



## ETCH SYSTEMS

**Alarms Manual, UnityII 85DRM**

1D97-410832-21 (N); 1D97-420828-21 (C)



TOKYO ELECTRON LIMITED



# Alarms Manual, UnityII 85DRM

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## Revision Information

Rev. #	Description of document changes.	DCN#	Date
1.0	Initial release. Conforms to software version 3.x.		24 Mar 2000

# Preface

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## About This Manual

The Alarms Manual provides information about the etcher alarms, their causes, and alarm recovery.

## About the Set of Manuals

The document set includes the following individual manuals:

*Basic Operations Manual* - This manual includes chapters on safety, operating the touch screen, preparing for operation, operating the etcher, and handling alarms

*Advanced Operations Manual* - This manual includes chapters on safety, main and item menus, system parameters, creating system and process recipes, assessing and using logs, maintenance operations, and accessing system information. The manual includes written descriptions of the major software program modules and also provides a hierarchy of the screen menus.

*Maintenance Manual* - This manual includes chapters on safety, the factory-recommended preventive maintenance (PM) schedule, procedures for alignments, checking/adjusting, cleaning, replacing, and troubleshooting information.

*Process Engineering Manual* - This manual includes explanations about plasma etching theory, the DRM process chamber, etch applications, recipes and methods for collecting etch data, and troubleshooting process problems.

*Theory of Operation Manual* - This manual describes the detailed theory of operation for the etcher. The manual describes how the various assemblies and subsystems work together to provide the general functions of the machine, and describes the functions of all major mechanical/pneumatic/vacuum assemblies and printed circuit boards.

*Alarms Manual* - This manual includes all alarm messages.

*Installation Manual* - This manual includes chapters on safety, general machine connections, preparing the etcher, setting up the etcher, and startup operations.

### **Who Should Read this Manual**

This manual is primarily intended for Operators, Maintenance Engineers, and Process Engineers.

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An explanation for warranty and liability for the products.

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## Chapter 1

# Introduction

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## Chapter Summary

This chapter provides chapter overviews, describes the typographical conventions used, and covers units of measure used in this manual.

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## 1.1 Overview of the Alarms Manual

This manual is organized by alarm code.

**Chapter 1**, Introduction, presents an overview of all the manuals in the series.

**Chapter 2**, Alarms, describes alarm numbers, messages, causes, and recovery actions.

## 1.2 Typographical Conventions

Typographical conventions used in this manual include text formatting for: **HARDWARE SWITCHES**, **SOFTWARE BUTTONS**, **menus**, **menu items**, and *screen names*.

Safety tables like the one below appear at the beginning of each procedure. No safety hazards within a category are represented by dashes (—).

Category	Criteria	Severity	Area
Electrical	SEMI Hot Work	Type 3	Line voltage
Mechanical	—	—	—
Chemical	—	—	—
Radiation	—	—	—

This manual uses SI units throughout, with Torr in parentheses. The table below shows common SI prefixes expressed different ways.

Multiplication Factor	Multiplication Factor	Prefix	SI Symbol
1 000 000 000 000	$10^{12}$	tera	T
1 000 000 000	$10^9$	giga	G
1 000 000	$10^6$	mega	M
1 000	$10^3$	kilo	k
0.01	$10^{-2}$	centi	c
0.001	$10^{-3}$	milli	m
0.000 001	$10^{-6}$	micro	u
0.000 000 001	$10^{-9}$	nano	n
0.000 000 000 001	$10^{-12}$	pico	p

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## 1.3 Notices

### 1.3.1 Documentation Numbers Defined

There are two document numbers on the cover of this manual. Note that an (N) follows one number, and a (C) follows the other. The number preceding the (N) refers to the normal bond paper documentation number. The number preceding the (C) refers to the clean room paper documentation number.

### 1.3.2 Ordering Documentation

If you require normal paper copy of a manual, order using the number with the (N). If you require clean room paper copy of a manual, order using the number with the (C). Include the (N) or (C) as part of the document number when ordering.

### 1.3.3 Procedure Times

The times that are shown in the procedures are representative. The published times are based on the following conditions:

- Required tools, parts and personnel are readily available
- Personnel are trained in TEA level II classes
- Some times shown do not account for the time required to complete associated corrective actions
- The times do not take local fab site policies into account
- Procedures are completed as written, without omission or revision

Therefore, when the procedure is performed at the local fab site, the actual time may be different.



### 1.3.4 Applicability of the Manual

If any of the content of the manual is unclear, please contact our service center.

Since the design of the machine is continuously revised and improved, the appearance and other detailed specifications shown in the manual may differ from the actual machine.

Depending on the specifications of the machine, details of the screens shown in the manual may differ from those on your actual display.

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## Chapter 2

# Alarms

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## Chapter Summary

This chapter lists the alarms on the etcher.

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## 2.1 Alarms Relating to the System

**ALARM NUMBER:** 0001

**Alarm Message:** C1 Mapping Data Error

**Recovery:** Accept Clears the error message. Check the wafer in the cassette and restart.

**Cause:** A mapping wafer data error occurred when cleaning out/replacing dummy wafer on cassette 1. Occurs when there are wafers in the cassettes when cleaning out. Occurs when there are wafers in cassette slots 4 - 6 when replacing dummy wafers. Refer to the slot information on the Slot Status Screen. The cassette will be automatically unloaded. Check the wafer in the cassette.

**ALARM NUMBER:** 0002

**Alarm Message:** C1 Mapping Data Error

**Recovery:** Abort Unloads the cassette. Check the wafer in the cassette. Restarts after checking the multi lot slot designation.

**Cause:** A mapping wafer data error occurred when performing multi lot start on cassette 1. This occurs when there are no wafers in the multi lots designated slot. Refer to the slot information on the Slot Status Screen. The slot designation when starting or the cassette is incorrect.

**ALARM NUMBER:** 0003

**Alarm Message:** C1 Mapping Data Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0004

**Alarm Message:** C2 Mapping Data Error

**Recovery:** Accept Clears the error message. Check the wafer in the cassette and restart.

**Cause:** A mapping wafer data error occurred when cleaning out/replacing dummy wafer on cassette 2. Occurs when there are wafers in the cassettes when cleaning out. Occurs



when there are wafers in cassette slots 4 - 6 when replacing dummy wafers. Refer to the slot information on the Slot Status Screen. The cassette will be automatically unloaded. Check the wafer in the cassette.

**ALARM NUMBER:** 0005

**Alarm Message:** C2 Mapping Data Error

**Recovery:** Abort Unload the cassette. Check the wafer in the cassette. Restart after checking the multi lot slot designation.

**Cause:** A mapping wafer data error occurred when performing multi lot start on cassette 2. This occurs when there are no wafers in the multi lots designated slot. Refer to the slot information on the Slot Status Screen. The slot designation when starting or the cassette is incorrect.

**ALARM NUMBER:** 0006

**Alarm Message:** C2 Mapping Data Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0007

**Alarm Message:** C1 Start Order Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0008

**Alarm Message:** C1 Recipe Verify Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0009

**Alarm Message:** C1 M/C Not Ready

**Recovery:** Accept Clears the error message. Restart is possible after ending maintenance mode for the Process Chamber on the transfer route or the management integrated value (current value) is cleared.

**Cause:** The Process Chamber entered use prohibited status on the transfer route when performing start processing on cassette 1. Use prohibited status is when the Process Chamber is in maintenance mode or when the integrated value (current value) of the maintenance management reaches level 2. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 000a

**Alarm Message:** C1 Wafer Count Error

**Recovery:** Accept Clears the error message. Replenish wafers and restart.

**Cause:** There were not enough wafers in the cassette to process when performing start processing on cassette 1. There will not be enough wafers for processing if too many are used in the pilot process and dummy wafer select processes. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 000b

**Alarm Message:** C1 Wafer Condition Error

**Recovery:** Accept Clears the error message. Replace the dummy wafer.

**Cause:** While performing start processing with dummy wafer designation on cassette 1, the dummy wafer in the dummy buffer cannot be used. Dummy processing and plasma cleaning are not possible. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 000c

**Alarm Message:** C2 Start Order Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 000d

**Alarm Message:** C2 Recipe Verify Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 000e

**Alarm Message:** C2 M/C Not Ready

**Recovery:** Accept Clears the error message. Restart is possible after ending maintenance mode for the Process Chamber on the transfer route or the management integrated value (current value) is cleared.

**Cause:** The Process Chamber entered use prohibited status on the transfer route when performing start processing on cassette 2. Use prohibited status is when the Process Chamber is in maintenance mode or when the integrated value (current value) of the maintenance management reaches level 2. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 000f

**Alarm Message:** C2 Wafer Count Error

**Recovery:** Accept Clears the error message. Replenish wafers and restart.

**Cause:** There were not enough wafers in the cassette to process when performing start processing on cassette 2. There will not be enough wafers for processing if too many are used in the pilot process and dummy wafer select processes. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 0010

**Alarm Message:** C2 Wafer Condition Error

**Recovery:** Accept Clears the error message. Replace the dummy wafer.

**Cause:** While performing start processing with dummy wafer designation on cassette 2, the dummy wafer in the dummy buffer cannot be used. Dummy processing and plasma cleaning are not possible. Because it is impossible to continue processing, the cassette will be automatically unloaded and processing will stop.

**ALARM NUMBER:** 0011

**Alarm Message:** C1 Mapping Data Error

**Recovery:** Retry Performs mapping.

**Cause:** The mapped slot status after reset and before maintenance mode on cassette 1 was wrong. Refer to slot status display and try maintenance mode again if the slot status is wrong and return the wafer to the way it was. Select Retry for others.

**ALARM NUMBER:** 0012

**Alarm Message:** C2 Mapping Data Error

**Recovery:** Retry Performs mapping.

**Cause:** The mapped slot status after reset and before maintenance mode on cassette 2 was wrong. Refer to slot status display and try maintenance mode again if the slot status is wrong and return the wafer to the way it was. Select Retry for others.

**ALARM NUMBER:** 0013

**Alarm Message:** C1 Dummy Wafer 1 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #1 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #1. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0014

**Alarm Message:** C1 Dummy Wafer 1 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #1 integrated value (current value) exceeded level 2. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #1. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0015

**Alarm Message:** C1 Dummy Wafer 2 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #2 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #2. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0016

**Alarm Message:** C1 Dummy Wafer 2 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #2 integrated value (current value) exceeded level 2. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #2. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0017

**Alarm Message:** C1 Dummy Wafer 3 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #3 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #3. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0018

**Alarm Message:** C1 Dummy Wafer 3 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 1 dummy wafer #3 integrated value (current value) exceeded level 2. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 1 dummy wafer #3. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 0019

**Alarm Message:** C2 Dummy Wafer 1 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #1 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #1. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001a

**Alarm Message:** C2 Dummy Wafer 1 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #1 integrated value (current value) exceeded level 2.

You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #1. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001b

**Alarm Message:** C2 Dummy Wafer 2 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #2 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #2. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001c

**Alarm Message:** C2 Dummy Wafer 2 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #2 integrated value (current value) exceeded level 2. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #2. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001d

**Alarm Message:** C2 Dummy Wafer 3 Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #3 integrated value (current value) exceeded level 1. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #3. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001e

**Alarm Message:** C2 Dummy Wafer 3 Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** Cassette 2 dummy wafer #3 integrated value (current value) exceeded level 2. You cannot start the next cassette. Replace dummy wafer or clear the integrated value (current value) for cassette 2 dummy wafer #3. When replacing dummy wafer, the integrated value (current value) will automatically be cleared.

**ALARM NUMBER:** 001f

**Alarm Message:** P1 P/C Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 Chamber cleaning exceeded level 1. P1 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0020

**Alarm Message:** P1 P/C Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 Chamber cleaning exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0021

**Alarm Message:** P1 Focus Ring Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 Chamber focus ring exceeded level 1. P1 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0022

**Alarm Message:** P1 Focus Ring Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 Chamber focus ring exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0023

**Alarm Message:** P1 General Counter 1 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 general counter 1 exceeded level 1.

P1 Chamber for the next lot entered use prohibited. Clear P1 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0024

**Alarm Message:** P1 General Counter 1 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 general counter 1 exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear P1 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0025

**Alarm Message:** P1 General Counter 2 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 general counter 2 exceeded level 1. P1 Chamber for the next lot entered use prohibited. Clear P1 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0026

**Alarm Message:** P1 General Counter 2 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P1 general counter 2 exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear P1 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0027

**Alarm Message:** P1 RF On Time - Notice

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0028

**Alarm Message:** P1 RF On Time - Caution

**Recovery:**



**Cause:** Not used.

**ALARM NUMBER:** 0029

**Alarm Message:** P1 Upper Electrode Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P1 Chamber exceeded level 1. P1 Chamber for the next lot entered use prohibited. Clear the P1 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 002a

**Alarm Message:** P1 Upper Electrode Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P1 Chamber exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear the P1 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 002b

**Alarm Message:** P1 Plasma Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P1 Chamber exceeded level 1. Plasma cleaning will be performed when starting processing on the next lot. After plasma cleaning, the integrated value (current value) will be cleared. If the P1 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 002c

**Alarm Message:** P1 Plasma Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P1 Chamber exceeded level 2. Plasma cleaning will be performed when starting processing on the next lot. After plasma cleaning, the integrated value (current value) will be cleared. If the P1 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 002d

**Alarm Message:** P1 Self Check Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The Self Check integrated value (current value) for P1 Chamber exceeded level 1. P1 Chamber for the next lot entered use prohibited. Clear the P1 Self Check integrated value (current value).

**ALARM NUMBER:** 002e

**Alarm Message:** P1 Self Check Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The Self Check integrated value (current value) for P1 Chamber exceeded level 2. P1 Chamber for the next wafer entered use prohibited. Clear the P1 Self Check integrated value (current value).

**ALARM NUMBER:** 002f

**Alarm Message:** P2 P/C Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The chamber cleaning integrated value (current value) for P2 Chamber exceeded level 1. P2 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0030

**Alarm Message:** P2 P/C Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The chamber cleaning integrated value (current value) for P2 Chamber exceeded level 2. P2 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0031

**Alarm Message:** P2 Focus Ring Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The focus ring integrated value (current value) for P2 Chamber exceeded level 1. P2 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0032

**Alarm Message:** P2 Focus Ring Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The focus ring integrated value (current value) for P2 Chamber exceeded level 2. P2 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0033

**Alarm Message:** P2 General Counter 1 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P2 general counter 1 exceeded level 1. P2 Chamber for the next lot entered use prohibited. Clear P2 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0034

**Alarm Message:** P2 General Counter 1 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P2 general counter 1 exceeded level 2. P2 Chamber for the next wafer entered use prohibited. Clear P2 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0035

**Alarm Message:** P2 General Counter 2 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P2 general counter 2 exceeded level 1. P2 Chamber for the next lot entered use prohibited. Clear P2 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0036

**Alarm Message:** P2 General Counter 2 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P2 general counter 2 exceeded level 2.

P2 Chamber for the next wafer entered use prohibited. Clear P2 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0037

**Alarm Message:** P2 RF On Time - Notice

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0038

**Alarm Message:** P2 RF On Time - Caution

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0039

**Alarm Message:** P2 Upper Electrode Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P2 Chamber exceeded level 1. P2 Chamber for the next lot entered use prohibited. Clear the P2 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 003a

**Alarm Message:** P2 Upper Electrode Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P2 Chamber exceeded level 2. P2 Chamber for the next wafer entered use prohibited. Clear the P2 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 003b

**Alarm Message:** P2 Plasma Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P2 Chamber exceeded level 1. Plasma cleaning will be performed when starting processing on the next lot.

After plasma cleaning, the integrated value (current value) will be cleared. If the P2 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 003c

**Alarm Message:** P2 Plasma Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P2 Chamber exceeded level 2. Plasma cleaning will be performed when starting processing on the next lot. After plasma cleaning, the integrated value (current value) will be cleared. If the P2 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 003d

**Alarm Message:** P2 Self Check Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The Self Check integrated value (current value) for P2 Chamber exceeded level 2. P2 Chamber for the next lot entered use prohibited. Clear the P2 Self Check integrated value (current value).

**ALARM NUMBER:** 003e

**Alarm Message:** P2 Self Check Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The Self Check integrated value for P2 Chamber exceeded level 2. P2 Chamber for the next wafer entered use prohibited. Clear the P2 Self Check integrated value.

**ALARM NUMBER:** 003f

**Alarm Message:** P3 P/C Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber cleaning exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0040

**Alarm Message:** P3 P/C Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber cleaning exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after performing chamber cleaning.

**ALARM NUMBER:** 0041

**Alarm Message:** P3 Focus Ring Change Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber focus ring exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0042

**Alarm Message:** P3 Focus Ring Change Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber focus ring exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear the integrated value (current value) after replacing the focus ring.

**ALARM NUMBER:** 0043

**Alarm Message:** P3 General Counter 1 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber general counter 1 exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear P3 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0044

**Alarm Message:** P3 General Counter 1 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber general counter 1 exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear P3 general counter 1 integrated value (current value).

**ALARM NUMBER:** 0045

**Alarm Message:** P3 General Counter 2 - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber general counter 2 exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear P3 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0046

**Alarm Message:** P3 General Counter 2 - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The integrated value (current value) for P3 Chamber general counter 2 exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear P3 general counter 2 integrated value (current value).

**ALARM NUMBER:** 0047

**Alarm Message:** P3 RF On Time - Notice

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0048

**Alarm Message:** P3 RF On Time - Caution

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 0049

**Alarm Message:** P3 Upper Electrode Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P3 Chamber exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear the P3 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 004a

**Alarm Message:** P3 Upper Electrode Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The upper electrode replacement integrated value (current value) for P3 Chamber exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear the P3 upper electrode replacement integrated value (current value).

**ALARM NUMBER:** 004b

**Alarm Message:** P3 Plasma Cleaning Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P3 Chamber exceeded level 1. Plasma cleaning will be performed when starting processing on the next lot. After plasma cleaning, the integrated value (current value) will be cleared. If the P3 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 004c

**Alarm Message:** P3 Plasma Cleaning Require - Caution

**Recovery:** Accept Clears the error message.

**Cause:** The plasma cleaning integrated value (current value) for P3 Chamber exceeded level 2. Plasma cleaning will be performed when starting processing on the next lot. After plasma cleaning, the integrated value (current value) will be cleared. If the P3 plasma cleaning integrated value (current value) is cleared before starting the next lot, the error message will be cleared but plasma cleaning will not be performed.

**ALARM NUMBER:** 004d

**Alarm Message:** P3 Self Check Require - Notice

**Recovery:** Accept Clears the error message.

**Cause:** The Self Check integrated value (current value) for P3 Chamber exceeded level 1. P3 Chamber for the next lot entered use prohibited. Clear the P3 Self Check integrated value (current value).

**ALARM NUMBER:** 004e

**Alarm Message:** P3 Self Check Require - Caution

**Recovery:** Accept Clears the error message.



**Cause:** The Self Check integrated value (current value) for P3 Chamber exceeded level 2. P3 Chamber for the next wafer entered use prohibited. Clear the P3 Self Check integrated value (current value).

**ALARM NUMBER:** 004f

**Alarm Message:** P1 General Counter 4 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0050

**Alarm Message:** P1 General Counter 4 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0051

**Alarm Message:** P1 General Counter 5 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0052

**Alarm Message:** P1 General Counter 5 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0053

**Alarm Message:** P1 General Counter 6 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 6 integrated value (current value).

**ALARM NUMBER:** 0054

**Alarm Message:** P1 General Counter 6 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 6 integrated value (current value).

**ALARM NUMBER:** 0055

**Alarm Message:** P1 General Counter 7 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0056

**Alarm Message:** P1 General Counter 7 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0057

**Alarm Message:** P1 General Counter 8 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0058

**Alarm Message:** P1 General Counter 8 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0059

**Alarm Message:** P1 General Counter 9 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 005a

**Alarm Message:** P1 General Counter 9 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 005b

**Alarm Message:** P1 General Counter 10 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 005c

**Alarm Message:** P1 General Counter 10 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 005d

**Alarm Message:** P1 General Counter 11 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 005e

**Alarm Message:** P1 General Counter 11 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 005f

**Alarm Message:** P1 General Counter 12 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 0060

**Alarm Message:** P1 General Counter 12 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 0061

**Alarm Message:** P1 General Counter 13 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the

next lot entered use prohibited. Clear P1 General Counter 13 integrated value (current vale).

**ALARM NUMBER:** 0062

**Alarm Message:** P1 General Counter 13 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 13 integrated value (current vale).

**ALARM NUMBER:** 0063

**Alarm Message:** P1 General Counter 14 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 14 integrated value (current vale).

**ALARM NUMBER:** 0064

**Alarm Message:** P1 General Counter 14 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 14 integrated value (current vale).

**ALARM NUMBER:** 0065

**Alarm Message:** P1 General Counter 15 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 15 integrated value (current vale).

**ALARM NUMBER:** 0066

**Alarm Message:** P1 General Counter 15 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 15 integrated value (current value).

**ALARM NUMBER:** 0067

**Alarm Message:** P1 General Counter 16 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 16 integrated value (current value).

**ALARM NUMBER:** 0068

**Alarm Message:** P1 General Counter 16 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 16 integrated value (current value).

**ALARM NUMBER:** 0069

**Alarm Message:** P1 General Counter 17 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 006a

**Alarm Message:** P1 General Counter 17 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 006b

**Alarm Message:** P1 General Counter 18 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 006c

**Alarm Message:** P1 General Counter 18 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. P1 chamber for the next lot entered use prohibited. Clear P1 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 006d

**Alarm Message:** P1 RF On Time - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 1. Clear P1 RF On Time integrated value (current value).

**ALARM NUMBER:** 006e

**Alarm Message:** P1 RF On Time - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P1 exceeded level 2. Clear P1 RF On Time integrated value (current value).

**ALARM NUMBER:** 006f

**Alarm Message:** P2 General Counter 4 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0070

**Alarm Message:** P2 General Counter 4 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0071

**Alarm Message:** P2 General Counter 5 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0072

**Alarm Message:** P2 General Counter 5 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0073

**Alarm Message:** P2 General Counter 6 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 6 integrated value (current value).

**ALARM NUMBER:** 0074

**Alarm Message:** P2 General Counter 6 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 6 integrated value (current value).



**ALARM NUMBER:** 0075

**Alarm Message:** P2 General Counter 7 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0076

**Alarm Message:** P2 General Counter 7 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0077

**Alarm Message:** P2 General Counter 8 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0078

**Alarm Message:** P2 General Counter 8 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0079

**Alarm Message:** P2 General Counter 9 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the

next lot entered use prohibited. Clear P2 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 007a

**Alarm Message:** P2 General Counter 9 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 007b

**Alarm Message:** P2 General Counter 10 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 007c

**Alarm Message:** P2 General Counter 10 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 007d

**Alarm Message:** P2 General Counter 11 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 007e

**Alarm Message:** P2 General Counter 11 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 007f

**Alarm Message:** P2 General Counter 12 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 0080

**Alarm Message:** P2 General Counter 12 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 0081

**Alarm Message:** P2 General Counter 13 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 13 integrated value (current value).

**ALARM NUMBER:** 0082

**Alarm Message:** P2 General Counter 13 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 13 integrated value (current value).

**ALARM NUMBER:** 0083

**Alarm Message:** P2 General Counter 14 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 14 integrated value (current value).

**ALARM NUMBER:** 0084

**Alarm Message:** P2 General Counter 14 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 14 integrated value (current value).

**ALARM NUMBER:** 0085

**Alarm Message:** P2 General Counter 15 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 15 integrated value (current value).

**ALARM NUMBER:** 0086

**Alarm Message:** P2 General Counter 15 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 15 integrated value (current value).

**ALARM NUMBER:** 0087

**Alarm Message:** P2 General Counter 16 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 16 integrated value (current value).

**ALARM NUMBER:** 0088

**Alarm Message:** P2 General Counter 16 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 16 integrated value (current value).

**ALARM NUMBER:** 0089

**Alarm Message:** P2 General Counter 17 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 008a

**Alarm Message:** P2 General Counter 17 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 008b

**Alarm Message:** P2 General Counter 18 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. P2 chamber for the next lot entered use prohibited. Clear P2 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 008c

**Alarm Message:** P2 General Counter 18 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. P2 chamber for the

next lot entered use prohibited. Clear P2 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 008d

**Alarm Message:** P2 RF On Time - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 1. Clear P2 RF On Time integrated value (current value).

**ALARM NUMBER:** 008e

**Alarm Message:** P2 RF On Time - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P2 exceeded level 2. Clear P2 RF On Time integrated value (current value).

**ALARM NUMBER:** 008f

**Alarm Message:** P3 General Counter 4 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0090

**Alarm Message:** P3 General Counter 4 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 4 integrated value (current value).

**ALARM NUMBER:** 0091

**Alarm Message:** P3 General Counter 5 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0092

**Alarm Message:** P3 General Counter 5 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 5 integrated value (current value).

**ALARM NUMBER:** 0093

**Alarm Message:** P3 General Counter 6 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 6 integrated value (current value).

**ALARM NUMBER:** 0094

**Alarm Message:** P3 General Counter 6 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 6 integrated value (current value).

**ALARM NUMBER:** 0095

**Alarm Message:** P3 General Counter 7 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0096

**Alarm Message:** P3 General Counter 7 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 7 integrated value (current value).

**ALARM NUMBER:** 0097

**Alarm Message:** P3 General Counter 8 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0098

**Alarm Message:** P3 General Counter 8 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 8 integrated value (current value).

**ALARM NUMBER:** 0099

**Alarm Message:** P3 General Counter 9 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 009a

**Alarm Message:** P3 General Counter 9 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 9 integrated value (current value).

**ALARM NUMBER:** 009b



**Alarm Message:** P3 General Counter 10 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 009c

**Alarm Message:** P3 General Counter 10 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 10 integrated value (current value).

**ALARM NUMBER:** 009d

**Alarm Message:** P3 General Counter 11 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 009e

**Alarm Message:** P3 General Counter 11 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 11 integrated value (current value).

**ALARM NUMBER:** 009f

**Alarm Message:** P3 General Counter 12 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 00a0

**Alarm Message:** P3 General Counter 12 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 12 integrated value (current value).

**ALARM NUMBER:** 00a1

**Alarm Message:** P3 General Counter 13 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 13 integrated value (current value).

**ALARM NUMBER:** 00a2

**Alarm Message:** P3 General Counter 13 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 13 integrated value (current value).

**ALARM NUMBER:** 00a3

**Alarm Message:** P3 General Counter 14 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 14 integrated value (current value).

**ALARM NUMBER:** 00a4

**Alarm Message:** P3 General Counter 14 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the

next lot entered use prohibited. Clear P3 General Counter 14 integrated value (current vale).

**ALARM NUMBER:** 00a5

**Alarm Message:** P3 General Counter 15 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 15 integrated value (current vale).

**ALARM NUMBER:** 00a6

**Alarm Message:** P3 General Counter 15 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 15 integrated value (current vale).

**ALARM NUMBER:** 00a7

**Alarm Message:** P3 General Counter 16 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 16 integrated value (current vale).

**ALARM NUMBER:** 00a8

**Alarm Message:** P3 General Counter 16 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 16 integrated value (current vale).

**ALARM NUMBER:** 00a9

**Alarm Message:** P3 General Counter 17 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 00aa

**Alarm Message:** P3 General Counter 17 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 17 integrated value (current value).

**ALARM NUMBER:** 00ab

**Alarm Message:** P3 General Counter 18 - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 00ac

**Alarm Message:** P3 General Counter 18 - Caution

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. P3 chamber for the next lot entered use prohibited. Clear P3 General Counter 18 integrated value (current value).

**ALARM NUMBER:** 00ad

**Alarm Message:** P3 RF On Time - Notice

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 1. Clear P3 RF On Time integrated value (current value).

**ALARM NUMBER:** 00ae

**Alarm Message:** P3 RF On Time - Cation

**Recovery:**

**Cause:** The integrated value (current value) for P3 exceeded level 2. Clear P3 RF On Time integrated value (current vale).

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## 2.2 Alarms Relating to the AGV Communication

**ALARM NUMBER:** 1001

**Alarm Message:** Cannot use A/D Converter

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1002

**Alarm Message:** C1 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore]- Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort]- Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV on the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1003

**Alarm Message:** C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1004

**Alarm Message:** C1 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1005

**Alarm Message:** C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1006

**Alarm Message:** C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1007

**Alarm Message:** C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1008

**Alarm Message:** C1 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore]- Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1009

**Alarm Message:** C1 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore]- Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort]-Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 100a

**Alarm Message:** C1 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore]-Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort]-Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence by the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 100b

**Alarm Message:** C1 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing



[Ignore] and [Abort] on the subsequent screen. [Ignore]-Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared.

[Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 100c

**Alarm Message:** C1 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 100d

**Alarm Message:** C1 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV on the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 100e

**Alarm Message:** C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 100f

**Alarm Message:** C1 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1010

**Alarm Message:** C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore]-Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1011

**Alarm Message:** C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1012

**Alarm Message:** C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the

cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared.  
[Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1013

**Alarm Message:** C1 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared.  
[Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1014

**Alarm Message:** C1 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared.  
[Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 1015

**Alarm Message:** C1 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared.  
[Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not

be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1016

**Alarm Message:** C1 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1017

**Alarm Message:** C1 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 1018

**Alarm Message:** AGV C1 Cassette Exist Error (Before L Seq)

**Recovery:** [Ignore]-Cassette status enters standby and AGV load sequence is not performed. [Abort]-AGV load sequence enters wait again.

**Cause:** A cassette was detected at C1 before AGV load sequence was executed when C1 was waiting for the AGV load request. Check if a cassette has been set.

**ALARM NUMBER:** 1019

**Alarm Message:** AGV C1 Cassette Not Exist Error (Before U Seq)

**Recovery:** [Ignore]-Cassette status enters standby and AGV unload sequence is not performed. [Abort]-AGV unload sequence enters wait again.

**Cause:** No cassette was detected at C1 before AGV unload sequence was executed when C1 was waiting for the AGV unload request. Check if a cassette has been set.

**ALARM NUMBER:** 101a

**Alarm Message:** C1 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 101b

**Alarm Message:** C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 101c

**Alarm Message:** C1 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 101d

**Alarm Message:** C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 101e

**Alarm Message:** C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 101f

**Alarm Message:** C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameter designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1020

**Alarm Message:** C1 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time.

Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1021

**Alarm Message:** C1 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 1022

**Alarm Message:** C1 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1023

**Alarm Message:** C1 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1024

**Alarm Message:** C1 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 1025

**Alarm Message:** AGV C2 Cassette Exist Error (Before L Seq)

**Recovery:** [Ignore]-Cassette status enters standby and AGV load sequence is not performed. [Abort]-AGV load sequence enters wait again.

**Cause:** A cassette was detected at C2 before AGV load sequence was executed when C2 was waiting for the AGV load request. Check if a cassette has been set.

**ALARM NUMBER:** 1026

**Alarm Message:** AGV C2 Cassette Not Exist Error (Before U Seq)

**Recovery:** [Ignore]-Cassette status enters standby and AGV unload sequence is not performed. [Abort]-AGV unload sequence enters wait again.

**Cause:** No cassette was detected at C2 before AGV unload sequence was executed when C2 was waiting for the AGV unload request. Check if a cassette has been set.

**ALARM NUMBER:** 1027

**Alarm Message:** AGV C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON



**ALARM NUMBER:** 1028

**Alarm Message:** AGC C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1029

**Alarm Message:** AGV C1 Hand-shake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 102a

**Alarm Message:** AGV C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 102b

**Alarm Message:** AGV C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 102c

**Alarm Message:** AGV C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 102d

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (U Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 102e

**Alarm Message:** AGV C1 BUSY=ON Timeout (U Seq) (T4)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 102f

**Alarm Message:** AGV C1 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, output the BUSY ON signal to the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1030

**Alarm Message:** AGV C1 COMP=ON Timeout (U Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 1031

**Alarm Message:** AGV C1 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 1032

**Alarm Message:** AGV C1 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1033

**Alarm Message:** AGV C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1034

**Alarm Message:** AGV C1 Hand-shake Signal Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1035

**Alarm Message:** AGV C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 1036

**Alarm Message:** AGV C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 1037

**Alarm Message:** AGV C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1038

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 1039

**Alarm Message:** AGV C1 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal

from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 103a

**Alarm Message:** AGV C1 Cassette Check Timeout (L Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 103b

**Alarm Message:** AGV C1 COMP=ON Timeout (L Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 103c

**Alarm Message:** AGV C1 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 103d

**Alarm Message:** AGV C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows.  
Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON  
ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 103e

**Alarm Message:** AGV C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 103f

**Alarm Message:** AGV C1 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1040

**Alarm Message:** AGV C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1041

**Alarm Message:** AGV C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1042

**Alarm Message:** AGV C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1043

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (U Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 1044

**Alarm Message:** AGV C1 BUSY=ON Timeout (U Seq) (T4)



**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1045

**Alarm Message:** AGV C1 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1046

**Alarm Message:** AGV C1 COMP=ON Timeout (U Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 1047

**Alarm Message:** AGV C1 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 1048

**Alarm Message:** AGV C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows.  
Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON  
ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1049

**Alarm Message:** AGV C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 104a

**Alarm Message:** AGV C1 Cassette Signal Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 104b

**Alarm Message:** AGV C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 104c

**Alarm Message:** AGV C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 104d

**Alarm Message:** AGV C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 104e

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON

signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 104f

**Alarm Message:** AGV C1 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1050

**Alarm Message:** AGV C1 Cassette Check Timeout (L Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1051

**Alarm Message:** AGV C1 COMP=ON Timeout (L Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 1052

**Alarm Message:** AGV C1 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 1053

**Alarm Message:** AGV C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1054

**Alarm Message:** AGV C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1055

**Alarm Message:** AGV C1 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1056

**Alarm Message:** AGV C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1057

**Alarm Message:** AGV C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1058

**Alarm Message:** AGV C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1059

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (U Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 105a

**Alarm Message:** AGV C1 BUSY=ON Timeout (U Seq) (T4)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 105b

**Alarm Message:** AGV C1 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 105c

**Alarm Message:** AGV C1 COMP=ON Timeout (U Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 105d

**Alarm Message:** AGV C1 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 105e

**Alarm Message:** AGV C1 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter

1	2	3	4	5	6	7	CS0	ON	OFF	ON	OFF	ON	OFF	ON	CS1	OFF	ON	ON	OFF
OFF	ON	ON	CS2	OFF	OFF	OFF	ON	ON	ON	ON									

**ALARM NUMBER:** 105f

**Alarm Message:** AGV C1 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1060

**Alarm Message:** AGV C1 Handshake Signal Error (L Seq)



**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1061

**Alarm Message:** AGV C1 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1062

**Alarm Message:** AGV C1 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1063

**Alarm Message:** AGV C1 Action Timeout (L Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment

parameters "Action Timeout".

**ALARM NUMBER:** 1064

**Alarm Message:** AGV C1 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 1065

**Alarm Message:** AGV C1 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1066

**Alarm Message:** AGV C1 Cassette Check Timeout (L Seq) (T5)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1067

**Alarm Message:** AGV C1 COMP=ON timeout (L Seq) (T6)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 1068

**Alarm Message:** AGV C1 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 1069

**Alarm Message:** C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 106a

**Alarm Message:** C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 106b

**Alarm Message:** C1 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 106c

**Alarm Message:** C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 106d

**Alarm Message:** C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 106e

**Alarm Message:** C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the

cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 106f

**Alarm Message:** C1 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1070

**Alarm Message:** C1 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 1071

**Alarm Message:** C1 Cassette Check Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not

be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1072

**Alarm Message:** C1 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1073

**Alarm Message:** C1 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 1074

**Alarm Message:** C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF

OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1075

**Alarm Message:** C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1076

**Alarm Message:** C1 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1077

**Alarm Message:** C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1078

**Alarm Message:** C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing

for having a cassette.

**ALARM NUMBER:** 1079

**Alarm Message:** C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 107a

**Alarm Message:** C1 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 107b

**Alarm Message:** C1 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 107c

**Alarm Message:** C1 Cassette Check Timeout (U Seq)



**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the BUSY ON signal to the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 107d

**Alarm Message:** C1 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 107e

**Alarm Message:** C1 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 107f

**Alarm Message:** C1 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C1 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1080

**Alarm Message:** C1 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1081

**Alarm Message:** C1 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1082

**Alarm Message:** C1 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1083

**Alarm Message:** C1 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1084

**Alarm Message:** C1 Action Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1085

**Alarm Message:** C1 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1086

**Alarm Message:** C1 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal

from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 1087

**Alarm Message:** C1 Cassette Check Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1088

**Alarm Message:** C1 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1089

**Alarm Message:** C1 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C1 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 108a

**Alarm Message:** C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 108b

**Alarm Message:** C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 108c

**Alarm Message:** C2 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 108d

**Alarm Message:** C2 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 108e

**Alarm Message:** C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 108f

**Alarm Message:** C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 1090

**Alarm Message:** C2 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 1091

**Alarm Message:** C2 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 1092

**Alarm Message:** C2 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1093

**Alarm Message:** C2 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1094

**Alarm Message:** C2 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 1095

**Alarm Message:** C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 1096

**Alarm Message:** C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1097

**Alarm Message:** C2 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1098

**Alarm Message:** C2 Cassette Exist Error (L Seq)



**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1099

**Alarm Message:** C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 109a

**Alarm Message:** C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 109b

**Alarm Message:** C2 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON

signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 109c

**Alarm Message:** C2 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 109d

**Alarm Message:** C2 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 109e

**Alarm Message:** C2 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 109f

**Alarm Message:** C2 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 10a0

**Alarm Message:** C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10a1

**Alarm Message:** C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10a2

**Alarm Message:** C2 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10a3

**Alarm Message:** C2 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10a4

**Alarm Message:** C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10a5

**Alarm Message:** C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10a6

**Alarm Message:** C2 TR\_REQ=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 10a7

**Alarm Message:** C2 BUSY=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 10a8

**Alarm Message:** C2 Cassette Check Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10a9

**Alarm Message:** C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10aa

**Alarm Message:** C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10ab

**Alarm Message:** C2 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10ac

**Alarm Message:** C2 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10ad

**Alarm Message:** C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10ae

**Alarm Message:** C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10af

**Alarm Message:** C2 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 10b0

**Alarm Message:** C2 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal

from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 10b1

**Alarm Message:** C2 Cassette Check Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10b2

**Alarm Message:** C2 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10b3

**Alarm Message:** C2 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 10b4



**Alarm Message:** C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10b5

**Alarm Message:** C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10b6

**Alarm Message:** C2 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10b7

**Alarm Message:** C2 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10b8

**Alarm Message:** C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10b9

**Alarm Message:** C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10ba

**Alarm Message:** C2 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 10bb

**Alarm Message:** C2 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 10bc

**Alarm Message:** C2 Cassette Check Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10bd

**Alarm Message:** C2 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10be

**Alarm Message:** C2 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 10bf

**Alarm Message:** C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10c0

**Alarm Message:** C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10c1

**Alarm Message:** C2 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10c2

**Alarm Message:** C2 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10c3

**Alarm Message:** C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10c4

**Alarm Message:** C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10c5

**Alarm Message:** C2 TR\_REQ=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON

signal to the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T1 Timeout."

**ALARM NUMBER:** 10c6

**Alarm Message:** C2 BUSY=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T3 Timeout."

**ALARM NUMBER:** 10c7

**Alarm Message:** C2 Cassette Check Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10c8

**Alarm Message:** C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter 1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF

OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10c9

**Alarm Message:** AGV C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10ca

**Alarm Message:** AGV C2 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10cb

**Alarm Message:** AGV C2 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 10cc

**Alarm Message:** AGV C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no

cassette timing.

**ALARM NUMBER:** 10cd

**Alarm Message:** AGV C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the "Action Timeout" on the external equipment parameters.

**ALARM NUMBER:** 10ce

**Alarm Message:** AGV C2 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 10cf

**Alarm Message:** AGV C2 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10d0

**Alarm Message:** AGV C2 Cassette Check Timeout (L Seq) (T5)



**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10d1

**Alarm Message:** AGV C2 COMP=ON Timeout (L Seq) (T6)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 10d2

**Alarm Message:** AGV C2 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher outputs the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 10d3

**Alarm Message:** AGV C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10d4

**Alarm Message:** AGV C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10d5

**Alarm Message:** AGV C2 Handshake Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10d6

**Alarm Message:** AGV C2 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10d7

**Alarm Message:** AGV C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing

[Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10d8

**Alarm Message:** AGV C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "ActiON Timeout".

**ALARM NUMBER:** 10d9

**Alarm Message:** AGV C2 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 10da

**Alarm Message:** AGV C2 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal

from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10db

**Alarm Message:** AGV C2 Cassette Check Timeout (L Seq) (T5)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10dc

**Alarm Message:** AGV C2 COMP=ON Timeout (L Seq) (T6)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 10dd

**Alarm Message:** AGV C2 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 10de

**Alarm Message:** AGV C2 Cassette Stage Input Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10df

**Alarm Message:** AGV C2 Cassette Stage Set Error (L Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10e0

**Alarm Message:** AGV C2 Handshake Signal Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10e1

**Alarm Message:** AGV C2 Cassette Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, the cassette was detected with the no cassette timing.

**ALARM NUMBER:** 10e2

**Alarm Message:** AGV C2 Cassette Not Exist Error (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10e3

**Alarm Message:** AGV C2 Action Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10e4

**Alarm Message:** AGV C2 TR\_REQ=ON Timeout (L Seq) (T2)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the L\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 10e5

**Alarm Message:** AGV C2 BUSY=ON Timeout (L Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10e6

**Alarm Message:** AGV C2 Cassette Check Timeout (L Seq) (T5)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10e7

**Alarm Message:** AGV C2 COMP=ON Timeout (L Seq) (T6)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 10e8

**Alarm Message:** AGV C2 COMP=OFF Timeout (L Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 10e9

**Alarm Message:** AGV C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10ea

**Alarm Message:** AGV C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10eb

**Alarm Message:** AGV C2 Handshake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10ec

**Alarm Message:** AGV C2 Cassette Exist Error (U Seq)



**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10ed

**Alarm Message:** AGV C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10ee

**Alarm Message:** AGV C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10ef

**Alarm Message:** AGV C2 TR\_REQ=ON Timeout (U Seq) (T2)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON

signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 10f0

**Alarm Message:** AGV C2 BUSY=ON Timeout (U Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10f1

**Alarm Message:** AGV C2 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10f2

**Alarm Message:** AGV C2 COMP=ON Timeout (U Seq) (T6)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 10f3

**Alarm Message:** AGV C2 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 10f4

**Alarm Message:** AGV C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter  
1 2 3 4 5 6 7 CS0 ON OFF ON OFF ON OFF ON CS1 OFF ON ON OFF  
OFF ON ON CS2 OFF OFF OFF ON ON ON ON

**ALARM NUMBER:** 10f5

**Alarm Message:** AGV C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 10f6

**Alarm Message:** AGV C2 Hand-shake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 10f7

**Alarm Message:** AGV C2 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 10f8

**Alarm Message:** AGV C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 10f9

**Alarm Message:** AGV C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment parameters "Action Timeout".

**ALARM NUMBER:** 10fa

**Alarm Message:** AGV C2 TR\_REQ=ON Time out (U Seq) (T2)

**Recovery:** After pressing [C2 Accept], on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 10fb

**Alarm Message:** AGV C2 BUSY=ON Timeout (U Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 10fc

**Alarm Message:** AGV C2 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 10fd

**Alarm Message:** AGV C2 COMP=ON Timeout (U Seq) (T6)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 10fe

**Alarm Message:** AGV C2 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 10ff

**Alarm Message:** AGV C2 Cassette Stage Input Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** The signal (CS0 to CS2) specifying the cassette hand-over position number designated from the AGV did not match the parameter designated cassette stage number. Check that the signal specifying the cassette hand-over position number is correctly designated from the AGV by Checking the AGV Status Screen. Check that the external equipment parameters "AGV C2 CS ID" selections 1 through 7 are as follows. Parameter

1	2	3	4	5	6	7	CS0	ON	OFF	ON	OFF	ON	OFF	ON	CS1	OFF	ON	ON	OFF
OFF	ON	ON	CS2	OFF	OFF	OFF	ON	ON	ON	ON									

**ALARM NUMBER:** 1100

**Alarm Message:** AGV C2 Cassette Stage Set Error (U Seq)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 1101

**Alarm Message:** AGV C2 handshake Signal Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, both side's I/F signals were abnormal and cassette transfer was terminated.

**ALARM NUMBER:** 1102

**Alarm Message:** AGV C2 Cassette Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, a cassette was detected at the timing for no cassette.

**ALARM NUMBER:** 1103

**Alarm Message:** AGV C2 Cassette Not Exist Error (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** During AGV and etcher P I/O handshake, no cassette was detected at the timing for having a cassette.

**ALARM NUMBER:** 1104

**Alarm Message:** AGV C2 Action Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking the VALID ON signal from the AGV, the AGV COMP ON signal did not turn OFF within the parameters designated time. Check the external equipment

parameters "Action Timeout".

**ALARM NUMBER:** 1105

**Alarm Message:** AGV C2 TR\_REQ=ON Timeout (U Seq) (T2)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the U\_REQ ON signal to the AGV, the TR\_REQ ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T2 Timeout."

**ALARM NUMBER:** 1106

**Alarm Message:** AGV C2 BUSY=ON Timeout (U Seq) (T4)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY ON signal to the AGV, the BUSY ON signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T4 Timeout."

**ALARM NUMBER:** 1107

**Alarm Message:** AGV C2 Cassette Check Timeout (U Seq) (T5)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the BUSY ON signal from the AGV, cassette existence could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 1108

**Alarm Message:** AGV C2 COMP=ON Timeout (U Seq) (T6)



**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T6 Timeout."

**ALARM NUMBER:** 1109

**Alarm Message:** AGV C2 COMP=OFF Timeout (U Seq) (T8)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 110a

**Alarm Message:** C2 COMP=ON Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 110b

**Alarm Message:** C2 COMP=OFF Timeout (L Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette exists). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette does not exist). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T7 Timeout."

**ALARM NUMBER:** 110c

**Alarm Message:** C2 COMP=ON Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After checking that there is a cassette transferred by the AGV, the BUSY OFF, COMP ON and TR\_REQ OFF signals could not be confirmed within the parameter designated time. Check the external equipment parameters "T5 Timeout."

**ALARM NUMBER:** 110d

**Alarm Message:** C2 COMP=OFF Timeout (U Seq)

**Recovery:** After pressing [C2 Accept] on the AGV Status Screen, reset by pressing [Ignore] and [Abort] on the subsequent screen. [Ignore] - Select [Ignore] after the cassette transfer has been completed (Cassette does not exist). After [Ignore], the alarm is cleared. [Abort] - Select [Abort] after setting the cassette to the transfer start position (Cassette exists). After [Abort], the alarm is cleared.

**Cause:** After the etcher output the READY OFF signal to the AGV, the COMP OFF signal from the AGV could not be confirmed within the parameter designated time. Check the external equipment parameters "T8 Timeout."

**ALARM NUMBER:** 110e

**Alarm Message:** SMIF ARM C1 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C1 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 110f

**Alarm Message:** SMIF ARM C1 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C1 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 1110

**Alarm Message:** SMIF ARM C1 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C1 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 1111

**Alarm Message:** SMIF ARM C2 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C2 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 1112

**Alarm Message:** SMIF ARM C2 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C2 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 1113

**Alarm Message:** SMIF ARM C2 Pod Not Exist Error

**Recovery:** [Accept] Clears the error message.

**Cause:** The Pod was removed from the C2 SMIF Arm. Reset the Pod to the SMIF Arm.

**ALARM NUMBER:** 1114

**Alarm Message:** SMIF ARM C1 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C1 SMIF Arm. Remove the Pod from the SMIF Arm.

**ALARM NUMBER:** 1115

**Alarm Message:** SMIF ARM C1 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C1 SMIF Arm. Remove the Pod from the SMIF Arm.

**ALARM NUMBER:** 1116

**Alarm Message:** SMIF ARM C1 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C1 SMIF Arm. Remove the Pod from the SMIF Arm.

**ALARM NUMBER:** 1117

**Alarm Message:** SMIF ARM C2 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C2 SMIF Arm. Remove the Pod from the SMIF Arm.

**ALARM NUMBER:** 1118

**Alarm Message:** SMIF ARM C2 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C2 SMIF Arm. Remove the Pod from the SMIF Arm.

**ALARM NUMBER:** 1119

**Alarm Message:** SMIF ARM C2 Pod Exist Error

**Recovery:** [Ignore] - Selects [Ignore] after moving to transfer position when transferring (remove Pot). After [Ignore], alarm is deleted. [Abort] - Selects [Abort] after the status before moving to transfer position when transferring. After [Abort] alarm is deleted.

**Cause:** The Pod was not removed from C2 SMIF Arm. Remove the Pod from the SMIF Arm.

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## 2.3 Alarms Relating to the T/C and P/A

**ALARM NUMBER:** 2001

**Alarm Message:** ARM Interlocked Due to Gate Close

**Recovery:** Switchover the T/C to Maintenance Mode, and after moving the arm to the home position, end Maintenance, and press . If the alarm is canceled, transfer continues. [Abort] - If the alarm is not canceled after retrying, press this key. The machine stops transfer, and withdraws the wafer.

**Cause:** Before the arm move to the station position, the gate closed, or an interlock activated. There may be a problem with the interlock signal output line. Perform the following inspections. There may be a problem with the interlock signal output (transfer gate open signal) from the T/C controller to the interrupter box. Remove the cable connector connected to interrupter box 1CN, and check the signal with a tester. The places for measurement are shown below. Interlock is inactive: approx. +24 V Interlock is active: approx. +0 V Special customer specification machines may show +24 V when the interlock is active and +0 V when it is inactive. Refer to the customer specification manual for each machine. P/C1 gate open interlock signal 1CN 14-25 pin P/C2 gate open interlock signal 1CN 02-25 pin P/C3 gate open interlock signal 1CN 15-25 pin C/C1 gate open interlock signal 1CN 03-25 pin C/C2 gate open interlock signal 1CN 16-25 pin If the interlock signal is active, there may be a problem with the cable connecting the interlock board inside the T/C controller or T/C controller back plane CN16 and interrupter box 1CN. Check the wiring of the cable. If there is nothing wrong with the cable, replace the interlock board.

**ALARM NUMBER:** 2002

**Alarm Message:** ARM Positioning Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 2003

**Alarm Message:** ARM READY Position Error

**Recovery:** Executes the ARM/IND1 controller move to READY position command again. If resetting fails, turn off and start up the machine. After starting up the machine, perform clean out.

**Cause:** The arm could not move from the current position to the READY position. Check the 7 segment LED of the ARM/IND1 controller. If there is a problem with the arm controller, an error code is displayed. [00]: The ARM/IND1 controller is normal Displays other than [00]: There is a problem with the ARM/IND1 controller. Before resetting, switchover the T/C to Maintenance Mode, and move the arm to all positions manually to check its operation. After resetting, inspection is necessary.

**ALARM NUMBER:** 2004

**Alarm Message:** ARM Sensor Data Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2005

**Alarm Message:** Arm Unknown Wafer Exist - Cannot Transfer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2006

**Alarm Message:** ARM Wafer Lost

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 2007

**Alarm Message:** T/C Now Venting

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2008

**Alarm Message:** Buffer Down Timeout

**Recovery:** The Buffer hoist down action is performed.

**Cause:** Hoist down operation for the Buffer was not detected by the down sensor during the prescribed time (30 s). Check that the sensor is operating properly. Check from the

Adjustment Terminal to check the sensor. An error will occur with the following conditions. Group ID=1, Local ID=30 (High Active)

**ALARM NUMBER:** 2009

**Alarm Message:** Buffer Up Timeout

**Recovery:** The Buffer Hoist Up action is performed. [Ignore] The Buffer Hoist Up is not performed and the Lamp heating process is performed.

**Cause:** Hoist Up operation for the Buffer was not detected by the up sensor during the prescribed time (30 s). Check that the sensor is operating properly. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. Group ID=1, Local ID=29 (High Active)

**ALARM NUMBER:** 200a

**Alarm Message:** T/C Execution Disabled in Gas Induction

**Recovery:** Executes vacuum pull again after the other chamber using the Dry Pump has finished processing. Press [Vacuum] to pull a vacuum when the process in the other chamber using the Dry Pump has been completed using the maintenance operation.

**Cause:** Vacuum pull cannot be performed because another chamber which is using the Dry Pump processing (HPC) when pulling a vacuum using the maintenance operation or when initializing the etcher.

**ALARM NUMBER:** 200b

**Alarm Message:** T/C Cannot Action Valve Due to Vacuum

**Recovery:** Executes venting to atmosphere again if all exhaust system valves are closed after initialization. Use the maintenance operation to close T01/T02 valves and execute the vent to atmosphere operation again.

**Cause:** Because an exhaust system valve (T01/T02 valves) was open, the vent valve (T05 valve), slow vent valve and needle valve (T03 valve) could not be opened when operating the valves venting to atmosphere using the maintenance operation or during initialization of the etcher.

**ALARM NUMBER:** 200c

**Alarm Message:** T/C Initialization Not Complete

**Recovery:**

**Cause:** Not Used.



**ALARM NUMBER:** 200d

**Alarm Message:** T/C Stopped Treatment Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 200e

**Alarm Message:** T/C Cannot Action Valve - CM Not Available

**Recovery:** Executes vacuum pull again after initialization. Execute your objective operation after checking that the capacitance manometer protection valve is open using the maintenance operation.

**Cause:** The exhaust system valves (T01/T02 valves) could not be opened because the pressure measurements by the capacitance manometer were invalid during etcher initialization or pulling a vacuum using maintenance operation or when operating the valves. Pressure measurements by the capacitance manometer are valid only when the Transfer Chamber pressure is below the designated pressure (T/C parameter "Slow Exhaust End Pressure"). The capacitance manometer protection valve is open at that time.

**ALARM NUMBER:** 200f

**Alarm Message:** C1 Gate Open

**Recovery:** Evacuate or vent the T/C to atmosphere. After closing the C1 gate, execute this command.

**Cause:** Venting or vacuum was not possible because the C1 gate is open. In the Maintenance Mode, close the C1 gate. If this alarm occurs when the gate is actually closed, it is necessary to check the C1 gate sensor. With the C1 gate closed, check the sensor output with a tester. C1 gate closed sensor output: TYB411-1/TC CN6 2-3 pin C1 gate closed detected: approx. +0 V C1 gate not detected closed: approx. +24 V Special customer specification machines may show +24 V when the C1 gate is detected closed and +0 V when it is not detected closed. Refer to the customer specification manual for each machine. If there is a problem with output, first adjust the position of the sensor. If there is no problem with the position of the sensor, check the wiring of the cable connecting the sensor and TYB411-1/TC CN6. If there is no problem with the sensor wiring, it is necessary to replace the I/O board (TYB-112A/DIO). Check the C1 gate closed sensor with the Adjustment Terminal. UNITY: Group ID=1 Local ID=18 (High Active) (When Gate Close is 2 action) Local ID=19 (High Active) (When Gate Rise is 1 action) UNITY-Ver.2: Group ID=1 Local ID=52 (High Active) (When Gate Rise is 1 action) Local ID=51 (High Active) (When Gate Close is 2 action)

**ALARM NUMBER:** 2010

**Alarm Message:** C2 Gate Open

**Recovery:** Evacuate or vent the T/C to atmosphere. After closing the C2 gate, execute this command.

**Cause:** Venting or vacuum was not possible because the C2 gate is open. In the Maintenance Mode, close the C2 gate. If this alarm occurs when the gate is actually closed, it is necessary to check the C2 gate closed sensor. With the C2 gate closed, check the sensor output with a tester. C2 gate closed sensor output TYB411-1/TC CN6 2-3 pin C2 gate closed detected: approx. +0 V C2 gate not detected closed: approx. +24 V Special customer specification machines may show +24 V when the C2 gate is detected closed and +0 V when it is not detected closed. Refer to the customer specification manual for each machine. If there is a problem with output, first adjust the position of the sensor. If there is no problem with the position of the sensor, check the wiring of the cable connecting the sensor and TYB411-1/TC CN6. If there is no problem with the sensor wiring, it is necessary to replace the I/O board (TYB-112A/DIO). Check the C2 gate closed sensor with the Adjustment Terminal. UNITY: Group ID=1 Local ID=22 (High Active) (When Gate Close is 2 action) Local ID=23 (High Active) (When Gate Rise is 1 action) UNITY-Ver.2: Group ID=1 Local ID=55 (High Active) (When Gate Rise is 1 action) Local ID=56 (High Active) (When Gate Close is 2 action)

**ALARM NUMBER:** 2011

**Alarm Message:** P1 Gate Open

**Recovery:** Venting or vacuum pull is performed again for the T/C.

**Cause:** Venting or vacuum pull was not possible because the P1 gate is open. Close the P1 Gate with the Maintenance Mode. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is PE type: Group ID=2 Local ID=53 (High Active) (1 action Gate Rise Position Sensor) Local ID=52 (High Active) (2 action Gate Close Position Sensor) UNITY when the P/C is M type: Group ID=2 Local ID=53 (High Active) (1 action Gate Rise Position Sensor) Local ID=52 (High Active) (2 action Gate Close Position Sensor) Local ID=50 (High Active) (Shutter Close Position Sensor) UNITY-Ver.2: Group ID=2 Local ID=54 (High Active) (Gate Rise Position Sensor)

**ALARM NUMBER:** 2012

**Alarm Message:** P2 Gate Open

**Recovery:** Venting or vacuum pull is performed again for the T/C.

**Cause:** Venting or vacuum pull was not possible because the P2 gate is open. Close the P2 Gate with the Maintenance Mode. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is PE type: Local ID=53 (High Active) (1 action Gate Rise Position Sensor) Local ID=52 (High

Active) (2 action Gate Close Position Sensor) UNITY when the P/C is M type: Group ID=3 Local ID=53 (High Active) (1 action Gate Rise Position Sensor) Local ID=52 (High Active) (2 action Gate Close Position Sensor) Local ID=50 (High Active) (Shutter Close Position Sensor) UNITY-Ver.2: Group ID=3 Local ID=64 (High Active) (Gate Rise Position Sensor)

**ALARM NUMBER:** 2013

**Alarm Message:** P3 Gate Open

**Recovery:** Venting or vacuum pull is performed again for the T/C.

**Cause:** Venting or vacuum pull was not possible because the P3 gate is open. Close the P3 Gate with the Maintenance Mode. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is PE or ATC type: Group ID=4 Local ID=53 (High Active) (When Gate Rise is 1 action) UNITY when the P/C is M type: Group ID=3 Local ID=53 (High Active) (When Gate Rise is 1 action) Local ID=52 (High Active) (When Gate Close is 2 action) Local ID=50 (High Active) (Shutter Close action) UNITY-Ver.2 when the P/C is either PE/IEM/ATC type: Group ID=4 Local ID=64 (High Active) (When Gate Close is 1 Action) Local ID=65 (High Active) (When Gate Rise is 2 Action) Local ID=68 (High Active) (Shutter Close Action) UNITY-Ver.2 when the P/C is DRM type: Group ID=3 Local ID=64 (High Active) (When Gate Close is 1 action) Local ID=65 (High Active) (When Gate Rise is 2 action) Local ID=68 (High Active) (Shutter Close action)

**ALARM NUMBER:** 2014

**Alarm Message:** T/C Valve Interlock - Pressure Limit

**Recovery:** Venting or vacuum pull is performed again for the T/C.

**Cause:** Venting or vacuum pull was not possible because the P3 gate is open. Close the P3 Gate with the Maintenance Mode. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is PE or ATC type: Group ID=4 Local ID=53 (High Active) (When Gate Rise is 1 action) Local ID=52 (High Active) (When Gate Close is 2 action) UNITY when the P/C is M type: Group ID=4 Local ID=53 (High Active) (When Gate Rise is 1 action) Local ID=52 (High Active) (When Gate Close is 2 action) Local ID=50 (High Active) (Shutter Close action) UNITY-Ver.2: Group ID=4 Local ID=64 (High Active) (Gate Rise action)

**ALARM NUMBER:** 2015

**Alarm Message:** Lamp Heater Broken

**Recovery:** The Lamp Heating process will be retried. [Ignore] The Lamp Heating process will quit and the wafer will be transferred out.

**Cause:** A broken wire signal was detected at the Lamp Heater Unit while monitoring the end of the lamp heating. Check if there is a broken wire on the Lamp Heating Unit. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. Group ID=1, Local ID=47 (High Active)

**ALARM NUMBER:** 2016

**Alarm Message:** Lamp Heater Error

**Recovery:** The Lamp Heating process will be retried. [Ignore] The Lamp Heating process will quit and the wafer will be transferred out.

**Cause:** The Lamp Heating was started for the Lamp Heating Unit but there is no Lamp Heater Unit RUN signal ON within the prescribed time (500 m/s). Check from the Adjustment Terminal that the lamp in the Lamp Heater Unit is lit. An error will occur with the following conditions Group ID=1, Local ID=45 (High Active)

**ALARM NUMBER:** 2017

**Alarm Message:** Lamp Heater Stop Timeout

**Recovery:** The Lamp Heating stop process will be performed again. [Ignore] The Lamp Heating process will quit and the wafer will be transferred out.

**Cause:** Lamp heating stopped because of the Lamp Heater Unit "Lamp Heater Broken" or the "Lamp Heater Off Timeout" errors, but there was no Lamp Heater Unit RESET signal ON within the prescribed time (500 m/s). Check from the Adjustment Terminal if the lamp in the Lamp Heating Unit is extinguished. An error will occur with the following conditions. Group ID=1, Local ID=46 (High Active)

**ALARM NUMBER:** 2018

**Alarm Message:** Lamp Heater Off Timeout

**Recovery:** The Lamp Heating process will be retried. [Ignore] The Lamp Heating process will quit and the wafer will be transferred.

**Cause:** The RESET signal for the Lamp Heater Unit was not detected within the prescribed time (120 s). Check from the Adjustment Terminal if the lamp in the Lamp Heater Unit is extinguished. An error will occur with the following conditions. Group ID=1, Local ID=46 (High Active)

**ALARM NUMBER:** 2019

**Alarm Message:** Arm Data Error

**Recovery:** Restart the system.

**Cause:** Command data fields were abnormal when receiving commands with the Arm Local Controller (Local Controller Internal Error Code: 09h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 201a

**Alarm Message:** P/A Data Error

**Recovery:** Restart the system.

**Cause:** Command data fields were abnormal when receiving commands with the P/A Local Controller (Local Controller Internal Error Code: 09h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 201b

**Alarm Message:** Arm Position Data Error

**Recovery:** Initialize the position data storing position in the Off-line Mode.

**Cause:** When storing position data with the Arm Local Controller, the area was already damaged (Local Controller Internal Error Code: 24h).

**ALARM NUMBER:** 201c

**Alarm Message:** P/A Position Data Error

**Recovery:** Initialize the position data storing position in the Off-line Mode.

**Cause:** When storing position data with the P/A Local Controller, the area was already damaged (Local Controller Internal Error Code: 24h).

**ALARM NUMBER:** 201d

**Alarm Message:** Arm Work Area Not Enough

**Recovery:** Turn the power ON again and down load.

**Cause:** Not enough work RAM for the Arm Local Controller (Local Controller Internal Error Code: 25h).

**ALARM NUMBER:** 201e

**Alarm Message:** P/A Work Area Not Enough

**Recovery:** Turn the power ON again and down load.

**Cause:** Not enough work RAM for the P/A Local Controller (Local Controller Internal Error Code: 25h).

**ALARM NUMBER:** 201f

**Alarm Message:** ARM Battery Voltage Dropped

**Recovery:** The alarm message is cleared by replacing or recharging the battery.

**Cause:** The battery voltage dropped on the ARM Local Controller or worn out.

**ALARM NUMBER:** 20

**Alarm Message:** P/A Battery Voltage Dropped

**Recovery:** The alarm message is cleared by replacing or recharging the battery.

**Cause:** The battery voltage dropped on the P/A Local Controller or worn out.

**ALARM NUMBER:** 2021

**Alarm Message:** Arm Check-sum Error

**Recovery:** Restart the system.

**Cause:** There was a checksum error in the data received from the Arm Local Controller (Local Controller Internal Error Code: 02h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2022

**Alarm Message:** P/A Check-sum Error

**Recovery:** Restart the system.

**Cause:** There was a checksum error in the data received from the P/A Local Controller (Local Controller Internal Error Code: 02h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2023

**Alarm Message:** Arm File Exists - Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore it.

**Cause:** During Restore of the APL program (file) with the Arm Local Controller, the designated APL program was already input (Local Controller Internal Error Code: 21h).

**ALARM NUMBER:** 2024

**Alarm Message:** P/A File Exists - Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore it.

**Cause:** During Restore of the APL program (file) with the P/A Local Controller, the designated APL program was already input (Local Controller Internal Error Code: 21h).

**ALARM NUMBER:** 2025

**Alarm Message:** Arm RAM Disk Full

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore it.

**Cause:** The Arm Local Controller RAM disk is full. The file cannot be stored (Local Controller Internal Error Code: 23h).

**ALARM NUMBER:** 2026

**Alarm Message:** P/A RAM Disk Full

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore it.

**Cause:** The P/A Local Controller RAM disk is full. The file cannot be stored (Local Controller Internal Error Code: 23h).

**ALARM NUMBER:** 2027

**Alarm Message:** Arm Interpreter Error

**Recovery:** Restore the appropriate APL program, etc. with the Off-line mode.

**Cause:** An Arm Local Controller APL program argument error, 0 divider or unregistered position occurred (Local Controller Internal Error Code: 05h).

**ALARM NUMBER:** 2028

**Alarm Message:** P/A Interpreter Error

**Recovery:** Restore the appropriate APL program, etc. with the Off-line mode.

**Cause:** An P/A Local Controller APL program argument error, 0 divider or unregistered position occurred (Local Controller Internal Error Code: 05h).

**ALARM NUMBER:** 2029

**Alarm Message:** Arm Message Aborted

**Recovery:** Restart the system.

**Cause:** The command transmitted from the HOST was determined to be unexecutable by the Arm Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 202a

**Alarm Message:** P/A Message Aborted

**Recovery:** Restart the system.

**Cause:** The command transmitted from the HOST was determined to be unexecutable by the P/A Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 202b

**Alarm Message:** Arm Power Off - Secondary P/S

**Recovery:** After turning ON the motor power, perform the RUN command (start up APL program).

**Cause:** The RUN command (Application program start-up) was received while the motor power was OFF (Local Controller Internal Error Code: 06h).

**ALARM NUMBER:** 202c

**Alarm Message:** P/A Power Off - Secondary P/S

**Recovery:** After turning ON the motor power, perform the RUN command (start up the APL program).

**Cause:** The RUN command (Application program start-up) was received while the motor power was OFF (Local Controller Internal Error Code: 06h).

**ALARM NUMBER:** 202d



**Alarm Message:** Arm No File Detected

**Recovery:** After rechecking the APL program name, back it up.

**Cause:** The APL program did not exist when backing up the APL program (file) designated by the Arm Local Controller (Local Controller Internal Error Code: 20h).

**ALARM NUMBER:** 202e

**Alarm Message:** P/A No File Detected

**Recovery:** After rechecking the APL program name, back it up.

**Cause:** The APL program did not exist when backing up the APL program (File) designated by the P/A Local Controller (Local Controller Internal Error Code: 20h).

**ALARM NUMBER:** 202f

**Alarm Message:** Arm Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The priority register command reception failed 10 times consecutively on the Arm Local Controller.

**ALARM NUMBER:** 2030

**Alarm Message:** P/A Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The priority register command reception failed 10 times consecutively on the P/A Local Controller.

**ALARM NUMBER:** 2031

**Alarm Message:** Arm Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the Arm Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 2032

**Alarm Message:** P/A Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the P/A Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 2033

**Alarm Message:** Arm Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** The time until the transmission of the next character exceeded the designated time (20 m/s) on the Arm Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2034

**Alarm Message:** P/A Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** The time until the transmission of the next character exceeded the designated time (20 m/s) on the P/A Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2035

**Alarm Message:** Arm Undefined Message Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the Arm Local Controller (Local Controller Internal Error Code: 03h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2036

**Alarm Message:** P/A Undefined Message Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the P/A Local Controller (Local Controller Internal Error Code: 03h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]:

Local Controller error.

**ALARM NUMBER:** 2037

**Alarm Message:** T/C Lid Open

**Recovery:** Performs venting or vacuum again on the T/C.

**Cause:** Venting or vacuum could not be performed because the T/C lid is open. Close the T/C lid. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=41 (High Active) (T/C cover Close) UNITY-Ver. 2: Group ID=1, Local ID=40 (High Active) (T/C cover Close)

**ALARM NUMBER:** 2038

**Alarm Message:** T/C Lid Open

**Recovery:** The alarm message is cleared when the T/C lid is closed.

**Cause:** Venting or vacuum could not be performed because the T/C lid is open. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=41 (High Active) (T/C cover Close) UNITY-Ver. 2: Group ID=1, Local ID=40 (High Active) (T/C cover Close)

**ALARM NUMBER:** 2039

**Alarm Message:** T/C Command Format Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 203a

**Alarm Message:** ARM Action Command Timeout

**Recovery:** Re-send the command to the Arm Local Controller.

**Cause:** Arm action was not executed within the prescribed time (T/C Parameter "Arm Move Timeout"). Check that the connectors for the Local Controller are connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 203b

**Alarm Message:** P/A Action Command Timeout

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** P/A action was not executed within the prescribed time (T/C Parameter "Alignment Move Timeout" "Alignment Other Move Timeout"). Check that the connectors for the Local Controller are connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 203c

**Alarm Message:** ARM Data Error

**Recovery:** Restart the system.

**Cause:** There were errors in the information of the transmitted data field when downloading parameters and position data with the Local Controller. Check that the connectors on the Local Controller are securely connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 203d

**Alarm Message:** P/A Data Error

**Recovery:** Restart the system.

**Cause:** There were errors in the information of the transmitted data field when downloading parameters and position data with the P/A Local Controller. Check that the connectors on the Local Controller are securely connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 203e

**Alarm Message:** ARM Function Command Timeout

**Recovery:** Re-send the command to the Arm Local Controller.

**Cause:** The function command for the Arm Local Controller could not be received. Check that the connectors for the Local Controller are connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 203f

**Alarm Message:** P/A Function Command Timeout

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** The function command for the P/A Local Controller could not be received. Check that the connectors for the Local Controller are connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2040

**Alarm Message:** ARM Motor Power Off

**Recovery:** Re-send the command to the Arm Local Controller. If no damaged is detected by the T/C zone sensor, the Local Controller restarts the motor power.

**Cause:** The Arm motor power was turned OFF because an Interlock caused by the T/C zone sensor (Local Controller Internal Error Code: 04h). Check the operation of the T/C Upper zone Sensor.

**ALARM NUMBER:** 2041

**Alarm Message:** ARM Motor Cannot Power On

**Recovery:** Re-send the command to the Arm Local Controller. If no damaged is detected by the T/C zone sensor, the Local Controller restarts the motor power.

**Cause:** The motor power cannot be restarted because of the Interlock (Local Controller Internal Error Code: 05h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2042

**Alarm Message:** ARM Home Error

**Recovery:** Re-send the move to Home Position request to the Arm Local Controller again.

**Cause:** Home return from the current position was not completed within the prescribed time (T/C Parameter "Arm Movement Timeout") by the Arm Local Controller. (Local Controller Internal Error Code: 02h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2043

**Alarm Message:** P/A Home Error

**Recovery:** Re-send the move to Home Position request to the P/A Local Controller again.

**Cause:** Home return from the current position was not completed within the prescribed time (T/C Parameter "Alignment Other Move Timeout") by the Arm Local Controller. (Local Controller Internal Error Code: 02h). Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2044

**Alarm Message:** ARM Stroke Limit Over

**Recovery:** Moves Arm to Station Position again after initializing Arm.

**Cause:** The moved position exceeds the prescribed range when move the Arm to the Station Position. Select and check the movement again or shift the T/C to Maintenance Mode and perform Arm Teaching.

**ALARM NUMBER:** 2045

**Alarm Message:** P/A Limit Over Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 2046

**Alarm Message:** Pressure Control Error - Not in Vacuum

**Recovery:** Executes Transfer Chamber vacuum pull and performs pressure control again.

**Cause:** Wafer transfer could not be started because the pressure control was not executable because of the ISO valve (T02 valve) closed when transferring the wafer out from the Cassette Chamber using vacuum transfer.

**ALARM NUMBER:** 2047

**Alarm Message:** T/C Cannot Action Valve Due to Vacuum

**Recovery:** Use the maintenance operation to close the T03/T05/slow vent valves and open the objective exhaust system valve again.

**Cause:** The exhaust system valve (T01/T02 valves) could not be opened because either the pressure in the Transfer Chamber exceeded the vacuum upper limit (T/C parameter

"Rough Vacuum End Pressure") when opening the exhaust system valves (T01/T02 valves) using the maintenance operation or of N2 venting (one of T03/T05/slow vent valve was open) for atmosphere was exceeded.

**ALARM NUMBER:** 2048

**Alarm Message:** T/C Chamber Pressure Upper Limit

**Recovery:** Pull a vacuum on the Transfer Chamber using the maintenance operation. The error is automatically cleared when the pressure in the Transfer Chamber is below the vacuum pressure upper limit (T/C parameter "Rough Vacuum End Pressure").

**Cause:** The vacuum upper limit (T/C parameter "Rough Vacuum End Pressure") was exceeded by the rise in pressure in the Transfer Chamber.

**ALARM NUMBER:** 2049

**Alarm Message:** T/C +12 V Power Failure

**Recovery:** The alarm message is cleared when power box fuse is replaced.

**Cause:** An error occurred with the T/C +12 V or +5 V power supply. Check if the power box fuse is spent or for broken wires. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=1, Local ID=1 (Low Active) (+12 V Power Off)

**ALARM NUMBER:** 204a

**Alarm Message:** T/C +15 V Power Failure

**Recovery:** The alarm message is cleared when power box fuse is replaced.

**Cause:** An error occurred with the T/C +15 V power supply. Check if the power box fuse is spent or for broken wires. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=1, Local ID=2 (Low Active) (+15 V Power Off)

**ALARM NUMBER:** 204b

**Alarm Message:** T/C +24 V Power Failure

**Recovery:** The alarm message is cleared when power box fuse is replaced.

**Cause:** An error occurred with the T/C +24 V power supply. Check if the power box fuse is spent or for broken wires. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=1, Local ID=4 (Low Active) (+24 V Power Off)

**ALARM NUMBER:** 204c

**Alarm Message:** T/C -15 V Power Failure

**Recovery:** The alarm message is cleared when power box fuse is replaced.

**Cause:** An error occurred with the T/C -15 V power supply. Check if the power box fuse is spent or for broken wires. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=1, Local ID=3 (Low Active) (-15 V Power Off)

**ALARM NUMBER:** 204d

**Alarm Message:** P/A Hoist Down Sensor Error

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** The hoist down sensor could not be detected during P/A operation. (Local Controller Internal Error Code: 15h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 204e

**Alarm Message:** P/A Hoist Action Timeout

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** The Hoist Action for the P/A was performed, but the Down Sensor could not detect during the fixed time (T/C Parameter "Alignment Other Move Timeout"). (Local Controller Internal Error Code: 16h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 204f

**Alarm Message:** P/A Lighting Error

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** When executing the lighting amount check command for P/A, a lighting amount decrease or increase was detected. (Local Controller Internal Error Code: 13h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2050



**Alarm Message:** P/A Line Sensor Data Error

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 2051

**Alarm Message:** P/A No Wafer

**Recovery:** Re-send the command to the P/A Local Controller.

**Cause:** No wafer was detected on the stage during P/A operation. If there is a wafer on the P/A, check the Wafer Sensor on the upper part of the P/A. If the power supply to the Wafer Sensor is ON, the green LED will light. If there are obstructions such as the wafer, the red LED will light. (Local Controller Internal Error Code: 14h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2052

**Alarm Message:** P/A Positioning Error - Centering

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 2053

**Alarm Message:** P/A Positioning Error - Orientation

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2054

**Alarm Message:** Arm Check-sum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Local Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the Arm Local Controller. Check the connection of the connectors on the Local Controller.

**ALARM NUMBER:** 2055

**Alarm Message:** P/A Check-sum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Local Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the P/A Local Controller. Check the connection of the connectors on the Local Controller.

**ALARM NUMBER:** 2056

**Alarm Message:** Arm Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time limit when receiving from the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the Arm Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2057

**Alarm Message:** P/A Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time limit when receiving from the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the P/A Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2058

**Alarm Message:** Arm Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Local Controller is detected within the LENGTH.

**Cause:** The data received from the Arm Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2059

**Alarm Message:** P/A Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Local Controller is detected within the LENGTH.

**Cause:** The data received from the P/A Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 205a

**Alarm Message:** Arm No Response Received

**Recovery:** The alarm is cleared when the response can be received from the Local Controller.

**Cause:** The Status Response was not received from the Arm Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 205b

**Alarm Message:** P/A No Response Received

**Recovery:** The alarm is cleared when the response can be received from the Local Controller.

**Cause:** The Status Response was not received from the P/A Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 205c

**Alarm Message:** Arm Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Local Controller.

**Cause:** A FRAMING error occurred when receiving from the Arm Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 205d

**Alarm Message:** P/A Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Local Controller.

**Cause:** A FRAMING error occurred when receiving from the P/A Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 205e

**Alarm Message:** Arm Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Local Controller.

**Cause:** A PARITY error occurred in the data received from the Arm Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 205f

**Alarm Message:** P/A Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Local Controller.

**Cause:** A PARITY error occurred in the data received from the P/A Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 2060

**Alarm Message:** Arm Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Local Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the Arm Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 2061

**Alarm Message:** P/A Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Local Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the P/A Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 2062

**Alarm Message:** Arm Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are transmitted within the time limit when transmitting to the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when transmitting commands to the Arm Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2063

**Alarm Message:** P/A Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are transmitted within the time limit when transmitted to the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when transmitting commands to the P/A Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2064

**Alarm Message:** Arm Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data transmitted to the Local Controller is detected within the LENGTH.

**Cause:** The data transmitted to the Arm Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2065

**Alarm Message:** P/A Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data transmitted to the Local Controller is detected within the LENGTH.

**Cause:** The data received from the P/A Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 2066

**Alarm Message:** T/C Pressure Deviated from Stable

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2067

**Alarm Message:** T/C Pressure Deviated from Stable

**Recovery:** Pulls a vacuum on the Transfer Chamber and performs pressure control again.

**Cause:** The pressure in the Transfer Chamber deviated from stable condition at vacuum transfer. Stable condition is the range of 9.31 Pa (70 mTorr) of the designated pressure (T/C parameter "Pressure Control Setting Value") for 5 seconds consecutively.

**ALARM NUMBER:** 2068

**Alarm Message:** T/C Pressure Stabilization Timeout

**Recovery:** Execute vacuum pull on the Transfer Chamber and perform pressure control again.

**Cause:** The pressure control in the Transfer Chamber could not be stabilized to the designated pressure (T/C parameter "Pressure Control Setting Value") within the designated time (T/C parameter "Pressure Control Timeout") at vacuum transfer. Stable condition is the range of 9.31 Pa (70 mTorr) of the designated pressure for 2 seconds consecutively.

**ALARM NUMBER:** 2069

**Alarm Message:** T/C Pressure Stabilization Timeout

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 206a

**Alarm Message:** Select Transfer Abnormal End Wafer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 206b

**Alarm Message:** Select Transfer Abnormal End Wafer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 206c

**Alarm Message:** T/C Being Pressure Control

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 206d

**Alarm Message:** T/C Dry Pump Alarm

**Recovery:** Vacuum is executed again after initializing the etcher.

**Cause:** A dry pump alarm occurred when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=2 (High Active) UNITY-Ver.2: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 206e

**Alarm Message:** T/C Dry Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cancelled.

**Cause:** A dry pump alarm occurred. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=2 (High Active) UNITY-Ver.2: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 206f

**Alarm Message:** T/C Dry Pump Not in Normal

**Recovery:** Vacuum is performed again after initializing the etcher.

**Cause:** The dry pump was not in normal when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=4 (High Active) UNITY-Ver.2: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 2070

**Alarm Message:** T/C Dry Pump Not in Normal

**Recovery:** The error is cleared when the normal signal from the pump is confirmed.

**Cause:** The dry pump is not normal when operating T/C initialize, vacuum pull and rough vacuum ON. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=4 (High Active) UNITY-Ver.2: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 2071

**Alarm Message:** T/C Dry Pump Not in Normal

**Recovery:** The error is cleared when the normal signal from the Pump is confirmed.

**Cause:** The dry pump was not in normal. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=4 (High Active) UNITY-Ver.2: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 2072

**Alarm Message:** T/C Dry Pump Warning

**Recovery:** Vacuum is performed again after initializing the etcher.

**Cause:** A dry pump warning occurred when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=3 (High Active) UNITY-Ver.2: Group ID=1, Local ID=9 (Low Active)

**ALARM NUMBER:** 2073

**Alarm Message:** T/C Dry Pump Warning

**Recovery:** The error is cleared when the warning signal from the pump is cancelled.

**Cause:** A dry pump warning occurred. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=3 (High Active) UNITY-Ver.2: Group ID=1, Local ID=9 (Low Active)

**ALARM NUMBER:** 2074

**Alarm Message:** T/C Turbo Pump Alarm

**Recovery:** Vacuum is performed again after initializing the etcher.



**Cause:** A turbo pump alarm occurred when pulling a vacuum when initializing the etcher. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=5 (High Active) UNITY-Ver.2: Group ID=1, Local ID=11 (High Active)

**ALARM NUMBER:** 2075

**Alarm Message:** T/C Turbo Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cleared.

**Cause:** A turbo pump alarm occurred. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=5 (High Active) UNITY-Ver.2: Group ID=1, Local ID =11 (High Active)

**ALARM NUMBER:** 2076

**Alarm Message:** T/C Turbo Pump in Decelerate

**Recovery:** Vacuum is performed again after initializing the etcher.

**Cause:** A turbo pump alarm occurred when pulling a vacuum when initializing the etcher. The turbo pump was decelerating (rotation speed was decreasing). Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=8 (High Active) UNITY-Ver.2: Group I=1, Local ID=14 (High Active)

**ALARM NUMBER:** 2077

**Alarm Message:** T/C Turbo Pump in Decelerate

**Recovery:** The error is cleared when the deceleration signal from the pump is cancelled.

**Cause:** A turbo pump was decelerating (rotation speed was decreasing). The turbo pump decelerated by the turbo pump alarm or the dry pump alarm. Check the condition of the appropriate turbo pump and dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=8 (High Active) UNITY-Ver.2: Group ID=1, Local ID=14 (High Active)

**ALARM NUMBER:** 2078

**Alarm Message:** T/C Turbo Pump Not in Normal

**Recovery:** Vacuum is performed again after initializing the etcher.

**Cause:** The turbo pump was not in normal when initializing the etcher. The turbo pump will not be in normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=6 (High Active) UNITY-Ver.2: Group ID=1, Local ID=12 (High Active)

**ALARM NUMBER:** 2079

**Alarm Message:** T/C Turbo Pump Not in Normal

**Recovery:** The error is cleared when the normal signal from the pump is confirmed.

**Cause:** The turbo pump was not in normal. The turbo pump will not be in normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=6 (High Active) UNITY-Ver.2: Group ID=1, Local ID=12 (High Active)

**ALARM NUMBER:** 207a

**Alarm Message:** T/C Now Rough Vacuuming

**Recovery:** T/C rough vacuum is performed again.

**Cause:** The vacuum valve tried to open while rough vacuuming the T/C. (This alarm is displayed only when T/C Parameters "T/C Roughing Vacuum Line Configuration" is valid.)

**ALARM NUMBER:** 207b

**Alarm Message:** T/C Now Rough Vacuuming

**Recovery:** The alarm message is cleared when other action is performed in T/C Maintenance.

**Cause:** The vacuum valve tried to open while rough vacuuming the T/C with maintenance. (This alarm is displayed only when T/C Parameters "T/C Roughing Vacuum Line Configuration" is valid.)

**ALARM NUMBER:** 207c

**Alarm Message:** T/C Aux CPU Initialize Error

**Recovery:** Initialize again for the T/C Controller.

**Cause:** The response (Initialize End Response) to the initialize command requested to the T/C Controller exceeded the time limit (10 s). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 207d

**Alarm Message:** T/C Aux CPU Initial Setup Error

**Recovery:** Initialize again for the T/C Controller.

**Cause:** The response (Initialize End Response) to the initialize command requested to the T/C Controller exceeded the time limit (10 s). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 207e

**Alarm Message:** T/C Synchronous Timeout

**Recovery:** Pulls a vacuum again after etcher initialization.

**Cause:** Another chamber (HPC) using the Dry Pump waited for vacuum pull to be completed while pulling a vacuum during etcher initialization but it was not completed within the designated time (T/C parameter "Slow Exhaust End Pressure" used with the synchronous timeout).

**ALARM NUMBER:** 207f

**Alarm Message:** T/C Synchronous Timeout

**Recovery:** Press the [Vacuum] button again the process in the chamber using the Dry Pump is completed.

**Cause:** Another chamber (HPC) using the Dry Pump waited for vacuum pull to be completed while pulling a vacuum using the maintenance operation but it was not completed within the designated time (T/C parameter "Slow Exhaust End Pressure" used with the synchronous timeout).

**ALARM NUMBER:** 2080

**Alarm Message:** T/C Evacuation Timeout

**Recovery:** Executes vacuum pull again after initializing etcher. Press the [Vacuum] button again using the maintenance operation to execute vacuum pull.

**Cause:** The designated pressures (T/C parameter "Rough Vacuum End Pressure," "Slow

Exhaust End Pressure," "Vacuum Pull End Pressure") were not reached within designated times (T/C parameter "Rough Vacuum Pull Timeout," "Slow Exhaust Timeout," "Vacuum Pull Timeout") for the main exhaust and rough slow exhaust when initializing the etcher or pulling a vacuum using the maintenance operation.

**ALARM NUMBER:** 2081

**Alarm Message:** T/C Now Vacuuming

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2082

**Alarm Message:** T/C Vent Timeout

**Recovery:** Executes venting to atmosphere again after etcher initialization. Press the [Vent] button to vent to atmosphere using the maintenance operation.

**Cause:** The designated pressure (C/C parameter "Atmosphere Vent Timeout") was not reached within the designated time (C/C parameter "Atmosphere Vent End Pressure") when initializing the etcher or venting to atmosphere using the maintenance operation.

**ALARM NUMBER:** 2083

**Alarm Message:** T/C Valve Cannot Open/Close

**Recovery:** Vents to atmosphere again if all exhaust system valves are closed after initialization. Use the maintenance operation to close T01/T02 valves and execute vent to atmosphere again.

**Cause:** Atmosphere vent could not started. because the N2 vent valve (T05 valve) or slow vent valve could not be opened because an exhaust system valve (T01/T02 valves) were open when initializing the etcher or venting to atmosphere using the maintenance operation.

**ALARM NUMBER:** 2084

**Alarm Message:** ARM Move-in Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2085

**Alarm Message:** ARM Move-out Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2086

**Alarm Message:** T/C Air Pressure Dropped

**Recovery:** The error is automatically cleared when the system air pressure dropped interlock is cancelled.

**Cause:** A system air pressure dropped interlock was detected. Check the system air supply pressure. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when turning off the Interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=1, Local ID=33 (High Active)

**ALARM NUMBER:** 2087

**Alarm Message:** T/C Pure N2 Pressure Dropped

**Recovery:** The error is automatically cleared when the T/C pure N2 pressure is restored.

**Cause:** A Pure N2 pressure dropped interlock was detected before initialization. Check the system pure N2 supply pressure. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 2088

**Alarm Message:** T/C Dry N2 Pressure Dropped

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 2089

**Alarm Message:** T/C TMP Cooling Water Flow Rate Dropped

**Recovery:** The error is automatically cleared when the Turbo pump cooling water flow amount dropped interlock is cancelled.

**Cause:** A Turbo pump cooling water flow amount dropped interlock was detected. Check the Turbo pump cooling water flow amount. Check from the Adjustment Terminal to

check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=8 (High Active) UNITY-Ver. 2: Group ID=1, Local ID=14 (High Active)

**ALARM NUMBER:** 208a

**Alarm Message:** T/C Interlock-Air Pressure Dropped (Reboot)

**Recovery:** The error is automatically cleared when the system air pressure dropped interlock is cancelled.

**Cause:** A system air pressure dropped interlock was detected during transfer. Check the system air supply pressure. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when turning off the Interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=1, Local ID=33 (High Active)

**ALARM NUMBER:** 208b

**Alarm Message:** T/C Panel Open Interlock (Reboot)

**Recovery:** Close the T/C Panel and restart the system.

**Cause:** An etcher panel open Interlock was detected. Check the condition of the etcher panel switches or check the Pure N2 pressure switch. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=50 (Low Active) (Panel open action) UNITY-Ver. 2: Group ID=1, Local ID=42 (Low Active) (Panel open action)

**ALARM NUMBER:** 208c

**Alarm Message:** Cannot Action Due to Interfer in Wafer

**Recovery:** Pressing [Accept] will delete the message sub-screen.

**Cause:** Arm action was terminated because touching of the wafer on the Arm occurred in the Maintenance Mode. Check the Gap, Hoist and Pin positions of the destination for the Arm action.

**ALARM NUMBER:** 208d

**Alarm Message:** ARM Data Error

**Recovery:** Restart the system.

**Cause:** Command data fields were abnormal when receiving commands with the Arm Local Controller. (Local Controller Internal Error Code: 09h) Check the display of the

Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 208e

**Alarm Message:** P/A Data Error

**Recovery:** Restart the system.

**Cause:** Command data fields were abnormal when receiving commands with the P/A Local Controller. (Local Controller Internal Error Code: 09h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 208f

**Alarm Message:** ARM Position Data Error

**Recovery:** Initialize the area for position data storage with the Off-line mode.

**Cause:** The area was already damaged when storing the position data with the Arm Local Controller. (Local Controller Internal Error Code: 24h)

**ALARM NUMBER:** 2090

**Alarm Message:** P/A Position Data Error

**Recovery:** Initialize the area for position data storage with the Off-line mode.

**Cause:** The area was already damaged when storing the position data with the P/A Local Controller. (Local Controller Internal Error Code: 24h)

**ALARM NUMBER:** 2091

**Alarm Message:** ARM Work Area Not Enough

**Recovery:** Turn ON the power and download.

**Cause:** There is not enough RAM for work on the Arm Local Controller. (Local Controller Internal Error Code: 25h)

**ALARM NUMBER:** 2092

**Alarm Message:** P/A Work Area Not Enough

**Recovery:** Turn ON the power and download.

**Cause:** There is not enough RAM for work on the P/A Local Controller. (Local Controller Internal Error Code: 25h)

**ALARM NUMBER:** 2093

**Alarm Message:** ARM Battery Voltage Dropped

**Recovery:** The alarm message is cleared by replacing or recharging the battery.

**Cause:** The battery voltage dropped on the Arm Local Controller or worn out.

**ALARM NUMBER:** 2094

**Alarm Message:** P/A Battery Voltage Dropped

**Recovery:** The alarm message is cleared by replacing or recharging the battery.

**Cause:** The battery voltage dropped on the P/A Local Controller or worn out.

**ALARM NUMBER:** 2095

**Alarm Message:** ARM Checksum Error

**Recovery:** Restart the system.

**Cause:** A checksum error occurred with the Arm Local Controller reception data. (Local Controller Internal Error Code: 02h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2096

**Alarm Message:** P/A Checksum Error

**Recovery:** Restart the system.

**Cause:** A checksum error occurred with the P/A Local Controller reception data. (Local Controller Internal Error Code: 02h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 2097

**Alarm Message:** ARM File Exists Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore.



**Cause:** The APL program was already input when restoring the APL program (file) with the Arm Local Controller. (Local Controller Internal Error Code: 21h)

**ALARM NUMBER:** 2098

**Alarm Message:** P/A File Exists Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore.

**Cause:** The APL program was already input when restoring the APL program (file) with the P/A Local Controller. (Local Controller Internal Error Code: 21h)

**ALARM NUMBER:** 2099

**Alarm Message:** ARM RAM Disk Fail

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore.

**Cause:** There is no space in the RAM Disk and the file cannot be stored with the Arm Local Controller. (Local Controller Internal Error Code: 23h)

**ALARM NUMBER:** 209a

**Alarm Message:** P/A RAM Disk Fail

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore.

**Cause:** There RAM Disk is full and the file cannot be stored with the P/A Local Controller. (Local Controller Internal Error Code: 23h)

**ALARM NUMBER:** 209b

**Alarm Message:** ARM Interpreter Error

**Recovery:** Restore the appropriate APL program with the Off-line mode.

**Cause:** An Arm Local Controller APL Program argument, 0 Divisor and uninput position occurred. (Local Controller Internal Error Code: 05h)

**ALARM NUMBER:** 209c

**Alarm Message:** P/A Interpreter Error

**Recovery:** Restore the appropriate APL program with the Off-line mode.

**Cause:** Argument, 0 Divisor and uninput position occurred with the P/A Local Controller APL program. (Local Controller Internal Error Code: 05h)

**ALARM NUMBER:** 209d

**Alarm Message:** ARM Message Aborted

**Recovery:** Restart the system.

**Cause:** The command transmitted from the HOST was determined to be unexecutable by the Arm Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 209e

**Alarm Message:** P/A Message Aborted

**Recovery:** Restart the system.

**Cause:** The command transmitted from the HOST was determined to be unexecutable by the P/A Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 209f

**Alarm Message:** ARM Power Off Secondary P/S

**Recovery:** Turn the power to the motor ON and perform the RUN command (start up the APL program).

**Cause:** The RUN command (APL program start-up) was received while the motor power was OFF. (Local Controller Internal Error Code: 06h)

**ALARM NUMBER:** 20a0

**Alarm Message:** P/A Power Off Secondary P/S

**Recovery:** Turn the power to the motor ON and perform the RUN command (start up the APL program).

**Cause:** RUN command (APL program start-up) was transmitted when the power to the motor was OFF. (Local Controller Internal Error Code: 06h)

**ALARM NUMBER:** 20a1

**Alarm Message:** ARM No File Detected

**Recovery:** Back up after re-checking the APL program name.

**Cause:** The APL program did not exist when backing up the APL program (file) designated by the Arm Local Controller. (Local Controller Internal Error Code: 20h).

**ALARM NUMBER:** 20a2

**Alarm Message:** P/A No File Detected

**Recovery:** Back up after rechecking the APL program name.

**Cause:** The APL program did not exist when making a back-up of the designated APL program (file) with the P/A Local Controller. (Local Controller Internal Error Code: 20h).

**ALARM NUMBER:** 20a3

**Alarm Message:** ARM Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The priority register command reception failed 10 times consecutively on the Arm Local Controller.

**ALARM NUMBER:** 20a4

**Alarm Message:** P/A Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The priority register command reception failed 10 times consecutively on the P/A Local Controller.

**ALARM NUMBER:** 20a5

**Alarm Message:** ARM Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the Arm Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 20a6

**Alarm Message:** P/A Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the P/A Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 20a7

**Alarm Message:** ARM Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** The time until the transmission of the next character exceeded the designated time (20 m/s) on the Arm Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 20a8

**Alarm Message:** P/A Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** The time until the transmission of the next character exceeded the designated time (20 m/s) on the P/A Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 20a9

**Alarm Message:** ARM Undefined Message Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the Arm Local Controller. (Local Controller Internal Error Code: 03h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 20aa

**Alarm Message:** P/A Undefined Message Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the P/A Local Controller. (Local Controller Internal Error Code: 03h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 20ab

**Alarm Message:** ARM Checksum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Local Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the Arm Local Controller. Check the connection of the connectors on the Local Controller.

**ALARM NUMBER:** 20ac

**Alarm Message:** P/A Checksum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Local Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the P/A Local Controller. Check the connection of the connectors on the Local Controller.

**ALARM NUMBER:** 20ad

**Alarm Message:** ARM Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time limit when receiving from the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the Arm Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 20ae

**Alarm Message:** P/A Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time limit when receiving from the Local Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the P/A Local Controller. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 20af

**Alarm Message:** ARM Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Local Controller is detected within the LENGTH.

**Cause:** The data received from the Arm Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local

Controller.

**ALARM NUMBER:** 20b0

**Alarm Message:** P/A Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Local Controller is detected within the LENGTH.

**Cause:** The data received from the P/A Local Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Local Controller.

**ALARM NUMBER:** 20b1

**Alarm Message:** ARM No Response Received

**Recovery:** The alarm is cleared when the response can be received from the Local Controller.

**Cause:** The Status Response was not received from the Arm Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b2

**Alarm Message:** P/A No Response Received

**Recovery:** The alarm is cleared when the response can be received from the Local Controller.

**Cause:** The Status Response was not received from the P/A Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b3

**Alarm Message:** ARM Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Local Controller.

**Cause:** A FRAMING error occurred when receiving from the Arm Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b4

**Alarm Message:** P/A Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Local Controller.

**Cause:** A FRAMING error occurred when receiving from the P/A Local Controller 3 times consecutively (1 s x 3). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b5

**Alarm Message:** ARM Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Local Controller.

**Cause:** A PARITY error occurred in the data received from the Arm Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b6

**Alarm Message:** P/A Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Local Controller.

**Cause:** A PARITY error occurred in the data received from the P/A Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b7

**Alarm Message:** ARM Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Local Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the Arm Local Controller 3 times consecutively. Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20b8

**Alarm Message:** P/A Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Local Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the P/A Local Controller 3 times consecutively. Check the connections of the connectors on the Local

Controller.

**ALARM NUMBER:** 20b9

**Alarm Message:** Select Transfer Abnormal End Wafer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20ba

**Alarm Message:** Select Transfer Abnormal End Wafer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20bb

**Alarm Message:** T/C Controller Fan Stopped

**Recovery:** Replace the Fan.

**Cause:** The T/C Controller Fan Stopped. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. Unity-Ver. 2: Group ID=1, Local ID=47 (Low Active) (T/C Fan Alarm ON)

**ALARM NUMBER:** 20bc

**Alarm Message:** ARM Indexer (1) Move-in Error

**Recovery:** Indexer 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to Indexer 1 during wafer transfer. (The wafer was confirmed by the wafer sensor at the Indexer 1 Idle Position.) When there is a wafer on the fork: Check the Indexer 1 and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the Indexer 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20bd

**Alarm Message:** ARM Indexer (2) Move-in Error

**Recovery:** Indexer 2 wafer sensor will be rechecked.



**Cause:** The wafer could not be transferred in to Indexer 2 during wafer transfer. (The wafer was confirmed by the wafer sensor at the Indexer 2 Idle Position.) When there is a wafer on the fork: Check the Indexer 2 and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the Indexer 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20be

**Alarm Message:** ARM P/A Move-in Error

**Recovery:** P/A wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to P/A during wafer transfer. (The wafer was confirmed by the wafer sensor at the P/A Idle Position.) When there is a wafer on the fork: Check the P/A and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the P/A Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20bf

**Alarm Message:** ARM Buffer Move-in Error

**Recovery:** Buffer wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to the Buffer during wafer transfer. (The wafer could not be checked by the wafer sensor on the Buffer.) When there is a wafer on the fork: Check the Buffer and Arm teaching. When there is no wafer on the fork: Check the wafer sensor on the Buffer. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c0

**Alarm Message:** ARM P/C (1) Move-in Error

**Recovery:** P/C 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to the P/C 1 during wafer transfer. (The wafer was confirmed by the wafer sensor at the P/C 1 Idle Position.) When there is a wafer on the fork: Check the P/C 1 and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the P/C 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c1

**Alarm Message:** ARM P/C (2) Move-in Error

**Recovery:** P/C 2 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to the P/C 2 during wafer transfer. (The wafer was confirmed by the wafer sensor at the P/C 2 Idle Position.) When there is a wafer on the fork: Check the P/C 2 and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the P/C 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c2

**Alarm Message:** ARM P/C (3) Move-in Error

**Recovery:** P/C 3 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred in to the P/C 3 during wafer transfer. (The wafer was confirmed by the wafer sensor at the P/C 3 Idle Position.) When there is a wafer on the fork: Check the P/C 3 and Arm teaching. When there is no wafer on the fork: Check the wafer sensor at the P/C 3 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c3

**Alarm Message:** ARM Indexer (1) Move-out Error

**Recovery:** Indexer 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from Indexer 1 during wafer transfer. (The wafer could not be confirmed by the wafer sensor at the Indexer 1 Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the Indexer 1 Idle Position. When there is no wafer on the fork: Check the Indexer 1 and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c4

**Alarm Message:** ARM Indexer (2) Move-out Error

**Recovery:** Indexer 2 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from Indexer 2 during wafer transfer. (The wafer could not be confirmed by the wafer sensor at the Indexer 2 Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the Indexer 2 Idle Position. When there is no wafer on the fork: Check the Indexer 2 and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c5

**Alarm Message:** ARM P/A Move-out Error

**Recovery:** P/A wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from P/A during wafer transfer. (The wafer could not be confirmed by the wafer sensor at the P/A Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the P/A Idle Position. When there is no wafer on the fork: Check the P/A and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c6

**Alarm Message:** ARM Buffer Move-out Error

**Recovery:** Buffer wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from the Buffer during wafer transfer. (The wafer was confirmed by the wafer sensor on the Buffer.) When there is a wafer on the fork: Check the wafer sensor on the Buffer. When there is no wafer on the fork: Check the Buffer and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c7

**Alarm Message:** ARM P/C (1) Move-out Error

**Recovery:** P/C 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from P/C 1 during wafer transfer. (The wafer was not confirmed by the wafer sensor at the P/C 1 Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the P/C 1 Idle Position. When there is no wafer on the fork: Check the P/C 1 and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c8

**Alarm Message:** ARM P/C (2) Move-out Error

**Recovery:** P/C 2 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from P/C 2 during wafer transfer. (The wafer could not be checked by the wafer sensor at the P/C 2 Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the P/C 2 Idle Position. When there is no

wafer on the fork: Check the P/C 2 and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20c9

**Alarm Message:** ARM P/C (3) Move-out Error

**Recovery:** P/C 3 wafer sensor will be rechecked.

**Cause:** The wafer could not be transferred out from P/C 3 during wafer transfer. (The wafer was not confirmed by the wafer sensor at the P/C 3 Idle Position.) When there is a wafer on the fork: Check the wafer sensor at the P/C 3 Idle Position. When there is no wafer on the fork: Check the P/C 3 and Arm teaching. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20ca

**Alarm Message:** ARM Indexer (1) W. P. Wafer Lost

**Recovery:** Indexer 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be confirmed before transferring into Indexer 1. (The wafer was not confirmed by the wafer sensor at the Indexer 1 Idle Position.) Check the wafer sensor at the Indexer 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20cb

**Alarm Message:** ARM Indexer (2) W. P. Wafer Lost

**Recovery:** Indexer 2 wafer sensor will be rechecked.

**Cause:** The wafer could not be confirmed before transferring into Indexer 2. (The wafer was not confirmed by the wafer sensor at the Indexer 2 Idle Position.) Check the wafer sensor at the Indexer 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20cc

**Alarm Message:** ARM P/A S. P. Sensor Data Error

**Recovery:** Checks the P/A Idle Position Wafer Sensor again.

**Cause:** Could not transfer the wafer out from the P/A during wafer transfer. (The Wafer Sensor at the P/A Idle Position could not detect the wafer.) If there is a wafer on the

**Fork:** Check the P/A Idle Position Wafer Sensor. The green LED lights when the Wafer Sensor power is turned ON and the red LED lights when there is an obstruction recognized, such as a wafer, etc. When there is no wafer on the Fork: Check the teaching for the P/A and the Arm.

**ALARM NUMBER:** 20cd

**Alarm Message:** ARM Buffer S. P. Sensor Data Error

**Recovery:** Checks the Buffer Idle Position Wafer Sensor again.

**Cause:** Could not transfer the wafer out from the Buffer during wafer transfer. (The Wafer Sensor at the Buffer Idle Position could not detect the wafer.) If there is a wafer in the Fork: Check the Buffer Idle Position Wafer Sensor. The green LED lights when the Wafer Sensor power is turned ON and the red LED lights when there is an obstruction recognized, such as a wafer, etc. When there is no wafer on the Fork: Check the teaching for the Buffer and the Arm.

**ALARM NUMBER:** 20ce

**Alarm Message:** ARM P/C (1) W. P. Wafer Lost

**Recovery:** P/C 1 wafer sensor will be rechecked.

**Cause:** The wafer could not be confirmed before transferring into P/C 1. (The wafer was not confirmed by the wafer sensor at the P/C 1 Idle Position.) Check the wafer sensor at the P/C 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20cf

**Alarm Message:** ARM P/C (2) W. P. Wafer Lost

**Recovery:** P/C 2 wafer sensor will be rechecked.

**Cause:** The wafer could not be confirmed before transferring into P/C 2. (The wafer was not confirmed by the wafer sensor at the P/C 2 Idle Position.) Check the wafer sensor at the P/C 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d0

**Alarm Message:** ARM P/C (3) W. P. Wafer Lost

**Recovery:** P/C 3 wafer sensor will be rechecked.

**Cause:** The wafer could not be confirmed before transferring into P/C 3. (The wafer was

not confirmed by the wafer sensor at the P/C 3 Idle Position.) Check the wafer sensor at the P/C 3 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d1

**Alarm Message:** ARM Indexer (1) W. P. Sensor Data Error

**Recovery:** Indexer 1 wafer sensor will be rechecked.

**Cause:** The wafer was confirmed before transferring out from Indexer 1. (The wafer sensor confirmed the wafer at the Indexer 1 Idle Position.) Check the wafer sensor at the Indexer 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d2

**Alarm Message:** ARM Indexer (2) W. P. Sensor Data Error

**Recovery:** Indexer 2 wafer sensor will be rechecked.

**Cause:** The wafer was confirmed before transferring out from Indexer 2. (The wafer sensor confirmed the wafer at the Indexer 2 Idle Position.) Check the wafer sensor at the Indexer 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d3

**Alarm Message:** ARM P/A S. P. Sensor Data Error

**Recovery:** Checks the P/A Idle Position Wafer Sensor again.

**Cause:** Could not transfer the wafer in to the P/A during wafer transfer. (The Wafer Sensor at the P/A Idle Position detected a wafer.) If there is a wafer on the Fork: Check the teaching for the P/A and the Arm. When there is no wafer on the Fork: Check the P/A Idle Position Wafer Sensor. The green LED lights when the Wafer Sensor power is turned ON and the red LED lights when there is an obstruction recognized, such as a wafer, etc.

**ALARM NUMBER:** 20d4

**Alarm Message:** ARM Buffer S. P. Sensor Data Error

**Recovery:** Checks the Buffer Idle Position Wafer Sensor again.

**Cause:** Could not transfer the wafer in to the Buffer during wafer transfer. (The Wafer Sensor at the Buffer Idle Position detected a wafer.) If there is a wafer in the Fork: Check

the teaching for the Buffer and the Arm. When there is no wafer on the Fork: Check the Buffer Idle Position Wafer Sensor. The green LED lights when the Wafer Sensor power is turned ON and the red LED lights when there is an obstruction recognized, such as a wafer, etc.

**ALARM NUMBER:** 20d5

**Alarm Message:** ARM P/C (1) W. P. Sensor Data Error

**Recovery:** P/C 1 wafer sensor will be rechecked.

**Cause:** The wafer was confirmed before transferring out from P/C 1. (The wafer sensor confirmed the wafer at the P/C 1 Idle Position.) Check the wafer sensor at the P/C 1 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d6

**Alarm Message:** ARM P/C (2) W. P. Sensor Data Error

**Recovery:** P/C 2 wafer sensor will be rechecked.

**Cause:** The wafer was confirmed before transferring out from P/C 2. (The wafer sensor confirmed the wafer at the P/C 2 Idle Position.) Check the wafer sensor at the P/C 2 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d7

**Alarm Message:** ARM P/C (3) W. P. Sensor Data Error

**Recovery:** P/C 3 wafer sensor will be rechecked.

**Cause:** The wafer was confirmed before transferring out from P/C 3. (The wafer sensor confirmed the wafer at the P/C 3 Idle Position.) Check the wafer sensor at the P/C 3 Idle Position. The green LED lights when the power is turned ON and the red LED lights when wafers or other obstacles are recognized.

**ALARM NUMBER:** 20d8

**Alarm Message:** P/A Limit Over Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20d9

**Alarm Message:** T/C Water Leakage

**Recovery:** The alarm is automatically cleared when the water leak detector sensor stops reacting.

**Cause:** The water leak detector reacted to leaks of the cooling water to the RF and Pumps into the system. Check from the Adjustment Terminal to check the sensor. An error occurs with the following conditions. UNITY-Ver.2: Group ID=1, Local ID=104 (Low Active)

**ALARM NUMBER:** 20da

**Alarm Message:** T/C Aux CPU Initialize Error

**Recovery:** Requests Initialize again to the T/C Pump Controller.

**Cause:** The response (Initialize End Response) to the initialize command requested to the T/C Pump Controller exceeded the time limit (10 s). Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 20db

**Alarm Message:** T/C Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time limit when receiving from the Pump Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the T/C Pump Controller. Check the connections of the connectors of the Pump Controllers.

**ALARM NUMBER:** 20dc

**Alarm Message:** T/C Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Pump Controller is detected within the LENGTH.

**Cause:** The data received from the T/C Pump Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Pump Controller.

**ALARM NUMBER:** 20dd

**Alarm Message:** T/C Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from



the Pump Controller.

**Cause:** A FRAMING error occurred when receiving from the T/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 20de

**Alarm Message:** T/C Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Pump Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the T/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 20df

**Alarm Message:** T/C Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Pump Controller.

**Cause:** A PARITY error occurred in the data received from the T/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 20e0

**Alarm Message:** T/C Checksum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Pump Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the T/C Pump Controller. Check the connection of the connectors on the Pump Controller.

**ALARM NUMBER:** 20e1

**Alarm Message:** Depth Monitor Not Ready

**Recovery:** Checks the READY signal again if the error occurred during initialization. Starts measurements if the error occurred during measurements. [Abort] - Ignores the READY signal if the error occurred during initialization and ends initialization. Terminates measurements if the error occurred during measurements and transfers the wafer out.

**Cause:** The DEPTH MONITOR READY signal is OFF. Check the READY signal is

ON. Check from the Adjustment Terminal to check the READY signal. An error will occur with the following conditions. Group ID=1, Local ID =107

**ALARM NUMBER:** 20e2

**Alarm Message:** Depth Monitor Not Ready

**Recovery:** The appropriate command cannot be executed but you can continue with maintenance by pressing the [Accept] button on the sub-screen.

**Cause:** The DEPTH MONITOR READY signal is OFF. Check the READY signal is ON. Check from the Adjustment Terminal to check the READY signal. An error will occur with the following conditions. Group ID=1, Local ID=107

**ALARM NUMBER:** 20e3

**Alarm Message:** Depth Chamber Lifter Pin Up Time Out

**Recovery:** Raises the lifter pin again. [Ignore] Performs DEPTH processing without raising the lifter pin.

**Cause:** DEPTH CHAMBER lifter pin up action was not detected by the up sensor within the prescribed time (30 s). Check if the up sensor is functioning normally. Check from the Adjustment Terminal to check the sensor. Group ID=1, Local ID=99

**ALARM NUMBER:** 20e4

**Alarm Message:** Depth Chamber Lifter Pin Up Time Out

**Recovery:** The appropriate command cannot be executed but you can continue Maintenance by pressing [Accept] on the sub-screen.

**Cause:** DEPTH CHAMBER lifter pin up action was not detected by the up sensor within the prescribed time (30 s). Check if the up sensor is functioning normally. Check from the Adjustment Terminal to check the sensor. Group ID=1, Local ID=99

**ALARM NUMBER:** 20e5

**Alarm Message:** Depth Chamber Lifter Pin Down Time Out

**Recovery:** Lowers the lifter pin again. [Ignore] Performs wafer transfer out without lowering the lifter pin.

**Cause:** DEPTH CHAMBER lifter pin down action was not detected by the down sensor within the prescribed time (30 s). Check if the down sensor is functioning normally. Check from the Adjustment Terminal to check the sensor. Group ID=1, Local ID=100

**ALARM NUMBER:** 20e6

**Alarm Message:** Depth Chamber Lifter Pin Down Time Out

**Recovery:** The appropriate command cannot be executed but you can continue Maintenance by pressing [Accept] on the sub-screen.

**Cause:** DEPTH CHAMBER lifter pin down action was not detected by the Down sensor within the prescribed time (30 s). Check if the down sensor is functioning normally. Check from the Adjustment Terminal to check the sensor. Group ID=1, Local ID=100

**ALARM NUMBER:** 20e7

**Alarm Message:** Depth Chamber Measurement Time Out

**Recovery:** Starts measurements again. [Abort] - Terminates measurements and transfers the wafer out.

**Cause:** DEPTH CHAMBER measurement processing did not end within the prescribed time (10 min). Check if the END signal is functioning normally. Check from the Adjustment Terminal to check the signal. Group ID=1, Local ID=106

**ALARM NUMBER:** 20e8

**Alarm Message:** Depth Chamber Measurement Time Out

**Recovery:** The appropriate command cannot be executed but you can continue Maintenance by pressing [Accept] on the sub-screen.

**Cause:** DEPTH CHAMBER measurement processing did not end within the prescribed time (10 min). Check if the END signal is functioning normally. Check from the Adjustment Terminal to check the signal. Group ID=1, Local ID=106

**ALARM NUMBER:** 20e9

**Alarm Message:** Gas Leakage - Detector 1

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 1. Check if an alarm has occurred in the gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=43 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 20ea

**Alarm Message:** Gas Leakage - Detector 2

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 2. Check if an alarm has occurred in the gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=44 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=35 (High Active)

**ALARM NUMBER:** 20eb

**Alarm Message:** Gas Leakage - Detector 3

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 3. Check if an alarm has occurred in the gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 20ec

**Alarm Message:** Gas Leakage - Detector 4

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 4. Check if an alarm has occurred in the gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 20ed

**Alarm Message:** Gas Leakage - Detector 5

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 5. Check if an alarm has occurred in the gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=47 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 20ee

**Alarm Message:** Gas Leakage - Detector 6

**Recovery:** The alarm is automatically cleared when the gas detector is cancelled.

**Cause:** A gas leak was detected by gas detector 6. Check if an alarm has occurred in the

gas detector that is connected. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (Low Active) UNITY-Ver.2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 20ef

**Alarm Message:** T/C Panel Open Interlock

**Recovery:** Close the T/C Panel and restart the system.

**Cause:** An etcher panel open Interlock was detected. Check the condition of the etcher's panels and check the Pure N2 Pressure Switch. Check from the Adjustment Terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=50 (Low Active) (Panel open action) UNITY-Ver.2: Group ID=1, Local ID=42 (Low Active) (Panel open action)

**ALARM NUMBER:** 20f0

**Alarm Message:** T/C Aux CPU Initialize Error

**Recovery:** Initialize again for the T/C Controller.

**Cause:** The response (Initialize End Response) to the initialize command requested to the T/C Controller exceeded the time limit (10 s). Check the connections of the connectors on the Local Controller.

**ALARM NUMBER:** 20f1

**Alarm Message:** T/C Aux CPU Initial Setup Error

**Recovery:** Retries initialization of the T/C Controller.

**Cause:** T/C Controller Initialization failed.

**ALARM NUMBER:** 20f2

**Alarm Message:** ECC Controller Fan Stopped

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20f3

**Alarm Message:** ECC Controller Fan 1 Stopped

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20f4

**Alarm Message:** ECC Controller Fan 2 Stopped

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20f5

**Alarm Message:** ECC Controller Fan 3 Stopped

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20f6

**Alarm Message:** ARM Interlocked Due to P/A Condition

**Recovery:** [Accept] The message screen is cleared.

**Cause:** Arm action was stopped because the Arm action touched wafer on the P/A. The condition of the P/A where the interlocked occurred is as follows. P/A action in progress. When there is a wafer when there P/A hoist is DOWN.

**ALARM NUMBER:** 20f7

**Alarm Message:** P/A Interlocked Due to ARM Condition

**Recovery:** [Accept] The message screen is cleared.

**Cause:** P/A action was stopped because it touched the ARM. The condition of the ARM where the interlocked occurred is as follows. ARM action in progress. When there is a wafer on the P/A when the ARM is at a position other than the P/A Station Point.

**ALARM NUMBER:** 20f8

**Alarm Message:** T/C I/O Board Not Installed

**Recovery:** The alarm message is cleared when the T/C Slave Board is connected.

**Cause:** The T/C Slave Board is not connected.

**ALARM NUMBER:** 20f9

**Alarm Message:** T/C Illegal I/O Parameter

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 20fa

**Alarm Message:** C1 Manual Load Cassette Error

**Recovery:** [Abort] - Performs Load Sequence again.

**Cause:** A cassette was detected in the timing for no cassette or no cassette was detected in the timing for having a cassette in the C1 Load Sequence. Check if it is waiting for a cassette.

**ALARM NUMBER:** 20fb

**Alarm Message:** C1 Manual Load SW Error

**Recovery:** [Abort] - Performs Load Sequence again.

**Cause:** The Load Switch was not pressed within the prescribed time (etcher basic parameters "Load/Unload T2 Timeout") after the Load Switch lit in the C1 Load Sequence. Check the time setting (0 = No) and the Load Switch signal. Check from the Adjustment Terminal to check the signal. An error will occur with the following conditions. Group ID=1, Local ID=1

**ALARM NUMBER:** 20fc

**Alarm Message:** C1 Manual Unload Cassette Error

**Recovery:** [Abort] - Performs Unload Sequence again.

**Cause:** A cassette was detected in the timing for no cassette or no cassette was detected in the timing for having a cassette in the C1 Unload Sequence. Check if it is waiting for a cassette.

**ALARM NUMBER:** 20fd

**Alarm Message:** C1 Manual Unload SW Error

**Recovery:** [Abort] - Performs Unload Sequence again.

**Cause:** The Unload Switch was not pressed within the prescribed time (etcher basic parameters "Load/Unload T2 Timeout") after the Load Switch lit in the C1 Unload Sequence. Check the time setting (0 = No) and the Unload Switch signal. Check from the

Adjustment Terminal to check the signal. An error will occur with the following conditions. Group ID=1, Local ID=121

**ALARM NUMBER:** 20fe

**Alarm Message:** C2 Manual Load Cassette Error

**Recovery:** [Abort] - Performs Load Sequence again.

**Cause:** A cassette was detected in the timing for no cassette or no cassette was detected in the timing for having a cassette in the C2 Load Sequence. Check if it is waiting for a cassette.

**ALARM NUMBER:** 20ff

**Alarm Message:** C2 Manual Load SW Error

**Recovery:** [Abort] - Performs Load Sequence again.

**Cause:** The Load Switch was not pressed within the prescribed time (etcher basic parameters "Load/Unload T2 Timeout") after the Load Switch lit in the C2 Load Sequence. Check the time setting (0 = No) and the Load Switch signal. Check from the Adjustment Terminal to check the signal. An error will occur with the following conditions. Group ID=1, Local ID=122

**ALARM NUMBER:** 2100

**Alarm Message:** C2 Manual Unload Cassette Error

**Recovery:** [Abort] - Performs Unload Sequence again.

**Cause:** A cassette was detected in the timing for no cassette or no cassette was detected in the timing for having a cassette in the C2 Unload Sequence. Check if it is waiting for a cassette.

**ALARM NUMBER:** 2101

**Alarm Message:** C2 Manual Unload SW Error

**Recovery:** [Abort] - Performs Unload Sequence again.

**Cause:** The Unload Switch was not pressed within the prescribed time (etcher basic parameters "Load/Unload T2 Timeout") after the Load Switch lit in the C2 Unload Sequence. Check the time setting (0 = No) and the Unload Switch signal. Check from the Adjustment Terminal to check the signal. An error will occur with the following conditions. Group ID=1, Local ID=124



**ALARM NUMBER:** 2102

**Alarm Message:** Smoke Detect

**Recovery:** The alarm is automatically cleared when the smoke detecting sensor stops detecting.

**Cause:** Smoke was detected inside system by the smoke sensor. Check from the Adjustment Terminal to check the signal. An error will occur with the following conditions. UNITY Ver. 2: Group ID=1, Local ID=45 (High Active)

**ALARM NUMBER:** 2103

**Alarm Message:** ARM Interlocked Due to P/A Condition

**Recovery:** Resend command to Arm Local Controller.

**Cause:** An interfere interlock occurred as there is a wafer on the P/A and the P/A is in the lowered state when initializing the arm. Remove the wafer from the P/A.

**ALARM NUMBER:** 2104

**Alarm Message:** Wafer ID Reader Read Status Error

**Recovery:** Reads Wafer ID again. [Abort] - Does not read Wafer ID and shifts to transfer out sequence.

**Cause:** Wafer ID Reader failed in reading Wafer ID. Check if the wafer ID read-in was completed successfully using the Wafer ID Reader Terminal.

**ALARM NUMBER:** 2105

**Alarm Message:** Wafer ID Reader Response Timeout

**Recovery:** Re-reads Wafer ID after reset command is transmitted. [Abort] - Does not read Wafer ID and shifts to transfer out sequence.

**Cause:** The response to the Wafer ID reader Command transmission was not received within the prescribed time (30 s). Check if the Wafer ID Reader is operating normally using the Wafer ID Reader Terminal.

**ALARM NUMBER:** 2106

**Alarm Message:** Wafer ID Reader Communication Error

**Recovery:** Re-reads Wafer ID after reset command is transmitted. [Abort] - Does not read Wafer ID and shifts to transfer out sequence.

**Cause:** An error occurred in communications with the Wafer ID Reader. Check if the Wafer ID Reader is operating normally using the Wafer ID Reader Terminal.

**ALARM NUMBER:** 2107

**Alarm Message:** Wafer ID Reader Check Sum Error

**Recovery:** Re-reads Wafer ID after reset command is transmitted. [Abort] - Does not read Wafer ID and shifts to transfer out sequence.

**Cause:** A checksum error occurred in communications with the Wafer ID Reader. Check it. Check if the Wafer ID Reader is operating normally using the Wafer ID Reader Terminal.

**ALARM NUMBER:** 2108

**Alarm Message:** Wafer ID Reader Receive Data Error

**Recovery:** Re-reads Wafer ID. [Abort] - Does not read Wafer ID and shifts to transfer out sequence.

**Cause:** Wafer ID Reader reception data was different than the data expected. Check if the Wafer ID reader is operating normally using the Wafer ID Reader Terminal.

**ALARM NUMBER:** 2109

**Alarm Message:** P/A Interlocked Due to ARM Condition

**Recovery:** Re-transfers in the P/A wafer and performs alignment.

**Cause:** P/A action was terminated because there was contact with the Arm during P/A movement. The status of the P/A where the Interlock occurred is either during P/A action, or when there was a wafer on the P/A when the Arm was anywhere but the P/A Station Point.

**ALARM NUMBER:** 210a

**Alarm Message:** T/C EXCOM board error occurred (Reboot)

**Recovery:** Restart the system.

**Cause:** A bus address error occurred when initializing the COM board. Check if the COM board is connected properly. Also, check if the fuse of the COM board is not cut. Check the settings of the jumper (JP) and dip switch (DSW) of the COM board. Settings of T/C COM Board JP1JP2JP3JP4JP5 JP6 1-2:OPEN1-2:SHORT1-2:SHORT1-2:OPEN1-2:OPEN 1-2:OPEN 123 4 5 DSW1 ON ON ON ON ON OFF DSW2ON ON OFF ON ON DSW3 ON ON ON

OFF OFF DSW4 ON ON ON OFF ON DSW5 ON ON  
ON ON OFF

**ALARM NUMBER:** 210b

**Alarm Message:** T/C Back Pressure of Turbo Pump Risen Up

**Recovery:** Reset the pump alarm from the Switch Board on the front of the machine and restart the pump.

**Cause:** The cause could be the Dry Pump. Check the Dry Pump alarms or check for leaks.

**ALARM NUMBER:** 210c

**Alarm Message:** T/C The Back Up of Turbo Pump Failed

**Recovery:** Reset the pump alarm from the Switch Board on the front of the machine and restart the pump.

**Cause:** It could be that the Turbo Pump back valve has been shut for a long time.

**ALARM NUMBER:** 210d

**Alarm Message:** T/C Vacuum Status Breaks

**Recovery:** The error is automatically cleared when a vacuum is pulled or vented to atmosphere.

**Cause:** The pressure rose to more than 200 Pa (1500 mTorr) after pulling a vacuum. It is possible that the N2 Supply Valve is open or there is a leak.

**ALARM NUMBER:** 210e

**Alarm Message:** T/C Atmosphere Status Breaks

**Recovery:** The error is automatically cleared when a vacuum is pulled or vented to atmosphere.

**Cause:** The pressure dropped to below 70000 Pa (52.6 Torr) after venting to atmosphere. It is possible that one of the exhaust valves is open.

**ALARM NUMBER:** 210f

**Alarm Message:** P/A Interlocked Due to ARM Condition

**Recovery:** Check the arm position, and execute alignment.

**Cause:** Before alignment was executed, the arm position was obstructed. Move the arm to a position outside P/A.

**ALARM NUMBER:** 2110

**Alarm Message:** Earthquake Detection (Pause)

**Recovery:** When the earthquake ends, the error is automatically cleared.

**Cause:** An earthquake was detected. Processing in all process units stops. Transfer of wafers in and out of all units is disabled. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Group ID=1, Local ID=125 (Low Active)

**ALARM NUMBER:** 2111

**Alarm Message:** C/C Heater Alarm

**Recovery:** When the alarm from the C/C heater box is canceled, the error is cleared.

**Cause:** An alarm occurred in the C/C heater box. Check that the temperature of the C/C heater is within the range 50 15 C. Also, check that there are no cut wires in the heater. Check whether the wires of heaters are not cut, or thermostats for detecting overheat on each heater are not operating. (operate over 90 C) An error occurs under the following conditions. Group ID=1, Local ID=130 (Low Active)

**ALARM NUMBER:** 2140

**Alarm Message:** P/A Line Sensor Data Error

**Recovery:** [Abort] - Terminates the P/A processing and restore the wafers to the C/C. Performing this process when the wafer is slipped from the P/A plate may result in breaking the forks and wafers.

**Cause:** Line sensor data during alignment was not within the normal range or all data was at the same value. Check the amount of light of the light source lamp for the line sensor and the wafer transfer position to the P/A.

**ALARM NUMBER:** 2146

**Alarm Message:** H2 Gas Leakage

**Recovery:** Warning will be automatically cleared when the H2 Gas detector alarm is cancelled.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you. Check the alarm signal from the Adjustment Terminal. An error occurs under the

following conditions. Group ID=1, Local ID=131 (Low Active)

**ALARM NUMBER:** 2147

**Alarm Message:** TC Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This warning is not stop N2-Flow at a dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Group ID=1, Local ID=141 (Low Active)

**ALARM NUMBER:** 2148

**Alarm Message:** TC Pump-N2 does not Flow

**Recovery:** Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and the error is cleared when the N2-Alarm signal from the pump is confirmed.

**Cause:** A dry pump-N2 alarm occurred when Pump Save Function is enable. This alarm does not flow N2-Flow at a dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Group ID=1, Local ID=143 (Low Active)

**ALARM NUMBER:** 2149

**Alarm Message:** TC Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Group ID=1, Local ID=141 (Low Active)

**ALARM NUMBER:** 214a

**Alarm Message:** TC Pump-N2 does not Flow

**Recovery:** Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and press .

**Cause:** A dry pump-N2 alarm occurred when Pump Save Function is enable. This alarm

does not flow N<sub>2</sub>-Flow at a dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Group ID=1, Local ID=143 (Low Active)

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## 2.4 Alarms Relating to the C/C and Indexer

**ALARM NUMBER:** 3001

**Alarm Message:** C1 Cannot Action Due to interfer

**Recovery:** Move the Arm away from the Indexer and execute the command again.

**Cause:** When moving the platform up and down and closing the gate, the Arm was inside C1 or its position was unknown.

**ALARM NUMBER:** 3002

**Alarm Message:** C1 Now Venting

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3003

**Alarm Message:** C1 Waiting to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3004

**Alarm Message:** C1 Waiting to Vacuum

**Recovery:** The error is cleared when the pressure reaches 5.32E+4 Pa (400 Torr) with the T/C vacuum pull action, and the vacuum pull is stopped.

**Cause:** The manostar switch has detected and vacuum pull is being performed during acid exhaust. Check the manostar switch signal to see if there is an error in the factory exhaust line. Check from the Adjustment Terminal to check the signal. UNITY: Group ID=1, Local ID=69 (High Active) UNITY-Ver. 2: Group ID=1, Local ID=62 (High Active)

**ALARM NUMBER:** 3005

**Alarm Message:** C1 Initialization Not Complete

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3006

**Alarm Message:** C1 Stopped Treatment Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3007

**Alarm Message:** C1 C/C Door Area Sensor Error

**Recovery:** [Accept] The message is cleared. The message is cleared when the door is opened and closed from the screen or with the foot-switch.

**Cause:** Door was stopped because the Area Sensor signal was detected during C1 Door action. Check if there are any obstructions to the door. Check from the Adjustment Terminal to check the Area Sensor. Adjustment Terminal: Group ID=1, Local ID=30

**ALARM NUMBER:** 3008

**Alarm Message:** C1 Door Open Error - Calibrating

**Recovery:** [Accept] The message is cleared. The message is cleared when the door is opened and closed from the screen or with the foot-switch.

**Cause:** C/C door was opened during C/C calibration. Open the door when calibration is completed.

**ALARM NUMBER:** 3009

**Alarm Message:** C1 Door Close Timeout

**Recovery:** [Accept] The message is cleared. The message is cleared when the door is opened and closed from the screen or with the foot-switch.

**Cause:** Door open action was not completed within the time prescribed in the etcher parameters (C/C Parameters "Door Move Timeout"). Check from the Adjustment Terminal to check if the C/C Door Down sensor is ON. Check the close sensor when 2 action type and up sensor when 1 action type. 2 Action (Close Sensor): Group ID=1, Local ID=74 1 Action (Up Sensor): Group ID=1, Local ID=75



**ALARM NUMBER:** 300a

**Alarm Message:** C1 Stop Door Operation Error

**Recovery:** [Accept] The alarm is cleared. The error message is cleared when you open using the Door Open/Close on the screen or by using the foot-switch. Only the foot-switch can be used to open the door when the door condition is unknown.

**Cause:** The screen or foot-switch was used to open/close the door during the door action for loading/unloading, maintenance or AGV sequence.

**ALARM NUMBER:** 300b

**Alarm Message:** C1 Door Open Error - Exhaust Line Trouble

**Recovery:** [Accept] The alarm is cleared.

**Cause:** An error was detected by the Cassette Chamber factory exhaust line sensor. Check if there was an error on the factory exhaust line. Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=69 UNITY-Ver. 2: Group ID=1, Local ID=62

**ALARM NUMBER:** 300c

**Alarm Message:** C1 Door Open Error - Mapping

**Recovery:** [Accept] The alarm is cleared. The alarm message is cleared when the door is opened with the door Open/Close on the screen or by using the foot-switch.

**Cause:** The C/C door was tried to open during the C/C mapping action. Open after mapping is completed.

**ALARM NUMBER:** 300d

**Alarm Message:** C1 Door Open Error - Not in ATMs

**Recovery:** [Accept] The alarm is cleared. The error message is cleared when opening or closing the door from the screen or using the foot-switch.

**Cause:** When the C/C Door was opened, the pressure inside the C/C was lower than the parameter settings (C/C Parameter "Atmosphere Vent End Pressure"). Open when the pressure is within the setting range.

**ALARM NUMBER:** 300e

**Alarm Message:** C1 Door Open

**Recovery:** [Retry] Executes from atmosphere holding action or vacuum pull again.

**Cause:** The door was open before executing the vacuum hold while pulling a vacuum. Recheck if the door is closed. Check from the Adjustment Terminal to check the sensor. Etcher composition parameters "C/C Door Type" [AGV Type (1 Action)] [AGV Type (2 Action)] UNITY 2 Action (Close Sensor): Group ID=1, Local ID=202 UNITY 1 Action (Up Sensor): Group ID=1, Local ID=203 UNITY-Ver. 2 2 Action (Close Sensor): Group ID=1, Local ID=74 UNITY-Ver. 2 1 Action (Up Sensor): Group ID=1, Local ID=75

**ALARM NUMBER:** 300f

**Alarm Message:** C1 Door Open Timeout

**Recovery:** [Accept] The message is cleared. The message is cleared when the door is opened and closed from the screen or with the foot-switch.

**Cause:** Door open action was not completed within the time prescribed in the etcher parameters (C/C Parameters "Door Move Timeout"). Check from the Adjustment Terminal to check if the C/C Door Down sensor is ON. Group ID=1, Local ID=76

**ALARM NUMBER:** 3010

**Alarm Message:** C1 Panel Open During C/C Door Action

**Recovery:** [Accept] The message is cleared. The message is cleared when the door is opened and closed from the screen or with the foot-switch.

**Cause:** The front panel was opened during C/C Door action and the door action was stopped because of an Interlock. Check from the Adjustment Terminal to check if the Front Panel is open. Group ID=1, Local ID=42

**ALARM NUMBER:** 3011

**Alarm Message:** C1 Door Open Error - Vacuuming

**Recovery:** [Accept] The alarm is cleared. The error message is cleared when you open using the Door Open/Close on the screen or by using the foot-switch. Only the foot-switch can be used to open the door when the door condition is unknown.

**Cause:** The door open request was received while the C/C pressure value was high. Check the pressure in the C/C. Open when the pressure is above the prescribed value (C/C parameter "Atmosphere Vent End Pressure"). High Vacuum Condition: Atmosphere to Vacuum Action: Min. 133 Pa (1000 mTorr) Vacuum to Atmosphere Action: Min. 200 Pa (1500 mTorr), PE Type: 1.26E+3 Pa (9500 mTorr)

**ALARM NUMBER:** 3012

**Alarm Message:** C1 Utility Exhaust Line Error

**Recovery:** [Retry] Performs venting again after initializing etcher. Performs the appropriate process again (vacuum or vent) when vacuuming or venting for lot transfer. Perform the objective process by pressing the button for [Vacuum] or [Vent] with the maintenance operation.

**Cause:** An error occurred with the pressure on the factory exhaust line during venting to atmosphere or vacuum pull with the maintenance operation during lot transfer or initialization of the etcher. The following ways to handle the error differ depending on the type of door on the Cassette Chamber when the pressure error was detected on the factory exhaust line in atmosphere venting. With the AGV Door: Venting to atmosphere continues without this error occurring. However, after reaching atmosphere, the door open interlock is engaged and the door open action cannot be executed. For this reason "3006 C1 Stopped Treatment Due to Vacuum" occurs with the door open request. With the non-AGV Door: Atmosphere venting is terminated. If the Cassette Chamber pressure is min.  $5.32\text{E}+4$  Pa (400 Torr), it will vent to  $5.32\text{E}+4$  Pa (400 Torr). Factory exhaust line pressure error detection is performed by the manostar switch attached to the same line. Check the Adjustment Terminal to check the condition of the manostar switch. An error occurs with the following conditions. UNITY: Group ID=1, Local ID=69 (High Active) UNITY Ver. 2: Group ID=1, Local ID=62 (High Active)

**ALARM NUMBER:** 3013

**Alarm Message:** Acid Exhaust Line Error

**Recovery:** The error is automatically cleared when the manostar switch pressure returns to normal.

**Cause:** The manostar switch attached to the factory exhaust line detected an error in the exhaust line pressure. Check from the Adjustment Terminal to check the manostar switch. An error occurs with the following conditions. UNITY: Group ID=1, Local ID=69 (High Active) UNITY-Ver. 2: Group ID=1, Local ID=62 (High Active)

**ALARM NUMBER:** 3014

**Alarm Message:** C1 Cannot Close Gate Due to interfer

**Recovery:** [Retry] Checks the Arm position again. [Ignore] Ignores the current position of the Arm and closes the gate.

**Cause:** The gate cannot be closed because of the Arm current position is the C/C station point. Use Maintenance Mode to retract the Arm.

**ALARM NUMBER:** 3015

**Alarm Message:** C1 Gate Close Timeout

**Recovery:** [Retry] Executes gate close action again. [Ignore] The gate is forced closed, but it will end normally even if the action is not completed within the prescribed time.

**Cause:** The C/C transfer gate close action was not completed within the prescribed time (C/C parameter "Gate Move Timeout"). Check the gate close sensor only when the C/C transfer gate type (C/C Parameter "C/C Transfer Gate Type") is the 2 action type. Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=18 UNITY-Ver. 2: Group ID=1, Local ID=51

**ALARM NUMBER:** 3016

**Alarm Message:** C1 Gate Down Timeout

**Recovery:** [Retry] Executes gate down action again. [Ignore] The gate is forced down, but it will end normally even if the action is not completed within the prescribed time.

**Cause:** The C/C transfer gate down action was not completed within the prescribed time (C/C parameter "Gate Move Timeout"). Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=20 UNITY-Ver. 2: Group ID=1, Local ID=53

**ALARM NUMBER:** 3017

**Alarm Message:** C1 Gate Open

**Recovery:** [Retry] Executes from pulling vacuum or atmosphere venting again.

**Cause:** The door was open before executing pulling vacuum or atmosphere venting. Execute after closing the C/C transfer gate door. Check from the Adjustment Terminal to check the sensor. C/C parameters "C/C Transfer Gate Type" [1 Action] [2 Action] UNITY 2 Action (Close Sensor): Group ID=1, Local ID=18 UNITY 1 Action (Up Sensor): Group ID=1, Local ID=19 UNITY-Ver. 2 2 Action (Close Sensor): Group ID=1, Local ID=51 UNITY-Ver. 2 1 Action (Up Sensor): Group ID=1, Local ID=52

**ALARM NUMBER:** 3018

**Alarm Message:** C1 Gate Open Timeout

**Recovery:** [Retry] Executes gate open action again. [Ignore] The gate is forced open, but it will end normally even if the action is not completed within the prescribed time.

**Cause:** The C/C transfer gate open action was not completed within the prescribed time (C/C parameter "Gate Move Timeout"). Check the gate close sensor only when the C/C transfer gate type (C/C Parameter "C/C Transfer Gate Type") is the 2 action type. Check from the Adjustment Terminal to check the gate open sensor. UNITY: Group ID=1, Local ID=17 UNITY-Ver. 2: Group ID=1, Local ID=50

**ALARM NUMBER:** 3019

**Alarm Message:** C1 Cannot Open Gate Due to Pressure

**Recovery:** [Retry] Performs the gate open action again. [Ignore] Ignores the condition of the T/C or C/C and opens the gate.

**Cause:** The T/C or C/C pressure is either not in a high vacuum or at atmosphere when the C/C transfer gate was opened. Check the pressure condition in the T/C and C/C.

**ALARM NUMBER:** 301a

**Alarm Message:** C1 Cannot Open Gate Due to T/C Pump

**Recovery:** [Retry] Performs gate open action again. [Ignore] Ignores T/C pump condition and opens the gate.

**Cause:** A T/C pump system error occurred when opening the C/C transfer gate. Check the T/C pump system (dry pump, turbo pump). There are the following pump system errors. Dry pump alarm signal is being output. Turbo pump alarm signal is being output. Turbo pump decelerating signal is not being output. Turbo pump normal signal is being output.

**ALARM NUMBER:** 301b

**Alarm Message:** C1 Gate Up Timeout

**Recovery:** [Retry] Executes gate up action again. [Ignore] The gate is forced up, but it will end normally even if the action is not completed within the prescribed time.

**Cause:** The C/C transfer gate up action was not completed within the prescribed time (C/C parameter "Gate Move Timeout"). Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=19 UNITY-Ver. 2: Group ID=1, Local ID=52

**ALARM NUMBER:** 301c

**Alarm Message:** C1 Wafer Ejection on Gate Close

**Recovery:** [Retry] Executes gate close again. [Ignore] Ignores the wafer protruding sensor and closes the gate.

**Cause:** The wafer protruding sensor detected during C/C transfer gate close action. Check if a wafer is protruding from the C/C. Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=42 UNITY-Ver. 2: Group ID=1, Local ID=48

**ALARM NUMBER:** 301d

**Alarm Message:** C1 Door Not Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 301e

**Alarm Message:** C1 Door Not Close

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 301f

**Alarm Message:** No Cassette Exists on I1

**Recovery:** [Retry] Checks the cassette sensor again.

**Cause:** No cassette was set on the Indexer when performing Indexer mapping, maintenance mapping or calibration. Check the condition of the cassette sensor on the Stage. Also, the cassette may not be placed correctly. Remove the cassette and place it again, correctly.

**ALARM NUMBER:** 3020

**Alarm Message:** I1 Home Position Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3021

**Alarm Message:** I1 Sensor Box Cover Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3022

**Alarm Message:** I1 Mapping Data Error

**Recovery:** [Retry] Performs mapping again when the parameter above is set to [Error Timing Output]. If it is set to [Atmosphere Output], vacuum pull is executed again. [Abort] Terminates transfer and the cassette is vented.

**Cause:** An error occurred in the wafer slot (angled storage, differences in search sensor) when performing the Indexer mapping action. Check if a wafer has been stored at an angle. Set the alarm occurrence timing in parameters (C/C parameter "Mapping Data Error Timing").

**ALARM NUMBER:** 3023

**Alarm Message:** C1 Door Open or Cassette Sensor Error

**Recovery:** [Retry] Checks the door closed or the cassette existence again.

**Cause:** The C/C door was open (or the door closed sensor did not detect) or there was no cassette set (or the cassette sensor did not detect) when performing the Indexer action. Check the conditions of the C/C door closed sensor or the cassette existence sensor on the Stage.

**ALARM NUMBER:** 3024

**Alarm Message:** I1 Sensor Data Error

**Recovery:** Shift to maintenance and check the condition of the laser light. The error is cleared when shifted to maintenance.

**Cause:** Mapping laser light was not confirmed during Indexer mapping or calibration action. Check the sensitivity of the laser light emission or reception or the teaching positions of the mapping start position.

**ALARM NUMBER:** 3025

**Alarm Message:** I1 Wafer Ejected

**Recovery:** [Retry] Checks the wafer protruding sensor again.

**Cause:** The wafer protruding sensor detected when starting Indexer Stage action. Check if a wafer is protruding from the cassette in the C/C. Check from the Adjustment Terminal to check the sensor. UNITY: Group ID=1, Local ID=42 UNITY-Ver. 2: Group ID=1, Local ID=48

**ALARM NUMBER:** 3026

**Alarm Message:** I1 Wafer Sensor Error

**Recovery:** [Retry] Rechecks the I1 Wafer Search Sensor.

**Cause:** An interference to the Wafer Search Sensor was confirmed before I1 mapping action. Check if there is any interference to the I1 Wafer Search Sensor at the Mapping Start Position or if the laser axis is displaced.

**ALARM NUMBER:** 3027

**Alarm Message:** I1 Position Error for Transfer Direction

**Recovery:** [Retry] Performs slot movement action again.

**Cause:** The Stage Rotation axis direction is in a position that will interfere with the Arm during slot movement. Check the position of the rotation axis and teach if necessary.

**ALARM NUMBER:** 3028

**Alarm Message:** I1 Position Error for Cassette Loading (Rotate)

**Recovery:** [Retry] Moves to Ready position again.

**Cause:** The elevator rotation axis position is not correctly positioned in the Ready position on etchers which use AGV. Check the position of the rotation axis and teach if necessary.

**ALARM NUMBER:** 3029

**Alarm Message:** I1 Position Error for Cassette Loading (ZAXIS)

**Recovery:** [Retry] Moves to Ready position again.

**Cause:** The elevator Z axis position is not correctly positioned in the Ready position on etchers which use AGV. Check the position of the rotation axis and teach if necessary.

**ALARM NUMBER:** 302a

**Alarm Message:** Indexer 1 Data Error

**Recovery:** Restart the system.

**Cause:** When receiving each command with the I1 Local Controller, there were errors in each command data. (Local Controller Internal Error Code: 09h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 302b

**Alarm Message:** Indexer 1 Position Data Error

**Recovery:** Initialize the position data storage area with the Off-line mode.

**Cause:** The area was already damaged when storing position data from the I1 Local Controller. (Local Controller Internal Error Code: 24h)



**ALARM NUMBER:** 302c

**Alarm Message:** Indexer 1 Work Area Not Enough

**Recovery:** Turn the power ON again and download.

**Cause:** There is not enough work RAM for the I1 Local Controller. (Local Controller Internal Error Code: 25h)

**ALARM NUMBER:** 302d

**Alarm Message:** Indexer 1 Battery Voltage Dropped

**Recovery:** The alarm message is cleared when the battery is recharged or replaced.

**Cause:** I1 Local Controller battery voltage has dropped or is worn out.

**ALARM NUMBER:** 302e

**Alarm Message:** Indexer 1 Checksum Error

**Recovery:** Restart the system.

**Cause:** A checksum error occurred when receiving data with the I1 Local Controller. (Local Controller Internal Error Code: 02h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 302f

**Alarm Message:** Indexer 1 File Exists - Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore.

**Cause:** The APL program was already input when restoring the APL program (file) with the I1 Local Controller. (Local Controller Internal Error Code: 21h)

**ALARM NUMBER:** 3030

**Alarm Message:** Indexer 1 RAM Disk Full

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore.

**Cause:** The RAM disk on the I1 Local Controller is full. The file cannot be stored. (Local Controller Internal Error Code: 23h)

**ALARM NUMBER:** 3031

**Alarm Message:** Indexer 1 Interpreter Error

**Recovery:** Restore the appropriate APL program with the Off-line mode.

**Cause:** An I1 Local Controller APL program argument error, 0 divider or unregistered position occurred. (Local Controller Internal Error Code: 05h)

**ALARM NUMBER:** 3032

**Alarm Message:** Indexer 1 Message Aborted

**Recovery:** Restart the system.

**Cause:** The command received by the HOST cannot be executed by the I1 Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3033

**Alarm Message:** Indexer 1 Power Off - Secondary P/S

**Recovery:** Perform the RUN command (start up APL program) after turning ON the power.

**Cause:** The RUN command (Application program start-up) was received while the Motor power was OFF. (Local Controller Internal Error Code: 06h)

**ALARM NUMBER:** 3034

**Alarm Message:** Indexer 1 No File Detected

**Recovery:** Back-up after rechecking the APL program name.

**Cause:** The APL program did not exist when backing up the APL program (File) designated by the I1 Local Controller. (Local Controller Internal Error Code: 20h)

**ALARM NUMBER:** 3035

**Alarm Message:** Indexer 1 Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The I1 Local Controller failed 10 times consecutively to receive the priority register command.

**ALARM NUMBER:** 3036

**Alarm Message:** Indexer 1 Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the I1 Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 3037

**Alarm Message:** Indexer 1 Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** Time-out limit (20 m/s) exceeded for the next character to be received by the I1 Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3038

**Alarm Message:** Indexer 1 Undefined Message Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the I1 Local Controller. (Local Controller Internal Error Code: 03h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3039

**Alarm Message:** C1 Command Format Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 303a

**Alarm Message:** I1 Action Command Timeout

**Recovery:** [Retry] Retransmit the command to the Indexer Local Controller.

**Cause:** Indexer action was not completed within the prescribed time (C/C Parameters "Indexer Action Timeout"). Check the connections of the connectors of the Local Controller. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 303b

**Alarm Message:** I1 Data Error

**Recovery:** [Retry] The HOME command is retransmitted and the command is retransmitted on the I1 Local Controller.

**Cause:** There was an error in the information of the transmission unit when downloading position data and parameters on the I1 Local Controller. Check if the connectors to the Local Controller are securely connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 303c

**Alarm Message:** I1 Function Command Timeout

**Recovery:** [Retry] Transmits the command again to the I1 Local Controller.

**Cause:** The function command to the I1 Local Controller could not be received. Check if the connectors to the Local Controller are securely connected. Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 303d

**Alarm Message:** I1 Motor Power Off

**Recovery:** [Retry] Transmits the Interlock reset command again to the I1 Local Controller. The Local Controller turns ON the motor power if the Ready Position sensor does not cause an interlock to occur.

**Cause:** I1 motor power was turned OFF with the occurrence of an Interlock because of the Ready Position sensor. (Local Controller Error Code: 04h) Check the panel sensor.

**ALARM NUMBER:** 303e

**Alarm Message:** I1 Motor Cannot Power On

**Recovery:** [Retry] Transmits the Interlock reset command again to the I1 Local Controller. The Local Controller turns ON the motor power if the Ready Position sensor does not cause an interlock to occur.

**Cause:** I1 motor power cannot turned ON because of the Interlock. (Local Controller Error Code: 05h) Check the Panel Sensor. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 303f

**Alarm Message:** I1 Home Error

**Recovery:** [Retry] Performs action request to the origin position again to the I1 Local Controller.

**Cause:** The Origin Reset action cannot move from the current position by the I1 Local Controller. (Local Controller Error Code: 02h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3040

**Alarm Message:** I1 Stroke Limit Over Error

**Recovery:** [Retry] Retransmits the command to the I1 Local Controller.

**Cause:** The I1 exceeded the elevation action range. (Local Controller Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Retry or restart the system. Shift to maintenance mode. C1 teaching is necessary. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3041

**Alarm Message:** Pressure Control Error - Not in Vacuum

**Recovery:** [Retry] Executes a vacuum pull on the Transfer Chamber and performs pressure control again.

**Cause:** Wafer transfer could not be started because the pressure control could not be executed because the Transfer Chamber ISO valve (T02 valve) was closed when transferring the wafer from the Cassette Chamber at vacuum transfer.

**ALARM NUMBER:** 3042

**Alarm Message:** C1 Chamber Pressure Upper Limit

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3043

**Alarm Message:** Indexer1 Checksum Error

**Recovery:** This alarm message is cleared when transmission data checksum from the

Local Controller is received normally.

**Cause:** There was a checksum error 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3044

**Alarm Message:** Indexer 1 Timeout Error Between Chars

**Recovery:** This alarm message is cleared when the characters can be received within the time limit between characters when receiving from the Local Controller.

**Cause:** The time limit between characters (150 m/s) in the command transmission from the Indexer Local Controller was exceeded 3 times consecutively. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3045

**Alarm Message:** Indexer 1 Data End Mark Not Detected

**Recovery:** This alarm message is cleared when the end mark of the reception data from the Local Controller is detected within the LENGTH.

**Cause:** The end mark of the data received from the Indexer Local Controller was not confirmed even when the LENGTH was exceeded. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3046

**Alarm Message:** Indexer 1 No Response Received

**Recovery:** This alarm message is cleared when the response from the Local Controller is received.

**Cause:** The Status Response was not received from the Indexer Local Controller 3 times consecutively (1 s x 3). Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3047

**Alarm Message:** Indexer 1 Framing Error

**Recovery:** This alarm message is cleared if there is no FRAMING error when receiving from the Local Controller.

**Cause:** A FRAMING error occurred 3 times consecutively when receiving from the Indexer Local Controller. Check that the connectors of the Local Controller are

connected.

**ALARM NUMBER:** 3048

**Alarm Message:** Indexer 1 Parity Error

**Recovery:** This alarm message is cleared if there is no parity error in the data received from the Local Controller.

**Cause:** A parity error occurred 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3049

**Alarm Message:** Indexer 1 Rx Overrun Error

**Recovery:** This alarm message is cleared if there is no Rx OVERRUN error in the data received from the Local Controller.

**Cause:** An Rx OVERRUN error occurred 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 304a

**Alarm Message:** Indexer 1 Timeout Error Between Chars

**Recovery:** This alarm message is cleared when the characters can be received within the time limit between characters when transmitting to the Local Controller.

**Cause:** The time limit between characters in the transmission to the Indexer Local Controller exceeded the time limit (150 m/s). Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 304b

**Alarm Message:** Indexer 1 Data End Mark Not Detected

**Recovery:** This alarm message is cleared when the end mark of the reception data from the Local Controller is detected within the LENGTH.

**Cause:** The end mark of the data received from the Indexer Local Controller was not confirmed even when the LENGTH was exceeded. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 304c

**Alarm Message:** T/C Pressure Stabilization Timeout

**Recovery:** [Retry] Executes vacuum pull on the Transfer Chamber and performs pressure control again.

**Cause:** The pressure control of the Transfer Chamber could not be stabilized to the designated pressure (T/C parameter "Pressure Control Setting Value") within the designated time (T/C parameter "Pressure Control Timeout") at vacuum transfer. Stable condition is the range of 9.31 Pa (70 mTorr) of the designated pressure for 2 seconds consecutively. Check that there are no leaks in the Transfer Chamber. Also, if the pressure does not stabilize and the monitor value fluctuates, the PCV may not be working properly.

**ALARM NUMBER:** 304d

**Alarm Message:** C1 Dry Pump Alarm

**Recovery:** [Retry] Vacuum is executed again after initializing the etcher.

**Cause:** A dry pump alarm occurred when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=10 (High Active) UNITY Ver. 2: Group ID=1, Local ID=19 (Low Active)

**ALARM NUMBER:** 304e

**Alarm Message:** C/C dry pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cancelled.

**Cause:** A dry pump alarm occurred. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=10 (High Active) UNITY Ver. 2: Group ID=1, Local ID=19 (Low Active)

**ALARM NUMBER:** 304f

**Alarm Message:** C1 Dry Pump Not in Normal

**Recovery:** [Retry] Vacuum is performed again after initializing the etcher.

**Cause:** The dry pump was not in normal when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1,



Local ID=12 (High Active) UNITY Ver. 2: Group ID=1, Local ID=21 (Low Active)

**ALARM NUMBER:** 3050

**Alarm Message:** C/C Dry Pump Not in Normal

**Recovery:** The error is cleared when the normal signal from the Pump is confirmed.

**Cause:** The dry pump was not in normal. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=12 (High Active) UNITY Ver. 2: Group ID=1, Local ID=21 (Low Active)

**ALARM NUMBER:** 3051

**Alarm Message:** C1 Dry Pump Warning

**Recovery:** [Retry] Vacuum is performed again after initializing the etcher.

**Cause:** A dry pump warning occurred when pulling a vacuum when initializing the etcher. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=11 (High Active) UNITY Ver. 2: Group ID=1, Local ID=20 (Low Active)

**ALARM NUMBER:** 3052

**Alarm Message:** C/C Dry Pump Warning

**Recovery:** The error is cleared when the warning signal from the pump is cancelled.

**Cause:** A dry pump warning occurred. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the Adjustment Terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=1, Local ID=11 (High Active) UNITY Ver. 2: Group ID=1, Local ID=20 (Low Active)

**ALARM NUMBER:** 3053

**Alarm Message:** C1 Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again after initialization. Press [Vacuum] using the maintenance operation to execute vacuum pull.

**Cause:** The designated pressure (C/C parameter "Slow Exhaust End Pressure") was not reached within the time designated by slow vent (C/C parameter "Slow Exhaust

Timeout") when pulling a vacuum using the maintenance operation or at vacuum transfer start. Also, the designated pressure (C/C parameter "Vacuum Pull End Pressure") was not reached within the time designated by the Main Exhaust (C/C parameter "Vacuum Pull Timeout").

**ALARM NUMBER:** 3054

**Alarm Message:** C1 Now Vacuuming

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3055

**Alarm Message:** C1 Vent Timeout

**Recovery:** [Retry] Executes venting to atmosphere again after initialization. Press [Vent] using the maintenance operation to execute venting to atmosphere.

**Cause:** The designated pressure (C/C parameter "Slow Vent End Pressure") was not reached within the designated time (C/C parameter "Slow Vent Timeout") on the equipment having the slow vent valve (machine parameters "C/C Slow Vent Valve") when venting to atmosphere using the maintenance operation at etcher initialization. The atmosphere end pressure (C/C parameter "Atmosphere Vent End Pressure") was not reached within the designated time (C/C parameter "Atmosphere Vent Timeout").

**ALARM NUMBER:** 3056

**Alarm Message:** C1 Valve Cannot Open/Close

**Recovery:** [Retry] Executes vacuum pull or atmosphere venting or acid exhaust when all the appropriate prohibited valves are closed. Executes the objective maintenance operation again after all valves are closed once using the maintenance operation.

**Cause:** A valve operation that was prohibited was operated during acid exhaust when venting or pulling a vacuum using the maintenance operation or at etcher initialization. Operation of the prohibited valve depends on the settings of the slow vent valve (machine parameters "C/C Slow Vent Valve") and the factory acid exhaust (machine parameters "C/C Acid Exhaust Function"). The following are the prohibitive conditions. Standard specifications has no slow vent valve and Slow Vent specifications has slow vent valves. Prohibited operation during vacuum pull (Standard Specifications): C13/C14 open while C11/C12 valves open. Prohibited operation during vacuum pull (Slow Vent Specifications): C13/C14/C15 open while C11/C12 valves open. Slow Vent valve (SVV) open while C11/C12 valves open. Prohibited operation during venting to atmosphere or N2 induction (Standard Specifications): C11/C12 open while C13/C14 valves open. Prohibited operation during venting to atmosphere or N2 induction (Slow Vent

Specifications): C11/C12 open while C13/C14 valves open. C11/C12 open while C15 valve open during OPEN. Prohibited operation during Cassette Chamber Acid Exhaust Processing (Standard Specifications): C11/C12 open while C19 valve (acid exhaust line) open. C11/C12/C15 open while Slow Vent valve (SVV) open. Prohibited operation during Cassette Chamber Acid Exhaust Processing (Slow Vent Specifications): C11/C12 open while C19 valve (acid exhaust line) open.

**ALARM NUMBER:** 3057

**Alarm Message:** AGV Executing

**Recovery:** [Retry] Performs the door open/close action again.

**Cause:** Door action was stopped because of a command to the door or because a stop request was received during AGV action.

**ALARM NUMBER:** 3058

**Alarm Message:** Indexer 1 Data Error

**Recovery:** Restart the system.

**Cause:** When receiving each command with the I1 Local Controller, there were errors in each command data. (Local Controller Internal Error Code: 09h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3059

**Alarm Message:** Indexer 1 Position Data Error

**Recovery:** Initialize the position data storage area with the Off-line mode.

**Cause:** The area was already damaged when storing position data from the I1 Local Controller. (Local Controller Internal Error Code: 24h)

**ALARM NUMBER:** 305a

**Alarm Message:** Indexer 1 Work Area Not Enough

**Recovery:** Turn the power ON again and download.

**Cause:** There is not enough work RAM for the I1 Local Controller. (Local Controller Internal Error Code: 25h)

**ALARM NUMBER:** 305b

**Alarm Message:** Indexer 1 Battery Voltage Dropped

**Recovery:** The alarm message is cleared when the battery is recharged or replaced.

**Cause:** The battery voltage dropped on the I1 or is worn out.

**ALARM NUMBER:** 305c

**Alarm Message:** Indexer 1 Checksum Error

**Recovery:** Restart the system.

**Cause:** A checksum error occurred when receiving data with the I1 Local Controller. (Local Controller Internal Error Code: 02h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 305d

**Alarm Message:** Indexer 1 File Exists Do Not Overwrite

**Recovery:** Delete the appropriate APL program with the Off-line mode and restore.

**Cause:** The APL program was already input when restoring the APL program (file) with the I1 Local Controller. (Local Controller Internal Error Code: 21h)

**ALARM NUMBER:** 305e

**Alarm Message:** Indexer 1 RAM Disk Full

**Recovery:** Delete the unneeded APL program with the Off-line mode and restore.

**Cause:** The RAM disk on the I1 Local Controller is full. The file cannot be stored. (Local Controller Internal Error Code: 23h)

**ALARM NUMBER:** 305f

**Alarm Message:** Indexer 1 Interpreter Error

**Recovery:** Restore the appropriate APL program with the Off-line mode.

**Cause:** An I1 Local Controller APL program argument error, 0 divider or unregistered position occurred. (Local Controller Internal Error Code: 05h)

**ALARM NUMBER:** 3060

**Alarm Message:** Indexer 1 Message Aborted

**Recovery:** Restart the system.

**Cause:** The command received by the HOST cannot be executed by the I1 Local Controller. (Local Controller Internal Error Code: 04h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3061

**Alarm Message:** Indexer 1 Power Off Secondary P/S

**Recovery:** Perform the RUN command (start up APL program) after turning ON the power.

**Cause:** The RUN command (Application program start-up) was received while the Motor power was OFF. (Local Controller Internal Error Code: 06h)

**ALARM NUMBER:** 3062

**Alarm Message:** Indexer 1 No File Detected

**Recovery:** Back-up after rechecking the APL program name.

**Cause:** The APL program did not exist when backing up the APL program (File) designated by the I1 Local Controller. (Local Controller Internal Error Code: 20h)

**ALARM NUMBER:** 3063

**Alarm Message:** Indexer 1 Priority Register Not Acceptable

**Recovery:** Restart the system.

**Cause:** The I1 Local Controller failed 10 times consecutively to receive the priority register command.

**ALARM NUMBER:** 3064

**Alarm Message:** Indexer 1 Time Over Detected

**Recovery:** Restart the system.

**Cause:** The response to the data request exceeded the designated time (2 s) on the I1 Local Controller. (Local Controller Internal Error Code: 22h)

**ALARM NUMBER:** 3065

**Alarm Message:** Indexer 1 Timeout Error Between Chars

**Recovery:** Restart the system.

**Cause:** Time-out limit (20 m/s) exceeded for the next character to be received by the I1 Local Controller. (Local Controller Internal Error Code: 01h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3066

**Alarm Message:** Indexer 1 Undefined Message: Received

**Recovery:** Restart the system.

**Cause:** An undefined message ID was received by the I1 Local Controller. (Local Controller Internal Error Code: 03h) Check the display of the Local Controller 7 Segment LED. When display is [00]: Restart the system. When display is other than [00]: Local Controller error.

**ALARM NUMBER:** 3067

**Alarm Message:** Indexer 1 Checksum Error

**Recovery:** This alarm message is cleared when transmission data checksum from the Local Controller is received normally.

**Cause:** There was a checksum error 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3068

**Alarm Message:** Indexer 1 Timeout Error Between Chars

**Recovery:** This alarm message is cleared when the characters can be received within the time limit between characters when receiving from the Local Controller.

**Cause:** The time limit between characters (150 m/s) in the command transmission from the Indexer Local Controller was exceeded 3 times consecutively. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 3069

**Alarm Message:** Indexer 1 Data End Mark Not Detected

**Recovery:** This alarm message is cleared when the end mark of the reception data from the Local Controller is detected within the LENGTH.

**Cause:** The end mark of the data received from the Indexer Local Controller was not confirmed even when the LENGTH was exceeded. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 306a

**Alarm Message:** Indexer 1 No Response Received

**Recovery:** This alarm message is cleared when the response from the Local Controller is received.

**Cause:** The Status Response was not received from the Indexer Local Controller 3 times consecutively (1 s x 3). Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 306b

**Alarm Message:** Indexer 1 Framing Error

**Recovery:** This alarm message is cleared if there is no FRAMING error when receiving from the Local Controller.

**Cause:** A FRAMING error occurred 3 times consecutively when receiving from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 306c

**Alarm Message:** Indexer 1 Parity Error

**Recovery:** This alarm message is cleared if there is no parity error in the data received from the Local Controller.

**Cause:** A parity error occurred 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 306d

**Alarm Message:** Indexer 1 Rx Overrun Error

**Recovery:** This alarm message is cleared if there is no Rx OVERRUN error in the data received from the Local Controller.

**Cause:** An Rx OVERRUN error occurred 3 times consecutively in the data received from the Indexer Local Controller. Check that the connectors of the Local Controller are connected.

**ALARM NUMBER:** 306e

**Alarm Message:** C1 interfer Detected

**Recovery:** [Retry] Performs mapping again. [Abort] Terminates transfer and vents the cassette.

**Cause:** Interfering objects were detected during Indexer mapping. Check if there is interference with the carrier handle. Interfering objects are not detected if the C/C parameters are set to "Detect the Carrier Handle."

**ALARM NUMBER:** 306f

**Alarm Message:** Indexer 1 Cannot Due to interfer

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3070

**Alarm Message:** I1 Mapping Data Error

**Recovery:** The error is cleared when venting is completed. An error [3022] with recovery occurs.

**Cause:** Wafer slot error (angled storage, wafer sensor difference) occurred during Indexer mapping. Check if a wafer has been stored at an angle.

**ALARM NUMBER:** 3071

**Alarm Message:** C1 Manual Load Cassette Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3072

**Alarm Message:** C1 Manual Load SW Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3073



**Alarm Message:** C1 Manual Unload Cassette Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3074

**Alarm Message:** C1 Manual Unload SW Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 3075

**Alarm Message:** C1 LOAD/UNLOAD Executing

**Recovery:** [Retry] Performs door open/close again.

**Cause:** Door action was stopped because of the command to the door or because a stop request was received during cassette loading/unloading.

**ALARM NUMBER:** 3076

**Alarm Message:** C1 Back Pressure of Turbo Pump Risen Up

**Recovery:** Reset the pump alarm from the switch board on the front of the machine, and restart the pump

**Cause:** There is probably a problem with the dry pump. Check the dry pump for alarms and leaks.

**ALARM NUMBER:** 3077

**Alarm Message:** C1 The Back Up of Turbo Pump Failed

**Recovery:** Reset the pump alarm from the switch board on the front of the machine, and restart the pump

**Cause:** This occurs when the dry pump takes longer than the fixed time to execute evacuation. This may occur when the back valve of the turbo pump is closed for a long time.

**ALARM NUMBER:** 3078

**Alarm Message:** C1 Vacuum status Breaks

**Recovery:** Evacuate and open to atmosphere, and the error is cleared automatically.

**Cause:** After evacuation, the pressure rose to above 200 Pa (150 mTorr). The N2 supply valve is open, or there may be a leak.

**ALARM NUMBER:** 3079

**Alarm Message:** C1 Atmosphere Status Breaks

**Recovery:** Evacuate and open to atmosphere, and the error is cleared automatically.

**Cause:** After venting to atmosphere, the pressure fell to below 70000 Pa (52.6 Torr). One of the exhaust valves may be open.

**ALARM NUMBER:** 307a

**Alarm Message:** C1 Evacuation Timeout in Air Cycle Purge

**Recovery:** [Retry] Executes cycle purge.

**Cause:** During the atmosphere cycle purge, evacuation for the set time was executed, however the atmosphere cycle purge evacuation final pressure was not reached. Review the C/C parameter setting "C/C Rust Prevention Vacuum End Pressure".

**ALARM NUMBER:** 307b

**Alarm Message:** C1 Vent Timeout in Air Cycle Purge

**Recovery:** [Retry] Executes cycle purge again.

**Cause:** During the atmosphere cycle purge, venting to atmosphere for the set time was executed, however the atmosphere cycle purge venting final pressure was not reached. There is probably a drop in pressure or a problem with the vacuum gauge.

**ALARM NUMBER:** 307c

**Alarm Message:** C1 Door Open Timeout in Keep Vacuum

**Recovery:** Close the door, and switchover the Cassette Chamber to the Keep Vacuum status.

**Cause:** As the Cassette Chamber door open time has exceeded the time limit, close the door.

**ALARM NUMBER:** 307d

**Alarm Message:** C1 Evacuation

**Recovery:** When evacuation is completed, it will be cleared automatically.

**Cause:** To switchover the Cassette Chamber to the Keep Vacuum status, execute evacuation.

**ALARM NUMBER:** 307e

**Alarm Message:** C1 Venting

**Recovery:** When evacuation is completed, it will be cleared automatically.

**Cause:** To switchover the Cassette Chamber to the Venting status, execute venting.

**ALARM NUMBER:** 307f

**Alarm Message:** C1 Keeping Atmosphere

**Recovery:** Open the door to stop Venting, then close it again to switchover to the Keep Vacuum status.

**Cause:** Venting of the Cassette Chamber was completed, and it switched over to the Keeping Atmosphere status.

**ALARM NUMBER:** 3080

**Alarm Message:** C1 Keeping vacuum

**Recovery:** Turn on the door switch and after venting to atmosphere, it switches over to the Keeping Atmosphere status. Turn on the start switch to start transfer.

**Cause:** Evacuation of the Cassette Chamber was completed, and it switched over to the Keeping vacuum status.

**ALARM NUMBER:** 3081

**Alarm Message:** C1 In Cycle Purge

**Recovery:** When cycle purge is completed, it will be canceled automatically.

**Cause:** The Cassette Chamber is executing cycle purge.

**ALARM NUMBER:** 3082

**Alarm Message:** C1 Heater Alarm

**Recovery:** [Retry] Executes evacuation or venting to atmosphere again. [Ignore] Ignores the C/C heater alarm, and executes evacuation or venting to atmosphere again.

**Cause:** When evacuation or venting to atmosphere was attempted, an alarm occurred in the C/C heater box. Check that the temperature of the heater box is 50 15 C. Also, check that there are no cut wires in the heater. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Group ID=1, Local ID=130 (Low Active)

**ALARM NUMBER:** 3083

**Alarm Message:** C1 In Cycle Purge

**Recovery:** The error is automatically cleared when cycle purge is complete.

**Cause:** The Cassette Chamber is executing cycle purge.

**ALARM NUMBER:** 3084

**Alarm Message:** C1 Heater Alarm

**Recovery:** [Retry] Executes evacuation or venting to atmosphere again. [Ignore] Ignores the C/C heater alarm, and executes evacuation or venting to atmosphere again.

**Cause:** When evacuation or venting to atmosphere was attempted, an alarm occurred in the C/C heater box. Check that the temperature of the heater box is 50 15 C. Also, check that there are no cut wires in the heater. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Group ID=1, Local ID=130 (Low Active)

**ALARM NUMBER:** 3085

**Alarm Message:** C1 Front End air pressure error

**Recovery:** [Retry]

**Cause:** The Front End air pressure is abnormal. Check the air pressure value, and check for air leaks.

**ALARM NUMBER:** 3086

**Alarm Message:** C1 mapping data error

**Recovery:** [Retry]

**Cause:** The mapping data was not acquired normally. Checking whether there is a wafer, and check the state of the mapping sensor.

**ALARM NUMBER:** 3087

**Alarm Message:** C1 Front End sensor error

**Recovery:**

**Cause:** An abnormality occurred with the Front End sensor. The Tines sensor or door open position sensor may be operating.

**ALARM NUMBER:** 3088

**Alarm Message:** C1 Mini Environment FAN error

**Recovery:**

**Cause:** FAN error occurred in Mini Environment. **Recovery:**Check the FAN Sensor of Mini Environment.

**ALARM NUMBER:** 3089

**Alarm Message:** C1 Door action error

**Recovery:**

**Cause:** CM Door OPEN/CLOSE action wasn't completed normally. It is possibility that Door cable doesn't connect or door action time-out occurred. **Recovery:**Please retry after checking door units.

**ALARM NUMBER:** 308a

**Alarm Message:** An upper limit in BTA offset over

**Recovery:**

**Cause:** Position offset in BTA exceed an upper limit. **Recovery:**Please retry after checking BTA position.

**ALARM NUMBER:** 308b

**Alarm Message:** C1 Load Port exhaust pressure error

**Recovery:**

**Cause:** Exhaust pressure error occurred in Load Port. **Recovery:**Check if the exhaust line of Load Port.

**ALARM NUMBER:** 308c

**Alarm Message:** C1 Front End air pressure error

**Recovery:** [Retry] Check the air pressure value, and check for air leaks.

**Cause:** The Front End air pressure is abnormal.

**ALARM NUMBER:** 308d

**Alarm Message:** C1 mapping data error

**Recovery:** [Retry] Checking whether there is a wafer, and check the state of the mapping sensor.

**Cause:** The mapping data was not acquired normally.

**ALARM NUMBER:** 308e

**Alarm Message:** C1 Front End sensor error

**Recovery:** The contents of the cause of alarms of the 4000 range are the same as those of the 3000 range (subtract 1000 from the 4000 ID number). However, the units where the alarms occurred in the 3000 range are either C1 or I1. For the 4000 range, they are either C2 or I2.

**Cause:** An abnormality occurred with the Front End sensor. The Tines sensor or door open position sensor may be operating.

**ALARM NUMBER:** 308f

**Alarm Message:** C1 Front End Wafer Slide-Out error

**Recovery:**

**Cause:** Wafer Slide-Out Sensor of Front End was detected. Wafer Slide-Out Sensor of Mini Environment and STACKLOAD detect. Recovery:Please retry after checking Wafer Slide-Out Sensor and wafers.

**ALARM NUMBER:** 3090

**Alarm Message:** C1 Front End interlock error

**Recovery:**

**Cause:** Front End Interlock error occurred. It is possibility that Door Opener or TRAY position is not regular. Recovery:Please retry after checking Door Opener, TARY and the other units.

**ALARM NUMBER:** 3091

**Alarm Message:** C1 POD Door error

**Recovery:**

**Cause:** Latching or Unlatching wasn't completed normally. It is possibility that POD Door not vacuum chucked. **Recovery:**Please retry after latching or unlatching.

**ALARM NUMBER:** 3092

**Alarm Message:** C1 door safety sensor detected

**Recovery:**

**Cause:** Safety Curtain Sensor was detected under CM door action. **Recovery:**Please retry after checking Safety Curtain Sensor and door.

**ALARM NUMBER:** 3093

**Alarm Message:** C1 Front End Local CPU status error

**Recovery:**

**Cause:** Un expected error occurred under Front End action. **Recovery:**It can not return. Please contact with operator.

**ALARM NUMBER:** 3094

**Alarm Message:** C1 Front End units busy

**Recovery:**

**Cause:** Command can not be executed because Front End units have been busy. It is possibility that initialization of units or under door action. **Recovery:**Please retry after checking Front End states.

**ALARM NUMBER:** 3095

**Alarm Message:** C1 Front End not initialize

**Recovery:**

**Cause:** Command can not be executed because Front End is not initialized. **Recovery:** Please retry after checking Front End states.

**ALARM NUMBER:** 3096

**Alarm Message:** C1 Load port Door action error

**Recovery:**

**Cause:** Error occurred during Load Port Door action. It is possibility that curtain sensor was detected during closing Load Port Door or CM maintenance Door was opened.  
**Recovery:**Please retry after checking curtain sensor of Load Port Door and Maintenance Door.

**ALARM NUMBER:** 3097

**Alarm Message:** C1 Door Open Error -Indexing

**Recovery:**

**Cause:** The C/C door was tried to open during the C/C index action. Open after index action is completes. **Recovery:**The alarm is cleared. The alarm message is cleared when the door is opened with the door Open/Close on the screen or by using the foot-switch.

**ALARM NUMBER:** 3098

**Alarm Message:** Motor EMO ON Detect

**Recovery:** [Retry] Executes again.

**Cause:** Motor Emergency was going to ON.

**ALARM NUMBER:** 3099

**Alarm Message:** C1 Door Motor EMO ON Detect

**Recovery:** Change the Motor Emergency to OFF and press the Interlock Release Switch.

**Cause:** Motor Emergency was going to ON.

**ALARM NUMBER:** 309a

**Alarm Message:** C1 Gate Door or T/C Lid Open Detect

**Recovery:** [Retry] Executes again.

**Cause:** Action cannot be performed because the Door or T/C lid is open. Check the condition of each sensor.

**ALARM NUMBER:** 309b

**Alarm Message:** IDX Door Open Detect

**Recovery:** [Retry] Executes again.



**Cause:** Action cannot be performed because the Door is open. Close it or check door sensor.

**ALARM NUMBER:** 309c

**Alarm Message:** C1 Load port wafer pick error

**Recovery:**

**Cause:** Error occurred during picking wafers of Load Port. It is possibility that BTA was emergency stopped during picking wafers to Cassette Module. Recovery: Please shift to maintenance mode that applying the module, and then confirm the unit.

**ALARM NUMBER:** 309d

**Alarm Message:** C1 Load port wafer place error

**Recovery:**

**Cause:** Error occurred during placing wafers of Load Port. It is possibility that BTA was emergency stopped during placing wafers to Cassette Module. Recovery: Please shift to maintenance mode that applying the module, and then confirm the unit.

**ALARM NUMBER:** 309e

**Alarm Message:** P1 Stopped N2 Purge-Pressure Upper Limit

**Recovery:**

**Cause:** Recovery:

**ALARM NUMBER:** 309f

**Alarm Message:** P1 Stopped N2 Purge-Pressure Upper Limit

**Recovery:**

**Cause:** Recovery:

**ALARM NUMBER:** 30a0

**Alarm Message:** C1 Keeping Atmosphere

**Recovery:** If open the door, keeping atmosphere will be stop. If close the door again, cassette chamber will be move to keeping vacuum status.

**Cause:** Cassette chamber is in keeping atmosphere status after vent has been executed.

**ALARM NUMBER:** 30a1

**Alarm Message:** C1 back pressure of turbo pump risen up

**Recovery:**

**Cause:** The error of the dry pump will be considered. Please make sure the alarm of the dry pump or leak. **Recovery:** Reset the pump alarm from the switch board on the front of equipment and restart the pump.

**ALARM NUMBER:** 30a2

**Alarm Message:** C1 Turbo Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cleared.

**Cause:** A turbo pump alarm occurred. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED).

**ALARM NUMBER:** 30a3

**Alarm Message:** T/C Turbo Pump Alarm

**Recovery:** Repair the pump system and press Alarm Reset on switch board. The alarm message will be cleared.

**Cause:** A turbo pump alarm occurred. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED).

**ALARM NUMBER:** 30a4

**Alarm Message:** C1 Turbo Pump Not in Normal

**Recovery:** The error is automatically cleared when the normal signal from the pump is confirmed.

**Cause:** The turbo pump was not in Normal. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED).

**ALARM NUMBER:** 30a5

**Alarm Message:** C1 Keeping Atmosphere

**Recovery:** If open the door, keeping atmosphere will be stop. If close the door again, cassette chamber will be move to keeping vacuum status.

**Cause:** Cassette chamber is in keeping atmosphere status after vent has been executed.

**ALARM NUMBER:** 30a6

**Alarm Message:** C1 Indexer Action Interlock

**Recovery:** Wait Indexer Action Completed and tray again.

**Cause:** Door Action Inter locked Due to Indexer Action Not completed.

**ALARM NUMBER:** 30a7

**Alarm Message:** Indexer (1) Controller Control Error

**Recovery:** [Retry] Try Indexer (1) Control again.

**Cause:** Indexer (1) Controller reported unexpected status

**ALARM NUMBER:** 30a8

**Alarm Message:** Indexer (2) Controller Control Error

**Recovery:** [Retry] Try Indexer (2) Control again.

**Cause:** Indexer (2) Controller reported unexpected status

**ALARM NUMBER:** 30a9

**Alarm Message:** C1 Valve Cannot Open/Close

**Recovery:** The error is cleared when the action complete from the pump is confirmed.

**Cause:** A valve operation that was prohibited was operated during acid exhaust when venting or pulling a vacuum using the maintenance operation or at etcher initialization. Operation of the prohibited valve depends on the settings of the slow vent valve (machine parameters "C/C Slow Vent Valve") and the factory acid exhaust (machine parameters "C/C Acid Exhaust Function"). The following are the prohibitive conditions. Standard specifications has no slow vent valve and Slow Vent specifications has slow vent valves. Prohibited operation during vacuum pull (Standard Specifications): C13/C14 open while C11/C12 valves open. Prohibited operation during vacuum pull (Slow Vent Specifications): C13/C14/C15 open while C11/C12 valves open. Slow Vent valve (SVV) open while C11/C12 valves open. Prohibited operation during venting to atmosphere or N2 induction (Standard Specifications): C11/C12 open while C13/C14 valves open. Prohibited operation during venting to atmosphere or N2 induction (Slow Vent Specifications): C11/C12 open while C13/C14 valves open. C11/C12 open while C15 valve open during OPEN. C11/C12/C15 open while Slow Vent valve (SVV) open. Prohibited operation during Cassette Chamber Acid Exhaust Processing (Standard

Specifications): C11/C12 open while C19 valve (acid exhaust line) open. Prohibited operation during Cassette Chamber Acid Exhaust Processing (Slow Vent Specifications): C11/C12 open while C19 valve (acid exhaust line) open.

**ALARM NUMBER:** 30aa

**Alarm Message:** C/C Dry Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cancelled.

**Cause:** A dry pump alarm occurred. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED).

**ALARM NUMBER:** 30ab

**Alarm Message:** C1 Turbo Pump Not in Normal

**Recovery:** The error is automatically cleared when the normal signal from the pump is confirmed.

**Cause:** The turbo pump was not in Normal. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED).

**ALARM NUMBER:** 30ac

**Alarm Message:** C1 Mapping Laser ON

**Recovery:** Set mapping laser into off and try to open the door again.

**Cause:** Mapping Laser become ON.

**ALARM NUMBER:** 30ad

**Alarm Message:** C1 Mapping Laser Interlock

**Recovery:** Close door or turn mapping laser Off, warning message will be disappeared.

**Cause:** Interlock between mapping laser and door open. Door detected in not close when mapping laser ON.

**ALARM NUMBER:** 30ae

**Alarm Message:** C1 Area Sensor Interlock

**Recovery:** Delete cause of area-sensor detected, and press interlock release switch.

**Cause:** Interlock between door close and area sensor. Door detected area sensor when close acting.

**ALARM NUMBER:** 30af

**Alarm Message:** C1 Load Port exhaust pressure error

**Recovery:**

**Cause:** Exhaust pressure error occurred in Load Port. **Recovery:** Check if the exhaust line of Load Port, Retry it.

**ALARM NUMBER:** 30b0

**Alarm Message:** C1 Front End air pressure error

**Recovery:**

**Cause:** Air pressure error occurred in Front End. **Recovery:** Check if the air pressure valve and the air leak.

**ALARM NUMBER:** 30b1

**Alarm Message:** C1 POD safety sensor detected

**Recovery:** [Retry] Please retry after checking POD safety sensor and units.

**Cause:** POD safety sensor was detected under shuttle dock motion.

**ALARM NUMBER:** 30b5

**Alarm Message:** Px Pump System Pressure Switch Alarm

**Recovery:** Repair the pump system and press Alarm Reset on switch board. The alarm message will be cleared.

**Cause:** One of following error occurred with pump system. - Pressure Switch was down more than 5 seconds during PUMP RUNNING sequence. - Pressure Switch was down more than 5 seconds during TMP BACKUP sequence. - Pressure Switch was not coming up in 300 seconds during PUMP RUNNING sequence. - Rough Vacuum was timeout. (6 minute)

**ALARM NUMBER:** 30d5

**Alarm Message:** C1 Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at a dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=140 (Low Active)

**ALARM NUMBER:** 30d6

**Alarm Message:** C1 Pump-N2 does not Flow

**Recovery:** Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and the error is cleared when the N2-Alarm signal from the pump is confirmed.

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=142 (Low Active)

**ALARM NUMBER:** 30d7

**Alarm Message:** C1 Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=140 (Low Active)

**ALARM NUMBER:** 30d8

**Alarm Message:** C1 Pump-N2 does not Flow

**Recovery:** [Retry] Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and press [Retry]. The contents of the cause of alarms of the 4000 range are the same as those of the 3000 range (subtract 1000 from the 4000 ID number). However, the units where the alarms occurred in the 3000 range are either C1 or I1. For the 4000 range, they are either C2 or I2.

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=142 (Low Active)

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## 2.5 Alarms Relating to the P/C

**ALARM NUMBER:** 5001

**Alarm Message:** P1 Unknown Message

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 5002

**Alarm Message:** P1 Unknown Message

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 5003

**Alarm Message:** P1 Unknown Message

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 5004

**Alarm Message:** P1 Aux CPU Comm Error - Lower Temp Unit

**Recovery:** [Retry] Resets the temperature on the lower temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** Communication was not possible between the auxiliary port and the lower temperature unit when setting the temperature on the lower temperature unit. (Including 3 automatic retries) With Unity: Check that the connector between the temperature unit and P/C MAIN INT CONN BRD is connected. With UNITY-Ver. 2: Check that the temperature board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK. Also, check that the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5005

**Alarm Message:** P1 Response Timeout - Lower Temp Unit

**Recovery:** [Retry] Resets the temperature on the lower temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** There was no response from the lower temperature unit within the prescribed time (5 s x 3 times) when setting the temperature on the lower temperature unit. It is possible that the temperature unit settings were defective, the RS cable is defective or the auxiliary CPU is defective. With Unity: Check that the connectors between the lower temperature unit and the P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the temperature board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK. Also, check that the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5006

**Alarm Message:** P1 Response Timeout - Lower Temp Unit

**Recovery:** Automatically cleared when communications with the temperature unit are checked.

**Cause:** There was no response from the lower temperature unit within the prescribed time (5 s x 3 times) when setting the temperature on the lower temperature unit. It is possible that the temperature unit settings were defective, the RS cable is defective or the auxiliary CPU is defective. With Unity: Check that the connectors between the lower temperature unit and the P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the temperature board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK. Also, check that the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5007

**Alarm Message:** P1 Communication Error - Lower Temp Unit

**Recovery:** [Retry] Sets the temperature again on the lower temperature unit. [Abort] Stops setting the temperature. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** An error occurred on the temperature unit when setting the temperature on the lower temperature unit. Check that the lower temperature unit and the machine parameter



[Lower Electrode Temp Control] match. P1 temperature parameter [Lower Electrode Temperature Control System].

**ALARM NUMBER:** 5008

**Alarm Message:** P1 Over Heat - Lower Temp Unit

**Recovery:** [Retry] Checks the overheating of the Lower temperature unit again.

**Cause:** Overheating was detected on the Lower temperature unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is ATC Type: Group ID=2, Local ID=302 (High Active)

**ALARM NUMBER:** 5009

**Alarm Message:** P1 Shield Cover Open

**Recovery:** Automatically cleared when the Shield Box Cover is detected to be closed.

**Cause:** Cover Box Open was detected for the Shield Box. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 500a

**Alarm Message:** P1 Shield Cover Open

**Recovery:** [Retry] Checks before executing initialization.

**Cause:** Cover Box Open was detected for the Shield Box before initialization. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 500b

**Alarm Message:** P1 Shield Cover Open

**Recovery:** [Retry] Checks before executing the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** Cover Box Open was detected for the Shield Box before executing the process. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2 Message: Local ID=130 (Low Active)

**ALARM NUMBER:** 500c

**Alarm Message:** P1 Shield Cover Open

**Recovery:** [Retry] Checks before executing the static electricity discharge again. [Abort] Cancels the static electricity discharge and wafer transfer out is performed.

**Cause:** Cover Box Open was detected for the Shield Box before discharging static electricity. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group I=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 500d

**Alarm Message:** P1 Cannot N2 Purge - Sheld Cover Open

**Recovery:** N2 purge is executed again when the Shield Box Cover is closed and the error is automatically cleared.

**Cause:** N2 purge was executed while the Shield Box Cover was open. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 500e

**Alarm Message:** P1 Cannot N2 Purge - Sheld Cover Open

**Recovery:** [Accept] The error message is cleared. N2 purge is executed again when the Shield Box Cover is closed and the error is automatically cleared.

**Cause:** N2 purge was executed while the Shield Box Cover was open. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2 Message: Local ID=130 (Low Active)

**ALARM NUMBER:** 500f

**Alarm Message:** P1 Cannot N2 Purge - Sheld Cover Open

**Recovery:** N2 purge is executed again when the Shield Box Cover is closed and the error is automatically cleared.

**Cause:** N2 purge was executed while the Shield Box Cover was open. Check if the Shield Box Cover is open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low

Active) UNITY-Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 5010

**Alarm Message:** P1 Exhaust Treatment Error (Pause)

**Recovery:** When the alarm for the exhaust gas treatment equipment is cancelled, the error is automatically cleared. Wafer transfer in is possible.

**Cause:** Transfer in of the wafer into the appropriate unit is not possible because an exhaust gas treatment equipment error signal was detected. Check if there is an alarm on the exhaust gas treatment equipment. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=86 (Low Active)

**ALARM NUMBER:** 5011

**Alarm Message:** P1 Exhaust Treatment Error

**Recovery:** [Retry] Checks before executing the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** An exhaust gas treatment equipment alarm signal was detected before executing the process. Check if there is an alarm on the exhaust gas treatment equipment. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=86 (Low Active)

**ALARM NUMBER:** 5012

**Alarm Message:** P1 Exhaust Treatment Error

**Recovery:** [Retry] Checks before executing initialization again.

**Cause:** An exhaust gas treatment equipment alarm signal was detected before performing initialization. Check if there is an alarm on the exhaust gas treatment equipment. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=86 (Low Active)

**ALARM NUMBER:** 5013

**Alarm Message:** P1 Exhaust Treatment Error

**Recovery:** [Retry] Checks before discharging static electricity again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** An exhaust gas treatment equipment alarm signal was detected before discharging static electricity. Check if there is an alarm on the exhaust gas treatment equipment. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=86 (Low Active)

**ALARM NUMBER:** 5014

**Alarm Message:** P1 Cannot Action Due to Interfer

**Recovery:** The appropriate command cannot be executed but you can continue with maintenance by pressing [Accept] on the sub-screen.

**Cause:** The Arm was transferred to the P/C Station Point while the Gap was up. Check if the Gap is down. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 5015

**Alarm Message:** P1 Cannot Close Shutter Due to Interfer

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The Arm position was inside the P1 unit when closing the shutter. Check the Arm position.

**ALARM NUMBER:** 5016

**Alarm Message:** P1 Cannot Close Shutter Due to Interfer

**Recovery:** [Retry] Checks Arm position data again and closes shutter.

**Cause:** The Arm position was inside the P1 unit when closing the shutter. Check the Arm position.

**ALARM NUMBER:** 5017

**Alarm Message:** P1 Cannot Close Shutter Due to Interfer

**Recovery:** [Abort] Terminates processing and executes wafer transfer out.

**Cause:** The Arm position was inside the P1 unit when closing the shutter. Check the Arm position.

**ALARM NUMBER:** 5018

**Alarm Message:** P1 Cannot Go Up Gate Due to Interfer

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The Arm position was inside the P1 unit when opening the transfer gate. Check the Arm position.

**ALARM NUMBER:** 5019

**Alarm Message:** P1 Cannot Go Up Gate Due to Interfer

**Recovery:** [Retry] Checks the Arm position data again and closes the transfer gate.

**Cause:** The Arm position was inside the P1 unit when opening the transfer gate. Check the Arm position.

**ALARM NUMBER:** 501a

**Alarm Message:** P1 Cannot Go Up Gate Due to Interfer

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The Arm position was inside the P1 unit when opening the transfer gate. Check the Arm position.

**ALARM NUMBER:** 501b

**Alarm Message:** P1 Now Venting

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 501c

**Alarm Message:** P1 Atm Pressure

**Recovery:** If it occurs during processing or electrostatic discharge, stop the process and close all valves related to the gas lines and exhaust valves. Use a vacuum meter (convectron gauge, or pressure switch) to check the pressure conditions.

**Cause:** The gas line induction valve (V30 Valve) was opened even though the Process Chamber is at atmosphere with the maintenance operation while the atmosphere interlock specifications (Interlock parameter "Atmospheric Pressure Interlock") is valid. If occurs during processing or electrostatic discharge, it is possible that the capacitance manometer is broken. Check the voltage of the capacitance manometer.

**ALARM NUMBER:** 501d

**Alarm Message:** P1 Measuring by BA Gauge

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 501e

**Alarm Message:** P1 Aux CPU Comm Error - Lower Chiller

**Recovery:** [Retry] Sets the lower chiller temperature again. [Abort] Stops setting the temperature. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** An error occurred in communications between the auxiliary board and the chiller when setting the lower chiller temperature. With Unity: Check that the connectors between the lower chiller and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check that the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 501f

**Alarm Message:** P1 Communication Error - Lower Chiller

**Recovery:** [Retry] Sets the lower chiller temperature again. [Abort] Stops setting the temperature. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** An error was transmitted from the chiller when setting the lower chiller temperature. Check that the lower temperature unit and the machine parameters match. P1 temperature parameter [Lower Electrode Temperature Control System].

**ALARM NUMBER:** 5020

**Alarm Message:** P1 Lower Temp Unstable (Pause)

**Recovery:** Automatically cleared when the temperature settings are confirmed to be within range.

**Cause:** The Interlock range of the lower electrode temperature of the process parameter setting values was exceeded when running the recipe. Check the setting range of the process parameters.

**ALARM NUMBER:** 5021

**Alarm Message:** P1 Lower Temp Up Limit Error (Pause)

**Recovery:** Automatically cleared when the temperature settings are confirmed to be within the upper limit.

**Cause:** The upper limit of the lower electrode temperature of the process parameter setting values was exceeded when running the recipe. Check the upper limit values of the process parameters.

**ALARM NUMBER:** 5022

**Alarm Message:** P1 Response Timeout - Lower Chiller

**Recovery:** [Retry] Sets the lower chiller temperature again. [Abort] Stops setting the temperature. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** There were no responses from the lower temperature unit for the prescribed time (5 s x 3 times) when setting the temperature on the lower temperature unit. It could be a defective temperature unit settings, defective RS cable or defective auxiliary CPU. With Unity: Check that the connectors between the lower chiller and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check that the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5023

**Alarm Message:** P1 Room Temp Timeout - Lower Temp Unit

**Recovery:** [Retry] Executes venting to atmosphere again after initialization. Press [Vent] to vent to atmosphere using the maintenance operation.

**Cause:** The temperature of the lower electrode control was not in the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature", "Atmosphere Disable Lower Limit Temperature") within the designated time (temperature parameter "Lower Unit Atmosphere Disable Waiting Timeout") when venting to atmosphere using the maintenance operation or at etcher initialization.

**ALARM NUMBER:** 5024

**Alarm Message:** P1 Room Temp Timeout - Lower Temp Unit

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5025

**Alarm Message:** P1 Room Temp Timeout - Lower Temp Unit

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5026

**Alarm Message:** P1 Wait Lower Temp Reach for Vent

**Recovery:** [Retry] Executes from check before processing again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** The Lower Electrode temperature exceeded the recipe parameter set value for interlock range (recipe parameter "Lower Electrode Interlock Conditions Range") and the set time (recipe parameter "Lower Electrode Interlock Conditions Time") was surpassed.

**ALARM NUMBER:** 5027

**Alarm Message:** P1 Lower Chiller Error (Pause)

**Recovery:** Automatically cleared when the error is cancelled on the chiller side. Wafer transfer in is possible.

**Cause:** An error occurred with the lower chiller. Wafer transfer in was not possible to the appropriate unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=97 (High Active)

**ALARM NUMBER:** 5028

**Alarm Message:** P1 Lower Chiller Error

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers wafer out.

**Cause:** An error occurred with the lower chiller. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=97 (High Active)

**ALARM NUMBER:** 5029

**Alarm Message:** P1 Lower Chiller Error



**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An error occurred with the lower chiller. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2:  
Group ID2, Local ID=97 (High Active)

**ALARM NUMBER:** 502a

**Alarm Message:** P1 Lower Chiller Error

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort]  
Terminates electrostatic discharge and transfers wafer in.

**Cause:** An error occurred with the lower chiller. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2:  
Group ID=2, Local ID=97 (High Active)

**ALARM NUMBER:** 502b

**Alarm Message:** P1 Lower Chiller Brine Dropped

**Recovery:** Automatically cleared when the lower chiller brine flow is normal.

**Cause:** The lower chiller brine flow amount dropped. Check the appropriate chiller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.

**ALARM NUMBER:** 502c

**Alarm Message:** P1 Lower Chiller Brine Dropped

**Recovery:** [Retry] Executes from check before executing initialization again.

**Cause:** The lower chiller brine flow amount dropped. Check the appropriate chiller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.

**ALARM NUMBER:** 502d

**Alarm Message:** P1 Lower Chiller Brine Dropped

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]  
Terminates the process and transfers the wafer out.

**Cause:** The lower chiller brine flow amount dropped. Check the appropriate chiller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.

**ALARM NUMBER:** 502e

**Alarm Message:** P1 Lower Chiller Brine Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The lower chiller brine flow amount dropped. Check the appropriate chiller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.

**ALARM NUMBER:** 502f

**Alarm Message:** P1 Lower Temp Unit Alarm

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5030

**Alarm Message:** P1 Heater Wire Broken - Lower Temp Unit

**Recovery:** Automatically cleared when heater broken wire is fixed.

**Cause:** A broken heater wire of the lower temperature unit was detected. Check the lower temperature control unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is ATC Type: Group ID=4, Local ID=300 (High Active)

**ALARM NUMBER:** 5031

**Alarm Message:** P1 Heater Wire Broken - Lower Temp Unit

**Recovery:** The error is automatically cleared when heater broken wire is fixed.

**Cause:** A lower temperature controller heater broken wire was detected. Check the appropriate lower temperature controller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is ATC Type: Group ID=4, Local ID=300

**ALARM NUMBER:** 5032

**Alarm Message:** P1 Lower Chiller Local (Pause)

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5033

**Alarm Message:** P1 Lower Chiller in Local

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The lower chiller is not in the remote status. Check if the appropriate chiller is in the remote status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=96 (High Active)

**ALARM NUMBER:** 5034

**Alarm Message:** P1 Lower Chiller in Local

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The lower chiller is not in the remote status. Check if the appropriate chiller is in the remote status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=96 (High Active)

**ALARM NUMBER:** 5035

**Alarm Message:** P1 Lower Chiller in Local

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The lower chiller is not in the remote status. Check if the appropriate chiller is in the remote status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=96 (High Active)

**ALARM NUMBER:** 5036

**Alarm Message:** P1 Lower Chiller Not in Ready (Pause)

**Recovery:** When the chiller can be confirmed to be operating, this is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the temperature settings and the temperature inside the chiller exceed the range band, or the lower chiller is not in the Ready status. Check the temperature setting and the recipe temperature

setting/range conditions of the lower chiller. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=99 (High Active)

**ALARM NUMBER:** 5037

**Alarm Message:** P1 Lower Chiller Not in Operate (Pause)

**Recovery:** When the chiller can be confirmed to be operating, this is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the temperature settings and the temperature inside the chiller exceed the range band, or the lower chiller is not in the Ready status. Check if the appropriate lower chiller is running. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2 when the P/C is DRM Type: Group ID=2, Local ID=100 (High Active)

**ALARM NUMBER:** 5038

**Alarm Message:** P1 Lower Chiller Stopped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The lower chiller stopped operating. Check if the appropriate lower chiller is in operating status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=100 (High Active)

**ALARM NUMBER:** 5039

**Alarm Message:** P1 Lower Chiller Stopped

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The lower chiller stopped operating. Check if the appropriate lower chiller is in operating status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=100 (High Active)

**ALARM NUMBER:** 503a

**Alarm Message:** P1 Lower Chiller Stopped

**Recovery:** [Retry] Executes from check before electrostatic discharge. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The lower chiller stopped operating. Check if the appropriate lower chiller is in operating status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=100 (High Active)

**ALARM NUMBER:** 503b

**Alarm Message:** P1 Execution Disabled in Gas Induction

**Recovery:** [Retry] Pulls a vacuum or vents to atmosphere again after initialization.

**Cause:** The objective process could not be executed because the convectron gauge could not be used because of process gas induction or RF charging or venting to atmosphere or pulling a vacuum during etcher initialization.

**ALARM NUMBER:** 503c

**Alarm Message:** P1 Execution Disabled in Gas Induction

**Recovery:** Press the appropriate button again using the maintenance operation to pull a vacuum or vent to atmosphere or perform B.A. gauge control.

**Cause:** The objective process could not be executed because the convectron gauge and B.A. gauge could not be used because of process gas induction or RF charging or performing B.A. gauge control or venting to atmosphere or pulling a vacuum using the maintenance operation.

**ALARM NUMBER:** 503d

**Alarm Message:** P1 Execution Disabled in Gas Induction

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** Vacuum pull was not possible because the convectron gauge could not be used because of vacuum pull from atmosphere during process gas induction or RF charging or when executing a process. Normally, process is performed under high vacuum conditions (pressure which does not require rough vacuum) but this alarm occurs only when executing a vacuum pull which requires rough vacuum because of the reset for the alarm types of pressure upper limit errors.

**ALARM NUMBER:** 503e

**Alarm Message:** P1 Execution Disabled in Gas Induction

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Vacuum pull was not possible because the convectron gauge could not be used because of vacuum pull from atmosphere during process gas induction or RF charging during electrostatic discharge. Normally, process is performed under high vacuum conditions (pressure which does not require rough vacuum) but this alarm occurs only when executing a vacuum pull which requires rough vacuum because of the reset for the alarm types of pressure upper limit errors.

**ALARM NUMBER:** 503f

**Alarm Message:** P1 Cannot use CV Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5040

**Alarm Message:** P1 Cannot use CV Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5041

**Alarm Message:** P1 Cannot use CV Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5042

**Alarm Message:** P1 Cannot use CV Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5043

**Alarm Message:** P1 Cannot use BA Gauge Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5044

**Alarm Message:** P1 Cannot use BA Gauge Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5045

**Alarm Message:** P1 Cannot use BA Gauge Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5046

**Alarm Message:** P1 Cannot use BA Gauge Due to RF

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5047

**Alarm Message:** P1 Cannot Vacuum - Now Etching Other P/C

**Recovery:** [Retry] Executes vacuum pull again. Vacuum pull is executed when the chamber using the dry pump is in idle.

**Cause:** Rough vacuum pull could not be executed because the chamber using the dry pump for rough vacuum was in a condition other than idle when pulling a vacuum before and after executing the process. Conditions other than idle are wafer transfer before and after executing the process and RF charge or electrostatic discharge.

**ALARM NUMBER:** 5048

**Alarm Message:** P1 Cannot Vacuum - Now Etching Other P/C

**Recovery:** [Retry] Executes vacuum pull again after initializing the etcher.

**Cause:** Rough vacuum pull could not be executed because the chamber using the dry pump for rough vacuum was in a condition other than idle when pulling a vacuum during initialization. Conditions other than idle are wafer transfer before and after executing the process and RF charge or electrostatic discharge.

**ALARM NUMBER:** 5049

**Alarm Message:** P1 Cannot Vacuum - Now Etching Other P/C

**Recovery:** [Retry] Executes vacuum pull again. Vacuum pull is executed when the chamber using the dry pump is in idle.

**Cause:** Rough vacuum pull could not be executed because the chamber using the dry pump for rough vacuum was in a condition other than idle when pulling a vacuum before and after electrostatic discharge. Conditions other than idle are wafer transfer before and after executing the process and RF charge or electrostatic discharge.

**ALARM NUMBER:** 504a

**Alarm Message:** P1 Cannot Vacuum - Now Etching Other P/C

**Recovery:** The error is automatically cleared by using the maintenance operation again.

**Cause:** Rough vacuum pull could not be executed in maintenance vacuum pull processing because the chamber using the same dry pump for rough vacuum is not in idle status. Conditions other than idle are wafer transfer before and after executing the process and RF charge or electrostatic discharge.

**ALARM NUMBER:** 504b

**Alarm Message:** P1 Now Waiting Room Temp

**Recovery:** [Accept] The message displayed is cleared. (Waiting continues until the chamber temperature is within range.)

**Cause:** This is a check message to wait until the chamber temperature reaches the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature," "Atmosphere Disable Lower Limit Temperature") when cutting the N2 induction when venting to atmosphere using the maintenance operation at etcher initialization. This message is displayed when one of the following conditions is met. When performing lower electrode temperature control (temperature parameter "Lower Electrode Temperature Control System"). When performing upper electrode temperature control (temperature parameter "Upper Electrode Temperature Control System") and room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") is valid for atmosphere venting. When performing wall electrode temperature control (temperature parameter "Wall Temperature Control System") and room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") is valid for atmosphere venting. When performing window heater control (temperature parameter "Window Heater Temperature Control System") and room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") is valid for atmosphere venting.



**ALARM NUMBER:** 504c

**Alarm Message:** P1 Now Waiting Room Temp

**Recovery:** [Accept] The message displayed is cleared. (Waiting continues until the chamber temperature is within range.)

**Cause:** This is a check message to wait until the chamber temperature reaches the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature," "Atmosphere Disable Lower Limit Temperature") when cutting the N2 induction when venting to atmosphere using the maintenance operation at etcher initialization. This message is displayed when one of the following conditions is met. When performing lower electrode temperature control (temperature parameter "Lower Electrode Temperature Control System"). When performing upper electrode temperature control (temperature parameter "Upper Electrode Temperature Control System") and room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") is valid for atmosphere venting.

**ALARM NUMBER:** 504d

**Alarm Message:** P1 Another P/C in Evacuation

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 504e

**Alarm Message:** P1 Cannot Action Valve Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 504f

**Alarm Message:** P1 Discharge Error - Another P/C Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5050

**Alarm Message:** P1 Etching Error - Another P/C Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5051

**Alarm Message:** P1 Cannot Execute Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5052

**Alarm Message:** P1 Initialization Not Complete

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5053

**Alarm Message:** P1 Initialization Not Complete

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5054

**Alarm Message:** P1 Discharge Stopped Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5055

**Alarm Message:** P1 Etching Stopped Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5056

**Alarm Message:** P1 Edge He Flow Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process

(electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "Edge B.P. Flow Interlock Conditions Range") exceeded the set time (Recipe Parameter "Edge B.P. Flow Interlock Conditions Time") when flowing in He gas with the wafer coolant (edge) line.

**ALARM NUMBER:** 5057

**Alarm Message:** P1 Edge He Flow Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** He gas flow exceeded the set time (recipe parameter "Edge B.P. Flow Stability Conditions Time" x 3 times when recipe "Step Time" was different on consecutive steps) without meeting the recipe parameter set value stability conditions (Recipe Parameter "Edge B.P. Flow Stability Conditions Range", "Edge B.P. Flow Stability Conditions Time") on the wafer coolant (edge) line.

**ALARM NUMBER:** 5058

**Alarm Message:** P1 Center He Flow Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "Center B.P. Flow Interlock Conditions Range") exceeded the set time (Recipe Parameter "Center B.P. Flow Interlock Conditions Time") when flowing in He gas with the wafer coolant (Center) line.

**ALARM NUMBER:** 5059

**Alarm Message:** P1 Center He Flow Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** He gas flow exceeded the set time (recipe parameter "Edge B.P. Flow Stability Conditions Time" x 3 times when recipe "Step Time" was different on consecutive steps) without meeting the recipe parameter set value stability conditions (Recipe Parameter "Edge B.P. Flow Stability Conditions Range", "Edge B.P. Flow Stability Conditions

Time") on the wafer coolant (center) line.

**ALARM NUMBER:** 505a

**Alarm Message:** P1 Replace Exhaust Treatment Filter

**Recovery:** Automatically cleared when the filter replacement signal is cancelled.

**Cause:** An exhaust gas treatment equipment filter replacement signal was detected. Check the appropriate exhaust gas treatment equipment. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=12 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=87 (Low Active)

**ALARM NUMBER:** 505b

**Alarm Message:** P1 CM Zero Adjust Not Available

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 505c

**Alarm Message:** P1 Cannot Action Valve - CM Not Available

**Recovery:** Press [0 Point Adjust] after pulling a vacuum on the Process Chamber using the maintenance operation, perform the capacitance manometer 0 point adjustment and perform your objective process again.

**Cause:** Process gas line MFC primary valve could not be opened because the pressure measurements by the capacitance manometer are invalid when executing the recipe with the maintenance operation, process gas batch induction operation and operating the valves independently. The cause of the error could be that the capacitance manometer protective valve (V34 valve) is closed because of the rise in pressure, the chamber pressure is out of the range measurable by the capacitance manometer or the capacitance manometer 0 point offset is not completed. Check whether the capacitance manometer protective valve (V34 valve) is open by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 505d

**Alarm Message:** P1 Stop Discharge - CM Not Available

**Recovery:** [Retry] Performs electrostatic discharge again after pulling a vacuum on the Chamber. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge was stopped because pressure measurements by the capacitance manometer are invalid and because the process gas line MFC primary valve could not be opened when inducting process gas during electrostatic discharge. The cause of the error could be that the capacitance manometer protective valve (V34 valve) is closed because of the rise in pressure, the chamber pressure is out of the range measurable by the capacitance manometer or the capacitance manometer 0 point offset is not completed. Check whether the capacitance manometer protective valve (V34 valve) is open by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 505e

**Alarm Message:** P1 Stop Etching - CM Not Available

**Recovery:** [Retry] Executes process again after pulling a vacuum on the Chamber.  
[Abort] Terminates the process and transfers the wafer out.

**Cause:** Processing was stopped because pressure measurements by the capacitance manometer are invalid and because the process gas line MFC primary valve could not be opened when inducting process gas when processing. The cause of the error could be that the capacitance manometer protective valve (V34 valve) is closed because of the rise in pressure, the chamber pressure is out of the range measurable by the capacitance manometer or the capacitance manometer 0 point offset is not completed. Check whether the capacitance manometer protective valve (V34 valve) is open by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 505f

**Alarm Message:** P1 Executing CM Zero Adjust

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5060

**Alarm Message:** P1 CM Zero Adjust Unsuccessful

**Recovery:** [Retry] Executes vacuum pull again when initializing the etcher. Press [0 Point Adjust] again using the maintenance operation to execute.

**Cause:** 0 point adjust could not be specified because the manometer analog output voltage is unstable during capacitance manometer 0 point offset (0 Point Adjust) with the maintenance operation or when initializing the etcher. It is possible that the capacitance manometer is broken so check the voltage output from the manometer. Check if the capacitance manometer protective valve (V34 valve) is open with the solenoid LED (Lit: Open; Extinguished: Closed). If the capacitance manometer type (pressure parameters "Capacitance Manometer Type") and the pressure control mode (pressure parameters

"Pressure Control Mode") are incorrectly set, the wrong 0 point will be offset so check the parameters.

**ALARM NUMBER:** 5061

**Alarm Message:** P1 CM Zero Adjust Not Executing

**Recovery:** [Retry] Executes vacuum pull again when initializing the etcher. Press [0 Point Adjust] again using the maintenance operation to execute.

**Cause:** Convectron Gauge measurement pressure was over 0.13 Pa (1 mTorr) after starting capacitance manometer 0 point offset (0 Point Adjust) with the maintenance operation or when initializing the etcher. Check the pressure value on the vacuum meter (capacitance manometer, and convectron gauge) monitor. It is possible that the capacitance manometer and convectron gauge are broken so check the voltage output of each. Check if the capacitance manometer protective valve (V34 valve) is open with the solenoid LED (Lit: Open; Extinguished: Closed). If the capacitance manometer type (pressure parameters "Capacitance Manometer Type") and the pressure control mode (pressure parameters "Pressure Control Mode") are incorrectly set, the wrong 0 point will be offset so check the parameters.

**ALARM NUMBER:** 5062

**Alarm Message:** P1 Lower Chiller Controller Error

**Recovery:** When the chiller can be confirmed to be running, this will be automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the lower chiller has stopped running. Check the operating status of the appropriate lower chiller.

**ALARM NUMBER:** 5063

**Alarm Message:** P1 Wall Temp Unit Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5064

**Alarm Message:** P1 Upper Chiller Unit Error

**Recovery:** When the chiller can be confirmed to be running, this will be automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the upper chiller

has stopped running. Check the operating status of the appropriate upper chiller.

**ALARM NUMBER:** 5065

**Alarm Message:** P1 Edge He Press Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "Edge B.P. Press Interlock Conditions Range") exceeded the set time (Recipe Parameter "Edge B.P. Press Interlock Conditions Time") when controlling the pressure on the wafer coolant (edge) line.

**ALARM NUMBER:** 5066

**Alarm Message:** P1 Edge He Press Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** Exceeded the set time (recipe parameter "Edge B.P. Press Stability Conditions Time" x 3 times when recipe "Step Time" was different on consecutive steps) without meeting the recipe parameter set value stability conditions (Recipe Parameter "Edge B.P. Press Stability Conditions Range", "Edge B.P. Press Stability Conditions Time") when controlling the pressure on the wafer coolant (edge) line.

**ALARM NUMBER:** 5067

**Alarm Message:** P1 Center He Press Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "Edge B.P. Press Interlock Conditions Range") exceeded the set time (Recipe Parameter "Edge B.P. Press Interlock Conditions Time") when controlling the pressure on the wafer coolant (edge) line.

**ALARM NUMBER:** 5068

**Alarm Message:** P1 Center He Press Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process

(electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** Exceeded the set time (recipe parameter "Center B.P. Flow Stability Conditions Time" x 3 times when recipe "Step Time" was different on consecutive steps) without meeting the recipe parameter set value stability conditions (Recipe Parameter "Center B.P. Flow Stability Conditions Range", "Center B.P. Flow Stability Conditions Time") when controlling the pressure on the wafer coolant (center) line.

**ALARM NUMBER:** 5069

**Alarm Message:** P1 Cannot Execute Due to Gate Open

**Recovery:** [Retry] Executes from RF power output, electrostatic chuck voltage output, gas induction or wafer cooling control again.

**Cause:** RF power output, electrostatic chuck voltage output, gas induction or wafer cooling control was executed while the transfer gate was open. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 506a

**Alarm Message:** P1 Cannot Execute Due to Gate Open

**Recovery:** This is an alarm which occurs only during maintenance. The alarm message is automatically cleared when another maintenance operation is performed.

**Cause:** The transfer gate was opened when RF power output, electrostatic chuck voltage output, gas induction or wafer cooling control was executed. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 506b

**Alarm Message:** P1 Cannot Execute Due to Door Open

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The transfer gate was opened when RF power output, electrostatic chuck voltage output, gas induction or wafer cooling control was executed. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)



**ALARM NUMBER:** 506c

**Alarm Message:** P1 Cannot Execute Due to Door Open

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The transfer gate was opened when RF power output, electrostatic chuck voltage output, gas induction or wafer cooling control was executed. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 506d

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** An alarm occurred with the dry pump when the turbo pump ISO valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 506e

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates the process and transfers out the wafer.

**Cause:** A dry pump alarm occurred when pulling a vacuum before and after executing the process. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 506f

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates electrostatic discharge and transfers in the wafer.

**Cause:** A dry pump alarm occurred when pulling a vacuum before and after electrostatic discharge. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 5070

**Alarm Message:** P1 DRY Pump Not in Remote

**Recovery:** [Retry] Vacuum is pulled when the pump system is in Remote Mode.

**Cause:** The pump system is not in remote status. Check if the pump system switch is set to remote. Check the connections of the signal wire cable between the pump system and the etcher and the connectors. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the remote signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=1 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=1 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (High Active)

**ALARM NUMBER:** 5071

**Alarm Message:** P1 DRY Pump Not in Remote

**Recovery:** [Retry] Vacuum is pulled when the pump system is in Remote Mode. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The pump system is not in remote status. Check if the pump system switch is set to remote. Check the connections of the signal wire cable between the pump system and the etcher and the connectors. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the remote signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=1 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=1 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (High Active)

**ALARM NUMBER:** 5072

**Alarm Message:** P1 DRY Pump Not in Remote

**Recovery:** [Retry] Vacuum is pulled when the pump system is in remote mode. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The pump system is not in remote status. Check if the pump system switch is changed to remote. Check the connections of the signal wire cable between the pump system and the etcher and the connectors. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the remote signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=1 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=1 (High Active) UNITY-Ver. 2 when the P/C is either DRM/PE/ATC types: Group ID=2, Local ID=11 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (High Active)

**ALARM NUMBER:** 5073

**Alarm Message:** P1 ESC Power Off

**Recovery:** [Retry] Executes from Electrostatic Chuck voltage output again.

**Cause:** Electrostatic Chuck voltage could not be detected even when the set time (etcher parameter "ESC On Timeout") was surpassed when outputting Electrostatic Chuck voltage.

**ALARM NUMBER:** 5074

**Alarm Message:** P1 ESC Power Off

**Recovery:** [Retry] Executes from the error recipe step again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** Electrostatic Chuck voltage could not be detected even when the set time (etcher parameter "ESC On Timeout") was surpassed when outputting Electrostatic Chuck voltage.

**ALARM NUMBER:** 5075

**Alarm Message:** P1 ESC Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe "Step Time", when consecutive steps voltage setting value is

a different time the recipe parameter "ESC Interlock Conditions Time" x 2) was exceeded without meeting the recipe parameter setting value for stability conditions (recipe parameter "ESC Interlock Conditions Range", "ESC Interlock Conditions Time") during electrostatic chuck voltage output.

**ALARM NUMBER:** 5076

**Alarm Message:** P1 ESC Voltage Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe "Step Time", when consecutive steps voltage setting value is a different time the recipe parameter "ESC Interlock Conditions Time" was exceeded by the recipe parameter setting value for interlock conditions (recipe parameter "ESC Interlock Conditions Range" during electrostatic chuck voltage output.

**ALARM NUMBER:** 5077

**Alarm Message:** P1 ESC Current Exceeded Upper Limit

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "ESC Interlock Conditions Time") exceeded the electrostatic chuck recipe parameter setting value for interlock upper limit (recipe parameter "ESC Interlock Conditions Upper Limit") during electrostatic chuck voltage output.

**ALARM NUMBER:** 5078

**Alarm Message:** P1 External Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An external Interlock was detected before initialization. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "External Interlock": [None] UNITY: Group ID=2, Local ID=112 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=114 (Low Active)

**ALARM NUMBER:** 5079

**Alarm Message:** P1 External Interlock

**Recovery:** [Retry] Executes from before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An external Interlock was detected before executing the process. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "External Interlock": [None] UNITY: Group ID=2, Local ID=112 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=114 (Low Active)

**ALARM NUMBER:** 507a

**Alarm Message:** P1 External Interlock

**Recovery:** [Retry] Executes from before electrostatic discharge again. [Abort] Terminates electrostatic discharge again and transfers the wafer in.

**Cause:** An external Interlock was detected before executing electrostatic discharge. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "External Interlock": [None] UNITY: Group ID=2, Local ID=112 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=114 (Low Active)

**ALARM NUMBER:** 507b

**Alarm Message:** P1 External Interlock

**Recovery:** The error is cleared when the external interlock is cancelled.

**Cause:** An external Interlock was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "External Interlock": [None] UNITY: Group ID=2, Local ID=112 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=114 (Low Active)

**ALARM NUMBER:** 507c

**Alarm Message:** P1 Gap motor alarm

**Recovery:** The error is automatically cleared when the external interlock is disabled.

**Cause:** During drive and initializing of the gap motor, an alarm was detected from the gap motor. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 507d

**Alarm Message:** P1 Gap motor alarm

**Recovery:** [Retry] Performs initialization again.

**Cause:** During drive and initializing of the gap motor, an alarm was detected from the gap motor. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID 2, Local ID 205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 507e

**Alarm Message:** P1 Gap motor alarm

**Recovery:** [Retry] Performs initialization again.

**Cause:** During drive and initializing of the gap motor, an alarm was detected from the gap motor. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 507f

**Alarm Message:** P1 Gap motor alarm

**Recovery:** [Retry] Performs Gap Drive again after motor initialization. [Abort] Terminates the process and transfers the wafer out.

**Cause:** During drive and initializing of the gap motor, an alarm was detected from the gap motor. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 5080

**Alarm Message:** P1 Gap motor alarm

**Recovery:** The error is automatically cleared when the maintenance operation is performed again.

**Cause:** During drive and initializing of the gap motor, an alarm was detected from the gap motor. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 5081

**Alarm Message:** P1 Gap motor interlock

**Recovery:** [Retry] Performs gap motor Drive after initializing again.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5082

**Alarm Message:** P1 Servo Alarm or Interlock

**Recovery:** The error is automatically cleared when the gap motor alarm or interlock is cancelled.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5083

**Alarm Message:** P1 Gap motor interlock

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5084

**Alarm Message:** P1 Gap motor interlock

**Recovery:** The error is automatically cleared when the maintenance operation is performed again.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5085

**Alarm Message:** P1 Gap motor interlock

**Recovery:** [Retry] Gap motor drive is performed again after initializing motor.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5086

**Alarm Message:** P1 Gap motor interlock

**Recovery:** [Retry] Performs gap motor drive again after initializing motor. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) At the same time, check the 7 segment display displayed in the gap servo driver.

**ALARM NUMBER:** 5087

**Alarm Message:** P1 Gap Stop at Lower Limit

**Recovery:** [Retry] Execute after initializing again.

**Cause:** The lower limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=209 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=44 (High Active)

**ALARM NUMBER:** 5088

**Alarm Message:** P1 Gap Stop at Lower Limit

**Recovery:** [Retry] Lower gap again.

**Cause:** The lower limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=209 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=44 (High Active)

**ALARM NUMBER:** 5089



**Alarm Message:** P1 Gap Stop at Lower Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The lower limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=209 (High Active)  
UNITY-Ver. 2: Group ID=2, Local ID=44 (High Active)

**ALARM NUMBER:** 508a

**Alarm Message:** P1 Gap Exceed Upper Limit

**Recovery:** [Retry] Executes from initialization again.

**Cause:** Gap motor designated drive position exceeded the prescribed upper limit position. Check the designated drive position.

**ALARM NUMBER:** 508b

**Alarm Message:** P1 Gap Exceed Upper Limit

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Gap motor designated drive position exceeded the prescribed upper limit position. Check the designated drive position.

**ALARM NUMBER:** 508c

**Alarm Message:** P1 Gap Exceed Upper Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Gap motor designated drive position exceeded the prescribed upper limit position. Check the designated drive position.

**ALARM NUMBER:** 508d

**Alarm Message:** P1 Gap Exceed Lower Limit

**Recovery:** [Retry] Executes from initialization again.

**Cause:** Gap motor designated drive position exceeded the prescribed lower limit position. Check the designated drive position.

**ALARM NUMBER:** 508e

**Alarm Message:** P1 Gap Exceed Lower Limit

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Gap motor designated drive position exceeded the prescribed lower limit position. Check the designated drive position.

**ALARM NUMBER:** 508f

**Alarm Message:** P1 Gap Exceed Lower Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Gap motor designated drive position exceeded the prescribed lower limit position. Check the designated drive position.

**ALARM NUMBER:** 5090

**Alarm Message:** P1 Gap Initialization Error

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (P/C Parameter "Gap Control" is set to [Standard Gap] of 10000 pulses, [Long Gap] and [Clamp] is 5000 pulses) when performing gap motor initialization from the home Sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active) At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5091

**Alarm Message:** P1 Gap Initialization Error

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (P/C Parameter "Gap Control" is set to [Standard Gap] of 10000 pulses, [Long Gap] and [Clamp] is 5000 pulses) when performing gap motor initialization from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active) At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5092

**Alarm Message:** P1 Gap Initialization Error

**Recovery:** [Abort] Terminates the process and transfers the wafer out

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (P/C Parameter "Gap Control" is set to [Standard Gap] of 10000 pulses, [Long Gap] and [Clamp] is 5000 pulses) when performing gap motor initialization from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active) At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5093

**Alarm Message:** P1 Gap Not in Correct Position Cause/Handling

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The difference in the designated drive pulse count and the encoder drive pulse count exceeded the tolerance range (For UNITY  $\pm 5$  pulses, UNITY Ver. 2  $\pm 20$  pulses). At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5094

**Alarm Message:** P1 Gap Not in Correct Position

**Recovery:** [Retry] Executes from motor initialization and Gap drive again.

**Cause:** The difference in the designated drive pulse count and the encoder drive pulse count exceeded the tolerance range (For UNITY  $\pm 5$  pulses, UNITY Ver. 2  $\pm 20$  pulses). At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5095

**Alarm Message:** P1 Gap Not in Correct Position

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The difference in the designated drive pulse count and the encoder drive pulse count exceeded the tolerance range (For UNITY  $\pm 5$  pulses, UNITY Ver. 2  $\pm 20$  pulses). At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5096

**Alarm Message:** P1 Gap Driving Timeout

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** The action was not completed even though the prescribed time (60 s) was exceeded when driving the gap motor. At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5097

**Alarm Message:** P1 Gap Driving Timeout

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** The action was not completed even though the prescribed time (60 s) was exceeded when driving the gap motor. At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5098

**Alarm Message:** P1 Gap Driving Timeout

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The action was not completed even though the prescribed time (60 s) was exceeded when driving the gap motor. At the same time, check whether an alarm has occurred in 7 segment displayed in the gap servo driver. Also, check that the connection of the cable between the motor and servo driver.

**ALARM NUMBER:** 5099

**Alarm Message:** P1 Gap Stop at Upper Limit

**Recovery:** [Retry] Executes after initializing again.

**Cause:** The upper limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=211 (High Active)  
UNITY-Ver. 2: Group ID=2, Local ID=46 (High Active)

**ALARM NUMBER:** 509a

**Alarm Message:** P1 Gap Stop at Upper Limit

**Recovery:** [Retry] Raises the gap again.

**Cause:** The upper limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=211 (High Active)  
UNITY-Ver. 2: Group ID=2, Local ID=46 (High Active)

**ALARM NUMBER:** 509b

**Alarm Message:** P1 Gap Stop at Upper Limit

**Recovery:** [Abort] Terminates the process and transfer the wafer out.

**Cause:** The upper limit signal was detected during gap drive. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=211 (High Active)  
UNITY-Ver. 2: Group ID=2, Local ID=46 (High Active)

**ALARM NUMBER:** 509c

**Alarm Message:** P1 Cannot Drive Gap - Pin Position Not HOME

**Recovery:** [Retry] Performs gap motor drive after initializing motor.

**Cause:** When the P/C parameter "Select the Pin/Gap Sequence of Motion" is set to "Starting with Pin," the lifter pin was not at the home position when the gap drive was performed. Check that the lifter pin is at the home position of check from the adjustment terminal. An error will occur with the following conditions. UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC types: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 509d

**Alarm Message:** P1 Cannot Drive Gap - Pin Position Not HOME

**Recovery:** [Retry] Performs gap motor drive after initializing motor. [Abort] Terminates

the process and transfers out the wafer.

**Cause:** When the P/C parameter "Select the Pin/Gap Sequence of Motion" is set to "Starting with Pin," the lifter pin was not at the home position when the gap drive was performed. Check that the lifter pin is at the home position of check from the adjustment terminal. An error will occur with the following conditions. UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC types: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 509e

**Alarm Message:** P1 Cannot Drive Gap - Pin Position Not HOME

**Recovery:** The error is automatically cleared when the maintenance operation is performed again.

**Cause:** When the P/C parameter "Select the Pin/Gap Sequence of Motion" is set to "Starting with Pin," the lifter pin was not at the home position when the gap drive was performed. Check that the lifter pin is at the home position of check from the adjustment terminal. An error will occur with the following conditions. UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE type: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 509f

**Alarm Message:** P1 Over Flow on Gap Motor

**Recovery:** The error is automatically cleared when the gap motor overflow is cancelled.

**Cause:** An overflow signal was detected from the gap motor. Check if an overflow has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=206 (High Active)

**ALARM NUMBER:** 50a0

**Alarm Message:** P1 Gap not Regular Position

**Recovery:** This is an alarm which only occurs during maintenance. The error message is cleared when another maintenance operation is performed.

**Cause:** Wafer cooling control was performed while the GAP position was not at the set position ("Process Gap Position"  $\pm 1$  (mm)) on the GAP Adjustment Screen (P/C Maintenance).

**ALARM NUMBER:** 50a1

**Alarm Message:** P1 Gas 1 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 1 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 1 Interlock Conditions Range") when introducing the gas on Gas Line 1. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP17 - A.GND Monitor rate of flow GAS I/O BOARD B TP9 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP15 - A.GND Monitor rate of flow TYB211-A/GAS TP8 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a2

**Alarm Message:** P1 Gas 1 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 1 Stability Conditions Range", "Gas 1 Stability Conditions Time") when introducing the gas on Gas Line 1. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP17 - A.GND Monitor rate of flow GAS I/O BOARD B TP9 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP15 - A.GND Monitor rate of flow TYB211-A/GAS TP8 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a3

**Alarm Message:** P1 Gas 2 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process

(electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 2 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 2 Interlock Conditions Range") when introducing the gas on Gas Line 2. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP18 - A.GND Monitor rate of flow GAS I/O BOARD B TP10 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP9 - A.GND Monitor rate of flow TYB211-A/GAS TP7 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a4

**Alarm Message:** P1 Gas 2 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 2 Stability Conditions Range", "Gas 2 Stability Conditions Time") when introducing the gas on Gas Line 2. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP18 - A.GND Monitor rate of flow GAS I/O BOARD B TP10 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP9 - A.GND Monitor rate of flow TYB211-A/GAS TP7 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a5

**Alarm Message:** P1 Gas 3 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 3 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 3 Interlock



Conditions Range") when introducing the gas on Gas Line 3. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP19 - A.GND Monitor rate of flow GAS I/O BOARD B TP11 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP10 - A.GND Monitor rate of flow TYB211-A/GAS TP6 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a6

**Alarm Message:** P1 Gas 3 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 3 Stability Conditions Range", "Gas 3 Stability Conditions Time") when introducing the gas on Gas Line 3. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP19 - A.GND Monitor rate of flow GAS I/O BOARD B TP11 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP10 - A.GND Monitor rate of flow TYB211-A/GAS TP6 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a7

**Alarm Message:** P1 Gas 4 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 4 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 4 Interlock Conditions Range") when introducing the gas on Gas Line 4. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP20 - A.GND

Monitor rate of flow GAS I/O BOARD B TP12 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP19 - A.GND Monitor rate of flow TYB211-A/GAS TP5 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a8

**Alarm Message:** P1 Gas 4 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 4 Stability Conditions Range", "Gas 4 Stability Conditions Time") when introducing the gas on Gas Line 4. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP20 - A.GND Monitor rate of flow GAS I/O BOARD B TP12 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP19 - A.GND Monitor rate of flow TYB211-A/GAS TP5 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50a9

**Alarm Message:** P1 Gas 5 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 5 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 5 Interlock Conditions Range") when introducing the gas on Gas Line 5. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP21 - A.GND Monitor rate of flow GAS I/O BOARD B TP13 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP16 - A.GND Monitor rate of flow TYB211-A/GAS TP4 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50aa

**Alarm Message:** P1 Gas 5 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 5 Stability Conditions Range", "Gas 5 Stability Conditions Time") when introducing the gas on Gas Line 5. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP21 - A.GND Monitor rate of flow GAS I/O BOARD B TP13 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP16 - A.GND Monitor rate of flow TYB211-A/GAS TP4 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50ab

**Alarm Message:** P1 Gas 6 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 6 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 6 Interlock Conditions Range") when introducing the gas on Gas Line 6. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP22 - A.GND Monitor rate of flow GAS I/O BOARD B TP14 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP11 - A.GND Monitor rate of flow TYB211-A/GAS TP3 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50ac

**Alarm Message:** P1 Gas 6 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process

(electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 6 Stability Conditions Range", "Gas 6 Stability Conditions Time") when introducing the gas on Gas Line 6. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP22 - A.GND Monitor rate of flow GAS I/O BOARD B TP14 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP11 - A.GND Monitor rate of flow TYB211-A/GAS TP3 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50ad

**Alarm Message:** P1 Gas 7 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 7 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 7 Interlock Conditions Range") when introducing the gas on Gas Line 7. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP23 - A.GND Monitor rate of flow GAS I/O BOARD B TP15 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP12 - A.GND Monitor rate of flow TYB211-A/GAS TP2 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50ae

**Alarm Message:** P1 Gas 7 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 7 Stability

Conditions Range", "Gas 7 Stability Conditions Time") when introducing the gas on Gas Line 7. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP23 - A.GND Monitor rate of flow GAS I/O BOARD B TP15 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP12 - A.GND Monitor rate of flow TYB211-A/GAS TP2 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50af

**Alarm Message:** P1 Gas 8 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 8 Interlock Conditions Time") exceeded the recipe parameter setting value for the Interlock range (recipe parameter "Gas 8 Interlock Conditions Range") when introducing the gas on Gas Line 8. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow GAS I/O BOARD B TP24 - A.GND Monitor rate of flow GAS I/O BOARD B TP16 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP14 - A.GND Monitor rate of flow TYB211-A/GAS TP1 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50b0

**Alarm Message:** P1 Gas 8 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 8 Stability Conditions Range", "Gas 8 Stability Conditions Time") when introducing the gas on Gas Line 8. The rate of flow of gas can be checked at the points below. The voltage for 0 to maximum rate of flow for both setting rate of flow and monitor rate of flow is 0 to 5 V. Check whether the setting rate of flow is the same as the recipe, and whether the monitor rate of flow is the same as for the setting rate of flow. With Unity: Setting rate of flow

GAS I/O BOARD B TP24 - A.GND Monitor rate of flow GAS I/O BOARD B TP16 - A.GND With Unity-Ver. 2: Setting rate of flow TYB211-A/GAS TP14 - A.GND Monitor rate of flow TYB211-A/GAS TP1 - A.GND If the voltage for the monitor rate of flow is different in regard to the voltage for the setting rate of flow, the gas is not flowing correctly. The MFC may not be working properly.

**ALARM NUMBER:** 50b1

**Alarm Message:** P1 Gas Box Door Open

**Recovery:** [Abort] Cancels processing and wafer transfer out is performed.

**Cause:** Gas Box Door Open was detected before executing the process. Check if the Gas Box Door or Regulator Box Door is open. Also, check the connection of the cable of the switch attached to the Gas Box and Regulator Box. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=109 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=110 (Low Active)

**ALARM NUMBER:** 50b2

**Alarm Message:** P1 Gas Box Door Open

**Recovery:** [Retry] Checks before executing initialization again.

**Cause:** Gas Box Door Open was detected before initialization. Check if the Gas Box Door or Regulator Box Door is open. Also, check the connection of the cable of the switch attached to the Gas Box and Regulator Box. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=109 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=110 (Low Active)

**ALARM NUMBER:** 50b3

**Alarm Message:** P1 Gas Box Door Open

**Recovery:** [Retry] Checks before executing discharging electricity again. [Abort] Cancels static electricity discharge and wafer transfer out is performed.

**Cause:** Gas Box Door Open was detected before discharging static electricity. Check if the Gas Box Door or Regulator Box Door is open. Also, check the connection of the cable of the switch attached to the Gas Box and Regulator Box. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=109 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=110 (Low Active)

**ALARM NUMBER:** 50b4

**Alarm Message:** P1 Door Open Interlock at Gas Box

**Recovery:** The error is automatically cleared when the Gas Box Door is closed.

**Cause:** Gas Box Door Open was detected. Check if the Gas Box Door or Regulator Box Door is open. Also, check the connection of the cable of the switch attached to the Gas Box and Regulator Box. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=109 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=110 (Low Active)

**ALARM NUMBER:** 50b5

**Alarm Message:** P1 Gas Leakage - Detector 1

**Recovery:** Automatically cleared when the gas detector alarm is cancelled.

**Cause:** Gas detector 1 detected a gas leak. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=43 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 50b6

**Alarm Message:** P1 Gas Leakage - Detector 1

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** Gas detector 1 detected a gas leak before executing the process. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=43 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 50b7

**Alarm Message:** P1 Gas Leakage - Detector 1

**Recovery:** [Retry] Executes from the check before executing the process again.

**Cause:** Gas detector 1 detected a gas leak before initialization. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=43 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 50b8

**Alarm Message:** P1 Gas Leakage - Detector 1



**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and wait for transfer in.

**Cause:** Gas detector 1 detected a gas leak before discharging the static electricity. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=43 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=34 (High Active)

**ALARM NUMBER:** 50b9

**Alarm Message:** P1 Gas Leakage - Detector 2

**Recovery:** Automatically cleared when gas detector alarm is cancelled.

**Cause:** Gas detector 2 detected a gas leak. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=44 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=35 (High Active)

**ALARM NUMBER:** 50ba

**Alarm Message:** P1 Gas Leakage - Detector 2

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** Gas detector 2 detected a gas leak before executing the process. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=44 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=35 (High Active)

**ALARM NUMBER:** 50bb

**Alarm Message:** P1 Gas Leakage - Detector 2

**Recovery:** [Retry] Executes for the check before initializing again.

**Cause:** Gas detector 2 detected a gas leak before initializing. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=44 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=35 (High Active)

**ALARM NUMBER:** 50bc

**Alarm Message:** P1 Gas Leakage - Detector 2



**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and waits for transfer in.

**Cause:** Gas detector 2 detected a gas leak before discharging the static electricity. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=44 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=35 (High Active)

**ALARM NUMBER:** 50bd

**Alarm Message:** P1 Gas Leakage - Detector 3

**Recovery:** Automatically cleared when the gas detector alarm is cancelled.

**Cause:** Gas detector 3 detected a gas leak. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 50be

**Alarm Message:** P1 Gas Leakage - Detector 3

**Recovery:** [Retry] Executes from the check before executing the process. [Abort] Stops executing the process and waits for transfer out.

**Cause:** Gas detector 3 detected a gas leak before executing the process. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 50bf

**Alarm Message:** P1 Gas Leakage - Detector 3

**Recovery:** [Retry] Executes from the check before initializing again.

**Cause:** Gas detector 3 detected a gas leak before initializing. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 50c0

**Alarm Message:** P1 Gas Leakage - Detector 3

**Recovery:** [Retry] Executes from the check before discharging static electricity again.  
[Abort] Stops discharging the static electricity and waits for transfer in.

**Cause:** Gas detector 3 detected a gas leak before discharging static electricity. Check if there is an alarm on the connected gas detector. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=45 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=36 (High Active)

**ALARM NUMBER:** 50c1

**Alarm Message:** P1 Gas Leakage - Detector 4

**Recovery:** Automatically cleared when the Gas Detector alarm is cancelled.

**Cause:** Gas Detector 4 detected a gas leak. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=46 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=37 (High Active)

**ALARM NUMBER:** 50c2

**Alarm Message:** P1 Gas Leakage - Detector 4

**Recovery:** [Retry] Checks before starting the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** Gas Detector 4 detected a gas leak before executing the process. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=46 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=37 (High Active)

**ALARM NUMBER:** 50c3

**Alarm Message:** P1 Gas Leakage - Detector 4

**Recovery:** [Retry] Checks before executing initialization again.

**Cause:** Gas Detector 4 detected a gas leak before initialization. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=46 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=37 (High Active)

**ALARM NUMBER:** 50c4

**Alarm Message:** P1 Gas Leakage - Detector 4

**Recovery:** [Retry] Checks before discharging static electricity again. [Abort] Cancels static electricity discharge and wafer transfer out is performed.

**Cause:** Gas Detector 4 detected a gas leak before discharging static electricity. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=46 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=37 (High Active)

**ALARM NUMBER:** 50c5

**Alarm Message:** P1 Gas Leakage - Detector 5

**Recovery:** Automatically cleared when the Gas Detector alarm is cancelled.

**Cause:** Gas Detector 5 detected a gas leak. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=47 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 50c6

**Alarm Message:** P1 Gas Leakage - Detector 5

**Recovery:** [Retry] Checks before starting the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** Gas Detector 5 detected a gas leak before executing the process. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=47 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 50c7

**Alarm Message:** P1 Gas Leakage - Detector 5

**Recovery:** [Retry] Checks before executing initialization again.

**Cause:** Gas Detector 5 detected a gas leak before initialization. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=47 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 50c8

**Alarm Message:** P1 Gas Leakage - Detector 5

**Recovery:** [Retry] Checks before discharging static electricity again. [Abort] Cancels static electricity discharge and wafer transfer out is performed.

**Cause:** Gas Detector 5 detected a gas leak before discharging static electricity. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=47 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=38 (High Active)

**ALARM NUMBER:** 50c9

**Alarm Message:** P1 Gas Leakage - Detector 6

**Recovery:** Automatically cleared when the Gas Detector alarm is cancelled.

**Cause:** Gas Detector 6 detected a gas leak. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=39 (High Active)

**ALARM NUMBER:** 50ca

**Alarm Message:** P1 Gas Leakage - Detector 6

**Recovery:** [Retry] Checks before starting the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** Gas Detector 6 detected a gas leak before executing the process. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=39 (High Active)

**ALARM NUMBER:** 50cb

**Alarm Message:** P1 Gas Leakage - Detector 6

**Recovery:** [Retry] Checks before executing initialization again.

**Cause:** Gas Detector 6 detected a gas leak before initialization. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=39 (High Active)

**ALARM NUMBER:** 50cc

**Alarm Message:** P1 Gas Leakage - Detector 6

**Recovery:** [Retry] Checks before discharging static electricity again. [Abort] Cancels static electricity discharge and wafer transfer out is performed.

**Cause:** Gas Detector 6 detected a gas leak before discharging static electricity. Check if there is an alarm on the Gas Detector connected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (Low Active) UNITY-Ver. 2: Group ID=1, Local ID=39 (High Active)

**ALARM NUMBER:** 50cd

**Alarm Message:** P1 Gas Hi Pressure Interlock

**Recovery:** The error is cleared when the gas pressure rise interlock is cancelled.

**Cause:** An process gas pressure rise Interlock was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Gas Pressure Up": [None] UNITY: Group ID=2, Local ID=111 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=113 (Low Active)

**ALARM NUMBER:** 50ce

**Alarm Message:** P1 Gas Hi Pressure Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An process gas pressure rise Interlock was detected before initializing. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Gas Pressure Up": [None] UNITY: Group ID=2, Local ID=111 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=113 (Low Active)

**ALARM NUMBER:** 50cf

**Alarm Message:** P1 Gas Hi Pressure Interlock

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An process gas pressure rise Interlock was detected before executing the process. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Gas Pressure Up": [None] UNITY: Group ID=2, Local ID=111 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=113 (Low Active)

**ALARM NUMBER:** 50d0

**Alarm Message:** P1 Gas Hi Pressure Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An process gas pressure rise Interlock was detected before electrostatic discharge. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Gas Pressure Up": [None] UNITY: Group ID=2, Local ID=111 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=113 (Low Active)

**ALARM NUMBER:** 50d1

**Alarm Message:** P1 Gate Not Closed

**Recovery:** Automatically cleared when the transfer gate is detected to be closed.

**Cause:** The transfer gate close sensor turned OFF during execution of the process. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=52 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=64 (High Active)

**ALARM NUMBER:** 50d2

**Alarm Message:** P1 Gate Down

**Recovery:** Automatically cleared when the transfer gate down sensor OFF is detected.

**Cause:** The transfer gate was detected to be down during execution of the process. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 50d3

**Alarm Message:** P1 Gate Open

**Recovery:** Automatically cleared when the transfer gate open sensor OFF is detected.

**Cause:** The transfer gate was detected to be open during execution of the process. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=51 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=63 (High Active)

**ALARM NUMBER:** 50d4

**Alarm Message:** P1 Gate Open

**Recovery:** [Retry] Performs venting when in the atmosphere transfer mode and vacuum pull when in the vacuum transfer mode again after initialization of the etcher. The objective exhaust or air supply is performed by pressing the button for that process (Initialize, Vent and Vacuum Pull) after executing gate close action on the drive control screen using the maintenance operation.

**Cause:** The process could not be started because the P/C 1 transfer gate was not closed when venting or pulling a vacuum using maintenance operations or when initializing the etcher. Check the condition of the P/C 1 transfer gate up sensor. Check the close sensor condition along with the transfer gate if it is a 2 action specification. Check from the adjustment terminal to check the transfer gate sensor. An error will occur with the following conditions. With 1 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor is turned OFF. With 2 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor or close sensor is turned OFF. UNITY Ver. 2 transfer gate specifications is always for 1 action. Transfer Gate Up Sensor UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=65 (High Active) Transfer Gate Close Sensor (UNITY 2 Action Specifications) UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=52 (High Active)

**ALARM NUMBER:** 50d5

**Alarm Message:** P1 Gate Open

**Recovery:** [Retry] Performs vacuum pull again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** Processing could not be started because the P/C 1 transfer gate was not closed when pulling a vacuum before and after processing. Check the condition of the P/C 1 transfer gate up sensor. Check the close sensor condition along with the transfer gate if it is a 2 action specification. Check from the adjustment terminal to check the transfer gate sensor. An error will occur with the following conditions. With 1 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor is turned OFF. With 2 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor or close sensor is turned OFF. UNITY Ver. 2 transfer gate specifications is always for 1 action. Transfer Gate Up Sensor UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=65 (High Active) Transfer Gate Close Sensor (UNITY 2 Action Specifications) UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=52 (High Active)

**ALARM NUMBER:** 50d6

**Alarm Message:** P1 Gate Open

**Recovery:** [Retry] Performs vacuum pull again. [Abort] Terminates electrostatic discharge and transfers the wafer out.



**Cause:** Processing could not be started because the P/C 1 transfer gate was not closed when pulling a vacuum before and after electrostatic discharge. Check the condition of the P/C 1 transfer gate up sensor. Check the close sensor condition along with the transfer gate if it is a 2 action specification. Check from the adjustment terminal to check the transfer gate sensor. An error will occur with the following conditions. With 1 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor is turned OFF. With 2 Action Transfer Gate Specifications: Error occurs when the transfer gate up sensor or close sensor is turned OFF. UNITY Ver. 2 transfer gate specifications is always for 1 action. Transfer Gate Up Sensor UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=65 (High Active) Transfer Gate Close Sensor (UNITY 2 Action Specifications) UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=52 (High Active)

**ALARM NUMBER:** 50d7

**Alarm Message:** P1 Gate Sensor Error

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The Open and Close sensors and the Up and Down sensors were detected simultaneously when opening and closing the transfer gate. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID=51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active) Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 50d8

**Alarm Message:** P1 Gate Sensor Error

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The Open and Close sensors and the Up and Down sensors were detected simultaneously when opening and closing the transfer gate. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID=51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active) Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY Ver. 2: Group ID=2, Local ID=66 (High Active)



**ALARM NUMBER:** 50d9

**Alarm Message:** P1 Gate Sensor Error

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The Open and Close sensors and the Up and Down sensors were detected simultaneously when opening and closing the transfer gate. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID=51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active) Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 50da

**Alarm Message:** P1 Gate not up

**Recovery:** Automatically cleared when the transfer gate is detected to be up.

**Cause:** The transfer gate up sensor turned OFF during execution of the process. Check if the transfer gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 50db

**Alarm Message:** P1 Pressure Gauge Not Available

**Recovery:** Press [BA On] again after pulling a vacuum on the chamber using the maintenance operation to start B.A. gauge pressure measurements.

**Cause:** B.A. gauge measurements could not be started because the pressure in the Process Chamber exceeded the B.A. gauge measurable upper limit (pressure parameter "BA Gauge Measurement Pressure Upper Limit") when starting B.A. gauge measurements using the maintenance operation.

**ALARM NUMBER:** 50dc

**Alarm Message:** P1 Valve Interlock - Pressure Limit

**Recovery:** [Retry] Executes process again after pulling a vacuum on the Chamber. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The exhaust system valves (ISO valves and rough vacuum line valves) closed because the Process Chamber pressure exceeded the vacuum pressure upper limits (pressure parameters "Exhaust Valve Open Pressure") when executing the electrostatic discharge. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 50dd

**Alarm Message:** P1 Valve Interlock - Pressure Limit

**Recovery:** [Retry] Performs electrostatic discharge again after pulling a vacuum on the Chamber. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The exhaust system valves (ISO valves and rough vacuum line valves) closed because the Process Chamber pressure exceeded the vacuum pressure upper limits (pressure parameters "Exhaust Valve Open Pressure") when executing the process. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 50de

**Alarm Message:** P1 Valve Interlock - Pressure Limit

**Recovery:** [Retry] Executes vacuum pull again after initializing etcher. You can also perform your objective process by pressing [Initialize] or [Vacuum] using the maintenance operation.

**Cause:** The exhaust valves (ISO valves and rough vacuum line valves) closed because the Process Chamber pressure exceeded the vacuum pressure upper limits (pressure parameter "Exhaust Valve Open Pressure") when initializing the etcher or pulling a vacuum using the maintenance operation. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 50df

**Alarm Message:** P1 Water Leakage

**Recovery:** [Retry] Executes from check before executing process again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** A system water leak interlock was detected. Check if a water leak has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (Low Active) UNITY-Ver. 2:

Group ID=2, Local ID=104 (Low Active)

**ALARM NUMBER:** 50e0

**Alarm Message:** P1 Out of Range for Measure Leak Rate

**Recovery:** [Execute] Performs Leak Check again.

**Cause:** The pressure during the Leak Check was outside of the tolerance ranges designated in the parameters. Check "Leak Rate Upper Limit Tolerance" and "Max Retries at Error" in the "Self Check" parameters. Press [Execute] again.

**ALARM NUMBER:** 50e1

**Alarm Message:** P1 Out of Range for Measure Leak Rate

**Recovery:** [Execute] Performs Leak Check again.

**Cause:** The pressure during the Leak Check was outside of the tolerance ranges designated in the parameters. Check "Leak Rate Upper Limit Tolerance" and "Max Retries at Error" in the "Self Check" parameters. Press [Execute] again.

**ALARM NUMBER:** 50e2

**Alarm Message:** P1 Lid Open

**Recovery:** [Retry] Performs venting in the atmosphere transfer mode and vacuum pull in the vacuum transfer mode again after initializing the etcher.

**Cause:** Processing could not be started because the P/C 1 lid was open when venting or pulling a vacuum during etcher initialization. Check the condition of the P/C 1 lid open sensor. Check from the adjustment terminal to check the chamber lid open sensor. An error will occur when the sensor is turned ON. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY when the P/C is either PE or ATC type: Group ID=2, Local ID=65 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 50e3

**Alarm Message:** P1 Lid Open

**Recovery:** Performs the objective exhaust or air supply when the button for that process (Initialization, Venting, Vacuum Pull) is pressed after closing the P/C 1 lid with the maintenance operation.

**Cause:** Processing could not be started because the P/C 1 lid was open when venting or pulling a vacuum or etcher initialization with the maintenance operation. Check the

condition of the P/C 1 lid open sensor. Check from the adjustment terminal to check the chamber lid open sensor. An error will occur when the sensor is turned ON. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY when the P/C is either PE or ATC type: Group ID=2, Local ID=65 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 50e4

**Alarm Message:** P1 Stop Discharge Due to Lid Open

**Recovery:** [Retry] Performs vacuum pull again. [Abort] Terminates electrostatic discharge and transfer the wafer out.

**Cause:** Processing could not be started because the P/C 1 lid was open when pulling a vacuum before or after electrostatic discharge. Check the condition of the P/C 1 lid open sensor. Check from the adjustment terminal to check the chamber lid open sensor. An error will occur when the sensor is turned ON. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY when the P/C is M type: Group ID=2, Local ID=65 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 50e5

**Alarm Message:** P1 Stop Etching Due to Lid Open

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Processing could not be started because the P/C 1 lid was open when venting or pulling a vacuum before or after etcher initialization. Check the condition of the P/C 1 lid open sensor. Check from the adjustment terminal to check the chamber lid open sensor. An error will occur when the sensor is turned ON. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=65 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 50e6

**Alarm Message:** P1 ESC ON Failure Due to Lid Open

**Recovery:** [Retry] Executes from electrostatic chuck voltage output again.

**Cause:** Electrostatic Chuck voltage output was executed while P/C cover open was being detected. Check if the P/C cover is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 50e7

**Alarm Message:** P1 Lower Chiller Brine Dropped (Pause)

**Recovery:** When the flow of brine in the lower chiller can be confirmed to be normal, this is automatically cleared.

**Cause:** Lower chiller brine flow amount dropped. Check the flow amount of the brine in the lower chiller.

**ALARM NUMBER:** 50e8

**Alarm Message:** P1 Upper Chiller Brine Dropped (Pause)

**Recovery:** When the flow of brine in the upper chiller can be confirmed to be normal, this is automatically cleared.

**Cause:** Upper chiller brine flow amount dropped. Check the flow amount of the brine in the upper chiller.

**ALARM NUMBER:** 50e9

**Alarm Message:** P1 Pin Stop at Lower Limit

**Recovery:** [Retry] Execute after initializing again.

**Cause:** The lower limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50ea

**Alarm Message:** P1 Pin Stop at Lower Limit

**Recovery:** [Retry] Executes pin lowering again. When pin drive is a motor, lowers pin after initializing motor.

**Cause:** The lower limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50eb

**Alarm Message:** P1 Pin Stop at Lower Limit

**Recovery:** [Abort] Cancel the process and transfer the wafer out.

**Cause:** The lower limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50ec

**Alarm Message:** P1 Pin Stop at Lower Limit

**Recovery:** [Retry] Performs electrostatic discharge again. [Abort] Terminates static electrostatic discharge and transfers the wafer in.

**Cause:** The lower limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50ed

**Alarm Message:** P1 Pin Exceed Upper Limit

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed upper limit. Check the designated drive position.

**ALARM NUMBER:** 50ee

**Alarm Message:** P1 Pin Exceed Upper Limit

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed upper limit. Check the designated drive position.

**ALARM NUMBER:** 50ef

**Alarm Message:** P1 Pin Exceed Upper Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed upper limit. Check the designated drive position.

**ALARM NUMBER:** 50f0

**Alarm Message:** P1 Pin Exceed Upper Limit

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed upper limit. Check the designated drive position.

**ALARM NUMBER:** 50f1

**Alarm Message:** P1 Pin Exceed Lower Limit

**Recovery:** [Retry] Executes from initialization again.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed lower limit. Check the designated drive position.

**ALARM NUMBER:** 50f2

**Alarm Message:** P1 Pin Exceed Lower Limit

**Recovery:** [Retry] Performs gap motor drive after initializing motor.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed lower limit. Check the designated drive position.

**ALARM NUMBER:** 50f3

**Alarm Message:** P1 Pin Exceed Lower Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed lower limit. Check the designated drive position.

**ALARM NUMBER:** 50f4

**Alarm Message:** P1 Pin Exceed Lower Limit

**Recovery:** [Retry] Performs from electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The lifter pin motor designated drive position exceeded the prescribed lower limit. Check the designated drive position.

**ALARM NUMBER:** 50f5

**Alarm Message:** P1 Pin Initialization Error

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (5000 pulse output) was performed at initialization of lifter pin from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 50f6

**Alarm Message:** P1 Pin Initialization Error

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (5000 pulse output) was performed at initialization of lifter pin from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 50f7

**Alarm Message:** P1 Pin Initialization Error

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (5000 pulse output) was performed at initialization of lifter pin from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 50f8

**Alarm Message:** P1 Pin Initialization Error

**Recovery:** [Retry] Executes electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.



**Cause:** Drive was designated before gap motor initialization. Designate the drive after performing initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (5000 pulse output) was performed at initialization of lifter pin from the home sensor ON status. Check that the home sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY when the P/C is M type: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is HPC type: Group ID=2, Local ID=60 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 50f9

**Alarm Message:** P1 Pin Not in Correct Position

**Recovery:** [Retry] Execute after Pin initializing again.

**Cause:** The Pin position could not be confirmed by the Lift Pin Position Sensor after Lifter Pin drive. Check if the adjustment value (P/C Maintenance Pin adjustment screen) or the sensor is working normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Rise Position Sensor UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active) Lower Position Sensor UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50fa

**Alarm Message:** P1 Pin Not in Correct Position

**Recovery:** [Retry] Execute after Pin initializing again.

**Cause:** The Pin position could not be confirmed by the Lift Pin Position Sensor after Lifter Pin drive. Check if the adjustment value (P/C Maintenance Pin adjustment screen) or the sensor is working normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Rise Position Sensor UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active) Lower Position Sensor UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50fb

**Alarm Message:** P1 Pin Not in Correct Position

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The Pin position could not be confirmed by the Lift Pin Position Sensor after Lifter Pin drive. Check if the adjustment value (P/C Maintenance Pin adjustment screen) or the sensor is working normally. Check from the adjustment terminal to check the

sensor. An error will occur with the following conditions. Rise Position Sensor UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active) Lower Position Sensor UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 50fc

**Alarm Message:** P1 Pin Not in Correct Position

**Recovery:** [Retry] Execute after Pin initializing again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The Pin position could not be confirmed by the Lift Pin Position Sensor after Lifter Pin drive. Check if the adjustment value (P/C Maintenance Pin adjustment screen) or the sensor is working normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Rise Position Sensor UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active) Lower Position Sensor UNITY: Group ID=2, Local ID=60 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID =70 (High Active)

**ALARM NUMBER:** 50fd

**Alarm Message:** P1 Pin Driving Timeout

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** The action was not completed when the prescribed time (60 s) was exceeded when driving the lifter pin motor.

**ALARM NUMBER:** 50fe

**Alarm Message:** P1 Pin Driving Timeout

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** The action was not completed when the prescribed time (60 s) was exceeded when driving the lifter pin motor.

**ALARM NUMBER:** 50ff

**Alarm Message:** P1 Pin Driving Timeout

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The action was not completed when the prescribed time (60 s) was exceeded when driving the lifter pin motor.

**ALARM NUMBER:** 5100

**Alarm Message:** P1 Pin Driving Timeout

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates the process and transfers the wafer in.

**Cause:** The action was not completed when the prescribed time (60 s) was exceeded when driving the lifter pin motor.

**ALARM NUMBER:** 5101

**Alarm Message:** P1 Pin Stop at Upper Limit

**Recovery:** [Retry] Execute after initializing again.

**Cause:** The upper limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5102

**Alarm Message:** P1 Pin Stop at Upper Limit

**Recovery:** [Retry] Executes Pin Rise again. If the pin drive is a motor, raise the pin after initializing the motor.

**Cause:** The upper limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5103

**Alarm Message:** P1 Pin Stop at Upper Limit

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The upper limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5104

**Alarm Message:** P1 Pin Stop at Upper Limit

**Recovery:** [Retry] Performs electrostatic discharge again. [Abort] Cancels static electricity dis-charge and transfers wafer in.

**Cause:** The upper limit signal was detected when driving the lifter pin. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=59 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5105

**Alarm Message:** P1 Cannot Drive Pin - Gap Position Not HOME

**Recovery:** [Retry] Executes pin rise again. Rises after initializing the motor if the pin drive is a motor.

**Cause:** When the P/C parameter "Insertion Pin/Gap Movement" was set to "Action from Pin," the gap was not at the home position when driving the Pin. Check that the gap is at the home position or check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 5106

**Alarm Message:** P1 Cannot Drive Pin - Gap Position Not HOME

**Recovery:** [Retry] Executes pin rise again. Rises after initializing the motor if the pin drive is a motor. [Abort] Terminates the process and transfers wafers out.

**Cause:** When the P/C parameter "Insertion pin/gap movement" was set to "Action from Pin," the gap was not at the home position when driving the pin. Check that the gap is at the home position or check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 5107

**Alarm Message:** P1 Cannot Drive Pin - Gap Position Not HOME

**Recovery:** With using a motor, the motor is initialized when it has executed the necessary motor drive (Maintenance End, Initialization, Pin Rise/Lower, etc.)

**Cause:** When the P/C parameter "Insertion Pin/Gap Movement" was set to "Action from Pin," the gap was not at the home position when driving the pin. Check that the gap is at the home position or check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 5108

**Alarm Message:** P1 Cannot Drive Pin - Gap Position Not HOME

**Recovery:** [Retry] Executes after electrostatic discharge. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** When the P/C parameter "Insertion Pin/Gap Movement" was set to "Action from Pin," the gap was not at the home position when driving the pin. Check that the gap is at the home position or check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 5109

**Alarm Message:** P1 Pin Motor Alarm

**Recovery:** [Retry] Performs gap motor drive after initializing motor.

**Cause:** Initialization and drive designation were performed during lifter pin motor initialization and drive.

**ALARM NUMBER:** 510a

**Alarm Message:** P1 Pin Motor Alarm

**Recovery:** [Retry] Performs gap motor drive after initializing motor.

**Cause:** Initialization and drive designation were performed during lifter pin motor initialization and drive.

**ALARM NUMBER:** 510b

**Alarm Message:** P1 Pin Motor Alarm

**Recovery:** [Retry] Performs gap motor drive after initializing motor. [Abort] Terminates the process and transfers the wafer out.

**Cause:** Initialization and drive designation were performed during lifter pin motor initialization and drive.

**ALARM NUMBER:** 510c

**Alarm Message:** P1 Pin Motor Alarm

**Recovery:** The error is cleared when the maintenance operation is performed again.

**Cause:** Initialization and drive designation were performed during lifter pin motor initialization and drive.

**ALARM NUMBER:** 510d

**Alarm Message:** P1 Pin Motor Alarm

**Recovery:** [Retry] Performs from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Initialization and drive designation were performed during lifter pin motor initialization and drive.

**ALARM NUMBER:** 510e

**Alarm Message:** P1 Magnet Motor Alarm

**Recovery:** This message is automatically cleared when the motor alarm signal is cancelled.

**Cause:** An alarm was detected from the magnet rotation motor driver during processing. Check from the adjustment terminal to check the sensor. The error will occur during rotation with the following conditions. UNITY: Group ID=2, Local ID=30 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=48 (High Active)

**ALARM NUMBER:** 510f

**Alarm Message:** P1 Magnet Motor Alarm

**Recovery:** [Retry] Initialization is performed after checking the sensor again and the motor alarm signal is cancelled.

**Cause:** An alarm occurred with the magnetic rotation motor driver. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=30 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=48 (High Active)

**ALARM NUMBER:** 5110

**Alarm Message:** P1 Magnet Motor Alarm

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An alarm was detected from the magnet rotation motor driver before executing the process. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID 2, Local ID 30 (High Active) UNITY-

Ver. 2: Group ID 2, Local ID 48 (High Active)

**ALARM NUMBER:** 5111

**Alarm Message:** P1 Magnet Motor Alarm

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An alarm was detected from the magnet rotation motor driver before electrostatic discharge. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=30 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=48 (High Active)

**ALARM NUMBER:** 5112

**Alarm Message:** P1 Magnet Not Rotation

**Recovery:** [Retry] Rotation sensor checks again.

**Cause:** The rotation sensor could not confirm in 5 s when the magnet stability rotation was started. Check if the rotation check sensor is operating normally. The rotation sensor takes 3 readings for 1 rotation of the magnet. There are 3 flags or slits in the circumference of the magnet which are read by the sensor. If the sensor has slipped from its position, the sensor will not respond to the 3 flags or slits. Check that the sensor has not slipped from its position. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=31 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=49 (High Active)

**ALARM NUMBER:** 5113

**Alarm Message:** P1 Magnet Not Rotation

**Recovery:** [Accept] Error message is cleared.

**Cause:** Magnetic rotation was executed but the magnetic rotation could not be confirmed within the 5 s during processing. The rotation sensor takes 3 readings for 1 rotation of the magnet. There are 3 flags or slits in the circumference of the magnet which are read by the sensor. If the sensor has slipped from its position, the sensor will not respond to the 3 flags or slits. Check that the sensor has not slipped from its position. Check from the adjustment terminal to check the sensor. The rotation sensor will detect during rotation with the following conditions. UNITY: Group ID=2, Local ID=31 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=49 (High Active)

**ALARM NUMBER:** 5114

**Alarm Message:** P1 Magnet Not Rotation

**Recovery:** [Retry] Rotation sensor checks again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The rotation sensor could not confirm in 10 s when the checking magnet rotation before starting the process. The rotation sensor takes 3 readings for 1 rotation of the magnet. There are 3 flags or slits in the circumference of the magnet which are read by the sensor. If the sensor has slipped from its position, the sensor will not respond to the 3 flags or slits. Check that the sensor has not slipped from its position. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=31 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=49 (High Active)

**ALARM NUMBER:** 5115

**Alarm Message:** P1 Magnet Position Error - Rotation

**Recovery:** [Retry] Performs sensor check again and starts initialization when the lowering sensor can confirm.

**Cause:** The counter magnet lowering sensor could not confirm when initializing. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 5116

**Alarm Message:** P1 Magnet Position Error - Rotation

**Recovery:** [Retry] Sensor check is performed again and the magnet is rotated when the Lowering sensor can be confirmed.

**Cause:** Lowering sensor could not be confirmed when rotating the magnet. Check from the adjustment terminal to check the sensor. The lowering sensor will detect with the following conditions. UNITY: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 5117

**Alarm Message:** P1 Magnet Rotation Unstable

**Recovery:** The error message is cleared when the alarm signal is cancelled.

**Cause:** Magnet rotation stable signal was not detected. If the magnet speed is not stable, a motor overload occurs. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=33 (High Active)

**ALARM NUMBER:** 5118



**Alarm Message:** P1 Magnet Deviated from Down Position

**Recovery:** The error message is cleared when the counter magnet moves to the lower position.

**Cause:** The Counter Magnet Lowering Sensor could not be confirmed. Check from the adjustment terminal to check the sensor. The lower sensor will detect with the following conditions. UNITY: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 5119

**Alarm Message:** P1 Magnet Position Error - Etching

**Recovery:** [Retry] Sensor check is performed again.

**Cause:** The counter magnet Lowering sensor could not confirmed when magnet rotation was stabilized. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID =2, Local ID=70 (High Active)

**ALARM NUMBER:** 511a

**Alarm Message:** P1 Magnet Position Error - Etching

**Recovery:** [Retry] Checks sensor again and starts processing when the Lower Sensor can be confirmed. [Abort] Does not execute processing and performs wafer transfer out processing.

**Cause:** The Counter Magnet Lowering Sensor could not be confirmed before starting the process. Check from the adjustment terminal to check the sensor. The sensor will detect with the following conditions. UNITY: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 511b

**Alarm Message:** P1 Magnet Stop Position Error

**Recovery:** [Retry] Magnet stops when the sensor check is performed again.

**Cause:** The rotation sensor could not confirm in 10 s when the magnet stop speed was rotating. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=32 (High Active)  
UNITY-Ver. 2: Group ID=2, Local ID=50 (High Active)

**ALARM NUMBER:** 511c

**Alarm Message:** P1 Matching Box Power Off

**Recovery:** The error is cleared when the Matching Box power is ON.

**Cause:** Matching Box power not ON was detected. Check if the Matching Box power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=17 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=138 (High Active)

**ALARM NUMBER:** 511d

**Alarm Message:** P1 Matching Box Power Off

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** Matching Box power not ON was detected before executing the process and RF Power output. Check if the Matching Box power is not ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=17 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=138 (High Active)

**ALARM NUMBER:** 511e

**Alarm Message:** P1 Matching Box Power Off

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** Matching Box power not ON was detected before initialization. Check if the Matching Box power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=17 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=138 (High Active)

**ALARM NUMBER:** 511f

**Alarm Message:** P1 Matching Box Power Off

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Matching Box power not ON was detected before electrostatic discharge and RF Power output. Check if the Matching Box power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=17 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=138 (High Active)

**ALARM NUMBER:** 5120

**Alarm Message:** P1 Command Format Error

**Recovery:** The appropriate command cannot be executed but you can continue with

maintenance by pressing [Accept] on the sub-screen.

**Cause:** The maintenance action command or the parameter is incorrect. It is possible that version corresponding to E/C and M/C is incorrect.

**ALARM NUMBER:** 5121

**Alarm Message:** P1 Command Cannot Execute

**Recovery:** [Retry] Executes from transfer gate open again.

**Cause:** The transfer gate was opened during RF power output, electrostatic chuck voltage output or gas induction.

**ALARM NUMBER:** 5122

**Alarm Message:** P1 Cannot Open Valve Due to Pressure

**Recovery:** [Retry] Executes vacuum pull or atmosphere vent again after initializing etcher.

**Cause:** The process could not be executed because the pressure in the Process Chamber exceeded the pressure under which the valve could be opened (pressure parameter "Exhaust Valve Open Pressure") when opening the ISO valve (V42 Valve) of the turbo pump when pulling a vacuum before venting to atmosphere or when pulling a vacuum when initializing the etcher. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rise exceeded the pressure upper limit (pressure parameter "Exhaust Valve Open Pressure") where the ISO valve could be opened which caused a valve interlock (exhaust valve closed). Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5123

**Alarm Message:** P1 Cannot Action Valve Due to Vacuum

**Recovery:** Pressure the button of the process you are going to execute after pulling a vacuum on the chamber using the maintenance operation.

**Cause:** The process could not be executed because the pressure in the Process Chamber is not at a high vacuum when pulling a vacuum with the maintenance operation, pulling a vacuum before venting to atmosphere, N2 induction operation, wafer cooling processing (batch operation), opening the primary side valve of the process gas line and opening the ISO valve (V42 Valve). The chamber pressure is determined to be at a high vacuum with the pressure is within the pressure where the exhaust valve can be opened (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed

into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5124

**Alarm Message:** P1 Cannot Open Valve Due to Pressure

**Recovery:** [Retry] Executes vacuum pull and pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge could not be executed because the pressure in the chamber was not at high vacuum when pulling a vacuum (high speed exhaust) before and after electrostatic discharge, process gas induction during electrostatic discharge and RF charging. The chamber pressure is determined to be at a high vacuum with the pressure is within the pressure where the exhaust valve can be opened (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5125

**Alarm Message:** P1 Cannot Open Valve Due to Pressure

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process could not be executed because pressure in the chamber was not at a high vacuum when transferring the wafer into the Process Chamber, pulling a vacuum (high speed exhaust) before and after processing, process gas induction and RF charging. The chamber pressure is determined to be at a high vacuum with the pressure is within the pressure where the exhaust valve can be opened (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5126

**Alarm Message:** P1 Lower Chiller Not Ready (Pause)

**Recovery:** When the chiller can be confirmed to be in the Ready status, this is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the temperature settings and the temperature inside the chiller exceed the range band, or the lower chiller is not in the Ready status.

**ALARM NUMBER:** 5127

**Alarm Message:** P1 Upper Chiller Not Ready (Pause)

**Recovery:** When the chiller can be confirmed to be in the Ready status, this is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the temperature settings and the temperature inside the chiller exceed the range band, or the upper chiller is not in the Ready status.

**ALARM NUMBER:** 5128

**Alarm Message:** P1 ESC not Value

**Recovery:** Re-execute the command after adhering the wafer by turning on the electrostatic chuck.

**Cause:** Electrostatic chuck was not ON before executing wafer cooling using the Maintenance action command so the command could not be executed.

**ALARM NUMBER:** 5129

**Alarm Message:** P1 Gate Open/Close Timeout

**Recovery:** [Retry] Executes from initialization again.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID= 51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active)

**ALARM NUMBER:** 512a

**Alarm Message:** P1 Gate Open/Close Timeout

**Recovery:** [Retry] Executes from the transfer gate open/close operation again.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID= 51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2,

Local ID=64 (High Active)

**ALARM NUMBER:** 512b

**Alarm Message:** P1 Gate Open/Close Timeout

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID=51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active)

**ALARM NUMBER:** 512c

**Alarm Message:** P1 Window Heater Cooling Timeout

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 512d

**Alarm Message:** P1 Window Heater Cooling Timeout

**Recovery:** [Retry] Executes venting again after initialization. By pressing [Vent] via the maintenance operation, venting can be executed.

**Cause:** The Wall window heater cooling exceeded the set time (temperature parameter "Lower Unit Venting Temperature Waiting Time") when starting venting via the maintenance operation or etcher initialization and the action was not completed. The error does not occur when the temperature parameter "Window Heater" or the pressure parameter "Venting Start Room Temperature Control" are turned off. Check from the adjustment terminal to check the window controller Box cooling signal (alarm signal 1) condition. An error will occur with the following conditions from the adjustment terminal. UNITY: Group ID=2, Local ID=36 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=56 (High Active)

**ALARM NUMBER:** 512e

**Alarm Message:** P1 Chamber Pressure Upper Limit

**Recovery:** Close the process gas line valves after shifting the Process Chamber to maintenance mode and pull a vacuum.

**Cause:** The Process Chamber pressure exceeded the upper limits (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 512f

**Alarm Message:** P1 Chamber Pressure Upper Limit

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5130

**Alarm Message:** P1 Chamber Pressure Upper Limit

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5131

**Alarm Message:** P1 Stopped N2 Purge - Pressure Upper Limit

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 5132

**Alarm Message:** P1 +12 V Power Failure

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The etcher's +12 V power supply was not input when checking before initialization. Check if the +12 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=3 (Low Active)

**ALARM NUMBER:** 5133

**Alarm Message:** P1 +12 V Power Failure

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]

Terminates the process and transfers the wafer out.

**Cause:** The etcher's +12 V power supply was not input when checking before executing the process. Check if the +12 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (High Active) UNITY-Ver. 2: Group ID=2, Local ID =3 (Low Active)

**ALARM NUMBER:** 5134

**Alarm Message:** P1 +12 V Power Failure

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer out.

**Cause:** The etcher's +12 V power supply was not input when checking before discharging static electricity. Check if the +12 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=3 (Low Active)

**ALARM NUMBER:** 5135

**Alarm Message:** P1 +12 V Power Failure

**Recovery:** The error is automatically cleared when the +12 V power is turned ON.

**Cause:** There is an error in the etcher +12 V power. Check the +12 V power voltage of the DC POW UNIT in the P/C1 UNIT BOX. Check if the +12 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=3 (Low Active)

**ALARM NUMBER:** 5136

**Alarm Message:** P1 +15 V Power Failure

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The etcher's +15 V power supply was not input when checking before initialization. Check if the +15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID =81 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=2 (Low Active)

**ALARM NUMBER:** 5137



**Alarm Message:** P1 +15 V Power Failure

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The etcher's +15 V power supply was not input when checking before executing the process. Check if the +15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=81 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=2 (Low Active)

**ALARM NUMBER:** 5138

**Alarm Message:** P1 +15 V Power Failure

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The etcher's +15 V power supply was not input when checking before discharging static electricity. Check if the +15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=81 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=2 (Low Active)

**ALARM NUMBER:** 5139

**Alarm Message:** P1 +15 V Power Failure

**Recovery:** The error is automatically cleared when the +15 V power is turned ON.

**Cause:** There is an error in the etcher +15 V power. Check if the +15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=81 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=2 (Low Active)

**ALARM NUMBER:** 513a

**Alarm Message:** P1 +24 V Power Failure

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The etcher's +24 V power supply was not input when checking before initialization. Check if the +24 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 513b

**Alarm Message:** P1 +24 V Power Failure

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The etcher's +24 V power supply was not input when checking before executing the process. Check if the +24 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 513c

**Alarm Message:** P1 +24 V Power Failure

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The etcher's +24 V power supply was not input when checking before discharging static electricity. Check if the +24 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 513d

**Alarm Message:** P1 +24 V Power Failure

**Recovery:** The error is automatically cleared when the +24 V power is turned ON.

**Cause:** There is an error in the etcher +24 V power. Check if the +24 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID =83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 513e

**Alarm Message:** P1 -15 V Power Failure

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The etcher's -15 V power supply was not input when checking before initialization. Check if the -15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=80 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=1 (Low

Active)

**ALARM NUMBER:** 513f

**Alarm Message:** P1 -15 V Power Failure

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The etcher's -15 V power supply was not input when checking before executing the process. Check if the -15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 5140

**Alarm Message:** P1 -15 V Power Failure

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The etcher's -15 V power supply was not input when checking before discharging static electricity. Check if the -15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 5141

**Alarm Message:** P1 -15 V Power Failure

**Recovery:** The error is automatically cleared when the -15 V power is turned ON.

**Cause:** There is an error in the etcher -15 V power. Check if the -15 V power is turned ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=83 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=4 (Low Active)

**ALARM NUMBER:** 5142

**Alarm Message:** P1 Gate Error - P/C Not in Atms

**Recovery:** [Retry] Executes from initialization again. [Ignore] Forces transfer gate open to continue the process.

**Cause:** The transfer gate could not be opened because of pressure differences with the P/

C and T/C. Check the pressure in the P/C and T/C.

**ALARM NUMBER:** 5143

**Alarm Message:** P1 Gate Error - P/C Not in Atms

**Recovery:** [Retry] Executes transfer gate open and close again.

**Cause:** The transfer gate could not be opened because of pressure differences with the P/C and T/C. Check the pressure in the P/C and T/C.

**ALARM NUMBER:** 5144

**Alarm Message:** P1 Gate Error - P/C Not in Vacuum

**Recovery:** [Retry] Executes from initialization again. [Ignore] Forces transfer gate open to continue the process.

**Cause:** The transfer gate could not be opened because of pressure differences with the P/C and T/C. Check the pressure in the P/C and T/C.

**ALARM NUMBER:** 5145

**Alarm Message:** P1 Gate Error - P/C Not in Vacuum

**Recovery:** [Retry] Executes transfer gate open and close again.

**Cause:** The transfer gate could not be opened because of pressure differences with the P/C and T/C. Check the pressure in the P/C and T/C.

**ALARM NUMBER:** 5146

**Alarm Message:** P1 Not in Vacuum

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Process gas induction and Electrostatic Chuck ON could not be executed because the Process Chamber pressure was not at a high vacuum when processing. This is determined depending on whether the Chamber pressure is higher (atmosphere or low vacuum) or lower (high vacuum) than the designated pressure (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5147

**Alarm Message:** P1 Not in Vacuum

**Recovery:** Perform [Execute Recipe] again after pulling a vacuum on the Process Chamber using the maintenance operation.

**Cause:** Process gas induction and Electrostatic Chuck ON could not be executed because the pressure in the Process Chamber was not at a high vacuum when executing a recipe using the maintenance operation. This is determined depending on whether the Chamber pressure is higher (atmosphere or low vacuum) or lower (high vacuum) than the designated pressure (pressure parameter "Exhaust Valve Open Pressure"). The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose. Check the pressure of the vacuum meter (capacitance manometer or convectron).

**ALARM NUMBER:** 5148

**Alarm Message:** P1 Exhaust Treatment Power Off (Pause)

**Recovery:** The error is automatically cleared when the alarm for the exhaust treatment equipment is cancelled and the wafer transfer in is possible.

**Cause:** The Power Supply to the exhaust gas treatment equipment is not turned ON. The wafer cannot be transferred into the appropriate unit. Check if the Power Supply for the exhaust gas treatment equipment is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=10 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=85 (High Active)

**ALARM NUMBER:** 5149

**Alarm Message:** P1 Exhaust Treatment Power Off

**Recovery:** [Retry] Checks before executing the process again. [Abort] Cancels the process and wafer transfer out is performed.

**Cause:** The Power Supply to the exhaust gas treatment equipment is not turned ON before executing the process so the wafer cannot be transferred into the appropriate unit. Check if the Power Supply for the exhaust gas treatment equipment is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=10 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=85 (High Active)

**ALARM NUMBER:** 514a

**Alarm Message:** P1 Exhaust Treatment Power Off

**Recovery:** [Retry] Checks before initialization again.

**Cause:** The Power Supply to the exhaust gas treatment equipment is not turned ON before initialization so the wafer cannot be transferred into the appropriate unit. Check if the Power Supply for the exhaust gas treatment equipment is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=10 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=85 (High Active)

**ALARM NUMBER:** 514b

**Alarm Message:** P1 Exhaust Treatment Power Off

**Recovery:** [Retry] Checks before discharging static electricity again. [Abort] Cancels static electricity discharge and wafer transfer out is performed.

**Cause:** The Power Supply to the exhaust gas treatment equipment is not turned ON before discharging static electricity so the wafer cannot be transferred into the appropriate unit. Check if the Power Supply for the exhaust gas treatment equipment is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=10 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=85 (High Active)

**ALARM NUMBER:** 514c

**Alarm Message:** P1 Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the transmission is within the time restrictions between characters when transmitting to the external controller.

**Cause:** The time between characters exceeded the time restrictions (150 m/s) 3 times consecutively in character transmission to the external controller (Temperature unit, RF Generator, and End Point Detector, etc.). Check that the connectors to the external controller are connected.

**ALARM NUMBER:** 514d

**Alarm Message:** P1 Pressure Deviated from Stable

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 514e

**Alarm Message:** P1 Pressure Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is

automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Interlock Conditions Range") during pressure control.

**ALARM NUMBER:** 514f

**Alarm Message:** P1 Cannot Vacuum - Different Pressure

**Recovery:** [Retry] Executes vacuum pull again. When the pressures between chambers using the Dry Pump are different, an error occurs without executing vacuum pull. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The pressure in another chamber using the Dry Pump is different than the pressure when executing rough vacuum or high speed exhaust when pulling a vacuum before and after electrostatic discharge so simultaneous vacuum pull cannot be executed. This pressure is limited when the pressure is higher (atmosphere or low vacuum) or lower (high vacuum) than the designated pressure (pressure parameter "Exhaust Valve Open Pressure"). Simultaneous vacuum pull is possible only when the other Process Chamber using the Dry Pump is at the same pressure.

**ALARM NUMBER:** 5150

**Alarm Message:** P1 Cannot Vacuum - Different Pressure

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The pressure in another chamber using the Dry Pump is different than the pressure when executing rough vacuum or high speed exhaust when pulling a vacuum before and after executing the process so simultaneous vacuum pull cannot be executed. This pressure is limited when the pressure is higher (atmosphere or low vacuum) or lower (high vacuum) than the designated pressure (pressure parameter "Exhaust Valve Open Pressure"). Simultaneous vacuum pull is possible only when the other Process Chamber using the Dry Pump is at the same pressure.

**ALARM NUMBER:** 5151

**Alarm Message:** P1 Pressure Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** Exceeded the set time (recipe parameter "Step Time," when the pressure setting value is different with the consecutive steps, recipe parameter "Chamber Press Stability Conditions Time" x 3 times) without meeting the recipe parameter set value stability

conditions (Recipe Parameter "Chamber Press Stability Conditions Range", "Chamber Press Stability Conditions Time") when controlling the pressure.

**ALARM NUMBER:** 5152

**Alarm Message:** P1 Pressure Stabilization Timeout

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5153

**Alarm Message:** P1 Etching Stopped Due to Interlock

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process was stopped during processing because of an interlock on the hardware.

**ALARM NUMBER:** 5154

**Alarm Message:** P1 Discharge Stopped Due to Interlock

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge was stopped during electrostatic discharge because of an interlock on the hardware.

**ALARM NUMBER:** 5155

**Alarm Message:** P1 End Point Detection Failure

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The recipe step set with "End Point 1 to End Point 3" was executed but the end point was not detected when the set time in the step was exceeded. Increase the end point step time setting or re-check the end point conditions.

**ALARM NUMBER:** 5156

**Alarm Message:** P1 Out of Stabilization for Etching

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process was terminated because of the process parameter setting value range



Interlock (recipe parameter "Interlock Conditions Range") exceeded the set time (recipe parameter "Interlock Conditions Time").

**ALARM NUMBER:** 5157

**Alarm Message:** P1 Out of Range for Discharge

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge was stopped because the set time (recipe parameter "Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Interlock Conditions Range") during electrostatic discharge.

**ALARM NUMBER:** 5158

**Alarm Message:** P1 Etching Stopped

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** [Stop Recipe] was pressed during execution of the recipe.

**ALARM NUMBER:** 5159

**Alarm Message:** P1 Etching Stopped

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Executes the recipe from the first step.

**Cause:** [Stop Recipe] was pressed during execution of the recipe.

**ALARM NUMBER:** 515a

**Alarm Message:** P1 Stabilization Condition Error

**Recovery:** [Abort] Terminates the processing and transfers the wafer out.

**Cause:** Processing was stopped because the set time (recipe parameter "Stability Cond. Time") did not meet the recipe parameter setting value for the interlock range (recipe parameter "Stability Cond. Range") during processing.

**ALARM NUMBER:** 515b

**Alarm Message:** P1 Out of Stability Time for Discharge

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates the

electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge was stopped because the set time (recipe parameter "Stability Cond. Time") did not meet the recipe parameter setting value for the stability conditions (recipe parameter "Stability Cond. Range") during electrostatic discharge.

**ALARM NUMBER:** 515c

**Alarm Message:** P1 Stabilization Condition Error

**Recovery:** [Retry] Executes from processing again. [Abort] Terminates the processing and transfers the wafer out.

**Cause:** Processing was stopped because the set time (recipe parameter "Stability Cond. Time") did not meet the recipe parameter setting value for the stability conditions (recipe parameter "Stability Cond. Range") during processing.

**ALARM NUMBER:** 515d

**Alarm Message:** P1 Exceeded Upper Limit During Etching

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** Processing was terminated because the upper limit (recipe parameter "Interlock Conditions Upper Lmt.") of the recipe parameters settings exceeded the set time (recipe parameters "Interlock Conditions Upper T") during processing.

**ALARM NUMBER:** 515e

**Alarm Message:** P1 Exceeded Upper Limit During ESC

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates processing and transfers the wafer in.

**Cause:** Electrostatic discharge was terminated because the upper limit (recipe parameter "Interlock Conditions Upper Lmt.") of the recipe parameters settings exceeded the set time (recipe parameters "Interlock Conditions Upper T") during electrostatic discharge.

**ALARM NUMBER:** 515f

**Alarm Message:** P1 Being Pressure Control

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5160

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** An alarm occurred with the dry pump when the turbo pump ISO valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 5161

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:**

**Cause:** A dry pump alarm occurred when pulling a vacuum before and after electrostatic discharging. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active) Reset: [Retry] Executes vacuum pull again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**ALARM NUMBER:** 5162

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Abort] Terminates the process and the wafer is transferred out.

**Cause:** A dry pump alarm occurred when pulling a vacuum before and after processing. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 5163

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cancelled.

**Cause:** A dry pump alarm occurred. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 5164

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** [Retry] Vacuum is executed again after initializing the etcher.

**Cause:** The dry pump was not in Normal condition when the turbo pump ISO Valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=4 (High Active) UNITY when the P/C is HPC type: Group ID 1, Local ID=4 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=13 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 5165

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** [Retry] Performs electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The dry pump was not in Normal condition when pulling a vacuum before and after electrostatic discharge. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=4 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=4 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=13 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 5166

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The dry pump was not in Normal condition before and after processing. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=4 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=4 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=13 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 5167

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** Error is cleared when the normal signal is confirmed from the Pump.

**Cause:** The turbo pump was not in Normal condition. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=4 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=4 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=13 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 5168

**Alarm Message:** P1 Dry Pump Warning

**Recovery:** [Retry] Performs vacuum again after initializing the etcher.

**Cause:** A dry pump warning occurred when the turbo pump ISO Valve (V42) was opened when vacuuming when initializing the etcher. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=3 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=3 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=12 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=9 (Low Active)

**ALARM NUMBER:** 5169

**Alarm Message:** P1 Dry Pump Warning

**Recovery:** The error is cleared when the warning signal from the pump is cancelled.

**Cause:** A dry pump warning occurred. Check the appropriate dry pump and pump

controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=3 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=3 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group ID=2, Local ID=12 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=9 (Low Active)

**ALARM NUMBER:** 516a

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** A turbo pump alarm occurred when the turbo pump ISO Valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 516b

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates electrostatic discharge and the wafer is transferred in.

**Cause:** A turbo pump alarm occurred when pulling a vacuum before and after electrostatic discharge. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 516c

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** [Abort] Terminates the process and the wafer is transferred out.

**Cause:** A turbo pump alarm occurred when pulling a vacuum before and after processing. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 516d

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** The error is cleared when the alarm signal from the pump is cancelled.

**Cause:** A turbo pump alarm occurred. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 516e

**Alarm Message:** P1 Turbo Pump in Decelerate

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** The turbo pump was decelerating (rotation speed is slowing down) when the turbo pump ISO valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the condition of the appropriate turbo pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=8 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 516f

**Alarm Message:** P1 Turbo Pump in Decelerate

**Recovery:** The error is cleared when the deceleration signal from the pump is cancelled.

**Cause:** The turbo pump is decelerating (rotation speed is slowing down). The turbo pump is decelerating because a turbo pump alarm occurred or a dry pump Alarm occurred. Check the condition of the appropriate turbo pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=8 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 5170

**Alarm Message:** P1 Turbo Pump in Decelerate

**Recovery:** [Retry] Vacuum is performed again. [Abort] Terminates electrostatic discharge and the wafer is transferred in.



**Cause:** The turbo pump was decelerating (rotation speed is slowing down) when pulling a vacuum before and after electrostatic discharge. The turbo pump is decelerating because a turbo pump alarm occurred or a dry pump Alarm occurred. Check the conditions of the appropriate turbo pump and dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=8 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 5171

**Alarm Message:** P1 Turbo Pump in Decelerate

**Recovery:** [Abort] Terminates the process and the wafer is transferred out.

**Cause:** The turbo pump was decelerating (rotation speed is slowing down) when pulling a vacuum before and after processing. The turbo pump is decelerating because a turbo pump alarm occurred or a dry pump Alarm occurred. Check the conditions of the appropriate turbo pump and dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=8 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 5172

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** The turbo pump was not in Normal when the turbo pump ISO Valve (V42) was opened when pulling a vacuum when initializing the etcher. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 5173

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates electrostatic discharge and the wafer is transferred in.

**Cause:** The turbo pump was not in Normal when pulling a vacuum before and after



electrostatic discharge. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 5174

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** [Abort] Terminates the process and the wafer is transferred out.

**Cause:** The turbo pump was not in Normal when pulling a vacuum before and after processing. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 5175

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** The error is automatically cleared when the normal signal from the pump is confirmed.

**Cause:** The turbo pump was not in Normal. The turbo pump will not be in Normal when there is a turbo pump alarm or when the turbo pump is accelerating or decelerating. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 5176

**Alarm Message:** P1 Cannot Execute Recipe

**Recovery:** After the recipe is completed, force termination of transfer and shift the P/C to maintenance. Reset from maintenance and return the wafer inside that chamber. The message on the alarm screen is automatically cleared when the etcher's power is cut and it is restarted.

**Cause:** An error was detected in the recipe that was executed. The recipe will be continued to the end with the recipe set last. It is possible that transfer was started with the process recipe set in the variable parameters, the variable step was deleted from the process recipe being executed or recipe being executed itself was deleted from the disk.

**ALARM NUMBER:** 5177

**Alarm Message:** P1 Lower Chiller Local (Pause)

**Recovery:** When the chiller can be confirmed to be in the Remote status, this will be automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the lower chiller is not in the remote status. Check if the P1 lower chiller is in the remote status.

**ALARM NUMBER:** 5178

**Alarm Message:** P1 Upper Chiller Local (Pause)

**Recovery:** When the chiller can be confirmed to be in the Remote status, this will be automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the upper chiller is not in the remote status. Check if the P1 upper chiller is in the remote status.

**ALARM NUMBER:** 5179

**Alarm Message:** P1 Discharge Stopped Due to RF Failure

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply error occurred during RF power output and before electrostatic discharge. Check if a power supply error occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID 2, Local ID 122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 517a

**Alarm Message:** P1 Etching Stopped Due to RF Failure

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply error occurred during RF power output and before processing. Check if a power supply error occurred with the RF generator. Check from

the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID 2, Local ID 122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 517b

**Alarm Message:** P1 Stopped Initialize - RF Error

**Recovery:** [Retry Executes from check before initialization again.

**Cause:** An RF generator power supply error occurred during RF power output and before initialization. Check if a power supply error occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 517c

**Alarm Message:** P1 Discharge Stopped Due to RF Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply interlock was detected during RF power output. Check if an Interlock occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=244 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=129 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=137 (Low Active)

**ALARM NUMBER:** 517d

**Alarm Message:** P1 Etching Stopped Due to RF Interlock

**Recovery:** [Abort] Terminates electrostatic discharge and transfers the wafer out.

**Cause:** An RF generator power supply interlock was detected during RF power output. Check if an Interlock occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=244 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=129 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=137 (Low Active)

**ALARM NUMBER:** 517e

**Alarm Message:** P1 Stop ESC Due to RF Water Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply cooling water drop occurred during RF power output and before electrostatic discharge. Check if a power supply cooling water drop occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 517f

**Alarm Message:** P1 Stop Etching Due to RF Water Dropped

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply cooling water drop was detected during RF power output and before processing. Check if a generator power supply cooling water drop occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 5180

**Alarm Message:** P1 RF Cooling Water Error (Pause)

**Recovery:** [Retry] Executes from initialization again.

**Cause:** Transfer of the wafer in to the appropriate unit was not possible because an RF generator power supply cooling water drop was detected. Check if an RF generator power supply cooling water drop has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 5181

**Alarm Message:** P1 Stop ESC Due to Pin Position

**Recovery:** [Abort] Terminates processing and transfers the wafer out. [Retry] Executes electrostatic discharge from beginning.

**Cause:** The Lifter Pin position Lower Position Sensor could not confirm when RF charging of the electrostatic discharge process. Check if the sensor is working normally.

Check from the adjustment terminal to check the sensor. UNITY (Air Drive): Group ID=2, Local ID=71 (Low Active) UNITY Ver. 2 (Air Drive, Motor Drive): Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5182

**Alarm Message:** P1 Stop Etching Due to Pin Position

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The Lifter Pin position Lower Position Sensor could not confirm when RF charging of the processing. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. UNITY (Air Drive): Group ID=2, Local ID=71 (Low Active) UNITY Ver. 2 (Air Drive, Motor Drive): Group ID=2, Local ID=69 (High Active)

**ALARM NUMBER:** 5183

**Alarm Message:** P1 Stop ESC Due to RF Maximum Power

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply maximum power was detected during RF power output. Check if an RF maximum power occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=241 (High Active)

**ALARM NUMBER:** 5184

**Alarm Message:** P1 Stop Etching Due to RF Maximum Power

**Recovery:** [Abort] Terminates electrostatic discharge and transfers the wafer out.

**Cause:** An RF generator power supply maximum power was detected during RF power output. Check if an RF maximum power occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=241 (High Active)

**ALARM NUMBER:** 5185

**Alarm Message:** P1 P/C Not in Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5186

**Alarm Message:** P1 P/C Not in Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5187

**Alarm Message:** P1 Stop ESC Due to RF OverPower

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply overpower was detected during RF power output and before electrostatic discharge. Check if an RF generator Power Supply overpower occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=242 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=3 (High Active)

**ALARM NUMBER:** 5188

**Alarm Message:** P1 Stop Etching Due to RF OverPower

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply overpower was detected during RF power output and before processing. Check if an RF generator Power Supply overpower occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=242 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=3 (High Active)

**ALARM NUMBER:** 5189

**Alarm Message:** P1 Stop ESC Due to RF OverHeat

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply Overheat was detected during RF power output and before electrostatic discharge. Check if an RF generator Power Supply overheat occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=243 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=128 (High Active)

**ALARM NUMBER:** 518a

**Alarm Message:** P1 Stop Etching Due to RF OverHeat

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply overheat was detected during RF power output and before processing. Check if an RF generator Power Supply overheat occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=243 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=128 (High Active)

**ALARM NUMBER:** 518b

**Alarm Message:** P1 Stopped Initialize - RF OverHeat

**Recovery:** [Retry] Executes from check before initialization again.

**Cause:** An RF generator power supply overheat was detected during RF power output and before initializing. Check if an RF generator Power Supply overheat occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=243 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=128 (High Active)

**ALARM NUMBER:** 518c

**Alarm Message:** P1 Stop ESC Due to RF Not Turn On

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply not turned ON error was detected during RF power output and before electrostatic discharge. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 518d

**Alarm Message:** P1 Stop Etching Due to RF Not Turn On

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply not turned ON error was detected during RF power output and before processing. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2

Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower  
Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 518e

**Alarm Message:** P1 Stopped Initialize - RF Power Off

**Recovery:** [Retry] Executes from check before initialization again.

**Cause:** An RF generator power supply not turned ON error was detected during RF power output and before initializing. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 518f

**Alarm Message:** P1 RF No Plasma Light Emission

**Recovery:** The error is automatically cleared when the alarm for process (electrostatic discharge) stop is recovered when executing the process (electrostatic discharge).

**Cause:** The RF light emission sensor could not confirm even though the timeout in the etcher parameters (etcher parameters "Timeout for Plasma Flash") was exceeded. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. UNITY: Group ID=2, Local ID=34 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=120 (Low Active)

**ALARM NUMBER:** 5190

**Alarm Message:** P1 RF No Plasma Light Emission

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** The RF light emission sensor could not confirm even though the timeout in the etcher parameters was exceeded. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. UNITY: Group ID=2, Local ID=34 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=120 (Low Active)

**ALARM NUMBER:** 5191

**Alarm Message:** P1 RF No Plasma Light Emission

**Recovery:** [Abort] Terminates electrostatic discharge and transfers the wafer in. [Retry] Executes electrostatic discharge from the beginning.



**Cause:** The RF light emission sensor could not confirm even though the timeout in the etcher parameters was exceeded. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. UNITY: Group ID=2, Local ID=34 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=120 (Low Active)

**ALARM NUMBER:** 5192

**Alarm Message:** P1 Stop ESC Due to RF Not Remote

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An RF generator power supply Local error was detected during RF power output and before electrostatic discharge. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=121 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=123 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=134 (Low Active)

**ALARM NUMBER:** 5193

**Alarm Message:** P1 Stop Etching Due to RF Not Remote

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** An RF generator power supply Local error was detected during RF power output and before processing. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=121 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=123 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=134 (Low Active)

**ALARM NUMBER:** 5194

**Alarm Message:** P1 Stopped Initialize - RF Not in Remote

**Recovery:** [Retry] Executes from check before initialization again.

**Cause:** An RF generator power supply Local error was detected during RF power output and before initializing. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=121 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=123 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=134 (Low Active)

**ALARM NUMBER:** 5195

**Alarm Message:** P1 RF Not Remote

**Recovery:** The error is automatically cleared when the RF generator power supply is set to Remote.

**Cause:** An RF generator power supply Local error was detected. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=121 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=123 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=134 (Low Active)

**ALARM NUMBER:** 5196

**Alarm Message:** P1 RF Power Error (Pause)

**Recovery:** The error is automatically cleared when the RF generator error is cancelled and wafer transfer in is possible.

**Cause:** The wafer cannot be transferred into the appropriate unit because an RF generator Power Supply error was detected. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 5197

**Alarm Message:** P1 RF Power Error

**Recovery:** The error is automatically cleared when the RF generator error is cancelled.

**Cause:** An RF generator Power Supply error was detected. Check if an RF generator Power Supply error has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 5198

**Alarm Message:** P1 RF Power Interlock (Pause)

**Recovery:** The error is automatically cleared when the RF generator interlock is cancelled and wafer transfer in is possible.

**Cause:** The wafer cannot be transferred into the appropriate unit because an RF generator Power Supply Interlock was detected. Check if the RF generator power supply interlock has occurred. Check from the adjustment terminal to check the sensor. An error will

occur with the following conditions. UNITY: Group ID=2, Local ID=244 (High Active)  
UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=129 (Low Active) UNITY Ver.  
2 Lower Electrode: Group ID=2, Local ID=137 (Low Active)

**ALARM NUMBER:** 5199

**Alarm Message:** P1 RF Power Interlock

**Recovery:** The error is automatically cleared when the RF generator interlock is cancelled and wafer transfer in is possible.

**Cause:** An RF generator Power Supply interlock was detected. Check if the RF generator power supply interlock has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=244 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=129 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=137 (Low Active)

**ALARM NUMBER:** 519a

**Alarm Message:** P1 RF Cooling Water Error

**Recovery:** The error is automatically cleared when the RF generator power supply cooling water drop is cancelled.

**Cause:** An RF generator Power Supply cooling water drop was detected. Check if the RF generator power supply cooling water has dropped. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 519b

**Alarm Message:** P1 RF Cooling Water Error (Pause)

**Recovery:** The error is automatically cleared when the RF generator power supply cooling water drop is cancelled and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because an RF generator Power Supply cooling water drop was detected. Check if the RF generator power supply cooling water has dropped. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 519c

**Alarm Message:** P1 RF Maximum Power (Pause)

**Recovery:** The error is automatically cleared when the RF generator power supply maximum power is cancelled and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because an RF generator Power Supply maximum power was detected. Check if the RF generator power supply maximum power has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=241 (High Active) UNITY Ver. 2: Group ID=2, Local ID=126 (High Active)

**ALARM NUMBER:** 519d

**Alarm Message:** P1 RF Maximum Power

**Recovery:** The error is automatically cleared when the RF generator power supply maximum power is cancelled.

**Cause:** An RF generator Power Supply maximum power was detected. Check if the RF generator power supply maximum power has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=241 (High Active) UNITY Ver. 2: Group ID=2, Local ID=126 (High Active)

**ALARM NUMBER:** 519e

**Alarm Message:** P1 RF OverPower (Pause)

**Recovery:** The error is automatically cleared when the RF generator power supply overpower is cancelled and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because an RF generator Power Supply overpower was detected. Check if the RF generator power supply overpower has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=242 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=3 (High Active)

**ALARM NUMBER:** 519f

**Alarm Message:** P1 RF OverPower

**Recovery:** The error is automatically cleared when the RF generator power supply overpower is cancelled and wafer transfer in is possible.

**Cause:** An RF generator Power Supply overpower was detected. Check if the RF generator power supply overpower has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group

ID=2, Local ID=242 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=3 (High Active)

**ALARM NUMBER:** 51a0

**Alarm Message:** P1 RF OverHeat (Pause)

**Recovery:** The error is automatically cleared when the RF generator power supply overheat is cancelled and wafer transfer in is possible.

**Cause:** Water transfer in to the appropriate unit was not possible because an RF generator Power Supply overheat was detected. Check if the RF generator power supply overheat has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=243 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=128 (High Active)

**ALARM NUMBER:** 51a1

**Alarm Message:** P1 RF OverHeat

**Recovery:** The error is automatically cleared when the RF generator power supply overheat is cancelled and wafer transfer in is possible.

**Cause:** An RF generator Power Supply overheat was detected. Check if the RF generator power supply overheat has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=243 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=128 (High Active)

**ALARM NUMBER:** 51a2

**Alarm Message:** P1 RF Power Off (Pause)

**Recovery:** The error is automatically cleared when the RF generator power supply is turned on and wafer transfer in is possible.

**Cause:** An RF generator Power Supply off was detected. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 51a3

**Alarm Message:** P1 RF Power Off

**Recovery:** The error is automatically cleared when the RF generator power supply is turned on.

**Cause:** An RF generator Power Supply off was detected. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 51a4

**Alarm Message:** P1 RF Power Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value for Interlock Range "RF Power Interlock Conditions Range" exceeded the set time (recipe parameter "RF Power Interlock Conditions Time") when outputting RF Power.

**ALARM NUMBER:** 51a5

**Alarm Message:** P1 RF Power Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value for stability conditions "RF Power Stability Conditions Range", "RF Power Stability Conditions Time" exceeded the set time (recipe parameter "Step Time," when differing from RF Power setting values with consecutive steps "RF Power Stability Conditions Time" x 2) when outputting RF Power.

**ALARM NUMBER:** 51a6

**Alarm Message:** P1 RF Power Not Stable

**Recovery:**

**Cause:** Not used.

**ALARM NUMBER:** 51a7

**Alarm Message:** P1 RF Reflect Power Exceed Upper Limit

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "RF Reflect Interlock Conditions Time") exceeded the RF Reflected Wave recipe parameter setting value for Interlock Upper Limit (recipe parameter "RF Reflect Interlock Conditions Upper Lmt.") when outputting RF power.

**ALARM NUMBER:** 51a8

**Alarm Message:** P1 Rough Evacuation Start Timeout

**Recovery:** [Retry] Performs vacuum pull again.

**Cause:** The turbo pump exhaust valve (V37) did not close within 15 seconds after output of the rough vacuum signal to the pump sequencer when vacuuming from atmosphere or initializing vacuum transfer mode. It could be a pump sequencer defect, valve DO defect or a valve sensor defect. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=42 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=23 (High Active)

**ALARM NUMBER:** 51a9

**Alarm Message:** P1 Rough Evacuation Start Timeout

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The turbo pump exhaust valve (V37) did not close within 15 seconds after output of the rough vacuum signal to the pump sequencer when vacuuming before and after processing. It could be a pump sequencer defect, valve DI defect or a valve sensor defect. Check the turbo pump exhaust valve close sensor. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=42 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=23 (High Active)

**ALARM NUMBER:** 51aa

**Alarm Message:** P1 Rough Evacuation Start Timeout

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The turbo pump exhaust valve (V37) did not close within 15 seconds after output of the rough vacuum signal to the pump sequencer when vacuuming before and after electrostatic discharge. It could be a pump sequencer defect, valve DI defect or a valve sensor defect. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=42 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=23 (High Active)

**ALARM NUMBER:** 51ab

**Alarm Message:** P1 Magnet Initialization Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 51ac

**Alarm Message:** P1 Magnet Initialization Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 51ad

**Alarm Message:** P1 Shutter Not Close

**Recovery:** The error is automatically cleared when shutter close is detected.

**Cause:** The shutter gate close sensor turned OFF during execution of the process. Check if the shutter gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=50 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=68 (High Active)

**ALARM NUMBER:** 51ae

**Alarm Message:** P1 Cannot Execute Due to Shutter Close

**Recovery:** The appropriate command cannot be executed but you can continue with maintenance by pressing [Accept] on the sub-screen.

**Cause:** Arm P/C Station Point transfer was executed while the shutter gate was closed. Check if the shutter gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=50 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=68 (High Active)

**ALARM NUMBER:** 51af

**Alarm Message:** P1 Shutter Open

**Recovery:** The error is automatically cleared when shutter open sensor is detected OFF.

**Cause:** The shutter gate open was detected during execution of the process. Check if the shutter gate is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=49 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=67 (High Active)



**ALARM NUMBER:** 51b0

**Alarm Message:** P1 Shutter Open/Close Timeout

**Recovery:** [Retry] Executes from initialization again.

**Cause:** After opening/closing the shutter, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Shutter Open Sensor UNITY: Group ID=2, Local ID=49 (High Active) UNITY Ver. 2: Group ID=2, Local ID=67 (High Active) Shutter Close Sensor UNITY: Group ID=2, Local ID=50 (High Active) UNITY Ver. 2: Group ID=2, Local ID=68 (High Active)

**ALARM NUMBER:** 51b1

**Alarm Message:** P1 Shutter Open/Close Timeout

**Recovery:** [Retry] Executes shutter open/close action again.

**Cause:** After opening/closing the shutter, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Shutter Open Sensor UNITY: Group ID=2, Local ID=49 (High Active) UNITY Ver. 2: Group ID=2, Local ID=67 (High Active) Shutter Close Sensor UNITY: Group ID=2, Local ID=50 (High Active) UNITY Ver. 2: Group ID=2, Local ID=68 (High Active)

**ALARM NUMBER:** 51b2

**Alarm Message:** P1 Shutter Open/Close Timeout

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** After opening/closing the shutter, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Shutter Open Sensor UNITY: Group ID=2, Local ID=49 (High Active) UNITY Ver. 2: Group ID=2, Local ID=67 (High Active) Shutter Close Sensor UNITY: Group ID=2, Local ID=50 (High Active) UNITY Ver. 2: Group ID=2, Local ID=68 (High Active)

**ALARM NUMBER:** 51b3

**Alarm Message:** P1 Aux CPU Initialize Error

**Recovery:** [Retry] Requests initialization to the P/C 1 Controller again.

**Cause:** The response (Response after initialization completed) transmission to the initialization command requested from the P/C 1 Controller exceeded the restricted time (10 s). Check the connections on the controller.

**ALARM NUMBER:** 51b4

**Alarm Message:** P1 Aux CPU Initial Setup Error

**Recovery:** [Retry] Requests initialization to the P/C 1 Controller again.

**Cause:** P/C1 Controller initialization failed.

**ALARM NUMBER:** 51b5

**Alarm Message:** P1 Aux CPU Communication Error - APC

**Recovery:** The error is automatically cleared when the APC unit and auxiliary CPU board communications can be confirmed.

**Cause:** An error occurred when communicating between the etcher's external communication Auxiliary CPU board and the APC unit. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51b6

**Alarm Message:** P1 Bottom Chiller Aux CPU Communication Error

**Recovery:** When communications with the lower chiller can be confirmed, this error will be automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in control communication between the Auxiliary board and chiller when communicating during control. Wafer transfer in to the appropriate unit is not possible. With UNITY: Check that the connectors between the lower chiller and the P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and the P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the cable between the TYB324-1/PC or TYB422-1/PC and the back of the etcher is connected correctly. Also, check that the cable between the back of the etcher and the lower chiller is connected correctly.

**ALARM NUMBER:** 51b7

**Alarm Message:** P1 Wall Temp Unit Aux CPU Communication Error

**Recovery:** When communications with the Wall Temperature Controller can be confirmed, this error will be automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in control communication between the Auxiliary board and chiller when communicating during control. Wafer transfer in to the appropriate unit is not possible. With UNITY: Check that the connector between the Wall Temperature Controller and the P/C MAIN INT CONN BRD is connected. With UNITY-Ver. 2 Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 51b8

**Alarm Message:** P1 Upper Chiller Aux CPU Communication Error

**Recovery:** When communications with the upper chiller can be confirmed, this error will be automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in control communication between the Auxiliary board and chiller when setting the temperature of the upper chiller. Wafer transfer in to the appropriate unit is not possible. With UNITY: Check that the connectors between the upper chiller and the P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and the P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the cable between the TYB324-1/PC or TYB422-1/PC and the back of the etcher is connected correctly. Also, check that the cable between the back of the etcher and the upper chiller is connected correctly.

**ALARM NUMBER:** 51b9

**Alarm Message:** P1 APC Aux CPU Communication Error

**Recovery:** [Retry] Executes vacuum pull or vent to atmosphere again. Press the button for your objective process using the maintenance operation.

**Cause:** An error occurred in communication between the etcher's external communication auxiliary CPU board and the APC unit when initializing the etcher or executing a maintenance operation. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51ba

**Alarm Message:** P1 APC Aux CPU Communication Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An error occurred in communication between the etcher's external communication auxiliary CPU board and the APC unit when pulling a vacuum when executing a process or controlling the pressure. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for

damage to the cables.

**ALARM NUMBER:** 51bb

**Alarm Message:** P1 APC Aux CPU Communication Error

**Recovery:** [Retry] Executes vacuum pull or vent to atmosphere again. [Abort]  
Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An error occurred in communication between the etcher's external communication auxiliary CPU board and the APC unit during electrostatic discharge. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51bc

**Alarm Message:** P1 APC Communication Error

**Recovery:** The error is automatically cleared when the communication between the APC unit and the auxiliary CPU board can be confirmed.

**Cause:** An error occurred in the APC unit when executing pressure settings, or valve control. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51bd

**Alarm Message:** P1 Bottom Chiller Communication Error

**Recovery:** When communications with the lower chiller can be confirmed, this error is cleared and wafer transfer in is possible.

**Cause:** An error was transmitted from the lower chiller in communications during control and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 51be

**Alarm Message:** P1 Wall Temp Unit Communication Error

**Recovery:** When communications with the Wall Temperature Controller can be confirmed, this error is cleared and wafer transfer in is possible.

**Cause:** An error was transmitted from the Wall Temperature Controller in communications during control and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 51bf

**Alarm Message:** P1 Upper Chiller Communication Error

**Recovery:** When communications with the upper chiller can be confirmed, this error is cleared and wafer transfer in is possible.

**Cause:** An error was transmitted from the upper chiller in communications during control and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 51c0

**Alarm Message:** P1 APC Communication Error

**Recovery:** [Retry] Executes vacuum pull or venting to atmosphere again. Press the button for your objective process using the maintenance operation.

**Cause:** An error occurred in the APC unit when executing pressure settings, or valve control when pulling a vacuum using the maintenance operation or venting to atmosphere when initializing the etcher. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c1

**Alarm Message:** P1 APC Communication Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An error occurred in the APC unit when executing pressure settings, or valve control when pulling a vacuum or controlling pressure when executing the process. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c2

**Alarm Message:** P1 APC Communication Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An error occurred in the APC unit when executing pressure settings, or valve control when pulling a vacuum or controlling pressure during electrostatic discharge.

Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c3

**Alarm Message:** P1 Response Timeout Error - APC

**Recovery:** The error is automatically cleared when the communication between the APC unit and the auxiliary CPU board can be confirmed.

**Cause:** There was no response from the APC unit within the designated time (10 s) when controlling the valves or executing pressure settings for the APC unit. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c4

**Alarm Message:** P1 Bottom Chiller Response Timeout Error

**Recovery:** When communications with the lower chiller can be confirmed, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because there was no response from the lower chiller was not confirmed during the fixed time (5 s x 3 times) at communication during control. It could be a communications setting defect, RS Cable defect or an Auxiliary CPU defect. With UNITY: Check that the connectors between the chiller and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the cable between the TYB324-1/PC or TYB422-1/PC and the back of the etcher is connected correctly. Also, check that the cable between the back of the etcher and the lower chiller is connected correctly.

**ALARM NUMBER:** 51c5

**Alarm Message:** P1 Wall Temp Unit Response Timeout Error

**Recovery:** When communications with the Wall Temperature Controller can be confirmed, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because there was no response from the Wall Temperature Controller was not confirmed during the fixed time (5 s x 3 times) at communication during control. It could be a communications setting defect, RS Cable defect or an Auxiliary CPU defect. With UNITY: Check that the

connectors between the Wall Temperature Controller and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 51c6

**Alarm Message:** P1 Upper Chiller Response Timeout Error

**Recovery:** When communications with the upper chiller can be confirmed, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because there was no response from the upper chiller was not confirmed during the fixed time (5 s x 3 times) at communication during control. It could be a communications setting defect, RS Cable defect or an Auxiliary CPU defect. With UNITY: Check that the connectors between the upper chiller and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are connected. With UNITY-Ver. 2: Check that the cable between the TYB324-1/PC or TYB422-1/PC and the back of the etcher is connected correctly. Also, check that the cable between the back of the etcher and the upper chiller is connected correctly.

**ALARM NUMBER:** 51c7

**Alarm Message:** P1 APC Response Timeout Error

**Recovery:** [Retry] Executes vacuum pull or venting to atmosphere again. Press the button of your objective process using the maintenance operation.

**Cause:** There was no response from the APC unit within the designated time (10 s) when pulling a vacuum or venting to atmosphere using the maintenance mode or at etcher initialization when controlling the valves or executing pressure settings for the APC unit. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c8

**Alarm Message:** P1 APC Response Timeout Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** There was no response from the APC unit within the designated time (10 s) when pulling a vacuum or venting to atmosphere during the process when controlling the valves or executing pressure settings for the APC unit. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the

same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51c9

**Alarm Message:** P1 APC Response Timeout Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** There was no response from the APC unit within the designated time (10 s) when pulling a vacuum or controlling pressure during electrostatic discharge when controlling the valves or executing pressure settings for the APC unit. Check that the pressure control controller type settings (pressure parameters "Pressure Control Controller Type") are the same as the APC connected to the etcher. Check that the communication cables of the APC unit and auxiliary CPU board are connected to the connectors. Check for damage to the cables.

**ALARM NUMBER:** 51ca

**Alarm Message:** P1 ISO Valve Close

**Recovery:** [Retry] Performs vacuum pull or venting to atmosphere again when initializing the etcher. Press the button for your objective process after pulling a vacuum on the chamber using the maintenance operation.

**Cause:** The objective process could not be executed because the turbo pump ISO valve (V42 valve) was closed when initializing the etcher, or pulling a vacuum (high speed exhaust) using the maintenance operation and when pulling a vacuum on the gas line before venting to atmosphere or during N2 purge of the gas line. Or the objective process could not be executed because turbo pump ISO valve (V42 valve) was closed when using the maintenance operation to control the pressure, during cycle purge or vacuum pull (high speed exhaust) during self check. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure limit where the ISO valve can be opened was exceeded because of the pressure rise (pressure parameter "Exhaust Valve Open Pressure) and a valve interlock (Exhaust Valve Closed) occurred. Check the pressure of the vacuum meter (capacitance manometer or convectron). Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 51cb

**Alarm Message:** P1 Stop ESC Due to ISO Close



**Recovery:** [Retry] Performs vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic discharge was stopped without being able to pull a vacuum or control the pressure because turbo pump ISO valve (V42 valve) was closed when pulling a vacuum or pressure control before and after electrostatic discharge. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure limit where the ISO valve can be opened was exceeded because of the pressure rise (pressure parameter "Exhaust Valve Open Pressure") and a valve interlock (Exhaust Valve Closed) occurred. Check the pressure of the vacuum meter (capacitance manometer or convectron). Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 51cc

**Alarm Message:** P1 Stop Etching Due to ISO Close

**Recovery:** [Retry] Performs vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process was stopped without being able to pull a vacuum or control the pressure because turbo pump ISO valve (V42 valve) was closed when pulling a vacuum or pressure control before and after processing. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure limit where the ISO valve can be opened was exceeded because of the pressure rise (pressure parameter "Exhaust Valve Open Pressure") and a valve interlock (Exhaust Valve Closed) occurred. Check the pressure of the vacuum meter (capacitance manometer or convectron). Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 51cd

**Alarm Message:** P1 ISO Valve Open

**Recovery:** [Retry] Executes vacuum pull or venting to atmosphere again after initializing etcher.

**Cause:** The turbo pump ISO valve (V42 valve) did not close within 5 seconds after starting N2 induction, rough vacuum, or venting to atmosphere, vacuum pull during etcher initialization. Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 51ce

**Alarm Message:** P1 ISO Valve Open

**Recovery:** Press the button of your objective process using the maintenance operation again and initialize the etcher, pull a vacuum or vent to atmosphere.

**Cause:** The turbo pump ISO valve (V42 valve) did not close within 5 seconds after self check processing, rough vacuum, starting N2 induction, or during initialization using maintenance operation, pulling a vacuum or venting to atmosphere. N2 induction was not possible because the turbo pump ISO valve (V42 valve) was open when operating N2 batch induction. Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 51cf

**Alarm Message:** P1 Gate Error - T/C Not in Atms

**Recovery:** [Retry] Executes from initialization again. [Ignore] Forces open the transfer gate to continue the process.

**Cause:** Transfer gate could not be opened because of a pressure difference with the P/C and T/C. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 51d0

**Alarm Message:** P1 Gate Error - T/C Not in Atms

**Recovery:** [Retry] Executes transfer gate open and close again.

**Cause:** Transfer gate could not be opened because of a pressure difference with the P/C and T/C. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 51d1

**Alarm Message:** P1 Gate Error - T/C Not in Vacuum

**Recovery:** [Retry] Executes from initialization again. [Ignore] Forces open the transfer gate to continue the process.

**Cause:** Transfer gate could not be opened because of a pressure difference with the P/C and T/C. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 51d2

**Alarm Message:** P1 Gate Error - T/C Not in Vacuum

**Recovery:** [Retry] Executes transfer gate open and close again.

**Cause:** Transfer gate could not be opened because of a pressure difference with the P/C and T/C. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 51d3

**Alarm Message:** P1 Lower Chiller Error (Pause)

**Recovery:** When the error on the lower chiller is cancelled, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in is not possible because there was an error in the lower chiller.

**ALARM NUMBER:** 51d4

**Alarm Message:** P1 Upper Chiller Error (Pause)

**Recovery:** When the error on the upper chiller is cancelled, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in is not possible because there was an error in the upper chiller.

**ALARM NUMBER:** 51d5

**Alarm Message:** P1 Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again after initializing etcher. Press [Initialize] or [Vacuum] to execute your objective process using the maintenance operation.

**Cause:** The designated pressure (pressure parameter "Rough Vacuum End Pressure") was not achieved within the designated time (pressure parameter "Rough Vacuum Pull End Timeout") for both rough vacuum and main exhaust when pulling a vacuum using maintenance operation or when initializing the etcher. Or all gas lines" MFC flow amount did not reach the designated gas line end flow amount (gas line parameters "Gas Line Vacuum Pull End Flow Amount") within the designated time (gas line parameter "Gas Line Vacuum Pull Timeout") when pulling a vacuum on the gas line when the gas line vacuum is valid (gas line parameter "Gas Line Vacuum Pull Yes/No"). Check the valve condition by the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line valve operation. When the P/C is either M/DRM/PE/A-IEM type: V36 valve is open and V37 valve is closed: rough vacuuming. V42 valve is open and V37 valve is closed: high exhaust Gas line vacuum pull if the V30 valve is open when rough vacuuming. When the P/C is ATC type: V36 valve is open and V42 valve is closed: rough vacuuming. V42 valve is open and V36 valve is closed: high exhaust Gas line vacuum pull if the V30 valve is open when rough vacuuming. When the P/C is HPC type:

V02 valve is open and V01 valve is closed: rough vacuuming. V01 valve is open and V02 valve is closed: high exhaust

**ALARM NUMBER:** 51d6

**Alarm Message:** P1 Gas Line Vacuum Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** No gas lines MFC flow amounts reached the end flow amount (gas line parameter "Gas Line Vacuum Pull Timeout") within the designated time (gas line parameter "Gas Line Vacuum Pull Timeout") when the gas line vacuum was valid (gas line parameter "Gas Line Vacuum than Vent") before and after processing. Gas Line vacuum from atmosphere end flow amount (gas line parameter "Gas Line Vacuum End Flow Rate than Vent") monitoring is executed when the gas line flow amount is min. 1 sccm and the designated time (gas line parameter "Gas Line Vacuum Pull Timeout") is min. 1 second when vacuum pull is valid (gas line parameter "Gas Line Vacuum than Vent"). Check the valve condition by the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line valve operation. When the P/C is either M/DRM/PE/A-IEM type: V36 valve is open and V37 valve is closed: rough vacuuming. Gas line vacuum pull if the V30 valve is open when rough vacuuming. When the P/C is ATC type: V36 valve is open and V42 valve is closed: rough vacuuming. Gas line vacuum pull if the V30 valve is open when rough vacuuming.

**ALARM NUMBER:** 51d7

**Alarm Message:** P1 Gas Line Vacuum Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** No gas lines MFC flow amounts reached the end flow amount (gas line parameter "Gas Line Vacuum Pull Timeout") within the designated time (gas line parameter "Gas Line Vacuum Pull Timeout") when the gas line vacuum was valid (gas line parameter "Gas Line Vacuum than Vent") before and after electrostatic discharge. Gas Line vacuum from atmosphere end flow amount (gas line parameter "Gas Line Vacuum End Flow Rte than Vent") monitoring is executed when the gas line flow amount is min. 1 sccm and the designated time (gas line parameter "Gas Line Vacuum Pull Timeout") is min. 1 second when vacuum pull is valid (gas line parameter "Gas Line Vacuum than Vent"). Check the valve condition by the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line valve operation. When the P/C is either M/DRM/PE/A-IEM type: V36 valve is open and V37 valve is closed: rough vacuuming. Gas line vacuum pull if the V30 valve is open when rough vacuuming. When the P/C is ATC type: V36 valve is open and V42 valve is closed: rough vacuuming. Gas line vacuum pull if the V30 valve is open when rough vacuuming.

**ALARM NUMBER:** 51d8

**Alarm Message:** P1 Upper Temp Error

**Recovery:** [Retry] Set the temperature of the upper electrode temperature unit again.

**Cause:** There were errors for upper electrode temperature limit, broken wire and SSR when setting the temperature. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2 Local ID= 23 (Low Active): Temperature Upper Limit Error 24 (Low Active): Broken Wire Error 25 (Low Active): SSR Error

**ALARM NUMBER:** 51d9

**Alarm Message:** P1 Aux CPU Comm Error - Upper Chiller

**Recovery:** [Retry] Set the upper chiller temperature again. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Upper Electrode Temp Control] to [None].

**Cause:** An error occurred in communications between the Auxiliary Board and the chiller when setting the temperature of the upper chiller. Check that the connectors between the upper chiller and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are securely connected.

**ALARM NUMBER:** 51da

**Alarm Message:** P1 Communication Error - Upper Chiller

**Recovery:** [Retry] Set the upper chiller temperature again. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Upper Electrode Temp Control] to [None].

**Cause:** An error was transmitted from the chiller when setting the temperature of the upper chiller. Check that the upper chiller and the etcher parameters match. P1 temperature parameters [Upper Electrode Temp Control]

**ALARM NUMBER:** 51db

**Alarm Message:** P1 Upper Temp Unit Wire Broken (Pause)

**Recovery:** Error automatically cleared when broken heater wire fixed.

**Cause:** Wafer transfer in to the appropriate unit was not possible because of a broken upper heater wire. Check if there is a broken wire in the Upper Electrode Heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=24 (Low Active)

**ALARM NUMBER:** 51dc

**Alarm Message:** P1 Upper Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An upper heater broken wire error was detected. Check if there is a broken wire in the P/C 1 Upper Electrode Heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=24 (Low Active)

**ALARM NUMBER:** 51dd

**Alarm Message:** P1 Upper Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An upper heater broken wire error was detected. Check if there is a broken wire in the P/C 1 Upper Electrode Heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=24 (Low Active)

**ALARM NUMBER:** 51de

**Alarm Message:** P1 Upper Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** An upper heater broken wire error was detected. Check if there is a broken wire in the P/C 1 Upper Electrode Heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=24 (Low Active)

**ALARM NUMBER:** 51df

**Alarm Message:** P1 Upper Temp Unit Wire Broken (Pause)

**Recovery:** Error automatically cleared when heater broken wire fixed.

**Cause:** Wafer transfer in to the appropriate unit was not possible because of a broken upper heater wire on the upper unit. Check if there is a broken wire in the Upper Electrode Heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=24 (Low Active)

**ALARM NUMBER:** 51e0

**Alarm Message:** P1 Upper Temp Up Limit Error (Pause)

**Recovery:** Error automatically cleared when the heater temperature is with the upper limit value.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the Upper Electrode temperature exceeded the upper limit values of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=23 (Low Active)

**ALARM NUMBER:** 51e1

**Alarm Message:** P1 Upper Temp Up Limit Error

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The Upper heater exceeded the recipe upper limit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=23 (Low Active)

**ALARM NUMBER:** 51e2

**Alarm Message:** P1 Upper Temp Up Limit Error

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer in.

**Cause:** The Upper heater exceeded the recipe upper limit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=23 (Low Active)

**ALARM NUMBER:** 51e3

**Alarm Message:** P1 Upper Temp Up Limit Error

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An upper temperature limit alarm was detected at the upper heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=23 (Low Active)

**ALARM NUMBER:** 51e4

**Alarm Message:** P1 Upper Temp Up Limit Error (Pause)

**Recovery:** Error automatically cleared when the heater temperature is with the upper limit value.

**Cause:** Wafer transfer in to the appropriate unit was not possible because the temperature of the upper electrode exceeded the upper limit value of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=23 (Low Active)

**ALARM NUMBER:** 51e5

**Alarm Message:** P1 SSR Error in Upper Temp Unit (Pause)

**Recovery:** Error automatically cleared when the SSR error is cancelled.

**Cause:** Wafer transfer in to the appropriate unit was not possible because an SSR error occurred in the upper heater. Check the operation of the SSR in the Temperature Controller inside the P/C1 UNIT BOX. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=25 (Low Active)

**ALARM NUMBER:** 51e6

**Alarm Message:** P1 SSR Error in Upper Temp Unit

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An upper heater SSR error was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=25 (Low Active)

**ALARM NUMBER:** 51e7

**Alarm Message:** P1 SSR Error in Upper Temp Unit

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An upper heater SSR error was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=25 (Low Active)

**ALARM NUMBER:** 51e8

**Alarm Message:** P1 SSR Error in Upper Temp Unit

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.



**Cause:** An upper heater SSR error was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=25 (Low Active)

**ALARM NUMBER:** 51e9

**Alarm Message:** P1 SSR Error in Upper Temp Unit (Pause)

**Recovery:** Error automatically cleared when the SSR error is cancelled.

**Cause:** Wafer transfer in to the appropriate unit was not possible because an SSR error occurred in the upper heater. Check the operation of the SSR in the Temperature Controller inside the P/C1 UNIT BOX. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=25 (Low Active)

**ALARM NUMBER:** 51ea

**Alarm Message:** P1 Upper Temp Unstable

**Recovery:** When the upper electrode temperature Interlock range is entered, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the upper electrode temperature Interlock range of the Process Parameter setting was exceeded during execution of the recipe.

**ALARM NUMBER:** 51eb

**Alarm Message:** P1 Upper Temp Up Limit Error (Pause)

**Recovery:** When the upper electrode temperature Interlock range is entered, this error is automatically cleared and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the upper electrode temperature Interlock upper limit of the Process Parameter settings was exceeded during execution of the recipe.

**ALARM NUMBER:** 51ec

**Alarm Message:** P1 Response Timeout - Upper Chiller

**Recovery:** [Retry] Set the upper chiller temperature again. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** There was no response from the upper chiller (5 s x 3 times) when setting the

temperature on the upper chiller. It could be a chiller setting defect, RS Cable defect or an Auxiliary CPU defect. Check that the connectors between the chiller and the P/C PANEL INT CONN BRD and between the P/C PAN INT CONN BRD and P/C MAIN INT CONN BRD are securely connected.

**ALARM NUMBER:** 51ed

**Alarm Message:** P1 Upper Temp Not at Set Value

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 51ee

**Alarm Message:** P1 Upper Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing processing. [Abort] Terminates processing and transfers the wafer out.

**Cause:** The set time (recipe parameter "Upper Electrode Temperature Interlock Conditions Time") exceeded the Upper Electrode temperature recipe parameter setting value interlock range (recipe parameter "Upper Electrode Interlock Conditions Range") before executing processing.

**ALARM NUMBER:** 51ef

**Alarm Message:** P1 Room Temp Timeout - Upper Temp Unit

**Recovery:** [Retry] Venting to atmosphere is executed again after initialization. Press [Vent] using the maintenance operation to vent to atmosphere.

**Cause:** The temperature of the upper electrode did not reach the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature" "Atmosphere Disable Lower Limit Temperature") within the designated time (temperature parameter "Lower Unit Atmosphere Disable Waiting Timeout" when used with the upper limit waiting time) when venting to atmosphere using the maintenance operation or at etcher initialization. This error does not occur when upper electrode temperature control (temperature parameter "Upper Electrode Temperature Control System") is not performed or when room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") when venting to atmosphere is invalid.

**ALARM NUMBER:** 51f0

**Alarm Message:** P1 TMP Error

**Recovery:** [Retry] Vacuum is executed again after initializing etcher.

**Cause:** A turbo pump alarm occurred when the turbo pump ISO valve (V42) was opened when pulling a vacuum when initializing the etcher. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 51f1

**Alarm Message:** P1 TMP Error

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates the process and the wafer is transferred out.

**Cause:** A turbo pump alarm occurred when pulling a vacuum before and after processing. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 51f2

**Alarm Message:** P1 TMP Error

**Recovery:** [Retry] Performs vacuum again. [Abort] Terminates electrostatic discharge and the wafer is transferred in.

**Cause:** A turbo pump alarm occurred when pulling a vacuum before and after electrostatic discharge. Check the condition of the appropriate turbo pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM types: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 51f3

**Alarm Message:** P1 Gate Up/Down Timeout

**Recovery:** [Retry] Executes from initialization again.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor

UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 51f4

**Alarm Message:** P1 Gate Up/Down Timeout

**Recovery:** [Retry] Performs transfer gate up/down action again.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 51f5

**Alarm Message:** P1 Gate Up/Down Timeout

**Recovery:** [Abort] Terminates processing and transfers the wafer out.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 51f6

**Alarm Message:** P1 UV Lamp Cannot Turn On - Gate Open

**Recovery:** [Retry] Executes from the recipe step where the error occurred again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** UV lamp control was executed while the transfer gate was open. Check if the transfer gate was open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 51f7

**Alarm Message:** P1 UV Lamp Cannot Turn On - Lid Open

**Recovery:** [Retry] Executes from the recipe step where the error occurred again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** UV lamp control was executed while the P/C cover was open. Check if the P/C Cover was open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 51f8

**Alarm Message:** P1 UV Lamp Cannot Turn On - Hi Pressure

**Recovery:** [Retry] Executes from the recipe step where the error occurred again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** UV lamp control was executed when the P/C was not under a vacuum. Check the pressure inside the P/C.

**ALARM NUMBER:** 51f9

**Alarm Message:** P1 UV Lamp Cannot Turn On - Shield Cover

**Recovery:** [Retry] Executes from the recipe step where the error occurred again. [Abort] Terminates processing and transfers the wafer out.

**Cause:** UV lamp control was executed while the Shield Box Cover was open. Check if the Shield Box Cover was open. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=229 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 51fa

**Alarm Message:** P1 Synchronous Timeout

**Recovery:** [Retry] Executes vacuum pull again after initializing the etcher. If the vacuum pull for the chamber using the dry pump was not completed, this ends in error without executing vacuuming.

**Cause:** Vacuum pull processing of the dry pump for rough vacuum did not end within the designated time (pressure parameter "P/C Vacuum Synchronize Timeout") in the vacuum pull when initializing the etcher.

**ALARM NUMBER:** 51fb

**Alarm Message:** P1 Synchronous Timeout

**Recovery:** [Retry] Executes vacuum pull again. If the vacuum pull for the chamber using

the dry pump was not completed, this ends in error without executing vacuuming. [Abort] Terminates processing and transfers the wafer out.

**Cause:** Vacuum pull processing of the dry pump for rough vacuum did not end within the designated time (pressure parameter "P/C Vacuum Synchronize Timeout") in the vacuum pull before and after processing.

**ALARM NUMBER:** 51fc

**Alarm Message:** P1 Synchronous Timeout

**Recovery:** [Retry] Executes vacuum pull again. If the vacuum pull for the chamber using the dry pump was not completed, this ends in error without executing vacuuming. [Abort] Terminates electrostatic discharge and transfers the wafer out.

**Cause:** Vacuum pull processing of the dry pump for rough vacuum did not end within the designated time (pressure parameter "P/C Vacuum Synchronize Timeout") in the vacuum pull before and after electrostatic discharge.

**ALARM NUMBER:** 51fd

**Alarm Message:** P1 Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull after initializing the etcher. Press [Initialize] or [Vacuum] again using the maintenance operation and execute your objective process.

**Cause:** The designated pressure (pressure parameter "Rough Vacuum End Pressure," "Vacuum Pull End Pressure") was not achieved within the designated time (pressure parameter "Rough Vacuum Pull End Timeout," "Vacuum Pull End Timeout") for both rough vacuum or main exhaust and pulling a vacuum using the maintenance operation or when initializing the etcher. Check the valve condition with the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line. When the P/C is M/DRM/PE/A-IEM type: V36 valve is open and V37 is closed: rough vacuuming. V42 valve is open and V37 is closed: high speed exhaust. When the P/C is ATC type: V36 valve is open and V42 is closed: rough vacuuming. V42 valve is open and V36 is closed: high speed exhaust. When the P/C is HPC type: V02 valve is open and V01 is closed: rough vacuuming. V01 valve is open and V02 is closed: high speed exhaust.

**ALARM NUMBER:** 51fe

**Alarm Message:** P1 Stop ESC Due to Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The designated pressure (pressure parameter "Rough Vacuum End Pressure," "Vacuum Pull End Pressure") was not achieved within the designated time (pressure

parameter "Rough Vacuum Pull End Timeout", "Vacuum Pull End Timeout") for both rough vacuum and main exhaust when pulling a vacuum before and after electrostatic discharge. Check the valve condition with the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line. When the P/C is M/DRM/PE/A-IEM type: V36 valve is open and V37 is closed: rough vacuuming. V42 valve is open and V37 is closed: high speed exhaust. When the P/C is ATC type: V36 valve is open and V42 is closed: rough vacuuming. V42 valve is open and V36 is closed: high speed exhaust. When the P/C is HPC type: V02 valve is open and V01 is closed: rough vacuuming. V01 valve is open and V02 is closed: high speed exhaust.

**ALARM NUMBER:** 51ff

**Alarm Message:** P1 Stop Etching - Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The designated pressure (pressure parameter "Rough Vacuum End Pressure", "Vacuum Pull End Pressure") was not achieved within the designated time (pressure parameter "Rough Vacuum Pull End Timeout", "Vacuum Pull End Timeout") for both rough vacuum and main exhaust when pulling a vacuum before and after executing the process. Check the valve condition with the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line. When the P/C is M/DRM/PE/A-IEM type: V36 valve is open and V37 is closed: rough vacuuming. V42 valve is open and V37 is closed: high speed exhaust. When the P/C is ATC type: V36 valve is open and V42 is closed: rough vacuuming. V42 valve is open and V36 is closed: high speed exhaust. When the P/C is HPC type: V02 valve is open and V01 is closed: rough vacuuming. V01 valve is open and V02 is closed: high speed exhaust.

**ALARM NUMBER:** 5200

**Alarm Message:** P1 Now Vacuuming

**Recovery:** The appropriate action command cannot be executed, but you can continue with maintenance by pressing [Accept] on the sub-screen.

**Cause:** Vacuum pull, leak checks, cycle purge self check or other maintenance commands were tried while pulling a vacuum. Retry the command after vacuum pull is completed.

**ALARM NUMBER:** 5201

**Alarm Message:** P1 Vent Timeout

**Recovery:** [Retry] This performs venting again after initializing the etcher. Press [Vent] using the maintenance operation to vent to atmosphere.



**Cause:** The designated pressure was not reached within the designated time in venting to atmosphere with the maintenance operation or when initializing. Pressure idling when venting the Process Chamber to atmosphere is performed at 2 levels. First ultimate pressure idling for the lower electrode temperature to reach room temperature (pressure parameters "P/C Susceptor Temp Idle Pressure" and "P/C Susceptor Temp Idle Pressure Timeout") is performed. Next, ultimate pressure idling (pressure parameter "P/C Vent Timeout" and "P/C Vent End Pressure") for venting after idling for the lower electrode temperature is performed. It is possible that the N2 supply pressure decreased or that there is a valve DO defect in the N2 induction line (or air induction line) or defect in the vacuum gauge (convectron or pressure switch). Check the solenoid LED (lit: open; extinguished: closed) to check the following valve conditions and N2 induction line valve operation. UNITY Standard Specifications (N2 Purge): N2 induction status when all V16, V17 and V30 valves are closed. UNITY Air Purge Specifications Air induction status if the V59 valve is open. UNITY Ver. 2 Standard Specifications (N2 Purge): N2 induction status when all V01, V02 and V30 valves are open. UNITY Ver. 2 Side Purge Specifications (N2 Purge with Type 5 Gas Box) N2 induction status when both V01 and V02 valves are open. The pressure switch can be checked only when the etcher is equipped with a pressure switch. Check from the adjustment terminal to check the following conditions. High Vacuum/Max.  $6.65 \times 10^3$  Pa (50 Torr): Both 50 Torr and 720 Torr pressure switches are ON. Low Vacuum/Higher than  $6.65 \times 10^3$  Pa (50 Torr), Less than  $9.58 \times 10^4$  Pa (720 Torr) 50 Torr switch is OFF and 720 Torr switch is ON. Atmospheric Pressure/Min.  $9.58 \times 10^4$  Pa (720 Torr) Both 50 Torr and 720 Torr switches are OFF. 50 Torr Pressure Switch UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=225 (High Active) UNITY Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=26 (High Active) 720 Torr Pressure Switch UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=226 (High Active) UNITY Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=27 (High Active) The following are the venting parameters. P/C Module Parameter: "P/C Chamber Purge Type" This selects the gas used (N2 Purge, Air Purge) when venting. P/C Module Parameter: "Gas Box Type" When Type 5 is selected, performs N2 induction for venting with Side Purge Specifications. Pressure Parameter: "Vacuum Gauge Type" This selects the pressure switch when the P/C is PE/A-IEM/ATC types, and the convectron when the P/C is M/DRM/HPC types.

**ALARM NUMBER:** 5202

**Alarm Message:** P1 Valve Cannot Open/Close

**Recovery:** [Retry] Executes vacuum pull or atmosphere venting again when initializing the etcher.

**Cause:** Turbo pump ISO valve (V42 valve) could not be opened because the turbo pump exhaust valve (V37 valve) was not open when pulling a vacuum before venting to atmosphere and pulling a vacuum when initializing the etcher. Check the turbo pump exhaust valve condition by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 5203



**Alarm Message:** P1 Valve Cannot Open/Close

**Recovery:** After closing all valves with the maintenance operation, press the button for your objective process again.

**Cause:** The objective process could not be performed because of the following valve interlocks when using the maintenance operation to initialize the etcher, pull a vacuum, vent to atmosphere, unit or batch valve operation. The valves for the appropriate gas line and the N2 induction line and the N2 link line connecting them was open at process gas batch induction operation, gas line primary side valve open operation. The process gas line primary valve was open when opening the N2 link line valve. The ISO valve (V42 valve) was open when opening the N2 vent line valves (on UNITY: V16, V17 valves; on UNITY 2: V1, V2 valves) when inducing N2. The ISO valve (V42 valve) was closed when opening the gas line primary side valve and operating the process gas batch induction. The turbo pump exhaust side valve (V37 valve) was closed when operating [Vacuum] from the vacuum condition. The N2 vent valve (on UNITY: V16, V17 valves; on UNITY 2: V1, V2 valves) was open when opening the turbo pump ISO valve (V42 valve). The V30 valve (gas induction valve) was open when opening the N2 induction valve (on UNITY: V17 valve; on UNITY 2: V2 valves) when the gas box type is "Type 5." The N2 induction valve (on UNITY: V17 valve; on UNITY 2: V2 valves) were open when opening the V30 valve (gas induction valve) when the gas box type is "Type 5." Check the valve conditions by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 5204

**Alarm Message:** P1 Stop Discharge Due to Valve Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The turbo pump ISO valve (V42 valve) could not be opened because the turbo pump exhaust side valve (V37 valve) was not open when pulling a vacuum (high speed exhaust) before and after electrostatic discharge. Check the condition of the turbo pump exhaust side valve by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 5205

**Alarm Message:** P1 Stop Etching Due to Valve Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The turbo pump ISO valve (V42 valve) could not be opened because the turbo pump exhaust side valve (V37 valve) was not open when pulling a vacuum (high speed exhaust) before and after executing the process. Check the condition of the turbo pump exhaust side valve by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 5206

**Alarm Message:** P1 ESC Not Cannot Execute - No Wafer

**Recovery:** [Retry] Electrostatic chuck is turned ON after re-checking wafer transfer in information.

**Cause:** Electrostatic chuck was turned ON when the wafer had not yet been transferred (wafer mark inside chamber is not displayed.). There is the possibility that wafer transfer failed. If you cannot reset the error when you retry, shift to the maintenance mode and reset to withdraw the wafer.

**ALARM NUMBER:** 5207

**Alarm Message:** P1 Etching Cannot Execute - No Wafer

**Recovery:** [Retry] Processing is executed after re-checking wafer transfer in information. [Abort] Terminates processing and transfers the wafer out.

**Cause:** Processing was executed when the wafer transfer was not completed (wafer mark inside chamber is not displayed.). There is the possibility that wafer transfer failed. If the alarm occurred when transferring the wafer in, retry this alarm after resetting (pressing [Retry]).

**ALARM NUMBER:** 5208

**Alarm Message:** P1 Wall Temp Error

**Recovery:** [Retry] Set the temperature on the wall temperature unit again.

**Cause:** There were errors for wall heater temperature upper limit, broken wire and SSR when setting the temperature. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID= 2 Local ID= 26 (Low Active): Temperature Upper Limit Error 27 (Low Active): Broken Wire Error 28 (Low Active): SSR Error

**ALARM NUMBER:** 5209

**Alarm Message:** P1 Aux CPU ComM Error - Wall Temp Unit

**Recovery:** [Retry] Resets the temperature on the temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** A communication error occurred with the Auxiliary Board when setting the temperature on the Wall Temperature Unit. With UNITY: Check that the connectors between the temperature unit and P/C MAIN INT CONN BRD are connected. With

UNITY-Ver. 2: Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 520a

**Alarm Message:** P1 Communication Error - Wall Temp Unit

**Recovery:** [Retry] Resets the temperature on the temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** An error was transmitted from the temperature unit when setting the temperature of the Wall Temperature Unit. Check that the Temperature and etcher parameters match. P1 temperature parameters [Wall Electrode Temp Control]

**ALARM NUMBER:** 520b

**Alarm Message:** P1 Wall Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A wall heater broken wire error was detected. Check if there is a broken wire in the wall heaters. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=27 (Low Active)

**ALARM NUMBER:** 520c

**Alarm Message:** P1 Wall Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** A wall heater broken wire error was detected. Check if there is a broken wire in the wall heaters. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=27 (Low Active)

**ALARM NUMBER:** 520d

**Alarm Message:** P1 Wall Temp Unit Wire Broken

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A wall heater broken wire error was detected. Check if there is a broken wire in the wall heaters. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=27 (Low Active)

**ALARM NUMBER:** 520e

**Alarm Message:** P1 Wall Temp Unit Wire Broken (Pause)

**Recovery:** When the heater broken wire is fixed, this is automatically cleared.

**Cause:** Wafer transfer in to the appropriate unit was not possible because of a broken wire in the Wall Heater. A wall heater broken wire error was detected. Check if there is a broken wire in the wall heaters. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. There are wall heaters in four places. UNITY when the P/C is M Type: Group ID=2, Local ID=27 (Low Active)

**ALARM NUMBER:** 520f

**Alarm Message:** P1 Wall Temp Up Limit Error

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** The wall heater temperature exceeded the upper limit of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=26 (Low Active)

**ALARM NUMBER:** 5210

**Alarm Message:** P1 Wall Temp Up Limit Error

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The wall heater temperature exceeded the upper limit of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=26 (Low Active)

**ALARM NUMBER:** 5211

**Alarm Message:** P1 Wall Temp Up Limit Error

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates the electrostatic discharge and transfers the wafer in.

**Cause:** The wall heater temperature exceeded the upper limit of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=26 (Low Active)

**ALARM NUMBER:** 5212

**Alarm Message:** P1 Wall Temp Up Limit Error (Pause)

**Recovery:** The error is automatically cleared when the heater temperature is within range.

**Cause:** Wafer transfer in to the appropriate unit was not possible because of a broken wire in the Wall Heater. The wall heater temperature exceeded the recipe upper limit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=26 (Low Active)

**ALARM NUMBER:** 5213

**Alarm Message:** P1 SSR Error in Wall Temp Unit

**Recovery:** [Retry] Executes from check before initializing again

**Cause:** An SSR error of the wall heater was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=28 (Low Active)

**ALARM NUMBER:** 5214

**Alarm Message:** P1 SSR Error in Wall Temp Unit

**Recovery:** [Retry] Executes from check before the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An SSR error of the wall heater was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=28 (Low Active)

**ALARM NUMBER:** 5215

**Alarm Message:** P1 SSR Error in Wall Temp Unit

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer out.

**Cause:** An SSR error of the wall heater was detected. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=28 (Low Active)

**ALARM NUMBER:** 5216

**Alarm Message:** P1 SSR Error in Wall Temp Unit (Pause)

**Recovery:** The error is automatically cleared when the SSR error is cancelled.

**Cause:** Transfer in to the appropriate unit was not possible because an SSR error occurred in the wall heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=28 (Low Active)

**ALARM NUMBER:** 5217

**Alarm Message:** P1 Wall Temp Unit Wire Broken (Pause)

**Recovery:** When the heater broken wire is fixed, this error is automatically cleared.

**Cause:** Wafer transfer in to the appropriate unit was not possible because of a broken wire in the wall heater. Check if there is a broken wire in the wall heaters. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. There are four wall heaters. UNITY when the P/C is M Type: Group ID=2, Local ID=27 (Low Active)

**ALARM NUMBER:** 5218

**Alarm Message:** P1 Wall Temp Up Limit Error (Pause)

**Recovery:** The error is automatically cleared when the heater temperature is within the upper limit.

**Cause:** Wafer transfer in to the appropriate unit was not possible because the wall electrode temperature exceeded the upper limit value of the recipe. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=26 (Low Active)

**ALARM NUMBER:** 5219

**Alarm Message:** P1 SSR Error in Wall Temp Unit (Pause)

**Recovery:** The error is automatically cleared when the SSR error is cancelled.

**Cause:** Wafer transfer in to the appropriate unit was not possible because an SSR error occurred in the wall heater. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=28 (Low Active)

**ALARM NUMBER:** 521a

**Alarm Message:** P1 Wall Temp Unstable (Pause)

**Recovery:** The error is automatically cleared when the upper electrode interlock range is entered and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the wall temperature Interlock range of the Process Parameters was exceeded during execution of the recipe.

**ALARM NUMBER:** 521b

**Alarm Message:** P1 Wall Temp Up Limit Error (Pause)

**Recovery:** The error is automatically cleared when the upper electrode interlock range is entered and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the wall temperature Interlock range of the Process Parameters was exceeded during execution of the recipe.

**ALARM NUMBER:** 521c

**Alarm Message:** P1 Response Timeout - Wall Temp Unit

**Recovery:** [Retry] Resets the temperature on the temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Lower Electrode Temp Control] to [None].

**Cause:** There was no response from the wall temperature unit within the fixed time (5 s x 3 times) when setting the temperature on the wall temperature unit. It could be a temperature unit setting defect, RS cable defect or a defective Auxiliary board CPU. With UNITY: Check that the connector between the temperature unit and P/C MAIN INT CONN BRD is connected. With UNITY-Ver. 2: Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 521d

**Alarm Message:** P1 Room Temp Timeout - Wall Temp Unit

**Recovery:** [Retry] Venting to atmosphere is executed again after initialization. Press [Vent] using the maintenance operation to vent to atmosphere.

**Cause:** The temperature of the wall did not reach the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature" "Atmosphere Disable Upper Limit Temperature") within the designated time (temperature parameter "Lower Unit Atmosphere Disable Waiting Timeout" when used with the wall temperature waiting time) when venting to atmosphere using the maintenance operation or at etcher initialization. This error does not occur when upper electrode temperature control (temperature parameter "Upper Electrode Temperature Control System") is not performed or when room temperature control (pressure parameter "Control to Set the Normal Temp. at Vent") when venting to atmosphere is invalid.

**ALARM NUMBER:** 521e

**Alarm Message:** P1 Wall Temp Not at Set Value

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 521f

**Alarm Message:** P1 Wall Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The set time (recipe parameter "Wall Temperature Interlock Conditions Time") exceeded the Wall Electrode Temperature recipe parameter setting value for interlock range (recipe parameter "Wall Temperature Interlock Conditions Range") before processing.

**ALARM NUMBER:** 5220

**Alarm Message:** P1 Magnet Speed Set at Zero

**Recovery:** Restart the system and change the following parameter. "P1 Module" Parameter "Magnet Rotation Speed": [20 rpm]

**Cause:** The magnet rotation speed parameters were set to 0 when rotating or stopping the magnet.

**ALARM NUMBER:** 5221

**Alarm Message:** P1 Air Pressure Dropped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** An system air low pressure interlock was detected before initialization. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5222

**Alarm Message:** P1 Air Pressure Dropped



**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** An system air low pressure interlock was detected before executing the process. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5223

**Alarm Message:** P1 Air Pressure Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An system air low pressure interlock was detected before electrostatic discharge. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5224

**Alarm Message:** P1 Air Pressure Dropped

**Recovery:** The error is automatically cleared when the system air pressure low interlock is cancelled.

**Cause:** An system air low pressure interlock was detected. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameters when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5225

**Alarm Message:** P1 Pure N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A pure N2 low pressure interlock was detected before initialization. Check the system pure N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=68 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=77 (High Active)

**ALARM NUMBER:** 5226

**Alarm Message:** P1 Pure N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort]  
Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A pure N2 low pressure interlock was detected before electrostatic discharge.  
Check the system pure N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=68 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=77 (High Active)

**ALARM NUMBER:** 5227

**Alarm Message:** P1 Pure N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]  
Terminates the process and transfers the wafer out.

**Cause:** A pure N2 low pressure interlock was detected before executing the process.  
Check the system pure N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=68 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=77 (High Active)

**ALARM NUMBER:** 5228

**Alarm Message:** P1 Dry N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A dry N2 low pressure interlock was detected before initialization. Check the system dry N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=67 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=76 (High Active)

**ALARM NUMBER:** 5229

**Alarm Message:** P1 Dry N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]  
Terminates the process and transfers the wafer out.

**Cause:** A dry N2 low pressure interlock was detected before executing the process.  
Check the system dry N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=67 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=76 (High Active)

**ALARM NUMBER:** 522a

**Alarm Message:** P1 Dry N2 Pressure Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A dry N2 low pressure interlock was detected before electrostatic discharge. Check the system dry N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=67 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=76 (High Active)

**ALARM NUMBER:** 522b

**Alarm Message:** P1 TMP Cooling Water Flow Rate Dropped

**Recovery:** The error is automatically cleared when the turbo pump cooling water flow amount low interlock is cancelled.

**Cause:** A turbo pump cooling water flow amount low interlock was detected. Check the turbo pump cooling water flow amount. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=48 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 522c

**Alarm Message:** P1 Cooling Water Dropped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A cooling water flow amount low interlock was detected before initialization. Check the cooling water flow amount. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=63 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=78 (High Active)

**ALARM NUMBER:** 522d

**Alarm Message:** P1 Cooling Water Dropped

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** A cooling water flow amount low interlock was detected before executing the process. Check the cooling water flow amount. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=63 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=78 (High Active)

**ALARM NUMBER:** 522e

**Alarm Message:** P1 Cooling Water Dropped

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A cooling water flow amount low interlock was detected before electrostatic discharge. Check the cooling water flow amount. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=63 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=78 (High Active)

**ALARM NUMBER:** 522f

**Alarm Message:** P1 Interlock - Air Pressure Dropped

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A system air pressure low interlock was detected before initialization. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5230

**Alarm Message:** P1 Interlock - Air Pressure Dropped (Reboot)

**Recovery:** Restart the system.

**Cause:** A system air pressure low interlock was detected before executing the process. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5231

**Alarm Message:** P1 Interlock - Air Pressure Dropped (Reboot)

**Recovery:** Restart the system.

**Cause:** A system air pressure low interlock was detected before electrostatic discharge. Check the system air supply pressure. Check from the adjustment terminal to check the

sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5232

**Alarm Message:** P1 Interlock - Air Pressure Dropped (Reboot)

**Recovery:** The error is automatically cleared when the system air pressure low interlock is disabled.

**Cause:** A system air pressure low interlock was detected. Check the system air supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Air Pressure Dropped": [None] UNITY: Group ID=2, Local ID=61 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=75 (High Active)

**ALARM NUMBER:** 5233

**Alarm Message:** P1 Panel Open Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A panel open interlock was detected before initialization. Check if the panels are closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Panel Open": [None] UNITY: Group ID=2, Local ID=213 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=91 (Low Active)

**ALARM NUMBER:** 5234

**Alarm Message:** P1 Panel Open Interlock (Reboot)

**Recovery:** Restart the system.

**Cause:** A panel open interlock was detected before executing the process. Check if the panels are closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Panel Open": [None] UNITY: Group ID=2, Local ID=213 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=91 (Low Active)

**ALARM NUMBER:** 5235

**Alarm Message:** P1 Panel Open Interlock (Reboot)

**Recovery:** Restart the system.

**Cause:** A panel open interlock was detected before electrostatic discharge. Check if the panels are closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Panel Open": [None] UNITY: Group ID=2, Local ID=213 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=91 (Low Active)

**ALARM NUMBER:** 5236

**Alarm Message:** P1 Panel Open Interlock (Reboot)

**Recovery:** The error is automatically cleared when the panel open interlock is cancelled.

**Cause:** A panel open interlock was detected. Check if the panels are closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Change the following parameter when disabling interlock detection. Interlock setting "Panel Open": [None] UNITY: Group ID=2, Local ID=213 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=91 (Low Active)

**ALARM NUMBER:** 5237

**Alarm Message:** P1 BA Gauge DEGAS Pressure Upper Limit

**Recovery:** Press [BA Measurements OFF] using the maintenance operation. Gas expulsion (Degas) processing is executed when the B.A Gauge pressure measurements are stopped.

**Cause:** Because the pressure in the Process Chamber (pressure measured by the convection gauge or the capacitance manometer) exceeded the designated pressure (pressure parameter "B/A Gauge Measurement Pressure Upper Limit) during B.A. Gauge gas expulsion (Degas) in the maintenance operation, B.A. Gauge gas expulsion could not be started. Or because the pressure in the Process Chamber exceeded 6.65 Pa (50 mTorr) with the B.A. Gauge pressure measurements, B.A. Gauge gas expulsion could not be started.

**ALARM NUMBER:** 5238

**Alarm Message:** P1 Cannot Measure BA Due to Hi Pressure

**Recovery:** Press [BA Measurements OFF] using the maintenance operation to execute vacuum pull. Gas expulsion (Degas) processing is executed when the B.A Gauge pressure measurements are stopped.

**Cause:** The measurement pressure exceeded the designated pressure (pressure parameter "B/A gauge Measurements Pressure Upper Limit) during B.A Gauge pressure measurements so the pressure measurements were stopped.

**ALARM NUMBER:** 5239

**Alarm Message:** P1 Measuring by BA Gauge

**Recovery:** Press [BA Measurements OFF] on the maintenance operation to stop B.A. Gauge pressure measurements and press [DEGAS ON] again.

**Cause:** B.A Gauge gas expulsion (Degas) could not be executed because B.A. Gauge pressure measurements are being executed in the maintenance operation. It is necessary to stop pressure measurements by the B.A. Gauge.

**ALARM NUMBER:** 523a

**Alarm Message:** P1 DEGAS Running by BA Gauge

**Recovery:** Press [DEGAS OFF] on the maintenance operation to stop B.A. Gauge gas expulsion and press [BA Measurements ON] again.

**Cause:** B.A Gauge pressure measurements could not be executed because B.A. Gauge gas expulsion is being executed in the maintenance operation. It is necessary to stop G.A. Gauge gas expulsion to execute B.A. Gauge pressure measurements.

**ALARM NUMBER:** 523b

**Alarm Message:** P1 N2 Purge Exec Disabled Cannot Open Valve

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 523c

**Alarm Message:** P1 N2 Purge Exec Disabled Cannot Open Valve

**Recovery:** The error is automatically cleared when the P/C is under a vacuum or the P/C Cover or Shield Box cover are detected as closed and N2 purge is executed again.  
[Accept] The message screen is cleared.

**Cause:** N2 purge was executed while the P/C was not under a vacuum, the P/C Cover was open or the Shield box cover was open. Check the pressure inside the P/C and check if the P/C or Shield Box covers are close. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. P/C Cover Open Sensor UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active) Shield Box Cover Open Sensor UNITY: Group ID=2, Local ID=229 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=130 (Low Active)

**ALARM NUMBER:** 523d

**Alarm Message:** P1 Cannot Open Gate

**Recovery:** [Retry] Executes from check before executing the process. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The transfer gate was opened during RF power output, electrostatic chuck voltage output or gas induction.

**ALARM NUMBER:** 523e

**Alarm Message:** P1 Cannot Open Gate

**Recovery:** [Retry] Executes from opening the transfer gate again.

**Cause:** The transfer gate open was executed while either RF power output, electrostatic chuck voltage output or gas induction was processing.

**ALARM NUMBER:** 523f

**Alarm Message:** P1 Cannot Open Gate

**Recovery:** [Retry] Executes from opening the transfer gate again.

**Cause:** The transfer gate open was executed while either RF power output, electrostatic chuck voltage output or gas induction was processing.

**ALARM NUMBER:** 5240

**Alarm Message:** P1 Cannot Open Gate

**Recovery:** The appropriate command cannot be executed but you can continue with maintenance by pressing [Accept] on the sub-screen.

**Cause:** The transfer gate open was executed while either RF power output, electrostatic chuck voltage output or gas induction was processing.

**ALARM NUMBER:** 5241

**Alarm Message:** P1 Stop Etching - Open ISO Valve

**Recovery:** [Retry] Performs vacuum pull or pressure control again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The turbo pump ISO valve (V42 valve) did not close within 5 seconds after starting rough vacuum, or pulling a vacuum before and after processing. Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)



**ALARM NUMBER:** 5242

**Alarm Message:** P1 Stop Discharge - Open ISO Valve

**Recovery:** [Retry] Performs vacuum pull or pressure control again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The turbo pump ISO valve (V42 valve) did not close within 5 seconds after starting rough vacuum, or pulling a vacuum before and after electrostatic discharge. Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 5243

**Alarm Message:** P1 Lid Open

**Recovery:** This error is automatically cleared when the P/C 1 lid is closed.

**Cause:** The P/C 1 lid is open. Check the condition of the P/C 1 lid open sensor. Check from the adjustment terminal to check the chamber lid open sensor. An error will occur when the sensor is turned ON. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY when the P/C is PE or ATC type: Group ID=2, Local ID=65 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5244

**Alarm Message:** P1 Gas Box Exhaust Pressure Error (Pause)

**Recovery:** The error is automatically cleared when the gas box exhaust pressure error interlock is cancelled and the wafer can be transferred in.

**Cause:** The wafer cannot be transferred into the appropriate unit because a gas box exhaust pressure error interlock was detected. Check the gas box exhaust pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=150 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=88 (Low Active)

**ALARM NUMBER:** 5245

**Alarm Message:** P1 Gas Box Exhaust Pressure Error

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** A gas box exhaust pressure error interlock was detected before initialization. Check the gas box exhaust pressure. Check from the adjustment terminal to check the

sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=150 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=88 (Low Active)

**ALARM NUMBER:** 5246

**Alarm Message:** P1 Gas Box Exhaust Pressure Error

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** A gas box exhaust pressure error interlock was detected before executing the process. Check the gas box exhaust pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=150 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=88 (Low Active)

**ALARM NUMBER:** 5247

**Alarm Message:** P1 Gas Box Exhaust Pressure Error

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A gas box exhaust pressure error interlock was detected before electrostatic discharge. Check the gas box exhaust pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=150 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=88 (Low Active)

**ALARM NUMBER:** 5248

**Alarm Message:** P1 Upper Temp Unit Wire Broken

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5249

**Alarm Message:** P1 Wall Temp Unit Wire Broken

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 524a

**Alarm Message:** P1 Lower Temp Unit Wire Broken

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 524b

**Alarm Message:** P1 RKC Board Error Detected

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 524c

**Alarm Message:** P1 Wind Heater Error (Pause)

**Recovery:** The error is automatically cleared when the window heater error is cancelled.

**Cause:** Because a window heater error has occurred, the wafer cannot be transferred in to the appropriate unit. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY when the P/C is M Type: Group ID=2, Local ID=71 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=56 (High Active)

**ALARM NUMBER:** 524d

**Alarm Message:** P1 Gap Shield Panel Open

**Recovery:** The error is cleared when the gap shield open interlock is cancelled.

**Cause:** A gap shield panel open interlock was detected. Check if the gap shield is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types: Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 524e

**Alarm Message:** P1 Gap Stop Due to Gap Panel Open

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** A gap shield panel open interlock was detected and the gap motor drive designation was performed. Also, a gap shield panel open interlock was detected during gap motor drive. Check if the gap shield panel is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C

is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types:  
Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 524f

**Alarm Message:** P1 Gap Stop Due to Gap Panel Open

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** A gap shield panel open interlock was detected and the gap motor drive designation was performed. Also, a gap shield panel open interlock was detected during gap motor drive. Check if the gap shield panel is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types: Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 5250

**Alarm Message:** P1 Gap Stop Due to Gap Panel Open

**Recovery:** The error is cleared when the maintenance operation is performed again.

**Cause:** A gap shield panel open interlock was detected and the gap motor drive designation was performed. Also, a gap shield panel open interlock was detected during gap motor drive. Check if the gap shield panel is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types: Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 5251

**Alarm Message:** P1 Gap Stop Due to Gap Panel Open

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** A gap shield panel open interlock was detected and the gap motor drive designation was performed. Also, a gap shield panel open interlock was detected during gap motor drive. Check if the gap shield panel is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types: Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 5252

**Alarm Message:** P1 Gap Stop Due to Lid Open

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** A P/C lid open interlock was detected and the gap motor drive designation was performed. Also, a P/C lid open interlock was detected during gap motor drive. Check if the P/C lid is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5253

**Alarm Message:** P1 Gap Stop Due to Lid Open

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** A P/C lid open interlock was detected and the gap motor drive designation was performed. Also, a P/C lid open interlock was detected during gap motor drive. Check if the P/C lid is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5254

**Alarm Message:** P1 Gap Stop Due to Lid Open

**Recovery:** The error is cleared when the maintenance operation is performed again.

**Cause:** A P/C lid open interlock was detected and the gap motor drive designation was performed. Also, a P/C lid open interlock was detected during gap motor drive. Check if the P/C lid is closed. Check the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5255

**Alarm Message:** P1 Gap Stop Due to Lid Open

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** A P/C lid open interlock was detected and the gap motor drive designation was performed. Also, a P/C lid open interlock was detected during gap motor drive. Check if the P/C lid is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5256

**Alarm Message:** P1 Gap Stop Due to During Gate Action

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Gap motor drive designation was performed while the P/C transfer gate open was detected. Also, a P/C transfer gate open interlock was detected during gap motor drive. Check if the P/C transfer gate is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 5257

**Alarm Message:** P1 Gap Stop Due to During Gate Action

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** Gap motor drive designation was performed while the P/C transfer gate open was detected. Also, a P/C transfer gate open interlock was detected during gap motor drive. Check if the P/C transfer gate is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 5258

**Alarm Message:** P1 Gap Stop Due to During Gate Action

**Recovery:** The error is cleared when the maintenance operation is performed again.

**Cause:** Gap motor drive designation was performed while the P/C transfer gate open was detected. Also, a P/C transfer gate open interlock was detected during gap motor drive. Check if the P/C transfer gate is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 5259

**Alarm Message:** P1 Gap Stop Due to During Gate Action

**Recovery:** [Retry] Performs gap motor drive again after initializing motor.

**Cause:** Gap motor drive designation was performed while the P/C transfer gate open was detected. Also, a P/C transfer gate open interlock was detected during gap motor drive. Check if the P/C transfer gate is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID =2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 525a

**Alarm Message:** P1 Lower Chiller Error (Pause)

**Recovery:** The error is automatically cleared when the chiller error is cancelled and

wafer transfer in is possible.

**Cause:** An error was detected on the lower chiller and wafer transfer in to the appropriate unit is not possible. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is DRM Type: Group ID=2, Local ID=97 (High Active)

**ALARM NUMBER:** 525b

**Alarm Message:** P1 Lower Chiller Brine Dropped

**Recovery:** The error is automatically cleared when the lower chiller brine flow amount is normal and wafer transfer in is possible.

**Cause:** Brine flow amount on the lower chiller dropped. Check the lower chiller unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is DRM Type: Group ID=2, Local ID=98 (High Active)

**ALARM NUMBER:** 525c

**Alarm Message:** P1 Lower Chiller Not in Ready (Pause)

**Recovery:** The error is automatically cleared when the chiller can be confirmed to be in the Ready status and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because either the lower chiller is not in the Ready status or the difference of the temperature setting and temperature inside the chiller exceed the range band. Check the lower chiller temperature and recipe temperature settings/range conditions. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is DRM Type: Group ID=2, Local ID=99 (High Active)

**ALARM NUMBER:** 525d

**Alarm Message:** P1 Lower Chiller Not in Operate (Pause)

**Recovery:** The error is automatically cleared when the chiller can be confirmed to be in the Ready status and wafer transfer in is possible.

**Cause:** Wafer transfer in to the appropriate unit is not possible because the lower chiller is not running. Check if the lower chiller is in running status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY when the P/C is DRM Type: Group ID=2, Local ID=100 (High Active)

**ALARM NUMBER:** 525e

**Alarm Message:** P1 RKC Aux CPU Communication Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 525f

**Alarm Message:** P1 RKC Communication Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5260

**Alarm Message:** P1 RKC Response Timeout Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 5261

**Alarm Message:** P1 APC Temp Unstable

**Recovery:** The error is automatically cleared when the APC temperature is within range.

**Cause:** The APC temperature exceeded the P1 temperature parameter setting range.

**ALARM NUMBER:** 5262

**Alarm Message:** P1 RKC Aux CPU Communication Error

**Recovery:** [Retry] Resets the temperature on the temperature unit. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** There was a communication error with the auxiliary board when setting the temperature on the temperature controller port. Check that the connectors between the temperature unit and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are securely connected. Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5263

**Alarm Message:** P1 RKC Communication Error



**Recovery:** [Retry] Resets the temperature on the temperature adjustment board. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Wall Temp Control] to [None].

**Cause:** An error was transmitted when setting the temperature on the Temperature adjustment board. Check that the temperature unit and the etcher parameters match. P1 temperature parameter "Control"

**ALARM NUMBER:** 5264

**Alarm Message:** P1 RKC Response Timeout Error

**Recovery:** [Retry] Resets the temperature on the temperature adjustment board. [Abort] Stops temperature setting. When stopping temperature settings, change the following parameters. Set the P1 temperature parameter [Wall Temp Control] to [None].

**Cause:** There was no response from the wall temperature unit within the fixed time (5 s x 3 times) when setting the temperature on the temperature adjustment board. It could be a temperature adjustment board setting defect, RS cable defect or a defective Auxiliary board CPU. Check that the connectors between the temperature adjustment board and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are securely connected. Check that the temperature board REC-860CS2 is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5265

**Alarm Message:** P1 Regulator Box Door Open

**Recovery:** The error is automatically cleared when the regulator box door open interlock is cancelled.

**Cause:** A regulator box door open interlock was detected. Check if the regulator box door is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY-Ver. 2: Group ID=2, Local ID=111 (High Active)

**ALARM NUMBER:** 5266

**Alarm Message:** P1 Pure N2 Pressure Dropped

**Recovery:** The error is automatically cleared when the pure N2 pressure low interlock is cancelled.

**Cause:** A pure N2 low pressure interlock was detected. Check the system pure N2 supply pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=68 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=77 (High Active)

**ALARM NUMBER:** 5267

**Alarm Message:** P1 Cannot ESC Due to Pressure

**Recovery:** [Retry] Executes from check of P/C pressure again.

**Cause:** The pressure in the P/C did not reach the set pressure value (etcher parameter "ESC Chuck ON Pressure") within the set time (10 s) after closing the transfer gate when transferring the wafer in.

**ALARM NUMBER:** 5268

**Alarm Message:** P1 Gap Motor Alarm

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An alarm signal was detected from the gap motor during gap motor initialization and drive. Check if an alarm has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active)

**ALARM NUMBER:** 5269

**Alarm Message:** P1 Gap Stop at Lower Limit

**Recovery:** [Retry] Performs electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The lower limit signal was detected when driving the gap. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=209 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=44 (High Active)

**ALARM NUMBER:** 526a

**Alarm Message:** P1 Exceed Upper Limit

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The gap motor designated drive position exceeds the prescribed upper limit position. Check the designated drive position.

**ALARM NUMBER:** 526b

**Alarm Message:** P1 Exceed Lower Limit

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The gap motor designated drive position exceeds the prescribed lower limit position. Check the designated drive position.

**ALARM NUMBER:** 526c

**Alarm Message:** P1 Gap Initialization Error

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Drive was designated before gap motor initialization. Or the home sensor did not turn OFF when the prescribed pulse output was performed (P/C Parameter "Gap Control" is set to [Standard Gap] of 10000 pulses, [Long Gap] and [Clamp] is 5000 pulses) when performing gap motor initialization from the home sensor ON status. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions UNITY: Group ID=2, Local ID=210 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=45 (High Active)

**ALARM NUMBER:** 526d

**Alarm Message:** P1 Gap Not in Correction Position

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The difference in the designated drive pulse count and the encoder drive pulse count exceeded the tolerance range (For UNITY  $\pm 5$  pulses, UNITY Ver. 2  $\pm 20$  pulses).

**ALARM NUMBER:** 526e

**Alarm Message:** P1 Gap Driving Timeout

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The action was not completed within the prescribed time (60 s) during gap motor drive.

**ALARM NUMBER:** 526f

**Alarm Message:** P1 Gap Stop at Lower Limit

**Recovery:** [Retry] Performs electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The upper limit signal was detected when driving the gap. Check that the limit sensor is detecting. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=211 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=46 (High Active)

**ALARM NUMBER:** 5270

**Alarm Message:** P1 Cannot Drive Gap - Pin Position Not HOME

**Recovery:** [Retry] Executes from Pin initialization again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The Lifter Pin was not at the HOME position when driving the GAP when setting the P/C parameter "Transfer In Time Pin/Gap Action." Check if the Lifter Pin is at the HOME position or check from the adjustment terminal. An error will occur with the following conditions. UNITY when the P/C is M types: Group ID=2, Local ID=60 (Low Active) UNITY when the P/C is PE or ATC types: Group ID=2, Local ID=60 (High Active) UNITY when the P/C is either HPC type: Group ID=2, Local ID=60 (High Active) UNITY Ver. 2: Group ID=2, Local ID=70 (High Active)

**ALARM NUMBER:** 5271

**Alarm Message:** P1 Gap motor interlock

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** An alarm signal or an Interlock signal was detected from the gap motor. Check if an alarm or an Interlock occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Gap Motor Alarm UNITY: Group ID=2, Local ID=205 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=41 (High Active) Gap Motor Interlock UNITY: Group ID=2, Local ID=16 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=40 (High Active)

**ALARM NUMBER:** 5272

**Alarm Message:** P1 Gap Stop Due to Gap Panel Open

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Gap motor drive designation was performed when the gap shield panel open interlock was detected. Also, a gap shield panel open interlock was detected during gap motor drive. Check if the gap shield panel is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. P/C is DRM type: Group ID=2, Local ID=47 (Low Active) P/C is either PE or A-IEM types: Group ID=2, Local ID=47 (High Active)

**ALARM NUMBER:** 5273

**Alarm Message:** P1 Gap Stop Due to Lid Open

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** A P/C lid open interlock was detected and the gap motor drive designation was performed. Also, a P/C lid open interlock was detected during gap motor drive. Check if the P/C lid is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5274

**Alarm Message:** P1 Gap Stop Due to During Gate Action

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Gap motor drive designation was performed while the P/C transfer gate open was detected. Also, a P/C transfer gate open interlock was detected during gap motor drive. Check if the P/C transfer gate is closed. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=53 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=65 (High Active)

**ALARM NUMBER:** 5275

**Alarm Message:** P1 Controller Fan 1 Stopped

**Recovery:** The error is automatically cleared when the controller 1 fan stop interlock is cancelled.

**Cause:** A controller fan 1 stop interlock was detected. Check if the controller 1 fan is running. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=7 (Low Active)

**ALARM NUMBER:** 5276

**Alarm Message:** P1 Controller Fan 2 Stopped

**Recovery:** The error is automatically cleared when the controller 2 fan stop interlock is cancelled.

**Cause:** A controller fan 2 stop interlock was detected. Check if the controller 1 fan is running. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=8 (Low Active)

**ALARM NUMBER:** 5277

**Alarm Message:** P1 Exhaust Pipe Heater Error

**Recovery:** The alarm is automatically cleared when the pipe heater unit alarm is cancelled.

**Cause:** The pipe heater unit detected an alarm. Check if an alarm occurred in the pipe heater unit. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. The following are heater alarms. There is not heater controller connected. AC-200 V is not being supplied to the heater controller. There is a broken wire in the heater. A warning has occurred in the heater controller temperature unit. Group ID=2, Local ID=160 (High Active)

**ALARM NUMBER:** 5278

**Alarm Message:** P1 Cannot Close Shutter Due To Interfer

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The Arm position was inside the P1 unit when closing the shutter. Check the Arm position.

**ALARM NUMBER:** 5279

**Alarm Message:** P1 Cannot Go Up Gate Due To Interfer

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The Arm position was inside the P1 unit when opening the transfer gate. Check the Arm position.

**ALARM NUMBER:** 527a

**Alarm Message:** P1 Cannot Open Gate

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The transfer gate was opened during RF power output, electrostatic chuck voltage output or gas induction.

**ALARM NUMBER:** 527b

**Alarm Message:** P1 Gate Sensor Error

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The Open and Close sensors and the Up and Down sensors were detected simultaneously when opening and closing the transfer gate. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Open Sensor Group ID=2, Local ID=51 (High Active) Transfer Gate Close Sensor Group ID=2, Local ID=52 (High Active) Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY Ver.2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY Ver.2: Group ID=2, Local ID=66 (High Active)

**ALARM NUMBER:** 527c

**Alarm Message:** P1 Gate Open/Close Timeout

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Open Sensor UNITY: Group ID=2, Local ID=51 (High Active) UNITY Ver. 2: Group ID=2, Local ID=63 (High Active) Transfer Gate Close Sensor UNITY: Group ID=2, Local ID=52 (High Active) UNITY Ver. 2: Group ID=2, Local ID=64 (High Active)

**ALARM NUMBER:** 527d

**Alarm Message:** P1 Gate Error - P/C Not In Atms

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The transfer gate could not be opened because the pressures in the P/C and T/C are different. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 527e

**Alarm Message:** P1 Gate Error - P/C Not in Vacuum

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic chuck voltage output or gas induction was executed while the P/C was not under a vacuum.

**ALARM NUMBER:** 527f

**Alarm Message:** P1 Shutter Open/Close Timeout

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates processing and transfers the wafer in.

**Cause:** After opening/closing the shutter, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Shutter Open Sensor Group ID=2, Local ID=49 (High Active) Shutter Close Sensor Group ID=2, Local ID=50 (High Active)

**ALARM NUMBER:** 5280

**Alarm Message:** P1 Gate Error - T/C Not in Atms

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The transfer gate could not be opened because the pressures in the P/C and T/C are different. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 5281

**Alarm Message:** P1 Gate Error - T/C Not in Vacuum

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The transfer gate could not be opened because the pressures in the P/C and T/C are different. Check the pressures in the P/C and T/C.

**ALARM NUMBER:** 5282

**Alarm Message:** P1 Gate Up/Down Timeout

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** After opening/closing the transfer gate, the sensor could not detect within the prescribed time (10 s). Check if the sensor is operating normally. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Transfer Gate Up Sensor UNITY: Group ID=2, Local ID=53 (High Active) UNITY Ver.2: Group ID=2, Local ID=65 (High Active) Transfer Gate Down Sensor UNITY: Group ID=2, Local ID=54 (High Active) UNITY Ver.2: Group ID=2, Local ID=66 (High Active)



**ALARM NUMBER:** 5283

**Alarm Message:** P1 ESC Power Off

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Electrostatic Chuck voltage could not be detected even when the set time (etcher parameter "ESC On Timeout") was surpassed when outputting Electrostatic Chuck voltage.

**ALARM NUMBER:** 5284

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Over) 1

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** When AGC was completed, the light amount from wavelength A (set wave length) was overscale (exceeded AD converter processing range) and processing stopped. The lighting amount is too high. Interrupt the fiber entrance, adjust and remeasure the lighting amount or check the lighting amount with the spectrum measurement. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5285

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Over) 2

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** When AGC was completed, the light amount from wavelength B (fixed wave length) was overscale (exceeded AD converter processing range) and processing stopped. The lighting amount is too high. Interrupt the fiber entrance, adjust and remeasure the lighting amount or check the lighting amount with the spectrum measurement. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5286

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Less) 1

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** When AGC was completed, the light amount from wavelength A (set wave length) was lower than 5% of the full scale (AD converter processing range) and processing stopped. Check for deposit on the Chamber Window and check the attachment of the fiber. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5287

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Less) 2

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** When AGC was completed, the light amount from wavelength B (fixed wave length) was lower than 5% of the full scale (AD converter processing range) and processing stopped. Check for deposit on the Chamber Window and check the attachment of the fiber. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5288

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Lack) 1

**Recovery:** The error is cleared when processing is completed.

**Cause:** When AGC was completed, the light amount from wavelength A (set wave length) was lower than 10% of the full scale (AD converter processing range) or the PMT high voltage was more than 90%. It is possible that lighting amounts decreased because of deposit on the Chamber Window. Processing continues when this error occurs.

**ALARM NUMBER:** 5289

**Alarm Message:** P1 EPD200 Quantity of Ray Error (Lack) 2

**Recovery:** The error is cleared when processing is completed.

**Cause:** When AGC was completed, the light amount from wavelength B (fixed wave length) was lower than 10% of the full scale (AD converter processing range) or the PMT high voltage was more than 90%. It is possible that lighting amounts decreased because of deposit on the Chamber Window. Processing continues when this error occurs.

**ALARM NUMBER:** 528a

**Alarm Message:** P1 EPD200 AGC Time Out sensor 1

**Recovery:** The error is cleared when processing is completed.

**Cause:** When AGC was completed, the light amount from wavelength A (set wave length) was not within 10% of the AGC Level. The cause was that there was excessive differences in the plasma lighting amounts or there is deposit on the Chamber Window. If the error occurs frequently, increase the settings for AGC time for the end point detection conditions. Processing continues when this error occurs.

**ALARM NUMBER:** 528b

**Alarm Message:** P1 EPD200 AGC Time Out sensor 2

**Recovery:** The error is cleared when processing is completed.

**Cause:** When AGC was completed, the light amount from wavelength B (fixed wave length) was not within 10% of the AGC Level. The cause was that there was excessive differences in the plasma lighting amounts or there is deposit on the Chamber Window. If the error occurs frequently, increase the settings for AGC time for the end point detection conditions. Processing continues when this error occurs.

**ALARM NUMBER:** 528c

**Alarm Message:** P1 EPD200 0V Adjustment Error sensor 1

**Recovery:**

**Cause:** The adjustment amount was too large when 0 V adjusting the wavelength A (set wavelength). Processing stops.

**ALARM NUMBER:** 528d

**Alarm Message:** P1 EPD200 0V Adjustment Error sensor 2

**Recovery:**

**Cause:** The adjustment amount was too large when 0 V adjusting the wavelength B (set wavelength). Processing stops.

**ALARM NUMBER:** 528e

**Alarm Message:** P1 EPD200 Motor Drive Error

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** The EPD 200 spectroscope motor did not move the set wavelength when initializing, setting the wavelength or measuring spectrum. The process stopped. It is possible that the spectroscope motor is mechanically broken or the cable is defective. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 528f

**Alarm Message:** P1 EPD200 Sensor Control Error

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** The process was stopped because the response from the spectroscope was long or sensor control was lost. It is possible that the spectroscope motor is mechanically broken

or the cable is defective. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5290

**Alarm Message:** P1 PED200 Calculation Error

**Recovery:** The error is cleared by [Abort] on the 5153 alarm.

**Cause:** The process was stopped because the 0 divisor or floating point overflowed during calculation within the EPD 200 Board. At the same time the "5153 P1 Etching Stopped Due to Interlock" alarm occurs.

**ALARM NUMBER:** 5291

**Alarm Message:** P1 Water Leakage

**Recovery:** The error is automatically cleared when the system water leak interlock is cancelled.

**Cause:** A system water leak interlock was detected. Check if a water leak has occurred. Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=82 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=104 (Low Active)

**ALARM NUMBER:** 5292

**Alarm Message:** P1 Discharge Less Error - Another P/C Vacuum

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Discharge less was terminated because the Dry pump being used with another P/C was either initialized or was vacuuming during discharge less.

**ALARM NUMBER:** 5293

**Alarm Message:** P1 Stop Discharge Less - CM Not Available

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Discharge less was terminated because the capacitance manometer was not initialized or the protective valve was closed during discharge less.

**ALARM NUMBER:** 5294

**Alarm Message:** P1 Discharge Less Stopped Due to Vacuum

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Discharge less was terminated because a command was received that could not be done by the exhaust system during discharge less.

**ALARM NUMBER:** 5295

**Alarm Message:** P1 Stop Discharge Less Due to Lid Open

**Recovery:** [Retry] Executes from electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** Discharge less was terminated because the P/C Cover was open during discharge less. Check if the P/C cover is closed. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=65 (Low Active) UNITY Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 5296

**Alarm Message:** P1 Discharge Less Stopped Due to Interlock .

**Recovery:** [Retry] Executes from discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** Discharge less stopped because of an interlock caused by the hardware during discharge less.

**ALARM NUMBER:** 5297

**Alarm Message:** P1 Out of Range to Plasma Discharge Less .

**Recovery:** [Retry] Executes from discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** Discharge less was stopped because the set time (recipe parameter "Interlock Conditions-Time") exceeded the recipe parameter setting value for interlock range (recipe parameter "Interlock Conditions-Range").

**ALARM NUMBER:** 5298

**Alarm Message:** P1 Out of Stability Time for Discharge Less .

**Recovery:** [Retry] Executes from discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** Discharge less was stopped because the set time (recipe parameter "Stability Cond. Time") exceeded the recipe parameter setting value for stability conditions (recipe parameter "Stability Cond. Range") without meeting those conditions during discharge less.

**ALARM NUMBER:** 5299

**Alarm Message:** P1 Exceed Upper Limit During Discharge Less .

**Recovery:** [Retry] Executes from discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** Discharge less was terminated because recipe parameter setting value for upper limit (recipe parameter "Stability Cond. Range") exceeded the set time (recipe parameter "Stability Cond. Time") during discharge less.

**ALARM NUMBER:** 529a

**Alarm Message:** P1 Discharge Less Stopped Due to RF Failure

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator power supply error was detected during RF power output and before discharge less. Check if the RF generator power supply error has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=122 (Low Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=124 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=135 (Low Active)

**ALARM NUMBER:** 529b

**Alarm Message:** P1 Discharge Less Stopped Due to RF Interlock

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator power supply interlock was detected during RF power output. Check if the RF generator power supply error has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=244 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=129 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=137 (Low Active)

**ALARM NUMBER:** 529c

**Alarm Message:** P1 Stop Discharge Less Due to RF Water Dropped

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator power supply cooling water drop was detected during RF power output and before discharge less. Check if the RF generator power supply cooling water drop has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=123 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=125 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=136 (Low Active)

**ALARM NUMBER:** 529d

**Alarm Message:** P1 Stop Discharge Less Due to Pin Position

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 529e

**Alarm Message:** P1 Stop Discharge Less Due to RF Maximum Power

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator power supply maximum power was detected during RF power output. Check if an RF Maximum Power occurred with the RF generator. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=241 (High Active)

**ALARM NUMBER:** 529f

**Alarm Message:** P1 Stop Discharge Less Due to RF Over Power

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator Power Supply overpower was detected during RF power supply output and before discharge less. Check if the RF generator power supply overpower has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=242 (Low Active)

**ALARM NUMBER:** 52a0

**Alarm Message:** P1 Stop Discharge Less Due to RF Over Heat

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates

discharge less and transfers the wafer in.

**Cause:** An RF generator Power Supply overheat was detected during RF power supply output and before discharge less. Check if the RF generator power supply overheat has occurred. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Group ID=2, Local ID=243 (Low Active)

**ALARM NUMBER:** 52a1

**Alarm Message:** P1 Stop Discharge Less Due to Not Turn ON

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator Power Supply off was detected during RF power supply output and before discharge less. Check if the RF generator power supply is turned on. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=119 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=121 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=132 (Low Active)

**ALARM NUMBER:** 52a2

**Alarm Message:** P1 Stop Discharge Less Due to Not Remote

**Recovery:** [Retry] Executes from check before discharge less again. [Abort] Terminates discharge less and transfers the wafer in.

**Cause:** An RF generator power supply Local error was detected during RF power output and before discharge less. Check if the RF generator power supply is in Remote. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=121 (High Active) UNITY Ver. 2 Upper Electrode: Group ID=2, Local ID=123 (Low Active) UNITY Ver. 2 Lower Electrode: Group ID=2, Local ID=134 (Low Active)

**ALARM NUMBER:** 52a3

**Alarm Message:** P1 Stop Discharge Less Due to ISO Valve

**Recovery:** [Retry] Executes vacuum pull or pressure control. [Abort] Terminates discharge less recipe and transfers the wafer out.

**Cause:** Discharge less was stopped without executing vacuum pull or pressure control because the turbo pump ISO valve (V42 valve) was closed when pulling a vacuum or pressure control before and after executing the discharge less recipe. The cause could be Turbo pump back pressure rise occurring with the pump error or a large amount of gas was quickly flowed into the Chamber and the pressure rose and a valve interlock



(Exhaust Valve Closed) when the ISO valve could not be opened because the pressure rise exceeded the pressure upper limit (pressure parameter "Exhaust Valve Open Pressure"). Check the pressure of the vacuum meter (capacitance manometer or convectron). Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 52a4

**Alarm Message:** P1 Stop Discharge Less - Open ISO Valve

**Recovery:** [Retry] Executes discharge less recipe after vacuum pull of the chamber. [Abort] Terminates discharge less recipe and transfers the wafer out.

**Cause:** The turbo pump ISO valve (V42 valve) did not close within 5 seconds after starting rough vacuum, or vacuuming when executing discharge less recipe. Check the ISO valve (V42 valve) open sensor. Check from the adjustment terminal to check the sensor. The following conditions indicate open condition. UNITY: Group ID=2, Local ID=37 (High Active) UNITY Ver. 2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 52a5

**Alarm Message:** P1 Stop Discharge Less Due to Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates discharge less and transfers the wafer out.

**Cause:** The designated pressure (pressure parameter "Rough Vacuum End Pressure", "Vacuum Pull End Pressure") was not achieved within the designated time (pressure parameter "Rough Vacuum Pull End Timeout", "Vacuum Pull End Timeout") for both rough vacuum and main exhaust when pulling a vacuum before and after executing the process. Check the valve condition with the solenoid LED (Lit: Open; Extinguished: Closed) to check the exhaust system line. When the P/C is M/DRM/PE/A-IEM type: V36 valve is open and V37 is closed: rough vacuuming. V42 valve is open and V37 is closed: high speed exhaust When the P/C is ATC type: V36 valve is open and V42 is closed: rough vacuuming. V42 valve is open and V36 is closed: high speed exhaust.

**ALARM NUMBER:** 52a6

**Alarm Message:** P1 Stop Discharge Less Due to Valve Error

**Recovery:** [Retry] Executes vacuum pull or pressure control again. [Abort] Terminates discharge less recipe and transfers the wafer out.

**Cause:** The turbo pump ISO valve (V42 valve) could not be opened because the turbo pump exhaust side valve (V37 valve) was not open when pulling a vacuum (high speed

exhaust) when executing discharge less recipe. Check the condition of the turbo pump exhaust side valve by the solenoid LED (Lit: Open; Extinguished: Closed).

**ALARM NUMBER:** 52a7

**Alarm Message:** P1 Invalid ATM Pressure Type Selected

**Recovery:** [Execute] Performs cycle purge again.

**Cause:** Cannot be executed because the pressure measurements by the capacitance manometer (pressure parameter "Capacitance Manometer Type") are invalid for the designated pressure (process module "Cycle Purge Atmosphere End Pressure Setting") for atmosphere pressure checks with the cycle purge.

**ALARM NUMBER:** 52a8

**Alarm Message:** P1 CM Zero Pressure Average Over Range

**Recovery:** [Execute] Performs CM 0 point pressure check again.

**Cause:** 0 Point pressure average value was out of the parameters designated tolerance at CM 0 Point pressure check. Perform CM 0 point offset or check the "Self Check" parameter settings for "CM 0 Point Pressure Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52a9

**Alarm Message:** P1 CM Zero Sensitivity Difference Over Range

**Recovery:** [Execute] Performs CM sensitivity check again.

**Cause:** Sensitivity difference rate for the changes in pressure was out of the parameters designated tolerance at CM sensitivity check. Perform CM 0 point offset or check the "Self Check" parameter settings for "CM Sensitivity Difference Rate Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52aa

**Alarm Message:** P1 CM Zero Differential Pressure Over Range

**Recovery:** [Execute] CM linearity check is performed again.

**Cause:** The linearity of the measured pressure was out of parameters designated tolerance range at CM linearity check. Perform CM 0 point offset or check the settings of "Self Check" parameters "CM Linearity Remaining Pressure Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52ab

**Alarm Message:** P1 MFC Zero Valve Average Over Range

**Recovery:** [Execute] MFC 0 point flow amount is performed again.

**Cause:** The 0 point flow amount average value was out of parameters designated range at MFC 0 point flow amount check. Perform MFC adjustments or check the settings of the "Self Check" parameters "MFC 0 Point Flow Amount Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52ac

**Alarm Message:** P1 MFC Measuring Difference Over Range

**Recovery:** [Execute] MFC flow amount check is performed again.

**Cause:** The measuring flow amount difference rate was out of parameters designated tolerance range at MFC flow amount check. Perform MFC adjustments or check the settings of "Self Check" parameters "MFC Flow Amount Difference Rate Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52ad

**Alarm Message:** P1 MFC Differential Press Over in MFC Check

**Recovery:** [Execute] MFC stability check is performed again.

**Cause:** The measured flow amount stability was out of parameters designated tolerance range at MFC stability check. Perform MFC adjustments or check the "Self Check" parameters "MFC Stability Remaining Pressure Tolerance Range" settings and press [Execute] again.

**ALARM NUMBER:** 52ae

**Alarm Message:** P1 Pump Base Pressure Average Over Range

**Recovery:** [Execute] Performs pump exhaust performance check again.

**Cause:** The base pressure average value was out of parameters designated range at the pump exhaust performance check. Perform CM 0 point offset or check the "Self Check" parameters "MFC Stability Remaining Pressure Tolerance Range" settings and press [Execute] again.

**ALARM NUMBER:** 52af

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Lid Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b0

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Lid Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b1

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b2

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Vacuum

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b3

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Valve Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b4

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Valve Error

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b5

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Shield Cover Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b6

**Alarm Message:** P1 Cannot Gas Line Exhaust Due to Shield Cover Open

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b7

**Alarm Message:** P1 Stop Gas Line Exhaust Due to Shield ISO Valve

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b8

**Alarm Message:** P1 Stop Gas Line Exhaust Due to Shield ISO Valve

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52b9

**Alarm Message:** P1 Stop Gas Line Exhaust Due to Interlock

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52ba

**Alarm Message:** P1 Stop Gas Line Exhaust Due to Interlock

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** 52bb

**Alarm Message:** P1 Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the characters are received within the time

limit when receiving from the Pump Controller.

**Cause:** The time between characters exceeded the time limit (150 m/s) 3 consecutive times when receiving commands from the P1 Pump Controller. Check the connections of the connectors of the Pump Controller.

**ALARM NUMBER:** 52bc

**Alarm Message:** P1 Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Pump Controller is detected within the LENGTH.

**Cause:** The data received from the P1 Pump Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Pump Controller.

**ALARM NUMBER:** 52bd

**Alarm Message:** P1 Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Pump Controller.

**Cause:** A FRAMING error occurred when receiving from the P1 Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 52be

**Alarm Message:** P1 Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Pump Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the P1 Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 52bf

**Alarm Message:** P1 Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Pump Controller.

**Cause:** A PARITY error occurred in the data received from the P1 Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** 52c0

**Alarm Message:** P1 Checksum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Pump Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the P1 Pump Controller. Check the connection of the connectors on the Pump Controller.

**ALARM NUMBER:** 52c1

**Alarm Message:** P1 Upper Temp Unit Wire Broken

**Recovery:** The error is automatically cleared when the heater broken wire is fixed.

**Cause:** A broken wire was detected on the upper RKC heater. Check if there is a broken wire on the upper RKC. If there are no broken wires in the heater, whether the temperature board REC-860CS2 settings are correct.

**ALARM NUMBER:** 52c2

**Alarm Message:** P1 Wall Temp Unit Wire Broken

**Recovery:** The error is automatically cleared when the heater broken wire is fixed.

**Cause:** A broken wire was detected on the wall RKC heater. Check if there is a broken wire on the wall RKC. If there are no broken wires in the heater, whether the temperature board REC-860CS2 settings are correct.

**ALARM NUMBER:** 52c3

**Alarm Message:** P1 Lower Temp Unit Wire Broken

**Recovery:** The error is automatically cleared when the heater broken wire is fixed.

**Cause:** A broken wire was detected on the lower RKC heater. Check if there is a broken wire on the lower RKC.

**ALARM NUMBER:** 52c4

**Alarm Message:** P1 RKC Board Error Detected

**Recovery:** [Abort] Stops temperature setting. When stopping setting the temperature, change the following parameters. Set the P1 temperature parameter [Upper Electrode Temp Control] to [None]. Set the P1 temperature parameter [Wall Temp Control] to [None]. Set the P1 temperature parameter [Lower Temp Control] to [None]. Set the P1

temperature parameter [APC Heater] to [None].

**Cause:** An error occurred when initializing the RKC board. (RAM Read Error/Write Error, A/D Converter Error, Back Up Data Check Error)

**ALARM NUMBER:** 52c5

**Alarm Message:** P1 RKC Aux CPU Communication Error

**Recovery:** The error is automatically cleared when the communications with the temperature adjustment board can be confirmed.

**Cause:** An error occurred in communications with the Auxiliary board during control communications. Check that the connectors between the temperature adjustment board and P/C PANEL INT CONN BRD and P/C INT CONN BRD and the P/C MAIN INT CONN BRD are securely connected.

**ALARM NUMBER:** 52c6

**Alarm Message:** P1 RKC Communication Error

**Recovery:** The error is automatically cleared when communications with the temperature adjustment board can be confirmed.

**Cause:** An error was transmitted from the temperature adjustment board during control communications. Check that the temperature adjustment board and the etcher parameters match. P1 temperature parameter [Upper Electrode Temp Control] P1 temperature parameter [Wall Temp Control]

**ALARM NUMBER:** 52c7

**Alarm Message:** P1 RKC Response Timeout Error

**Recovery:** The error is automatically cleared when communications with the temperature adjustment board can be confirmed.

**Cause:** There was no response from the temperature adjustment board within the fixed time (5 s x 3 times) during control communications. It could be a temperature adjustment board setting defect, RS cable defect or a defective Auxiliary board CPU. Check that the connectors between the temperature adjustment board and P/C PANEL INT CONN BRD and between the P/C PANEL INT CONN BRD and P/C MAIN INT CONN BRD are securely connected.

**ALARM NUMBER:** 52c8

**Alarm Message:** P1 CM Zero Pressure Average Over Range



**Recovery:** [Execute] Performs CM 0 point pressure check again.

**Cause:** The 0 point average value was out of the parameters designated tolerance range at CM 0 point check. Perform CM 0 point offset or check the "Self Check" parameters "CM 0 Point Pressure Tolerance Range" settings and pressure [Execute] again.

**ALARM NUMBER:** 52c9

**Alarm Message:** P1 CM Zero Sensitivity Difference Over Range

**Recovery:** [Execute] Performs CM sensitivity check again.

**Cause:** The sensitivity difference rate for the pressure change was out of parameters designated tolerance range at CM sensitivity check. Perform CM 0 point offset or check the "Self Check" parameters "CM Sensitivity Difference Rate Tolerance Range" settings and press [Execute] again.

**ALARM NUMBER:** 52ca

**Alarm Message:** P1 CM Differential Pressure Over Range

**Recovery:** [Execute] Performs CM linearity check again.

**Cause:** The measure pressure value linearity was out of parameters designated tolerance range at CM linearity check. Perform CM 0 point offset or check the "Self Check" parameters "CM Linearity Remaining Pressure Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52cb

**Alarm Message:** P1 MFC Zero Valve Average Over Range

**Recovery:** [Execute] Performs MFC 0 point flow amount check again.

**Cause:** The 0 Point Flow Amount average value was out of parameters designated tolerance range at MFC 0 point flow amount check. Perform MFC adjustments or check the "Self Check" parameters "MFC 0 Point Flow Amount Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52cc

**Alarm Message:** P1 MFC Measuring Difference Over Range

**Recovery:** [Execute] Performs MFC flow amount check again.

**Cause:** The measured flow amount difference rate was out of parameters designated tolerance range at MFC flow amount check. Perform MFC adjustments or check the "Self

Check" parameters "MFC Flow Amount Difference Rate Tolerance Range" settings and press [Execute] again.

**ALARM NUMBER:** 52cd

**Alarm Message:** P1 MFC Differential Press Over in MFC Check

**Recovery:** [Execute] Performs MFC stability check again.

**Cause:** The measured flow amount stability was out of parameters designated tolerance range at MFC stability check. Perform MFC adjustments or check the "Self Check" parameters "MFC Stability Remaining Pressure Tolerance Range" and press [Execute] again.

**ALARM NUMBER:** 52ce

**Alarm Message:** P1 Pump Base Pressure Average Over Range

**Recovery:** [Execute] Performs pump exhaust performance check again.

**Cause:** The base pressure average value was out of parameters designated tolerance range at pump exhaust performance check. Perform CM 0 point offset or check the "Self Check" parameters "MFC Stability Remaining Pressure Tolerance Range" settings and press [Execute] again.

**ALARM NUMBER:** 52cf

**Alarm Message:** P1 Regulator Box Pressure Error

**Recovery:** The error is automatically cleared when the Regulator Box exhaust pressure error interlock is cancelled.

**Cause:** A Regulator Box exhaust pressure error interlock was detected. Check the Regulator Box exhaust pressure. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. UNITY: Group ID=2, Local ID=150 (High Active) UNITY-Ver. 2: Group ID=2, Local ID=88 (Low Active)

**ALARM NUMBER:** 52d0

**Alarm Message:** P1 Shield Box FAN Stopped

**Recovery:** The error is automatically cleared when the Shield Box Fan Stopped interlock is cancelled.

**Cause:** A Shield Box Fan Stopped interlock was detected. Check if the Shield Box fan is rotating.

**ALARM NUMBER:** 52d1

**Alarm Message:** P1 Step 1 Transference Pressure Timeout

**Recovery:** [Retry] Executes from dummy step again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The set time (etcher parameter "Step 1 Transference Pressure Timeout") exceeded the P/C internal pressure and did not reach the set pressure (etcher parameter "ESC ON Pressure") when executing the dummy step (Step 1 Gas Induction Step).

**ALARM NUMBER:** 52d2

**Alarm Message:** P1 End Point Detection Too Fast

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The step lower limit time was exceeded for the end point detection with the EPD execution step during processing. Check the process recipe conditions and the end point detection recipe conditions.

**ALARM NUMBER:** 52d3

**Alarm Message:** P1 Spectre Measuring Failure

**Recovery:** [Abort] Terminates spectrum measurements and transfers the wafer out.

**Cause:** Spectrum data was not collected even though the step time was exceeded when measuring EPD200 spectrum. Lengthen the step time. Full scale data collection (start wavelength/end wavelength/accuracy = 200.0 nm/800.0 nm/0.2 nm) takes about 3 minutes.

**ALARM NUMBER:** 52d4

**Alarm Message:** P1 I/O Board Not Installed

**Recovery:** Change the etcher parameters to match the composition of the etcher and turn the power OFF and restart or connect the necessary I/O board after turning OFF the power and restart the etcher.

**Cause:** The I/O board needed for etcher composition is not connected. The I/O board deficiency information is listed in the following system log. Not Connection Board  
GhostId = (IOC\_GHOST\_A - IOC\_GHOST\_D) SlaveID = (1 - 31)

**ALARM NUMBER:** 52d5

**Alarm Message:** P1 Illegal I/O Parameter

**Recovery:** Change the etcher parameters to match the composition of the etcher and turn the power OFF and restart or add the I/O parameters which are insufficient and restart the etcher.

**Cause:** The I/O parameter needed for etcher composition is not existed. The I/O parameter insufficiency information is listed in the following system log. I/O Parameter Error GhostID = (IOC\_GHOST\_A - IOC\_GHOST\_D) SlaveID = (1 - 31)

**ALARM NUMBER:** 52d6

**Alarm Message:** P1 Stop Etching Due to V23 Cannot Open

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The sensor did not detect action completed within 2 seconds after executing wafer cooling He induction valve (V23) open action so that process was terminated. Check the operation of the P/C V23 open sensor. Also, check whether air is being supplied to V23, and check whether the air pipe is bent.

**ALARM NUMBER:** 52d7

**Alarm Message:** P1 Stop Etching Due to V23 Cannot Open

**Recovery:** The error is automatically cleared with the maintenance operation.

**Cause:** The sensor did not detect action completed within 2 seconds after executing wafer cooling He induction valve (V23) open action so that process was terminated. Check the operation of the P/C V23 open sensor. Also, check whether air is being supplied to V23, and check whether the air pipe is bent.

**ALARM NUMBER:** 52d8

**Alarm Message:** P1 Pump Cannot Set Up

**Recovery:** After checking that the gas induction valve (V30) for another Process Chamber also using the Dry Pump is closed, restart the Turbo Pump. With a side purge, whether V17 is closed, in the same way as V30.

**Cause:** The gas induction valve (V30) for another Process Chamber also using the Dry Pump is open so the Turbo Pump cannot be started. Check the status of the gas induction valve (V30) on the other Process Chamber using the Dry Pump. With a side purge, process V17 in the same way as V30.

**ALARM NUMBER:** 52d9

**Alarm Message:** P1 Window Temp Cool Down (Pause)

**Recovery:** The alarm is automatically cleared when the window heater alarm is cancelled.

**Cause:** The temperature of the window exceeds that of the range for executing a process. Check the temperature of the window heater. Also, check whether the thermostat is working. The alarm is monitored when the following parameter is active. P1 Parameter "Temperature": "Window Heater": [Exist]

**ALARM NUMBER:** 52da

**Alarm Message:** P1 Window Temp Cool Down

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] The process is terminated and the wafer is transferred out.

**Cause:** The window temperature did not reach the temperature where the process can be executed before starting the process. Check the temperature of the window heater. Also, check whether the thermostat is working. The alarm is monitored when the following parameter is active. P1 Parameter "Temperature": "Window Heater": [Exist]

**ALARM NUMBER:** 52db

**Alarm Message:** P1 Window Temp Cool Down

**Recovery:** [Retry] Executes from the check before executing the electrostatic discharge again. [Abort] Electrostatic discharge is terminated and the wafer is transferred out.

**Cause:** The temperature of the window did not reach the temperature where static electricity can be discharged before electrostatic discharge. Check the temperature of the window heater. Also, check whether the thermostat is working. The alarm is monitored when the following parameter is active. P1 Parameter "Temperature" "Window Heater": [Exist]

**ALARM NUMBER:** 52dc

**Alarm Message:** P1 A-IEM Controller AuxCPU Comm Err (Pause)

**Recovery:** When communications with the A-IEM controller can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in communications with the auxiliary board and the A-IEM controller and transfer in to the appropriate unit is not possible. Check that the connector between the A-IEM Controller and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52dd

**Alarm Message:** P1 A-IEM Controller Comm Err (Pause)

**Recovery:** When communications with the A-IEM controller can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error was transmitted from the A-IEM controller and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52de

**Alarm Message:** P1 A-IEM Cont Response Timeout (Pause)

**Recovery:** When communications with the A-IEM controller can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** Because there was no response from the A-IEM Controller within the prescribed time (200 m/s x 3 times) wafer transfer in to the appropriate unit is not possible. It could be that the A-IEM controller settings are defective, RS cable is defective or the auxiliary CPU is defective. Check that the cable between the A-IEM Controller and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52df

**Alarm Message:** P1 Upper Matcher Aux CPU Comm Err (Pause)

**Recovery:** When communications with the Upper Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in communications between the auxiliary board and Upper Matcher and wafer transfer in to the appropriate unit is not possible. Check that the cable between the Upper Matcher and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52e0

**Alarm Message:** P1 Upper Matcher Comm Err (Pause)

**Recovery:** When communications with the Upper Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error was communicated from the Upper Matcher and wafer transfer in to the appropriate unit is not possible. Check the Upper Matcher.

**ALARM NUMBER:** 52e1

**Alarm Message:** P1 Upper Matcher Response Timeout (Pause)

**Recovery:** When communications with the Upper Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** Because there was no response from the Upper Matcher within the prescribed time (200 m/s x 3 times) wafer transfer in to the appropriate unit is not possible. It is possible that the Upper Matcher settings are defective, RS Cable is defective or the auxiliary CPU is defective. Check that the cable between the Upper Matcher and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52e2

**Alarm Message:** P1 Lower Matcher AuxCPU Comm Err (Pause)

**Recovery:** When communications with the Lower Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in communications between the auxiliary board and the Lower Matcher and wafer transfer in is not possible. Check that the cable between the Lower Matcher and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52e3

**Alarm Message:** P1 Lower Matcher Comm Err (Pause)

**Recovery:** When communications with the Lower Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An error occurred in communications between the auxiliary board and the Lower Matcher and wafer transfer in is not possible. Check the Lower Matcher.

**ALARM NUMBER:** 52e4

**Alarm Message:** P1 Lower Matcher Response Timeout (Pause)

**Recovery:** When communications with the Lower Matcher can be confirmed, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** Because there was no response from the Lower Matcher within the prescribed time (200 m/s x 3 times) wafer transfer in to the appropriate unit is not possible. It is possible that the Lower Matcher settings are defective, RS Cable is defective or the auxiliary CPU is defective. Check that the cable between the Lower Matcher and the TYB422-1/PC board are connected. Also, whether the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 52e5

**Alarm Message:** P1 A-IEM Controller M.Ratio Error (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An M.RATIO Control malfunction error occurred in the A-IEM Controller and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52e6

**Alarm Message:** P1 A-IEM Cont Input Level Over (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An input level over error occurred in the A-IEM controller and transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52e7

**Alarm Message:** P1 A-IEM Cont Etching Interlock (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An etching mode change Interlock occurred in the A-IEM controller and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52e8

**Alarm Message:** P1 A-IEM Cont Relay Contro 1Err (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A relay control malfunction error occurred in the A-IEM controller and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52e9

**Alarm Message:** P1 Upper Matcher VPP Alarm (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A VPP alarm occurred in the Upper Matcher and transfer in to the appropriate unit is not possible.



**ALARM NUMBER:** 52ea

**Alarm Message:** P1 Upper Macher VARI-CON Alarm (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A Veri-con withstand voltage alarm occurred at the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52eb

**Alarm Message:** P1 Upper Matcher Range Alarm 1 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 1 occurred in the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52ec

**Alarm Message:** P1 Upper Matcher Range Alarm 2 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 2 occurred in the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52ed

**Alarm Message:** P1 Upper Matcher Range Alarm 3 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 3 occurred in the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52ee

**Alarm Message:** P1 Upper Matcher Range Alarm 4 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 4 occurred in the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52ef

**Alarm Message:** P1 Upper Matcher Maintenance Alarm 1

**Recovery:** Apply grease to the vari-con and when the error from the Matcher is cancelled, the alarm is automatically cleared. This alarm has no effect on process control.

**Cause:** Upper Matcher vari-con rotation count exceeds 200,000 times and maintenance alarm 1 occurred.

**ALARM NUMBER:** 52f0

**Alarm Message:** P1 Upper Matcher Maintenance Alarm 2

**Recovery:** Check for wear on the sliding parts of the vari-con. If there is a lot of wear on the vari-con, replace it. When the error from the Matcher is cancelled, the alarm is automatically cleared. This alarm has no effect on process control.

**Cause:** Upper Matcher vari-con rotation count exceeds 600,000 times and maintenance alarm 2 occurred.

**ALARM NUMBER:** 52f1

**Alarm Message:** P1 Upper Matcher Temp Alarm (Pause)

**Recovery:** When the temperature rise alarm is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A temperature rise alarm occurred on the Upper Matcher and transfer in to the appropriate unit is not possible. Check that the RF output settings are correct. Also, whether the Upper Matcher cooling fan is working.

**ALARM NUMBER:** 52f2

**Alarm Message:** P1 Upper Matcher Over Current (Pause)

**Recovery:** When the overcurrent alarm is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An overcurrent alarm occurred on the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f3

**Alarm Message:** P1 Upper Matcher Noise Alarm (Pause)

**Recovery:** When the noise alarm is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A noise alarm occurred on the Upper Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f4

**Alarm Message:** P1 Lower Matcher VPP Alarm (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A VPP alarm occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f5

**Alarm Message:** P1 Lower Matcher VARI-CON Alarm (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A vari-con withstand voltage alarm occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f6

**Alarm Message:** P1 Lower Matcher Range Alarm 1 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 1 occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f7

**Alarm Message:** P1 Lower Matcher Range Alarm 2 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 2 occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f8

**Alarm Message:** P1 Lower Matcher Range Alarm 3 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 3 occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52f9

**Alarm Message:** P1 Lower Matcher Range Alarm 4 (Pause)

**Recovery:** When the controller error is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** An out of conformity range alarm 4 occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52fa

**Alarm Message:** P1 Lower Matcher Maintenance Alarm 1

**Recovery:** Apply grease to the vari-con and when the error from the Matcher is cancelled, the alarm is automatically cleared. This alarm has no effect on process control.

**Cause:** Lower Matcher vari-con rotation count exceeds 200,000 times and maintenance alarm 1 occurred.

**ALARM NUMBER:** 52fb

**Alarm Message:** P1 Lower Matcher Maintenance Alarm 2

**Recovery:** Checks for wear on the sliding parts of the vari-con. If there is a lot of wear on the vari-con, replace it. When the error from the Matcher is cancelled, the alarm is automatically cleared. This alarm has no effect on process control.

**Cause:** Lower Matcher vari-con rotation count exceeds 600,000 times and maintenance alarm 2 occurred.

**ALARM NUMBER:** 52fc

**Alarm Message:** P1 Lower Matcher Temp Alarm (Pause)

**Recovery:** When the temperature rise alarm is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A temperature rise alarm occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible. Check that the RF output settings are correct. Also, whether the Lower Matcher cooling fan is working.

**ALARM NUMBER:** 52fd

**Alarm Message:** P1 Lower Matcher Over Current Alarm (Pause)

**Recovery:** When the overcurrent alarm is cancelled, the alarm is automatically cleared, and wafer transfer in is possible.

**Cause:** An overcurrent alarm occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52fe

**Alarm Message:** P1 Lower Matcher Noise Alarm (Pause)

**Recovery:** When the noise alarm is cancelled, the alarm is automatically cleared and wafer transfer in is possible.

**Cause:** A noise alarm occurred on the Lower Matcher and wafer transfer in to the appropriate unit is not possible.

**ALARM NUMBER:** 52ff

**Alarm Message:** P1 Stop Etching-Matcher Comm Error

**Recovery:** [Retry] Executes from check before executing process. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process was terminated (check before executing the process) because a communication error occurred on the A-IEM controller Upper or Lower Matcher. Check that the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK. Also, whether the cable to the Matcher is connected.

**ALARM NUMBER:** 5300

**Alarm Message:** P1 Stop Discharge-Matcher Comm Error

**Recovery:** [Retry] Executes from check before electrostatic discharge. [Abort] Terminates electrostatic discharge and waits for transfer out.

**Cause:** Electrostatic discharge was terminated (check before executing electrostatic discharge) because a communication error occurred on the A-IEM controller Upper or Lower Matcher. Check that the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK. Also, whether the cable to the Matcher is connected.

**ALARM NUMBER:** 5301

**Alarm Message:** P1 Matcher Communication Timeout

**Recovery:** The alarm is automatically cleared when the alarm "Process (Electrostatic Discharge) terminated" which occurs simultaneously, is recovered.

**Cause:** Communications was not completed when the step time was exceeded when communicating with the Upper or Lower Matcher on the A-IEM Controller. Check that the TYB121-1/COM board is correctly inserted in the P/C CONTROLLER RACK. Also, whether the cable to the Matcher is connected.

**ALARM NUMBER:** 5302

**Alarm Message:** P1 Bellows Temp Unstable

**Recovery:** The alarm is automatically cleared when the Bellows temperature is within range.

**Cause:** The temperature of the Bellows exceeds the ranges of the P1 Parameter "Temperature" Bellows Heater Upper Temperature and Bellows Heater Lower Temperature. Check whether the heater has a cut wire, and whether the thermostat is working.

**ALARM NUMBER:** 5303

**Alarm Message:** P1 Gas Inlet Filter Temp Unstable

**Recovery:** The alarm is automatically cleared when the Gas Inlet temperature is within range.

**Cause:** The temperature of the Gas Inlet exceeds the ranges of the P1 Parameter "Temperature" Gas Filter Heater Upper Temperature and Gas Filter Heater Lower Temperature. Check whether the heater has a cut wire, and whether the thermostat is working.

**ALARM NUMBER:** 5304

**Alarm Message:** P1 ISO Valve Temp Unstable

**Recovery:** The alarm is automatically cleared when the ISO Valve temperature is within range.

**Cause:** The temperature of the ISO Valve exceeds the ranges of the PC Temperature Parameters ISO Valve Heater Upper Temperature Limits and Bellows Heater Lower Temperature Limits. Check whether the heater has a cut wire, and whether the thermostat is working.

**ALARM NUMBER:** 5305

**Alarm Message:** P1 Manifold Temp Unstable

**Recovery:** The alarm is automatically cleared when the manifold temperature is within range.

**Cause:** The temperature of the manifold exceeds the ranges of the PC Temperature Parameters manifold Heater Upper Temperature Limits and Bellows Heater Lower Temperature Limits. Check whether the heater has a cut wire, and whether the thermostat is working.

**ALARM NUMBER:** 5306

**Alarm Message:** P1 No. 1 Capa-Mano Meter Temp Unstable

**Recovery:** The alarm is automatically cleared when the capacitance manometer temperature is within range.

**Cause:** The temperature of the capacitance manometer 1 exceeds the ranges of the PC Temperature Parameters capacitance manometer 1 Heater Upper Temperature Limits and Bellows Heater Lower Temperature Limits. Check whether the green LED of the capacitance manometer is on. If the green LED is not on, and the red LED is on continuously, replace the capacitance manometer.

**ALARM NUMBER:** 5307

**Alarm Message:** P1 A-IEM Controller Etching Error (Pause)

**Recovery:** The alarm is automatically cleared when the etching mode set in the recipe and the etching mode of the A-IEM controller match and wafer transfer in is possible.

**Cause:** A setting defect occurred in the A-IEM controller etching mode and wafer transfer in to the appropriate unit was not possible.

**ALARM NUMBER:** 5308

**Alarm Message:** P1 EPD200 Wave Setting Timeout

**Recovery:** When both alarms are recovered, the alarm is cleared.

**Cause:** The wavelength setting (the spectrometer motor moves to the wavelength set in the end point detection step) set in the step before (stability step) the end point detection step was not completed within the step time when using EPD 200. Either the set time in the stability step is too short (only about 10 s) or the spectrometer motor is defective. "Step end conditions stability time exceeded." occurs at the same time as this alarm.

**ALARM NUMBER:** 5309

**Alarm Message:** P1 No. 2 Capa-Mano Meter Temp Unstable

**Recovery:** This alarm is automatically cleared when capacitance manometer 1 temperature is within range.

**Cause:** Capacitance manometer 2 temperature is out of the range setting of the PC temperature parameters CM2 Heater Upper Temperature Limit and CM2 Heater Lower Temperature Limit settings. Check whether the green LED of the capacitance manometer is on. If the green LED is not on, and the red LED is on continuously, replace the capacitance manometer.

**ALARM NUMBER:** 530a

**Alarm Message:** P1 RKC2 AuxCPU Communication Error

**Recovery:** The alarm is automatically cleared when communications with the second temperature control board can be confirmed.

**Cause:** A communications error occurred between auxiliary boards. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 530b

**Alarm Message:** P1 RKC2 Communication Error

**Recovery:** The alarm is automatically cleared when communications with the second temperature control board can be confirmed.

**Cause:** An error was communicated from the second temperature control board. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 530c

**Alarm Message:** P1 RKC2 Response Timeout Error

**Recovery:** The alarm is automatically cleared when communications with the second temperature control board can be confirmed.

**Cause:** There was no response from the second temperature control board within the prescribed time (5 s x 3 times). Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 530d



**Alarm Message:** P1 Second RKC Board Error Detected

**Recovery:** [Retry] Initializes second temperature control board again. [Abort] Cancels initialization of the second temperature control board. If initialization is not possible, change the following parameters. P1 Parameter "Temperature" "Heater Temp Monitor": [None]

**Cause:** An error occurred in initialization of the second RKC board. (RAM read/write error, A/D converter error, back-up data check error, etc.)

**ALARM NUMBER:** 530e

**Alarm Message:** P1 RKC AuxCPU Commu. Err In Initialize

**Recovery:** [Retry] Initializes the first temperature control board again. [Abort] Cancels initialization of the first temperature control board. Change the following parameters when not initializing. P1 Parameter "Temperature" "Upper Electrode Temp Control": [None] P1 Parameter "Temperature" "Wall Temp Control": [None] P1 Parameter "Temperature" "Lower Temp Control": [None] P1 Parameter "Temperature" "APC Heater": [None]

**Cause:** A communication error between the auxiliary boards occurred when initializing the machine. Check that the first temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 530f

**Alarm Message:** P1 RKC Communication Err In Initialize

**Recovery:** [Retry] Initializes the first temperature control board. [Abort] Cancels initialization of the first temperature control board. Change the following parameters when not initializing. P1 Parameter "Temperature" "Upper Electrode Temp Control": [None] P1 Parameter "Temperature" "Wall Temp Control": [None] P1 Parameter "Temperature" "Lower Temp Control": [None] P1 Parameter "Temperature" "APC Heater": [None]

**Cause:** An error was communicated from the first temperature control board when initializing the machine. The first temperature control board could not be initialized. Check that the first temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5310

**Alarm Message:** P1 RKC Response Timeout Err In Initial

**Recovery:** [Retry] Initializes the first temperature control board. [Abort] Cancels initialization of the first temperature control board. Change the following parameters

when not initializing. P1 Parameter "Temperature" "Upper Electrode Temp Control": [None] P1 Parameter "Temperature" "Wall Temp Control": [None] P1 Parameter "Temperature" "Lower Temp Control": [None] P1 Parameter "Temperature" "APC Heater": [None]

**Cause:** Initialization of the first temperature control board was not possible because there was no response from the first temperature control board within the prescribed time (5 s x 3 times) when initializing the machine. Check that the first temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5311

**Alarm Message:** P1 RKC2 AuxCPU Commu. Err In Initialize

**Recovery:** [Retry] Initializes the second temperature control board. [Abort] Cancels initialization of the second temperature control board. Change the following parameter if not initializing. P1 Parameter "Temperature" "Heater Temp Monitor": [None]

**Cause:** A communication error occurred between the auxiliary boards when initializing the machine and initialization of the second temperature control board was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5312

**Alarm Message:** P1 RKC2 Communication Err In Initialize

**Recovery:** [Retry] Initializes the second temperature control board. [Abort] Cancels initialization of the second temperature control board. Change the following parameter when not initializing. P1 Parameter "Temperature" "Heater Temp Monitor": [None]

**Cause:** An error was communicated from the second temperature control board when initializing the machine and initialization of the second temperature control board was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5313

**Alarm Message:** P1 RKC2 Response Timeout Err In Initial

**Recovery:** [Retry] Initializes second temperature control board. [Abort] Cancels initialization of second temperature control board. Change the following parameters when not initializing. P1 Parameter "Temperature" "Heater Temp Monitor": [None]

**Cause:** Initialization of the second temperature control board was not possible because there was no response from the second temperature control board within the prescribed time (5 s x 3 times) when initializing the machine. It could be a defective second

temperature control board setting, defective RS cable or defective auxiliary CPU. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5314

**Alarm Message:** P1 EXCOM board error occurred (Reboot)

**Recovery:** Restart the system.

**Cause:** A bus address error occurred when initializing the COM board. Check if the COM board is connected properly. Also, check if the fuse of the COM board is not cut. Check the settings of the jumper (JP) and dip switch (DSW) of the COM board. Settings of P/C COM Board JP1 JP2 JP3 JP4 JP5 JP6 1-2:OPEN 1-2:SHORT 1-2:SHORT 1-2:OPEN 1-2:OPEN 1-2:OPEN 1 2 3 4 5 6 DW1 ON ON OFF ON ON OFF DW2 ON OFF OFF ON ON DW3 ON OFF ON OFF OFF DW4 ON OFF ON OFF ON DW5 ON OFF ON ON OFF Settings of COM Board for P/C1 EPD100 COM Board/XINIX JP1 JP2 JP3 JP4 JP5 JP6 1-2:OPEN 1-2:SHORT 1-2:SHORT 1-2:OPEN 1-2:OPEN 1-2:OPEN 1 2 3 4 5 6 DW1 ON OFF ON ON ON OFF DW2 OFF ON OFF ON ON DW3 OFF ON ON OFF OFF DW4 OFF ON ON OFF ON DW5 OFF ON ON ON OFF

**ALARM NUMBER:** 5315

**Alarm Message:** P1 EXCOM board error occurred (Reboot)

**Recovery:** Restart the system.

**Cause:** A bus address error occurred when initializing the COM board. Check if the COM board is connected properly. Also, check if the fuse of the COM board is not cut. Check the settings of the jumper (JP) and dip switch (DSW) of the COM board. Settings of P/C COM Board JP1 JP2 JP3 JP4 JP5 JP6 1-2:OPEN 1-2:SHORT 1-2:SHORT 1-2:OPEN 1-2:OPEN 1-2:OPEN 1 2 3 4 5 6 DW1 ON ON OFF ON ON OFF DW2 ON OFF OFF ON ON DW3 ON OFF ON OFF OFF DW4 ON OFF ON OFF ON DW5 ON OFF ON ON OFF Settings of COM Board for P/C1 EPD100 COM Board/XINIX JP1 JP2 JP3 JP4 JP5 JP6 1-2:OPEN 1-2:SHORT 1-2:SHORT 1-2:OPEN 1-2:OPEN 1-2:OPEN 1 2 3 4 5 6 DW1 ON OFF ON ON ON OFF DW2 OFF ON OFF ON ON DW3 OFF ON ON OFF OFF DW4 OFF ON ON OFF ON DW5 OFF ON ON ON OFF

**ALARM NUMBER:** 5316

**Alarm Message:** P1 RKC2 Bellows Aux CPU Commu. Err In Setting

**Recovery:** [Retry] Sets bellows heater temperature setting again. [Abort] Cancels bellow heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Bellows Heater Temperature": [0 C]

**Cause:** A communications error occurred with the auxiliary port when setting the

temperature for the bellows heater and the temperature could not be set for the bellows heater. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5317

**Alarm Message:** P1 RKC2 Bellows Commu. Err In Setting

**Recovery:** [Retry] Sets bellows heater temperature setting again. [Abort] Cancels bellow heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Bellows Heater Temperature": [0 C]

**Cause:** An error occurred from the second temperature control board when setting the temperature for the bellows heater. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5318

**Alarm Message:** P1 RKC2 Bellows Response T.out Err In Setting

**Recovery:** [Retry] Sets the bellows heater temperature setting again. [Abort] Cancels temperature setting for the bellows heater. Change the following parameters when not setting the temperature setting. P1 Parameter "Temperature" "Bellows Heater Temperature": [0 C]

**Cause:** Bellows heater temperature setting was not possible because there was not response from the second temperature control board for the prescribed time (5 s x 3 times) when setting the temperature for the bellows heater. It could be a defective second temperature board setting, defective RS cable or defective auxiliary CPU. It could be a defective second temperature control board setting, defective RS cable or defective auxiliary CPU. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5319

**Alarm Message:** P1 Gas Inlet Filter Aux CPU Comm. Err.InSetting

**Recovery:** [Retry] Sets gas inlet filter heater temperature setting again. [Abort] Cancels gas inlet filter heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Gas Filter Heater Temperature": [0 C]

**Cause:** A communications error occurred between the auxiliary board when setting the temperature for the gas line inlet filter heater and temperature setting for the gas inlet filter heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531a

**Alarm Message:** P1 Gas Inlet Filter Commu. Err. In Setting

**Recovery:** [Retry] Sets gas inlet filter heater temperature setting again. [Abort] Cancels gas inlet filter heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Gas Filter Heater Temperature": [0 C]

**Cause:** An error was communicated from the second temperature control board when setting the temperature for the gas inlet filter heater and temperature setting for the gas inlet filter heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531b

**Alarm Message:** P1 Gas Inlet Filter Response T.out Err. In Setting

**Recovery:** [Retry] Sets gas inlet filter heater temperature setting again. [Abort] Cancels gas inlet filter heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Gas Filter Heater Temperature": [0 C]

**Cause:** Temperature setting or the gas inlet filter was not possible because there was no response from the second temperature control board within the prescribed time (5 s x 3 times) when setting the temperature for the gas inlet filter heater. It could be a defective second temperature control board setting, defective RS cable or defective auxiliary CP. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531c

**Alarm Message:** P1 RKC2 ISOV Aux CPU Commu. Err. In Setting

**Recovery:** [Abort] Cancels ISO valve heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "ISO Valve Heater Temperature": 0 C]

**Cause:** A communication error occurred between the auxiliary boards when setting the temperature for the ISO valve heater and temperature setting for the ISO heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531d

**Alarm Message:** P1 RKC2 ISO V Commu. Err. In Setting

**Recovery:** [Retry] Sets ISO valve heater temperature setting again. [Abort] Cancels ISO valve heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "ISO Valve Heater Temperature": [0 C]

**Cause:** An error was communicated from the second temperature control board when setting the temperature for the ISO valve heater and temperature setting for the ISO valve heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531e

**Alarm Message:** P1 RKC2 ISOV Response Timeout Err. In Setting

**Recovery:** [Retry] Sets ISO valve heater temperature setting again. [Abort] Cancels ISO valve heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "ISO Valve Heater Temperature": [0 C]

**Cause:** Temperature setting for the ISO valve heater was not possible because there was no response from the second temperature control board within the prescribed time (5 s x 3 times) when setting the temperature for the ISO valve heater. It could be a defective second temperature control board setting, defective RS cable or defective auxiliary CP. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 531f

**Alarm Message:** P1 RKC2 Manifold Aux CPU Commu. Err. In Setting

**Recovery:** [Retry] Sets manifold valve heater temperature setting again. [Abort] Cancels manifold valve heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Manifold Heater Temperature": [0 C]

**Cause:** A communication error occurred between the auxiliary boards when setting the temperature for the manifold heater and temperature setting for the manifold heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5320

**Alarm Message:** P1 RKC2 Manifold Commu. Err In Setting

**Recovery:** [Retry] Sets manifold valve heater temperature setting again. [Abort] Cancels manifold valve heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Manifold Heater Temperature": [0 C]

**Cause:** An error was communicated from the second temperature control board when setting the temperature for the manifold heater and temperature setting for the manifold heater was not possible. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5321

**Alarm Message:** P1 RKC2 Manifold Response T.out Err In Setting

**Recovery:** [Retry] Sets manifold heater temperature setting again. [Abort] Cancels manifold heater temperature setting. Change the following parameters when not setting the temperature. P1 Parameter "Temperature" "Manifold Heater Temperature": [0 C]

**Cause:** Temperature setting for the manifold heater was not possible because there was no response from the second temperature control board within the prescribed time (5 s x 3 times) when setting the temperature for the manifold heater. It could be a defective second temperature control board setting, defective RS cable or defective auxiliary CP. Check that the second temperature control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5322

**Alarm Message:** P1 Middle He Flow Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm stating to the effect that "process (static electricity discharge) was terminated" is recovered. The error is automatically cleared when the maintenance action is executed in the maintenance mode.

**Cause:** When inducing He gas on the wafer cooling line (Middle), the stability conditions of the recipe parameter settings (recipe parameter "Middle B. P. Flow" "Stability Cond." and "Middle B. P. Flow Stability Cond. Time") were not met and the set time (when the recipe "Step Time," Cont. Step flow amount setting value was different, recipe parameter "Middle B. P. Flow Stability Cond. Time" x 3 times) was exceeded.

**ALARM NUMBER:** 5323

**Alarm Message:** P1 Middle He Flow Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm stating to the effect that "process (static electricity discharge) was terminated" is recovered. The error is automatically cleared when the maintenance action is executed in the maintenance mode.

**Cause:** Recipe parameters setting value interlock range (recipe parameter "Middle B. P. Flow Interlock Conditions Range") and set time (recipe parameter "Middle B. P. Flow Interlock Conditions Time") were exceeded when inducing He gas on the wafer cooling line (Middle).

**ALARM NUMBER:** 5324

**Alarm Message:** P1 Middle He Press Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm stating to the effect that "process (static electricity discharge) was terminated" is recovered. The error is automatically cleared when the maintenance action is executed in the maintenance mode.

**Cause:** When controlling pressure on the wafer cooling line (Middle), the stability conditions of the recipe parameter settings (recipe parameter "Middle B. P. Pressure Stability Cond. Range," and Middle B. P. Pressure Stability Cond. Time") were not fulfilled and the set time (when the recipe "Step Time," Cont. Step pressure setting value was different, recipe parameter "Middle B. P. Pressure Stability Cond. Time" x 3 times) was exceeded.

**ALARM NUMBER:** 5325

**Alarm Message:** P1 Middle He Press Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm stating to the effect that "process (static electricity discharge) was terminated" is recovered. The error is automatically cleared when the maintenance action is executed in the maintenance mode.

**Cause:** Recipe parameters setting value interlock range (recipe parameter "Middle B. P. Press Interlock Conditions Range") and set time (recipe parameter "Middle B. P. Press Interlock Conditions Time") were exceeded when inducing He gas on the wafer B. P. line (Middle).

**ALARM NUMBER:** 5326

**Alarm Message:** P1 Bottom RF VPP Voltage Upper Limit

**Recovery:** During processing (Discharge Less), when recovering from the "process (electrostatic discharge) Stopped" alarm, the error was automatically cleared. In the Maintenance Mode, when maintenance operation is executed again, the error is automatically cleared.

**Cause:** The lower RF VPP voltage has exceeded the upper limit.

**ALARM NUMBER:** 5327

**Alarm Message:** P1 Stop Plasma Discharge (Discharge Less)

**Recovery:** [Retry] Executes operations again from the check before executing Plasma Discharge (Discharge Less). [Abort] Stops Plasma Discharge (Discharge Less) processing, and executes wafer transfer in process.



**Cause:** Due to incorrect recipe setting, Plasma Discharge (Discharge Less) stopped. If it occurs during Plasma Discharge, set an electrical power value in "Upper RF Power" and "Lower RF Power". If it occurs during Discharge Less, set a voltage value in "Setting" of the Plasma Discharge recipe.

**ALARM NUMBER:** 5328

**Alarm Message:** P1 Out of Range for Measure Leak Rate

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** As the leak rate was found to exceed the tolerance range during the leak check for maintenance auto return, in the leak check retry, the retry count exceeded the count setting.

**ALARM NUMBER:** 5329

**Alarm Message:** P1 Gate Open

**Recovery:** When the P1 gate is closed, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation or venting to atmosphere, as the P/C transfer gate is not closed, the process could not start. Check the status of the P/C transfer gate up sensor. If the transfer gate is the 2 action specification, also check the close sensor. Check the status of the transfer gate sensor from the Adjustment Terminal, and under the following conditions, an error occurs. When the transfer gate is 1 action specification: An error occurs when the action gate up sensor is OFF When the transfer gate is 2 action specification: An error occurs when the action gate up sensor is OFF, or when the close sensor is OFF On UNITY Ver.2 transfer gates are all 1 action specification. Transfer gate up sensor UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=53 (High Active) UNITY Ver. 2 when the P/C is either PE/A-IEM/ATC type: Group ID=2, Local ID=65 (High Active) Transfer gate close sensor (UNITY 2 action specification only) UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=52 (High Active)

**ALARM NUMBER:** 532a

**Alarm Message:** P1 Lid Open

**Recovery:** When the lid is closed, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation or venting to atmosphere, as the P/C

lid is open, the process could not start. Check the status of the P/C lid open sensor. Check the status of the Chamber lid open sensor from the Adjustment Terminal, and when the sensor is ON, an error occurs. UNITY when the P/C is M type: Group ID=2, Local ID=65 (Low Active) UNITY Ver. 2 when the P/C is PE/A-IEM or ATC type: Group ID=2, Local ID=65 (High Active) UNITY Ver. 2: Group ID=2, Local ID=79 (Low Active)

**ALARM NUMBER:** 532b

**Alarm Message:** P1 Dry Pump Warning

**Recovery:** When the dry pump warning is cleared, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, a warning occurred in the dry pump. Check the status of the dry pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=3 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=3 (High Active) UNITY Ver.2 when the P/C is other than HPC type: Group ID=2, Local ID=12 (Low Active) UNITY Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=9 (Low Active)

**ALARM NUMBER:** 532c

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** When the dry pump status returns to Normal, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, the dry pump was not in the Normal status. Check the status of the dry pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=4 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=4 (High Active) UNITY Ver.2 when the P/C is other than HPC type: Group ID=2, Local ID=13 (High Active) UNITY Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 532d

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** When the dry pump alarm is cleared, the message is automatically cleared.

Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, an alarm occurred in the dry pump. Check the status of the dry pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs.  
UNITY when the P/C is either M/PE/ATC type: Group ID=2, Local ID=2 (High Active)  
UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY  
Ver.2 when the P/C is other than HPC type: Group ID=2, Local ID=11 (Low Active)  
UNITY Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 532e

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** When the turbo pump status returns to Normal, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, the turbo pump was not in the Normal status. The turbo pump is not in the Normal status when an alarm occurs in the turbo pump, or when the turbo pump is accelerating or decelerating. Check the status of the turbo pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY Ver.2 when the P/C is either DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 532f

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** When the turbo pump alarm is cleared, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, an alarm occurred in the turbo pump. Check the status of the turbo pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY Ver.2 when the P/C is either DRM/PE/A-IEM type: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 5330

**Alarm Message:** P1 Turbo Pump in Decelerate

**Recovery:** When the turbo pump Decelerate status is cleared, the message is automatically cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation when the ISO valve (V42) of the turbo pump was opened, in the turbo pump changed to the Decelerate status. Check the status of the turbo pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M or PE type: Group ID=2, Local ID=8 (High Active) UNITY Ver.2 when the P/C is either DRM/PE/A-IEM type: Group ID=2, Local ID=17 (High Active)

**ALARM NUMBER:** 5331

**Alarm Message:** P1 Rough Evacuation Start Timeout

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, after the start rough evacuation signal was output to the pump sequencer, the turbo pump exhaust valve (V37) did not close within 15 seconds. There is probably a problem with the operation of the pump sequencer, or with the valve DO, or with the valve sensor. Check the close sensor of the turbo pump exhaust valve. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY: Group ID=2, Local ID=42 (High Active) UNITY Ver.2: Group ID=2, Local ID=23 (High Active)

**ALARM NUMBER:** 5332

**Alarm Message:** P1 Evacuation Timeout

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation at rough main exhaust, the various designated pressures (maintenance auto return parameter "Rough Vacuum End Pressure", "Vacuum Pull End Pressure") were not reached at the designated times (maintenance auto return parameter "Rough Vacuum Pull End Timeout", "Vacuum Pull End Timeout"). If gas line evacuation is enabled (maintenance auto return parameter "Gas Line Exhaust at Rough Vacuuming"), when the gas lines are evacuated, all the rates of flow of all the MFCs on the gas lines did not reach the designated gas line final rate of flow (maintenance auto return parameter "Gas Line Exhaust End Flow") within the designated time (maintenance auto return parameter "Gas Line Vacuum Pull Timeout"). Check the operation of the valves on the exhaust system lines by checking the solenoid LED (on: open, off: closed) of the valves below. When the P/C is either M/DRM/PE/A-IEM type:

If the V36 valve is open, and the V37 valve is closed, rough vacuum is being executed If the V42 valve is open, and the V37 valve is open, high speed exhaust is being executed During rough vacuum, if the V30 valve is open, gas line evacuation is being executed. When the P/C is ATC type: If the V36 valve is open, and the V42 valve is closed, rough vacuum is being executed If the V42 valve is open, and the V36 valve is closed, high speed exhaust is being executed During rough vacuum, if the V30 valve is open, gas line evacuation is being executed.

**ALARM NUMBER:** 5333

**Alarm Message:** P1 Evacuation Timeout

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation and rough main exhaust, the various designated pressures (maintenance auto return parameter "Rough Vacuum End Pressure", "Vacuum Pull End Pressure") were not reached at the designated times (maintenance auto return parameter "Rough Vacuum Pull End Timeout", "Vacuum Pull End Timeout"). Check the operation of the valves on the exhaust system lines by checking the solenoid LED (on: open, off: closed) of the valves below. When the P/C is either M/DRM/PE/A-IEM type: If the V36 valve is open, and the V37 valve is closed, rough vacuum is being executed If the V42 valve is open, and the V37 valve is open, high speed exhaust is being executed When the P/C is ATC type: If the V36 valve is open, and the V42 valve is closed, rough vacuum is being executed If the V42 valve is open, and the V36 valve is closed, high speed exhaust is being executed

**ALARM NUMBER:** 5334

**Alarm Message:** P1 Vent Timeout

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, when Evacuation Timeout occurred, during retry operation for venting, the various designated pressures (maintenance auto parameters "Vent End Pressure of Rough Vacuuming", "Vent End Pressure of High Vacuuming") were not reached at the designated times (maintenance auto parameters "Vent End Time Out of Rough Vacuuming", "Vent End Time Out of High Vacuuming"). When the designated pressure is 6.65 Pa (50 Torr) or 1.01E+5 Pa (760 Torr), N2 is introduced through the N2 line. When the designated pressure is 1.33E+2 Pa (1 Torr), 2.66E+2 Pa (2 Torr), or 1.33E+3 Pa (10 Torr), N2 is introduced into the designated gas line (PC module parameters "N2 Vent Line No. to Cycle Purge") at the designated rate of flow (PC module parameters "N2 Vent Line Flow Rate to Cycle Purge").

**ALARM NUMBER:** 5335

**Alarm Message:** P1 APC Aux CPU Communication Error

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, a communication error occurred between the external communication auxiliary CPU board and the APC unit. Check that the APC control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5336

**Alarm Message:** P1 APC Communication Error

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, when controlling the valves or setting the pressure for the APC unit, an error occurred. Check that the pressure control controller type setting (pressure parameters "Pressure Control Controller Type") is the same as that connected to the machine APC. Also, check that the APC control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5337

**Alarm Message:** P1 APC Response Timeout Error

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, when controlling the valves or setting the pressure for the APC unit, there was no response from the APC unit within the designated time (10 s). Check that the pressure control controller type setting (pressure parameters "Pressure Control Controller Type") is the same as that connected to the machine APC. Also, check that the APC control board and TYB121-1/COM board are inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5338

**Alarm Message:** P1 Synchronous Timeout

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, at rough evacuation the dry pump joint partner did not finish evacuation within the designated time (pressure parameters "Exhaust Valve Open Pressure").

**ALARM NUMBER:** 5339

**Alarm Message:** P1 Valve Cannot Open/Close

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, as the turbo pump exhaust valve (V37 valve) was not open, the turbo pump ISO valve (V42) could not open. Check the status of the turbo pump exhaust valve by checking the solenoid LED (on: open, off: closed).

**ALARM NUMBER:** 533a

**Alarm Message:** P1 ISO Valve Open

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation and venting to atmosphere, at rough evacuation of the dry pump ISO valve (V42 valve) could not close within 5 seconds. Check the ISO valve (V42 valve) open sensor. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY: Group ID=2, Local ID=37 (High Active) UNITY Ver.2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 533b

**Alarm Message:** P1 ISO Valve Close

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation (high speed exhaust), before venting to atmosphere, during evacuation of the gas lines, during N2 purge of the gas lines, the turbo pump ISO valve (V42 valve) is closed so the target process couldn't be executed. Or, at pressure control during maintenance operations, during cycle purge, during self check at evacuation (high speed exhaust), the turbo pump ISO valve (V42 valve) is closed so the target process couldn't be executed. This is caused by increase in turbo pump back pressure as a result of a pump error, or a large volume of gas suddenly flowing into the Chamber causing a rise in pressure and a valve interlock (exhaust valve closes) due to the pressure reaching the upper limit for opening the ISO valve (pressure parameters "Exhaust Valve Open Pressure"). Check the pressure with a vacuum gauge (capacitance manometer or convectron). Check the ISO valve (V42 valve) open sensor. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY: Group ID=2, Local ID=37 (High Active) UNITY Ver.2: Group ID=2, Local ID=18 (High Active)

**ALARM NUMBER:** 533c



**Alarm Message:** P1 Pressure Deviated from Stable

**Recovery:** Carry out reset operations for "

**Cause:** During pressure control, the interlock range of the recipe parameter setting (recipe parameters "[Chamber Press]-[Interlock Conditions]-[Range]") exceeded the set time (recipe parameters "[Chamber Press]-[Interlock Conditions]-[Time]").

**ALARM NUMBER:** 533d

**Alarm Message:** P1 CM Zero Adjust Not Executing

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at the start of 0 point calibration (0 point adjustment) of the capacitance manometer, the measured pressure of the convectron gauge was lower than 1.33 Pa (1 mTorr). Check the monitor pressure value on a vacuum gauge (capacitance manometer, convectron gauge, or BA gauge). Check the output voltage of the capacitance manometer by the TP2(CM-V)-TP4(COM) of the TYB419-\*/PC board, and the output voltage of the convectron gauge by the TP54(AI13)-TP57(AGND) of the TYB111-\*/MAIO board. As the capacitance manometer or convectron gauge may not be working properly, check the various output voltages. Or, check by the solenoid LED (on: open, off: closed) whether the protective valve (V34) of the capacitance manometer is open. If the settings for the type of capacitance manometer (pressure parameter "Capacitance Manometer Type") or the pressure control mode (pressure parameters "Pressure Control Mode") are incorrect, as incorrect 0 point calibration will be executed, also check all the parameters.

**ALARM NUMBER:** 533e

**Alarm Message:** P1 CM Zero Adjust Unsuccessful

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, during 0 point calibration (0 point adjustment) of the capacitance manometer, as the analog output voltage from the manometer did not stabilize, 0 point could not be specified. As the capacitance manometer may not be working properly, check the output voltage of the capacitance manometer. Check the output voltage of the capacitance manometer by the TP2(CM-V)-TP4(COM) of the TYB419-\*/PC board. Also, check the solenoid valve LED (on: open, off: closed) to see if the capacitance manometer protection valve (V34) is open. If the settings for the type of capacitance manometer (pressure parameter "Capacitance Manometer Type") or the pressure control mode (pressure parameter "Pressure Control Mode") are incorrect, as incorrect 0 point calibration will be executed, also check all the parameters.



**ALARM NUMBER:** 533f

**Alarm Message:** P1 Chamber Pressure Upper Limit

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, the pressure inside the Process Chamber exceeded the vacuum pressure upper limit (pressure parameters "Exhaust Valve Open Pressure"). This is probably caused by increase in turbo pump back pressure as a result of a pump error, or a large volume of gas suddenly flowing into the Chamber causing a rise in pressure. Check the pressure with a vacuum gauge (capacitance manometer or convectron).

**ALARM NUMBER:** 5340

**Alarm Message:** P1 Valve Interlock -Pressure Limit

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** For maintenance auto return, at evacuation, as the pressure in the Process Chamber exceeded the vacuum pressure upper limit (pressure parameters "Exhaust Valve Open Pressure"), the exhaust valves (ISO valve, rough line valve etc.) closed. This is probably caused by increase in turbo pump back pressure as a result of a pump error. Check the pressure with a vacuum gauge (capacitance manometer or convectron).

**ALARM NUMBER:** 5341

**Alarm Message:** P1 Invalid ATM Pressure Type Selected

**Recovery:** Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** When a maintenance auto return error occurs during venting to atmosphere, the atmosphere final pressure value set in parameters was not within the range of measurement of the capacitance manometer. For Process Chamber types PE/A-IEM/ATC, the following cases are likely. Capacitance manometer with measurement range of 250 [mTorr]: When set at 1 [Torr], 2 [Torr], 10 [Torr] Capacitance manometer with measurement range of 1 [mTorr]: When set at 2 [Torr], 10 [Torr] Capacitance manometer with measurement range of 2 [mTorr]: When set at 10 [Torr]

**ALARM NUMBER:** 5342

**Alarm Message:** P1 Maintenance Auto Return Retry Over

**Recovery:** [Retry] Carries out the process that caused the error from the beginning.

[Abort] Stops maintenance auto return and returns to maintenance.

**Cause:** As the number of errors at maintenance auto return exceeded the maximum count, the process was stopped. As the error message for the process that caused the error is displayed at the same time, take measures for that item.

**ALARM NUMBER:** 5343

**Alarm Message:** P1 CM Zero Adjust Not Executing by BA

**Recovery:** Execute maintenance auto return again, and if pressure gauge calibration for the BA pipe is set, execute it.

**Cause:** During maintenance auto return, during 0 point calibration (0 point adjustment) for the BA pipe, as the analog output from the manometer does not stabilize, the 0 point could not be determined. As the capacitance manometer may not be working properly, check the output voltage. Check the output voltage of the capacitance manometer by the TP2(CM-V)-TP4(COM) of the TYB419-\*/PC board. Or, check by the solenoid LED (on: open, off: closed) whether the protective valve (V34) of the capacitance manometer is open. If the settings for the type of capacitance manometer (pressure parameters "Capacitance Manometer Type") or the pressure control mode (pressure parameters "Pressure Control Mode") are incorrect, as incorrect 0 point calibration will be executed, also check all the parameters.

**ALARM NUMBER:** 5344

**Alarm Message:** P1 CM Zero Adjust Unsuccessful by BA

**Recovery:** Execute maintenance auto return again, and if pressure gauge calibration for the BA pipe is set, execute it.

**Cause:** During maintenance auto return, during 0 point calibration (0 point adjustment) for the BA pipe, as the analog output from the manometer does not stabilize, the 0 point could not be determined. As the capacitance manometer may not be working properly, check the output voltage. Check the output voltage of the capacitance manometer by the TP2(CM-V)-TP4(COM) of the TYB419-\*/PC board. Or, check by the solenoid LED (on: open, off: closed) whether the protective valve (V34) of the capacitance manometer is open. If the settings for the type of capacitance manometer (pressure parameter "Capacitance Manometer Type") or the pressure control mode (pressure parameters "Pressure Control Mode") are incorrect, as incorrect 0 point calibration will be executed, also check all the parameters.

**ALARM NUMBER:** 5345

**Alarm Message:** P1 an Unknown Wafer is Detected

**Recovery:** [Abort] Status changes to waiting for transfer out.

**Cause:** During probing, a wafer without a destination in the cassette was detected in the P/C. Execute clean out or after switching over to the Maintenance Mode and venting to atmosphere, take out the wafer.

**ALARM NUMBER:** 5346

**Alarm Message:** P1 Execution Disabled in Gas Induction

**Recovery:** When P1 process or introduction of gas is stopped, the message will automatically be cleared. Carry out reset operations for "5342 P1 Maintenance Auto Return Retry Over" which occurs at the same time.

**Cause:** During processing, during RF discharge during introduction of the process gas, as evacuation was executed by maintenance auto return, as the convectron gauge could not be used, evacuation could not be executed.

**ALARM NUMBER:** 5347

**Alarm Message:** P1 Window Heater Error (Pause)

**Recovery:** [Retry] Re-executes initialization.

**Cause:** As an error occurred in the window heater, evacuation by maintenance auto return was stopped. Check whether the display of the temperature controller is the same as the temperature set. Also, check whether the window unit thermostat is working. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M type: Group ID=2, Local ID=71 (High Active) UNITY Ver.2: Group ID=2, Local ID=56 (High Active)

**ALARM NUMBER:** 5348

**Alarm Message:** P1 Window Heater Error (Pause)

**Recovery:** [Retry] Re-executes the process. [Abort] Stops the process.

**Cause:** As an error occurred in the window heater, the process was stopped. Check whether the display of the temperature controller is the same as the temperature set. Also, check whether the window unit thermostat is working. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M type: Group ID=2, Local ID=71 (High Active) UNITY Ver.2: Group ID=2, Local ID=56 (High Active)

**ALARM NUMBER:** 5349

**Alarm Message:** P1 Window Heater Error (Pause)

**Recovery:** [Retry] Re-executes Discharge Less. [Abort] Stops Discharge Less.

**Cause:** As an error occurred in the window heater, Discharge Less stops. As an error occurred in the window heater, the process was stopped. Check whether the display of the temperature controller is the same as the temperature set. Also, check whether the window unit thermostat is working. Check the sensor from the Adjustment Terminal, and under the following conditions, an error occurs. UNITY when the P/C is M type: Group ID=2, Local ID=71 (High Active) UNITY Ver.2: Group ID=2, Local ID=56 (High Active)

**ALARM NUMBER:** 534a

**Alarm Message:** P1 Magnet Rotation Not Stop

**Recovery:** [Retry] The process is executed again. [Abort] The process is stopped.

**Cause:** During spectral measurement in the P/C of the DRM type, the magnet did not stop rotating in the stabilization step.

**ALARM NUMBER:** 534b

**Alarm Message:** P1 Stop Etching Due to V65 Cannot Open

**Recovery:** [Abort] Stops processing, and status changes to waiting for transfer out.

**Cause:** After the valve for introducing wafer cooling He (V65) was opened, as the sensor could not detect the end of the operation within 2 seconds, the process was stopped. Check the operation of the P/C V65 open sensor. Also, check whether air is being supplied to V65, and check whether the air pipe is bent.

**ALARM NUMBER:** 534c

**Alarm Message:** P1 Stop Etching Due to V65 Cannot Open

**Recovery:** [Abort] Stops processing, and status changes to waiting for transfer out.

**Cause:** After the valve for introducing wafer cooling He (V65) was opened, as the sensor could not detect the end of the operation within 2 seconds, the process was stopped. Check the operation of the P/C V65 open sensor. Also, check whether air is being supplied to V65, and check whether the air pipe is bent.

**ALARM NUMBER:** 534d

**Alarm Message:** P1 Stop Etching Due to V66 Cannot Open

**Recovery:** [Abort] Stops processing, and status changes to waiting for transfer out.

**Cause:** After the valve for introducing wafer cooling He (V66) was opened, as the sensor could not detect the end of the operation within 2 seconds, the process was stopped.

Check the operation of the P/C V66 open sensor. Also, check whether air is being supplied to V66, and check whether the air pipe is bent.

**ALARM NUMBER:** 534e

**Alarm Message:** P1 Stop Etching Due to V66 Cannot Open

**Recovery:** [Abort] Stops processing, and status changes to waiting for transfer out.

**Cause:** After the valve for introducing wafer cooling He (V66) was opened, as the sensor could not detect the end of the operation within 2seconds, the process was stopped. Check the operation of the P/C V66 open sensor. Also, check whether air is being supplied to V66, and check whether the air pipe is bent.

**ALARM NUMBER:** 534f

**Alarm Message:** P1 AuxCPU CommError-Lower Temp Unit (Pause)

**Recovery:** When communication is confirmed with the lower temperature unit, the error is automatically cleared, and the wafer can be transferred in.

**Cause:** During control, a communication error occurred between the auxiliary board and lower temperature unit, so wafers cannot be transferred into that unit. **UNITY:** Check whether the connectors between the lower temperature unit and the P/C PANEL INTCONN BRD, and the P/C PANEL INTCONN BRD and P/C MAIN INTCONN BRD are connected. **UNITY-Ver.2** Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check whether the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5350

**Alarm Message:** P1 Comm Error - Lower Temp Unit (Pause)

**Recovery:** When communication is confirmed with the lower temperature unit, the error is automatically cleared, and the wafer can be transferred in.

**Cause:** During control, an error was communicated from the lower temperature unit, so wafers cannot be transferred into that unit.

**ALARM NUMBER:** 5351

**Alarm Message:** P1 Response Timeout-Lower Temp Unit (Pause)

**Recovery:** When communication is confirmed with the lower temperature unit, the error is automatically cleared.

**Cause:** When setting the temperature of the lower temperature unit, there was no response within the time limit (5 s x 3 times). This is probably caused by incorrect setting of the temperature unit, or faulty RS cable, or faulty auxiliary CPU. **UNITY:** Check that the connectors between the lower temperature unit and the P/C PANEL INTCONN BRD, and the P/C PANEL INTCONN BRD and P/C MAIN INTCONN BRD are connected. **UNITY-Ver.2:** Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check whether the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5352

**Alarm Message:** P1 Aux CPU Comm Error -Lower Temp Unit

**Recovery:** [Retry] Resets the lower temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Lower Temp Control] to [None].

**Cause:** When setting the heater cut wire warning data of the lower temperature unit, communication failed between the auxiliary board and lower temperature unit. (including 3 automatic retries). **UNITY:** Check that the connector between the lower temperature unit and the P/C MAIN INTCONN BRD are connected. **UNITY-Ver.2:** Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check whether the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5353

**Alarm Message:** P1 Communication Error -Lower Temp Unit

**Recovery:** [Retry] Resets the lower temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Lower Temp Control] to [None].

**Cause:** When setting the heater cut wire warning data of the lower temperature unit, an error was communicated from the lower temperature unit. Check that the type of lower temperature unit and the settings in P/C temperature parameter "Lower Temp Control" are the same.

**ALARM NUMBER:** 5354

**Alarm Message:** P1 Response Timeout - Lower Temp Unit

**Recovery:** [Retry] Resets the lower temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Lower Temp Control] to [None].

**Cause:** When setting the heater cut wire warning data of the lower temperature unit, there

was no response within the time limit (5 s x 3 times). This is probably caused by incorrect. UNITY: Check that the connectors between the lower temperature unit and the P/C PANEL INTCONN BRD, and the P/C PANEL INTCONN BRD and P/C MAIN INTCONN BRD are connected. UNITY-Ver.2 Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK. Also, check whether the cable between the back of the etcher and the chiller is connected correctly.

**ALARM NUMBER:** 5355

**Alarm Message:** P1 Aux CPU ComM Error -Wall Temp Unit

**Recovery:** [Retry] Resets the wall temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** When setting the heater cut wire warning data of the wall temperature unit, communication failed between the auxiliary board and wall temperature unit. (including 3 automatic retries). UNITY: Check whether the connector between the temperature unit and the P/C MAIN INT CONN BRD is connected. UNITY-Ver.2 Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5356

**Alarm Message:** P1 Communication Error -Wall Temp Unit

**Recovery:** [Retry] Resets the wall temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** When setting the heater cut wire warning data of the wall temperature unit, an error was communicated from the wall temperature unit. Check that the type of wall temperature unit and the P1 temperature parameter settings in "Wall Electrode Temp Control" are the same.

**ALARM NUMBER:** 5357

**Alarm Message:** P1 Response Timeout -Wall Temp Unit

**Recovery:** [Retry] Resets the wall temperature unit heater cut wire data. [Abort] Stops warning setting. When stopping warning settings, change the following parameters. Set the P/C temperature parameter [Wall Electrode Temp Control] to [None].

**Cause:** When setting the cut wire warning data of the wall temperature unit, there was no response within the time limit (5 s x 3 times). This is probably caused by incorrect setting of the wall temperature unit, or faulty RS cable, or faulty auxiliary CPU. UNITY: Check

that the connectors between the wall temperature unit and the P/C PANEL INTCONN BRD, and the P/C PANEL INTCONN BRD and P/C MAIN INTCONN BRD are connected. UNITY-Ver.2 Check whether the temperature control board and TYB121-1/COM board is inserted correctly in the P/C CONTROLLER RACK.

**ALARM NUMBER:** 5358

**Alarm Message:** P1 Acid Exhaust Line abnormal pressure

**Recovery:** When the pressure of the manostar switch is normal, the message is automatically cleared.

**Cause:** The pressure of the P/C acid exhaust line has become higher than the pressure setting. There may be a problem with the factory exhaust line. Also, whether the pressure setting of the manostar switch is appropriate and change it as necessary.

**ALARM NUMBER:** 5359

**Alarm Message:** P1 Acid Exhaust Line abnormal pressure

**Recovery:** When the pressure of the manostar switch is normal, the message is automatically cleared.

**Cause:** The pressure of the P/C acid exhaust line has become higher than the pressure setting. There may be a problem with the factory exhaust line. Also, whether the pressure setting of the manostar switch is appropriate and change it as necessary.

**ALARM NUMBER:** 535a

**Alarm Message:** P1 Upper Matcher Vpp Over Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the upper Matcher.

**Cause:** As high voltage has occurred the variable condenser did not reach the matching point. An abnormally high voltage has occurred at the output terminal. As the elements of the Matcher may be damaged, reduce the discharge power.

**ALARM NUMBER:** 535b

**Alarm Message:** P1 Upper Matcher Water Leak Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the upper Matcher.

**Cause:** There is a leak of cooling water inside the Matcher, or condensation has formed. Stop RF discharge immediately and stop the cooling water.



**ALARM NUMBER:** 535c

**Alarm Message:** P1 Upper Matcher Water Flow Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the upper Matcher.

**Cause:** The operation of the water cooling valve is abnormal. The water cooling valve is probably not working properly or the Matcher signal is defective. Stop RF discharge immediately and stop the cooling water.

**ALARM NUMBER:** 535d

**Alarm Message:** P1 Upper Matcher Cover Open Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the upper Matcher.

**Cause:** The cover of the upper Matcher is open. Close the cover.

**ALARM NUMBER:** 535e

**Alarm Message:** P1 Upper Matcher Connector Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again.

**Cause:** There is a problem with the RF connector. Check that it is properly connected.

**ALARM NUMBER:** 535f

**Alarm Message:** P1 Upper Matcher Data Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again.

**Cause:** There is a problem with RS232C communication. Check the connection of the communication cable.

**ALARM NUMBER:** 5360

**Alarm Message:** P1 Upper Matcher Fan Stop Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again. If the problem cannot be fixed, replace the Matcher.

**Cause:** There is a problem with the fan.

**ALARM NUMBER:** 5361

**Alarm Message:** P1 Upper Matcher Abnormally Charge (Pause)

**Recovery:** After pressing [ESC] key on the front panel of the Matcher, check the status of the plasma.

**Cause:** Abnormal discharge has occurred. Reduce the discharge power.

**ALARM NUMBER:** 5362

**Alarm Message:** P1 Lower Matcher Vpp Over Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the lower Matcher.

**Cause:** As high voltage has occurred the variable condenser did not reach the matching point. An abnormally high voltage has occurred at the output terminal. As the elements of the Matcher may be damaged, reduce the discharge power.

**ALARM NUMBER:** 5363

**Alarm Message:** P1 Lower Matcher Water Leak Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the lower Matcher.

**Cause:** There is a leak of cooling water inside the Matcher, or condensation has formed. Stop RF discharge immediately and stop the cooling water.

**ALARM NUMBER:** 5364

**Alarm Message:** P1 Lower Matcher Water Flow Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the lower Matcher.

**Cause:** The operation of the water cooling valve is abnormal. The water cooling valve is probably not working properly or the Matcher signal is defective. Stop RF discharge immediately and stop the cooling water.

**ALARM NUMBER:** 5365

**Alarm Message:** P1 Lower Matcher Cover Open Alarm (Pause)

**Recovery:** The message is cleared by pressing [ESC] key on the front panel of the lower Matcher.

**Cause:** The shield cover of the lower Matcher is open. Close the shield cover.

**ALARM NUMBER:** 5366

**Alarm Message:** P1 Lower Matcher Connector Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again.

**Cause:** There is a problem with the RF connector. Check that it is properly connected.

**ALARM NUMBER:** 5367

**Alarm Message:** P1 Lower Matcher Data Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again.

**Cause:** There is a problem with RS232C communication. Check the connection of the communication cable.

**ALARM NUMBER:** 5368

**Alarm Message:** P1 Lower Matcher Fan Stop Alarm (Pause)

**Recovery:** After checking the cause, turn off the Matcher controller, and turn it on again. If the problem cannot be fixed, replace the Matcher.

**Cause:** There is a problem with the fan.

**ALARM NUMBER:** 5369

**Alarm Message:** P1 Lower Matcher Abnormally Charge (Pause)

**Recovery:** After pressing [ESC] key on the front panel of the Matcher, check the status of the plasma.

**Cause:** Abnormal discharge has occurred. Reduce the discharge power.

**ALARM NUMBER:** 536a

**Alarm Message:** P1 Upper Matcher Interlock (Pause)

**Recovery:** When the upper Matcher interlock is released, the error is canceled automatically and the wafer can be transferred in.

**Cause:** As an upper Matcher interlock was detected, wafers cannot be transferred into the unit. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 536b

**Alarm Message:** P1 Upper Matcher Interlock

**Recovery:** [Retry] A check is executed before re-initialization.

**Cause:** Before initialization, an upper Matcher interlock was detected. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 536c

**Alarm Message:** P1 Upper Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing the process. [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, an upper Matcher interlock was detected. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 536d

**Alarm Message:** P1 Upper Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing Discharge Less. [Abort] The Discharge Less process is stopped, and the wafer is transferred out.

**Cause:** Before Discharge Less was executed, an upper Matcher interlock was detected. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 536e

**Alarm Message:** P1 Upper Matcher Interlock

**Recovery:** When the upper Matcher interlock is released, the error is canceled automatically.

**Cause:** An upper Matcher interlock was detected. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 536f

**Alarm Message:** P1 Cannot N2 Purge - Upper Matcher Alarm

**Recovery:** When an N2 purge is executed again when an upper Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When an upper Matcher interlock was detected, an N2 purge was executed. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 5370

**Alarm Message:** P1 Cannot N2 Purge - Upper Matcher Alarm

**Recovery:** Clear the error message. When an N2 purge is executed again when an upper Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When an upper Matcher interlock was detected, an N2 purge was executed. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 5371

**Alarm Message:** P1 Lower Matcher Interlock (Pause)

**Recovery:** When the lower Matcher interlock is released, the error is canceled automatically and the wafer can be transferred in.

**Cause:** As a lower Matcher interlock was detected, wafers cannot be transferred into the unit. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5372

**Alarm Message:** P1 Lower Matcher Interlock

**Recovery:** [Retry] A check is executed before re-initialization.

**Cause:** Before initialization, a lower Matcher interlock was detected. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5373

**Alarm Message:** P1 Lower Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing the process. [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, a lower Matcher interlock was detected. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5374

**Alarm Message:** P1 Lower Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing Discharge Less. [Abort] The Discharge Less process is stopped, and the wafer is transferred out.

**Cause:** Before Discharge Less was executed, a lower Matcher interlock was detected.

Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5375

**Alarm Message:** P1 Lower Matcher Interlock

**Recovery:** When the lower Matcher interlock is released, the error is canceled automatically.

**Cause:** A lower Matcher interlock was detected. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5376

**Alarm Message:** P1 Cannot N2 Purge - Lower Matcher Alarm

**Recovery:** When an N2 purge is executed again when a lower Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When a lower Matcher interlock was detected, an N2 purge was executed. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5377

**Alarm Message:** P1 Cannot N2 Purge - Lower Matcher Alarm

**Recovery:** [Accept] Clear the error message. When an N2 purge is executed again when a lower Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When a lower Matcher interlock was detected, an N2 purge was executed. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 5378

**Alarm Message:** P1 Upper Matcher Interlock

**Recovery:** When the upper Matcher interlock is released, the error is canceled automatically.

**Cause:** An upper Matcher interlock was detected. Check whether an upper Matcher interlock occurred.

**ALARM NUMBER:** 5379

**Alarm Message:** P1 Lower Matcher Interlock

**Recovery:** When the lower Matcher interlock is released, the error is canceled

automatically.

**Cause:** A lower Matcher interlock was detected. Check whether a lower Matcher interlock occurred.

**ALARM NUMBER:** 537a

**Alarm Message:** P1 Matcher Interlock (Pause)

**Recovery:** When the Matcher interlock is released, the error is canceled automatically and the wafer can be transferred in.

**Cause:** As a Matcher interlock was detected, wafers cannot be transferred into the unit. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 537b

**Alarm Message:** P1 Matcher Interlock

**Recovery:** [Retry] A check is executed before re-initialization.

**Cause:** Before initialization, a Matcher interlock was detected. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 537c

**Alarm Message:** P1 Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing the process. [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, a Matcher interlock was detected. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 537d

**Alarm Message:** P1 Matcher Interlock

**Recovery:** [Retry] A check is executed before re-executing Discharge Less. [Abort] The Discharge Less process is stopped, and the wafer is transferred out.

**Cause:** Before Discharge Less was executed, a Matcher interlock was detected. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 537e

**Alarm Message:** P1 Matcher Interlock

**Recovery:** When the Matcher interlock is released, the error is canceled automatically.

**Cause:** A Matcher interlock was detected. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 537f

**Alarm Message:** P1 Cannot N2 Purge - Matcher Alarm

**Recovery:** When an N2 purge is executed again when a Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When a Matcher interlock was detected, an N2 purge was executed. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 5380

**Alarm Message:** P1 Cannot N2 Purge - Matcher Alarm

**Recovery:** [Accept] Clear the error message. When an N2 purge is executed again when a Matcher interlock is not detected, the error is canceled automatically.

**Cause:** When a Matcher interlock was detected, an N2 purge was executed. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 5381

**Alarm Message:** P1 Matcher Interlock

**Recovery:** When the lower Matcher interlock is released, the error is canceled automatically.

**Cause:** A Matcher interlock was detected. Check whether a Matcher interlock occurred.

**ALARM NUMBER:** 5382

**Alarm Message:** P1 Upper RF Power Interlock (Pause)

**Recovery:** When the upper RF generator power supply interlock is released, the error is canceled automatically and the wafer can be transferred in.

**Cause:** As an upper RF generator power supply interlock was detected, wafers cannot be transferred into the unit. Check whether an upper RF generator power supply interlock occurred.

**ALARM NUMBER:** 5383

**Alarm Message:** P1 Stopped Discharge - Upper RF Error



**Recovery:** [Retry] A check is executed before re-executing Discharge Less. [Abort] The Discharge Less process is stopped, and the wafer is transferred out.

**Cause:** Before Discharge Less was executed, or before RF power output, an abnormality was detected in the upper RF generator power supply. Check whether an abnormality in the upper RF generator power supply occurred.

**ALARM NUMBER:** 5384

**Alarm Message:** P1 Stopped Etching - Upper RF Error

**Recovery:** [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, or before RF power output, an abnormality was detected in the upper RF generator power supply. Check whether an abnormality in the upper RF generator power supply occurred.

**ALARM NUMBER:** 5385

**Alarm Message:** P1 Stopped Initialize - Upper RF Error

**Recovery:** [Retry] A check is executed before re-initialization.

**Cause:** Before initialization, an abnormality was detected in the upper RF generator power supply. Check whether an abnormality in the upper RF generator power supply occurred.

**ALARM NUMBER:** 5386

**Alarm Message:** P1 Upper RF Power Interlock

**Recovery:** When the upper RF generator power supply interlock is released, the error is canceled automatically.

**Cause:** An upper RF generator power supply interlock was detected. Check whether an upper RF generator power supply interlock occurred.

**ALARM NUMBER:** 5387

**Alarm Message:** P1 Lower RF Power Interlock (Pause)

**Recovery:** When the lower RF generator power supply interlock is released, the error is canceled automatically and the wafer can be transferred in.

**Cause:** As a lower RF generator power supply interlock was detected, wafers cannot be transferred into the unit. Check whether a lower RF generator power supply interlock occurred.

**ALARM NUMBER:** 5388

**Alarm Message:** P1 Stopped Discharge - Lower RF Error

**Recovery:** [Retry] A check is executed before re-executing Discharge Less. [Abort] The Discharge Less process is stopped, and the wafer is transferred out.

**Cause:** Before Discharge Less was executed, or before RF power output, an abnormality was detected in the lower RF generator power supply. Check whether an abnormality in the lower RF generator power supply occurred.

**ALARM NUMBER:** 5389

**Alarm Message:** P1 Stopped Etching - Lower RF Error

**Recovery:** [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, or before RF power output, an abnormality was detected in the lower RF generator power supply. Check whether an abnormality in the lower RF generator power supply occurred.

**ALARM NUMBER:** 538a

**Alarm Message:** P1 Stopped Initialize - Lower RF Error

**Recovery:** [Retry] A check is executed before re-initialization.

**Cause:** Before initialization, an abnormality was detected in the lower RF generator power supply. Check whether an abnormality in the lower RF generator power supply occurred.

**ALARM NUMBER:** 538b

**Alarm Message:** P1 Lower RF Power Interlock

**Recovery:** When the lower RF generator power supply interlock is released, the error is canceled automatically.

**Cause:** A lower RF generator power supply interlock was detected. Check whether a lower RF generator power supply interlock occurred.

**ALARM NUMBER:** 538c

**Alarm Message:** P1 Upper RF Power Interlock

**Recovery:** When the upper RF generator power supply interlock is released, the error is canceled automatically.

**Cause:** An upper RF generator power supply interlock was detected. Check whether an upper RF generator power supply interlock occurred.

**ALARM NUMBER:** 538d

**Alarm Message:** P1 Lower RF Power Interlock

**Recovery:** When the lower RF generator power supply interlock is released, the error is canceled automatically.

**Cause:** A lower RF generator power supply interlock was detected. Check whether a lower RF generator power supply interlock occurred.

**ALARM NUMBER:** 538e

**Alarm Message:** P1 N2 Purge Pressure is out of stable range

**Recovery:** When the P/C pressure enters the stable range, the error is canceled automatically.

**Cause:** During N2 purge, the P/C pressure was outside the stable pressure range set in the P/C module parameter "N2 Purge Control Pressure".

**ALARM NUMBER:** 538f

**Alarm Message:** P1 CM1 Temp is over the set range (Pause)

**Recovery:** When the temperature of the CM for processing enters the set range, the error is canceled automatically.

**Cause:** The temperature of the CM for processing was outside the range  $80\text{ C} \pm 8\text{ C}$ . (The temperature setting is a fixed value.) Check the high temperature CM controller (for processing).

**ALARM NUMBER:** 5390

**Alarm Message:** P1 CM2 Temp is over the set range

**Recovery:** When the temperature of the CM for self check enters the set range, the error is canceled automatically.

**Cause:** The temperature of the CM for self check was outside the range  $\pm 8\text{ C}$ . Check the high temperature CM controller (for self check). Set the temperature directly from the controller. The setting is 100 C.

**ALARM NUMBER:** 5391

**Alarm Message:** P1 CM1 Temp is over the set range

**Recovery:** [Retry] A check is executed before re-initialization. [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** Before the process was executed, the temperature of the CM for processing was outside the range  $80\text{ C} \pm 8\text{ C}$ . (The temperature setting is a fixed value.) Check the high temperature CM controller (for processing).

**ALARM NUMBER:** 5392

**Alarm Message:** P1 Acid Exhaust Line abnormal pressure

**Recovery:** When the pressure of the P1 acid exhaust line is normal, the message is automatically cleared.

**Cause:** The pressure of the P/C acid exhaust line has become higher than the pressure setting. There may be a problem with the factory exhaust line. Also, whether the pressure setting of the manostar switch is appropriate and change it as necessary.

**ALARM NUMBER:** 5393

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:** [Retry] The process is executed again.

**Cause:** An alarm occurred in the dry pump. Check the status of the relevant dry pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal. An error will occur with the following conditions.

UNITY when the P/C is M/PE/ATC type: Group ID=2, Local ID=2 (High Active)

UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver.

2 when the P/C is M/PE/ATC type: Group ID=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active)

**ALARM NUMBER:** 5394

**Alarm Message:** P1 Dry Pump Not in Normal

**Recovery:** [Retry] The process is executed again.

**Cause:** The dry pump was not in the Normal status. Check the status of the relevant dry pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal. An error will occur with the following conditions.

UNITY when the P/C is M/PE/ATC type: Group ID=2, Local ID=4 (High Active)

UNITY when the P/C is HPC type: Group ID=1, Local ID=4 (High Active) UNITY-Ver.

2 when the P/C is M/PE/ATC type: Group ID=2, Local ID=13 (High Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=10 (High Active)

**ALARM NUMBER:** 5395

**Alarm Message:** P1 Turbo Pump Alarm

**Recovery:** [Retry] The process is executed again.

**Cause:** As an alarm occurred in the turbo pump. Check the status of the relevant turbo pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=5 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=14 (High Active)

**ALARM NUMBER:** 5396

**Alarm Message:** P1 Turbo Pump Not in Normal

**Recovery:** [Retry] The process is executed again.

**Cause:** The turbo pump was not in the Normal status, when the turbo pump alarm occurred, turbo pump is accelerating or reducing speed, the turbo pump was not in the normal status. Check the status of the relevant turbo pump and the pump controller displays (monitor display and LED etc.). Check the alarm signal from the Adjustment Terminal. An error will occur with the following conditions. UNITY when the P/C is M or PE type: Group ID=2, Local ID=6 (High Active) UNITY-Ver. 2 when the P/C is DRM/PE/A-IEM type: Group ID=2, Local ID=15 (High Active)

**ALARM NUMBER:** 5397

**Alarm Message:** P1 susceptor press in over range (Pause)

**Recovery:** When the pressure of the susceptor cooling helium enters the parameter setting range, the error is canceled automatically.

**Cause:** The pressure of the susceptor cooling helium was outside the range set in the parameters (P1 parameter wafer cooling "Susceptor Upper Limit Pressure", "Susceptor Lower Limit Pressure"). Check that the upper and lower pressure limits set in the parameters for the regulator pressure settings are appropriate and change them as necessary. The susceptor cooling helium may be leaking.

**ALARM NUMBER:** 5398

**Alarm Message:** P1 Cannot Control APC Due to Lid Open

**Recovery:** [Retry] The process is executed again. [Abort] The process is stopped, and the wafer is transferred out.

**Cause:** As the P/C lid was open, APC control could not start. Check the status of the P/C

lid open sensor.

**ALARM NUMBER:** 5399

**Alarm Message:** P1 Now Rough Vacuuming

**Recovery:** By executing another operation from the P/C Maintenance Screen, the alarm message is cleared.

**Cause:** In the Maintenance Mode, during rough vacuuming of the P/C, opening the ISO valve was attempted.

**ALARM NUMBER:** 539a

**Alarm Message:** P1 HPC N2 Gas Deviated from Stable

**Recovery:** The error is automatically cleared when recovering the alarm of "Process Stopped" when processing. The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The parameter set time "HPC N2 Flow Bound Time" was surpassed while the actual value does not reach the P1 Parameters (P/C Module) set value "HPC N2 Flow Bound Value" when introducing N2 on HPC.

**ALARM NUMBER:** 539b

**Alarm Message:** P1 Dry Pump Alarm

**Recovery:**

**Cause:** An alarm occurred with the dry pump. Check the appropriate dry pump and pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An alarm will occur with the following conditions. UNITY when the P/C is either M/PE/ATC types: Group ID=2, Local ID=2 (High Active) UNITY when the P/C is HPC type: Group ID=1, Local ID=2 (High Active) UNITY-Ver. 2 when the P/C is either M/PE/ATC types: Group=2, Local ID=11 (Low Active) UNITY-Ver. 2 when the P/C is HPC type: Group ID=1, Local ID=8 (Low Active) Reset:

**ALARM NUMBER:** 539c

**Alarm Message:** P1 ESC Over Curr at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The electrostatic chuck current exceeded the interlock upper limit (recipe parameter "ESC Interlock Conditions Upper Limit") and the set time (recipe parameter "ESC Interlock Conditions Time") set in the recipe parameter when vacuuming (Chuck

OFF).

**ALARM NUMBER:** 539d

**Alarm Message:** P1 ESC Volt unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The electrostatic chuck voltage exceeded the interlock range (recipe parameter "ESC Interlock Conditions Range") and the set time (recipe parameter "ESC Interlock Conditions Time") set in the recipe parameter when vacuuming (Chuck OFF).

**ALARM NUMBER:** 539e

**Alarm Message:** P1 Press unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The set time (recipe parameter "Step Time"), (recipe parameter "Chamber Press Stability Conditions Time" x 3) if the pressure setting values differ between continuous steps, was surpassed without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Chamber Press Stability Conditions Range", "Chamber Press Stability Conditions Time") when vacuuming (Chuck OFF).

**ALARM NUMBER:** 539f

**Alarm Message:** P1 Gas1 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 1 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 1 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP17 and A. GND Monitor Amount; Between GAS I/O BOARD B TP9 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP15 and A. GND Monitor Amount; Between TYB211-A/GAS TP8 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a0

**Alarm Message:** P1 Gas2 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 2 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 2 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP18 and A. GND Monitor Amount; Between GAS I/O BOARD B TP10 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP9 and A. GND Monitor Amount; Between TYB211-A/GAS TP7 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a1

**Alarm Message:** P1 Gas3 unstab at WF-Dis (Chuck OFF) Cause/Handling .

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 3 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 3 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP19 and A. GND Monitor Amount; Between GAS I/O BOARD B TP11 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP10 and A. GND Monitor Amount; Between TYB211-A/GAS TP6 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a2

**Alarm Message:** P1 Gas4 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 4 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 4 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP20 and A. GND Monitor Amount; Between GAS I/O BOARD B TP12 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP19 and A. GND Monitor Amount; Between TYB211-A/GAS TP5 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a3



**Alarm Message:** P1 Gas5 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 5 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 5 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP21 and A. GND Monitor Amount; Between GAS I/O BOARD B TP13 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP16 and A. GND Monitor Amount; Between TYB211-A/GAS TP4 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a4

**Alarm Message:** P1 Gas6 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 6 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 6 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP22 and A. GND Monitor Amount; Between GAS I/O BOARD B TP14 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP11 and A. GND Monitor Amount; Between TYB211-A/GAS TP3 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a5

**Alarm Message:** P1 Gas7 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 7 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 7 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP23 and A. GND Monitor Amount; Between GAS I/O BOARD B TP15 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP12 and A. GND Monitor Amount; Between TYB211-A/GAS TP2 and A. GND The gas does not flow properly if the voltage of the

set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a6

**Alarm Message:** P1 Gas8 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The interlock range (recipe parameter "Gas 8 Interlock Conditions Range") set in the recipe parameter was surpassed for the set time (recipe parameter "Gas 8 Interlock Conditions Time") when vacuuming. The amount of the gas can be checked at the following points. For both the set amount and monitor amount, the amount of 0-MAX is 0-5 V. Check whether the set amount meets the recipe and whether the monitor amount meets the set amount. UNITY: Set Amount; Between GAS I/O BOARD B TP24 and A. GND Monitor Amount; Between GAS I/O BOARD B TP16 and A. GND UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS TP14 and A. GND Monitor Amount; Between TYB211-A/GAS TP1 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 53a7

**Alarm Message:** P1 Cannot Execute Due to Vacuum

**Recovery:** Shut down and re-start up the machine if this alarm occurs after the process is stopped or retried.

**Cause:** Stopped due to improper processing when vacuuming and leak checks when executing automatic switching to the Maintenance Mode.

**ALARM NUMBER:** 53a8

**Alarm Message:** P1 Upper Reactor Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The Upper Electrode temperature exceeded the recipe parameter set value for interlock range (recipe parameter "Lower Elec. Temp Interlock Conditions Range") and the set time (recipe parameter "Lower Elec. Temp Interlock Conditions Time") was surpassed.

**ALARM NUMBER:** 53a9

**Alarm Message:** P1 Upper Reactor Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again.

**Cause:** The Upper Electrode temperature exceeded the recipe parameter set value for interlock range (recipe parameter "Lower Elec. Temp Interlock Conditions Range") and the set time (recipe parameter "Lower Elec. Temp Interlock Conditions Time") was surpassed.

**ALARM NUMBER:** 53aa

**Alarm Message:** Lower Wall Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again.

**Cause:** The Lower Wall temperature exceeded the recipe parameter set value for interlock range (recipe parameter "Wall Temp. Interlock Conditions Range") and the set time (recipe parameter "Wall Temp. Interlock Conditions Time") was surpassed.

**ALARM NUMBER:** 53ab

**Alarm Message:** Lower Wall Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfer the wafer out.

**Cause:** The Lower Wall temperature exceeded the recipe parameter set value for interlock range (recipe parameter "Wall Temp. Interlock Conditions Range") and the set time (recipe parameter "Wall Temp. Interlock Conditions Time") was surpassed.

**ALARM NUMBER:** 53ac

**Alarm Message:** Room Temp Timeout - Lower Wall Unit

**Recovery:** [Retry] Executes venting to atmosphere again after initialization. Press [Vent] to vent to atmosphere using the maintenance operation.

**Cause:** The temperature of the Lower Reactor was not in the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature", "Atmosphere Disable Lower Limit Temperature") within the designated time (temperature parameter "Lower Unit Atmosphere Disable Waiting Timeout" is used as the waiting time for reaching the Lower Wall temperature) when venting to atmosphere using the maintenance operation or at etcher initialization. This error will not occur when the temperature control of the Lower Wall (temperature parameter "Wall Temp Control") is not executed, or the room temperature control when venting to atmosphere (pressure parameter "Control to Set the Normal Temp. at Vent") is disabled.

**ALARM NUMBER:** 53ad

**Alarm Message:** Lower Reactor Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again.

**Cause:** The temperature of the Lower Reactor exceeded the recipe parameter set value for interlock range (recipe parameter "Lower Reaction Temp. Interlock Conditions Range") and the set time (recipe parameter "Lower Reaction Temp. Interlock Conditions Range") was surpassed.

**ALARM NUMBER:** 53ae

**Alarm Message:** Lower Reactor Temp Not at Set Value

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfer the wafer out.

**Cause:** The temperature of the Lower Reactor exceeded the recipe parameter set value for interlock range (recipe parameter "Lower Reaction Temp. Interlock Conditions Range") and the set time (recipe parameter "Lower Reaction Temp. Interlock Conditions Range") was surpassed.

**ALARM NUMBER:** 53af

**Alarm Message:** Room Temp Timeout - Lower Reactor Unit

**Recovery:** [Retry] Executes venting to atmosphere again after initialization. Press [Vent] to vent to atmosphere using the maintenance operation.

**Cause:** The temperature of the Lower Reactor was not in the designated temperature range (pressure parameter "Atmosphere Disable Upper Limit Temperature", "Atmosphere Disable Lower Limit Temperature") within the designated time (temperature parameter "Lower Unit Atmosphere Disable Waiting Timeout" is used as the waiting time for reaching the Lower Wall temperature) when venting to atmosphere using the maintenance operation or at etcher initialization. This error will not occur when the temperature control of the Lower Wall (temperature parameter "Wall Temp Control") is not executed, or the room temperature control when venting to atmosphere (pressure parameter "Control to Set the Normal Temp. at Vent") is disabled.

**ALARM NUMBER:** 53b0

**Alarm Message:** P1 Upper APC Temp Unstable

**Recovery:** The error is automatically cleared when the temperature of the upper APC is within the range.

**Cause:** The temperature of the upper APC is not within the range set in the P/C temperature parameter.

**ALARM NUMBER:** 53b1

**Alarm Message:** P1 Lower APC Temp Unstable

**Recovery:** The error is automatically cleared when the temperature of the lower APC is within the range.

**Cause:** The temperature of the lower APC is not within the range set in the P/C temperature parameter.

**ALARM NUMBER:** 5469

**Alarm Message:** P1 Gas 9 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 9 Stability Cond. Range", "Gas 9 Stability Cond. Time") when introducing the gas on Gas Line 9. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP15 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP8 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546a

**Alarm Message:** P1 Gas 10 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 10 Stability Cond. Range", "Gas 10 Stability Cond. Time") when introducing the gas on Gas Line 10. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP9 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP7 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546b

**Alarm Message:** P1 Gas 11 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 11 Stability Cond. Range", "Gas 11 Stability Cond. Time") when introducing the gas on Gas Line 11. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP10 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP6 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546c

**Alarm Message:** P1 Gas 12 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 12 Stability Cond. Range", "Gas 12 Stability Cond. Time") when introducing the gas on Gas Line 12. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP13 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP5 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546d

**Alarm Message:** P1 Gas 13 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 13 Stability Cond. Range", "Gas 13 Stability Cond. Time") when introducing the gas on Gas Line 13. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP16 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP4 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546e

**Alarm Message:** P1 Gas 14 Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 14 Stability Cond. Range", "Gas 14 Stability Cond. Time") when introducing the gas on Gas Line 14. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP11 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP3 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 546f

**Alarm Message:** P1 Gas 15 Stabilization Timeout

**Recovery:**

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 15 Stability Cond. Range", "Gas 15 Stability Cond. Time") when introducing the gas on Gas Line 15. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP12 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP2 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective. Reset: The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**ALARM NUMBER:** 5470

**Alarm Message:** P1 Gas 16 Stabilization Timeout

**Recovery:**

**Cause:** The set time (process recipe "Step Time") exceeded without meeting the recipe parameter setting value for the stability conditions (recipe parameter "Gas 16 Stability Cond. Range", "Gas 16 Stability Cond. Time") when introducing the gas on Gas Line 16. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP14 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP1 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective. Reset: The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**ALARM NUMBER:** 5471

**Alarm Message:** P1 Gas 9 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process



(electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 9 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 9 Interlock Conditions Range") when introducing the gas on Gas Line 9. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP15 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP8 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5472

**Alarm Message:** P1 Gas 10 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 10 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 10 Interlock Conditions Range") when introducing the gas on Gas Line 10. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP9 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP7 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5473

**Alarm Message:** P1 Gas 11 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 11 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 11 Interlock Conditions Range") when introducing the gas on Gas Line 11. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP10 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP6 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5474

**Alarm Message:** P1 Gas 12 Deviated from Stable



**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 12 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 12 Interlock Conditions Range") when introducing the gas on Gas Line 12. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP13 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP5 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5475

**Alarm Message:** P1 Gas 13 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 13 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 13 Interlock Conditions Range") when introducing the gas on Gas Line 13. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP16 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP4 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5476

**Alarm Message:** P1 Gas 14 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 14 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 14 Interlock Conditions Range") when introducing the gas on Gas Line 14. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP11 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP3 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5477

**Alarm Message:** P1 Gas 15 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 15 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 15 Interlock Conditions Range") when introducing the gas on Gas Line 15. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP12 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP2 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5478

**Alarm Message:** P1 Gas 16 Deviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The set time (recipe parameter "Gas 16 Interlock Conditions Time") exceeded the recipe parameter setting value for the interlock range (recipe parameter "Gas 16 Interlock Conditions Range") when introducing the gas on Gas Line 16. UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP14 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP1 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 5479

**Alarm Message:** P1 Upper Vdc Offset I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** Cause/Handling: An interlock for the upper Vdc offset value occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547a

**Alarm Message:** P1 Upper Vdc I/L Max: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the maximum value of the upper Vdc occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547b

**Alarm Message:** P1 Upper Vpp Offset I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the upper Vpp offset value occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547c

**Alarm Message:** P1 Upper Vpp I/L Max: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the maximum value of the upper Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547d

**Alarm Message:** P1 Upper Vpp I/L Min: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the minimum value of the upper Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547e

**Alarm Message:** P1 Upper Vpp Shift I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the amount of change of the upper Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 547f

**Alarm Message:** P1 Lower Vdc Offset I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the lower Vdc offset value occurred with the previously

processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5480

**Alarm Message:** P1 Lower Vdc I/L Max: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the maximum value of the upper Vdc occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5481

**Alarm Message:** P1 Lower Vpp Offset I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the lower Vpp offset value occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5482

**Alarm Message:** P1 Lower Vpp I/L Max: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the maximum value of the lower Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5483

**Alarm Message:** P1 Lower Vpp I/L Min: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** An interlock for the minimum value of the lower Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5484

**Alarm Message:** P1 Lower Vpp Shift I/L: Last Wafer (Pause)

**Recovery:** [Ignore] Cancels the wafer transfer in stop.

**Cause:** Cause/Handling: An interlock for the amount of change of the lower Vpp occurred with the previously processed wafer when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5485

**Alarm Message:** P1 Out of Range for APC Angle

**Recovery:** [Check] Open the alarm screen, and press the check button.

**Cause:** The APC control angle exceeded the set range when processing. The cause could be the reduction of the turbo pump exhaustion capacity or change of the exhaustion characteristics by deposition.

**ALARM NUMBER:** 5486

**Alarm Message:** P1 Upper Vdc Offset I/L (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** Cause/Handling: An interlock for the upper Vdc offset value occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5487

**Alarm Message:** P1 Upper Vdc Offset I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the upper Vdc offset value occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5488

**Alarm Message:** P1 Upper Vdc I/L Max (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the maximum value of the upper Vdc occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5489

**Alarm Message:** P1 Upper Vdc I/L Max (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the maximum value of the upper Vdc occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 548a

**Alarm Message:** P1 Upper Vpp Offset I/L (Pause)

**Recovery:**

**Cause:** An interlock for the upper Vpp offset value occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L. Reset: A warning is automatically cleared when transferring the wafer out.

**ALARM NUMBER:** 548b

**Alarm Message:** P1 Upper Vpp Offset I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the upper Vpp offset value occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 548c

**Alarm Message:** P1 Upper Vpp I/L Max (Pause)

**Recovery:**

**Cause:** An interlock for the maximum value of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L. Reset: A warning is automatically cleared when transferring the wafer out.

**ALARM NUMBER:** 548d

**Alarm Message:** P1 Upper Vpp I/L Max (Pause)

**Recovery:**

**Cause:** An interlock for the maximum value of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Reset: [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**ALARM NUMBER:** 548e

**Alarm Message:** P1 Upper Vpp I/L Min (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the minimum value of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 548f

**Alarm Message:** P1 Upper Vpp I/L Min (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the minimum value of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5490

**Alarm Message:** P1 Upper Vpp Shift I/L (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the amount of change of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5491

**Alarm Message:** P1 Upper Vpp Shift I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the amount of change of the upper Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5492

**Alarm Message:** P1 Lower Vdc Offset I/L (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the lower Vdc offset value occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5493

**Alarm Message:** P1 Lower Vdc Offset I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the lower Vdc offset value occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5494

**Alarm Message:** P1 Lower Vdc I/L Max (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the maximum value of the lower Vdc occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5495

**Alarm Message:** P1 Lower Vdc I/L Max (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the maximum value of the lower Vdc occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 5496

**Alarm Message:** P1 Lower Vpp Offset I/L (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the lower Vpp offset value occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5497

**Alarm Message:** P1 Lower Vpp Offset I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the lower Vpp offset value occurred when executing a recipe. Check the conditions inside the Process Chamber.



**ALARM NUMBER:** 5498

**Alarm Message:** P1 Lower Vpp I/L Max (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the maximum value of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 5499

**Alarm Message:** P1 Lower Vpp I/L Max (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the maximum value of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 549a

**Alarm Message:** P1 Lower Vpp I/L Min (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the minimum value of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 549b

**Alarm Message:** P1 Lower Vpp I/L Min (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the minimum value of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber.

**ALARM NUMBER:** 549c

**Alarm Message:** P1 Lower Vpp Shift I/L (Pause)

**Recovery:** A warning is automatically cleared when transferring the wafer out.

**Cause:** An interlock for the amount of change of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 549d

**Alarm Message:** P1 Lower Vpp Shift I/L (Pause)

**Recovery:** [Abort] Cancels the wafer transfer in stop and transfers the wafer out.

**Cause:** An interlock for the amount of change of the lower Vpp occurred when executing a recipe. Check the conditions inside the Process Chamber. Wafer processing will continue irrespective of this I/L.

**ALARM NUMBER:** 549e

**Alarm Message:** P1 Gas9 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 9 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP15 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP8 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 549f

**Alarm Message:** P1 Gas10 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 10 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP9 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP7 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a0

**Alarm Message:** P1 Gas11 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 11 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP10 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP6 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a1

**Alarm Message:** P1 Gas12 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 12 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP13 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP5 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a2

**Alarm Message:** P1 Gas13 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 13 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP16 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP4 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a3

**Alarm Message:** P1 Gas14 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 14 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP11 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP3 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a4

**Alarm Message:** P1 Gas15 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 15 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP12 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP2 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a5

**Alarm Message:** P1 Gas16 unstab at WF-Dis (Chuck OFF)

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** The amount of gas 16 exceeded the interlock range set in the recipe parameter when vacuuming (Chuck OFF). UNITY-Ver. 2: Set Amount; Between TYB211-A/GAS (for gases 9 to 16) TP14 and A. GND Monitor Amount; Between TYB211-A/GAS (for gases 9 to 16) TP1 and A. GND The gas does not flow properly if the voltage of the set amount differs from that of the monitor amount. The MFC could be defective.

**ALARM NUMBER:** 54a6

**Alarm Message:** P1 Out of Stabilization for Etching

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Executes recipes from step 1.

**Cause:** Process stopped as the upper limit (recipe parameter "Interlock Conditions Upper Limit") set in the recipe parameter was surpassed for the set time (recipe parameter "Interlock Conditions Upper T") when processing.

**ALARM NUMBER:** 54a7

**Alarm Message:** P1 Exceeded Upper Limit During Etching

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Executes recipes from step 1.

**Cause:** Process stopped as the upper limit (recipe parameter "Interlock Conditions Upper Limit") set in the recipe parameter was surpassed for the set time (recipe parameter "Interlock Conditions Upper T") when processing.

**ALARM NUMBER:** 54a8

**Alarm Message:** P1 Etching Stopped Due to Interlock

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Executes recipes from step 1.

**Cause:** Process stopped as an interlock relevant to the hardware is detected when processing.

**ALARM NUMBER:** 54a9

**Alarm Message:** P1 RF No Plasma Light Emission

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Executes

recipes from step 1.

**Cause:** Cause/Handling The RF light emission sensor could not confirm even though the timeout in the etcher parameters was exceeded. Check if the sensor is working normally. Check from the adjustment terminal to check the sensor. UNITY: Group ID=2, Local ID=34 (Low Active) UNITY-Ver. 2: Group ID=2, Local ID=120 (Low Active)

**ALARM NUMBER:** 54aa

**Alarm Message:** P1 End Point Detection Too Fast

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Execute Recipe in First step.

**Cause:** The step lower limit time was exceeded for the end point detection with the EPD execution step during processing. Check the process recipe conditions and the end point detection recipe conditions.

**ALARM NUMBER:** 54ab

**Alarm Message:** P1 End Point Detection Failure

**Recovery:** [Abort] Terminates the process and transfers the wafer out. [Retry] Execute Recipe in First step.

**Cause:** The end point could not be detected within the step time with the EPD stop during processing. Check the process recipe conditions and the end point detection recipe conditions.

**ALARM NUMBER:** 54ac

**Alarm Message:** P1 Spectre measuring Failure

**Recovery:** [Abort] Terminates spectrum measurements and transfers the wafer out. [Retry] Execute Recipe in First step.

**Cause:** Spectrum data was not collected even though the step time was exceeded when measuring EPD200 spectrum. Lengthen the step time. Full scale data collection (start wavelength/end wavelength/accuracy = 200.0 nm/800.0 nm/0.2 nm) takes about 3 minutes.

**ALARM NUMBER:** 54ad

**Alarm Message:** P1 DEGAS Running by BA Gauge

**Recovery:** After pressing [DEGAS OFF] in the maintenance mode, stop gas expulsion (Degas) processing of the BA gasuge, and then press [BA Measurements OFF] again.

**Cause:** BA gauge pressure measurement will not be performed because BA gauge DEGAS processing is being executed.

**ALARM NUMBER:** 54ae

**Alarm Message:** P/Cx CM is in unstability (Pause)

**Recovery:**

**Cause:** Can not transfer wafer to Process Chamber, because P/Cx CM is in unstability.

**ALARM NUMBER:** 54af

**Alarm Message:** CM is in unstability

**Recovery:**

**Cause:** Can not execute ZERO adjust of CM, because CM is in unstability.

**ALARM NUMBER:** 54b0

**Alarm Message:** P1 Pressure Control Timeout as Gate Open

**Recovery:**

**Cause:** The parameter setting value of Process Chamber pressure could not meet the stability requirements as executing gate open.

**ALARM NUMBER:** 54b1

**Alarm Message:** P1 Stop Discharge - Matcher Comm Error

**Recovery:** [Retry] Check it before making the discharge again. [Abort] Waiting the dispose of carrying out, after stopping the dispose of the discharge.

**Cause:** Because communication error happened in lower matcher, made the discharge stop. (Checked it before making the discharge.)

**ALARM NUMBER:** 54b2

**Alarm Message:** P1 Stop Etching - Matcher Comm Error

**Recovery:** [Retry] Making the process again. [Abort] Waiting the dispose of carrying out, after stopping the dispose of the process.

**Cause:** Because communication error happened in lower matcher, made the process stop. (Checked it before making the process.)

**ALARM NUMBER:** 54b3

**Alarm Message:** P1 Stop Etching - Matcher Comm Error

**Recovery:** [Abort] Waiting the dispose of carrying out, after stopping the dispose of the process.

**Cause:** Because communication error happened in lower matcher, made the process stop. (Checked it before making the process.)

**ALARM NUMBER:** 54b4

**Alarm Message:** P1 EPD202 Wave length setting is not end

**Recovery:** [Retry] Execute EPD202 Wave length setting again.

**Cause:** Can not detect end point, because EPD202 Wave length setting is not end.

**ALARM NUMBER:** 54b5

**Alarm Message:** Error of taking in P1 BA Analog value

**Recovery:**

**Cause:**

**ALARM NUMBER:** 54b6

**Alarm Message:** P1 BA DEGASS Error

**Recovery:**

**Cause:**

**ALARM NUMBER:** 54b7

**Alarm Message:** P1 ZERO Adjustment Error

**Recovery:**

**Cause:**

**ALARM NUMBER:** 54b8

**Alarm Message:** P1 Cannot etch - P/C recipe set up error

**Recovery:** [Abort] Waiting the dispose of carrying out, after stopping the dispose of the

process.

**Cause:** When the P/C module parameter "PIN DISCHARGE MEASURES" is Enable, the Action-Time of wafer-dis./chuck-off is set to ZERO. Please set the Action-Time of wafer-dis./chuck-off to over 1 second.

**ALARM NUMBER:** 54c3

**Alarm Message:** P1 Wafer Chuck is not normal

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process Stopped" when processing. The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The leakage flow of He exceeded the P1 parameter setting value for interlock (P1 Parameter (Wafer Coolant) ESC Leak Permission Flow Rate) when flowing in He gas with the wafer coolant line. Check the condition of Wafer chuck.

**ALARM NUMBER:** 54c4

**Alarm Message:** P1 Stop Etching Due to V65 Cannot Open

**Recovery:** [Abort] Waiting the dispose of carrying out, after stopping the dispose of the process.

**Cause:** Processing was stopping. Because when vacuuming He gas out of the wafer coolant line, it was not done normally. Check the operations of V65, V67.

**ALARM NUMBER:** 54c5

**Alarm Message:** P1 Stop Etching Due to V66 Cannot Open

**Recovery:** [Abort] Waiting the dispose of carrying out, after stopping the dispose of the process.

**Cause:** Processing was stopping. Because when vacuuming He gas out of the wafer coolant line, it was not done normally. Check the operations of V66, V68.

**ALARM NUMBER:** 54c6

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** Warning will be automatically cleared when the H2 Gas detector alarm is cancelled.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you. The process of all the units has stops. Transfer of wafers in and out of all process units is



disabled. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Local ID=172 (Low Active)

**ALARM NUMBER:** 54c7

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** Warning will be automatically cleared when the Dry Pump N2 Gas alarm is cancelled.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than setvalue. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54c8

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** Warning will be automatically cleared when P/C Pressure is lower than above value.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value. Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54c9

**Alarm Message:** H2 Gas Leakage

**Recovery:** Warning will be automatically cleared when the H2 Gas detector alarm is cancelled.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Group ID=1, Local ID=131 (Low Active)

**ALARM NUMBER:** 54ca

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** Warning will be automatically cleared when the H2 Gas detector alarm is cancelled.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you. The process of all the units has stops. Transfer of wafers in and out of all process units is disabled. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Local ID=172 (Low Active)

**ALARM NUMBER:** 54cb

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** Warning will be automatically cleared when the Dry Pump N2 Gas alarm is cancelled.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than set value. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54cc

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** Warning will be automatically cleared when P/C Pressure is lower than above value.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value. Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54cd

**Alarm Message:** H2 Gas Leakage

**Recovery:** [Retry] The process when the error happened will be execute from the Beginning. [Abort] Stop the Maintenance Auto Return, and return maintenance.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54ce

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** [Retry] The process when the error happened will be execute from the Beginning. [Abort] Stop the Maintenance Auto Return, and return maintenance.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54cf

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** [Retry] The process when the error happened will be execute from the Beginning. [Abort] Stop the Maintenance Auto Return, and return maintenance.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than set value. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54d0

**Alarm Message:** H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54d1

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54d2

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than set value. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54d3

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** [Retry] Executes from the check before executing the process again. [Abort] Stops processing and waits for transfer out.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value. Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54d4

**Alarm Message:** H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and wait for transfer in.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54d5

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and wait for transfer in.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54d6

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and wait for transfer in.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than set value. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54d7

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** [Retry] Executes from the check before discharging the static electricity again. [Abort] Stops discharging the static electricity and wait for transfer in.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value. Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54d8

**Alarm Message:** H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before executing the initialize again.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54d9

**Alarm Message:** P1 H2 Gas Leakage

**Recovery:** [Retry] Executes from the check before executing the initialize again.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you.

**ALARM NUMBER:** 54da

**Alarm Message:** P1 N2 Gas in the Dry Pump Dropped

**Recovery:** [Retry] Executes from the check before executing the initialize again.

**Cause:** N2 gas flow that is supplied to Dry Pump is lower than set value. Please check N2 gas flow and N2 gas set value.

**ALARM NUMBER:** 54db

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** [Retry] Executes from the check before executing the initialize again.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value.  
Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54dc

**Alarm Message:** P1 Valve Closed Due to High Pressure

**Recovery:** [Retry] The process when the error happened will be execute from the Beginning. [Abort] Stop the Maintenance Auto Return, and return maintenance.

**Cause:** Gas valve is closed because P/C pressure became higher than the following value.  
Use H2 gas: 1.33E+3 Pa (10 Torr) DRM (Not use H2 gas): 6.65E+3 Pa (50 Torr) PE, A-IEM (Not use H2 gas): 9.58E+4 Pa (720 Torr) P/C pressure is watched by Pressure Switch.

**ALARM NUMBER:** 54dd

**Alarm Message:** H2 Gas Leakage

**Recovery:** Warning will be automatically cleared when the H2 Gas detector alarm is cancelled.

**Cause:** H2 Gas detector detected H2 Gas Leak. Please check your safety around you. Check the alarm signal from the Adjustment Terminal. An error occurs under the following conditions. Group ID=1, Local ID=131 (Low Active)

**ALARM NUMBER:** 54de

**Alarm Message:** P1 Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=179 (Low Active)

**ALARM NUMBER:** 54df

**Alarm Message:** P1 Pump-N2 does not Flow

**Recovery:** Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and the error is cleared when the N2-Alarm signal from the pump is confirmed.

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=180 (Low Active)

**ALARM NUMBER:** 54e0

**Alarm Message:** P1 Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** Cause/Handling; A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=179 (Low Active)

**ALARM NUMBER:** 54e1

**Alarm Message:** P1 Pump-N2 does not Flow

**Recovery:** [Retry] Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and press [Retry].

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the

adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID 180 (Low Active)

**ALARM NUMBER:** 54e2

**Alarm Message:** P1 Pump-N2 does not Stop

**Recovery:** The error is cleared when the N2-Warning signal from the pump is confirmed.

**Cause:** A dry pump-N2 warning occurred when Pump Save Function is enable. This Warning is not stop N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=179 (Low Active)

**ALARM NUMBER:** 54e3

**Alarm Message:** P1 Pump-N2 does not Flow

**Recovery:** [Retry] Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and press [Retry].

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=180 (Low Active)

**ALARM NUMBER:** 54e4

**Alarm Message:** P1 Pump-N2 does not Flow

**Recovery:** [Abort] Terminates the process and waits for transfer out.

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=180 (Low Active)

**ALARM NUMBER:** 54e5

**Alarm Message:** P1 Pump-N2 does not Flow

**Recovery:** [Retry] Press the Alarm Reset Button on the Pump-N2 Control Box Panel, and press [Retry]. [Abort] Terminates electrostatic discharge and wait for transfer in.

**Cause:** A dry pump-N2 Alarm occurred when Pump Save Function is enable. This Alarm does not flow N2-Flow at A dry-pump. Check the condition of the appropriate dry pump and check the pump controller display (Monitor Display and LED). Check from the adjustment terminal to check the alarm signal. An error will occur with the following conditions. UNITY Ver. 2: Local ID=180 (Low Active)

**ALARM NUMBER:** 54e6

**Alarm Message:** P1 Pump-Save ISO Valve Cannot Close

**Recovery:** [Accept] The error message is cleared.

**Cause:** ISO valve (V42) cannot be closed during Pump Save Function when the PC module parameter is set to [ISO Valve Select at TMP seal up "CLOSE"]. There is a possibility that ISO Valve close action wasn't completed inside 5 seconds or CLOSE sensor of ISO valve (V42) is out of order. Shift to maintenance and check the ISO valve (V42) OPEN/CLOSE action.

**ALARM NUMBER:** 54e7

**Alarm Message:** P1 Gap Position not exist

**Recovery:** [Retry] The Gap will move to the same position as before.

**Cause:** Because there is not the set value for the Gap action in the P1 parameter "Position A of Air Cylinder Gap", "Position B of Air Cylinder Gap", "Position C of Air Cylinder Gap", "Position D of Air Cylinder Gap", "Position E of Air Cylinder Gap", it is impossible to move Gap. Please Check the setting of Gap in the recipe and P1 parameter of equipment. Please shift to the maintenance mode in order to modify the Gap setting in recipe.

**ALARM NUMBER:** 54e8

**Alarm Message:** P1 Gap Position not exist

**Recovery:** [Abort] Move the wafer out from process chamber.

**Cause:** Because there is not the set value for the Gap action in the P1 parameter "Position A of Air Cylinder Gap", "Position B of Air Cylinder Gap", "Position C of Air Cylinder Gap", "Position D of Air Cylinder Gap", "Position E of Air Cylinder Gap", it is impossible to move Gap. Please Check the setting of Gap in the recipe and P1 parameter of equipment. Please shift to the maintenance mode in order to modify the Gap setting in recipe.

**ALARM NUMBER:** 54e9

**Alarm Message:** P1 Gap Position not exist



**Recovery:**

**Cause:** Because there is not the set value for the Gap action in the P1 parameter "Position A of Air Cylinder Gap", "Position B of Air Cylinder Gap", "Position C of Air Cylinder Gap", "Position D of Air Cylinder Gap", "Position E of Air Cylinder Gap", it is impossible to move Gap. Please Check the setting of Gap in the recipe and P1 parameter of equipment. Please shift to the maintenance mode in order to modify the Gap setting in recipe.

**ALARM NUMBER:** 54ea

**Alarm Message:** P1 Gap Position not exist

**Recovery:** [Retry] The Gap will move to the same position as before. [Abort] Move the wafer out from process chamber.

**Cause:** Because there is not the set value for the Gap action in the P1 parameter "Position A of Air Cylinder Gap", "Position B of Air Cylinder Gap", "Position C of Air Cylinder Gap", "Position D of Air Cylinder Gap", "Position E of Air Cylinder Gap", it is impossible to move Gap. Please Check the setting of Gap in the recipe and P1 parameter of equipment. Please shift to the maintenance mode in order to modify the Gap setting in recipe.

**ALARM NUMBER:** 54eb

**Alarm Message:** Undefined P1 Gap Position

**Recovery:**

**Cause:** Because indefinite Gap position (outside the set up value in the P1 parameter "Position A of Air Cylinder Gap", "Position B of Air Cylinder Gap", "Position C of Air Cylinder Gap", "Position D of Air Cylinder Gap", "Position C of Air Cylinder Gap"), Gap cannot move.

**ALARM NUMBER:** 54ec

**Alarm Message:** P1 Setting EPD Type is wrong

**Recovery:** Please confirm setting, and reactivate the device.

**Cause:** Setting EPD Type is different by setting the device parameter and hardness. It is time when it is set EPD Type of the device parameter at "EPD302", and hard (EPD ROM Version) are and there is a possibility for "EPD202".

**ALARM NUMBER:** 54ed

**Alarm Message:** P1 FCS Reset error End

**Recovery:** [Retry] Make vacuuming of process chamber again, after the initial the UNITY equipment, or press [initialize] again in maintenance mode.

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54ee

**Alarm Message:** P1 FCS Reset error End

**Recovery:**

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54ef

**Alarm Message:** P1 FCS Reset error End

**Recovery:**

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f0

**Alarm Message:** P1 FCS Evacuation error End

**Recovery:** [Retry] Make vacuuming of process chamber again, after the initial the UNITY equipment, or press [initialize] again in maintenance mode.

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f1

**Alarm Message:** P1 FCS Evacuation error End

**Recovery:**

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f2

**Alarm Message:** P1 FCS Evacuation error End

**Recovery:**

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f3

**Alarm Message:** P1 Stop Etching - FCS error End

**Recovery:** [Retry] Make vacuuming of process chamber again. [Abort] Terminates process and transfers the wafer out.

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f4

**Alarm Message:** P1 Stop ESC Due to FCS error End

**Recovery:** [Retry] Make vacuuming of process chamber again. [Abort] Terminates discharge and transfers the wafer out.

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f5

**Alarm Message:** P1 Stop Discharge Less - FCS error End

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates discharge less and transfers the wafer out.

**Cause:** FCS exhaust was executed for the set time (timeout parameter "FCS Gas Line Exhaust Time"), but the expected flow (FCS) was not reached.

**ALARM NUMBER:** 54f6

**Alarm Message:** P1 FCS Evacuation Timeout

**Recovery:** [Retry] Make vacuuming of process chamber again, after the initial the UNITY equipment, or press [initialize] again in maintenance mode.

**Cause:** FCS exhaust was executed for the set time, but the expected pressure was not reached.

**ALARM NUMBER:** 54f7

**Alarm Message:** P1 FCS Evacuation Timeout

**Recovery:**

**Cause:** FCS exhaust was executed for the set time, but the expected pressure was not reached.

**ALARM NUMBER:** 54f8

**Alarm Message:** P1 FCS Evacuation Timeout

**Recovery:**

**Cause:** FCS exhaust was executed for the set time, but the expected pressure was not reached.

**ALARM NUMBER:** 54f9

**Alarm Message:** P1 Stop Etching - FCS Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates process and transfers the wafer out.

**Cause:** The FCS vacuum pull was executed for the set time, but the expected pressure was not reached so processing was terminated.

**ALARM NUMBER:** 54fa

**Alarm Message:** P1 Stop ESC Due to FCS Evacuation Timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates ESC and transfers the wafer out.

**Cause:** The FCS vacuum pull was executed for the set time, but the Expected pressure was not reached so static electricity discharge was terminated.

**ALARM NUMBER:** 54fb

**Alarm Message:** P1 Stop Discharge Less Due to FCS timeout

**Recovery:** [Retry] Executes vacuum pull again. [Abort] Terminates discharge less and transfers the wafer out.

**Cause:** The designated pressure (pressure parameter "FCS Vacuum End Pressure") was not achieved within the designated time (pressure parameter "FCS Vacuum End Timeout") for FCS vacuum before and after executing the process.

**ALARM NUMBER:** 54fc

**Alarm Message:** P1 Matching Box Power Off (Pause)

**Recovery:** The error is cleared when the Matching Box power is ON.

**Cause:** Matching Box power not ON was detected. Check if the Matching Box power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. With the Adjustment Terminal on UNITY: Local ID=17 (High Active) With the Adjustment Terminal on UNITY-Ver. 2: Local ID=138 (High Active)

**ALARM NUMBER:** 54fd

**Alarm Message:** P1 RF Not Remote (Pause)

**Recovery:** The error is cleared when the RF power unit is Remote Mode.

**Cause:** The RF power unit is not Remote Mode. Check if the RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. With the Adjustment Terminal on UNITY: Local ID=121 (High Active) With the Adjustment Terminal on UNITY-Ver. 2 Upper RF: Local ID=123 (Low Active) With the Adjustment Terminal on UNITY-Ver. 2 Lower RF: Local ID=34 (Low Active)

**ALARM NUMBER:** 54fe

**Alarm Message:** P1 HF.RF Reflect Lower Timeout

**Recovery:** [Abort] Waiting the dispose of carrying out, after stopping the dispose of the process.

**Cause:** The process was terminated because HF.RF reflect was not lower than setting values of the recipe parameter "HF.RF Ref Power", after passing the setting time of recipe parameter "HF.RF Ref Timeout" when LF.RF were powered on.

**ALARM NUMBER:** 54ff

**Alarm Message:** P1 HF.RF Power Off (Pause)

**Recovery:** The error is cleared when the HF.RF Generator power is ON.

**Cause:** HF.RF Generator power not ON was detected. Check if the HF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=121 (High Active)

**ALARM NUMBER:** 5500

**Alarm Message:** P1 LF.RF Power Off (Pause)

**Recovery:** The error is cleared when the LF.RF Generator power is ON.

**Cause:** LF.RF Generator power not ON was detected. Check if the LF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=132 (High Active)

**ALARM NUMBER:** 5501

**Alarm Message:** P1 HF.RF Power Off

**Recovery:** The error is cleared when the HF.RF Generator power is ON.

**Cause:** HF.RF Generator power not ON was detected. Check if the HF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=121 (High Active)

**ALARM NUMBER:** 5502

**Alarm Message:** P1 LF.RF Power Off

**Recovery:** The error is cleared when the LF.RF Generator power is ON.

**Cause:** LF.RF Generator power not ON was detected. Check if the LF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=132 (High Active)

**ALARM NUMBER:** 5503

**Alarm Message:** P1 Stopped Initialize - HF.RF Power Off

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** HF.RF Generator power not ON was detected before initialization. Check if the HF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=121 (High Active)

**ALARM NUMBER:** 5504

**Alarm Message:** P1 Stopped Initialize - LF.RF Power Off

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** LF.RF Generator power not ON was detected before initialization. Check if the LF.RF Generator power is ON. Check from the adjustment terminal to check the sensor.

An error will occur with the following conditions. Adjustment Terminal: Local ID=132 (High Active)

**ALARM NUMBER:** 5505

**Alarm Message:** P1 Stopped Etching - HF.RF Power Off

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** HF.RF Generator power not ON was detected before executing the process and RF Power output. Check if the HF.RF Generator power is not ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=121 (High Active)

**ALARM NUMBER:** 5506

**Alarm Message:** P1 Stopped Etching - LF.RF Power Off

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** LF.RF Generator power not ON was detected before executing the process and RF Power output. Check if the LF.RF Generator power is not ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=132 (High Active)

**ALARM NUMBER:** 5507

**Alarm Message:** P1 Stopped ESC - HF.RF Power Off

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** HF.RF Generator power not ON was detected before electrostatic discharge and RF Power output. Check if the HF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=121 (High Active)

**ALARM NUMBER:** 5508

**Alarm Message:** P1 Stopped ESC - LF.RF Power Off

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in. 5509

**Cause:** LF.RF Generator power not ON was detected before electrostatic discharge and

RF Power output. Check if the LF.RF Generator power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=132 (High Active)

**ALARM NUMBER:** 5509

**Alarm Message:** P1 HF.RF Not Remote (Pause)

**Recovery:** The error is cleared when the HF.RF power unit is Remote Mode.

**Cause:** The HF.RF power unit is not Remote Mode. Check if the HF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=123 (High Active)

**ALARM NUMBER:** 550a

**Alarm Message:** P1 LF.RF Not Remote (Pause)

**Recovery:** The error is cleared when the LF.RF power unit is Remote Mode.

**Cause:** The LF.RF power unit is not Remote Mode. Check if the LF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=134 (High Active)

**ALARM NUMBER:** 550b

**Alarm Message:** P1 HF.RF Not Remote

**Recovery:** The error is cleared when the HF.RF power unit is Remote Mode.

**Cause:** The HF.RF power unit is not Remote Mode. Check if the HF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=123 (High Active)

**ALARM NUMBER:** 550c

**Alarm Message:** P1 LF.RF Not Remote

**Recovery:** The error is cleared when the LF.RF power unit is Remote Mode.

**Cause:** The LF.RF power unit is not Remote Mode. Check if the LF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=134 (High Active)

**ALARM NUMBER:** 550d

**Alarm Message:** P1 Stopped Init - HF.RF Not in Remote



**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** HF.RF power is not in Remote Mode so initialization was terminated. Check if the HF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=123 (High Active)

**ALARM NUMBER:** 550e

**Alarm Message:** P1 Stopped Init - LF.RF Not in Remote

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** LF.RF power is not in Remote Mode so initialization was terminated. Check if the LF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=134 (High Active)

**ALARM NUMBER:** 550f

**Alarm Message:** P1 Stopped Etching - HF.RF Not in Remote

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** HF.RF power is not in Remote Mode so processing was terminated. Check if the HF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=123 (High Active)

**ALARM NUMBER:** 5510

**Alarm Message:** P1 Stopped Etching - LF.RF Not in Remote

**Recovery:** [Abort] Terminates the process and transfers the wafer out.

**Cause:** LF.RF power is not in Remote Mode so processing was terminated. Check if the LF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=134 (High Active)

**ALARM NUMBER:** 5511 Message P1 Stopped ESC - HF.RF Not in Remote

**Alarm Message:**

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** HF.RF power is not in Remote Mode so static electricity discharge was terminated. Check if the HF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.  
Adjustment Terminal: Local ID=123 (High Active)

**ALARM NUMBER:** 5512

**Alarm Message:** P1 Stopped ESC - LF.RF Not in Remote

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** LF.RF power is not in Remote Mode so static electricity discharge was terminated. Check if the LF.RF power unit is Remote Mode. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.  
Adjustment Terminal: Local ID=134 (High Active)

**ALARM NUMBER:** 5513

**Alarm Message:** P1 HF Matcher Power Off (Pause)

**Recovery:** The error is cleared when the HF Matcher power is ON.

**Cause:** HF Matcher power not ON was detected. Check if the HF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=138 (High Active)

**ALARM NUMBER:** 5514

**Alarm Message:** P1 LF Matcher Power Off (Pause)

**Recovery:** The error is cleared when the LF Matcher power is ON.

**Cause:** LF Matcher power not ON was detected. Check if the LF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=197 (High Active)

**ALARM NUMBER:** 5515

**Alarm Message:** P1 HF Matcher Power Off

**Recovery:** The error is cleared when the HF Matcher power is ON.

**Cause:** HF Matcher power not ON was detected. Check if the HF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=138 (High Active)

**ALARM NUMBER:** 5516

**Alarm Message:** P1 LF Matcher Power Off

**Recovery:** The error is cleared when the LF Matcher power is ON.

**Cause:** LF Matcher power not ON was detected. Check if the LF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=197 (High Active)

**ALARM NUMBER:** 5517

**Alarm Message:** P1 Stopped Init - HF Matcher Pow Off

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** HF Matcher power not ON was detected before initialization. Check if the HF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=138 (High Active)

**ALARM NUMBER:** 5518

**Alarm Message:** P1 Stopped Init - LF Matcher Pow Off

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** LF Matcher power not ON was detected before initialization. Check if the LF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=197 (High Active)

**ALARM NUMBER:** 5519

**Alarm Message:** P1 Stopped Etching - HF Matcher Pow Off

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** HF Matcher power not ON was detected before executing the process and RF Power output. Check if the HF Matcher power is not ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=138 (High Active)

**ALARM NUMBER:** 551a

**Alarm Message:** P1 Stopped Etching - LF Matcher Pow Off

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** LF Matcher power not ON was detected before executing the process and RF Power output. Check if the LF Matcher power is not ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.  
Adjustment Terminal: Local ID=197 (High Active)

**ALARM NUMBER:** 551b

**Alarm Message:** P1 Stopped ESC - HF Matcher Pow Off

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** HF Matcher power not ON was detected before electrostatic discharge and RF Power output. Check if the HF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.  
Adjustment Terminal: Local ID=138 (High Active)

**ALARM NUMBER:** 551c

**Alarm Message:** P1 Stopped ESC - LF Matcher Pow Off

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** LF Matcher power not ON was detected before electrostatic discharge and RF Power output. Check if the LF Matcher power is ON. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.  
Adjustment Terminal: Local ID= 197 (High Active)

**ALARM NUMBER:** 551d

**Alarm Message:** P1 HF.RF Power Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** Time Setting (Process Recipe "Step Time", Recipe Parameter "HF.RF Power Stability Conditions Time" x 2 in case of continue step different HF.RF power set value) passed before reached the recipe parameter setting value interlock range (Recipe Parameter "HF.RF Power Stability Conditions Range", "HF.RF Power Stability Conditions Time") when setting HF.RF power.

**ALARM NUMBER:** 551e

**Alarm Message:** P1 LF.RF Power Stabilization Timeout

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** Time Setting (Process Recipe "Step Time", Recipe Parameter "LF.RF Power Stability Conditions Time" x 2 in case of continue step different LF.RF power set value) passed before reached the recipe parameter setting value interlock range (Recipe Parameter "LF.RF Power Stability Conditions Range", "LF.RF Power Stability Conditions Time") when setting LF.RF power.

**ALARM NUMBER:** 551f

**Alarm Message:** P1 HF.RF Power Daviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "HF.RF Power Interlock Conditions Range") exceeded the set time (Recipe Parameter "HF.RF Power Interlock Conditions Time") when setting HF.RF power.

**ALARM NUMBER:** 5520

**Alarm Message:** P1 LF.RF Power Daviated from Stable

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock range (Recipe Parameter "LF.RF Power Interlock Conditions Range") exceeded the set time (Recipe Parameter "LF.RF Power Interlock Conditions Time") when setting LF.RF power.

**ALARM NUMBER:** 5521

**Alarm Message:** P1 HF.RF Reflect Power Exceed Up Limit

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock upper limit (Recipe Parameter "HF.RF Reflect Power Interlock Conditions Upper Limit") exceeded the set time (Recipe Parameter "HF.RF Reflect Power Interlock Conditions Time") when setting HF.RF

power.

**ALARM NUMBER:** 5522

**Alarm Message:** P1 LF.RF Reflect Power Exceed Up Limit

**Recovery:** The error is automatically cleared when the alarm to the effect that "Process (electrostatic discharge) Stopped" when processing (electrostatic discharge). The error is automatically cleared when maintenance is performed with the Maintenance Mode.

**Cause:** The recipe parameter setting value interlock upper limit (Recipe Parameter "LF.RF Reflect Power Interlock Conditions Upper Limit") exceeded the set time (Recipe Parameter "LF.RF Reflect Power Interlock Conditions Time") when setting LF.RF power.

**ALARM NUMBER:** 5523 Message P1 HF.RF Reflect Lower Timeout

**Alarm Message:**

**Recovery:** [Retry] Executes from the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** The process was terminated because HF.RF reflect was not lower than setting values of the recipe parameter "HF.RF Ref Power", after passing the setting time of recipe parameter "HF.RF Ref Timeout" when LF.RF were powered on.

**ALARM NUMBER:** 5524

**Alarm Message:** P1 HF.RF Interlock (Pause)

**Recovery:** The error is cleared when release from HF.RF Generator power interlock.

**Cause:** HF.RF Generator power interlock was detected. Check if the HF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=124 (Low Active)

**ALARM NUMBER:** 5525

**Alarm Message:** P1 LF.RF Interlock (Pause)

**Recovery:** The error is cleared when release from LF.RF Generator power interlock.

**Cause:** LF.RF Generator power interlock was detected. Check if the LF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=135 (Low Active)

**ALARM NUMBER:** 5526

**Alarm Message:** P1 HF.RF Interlock

**Recovery:** The error is cleared when release from HF.RF Generator power interlock.

**Cause:** HF.RF Generator power interlock was detected. Check if the HF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=124 (Low Active)

**ALARM NUMBER:** 5527

**Alarm Message:** P1 LF.RF Interlock

**Recovery:** The error is cleared when release from LF.RF Generator power interlock.

**Cause:** LF.RF Generator power interlock was detected. Check if the LF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=135 (Low Active)

**ALARM NUMBER:** 5528

**Alarm Message:** P1 Stopped Initialize - HF.RF Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** HF.RF Generator power interlock was detected before initialization. Check if the HF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=124 (Low Active)

**ALARM NUMBER:** 5529

**Alarm Message:** P1 Stopped Initialize - LF.RF Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** LF.RF Generator power interlock was detected before initialization. Check if the LF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=135 (Low Active)

**ALARM NUMBER:** 552a

**Alarm Message:** P1 Stopped Etching - HF.RF Interlock

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]  
Terminates the process and transfers the wafer out.

**Cause:** HF.RF Generator Power Interlock was detected before executing the process and RF Power output. Check if the HF.RF Generator power Interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=124 (Low Active)

**ALARM NUMBER:** 552b

**Alarm Message:** P1 Stopped Etching - LF.RF Interlock

**Recovery:** [Retry] Executes from check before executing the process again. [Abort]  
Terminates the process and transfers the wafer out.

**Cause:** LF.RF Generator Power Interlock was detected before executing the process and RF Power output. Check if the LF.RF Generator power Interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=135 (Low Active)

**ALARM NUMBER:** 552c

**Alarm Message:** P1 Stopped ESC - HF.RF Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort]  
Terminates electrostatic discharge and transfers the wafer in.

**Cause:** HF.RF Generator power Interlock was detected before electrostatic discharge and RF Power output. Check if the HF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=124 (Low Active)

**ALARM NUMBER:** 552d

**Alarm Message:** P1 Stopped ESC - LF.RF Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort]  
Terminates electrostatic discharge and transfers the wafer in.

**Cause:** LF.RF Generator power Interlock was detected before electrostatic discharge and RF Power output. Check if the LF.RF Generator power interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=135 (Low Active)

**ALARM NUMBER:** 552e

**Alarm Message:** P1 HF Matcher Interlock (Pause)



**Recovery:** The error is cleared when release from HF Matcher interlock. 5

**Cause:** HF Matcher interlock was detected. Check if the HF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=161 (High Active)

**ALARM NUMBER:** 552f

**Alarm Message:** P1 LF Matcher Interlock (Pause)

**Recovery:** The error is cleared when release from LF Matcher interlock.

**Cause:** LF Matcher interlock was detected. Check if the LF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=162 (High Active)

**ALARM NUMBER:** 5530

**Alarm Message:** P1 HF Matcher Interlock

**Recovery:** The error is cleared when release from HF Matcher interlock.

**Cause:** HF Matcher interlock was detected. Check if the HF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=161 (High Active)

**ALARM NUMBER:** 5531

**Alarm Message:** P1 LF Matcher Interlock

**Recovery:** The error is cleared when release from LF Matcher interlock.

**Cause:** LF Matcher interlock was detected. Check if the LF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=162 (High Active)

**ALARM NUMBER:** 5532

**Alarm Message:** P1 Stopped Initialize - HF Matcher Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** HF Matcher interlock was detected before initialization. Check if the HF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=161 (High Active)

**ALARM NUMBER:** 5533

**Alarm Message:** P1 Stopped Initialize - LF Matcher Interlock

**Recovery:** [Retry] Executes from check before initializing again.

**Cause:** LF Matcher interlock was detected before initialization. Check if the LF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=162 (High Active)

**ALARM NUMBER:** 5534

**Alarm Message:** P1 Stopped Etching - HF Matcher Interlock

**Recovery:** [Retry] Executes from check before executing the process again. [Abort] Terminates the process and transfers the wafer out.

**Cause:** HF Matcher Interlock was detected before executing the process and RF Power output. Check if the HF Matcher Interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=161 (High Active)

**ALARM NUMBER:** 5535

**Alarm Message:** P1 Stopped Etching - LF Matcher Interlock

**Recovery:** [Retry] Executes from check before executing the process again [Abort] Terminates the process and transfers the wafer out.

**Cause:** LF Matcher Interlock was detected before executing the process and RF Power output. Check if the LF Matcher Interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=162 (High Active)

**ALARM NUMBER:** 5536

**Alarm Message:** P1 Stopped ESC - HF Matcher Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** HF Matcher Interlock was detected before electrostatic discharge and RF Power output. Check if the HF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions. Adjustment Terminal: Local ID=161 (High Active)

**ALARM NUMBER:** 5537

**Alarm Message:** P1 Stopped ESC - LF Matcher Interlock

**Recovery:** [Retry] Executes from check before electrostatic discharge again. [Abort] Terminates electrostatic discharge and transfers the wafer in.

**Cause:** The contents of the cause of alarms of the 6000, 7000 and 8000 ranges are the same as those of the LF Matcher Interlock was detected before electrostatic discharge and RF Power output. Check if the LF Matcher interlock occur. Check from the adjustment terminal to check the sensor. An error will occur with the following conditions.

Adjustment Terminal: Local ID=162 (High Active)5000 range (subtract 1000, 2000 or 3000 from the 6000, 7000 or 8000 ID number). However, the units where the alarms occurred in the 5000 range are for P1. For the 6000 range they are for P2; for the 7000 range they are P3; for the 8000 they are for P4. Also, the group ID when the adjustment terminal is used, P1 changes to 2, P2 to 3, P3 to 4 and P4 to 5

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## 2.6 Alarms Relating to the C/C and T/C Communications

**ALARM NUMBER:** e000

**Alarm Message:** C/C Timeout Error Between Chars

**Recovery:** The alarm message is cleared when the time between characters is within the time restrictions when transmitting from the Pump Controller.

**Cause:** The time between characters exceeded the time restrictions (150 m/s) 3 times consecutively in command transmission from the C/C Pump Controller. Check that the connectors of the pump controller are securely connected.

**ALARM NUMBER:** e001

**Alarm Message:** C/C Data End Mark Not Detected

**Recovery:** The alarm message is cleared when the end mark of the data received from the Pump Controller is detected within the LENGTH.

**Cause:** The data received from the C/C Pump Controller exceeded the LENGTH and the end mark could not be detected. Check the connections of the connectors of the Pump Controller.

**ALARM NUMBER:** e002

**Alarm Message:** C/C Framing Error

**Recovery:** The alarm is cleared when there is no FRAMING error in the reception from the Pump Controller.

**Cause:** A FRAMING error occurred when receiving from the C/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** e003

**Alarm Message:** C/C Rx Overrun Error

**Recovery:** The error message is cleared when there is no Rx OVERRUN error when receiving data from the Pump Controller.

**Cause:** An Rx OVERRUN error occurred in the data received from the C/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** e004

**Alarm Message:** C/C Parity Error

**Recovery:** The error message is cleared when there is no PARITY error when receiving data from the Pump Controller.

**Cause:** A PARITY error occurred in the data received from the C/C Pump Controller 3 times consecutively. Check the connections of the connectors on the Pump Controller.

**ALARM NUMBER:** e005

**Alarm Message:** C/C Checksum Error

**Recovery:** The alarm message is cleared when the checksum of the data received from the Pump Controller is normal.

**Cause:** There were 3 consecutive checksum errors in the data received from the C/C Pump Controller. Check the connections of the connectors on the Pump Controller.

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## 2.7 Alarms Relating to the Online with the Host

**ALARM NUMBER:** f001

**Alarm Message:** Unknown stream received (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the stream number was undefined.

**ALARM NUMBER:** f002

**Alarm Message:** Unknown function received (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the function number was undefined.

**ALARM NUMBER:** f003

**Alarm Message:** Invalid W-Bit (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the W-BIT was incorrect.

**ALARM NUMBER:** f004

**Alarm Message:** Invalid message format (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the data format was incorrect.

**ALARM NUMBER:** f005

**Alarm Message:** Unknown device ID recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the device ID was incorrect.

**ALARM NUMBER:** f006

**Alarm Message:** T4 timed out (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message (SxFx) of T4 Timer (SECS inter-block timeout) entered timeout.

**ALARM NUMBER:** f007

**Alarm Message:** Received abort message (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** An abort message (SxF0) was received during communications with the Host.

**ALARM NUMBER:** f008

**Alarm Message:** Too short message recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the message was too short.

**ALARM NUMBER:** f009

**Alarm Message:** Unknown transaction (1st) (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) during communications with the Host was broken because the message header was duplicated.

**ALARM NUMBER:** f00a

**Alarm Message:** Unknown secondary received (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** An incorrect secondary message (SxFx) was received during communications with the Host.

**ALARM NUMBER:** f00b

**Alarm Message:** HCI: Unknown error (0 ch) S0F0

**Recovery:**

**Cause:** Not Used.

**ALARM NUMBER:** f00c

**Alarm Message:** T3 timeout (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The response to the message (SxFx) was not received within the T3 Timer (SECS/HSMS reply timeout) during communications with the Host.

**ALARM NUMBER:** f00d

**Alarm Message:** T1 timeout (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** A T1 Timer (SECS inter-character timeout) timeout was detected during communications with the Host.

**ALARM NUMBER:** f00e

**Alarm Message:** T2 timeout out (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** A T2 Timer (SECS protocol timeout) timeout was detected during communications with the Host.

**ALARM NUMBER:** f00f

**Alarm Message:** T7 timeout (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** After completion of TCP/IP connection, it did not switch to Select status within the T7 Timer (HSMS SELECTED timeout) during communications with the Host.

**ALARM NUMBER:** f010

**Alarm Message:** T8 timeout (0 ch)



**Recovery:** Accept The error message is cleared.

**Cause:** The next data stream was not received within T8 Timer (HSMS inter-character timeout) during communications with the Host.

**ALARM NUMBER:** f011

**Alarm Message:** Check-Sum error (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** A checksum error was detected with the message (SxFx) received and it was broken during communications with the Host.

**ALARM NUMBER:** f012

**Alarm Message:** Parity error (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** A PARITY error was detected with the message (SxFx) received during communications with the Host.

**ALARM NUMBER:** f013

**Alarm Message:** HSMS: Illegal connected host name (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The connected Host name is incorrect during communications with the Host (HSMS). Check the circuit parameters.

**ALARM NUMBER:** f014

**Alarm Message:** Too many transaction recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message received (SxFx) exceeded the max. transaction count during communications with the Host and was broken. Change the circuit parameters.

**ALARM NUMBER:** f015

**Alarm Message:** Secondary no response (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** A message (SxFx) could not be responded during communications with the Host.

**ALARM NUMBER:** f016

**Alarm Message:** Not communicating (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because the communications status is uncertain, the message (SxFx) transmission failed during communications with the Host.

**ALARM NUMBER:** f017

**Alarm Message:** Retry over (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because retries exceeded with the transmission message (SxFx) during communications with the Host, the message could not be transmitted. Check if the connection with the Host is physically stable.

**ALARM NUMBER:** f018

**Alarm Message:** SX: Request overflow (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The Host communications transmission request overflowed during communications with the Host. There is the possibility that the message to the Host stopped. Restart the etcher when the current process is completed without placing in a new cassette.

**ALARM NUMBER:** f019

**Alarm Message:** SX: Parameter error (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The communication settings with the Host deviated from the circuit parameters. Check the circuit parameter range and restart.

**ALARM NUMBER:** f01a

**Alarm Message:** SX: Not supported (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The designated communications method is not currently supported with the communications with the Host. Change to another communications method.

**ALARM NUMBER:** f01b

**Alarm Message:** SX: Illegal physical sh state. (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** There is a physical state error during communications with the Host. Re-close and re-open the circuit.

**ALARM NUMBER:** f01c

**Alarm Message:** Unknown transaction (1st) (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because a matching conversation cannot be found during communications with the Host, the primary message (SxFx) transmission failed.

**ALARM NUMBER:** f01d

**Alarm Message:** HSMS: Connect retrying (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Retry TCP/IP connections during communications (HSMS) with the Host.

**ALARM NUMBER:** f01e

**Alarm Message:** Conversation time out (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message (SxFx) was not received within the conversation timer during communications with the Host.

**ALARM NUMBER:** f01f

**Alarm Message:** HCI: Unknown error (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** An untranslatable error occurred during communications with the Host.

**ALARM NUMBER:** f020

**Alarm Message:** HSMS: Passive timeout (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The circuit could not TCP/IP connect within the designated time during communications with the Host (HSMS). Close the circuit, change the circuit parameter passive timeout value and reopen.

**ALARM NUMBER:** f021

**Alarm Message:** SX: Format error (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** A circuit parameter format error occurred during communications with the Host. Restart the etcher when the current process is completed without placing in a new cassette.

**ALARM NUMBER:** f022

**Alarm Message:** SX: Duplicated physical channel (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The designated physical circuit is already in use during communications with the Host. Change the settings to use a different circuit.

**ALARM NUMBER:** f023

**Alarm Message:** SX: Duplicated logical channel (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The designated circuit number is already in use during communications with the Host. Change the settings to use a different circuit.

**ALARM NUMBER:** f024

**Alarm Message:** SX: Duplicated device ID (0ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The designated device ID (or session ID) is already in use during communications with the Host. Change the circuit parameters.

**ALARM NUMBER:** f025

**Alarm Message:** SX: Unknown physical channel (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** An undefined physical circuit number was designated during communications with the Host. Change the circuit settings.

**ALARM NUMBER:** f026

**Alarm Message:** SX: Unknown logical channel (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** An undefined circuit number was designated during communications with the Host. Change the circuit settings.

**ALARM NUMBER:** f027

**Alarm Message:** SX: Physical channel over flow (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The physical circuit input numbers were exceeded during communications with the Host. Change the circuit parameters.

**ALARM NUMBER:** f028

**Alarm Message:** SX: Device ID error (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The designated physical circuit device file could not be opened during communications with the Host. Check the device file name.

**ALARM NUMBER:** f029

**Alarm Message:** HSMS: Select error (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The circuit HSMS select status was disabled during communications (HSMS) with the Host.

**ALARM NUMBER:** f02a

**Alarm Message:** Unknown transaction (2nd) (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because a matching conversation cannot be found during communications with the Host, the secondary message (SxFx) transmission failed.

**ALARM NUMBER:** f02b

**Alarm Message:** Unknown transaction (HSMS) (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because a matching conversation cannot be found during communications (HSMS) with the Host, HSMS control message transmission failed.

**ALARM NUMBER:** f02c

**Alarm Message:** Unknown transaction (Abort) (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** Because a matching conversation cannot be found during communications with the Host, the conversation abort request was broken.

**ALARM NUMBER:** f02d

**Alarm Message:** Aborted send request (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message (SxFx) transmission was not possible because the transaction count that can be opened was exceeded during communications with the Host.

**ALARM NUMBER:** f02e

**Alarm Message:** Invalid block received (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message (SxFx) received was broken because the Block Number was not consecutive during communications with the Host.

**ALARM NUMBER:** f02f

**Alarm Message:** Too long message recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The length of the message (SxFx) received was too long during communications with the Host. Change the circuit parameters.

**ALARM NUMBER:** f030

**Alarm Message:** T6 timed out (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The HSMS control message response was not received within the T6 Timer (HSMS control transaction timeout).

**ALARM NUMBER:** f031

**Alarm Message:** HSMS: Unknown S type received (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** An undefined S Type message was received during communications (HSMS) with the Host.

**ALARM NUMBER:** f032

**Alarm Message:** HSMS: Unknown P type received (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** An undefined P Type message was received during communications (HSMS) with the Host.

**ALARM NUMBER:** f033

**Alarm Message:** HSMS: Invalid control received (2nd) (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** An incorrect control secondary message was received during communications with the Host.

**ALARM NUMBER:** f034

**Alarm Message:** HSMS: Data recv. no selected (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** A message (SxFx) was received although the circuit is not in the select status during communications with the Host.

**ALARM NUMBER:** f035

**Alarm Message:** HSMS: Separate.req recv. (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** A separate message was received during communications (HSMS) with the Host

**ALARM NUMBER:** f036

**Alarm Message:** HSMS: Invalid session ID recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** An undefined session ID message (SxFx) was received during communications (HSMS) with the Host.

**ALARM NUMBER:** f037

**Alarm Message:** HSMS: Too long message recv. (0 ch) S0F0

**Recovery:** Accept The error message is cleared.

**Cause:** The message (SxFx) received exceeded the maximum message length and was broken during communications (HSMS) with the Host.

**ALARM NUMBER:** f038

**Alarm Message:** HSMS: 2nd connection established (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** A new TCP/IP connection was established so the previous TCP/IP connection was broken during communications (HSMS) with the Host.

**ALARM NUMBER:** f039

**Alarm Message:** HSMS: Connection failed (0 ch)

**Recovery:** Accept The error message is cleared.

**Cause:** The TCP/IP connection failed during communications (HSMS) with the Host.  
Close the circuit and re-open.

**ALARM NUMBER:** f03a

**Alarm Message:** HSMS: Control message no response (0 ch)



**Recovery:** Accept The error message is cleared.

**Cause:** The HSMS control message response could not be received during communications (HSMS) with the Host.

**ALARM NUMBER:** f03b

**Alarm Message:** C1 Wafer Count Error

**Recovery:** Use the external Host communications equipment to disable.

**Cause:** The C1 wafer count designated by the Host did not match the actual number of wafers in the etcher.

**ALARM NUMBER:** f03c

**Alarm Message:** C2 Wafer Count Error

**Recovery:** Use the external Host communications equipment to disable.

**Cause:** The 2 wafer count designated by the Host did not match the actual number of wafers in the etcher.

**ALARM NUMBER:** f03d

**Alarm Message:** HOST Interface Adapter Alarm

**Recovery:** Accept The error message is cleared.

**Cause:** An alarm occurred on the Host communications equipment connected externally. Inspect the Host communications equipment.

**ALARM NUMBER:** f03e

**Alarm Message:** HOST Interface Adapter Message Alarm

**Recovery:** Accept The error message is cleared.

**Cause:** A message error was detected on the external Host communications equipment. Check the external Host communications equipment.

**ALARM NUMBER:** f03f

**Alarm Message:** HOST Interface Adapter Operation

**Recovery:** Accept The error message is cleared.

**Cause:** An illegal operation was performed on the external Host communications equipment. Inspect the external Host communications equipment.

**ALARM NUMBER:** f040

**Alarm Message:** Bar Code Read Error

**Recovery:** Accept The error message is cleared.

**Cause:** A read alarm occurred on the Bar Code Reader.

**ALARM NUMBER:** f041

**Alarm Message:** Bar Code Read Failure

**Recovery:** Accept The error message is cleared.

**Cause:** The Bar Code Read failed.

**ALARM NUMBER:** f042

**Alarm Message:** Host Interface Adapter Transfer Alarm

**Recovery:** Accept The error message is cleared.

**Cause:** A communications error occurred on the external Host communications equipment. Check the external Host communications equipment.

**ALARM NUMBER:** f043

**Alarm Message:** Host Interface Adapter Down

**Recovery:** Accept The error message is cleared.

**Cause:** It appears that the external communications equipment failed. Inspect (restart) the external Host communications equipment.

**ALARM NUMBER:** f044

**Alarm Message:** C1 Slot Information Error

**Recovery:** Accept The error message is cleared.

**Cause:** The C1 wafer position slot information designated from the Host did not match the actual wafer position slot information.

**ALARM NUMBER:** f045

**Alarm Message:** C2 Slot Information Error

**Recovery:** Accept The error message is cleared.

**Cause:** The C2 wafer position slot information designated from the Host did not match the actual wafer position slot information.

**ALARM NUMBER:** f046

**Alarm Message:** P1 E/R or Particle Out of SPC. Chamber

**Recovery:** Accept The error message is cleared.

**Cause:** Etching rate or particles are outside the designated range.

**ALARM NUMBER:** f047

**Alarm Message:** P2 E/R or Particle Out of SPC. Chamber

**Recovery:** Accept The error message is cleared.

**Cause:** Etching rate or particles are outside the designated range.

**ALARM NUMBER:** f048

**Alarm Message:** P3 E/R or Particle Out of SPC. Chamber

**Recovery:** Accept The error message is cleared.

**Cause:** Etching rate or particles are outside the designated range.

**ALARM NUMBER:** f049

**Alarm Message:** C1 Unexpected Cassette Detected

**Recovery:**

**Cause:** A cassette was placed before insert command. Remove the cassette.

**ALARM NUMBER:** f04a

**Alarm Message:** C2 Unexpected Cassette Detected

**Recovery:**

**Cause:** A cassette was placed before insert command. Remove the cassette.

**ALARM NUMBER:** f04b

**Alarm Message:** C1 Wafer Unmatched

**Recovery:** Accept The error message is cleared.

**Cause:** Wafer information designated from the host and the mapping results of the machine do not match.

**ALARM NUMBER:** f04c

**Alarm Message:** C2 Wafer Unmatched

**Recovery:** Accept The error message is cleared.

**Cause:** Wafer information designated from the host and the mapping results of the machine do not match.

**ALARM NUMBER:** f04d

**Alarm Message:** EQ Constant data verify NG

**Recovery:** Accept The error message is cleared.

**Cause:** A machine constant verify NG for the machine and host was detected.

**ALARM NUMBER:** f04e

**Alarm Message:** P1 Maintenance reset failure

**Recovery:** Accept The error message is cleared.

**Cause:** Maintenance canceling from the host failed.

**ALARM NUMBER:** f04f

**Alarm Message:** P2 Maintenance reset failure

**Recovery:** Accept The error message is cleared.

**Cause:** Maintenance canceling from the host failed.

**ALARM NUMBER:** f050

**Alarm Message:** P3 Maintenance reset failure

**Recovery:** Accept The error message is cleared.

**Cause:** Maintenance canceling from the host failed.



# Acronym List

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<b>ANSI</b>	American National Standards Institute. The primary organization for fostering the development of technology standards in the United States. ANSI works with industry groups and is the U.S. member of the International Standards Organization (ISO) and the International Electrotechnical Commission (IEC).
<b>bit</b>	<b>B</b> inary digit.
<b>CMOS</b>	Complimentary metal oxide semiconductor.
<b>DIP</b>	Dual-in-line package.
<b>DRAM</b>	Dynamic Random Access Memory.
<b>EPROM</b>	Electrically programmable read-only memory.
<b>GHOST</b>	General high-speed optimum scalable transceiver, the serial communication network that keeps the machine running. GHOST communications use the RS485 standard.
<b>ISO</b>	International Standards Organization.
<b>LOCOS</b>	<b>L</b> ocal <b>O</b> xidation of <b>S</b> ilicon. Masked oxidation near the silicon surface to provide electronic isolation between devices. Made possible by relatively slow oxidation of silicon nitride, used as a mask. To prevent dopant diffusion, oxidation is done at low temperature and high pressure. (The interested reader should search the World Wide Web, specifically, <a href="http://www.onelook.com">http://www.onelook.com</a> , for related terms: ROx, Dielectric isolation, junction isolation.)
<b>MIC/MOC</b>	Move in complete/move out complete. The switch used for loading and unloading wafers on the loadport.
<b>Modem</b>	<b>M</b> odulator/ <b>d</b> emodulator.
<b>MUX</b>	<b>M</b> ultiplexer.
<b>OSHA</b>	The Occupational Safety and Health Administration in the United States.

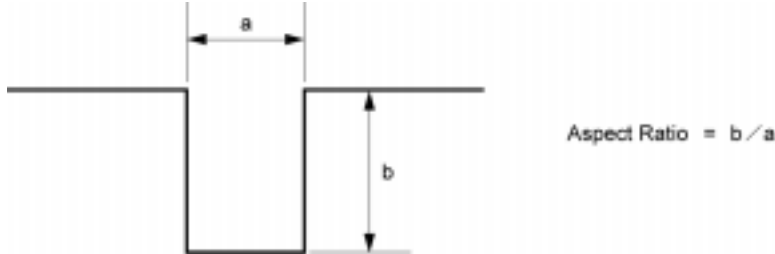
<b>PBET</b>	Performance-based equipment training.
<b>RAM</b>	Random-access memory.
<b>ROM</b>	Read-only memory.
<b>SAC</b>	Self-aligned contact recipe; typically 16 sccm of C4F8, 400 sccm of argon, 300 sccm of carbon monoxide. <i>See</i> sccm.
<b>sccm</b>	Standard cubic centimeters per minute; commonly called “skims.”
<b>SECS</b>	SEMI Equipment Communication Standard. This is the communication standard for data communications between the etch system controller and the host controller. It specifies the message transfer protocol with electrical signal levels based on the EIA RS232-C standard.
<b>SEMI</b>	Semiconductor Equipment and Materials International, Inc. An international trade organization with membership from companies that supply equipment, materials, and services used in the semiconductor manufacturing industry.
<b>SMIF</b>	Standard mechanical interface.
<b>VAT</b>	Vacuum advanced technology.



# Glossary

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<b>AC</b>	Alternating current.
<b>active type</b>	The atom or molecule that absorbs energy, gets excited, and enters a state at which a chemical reaction can easily occur.
<b>A/D</b>	Analog-to-digital. A circuit that converts an analog signal to a digital signal.
<b>address</b>	The label or number identifying the memory location where a unit of information is stored.
<b>adjust</b>	To maintain or regulate within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
<b>AGC</b>	Automatic gain control system, which allows accurate end-point detection (EPD) measurement.
<b>A.GND</b>	Analog ground.
<b>AGV</b>	Automatic Guided Vehicle. This vehicle transports wafer cassettes to and from the etcher.
<b>AI</b>	Analog input. Continuous input or input having a continuous range of values, as opposed to having discrete values like digital input.
<b>air-purifying respirator</b>	A respirator that uses chemical to remove specific gases and vapors from the air or a filter to remove particulates. An air-purifying respirator must be used only when there is a sufficient amount of oxygen and the air contaminate level is below the concentration limits of the device.
<b>algorithm</b>	A procedure or formula for solving a problem. A computer program and a process recipe can both be viewed as an elaborate algorithm.
<b>ambient pressure</b>	In mass flow controllers, the absolute pressure of the medium surrounding the device. (SEMI E28-92)

<b>AMHS</b>	Automated Material Handling System.
<b>angstrom</b>	Equivalent to 1.0 E-10 meters in length. The unit notation is Å.
<b>anisotropic etching</b>	A term that derives its meaning from isotropic etching. Isotropic etching is when the etching speed of the pattern depth in the vertical direction is equal to or less than the etching speed in the horizontal directions. When the etching speed in the depth direction is greater than that of the horizontal direction, the etching speed gains directionality, attaining anisotropic etching. As a principle, anisotropic etching depends on the directionality of the positive ion within the plasma. <i>See</i> dry etching.
<b>anode</b>	The positive electrode. The upper electrode of the DRM etcher.
<b>AO</b>	Analog output. Continuous output or output having a continuous range of values, as opposed to having discrete values like digital output.
<b>APC</b>	Adaptive pressure controller. Also known as an automatic pressure controller. Depending on the model, it is a butterfly valve or a pendulum valve.
<b>aspect ratio</b>	Ratio of the etched pattern in the vertical direction to the horizontal direction.
	
<b>assembly</b>	Two or more parts or subassemblies joined together to perform a specific function and capable of disassembly.
<b>atmosphere (atm)</b>	A unit of pressure equal to 101.325 kPa, which is mean air pressure measured at sea level.
<b>ATC</b>	After treatment chamber. An additional type of chamber installed on some models of TEL etchers.

**atmospheric pressure**

Pressure equal to the pressure exerted by a vertical column of mercury 760mm high at a temperature of 0°C and under standard gravity. Stated in other units of measure it is equal to 760 torr, 101.325 kPa, or 1.0 atmosphere.

**attribute** In Windows and MS-DOS systems, information about a file that indicates whether a file is a read-only file, a hidden file, or a system file.

**B-A gauge** The Bayrd-Alpert gauge provides a measure of the ultimate pressure of the process chamber for the purpose of making zero adjustments for the convectron gauge and capacitance manometer.

**base pressure** That pressure which is typically reached when the chamber is clean, empty and dry.

**batch** A group of wafers intended for a process sequence, as opposed to single-wafer processing.

**baud** A unit of telecommunications signalling speed equal to the number of code elements per second. Not the same as bits per second (bps).


**BCB** Benzocyclobutene, a spin-on coating polymer with silicon.

**bellows** A flexible tube that can expand and contract lengthwise while withstanding pressure radially.

**bencotton** A wiper without an IPA solution.

**block diagram** A modified schematic diagram in which each group of maintenance-significant components that together perform one or more functions is represented by a single symbol or block. The block or symbol representing the group of components shows simplified relevant input and output signals pertinent to the subject diagram.

**BNC** Bayonet Neil-Concelman connector: a small device for connecting coaxial cables, used frequently in low power, radio-frequency, and test applications.

<b>bowing shape</b>	Bowing is the state at which side wall passivation is inefficient, causing horizontal etching to occur non-uniformly at various depths of the pattern. It occurs when the angle of incidence of the ions is multi-directional, sometimes resulting in the etching of the lower portions of the mask formed by photo resist. In this case, etching widens the hole diameter or the pattern width in proportion to the ion's angle of incidence. The mask becomes misshapen. As a preventive measure, align the ion directional or use an etching gas that improves sideways protection.
<b>BP</b>	Back pressure. Helium back pressure (He B.P.) is pressure due to the force of the electrostatic clamping of the wafer to the ESC that operates in a direction opposite of the Helium gas flow.
<b>bps</b>	Bits per second. A unit of data transmission that specifies the instantaneous speed at which a device or channel transmits data. <i>See</i> baud.
<b>brine</b>	Recirculating fluid for the chiller. Also known as Galden.
<b>BTA</b>	Batch Transfer Arm. A robotic arm designed with a set of multi-level end effectors (or "tines") used for transporting entire batches of substrates into and out of the cassette chamber.
<b>C4F8</b>	Chemical symbols for perfluorocyclobutane, an etching gas.
<b>C5F8</b>	Chemical symbols for octafluorocyclopentene.
<b>calibrate</b>	To determine and cause corrections or adjustments to be made to instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
<b>carrier handle</b>	A tool for transporting cassettes.
<b>cassette</b>	An open structure that holds one or more substrates. Also known as a carrier. <i>See</i> the following illustration.
	
<b>cathode</b>	The negative electrode of the etcher (DRM: lower electrode; PE: upper electrode).

**caution** A safety label found throughout the system and the documentation. Caution labels are yellow and indicate potentially hazardous situations which, if not avoided, may result in minor or moderate injury. See the following example.



In these manuals the word “CAUTION” with its accompanying graphic signals a visual hazard alert that indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. (ANSI Z535.4)

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If used without the safety alert symbol, the caution indicates a potentially hazardous situation which, if not avoided, may result in property damage.

**C/C** Cassette chamber. Also known as CC.

**CDA** Compressed dry air.

**CCD** Charged coupled device.

**Celsius** A temperature scale that has zero degrees at the freezing point and 100 degrees at the boiling point of water.

**check** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (that is, by sight, sound, or feel).

**cleanroom** A confined area in which the humidity, temperature, particulate matter, and contamination are precisely controlled within specified parameters.

**CM** Capacitance manometer.

**CMP** The chemical mechanical polish used to remove surface metal in a damascene process. *See* damascene.

**conduction** The conveying of electrical or thermal energy through or by means of a conductor.

**COM** The COM board (TYB-121) translates GHOST signals into RS232C signals and vice versa.

<b>CONT</b>	The CONT board is the “sister” board to the INL board. It receives signals from the etcher body and distributes them to the main controller module. (TYB-414)
<b>contaminant</b>	An unwanted substance present in the cleanroom or on the product wafer.
<b>contamination</b>	The presence of particles, chemicals, and other undesirable substances, such as on or in a process tool, a process liquid, or a cleanroom environment.
<b>COO</b>	Cost of ownership.
<b>component</b>	A constituent part not normally considered to be capable of independent operation; a piece part.
<b>corrosive</b>	A chemical that can destroy or irreversibly change the structure of the tissue at the site of contact following an exposure period.
<b>CPF</b>	Command platform.
<b>CPU</b>	Central processing unit.
<b>CVD</b>	Chemical vapor deposition. In semiconductor technology, a process in which a controlled chemical reaction produces a thin surface film.
<b>D/A</b>	Digital-to-analog circuit. It converts a digital signal to an analog signal.
<b>damascene</b>	The method of inlaying metal in desired locations during the chip fabrication process, rather than pouring it on and then etching it away from where it is not wanted. <i>See</i> non-damascene.
<b>DC</b>	Direct current. An electric current flowing in one direction only and substantially constant in value.

**DANGER** A safety label found throughout the system and the documentation. Danger labels are red and indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury. See the example below.



In these manuals the word “DANGER” with its accompanying graphic signals a visual hazard alert that indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. (ANSI Z535.4).

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**dedicated purge gas cylinder**

A cylinder of gas dedicated to the task of purging undesirable gas from piping manifolds.

**degree of hazard** The inherent ability of a chemical to do harm due to its toxicity, corrosiveness, flammability, or other characteristics, and the potential for that chemical to contact persons or the environment.

**deposition** See CVD.

**DI** Digital input. An input signal that represents the size of an input in the form of a series of discrete quantities.

**differential pressure** In mass flow controllers (MFC): the difference in absolute pressure between two points of measurement in a system. As applies to MFC, differential pressure is usually the measured difference between the gas inlet and outlet fittings of the MFC.

**DIO** Digital input/output. The digital input/output (DIO) board (TYB-112) converts GHOST signals into digital outputs for two-state devices, like valves. It also turns status of digital inputs (sensors) into GHOST signals to the ECC.

**DIP switch** A dual inline package (DIP) switch is a unit with several small rocker-type switches that are on a printed circuit board.

**disable** To prevent the output despite an input signal. Disabling is used to prevent false or unwanted signals from triggering the control.

**dissociation** The splitting of molecules due to receiving external energy.

<b>dopant</b>	In silicon technology, a chemical element incorporated in trace amounts in a semiconductor crystal or epitaxial layer to establish its conductivity type and resistivity.
<b>DO</b>	Digital output. An output signal that represents the size of an input in the form of a series of discrete quantities.
<b>DP</b>	Dry pump.
<b>DPM</b>	Dual port memory.
<b>DRM</b>	Dipole ring magnet.
<b>dry plasma etching</b>	A process that brings the wafer into contact with a plasma created in a gas. The plasma either physically or chemically interacts with the wafer and removes (etches away) unwanted material. Dry etching is primarily an anisotropic etching process. <i>See</i> isotropic etching. Also known as dry etch and plasma etch. Compare to reactive ion etch.
<b>dust</b>	A discrete particle of material on a wafer or reticle, usually removable by the solvent cleaning method.
<b>dummy wafer</b>	A noncritical wafer added to a load-sensitive operation or run to complete a load of the equipment or process. Dummy wafers are never measured. Also known as filler wafers or filler dummies.
<b>ECC</b>	Equipment Controller Concept. A TEL standard for controllers.
<b>ECC controller</b>	The main digital computer controller that continuously receives process data, processes it as programmed, presents the data, and automatically acts on the equipment to correct any deviation from desired preset values (parameters).
<b>elbow</b>	The joint on the robot's arms between the inner and outer arm members.
<b>electrolytic dissociation</b>	Division of the atom into the elements of electron and atomic nucleus. The atom that loses the electron becomes a positively charged ion.
<b>elevator</b>	A device used to vertically position wafers in a cassette, or on a BTA. The elevator is also known as an indexer.
<b>emf</b>	Electromotive force.



<b>EMI</b>	Electromagnetic interference. Electrical noise that can interfere with proper operation of sensors, controllers, and other sensitive electronic equipment. Common sources of EMI include lighting fixtures and controls, motors, generators, and contactors. EMI emissions are distributed evenly across the radio frequency spectrum. Emissions are readily conducted along cables.
<b>EMO</b>	Emergency machine off.
<b>encoder</b>	Apparatus consisting of a measuring standard and a scanning unit (transducer or sensor).
<b>end-point detection (EPD)</b>	Optical end-point detection stops the etch process based on the intensity changes of selected wavelengths; unlike timed etches, optical endpoint detection can compensate for variations in material thickness.
<b>energy isolating device</b>	A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following: a manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors of a circuit can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolating devices.
<b>enthalpy</b>	The latent or potential heat in a substance based on its chemical properties—the magnitude of the ability to react.
<b>EOC</b>	End of conversion.
<b>EPD</b>	End-point detection.
<b>epitaxial growth</b>	The growth of semiconductor film on the crystal substrate.
<b>epitaxial deposition</b>	The deposition of a single crystal layer on a substrate so the crystal structure of the deposited layer matches the crystal structure of the substrate.
<b>ESC</b>	Electrostatic chuck; the RF power producer for plasma production.

<b>etch</b>	A category of lithographic processes that removes unwanted material from selected areas of a wafer by physical or chemical means in a controlled manner; examples are nitride etch and oxide etch. <i>See</i> wet etching and dry plasma etching.
<b>etch rate</b>	Etching speed per unit time. The value of the remaining etched material thickness on a blanket wafer or depth of a feature divided by the etching time. One m shaved in two minutes makes the etch rate 0.5 m/min.
<b>error</b>	An error situation is one where the machine requires the user to initialize or perform some other corrective action to enable the machine to function properly.
<b>excitation</b>	The state in which the atom (molecule) at its most stable energy level, in the ground state, receives energy and becomes active.
<b>extend</b>	To move outward. For the robot arm this is movement outward (away from the robot's body). For the elevator, this is movement upward. <i>Also see</i> retract.
<b>fab</b>	The main manufacturing facility for processing semiconductor wafers.
<b>FDD</b>	Floppy disk drive.
<b>FG</b>	Frame ground.
<b>fiber optic</b>	Also known as optical fiber. The term refers to the medium and the technology associated with the transmission of information as light pulses along a glass or plastic wire or fiber. Optical fiber carries much more information than conventional copper wire and is in general not subject to electromagnetic interference and the need to retransmit signals.
<b>field</b>	A specified area of the screen used for a particular category of data.
<b>firmware</b>	Firmware is programming that is inserted into programmable read-only memory (PROM), thus becoming a permanent part of a computing device.
<b>fixed load</b>	Area in front of the cassette chamber. The FOUP is set on top of the fixed load or the tray. <i>Also see</i> FOUP.
<b>flammable</b>	Any solid, liquid, vapor, or gas that ignites easily and burns rapidly. U.S. regulatory agencies define a flammable liquid as having a flash point below 37.8°C (100°F).

<b>flag</b>	A piece of opaque material that interrupts the beam in an optical sensor when a moving mechanism reaches a defined point in its travel.
<b>flat</b>	A flat area on the wafer that provides for wafer orientation during wafer fabrication. <i>See</i> notch.
<b>FM</b>	Foreign material.
<b>fork</b>	A two-pronged transport module designed to hold the wafer, also known as a pick.
<b>FOUP</b>	Front opening unified pod, designed to carry 300 mm wafers.
<b>FPD</b>	Flat panel display, also known as the touch screen.
<b>gas</b>	A material that is shipped in compressed gas cylinders or acts as a gas upon release at normal temperatures and pressure.
<b>GAS board</b>	The GAS control board (TYB-211) translates GHOST signals into analog outputs for MFC set points and digital outputs for valve positions. It reports status to the ECC based on analog inputs for MFC status and digital inputs for interlock switches (doors and pressure switches).
<b>gas cylinder</b>	In the design of gas source equipment enclosures, a high-pressure compressed gas cylinder governed by Department of Transportation (DOT) regulations, or a non-DOT low pressure container used for liquid product having low vapor pressure.
<b>gas temperature</b>	In a mass flow controller, the actual temperature of the flowing gas at the primary flow standard.
<b>gauge pressure</b>	The pressure above (or below) atmospheric. Represents positive difference between measured pressure and existing atmospheric pressure. Can be converted to absolute by adding actual atmospheric pressure value.
<b>grey room</b>	The maintenance area of a partitioned clean room. Typically this area is not filtered as well as the clean room.
<b>H end</b>	The side of the wafer cassette that resembles the shape of the letter H. <i>See</i> U end.



**hardwired interlocks**

An electromechanical connection through which interlock conditions are verified.

**hazardous energy** Energy of 20 Joules or more, or an available continuous power level of 240 VA or more, at a potential of 2V or more.

**hazardous gases** Gases supplied in cylinders that are listed in National Fire Protection Association (NFPA) 49 with a degree of hazard rating 3 to 4 in Health, Flammability, or Reactivity.

**hazardous materials** Those chemicals or substances that are physical hazards or health hazards as defined and classified in National Fire Protection Association (NFPA) 704, whether the materials are in use or in waste conditions.

**hazard signs** *See* DANGER, WARNING, and CAUTION.

**handshake** An interface procedure that is based on status/data signals that assure orderly data transfer as opposed to asynchronous exchange. The furnace uses a handshake when establishing host communications.

**HDD** Hard disk drive.

**health hazards** A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects may occur in exposed persons.

**hexadecimal** Refers to a base sixteen number system using the characters 0 through 9 and A through F to represent the values. Machine language programs are often written in hexadecimal notation.

**home position** The home position is a position along the axis where the unit stops when the system is ready to process wafers or when it is ready to run automation operations. The home position is a predetermined position either set when the automation is in teach mode or it is stored in a automation ROM chip.

**host** In automated material movement, the intelligent system that communicates with the equipment. This is also known as a bank controller or a group controller (AGC).

**hot work** *See* SEMI hot work levels.

**HPC** High pressure cutout.

<b>HTC</b>	High temperature cutout.
<b>Hz</b>	Hertz. A term applied to the number of repetitions of a periodic wave per second.
<b>icon</b>	A graphical functional symbol display. A graphic representation of a function or functions to be performed by the computer.
<b>ILD</b>	Interlayer dielectric.
<b>IDLH</b>	Immediately dangerous to life and health.
<b>input</b>	<b>1.</b> Data that is entered into a system. <b>2.</b> The signal or stimulus put into a circuit. Compare digital input and analog input.
<b>inspect</b>	To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (that is, by sight, sound, or feel).
<b>interface</b>	The means by which two devices are connected and interact with each other.
<b>interlock</b>	Interlocks are software, firmware, or hardware switches that interrupt the control program, or prevent activation of the automation or other components of the furnace when a hazard exists, such as when a protective door or panel is open.
<b>interference</b>	Overlapping or contact between parts.
<b>initialize</b>	A series of steps that (a) drive a component along its axis until it trips a limit sensor allowing the controller to synchronize the encoder count (software axis position) with the real-world axis position, and (b) move the component to its home position where it is ready to process wafers or run automation operations.
<b>ion sheath</b>	Faraday dark space that exists between the cathode and the plasma. The positive ion receives energy in this region. Also known as dark space.
<b>I/O</b>	Input/Output.
<b>IPA</b>	Isopropyl Alcohol ( $[\text{CH}_3]_2\text{CHOH}$ ). A volatile flammable liquid secondary alcohol made by hydration of propylene by means of sulfuric acid. Used as a solvent and as a source of rubbing alcohol. Often mixed with water for a diluted solution.

<b>irritant</b>	A chemical that is not corrosive but can cause a reversible inflammatory effect on living tissue by chemical action at the site of contact.
<b>ISO</b>	Isolation valve.
<b>isotropic etching</b>	<i>See</i> wet etching.
<b>keyboard</b>	Displayed on the touch screen, uses a QWERTY keyboard format.
<b>kgf/cm2</b>	A measure of torque. Kilogram of force per square centimeter.
<b>Kinematic coupling</b>	A registering mechanism commonly employed in 300 mm equipment, consisting of three pins and corresponding mating surfaces, also known as Kinematic pins.
<b>kPa</b>	Kilo (thousand) Pascals. 1 kPa is equal to 1,000 Pascals or 0.145 psi (pounds per square inch).
<b>kW</b>	Kilowatts.
<b>laminar flow</b>	A streamlined flow of air or other fluid with little mixing motion.
<b>larmor radius</b>	Radius of the circular motion exhibited by a charged particle (electron, ion) when exposed to a magnetic field.
<b>latched switch</b>	A switch that keeps sustained contact after the plunger has been released. To reset this switch, you must press it again.
<b>LED</b>	A light-emitting diode (LED) is a solid-state semiconductor, similar electrically to a diode, except that it emits a small amount of light when current flows through it in the forward direction. LEDs can be built to emit various colors such as green, red, or infrared light.
<b>limit switch</b>	On/off switches that are actuated mechanically by some object that hits the switch.
<b>load</b>	<b>[electrical]</b> A device that consumes electrical power.
<b>load lock</b>	The load lock hermetically separates vacuum and atmosphere for wafer handling and processing. The load lock consists of the etcher process chambers, the cassette chambers, and the transfer chamber.
<b>loadport</b>	A unit on the front of the cassette chamber that transfers wafers to the cassette module using a pod.

<b>lockout device</b>	A device that uses positive means, such as a lock, to hold an isolating device in the safe position and prevent the energization of the machine or equipment. Used during maintenance work on equipment to ensure safety. <i>See</i> Tagout.
<b>leakage, internal</b>	Leakage that occurs from within a component across a flow barrier, such as leakage across the seat of a closed valve.
<b>lithography</b>	A process in which a masked pattern is projected onto a photosensitive coating that covers a substrate. Also known as photolithography.
<b>Lorentz Force</b>	The theory that proposes that an electron moving at a speed $v$ perpendicular to the magnet is impacted by the energy field of the magnet causing the electron to move in a circular motion.
<b>lot</b>	A group of wafers transported in one wafer cassette. A lot typically consists of 25 wafers.
<b>lot ID</b>	A unique identification code given to each lot of wafers.
<b>LPC</b>	Low pressure cutout.
<b>LPCVD</b>	Low pressure chemical vapor deposition.
<b>main controller</b>	The main digital computer controller that continuously receives process data, processes it as programmed, presents the data, and automatically acts on the furnace equipment to correct any deviation from desired preset values (parameters).
<b>maintenance</b>	The act of sustaining equipment in a condition to perform its intended function.
<b>maintenance controller</b>	An optional unit that has the same functions as the front switch panel. It can be installed at the rear of the etcher.
<b>MAIO</b>	Motor analog input/output; the motor analog input/output (MAIO) board (TYB-111) converts GHOST signals into analog outputs (such as MFC control signals and magnet rotation) and motor drive signals (such as pin and gap drive). It also has three convectron drive circuits and reports status of 16 analog inputs to the ECC through GHOST communication.
<b>mask</b>	To configure an input so that the controller ignores it. When referring to an alarm, it is also known as an override.

<b>mass flow</b>	In mass flow controllers and gas meters, the number of molecules of gas per unit of time flowing in a closed fluid channel. Mass flow rate equals the volumetric flow rate times density, that is, kilograms per minute.
<b>mass flow controller (MFC)</b>	A self-contained device (consisting of a transducer, control valve, and control and signal-processing electronics) commonly used in the semiconductor industry to measure and regulate the mass flow of gas.
<b>mass flow meter (MFM)</b>	A self-contained device (consisting of a mass flow transducer and signal-processing electronics) commonly used in the semiconductor industry to measure and regulate (MFM does not control gas flow as does an MFC) the mass flow of gas.
<b>MCM</b>	Main controller module.
<b>memory</b>	Where data is stored so the CPU can reach it quickly. Sometimes thought of as RAM.
<b>MFC</b>	Mass flow controller.
<b>MHz</b>	Megahertz—one million hertz.
<b>mini-environment</b>	Area containing the door opener and door actuator for opening and closing the loadport doors.
<b>MMI</b>	Man-machine interface. The etcher user interface, also known as a touch panel.
<b>module</b>	A group of related sub-assemblies typically having a specific function or role within the etcher system. Because each module connects to other modules in the system, an overlap of module components exists among modules.
<b>MOL</b>	Motor overload.
<b>molecular weight</b>	The sum of the atomic weights of all the atoms in a molecule; also known as the relative molecular mass.
<b>monitor wafer</b>	A wafer used to assess a unit process concurrent with product wafers. Also known as a test wafer.



<b>MPa</b>	Mega (million) Pascals. 1 MPa is equal to 1,000,000 Pascals or 145.04 psi (pounds per square inch).
<b>MPU</b>	Microprocessor unit.
<b>MSDS</b>	Material Safety Data Sheet. A published specification that provides details on a particular chemical or chemical compound. Fabs have these sheets on hand for all chemicals used within the facility.
<b>MTTR</b>	Mean time to repair.
<b>NASS board</b>	Net Adapter and Status Setting printed circuit board (TEB102-2-2). This PC board mounts in the ECC controller and includes the functions: (1) input the setting value, and (2) display the ECC status, but it does not have a net adapter function.
<b>nanometer</b>	Equivalent to 1.0E-9 meters in length, or 10 Å. The unit notation is nm.
<b>native oxide</b>	An oxide film consisting of a layer with a thickness of several atoms formed on the silicon surface at room temperature in air or water. A native oxide can be formed as a result of incoming air during boat loading and unloading in the course of a heat treatment. In a general sense, all oxide films that are not formed during the oxidation sequence of a process can be thought of as native oxides.
<b>newton</b>	The unit of force in the meter-kilogram-second system, equal to the force which will impart an acceleration of 1 meter per second squared to the International Prototype Kilogram mass. Symbolized by <i>N</i> .
<b>nitride</b>	Silicon nitride ( $\text{Si}_3\text{N}_4$ ).
<b>nitride film</b>	A general term for thin films composed of nitrides. Usually, the term refers to $\text{Si}_3\text{N}_4$ or $\text{Si}_x\text{N}_y$ films. $\text{Si}_3\text{N}_4$ films are used as protective films for the surfaces of chips such as ICs (patterning masks) and as DRAM capacitor films.
<b>noise (audible)</b>	Unstable or inconsistent sound.
<b>noise (electrical)</b>	<i>See</i> EMI.
<b>non-damascene</b>	The method of pouring metal on during the chip fabrication process and then etch it away from where it is not wanted. <i>See</i> damascene.
<b>notch</b>	A notch cut on the wafer edge that provides for wafer orientation during wafer fabrication. <i>See</i> flat.

<b>null</b>	A condition that results in a minimum absolute value of output.
<b>numeric keypad</b>	Displayed upon the touch screen, resembles standard numeric keypad, also known as the ten-key pad. Used to enter numbers into the system.
<b>OCR</b>	Optical character recognition.
<b>OHT</b>	Overhead transfer system.
<b>OEM</b>	Original equipment manufacturer.
<b>OPE</b>	The OPE board (TYB-417) is the interface board for the user interface (touch screen), the switch panel, the tower lights, and the floppy disk drive (FDD).
<b>orienter</b>	The component on some models of etchers that aligns the wafer prior to processing.
<b>outgassing</b>	The escape of gases and vapors from the walls of a vacuum container or other components.
<b>output</b>	The electrical signal measured at the output terminals that is produced by an applied input to a transducer.
<b>over-etch</b>	Added etch time required for “cleaning” the remaining film that is being etched. This process is needed because of non-uniformities in film thickness and etch rates.
<b>overshoot</b>	The amount that the parameter being controlled exceeds the desired value. For example, the number of degrees that the heater exceeds the set point temperature when ramping up to the set point temperature.
<b>oxidation</b>	A high-temperature chemical reaction in which the silicon of the wafer surface reacts with oxygen or water vapor to form an oxide such as silicon dioxide, typically at temperatures greater than 800°C.
<b>oxygen deficient atmosphere</b>	An atmosphere in which the concentration of oxygen is less than 19.5%.
<b>oxide</b>	Silicon dioxide (SiO <sub>2</sub> ).
<b>P/A</b>	Prealigner or prealignment unit; it aligns the wafer prior to processing.

<b>P/C</b>	Process chamber.
<b>Pa</b>	Pascal. 101,300 Pa equals 760 Torr or 760,000 mTorr.
<b>packet</b>	A packet is the unit of data that is routed between an origin and a destination on any packet-switched network. When any file is sent from one place to another the Transport Control Protocol (TCP) layer of TCP/IP divides the file into chunks of an efficient size for routing. Each of these packets includes the Internet address of the destination. The individual packets for a given file may travel different routes; when they have all arrived, they are reassembled into the original file (by the TCP layer at the receiving end).
<b>particle contamination</b>	On a semiconductor wafer, a particle or particles on the surface of the wafer.
<b>particulate</b>	A discrete particle of dirt or other material.
<b>Pascal</b>	The SI unit of measure for pressure or stress equal to one newton per square meter, equal to $1.000 \times 10^{-5}$ or 0.100 dynes per square meter. Compare with Torr. Symbolized by Pa.
<b>passivation (PAD)</b>	A process of applying a scratch-resistant material, such as silicon nitride and/or silicon dioxide, onto the wafer surface, sealing the wafer and preventing deterioration from contaminants and moisture. Openings are etched into this passivation layer to expose metal patterns, called bonding pads, typically $100 \times 100 \mu\text{m}$ in size and separated by a space of 50 to $100 \mu\text{m}$ . Connecting wires are used to attach the bonding pads to the chip package, establishing connections from the chip to the package leads.
<b>PCB</b>	Printed circuit board.
<b>PCV</b>	Pressure control valve.
<b>PE</b>	Physical etch or plasma etch.
<b>PECVD</b>	Plasma-enhanced chemical vapor deposition.
<b>perfluorocyclobutane</b>	Chemical compound $\text{C}_4\text{F}_8$ .

<b>phase</b>	A time based relationship between a periodic function and a reference. In electricity, it is expressed in angular degrees to describe the voltage or current relationship of two alternating waveforms.
<b>phase difference</b>	The time expressed in degrees between the same reference point on two periodic waveforms.
<b>pick</b>	A two-pronged transfer module designed to hold the wafer, also known as a fork.
<b>PID</b>	Proportional band, integral, and derivative is a three-mode control action in which the controller has time proportioning, integral (auto reset), and derivative rate action. The integral function automatically adjusts the system temperature to the set point temperature to eliminate overshoot due to the time proportioning function. The derivative function sense the rate of rise or fall of the system temperature and automatically adjusts the cycle time of the controller to minimize overshoot or undershoot.
<b>pitch</b>	The distance between slots on the boat or cassette.
<b>pitch conversion</b>	Also known as variable pitch or slot-to-slot spacing. The expansion or contraction of the forks to correctly position the wafers on slots with different pitch.
<b>plasma</b>	An electrically charged (ionized) gas with equal numbers of positive and negative charged particles at a sufficiently high concentration that coulomb interactions control the movement of charged particles. In plasma processing, plasma is also known as glow discharge. The plasma supplies etchants which remove the film selectively, leaving the mask area and substrate undamaged.
<b>play (mechanical)</b>	A shift detected when moved by hand.
<b>PMT</b>	Photomultiplier tubes used by the end point detector as photodetectors.
<b>pod</b>	A hermetically sealed container that holds cassettes.
<b>polymer deposition</b>	Chemical compound that forms from the gases used within the plasma. Most processes form a carbon and fluorine chain (CF <sub>x</sub> ). When excessive polymer is formed, the chamber and associated hardware must be cleaned or replaced as particle problems arise.

<b>polysilicon</b>	Polycrystalline silicon (abbreviated as PolySi). Silicon formed by chemical vapor deposition from a silicon source gas or other methods and having a structure that contains large-angle grain boundaries, twin boundaries, or both.
<b>PPE</b>	Personal protective equipment such as safety goggles, gloves, and protective clothing.
<b>ppm</b>	Parts per million.
<b>process gas</b>	A typical process gas contact recipe is 10 sccm C <sub>4</sub> F <sub>8</sub> , 200 sccm Ar, 5 sccm O <sub>2</sub> , and 5 sccm CO. In the calibration of mass flow devices, the principal gas that the user requires the device to control or measure.
<b>protection plate</b>	Electrostatic chuck (ESC) protection plate, which covers and protects the ESC during maintenance operations.
<b>protocol</b>	Used in data communications and networking, a standard that specifies the format of data as well as the rules to be followed in data.
<b>PTFE</b>	Polytetrafluoroethylene is a fully fluorinated, opaque, white polymer with the lowest coefficient of friction of any solid. A commonly-known brand is Teflon PTFE from DuPont. PTFE has high impact strength, is subject to creep, and is resistant to virtually all chemicals and solvents. TEL uses PTFE tubes in the cooling water system.
<b>pulse</b>	A momentary sharp change in current, voltage, or other quantity that is normally constant. A pulse is characterized by a rise and a fall and has a definite duration.
<b>PUMP</b>	The PUMP board (TYB-221) is a digital I/O board that controls all of the two-state signals for the dry pumps, chillers, and turbo pumps. It also controls the uniwire system which remotely initializes and shuts down the pumps when the ECC is down.
<b>PVD</b>	Physical vapor deposition.
<b>QEW</b>	Qualified Electrical Worker
<b>quartzware</b>	Containers made from amorphous material, which is resistant to high temperature.

<b>radical</b>	Applying high frequency electric power to the electrode results in a glow discharge. Besides the charged particles, such as electrons and ions, this process electrically generates atoms and chemically highly active neutral molecules. Many of the molecules are chemically unstable radicals, and there are differences in their longevity depending on the type. Because radicals are electrically neutral, they do not possess directionality, they distribute randomly, and they chemically react.
<b>range</b>	The measured values, over which a transducer is intended to measure, specified by their upper and lower limits.
<b>reactive ion etching</b>	The etcher is designed with two opposing plates, parallel plane electrodes built into a vacuum chamber. One electrode connects to a matching circuit, and is called the cathode and a high frequency (RF) power can be applied. The other electrode is grounded to the chamber wall, and is called the anode. The sample to be etched is placed on the cathode side. This is in contrast to the plain parallel plate electrode-type, (PE), where the sample to be etched is placed on the anode. In RIE etching a greater negative self bias, (Vdc), is placed on the sample being etched, and the ion plays a large role during the process.
<b>recipe</b>	A set of unique parameters for processing wafers, including the required pressure, gas flow and temperature, end-point detection, and RF power.
<b>reflow</b>	A technique that is used to obtain greater surface smoothness through a high temperature heat treatment. Reflow helps to lessen the degree of surface irregularity in complex vertically-graded structures, which are formed on the surface.
<b>REF</b>	Reference.
<b>relay (mechanical)</b>	An electromechanical device that completes or interrupts a circuit by physically moving electrical contacts into contact with each other.
<b>relay (solid state)</b>	A solid state switching device which completes or interrupts a circuit electrically with no moving parts.

<b>repair</b>	The act of restoring a component or system to operational status by performing maintenance services such as adjustment, alignment, calibration, and/or replacement, thereby correcting specific damage, fault, malfunction, or failure.
<b>repeatability</b>	The degree to which a parameter such as position or speed can be duplicated.
<b>replace</b>	To remove an unserviceable part and install a serviceable part (new or reconditioned) in its place.
<b>remove/re-install</b>	To remove and re-install the same item when required to perform service or other maintenance functions. Re-install may be the act of emplacing, seating, or fixing into position a repair part or assembly.
<b>resident dummy</b>	A wafer set at the top and bottom of the boat that enables the placement of production wafers into the flat zone of the furnace. Also known as side dummies.
<b>residue</b>	Any undesirable material that remains on the substrate after a process step. Can be caused by incomplete etch, sputtered materials, poor film quality and/or thermal effects on the wafer.
<b>resistivity</b>	The resistance that a unit volume of semiconductor material offers to the passage of electricity when the electric current is perpendicular to two parallel faces.
<b>resolution</b>	The smallest change in mechanical input that produces a detectable change in the output signal.
<b>restricted work envelope</b>	The volume of space in which the robots can move and can potentially crush maintenance personnel. The envelope is the set of all possible positions attainable by robot end effectors as defined by the range of motion of each of the joints. It is located in the wafer and cassette transfer areas.
<b>retract</b>	Movement inward. For the robot arm, this is movement toward the robot body.
<b>reticulation (of resist)</b>	The burning of the photoresist mask during the etching process.
<b>RF</b>	Radio frequency. Electromagnetic energy with frequencies ranging from 3 kHz to 300 GHz.

<b>RF generator</b>	Radio frequency generator. The RF generator supplies electrical power to the process chambers to excite plasma.
<b>RF I/O board</b>	The RF control board (TYB-212) turns GHOST signals into analog outputs (RF set point to generator) and digital outputs (RF GEN ON/OFF). It converts analog inputs (such as reflected power and forward power) and digital inputs (such as error signals).
<b>robot</b>	A programmable, multifunction manipulator designed to move and manipulate material, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of specified tasks.
<b>RS485</b>	An Electronics Industry Association (EIA) standard for data communications. EIA standards were previously marked with the prefix RS to indicate recommended standard; however, the standards are now generally indicated as EIA standards to identify the standards organization. The GHOST boards are RS485 boards.
<b>SCCM</b>	Standard cubic centimeter.
<b>SD</b>	Slow-down sensor.
<b>selectivity</b>	The etch rates of different materials are known as the selectivity of an etched process. When etching a certain material, the resist mask etches simultaneously with the underlying material. The ratio of the etch rate of the underlying material with the masking material, photo resist is called the etch selectivity. For process robustness, a large selectivity is desirable. The etching gas is very important; however, generally, to improve the etch selectivity ratio, you must increase the rate of polymer deposition to masking material relative to the etch rate of the underlying material.
<b>SEM</b>	Scanning electron microscope.



### SEMI Hot Work Level

SEMI has defined five “Hot Work Levels” to indicate the type and severity of electrical hazards that are present to personnel while working on a particular piece of equipment. The following is a description of each Hot Work Level:

- 1. Type 1:** Equipment is fully de-energized (electrically cold). This includes all uninterruptable power supplies.
- 2. Type 2:** Equipment is energized. Live circuits are covered or insulated. Work is performed at a remote location to preclude accidental shock.
- 3. Type 3:** Equipment is energized. Live circuits are exposed and accidental contact is possible. Potential exposures are less than 30 VRMS, 42.2 volts peak, 240 volt-amps, and 20 Joules. Reference NFPA 79-14.3, IEC 204, UL 1950 & 1262, IEC 950.
- 4. Type 4:** Equipment is energized. Live circuits are exposed and accidental contact is possible. Voltage potentials are higher than 30 VRMS, 42.2 volts peak, 240 volt-amps, 20 Joules, or radio frequency (rf) energy is present. Reference NFPA 79-14.3, IEC 204, UL 1950 & 1262, IEC 950.
- 5. Type 5:** Equipment is energized and measurements and adjustments require physical entry into the equipment, or equipment configuration will not allow the use of clamp-on probes.

**Note:** See SEMI S2-93A Safety Guidelines for Semiconductor Manufacturing Equipment, 1991, 1996.

**servomotor** A type of motor used in a feedback control system.

### sequential taper angle

Achieving a tapered shape is generally accomplished by re-flowing the photo resist, doing this so that the corners of the pattern resist get pulled back and become rounded. During the etch, the width of the hole diameter of the underlying pattern material is replicated. Using this technique, the bottom of the hole narrows and becomes wedge-like shape. This is also seen when the etch selectivity ratio of underlying material compared to the mask material is small, or when sideway passivation is too large.

**set point** The value set on a controller to control a system.

**short batch** A batch of production wafers that is short of the quantity for normal production.

<b>shoulder</b>	On the robot arm, the joint located at the drive shaft.
<b>shutdown</b>	Defined as the time required to put the equipment in a safe condition when entering a nonscheduled state. It includes any procedures necessary to reach a safe condition. Shutdown is included only in nonscheduled time.
<b>shutoff valve</b>	A valve designed for and capable of positive closure to prevent flow within a piping system. Typical shutoff valves include, but are not limited to, manually-actuated, power-actuated, or spring-actuated fail-safe shutoff valves. Usually excluded are self-actuated valves, such as check valves, pressure regulators, flow controllers, and other devices that are not intended to provide positive shutoff of safety isolation.
<b>sidewall protection effect/sidewall protection layer</b>	Generally, processes that are performed under high pressure or at above 100 mTorr, etching proceeds in the horizontal direction, (isotropic etching) and the pattern anisotropy becomes difficult to achieve. For this reason, a process may require deposition to be generated that cannot be etched by the chemical reactions. The deposition helps to prevent etching in the horizontal direction. The deposition attaches to the wall surface but is removed in the vertical direction by ion bombardment. Normally, we use the addition of gas which includes carbon (C) or the resist mask reactant.
<b>SI</b>	Système International d'Unités. International system for units of measure.
<b>signal</b>	An electrical transmittance (either input or output) that conveys information.
<b>silicon carbide</b>	(SiC) A material used to replace quartz in a furnace in which the process temperature exceeds 1100 degrees Celsius.
<b>silicon nitride</b>	(Si <sub>3</sub> N <sub>4</sub> ) A passivation layer chemically deposited on a wafer at temperatures of between 600°C and 900°C to protect the wafer from contamination. Silicon nitride (sometimes abbreviated as SiN) is also used as a masking layer and as an insulator.
<b>SiO<sub>2</sub></b>	Chemical symbol for silicon dioxide.
<b>Si<sub>3</sub>N<sub>4</sub></b>	Chemical symbol for silicon nitride.
<b>SMIF pod</b>	A hermetically sealed container that holds a cassette; opened by a SMIF.

<b>sputter</b>	An operation in which a target material, such as gold or aluminum, is bombarded with argon ions. The displaced molecules of the target material are then deposited on the wafer surface.
<b>SRQ</b>	Service request.
<b>SSR</b>	Solid-state rectifier.
<b>STC</b>	Start of conversion.
<b>stepping motor</b>	Direct current motor whose speed and position are accurately controlled by input pulse signals.
<b>subassembly</b>	Two or more parts that form a portion of an assembly or a component replaceable as a whole, but having a part or parts that are individually replaceable.
<b>substrate</b>	A wafer that is the basis for subsequent processing operations in the fabrication of semiconductor devices or circuits.
<b>SVV</b>	Slow vent valve.
<b>SW</b>	Switch.
<b>system</b>	A group of items united or regulated by interaction or interdependence to accomplish a set of specific functions.
<b>system controller</b>	<i>See</i> ECC controller.
<b>tagout device</b>	A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
<b>tapered etch</b>	A controlled etch that results in a sidewall profile of less than 90° and greater than 70°.
<b>T/C</b>	Transfer chamber. The robot inside the T/C transfers wafers from the cassette chamber to the prealignment chamber and then to the process chamber. Sometimes written as TC.
<b>TCP/IP</b>	Transmission Control Protocol/Internet Protocol. The TCP manages the packaging of data into the packets that are routed on different paths for transmission and reassembled at their destination. The IP address part of packet helps route it to the right destination. TCP/IP also works with physical layer protocols such as that of the Ethernet.

<b>teaching</b>	TEL etchers use point-to-point motion robots which can be taught motion positions by an operator so that the controller can later direct the robots to these positions for processing. Teaching, or teach-by-showing, is basically discrete point programming. The operator moves the robot to the correct location. Later the controller moves the mechanism to this predetermined point for wafer transfer operations. The equipment must be initialized before teaching.
<b>TEOS</b>	Tetraethylorthosilicate.
<b>test</b>	To verify serviceability by measuring the mechanical, pneumatic, electrical or electronic characteristics of an item and comparing those characteristics with prescribed standards.
<b>thermocouple</b>	The junction of two dissimilar metals which has a voltage output proportional to the difference in temperature between the hot junction and the lead wires (cold junction).
<b>TMP</b>	Turbo-molecular pump. It evacuates the process chambers and the transfer chamber.
<b>Torr</b>	The customary U.S. unit of measure for the pressure exerted by 1 mm of mercury, equal to 1/760th of standard atmospheric pressure; used to measure pressure in vacuum systems. The newer SI unit is the pascal (Pa).
<b>total pitch</b>	The total number of slots available on the boat.
<b>toxic gas</b>	A substance that is discharged into a piping system in gaseous form and is defined as toxic or highly toxic in Title 29 of the Code of Federal Regulations, Section 1910.1200.
<b>transducers</b>	Instruments that receive information from a process in one manner (position, pressure, velocity) and output that information in another form, usually an electrical signal.
<b>T wafer</b>	Test wafer. This wafer is used in Expert Mode operation in process verification, performance, and pre-processing.
<b>U end</b>	The side of the wafer cassette that resembles the shape of the letter U. <i>See</i> H end.



<b>ultimate pressure</b>	The lowest attainable pressure in a vacuum container.
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<b>uniformity</b>	The evenness of etching across a wafer of the degree to which etch rates are maintained from wafer to wafer. Taken in accordance with pre and post measurements associated with a given position. The etch rate differs depending on the etching material and is evaluated using the maximum and minimum values or with standard deviation referenced to a mean.
<b>UPS</b>	Uninterruptable power supply.
<b>V</b>	Volts.
<b>vacuum</b>	Any pressure less than atmospheric pressure.
<b>VR</b>	Variable resistor, typically located on printed circuit boards.
<b>VME</b>	Industry standard system bus.
<b>via first dual damascene</b>	Via first means that the via is etched before the trench, instead of both at the same time. Dual means that the metal is inlaid in both the via and the trench at the same time. See damascene and non-damascene.
<b>vibration reducer unit</b>	A unit located at the side of some etchers that adjusts the load according to the weight of the upper electrode unit.
<b>wafer</b>	A thin slice with parallel faces cut from a semiconductor crystal. [ASTM F1241]
<b>wafer transfer plane</b>	The plane in which wafers are transported horizontally by the robot arm. The plane is established by the surface of the arm end effector which supports the wafer.

**warning**

A safety warning label found throughout the etcher system and the documentation. Warning labels are orange and indicate a potentially hazardous situation which, if not avoided, **could** result in death or serious injury. See the following example.



**Examples of warnings to personnel include electrical shock, strains/sprains, less extensive burns, etc. Examples of warnings to equipment include major component loss, utility lines becoming contaminated, broken wires, and so on.**

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**wet etching**

In wet etching, chemicals, typically in the liquid state, are used. These chemicals include acids, gases, and solvents. Wet etching is very selective and very attractive for processes with large geometries. (larger than 3 microns) Wet etching is primarily an isotropic etching. See dry etching and anisotropic etching.

**window**

A defined area in a screen bounded by limits less than the screen size.

**WIP**

Work in progress.

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## Colophon

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