ORACLE

In-Line or Field CPU Return Process from External Manufacturer (EM) to Oracle

Document Number and Revision: 917-7040849 Rev 05

Overview

This document describes the SPARC CPU return process for in-line as well as non-NCAT field returns from external manufacturers (EMs) to Oracle and the roles and responsibilities of the EM, Semiconductor Engineering (SE), Supply Execution & SPARC (SES), Supply Program Management (SPM), and Oracle Engineering involved in this process.

Audience

This document is for the EMs, SE, SES, SPM, and Oracle Engineering.

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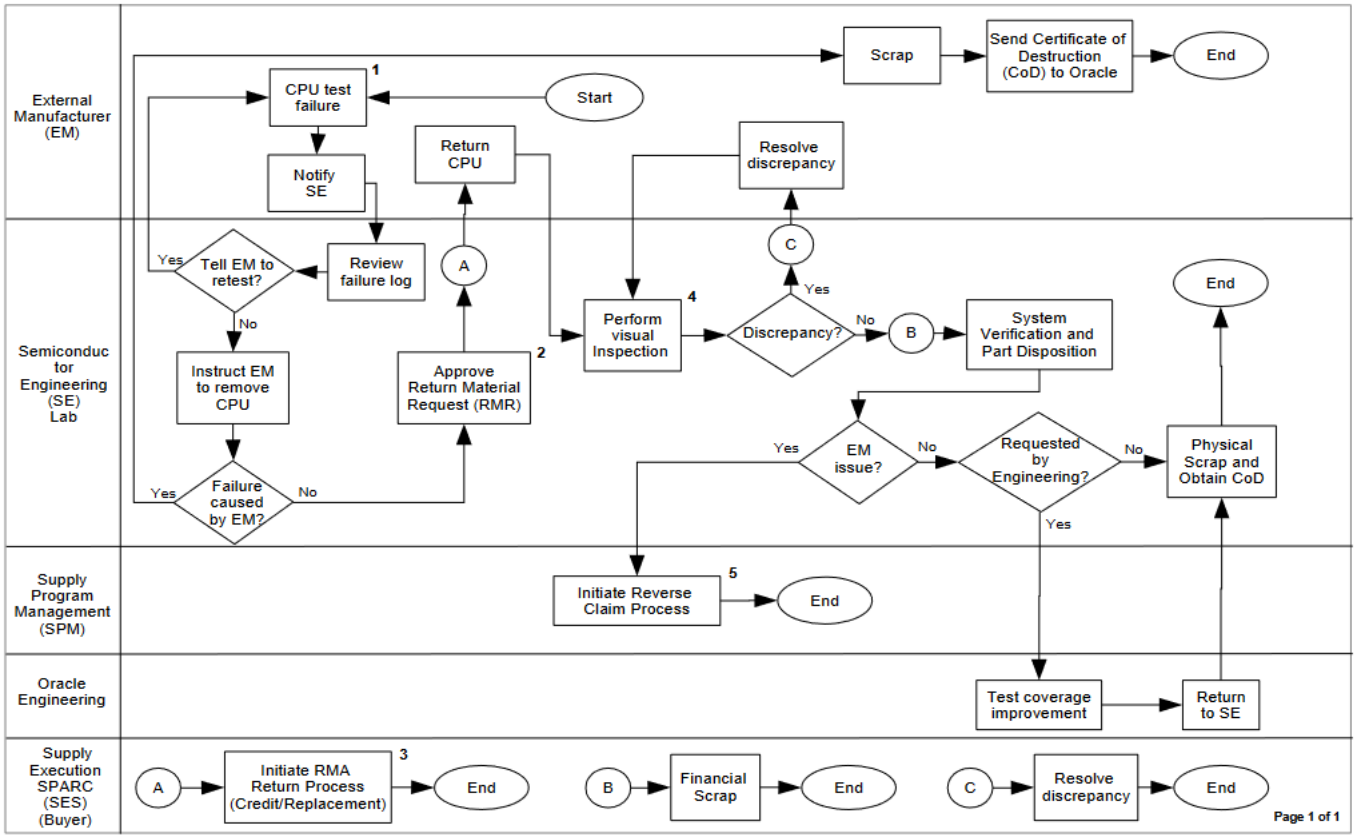
1. CPU Return Process Details

1.1. CPU Return Process Flow



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1 In-Line Failure (New Production Repair) or Field Failure (Field Return Repair)
2 RMR: The EM makes a request to return the failed CPU.
3 RMA: Oracle approves the return of the failed CPU.
4 *WWOPS Semiconductor Engineering: Processor Chip Checklist*, 913-3569-xx
5 *WWOPS Supplier Management: Claims Process*, 924-0258-xx

1.2 Board or System Failure at EM

This process applies when the EM identifies and verifies the SPARC CPU to be the cause of a board or system failure. In this case, the following is performed:

1. On a weekly basis, the EM compiles and reports details of CPU failures using a spreadsheet, called the 'FA Tracker', provided by SE contacts (FA – Failure Analysis).
2. The EM submits, by email, the 'FA Tracker' and the associated failure logs attached to it to SE contacts.
3. SE reviews the failure logs and makes determination for retest.
4. The CPU can be removed from the board only with written approval of SE.

1.3 Return Material Request (RMR) Process

1. The EM requests an RMR tracking number from SES by sending an email request and a completed RMR Tracking Spreadsheet with error logs to the designated Oracle RMR contacts.

The RMR Tracking Spreadsheet format is defined and maintained by Oracle. For the listing of data elements and RMR Tracking Spreadsheet example, refer to *Appendix A*, *Appendix A RMR Tracking Spreadsheet Format* and Content, on page 6.

NOTE 1: Do not return any CPUs that are physically damaged (that is, cracked during assembly, missing the ball grid array (BGA) balls, and so on). Oracle rejects RMRs that are the result of failures at assembly. Oracle only accepts physically damaged CPUs if the damage is discovered when the vacuum sealed bag is opened and inspected. The EM is responsible for the costs associated with assembly damage.

2. The EM requests SE to approve the RMR. This request is rejected in the following cases:
   - If the RMR Tracking Spreadsheet and the error logs are not included in the email (for guidelines on error log content, refer to *Appendix B, Appendix B Failure* Reporting Guidelines*, on page* 9).
   - If there is discrepancy in the spreadsheet.

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- If the request is more than 14 (working) days from the removal or replacement date of the failed CPU.
- If the CPU is out of warranty (OOW). Oracle determines whether the CPU is in warranty (IW) or OOW. Warranty is determined from the shipment date from the Supplier. Generally, the CPU is IW if the date code on the top of the CPU (yyww) is within 13 months of the date of the failure.

3. SE notifies the EM and SES of the RMR approval or disapproval.
4. Within two business days after receiving the SE approval, SES issues an RMR tracking number to the EM.
5. After receiving the RMR tracking number from SES, the EM notifies and ships the failed CPUs to Oracle with the following requirements:
   a. The EM notifies the Oracle RMR contacts through an email of the shipment. Each shipment notification must include the RMR Tracking Spreadsheet, the airway bill number, and the RMR tracking number.
   b. All returned CPUs must be packaged in accordance with *WWOPS SPARC: Packaging CPUs or ASICs for Shipment*, 912-1696-xx. Units not packaged in accordance with this procedure can be rejected by Oracle and returned to the EM without credit. Units damaged because of non-compliant packaging are the liability of the EM.
   c. All units for each RMR tracking number must be shipped together in the same shipment. The part numbers and the quantities must match the Return Material Authorization (RMA). The units must be shipped within two weeks of receiving the RMR tracking number from SES.
   d. The handling of the CPU must be in compliance with ANSI/ESD S20.20-2014, Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices), to prevent ESD damage to the returns.

1.4 Returned CPUs

Upon receipt, the parts are inspected for visual and mechanical damage:

1. If the CPUs are not visually acceptable or other discrepancies are noted, they are returned to the EM to resolve the noted discrepancy.
2. The returned CPUs are tested by SE Laboratory on an approved assembly and method.
3. Any EM issues are resolved using the reverse Claim Process (refer to *WWOPS Supplier Management: Claims Process*, 924-0258-xx).
4. The test results and/or the CPU can be provided by SE to Oracle Engineering upon request.
5. Oracle Engineering must return the CPU to SE within 30 days.

2 RMR Cost Reconciliation

RMR charges are reconciled as follows:

- The supplier provides the EM with a replacement part or credit at Oracle's discretion for all the IW or 'risk buy' CPU failures or automated test equipment (ATE) failures.

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- The EM is responsible for misdiagnosed parts that pass system test (System No Trouble Found [SNTF]) and pass ATE (Test No Trouble Found [TNTF]).
- Any OOW processor defined as being older than 13 months from the time of the failure to the Supplier shipment date of the processor must be dealt with on a case-by-case basis. The EM or Oracle is not expected to have any OOW processors in general.
- If the FA determines the root cause of a RMA return to be improper assembly, attach, handling or storage, it can be resolved with a reverse Supplier claim.
    - Any damaged units are the responsibility of the party who improperly packaged the units for shipment or directly caused the damage. Packaging must be in accordance with *WWOPS SPARC: Packaging CPUs or ASICs for Shipment*, 912-1696-xx.

Appendix A RMR Tracking Spreadsheet Format and Content

Format

The RMR Tracking Spreadsheet format is defined and maintained by Oracle.

One RMR Tracking Spreadsheet tab must be used for each Oracle manufacturing part number (that is, for 527-xxxx-xx or for 7xxxxxx). The RMR Tracking Spreadsheet request can have multiple tabs.

For an example, refer to

Figure A-1, *RMR Tracking Spreadsheet*, below.

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Figure A-1 RMR Tracking Spreadsheet

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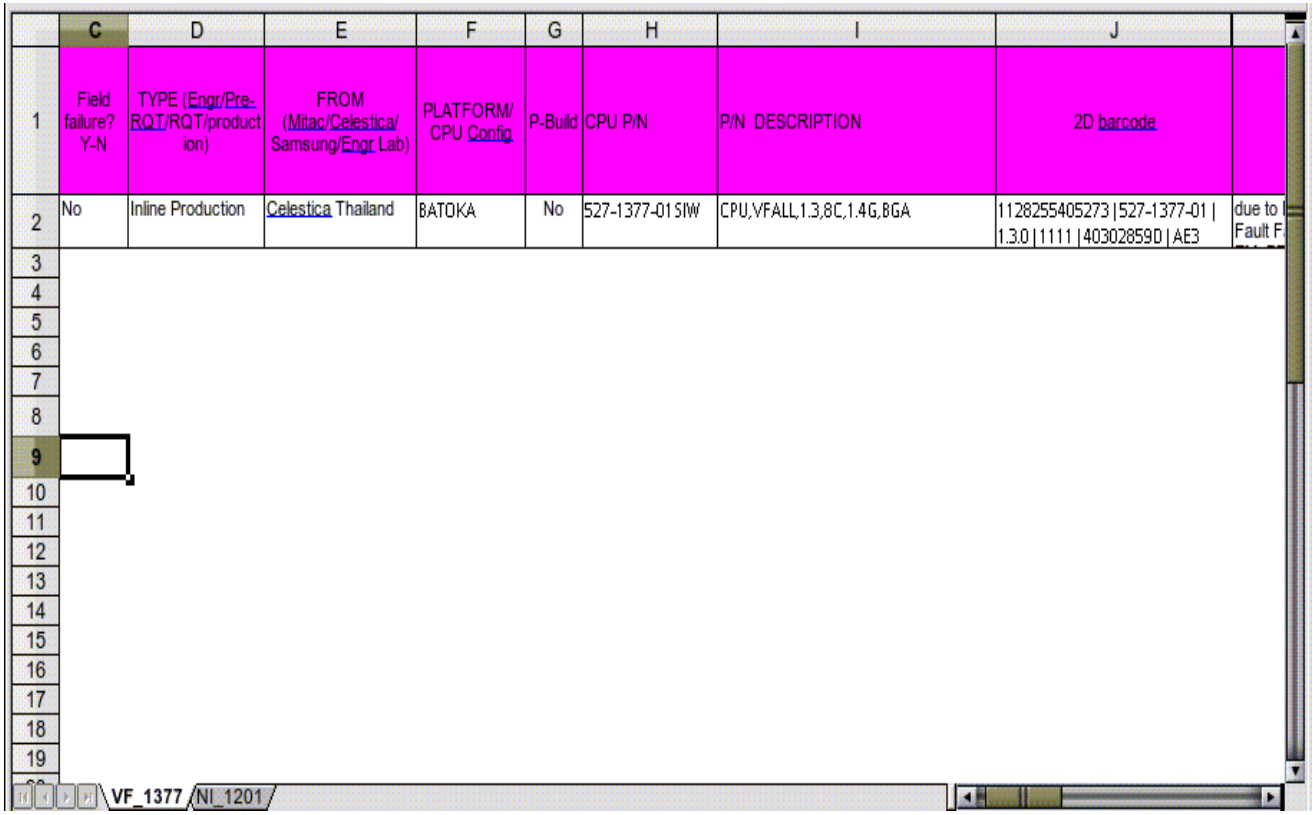

	C	D	E	F	G	H	I	J	
1	Field failure? Y-N	TYPE (Engr/Pre-RQT/RQT/production)	FROM (Mitac/Celestica/ Samsung/Engr Lab)	PLATFORM/ CPU Config	P-Build	CPU P/N	P/N DESCRIPTION	2D barcode	
2	No	Inline Production	Celestica Thailand	BATOKA	No	527-1377-01 SIW	CPU,VFALL,1.3,8C,1.4G,8GA	1128255405273 | 527-1377-01 | 1.3.0 | 1111 | 403028590 | AE3	due to Fault F
3									
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VF_1377 NI_1201

Content

The data elements of the following list are required, as a minimum:

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- REQUESTER (the individual's name)
- Field failure? (Y/N)
- TYPE (Engineering, reliability qualification test [RQT], pre-RQT, or Production)
- FROM (EM site name)
- Platform/CPU Configuration
- P-Build
- CPU P/N (527-xxxx-xx or 7xxxxxx)
- P/N (part number) DESCRIPTION
- 2D barcode
- FAIL TEST OPERATION
- FAILURE SYMPTOM
- TTF (time to failure)
- FAILURE DATE
- Date code (YYWW)
- BOARD S/N (serial number)
- Model
- Test revision
- CPU Supplier Invoice Number
- Board Assembly Date
- Fail Log

Appendix B Failure Reporting Guidelines

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Whenever logs are available, include the following:

- The section of the logs that was used to determine the failure mode or symptom
- Enough information preceding the failure to assist in identifying the tests being run
- All information following the failure that is relevant to the failure

Examples of a log entries include the following:

- Power on self test (POST) output with failure information
- Fault management architecture (FMA) output
- Messages file output with failure information
- Panic messages

Reference Information

Reference Documents and Records

Document Title	***Number***	***ESO Controlled*** [1]	
		Yes	***No***
WWOPS SPARC: Packaging CPUs or ASICs for Shipment	912-1696-xx	x	
WWOPS Semiconductor Engineering*: Processor Chip Checklist*	913-3569-xx	x	
WWOPS Supply Management: Supplier Claims Process Guide	917-1913-xx	x	
WWOPS Supplier Management: Claims Process	924-0258-xx	x	

[1] All references to documents controlled by Engineering Services were current when this document was released. All hard copies of this document are to be used for reference only.

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Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)	ANSI/ESD S20.20-2014		x

Document History and Approvals

Dash	***Rev***	***Date***	***Description of Change***	***Originator***
01	A	27 Dec 2011	Initial release.	N/A
02	A	27 Mar 2012	Added reference to returns from failures from field repair EMs and *WWOPS* Semiconductor Engineering*: Processor Chip Checklist*, 913-3569-xx. Updated Section 1.1.	N/A
Agile History				
Rev		***Date***	***Description of Change***	***Originator***
03		20 Nov 2015	Update document for Oracle organizational names. Replaced 914-1301 with ANSI/ESD S20.20-2014.	N/A
04		26. Jan. 2018	Update owner to Ed Maxwell, and move any references to older now defunct groups to Semiconductor Engineering.	N/A
Fusion History				
05		17 Jan 2023	Reformat to Redwood Template. Update attachment category to Misc. No content changes.	N/A

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