Qualification Documentation

Alarm and Function Testing

Glaxowellcome Production France

CUC 2002

Cartoning machine

Serial Number	Overall order no.
100223	3100001673

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Alarm and Function Testing — AFT

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Alarm and Function Testing Plan

CUC 2002
Cartoning machine

100223

Glaxowellcome Production
France

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1 References

No.	Title
[1]	Order confirmation
[2]	SOP-AG-06.013e: Qualification deviation procedure
[3]	SOP-AG-23.007e: Handwritten documentation for qualification
[4]	SOP-AG-24.006e: Procedure for change control
[5]	Alarm and Function Testing Report

2 Introduction

This document forms the Alarm and Function Testing of the ROTZINGER PharmaPack GmbH equipment installed at Glaxowellcome Production, France. The execution of this document shows that the product administration as well as faults, messages, warnings and software switches function correctly.

3 Scope

This document contains the Alarm and Function Testing Plan and the references necessary to collect and record the evidence that shows the CUC 2002, 100223 operates correctly.

The test results will be approved after completion of the Alarm and Function Testing Report.

4 Test philosophy

The following chapter describes the general test philosophy for this Alarm and Function Testing.

4.1 Test approach

The objective of this Alarm and Function Testing is to gather and document evidence that verifies that the ROTZINGER PharmaPack GmbH equipment operates according to the manufacturer's requirements and updated design documents.

The Alarm and Function Testing plan has been produced according to the agreed scope of supply in [1], which is based on current GMP requirements.

It will be approved prior to execution by ROTZINGER PharmaPack GmbH and Glaxowellcome Production representatives. After testing, and closing of the nonconformances, the Alarm and Function Testing report can be issued and approved.

All information for an individual test as well as any additional documentation used or collected during the Alarm and Function Testing execution, will be attached to the individual test protocols and annotated with the test number, date and initials (see [2]).

The agreed acceptance criteria for each test are defined in the test scope (see chapter 7.2).

4.2 Test structure

All qualification tests of this document have the following structure:

- Test title
- Test number
- Test objective
- Test prerequisites
- Test procedure
- Acceptance criteria
- Data to be recorded (if applicable)
- Test result(s)
- Comments
- Final test assessment

4.2.1 Access protection

The machine software provides an access protection feature.

The access protection is connected to the customer network. In this special case, the user administration is not locally set, but as a domain, i.e. the Windows-domain, which is overlapping. This includes a multiple connection of different stations over one network.

An advantage of this administration system is that a new user can be added in the domain and all computers in the network dispose of this new user. User administration is simplified thereby.

User administration - domain

In the domain the user administration contains different levels:

- Groups: all users with the same characteristic parameters are summarized in a group and certain rights are assigned by the Administrator.
- User: A user is defined over its access data (user name, password)

Comment:

The configuration of user data is defined by the customers system and can not be set absolutely. As a reference the FDA 21 CFR Part 11/GMP Vol.4 Annex 11 provisions have to be maintained.

- The combination of user name and password is unique and allocated definitely to one access authorization.
  (FDA 21 CFR Part 11 §11.300(a)/GMP Vol.4 Annex 11: 12.1)
- Only the Administrator can create or disable, but not delete, a user name.
  (FDA 21 CFR Part 11 §11.300(b)/GMP Vol.4 Annex 11: 12.1)
- The password becomes invalid automatically after x days, the user receives pertinent information y days previous to this date - x,y parameters can be set by the Administrator.
  (FDA 21 CFR Part 11 §11.300(b)/GMP Vol.4 Annex 11: 12.1)
- Further settings, concerning structure and length of the password and the definition of forbidden passwords (”No-go-List” for passwords) are defined by the Administrator.
- Consequences referring to invalid inputs and the corresponding inhibition of the system by Administrator only.
  (FDA 21 CFR Part 11 §11.300(d)/GMP Vol.4 Annex 11: 12.3)

4.2.2 Version management

Version management - format - product - recipe data

- When creating a new format, a count up ”number” is generated (e.g. “1” ;“2” ;“3” ....), the format name can be renamed, the text is open for configuration (e.g. “Aspirin 50 mg)
- One format can include different drafts or released versions with corresponding machine setting parameters. For a newly created draft version, the (version) number is increased by 1. When the draft is released to “released version” it changes its status from draft to released. (e.g. Format 1 and released version 4 will be named version 1.004)
- Preset format parameters can only be changed in a draft version. The draft version can be released, a released version can be activated for production.
- Versions can be disabled by a user (definition per matrix), however only the Admin can delete versions. All existing versions are shown in the HMI.

4.2.3 Audit trail

- All user actions related to process, quality and product as well as parameter changes must be recorded in the audit trail: e.g.:
  - Logon/logout of users, also invalid access attempts and system disable
    (FDA 21 CFR Part 11 §11.300(d)/GMP Vol.4 Annex 11: 12.1, 12.3)
  - Modifications of the access matrix
    (FDA 21 CFR Part 11 §11.10(d)/GMP Vol.4 Annex 11: 12.1, 12.3)
  - Faults, errors, message display
  - Creating, changing format/recipe data (filling/empty weights, ...)
  - Change of defaults of checking devices (code reader, camera, ...)
  - Checking devices On/Off
  - Options On/Off
  - Format change
  - Modifications of sizes / speeds / reject limits/ weights, ... relevant to product (machine speed, r.p.m, shift register ...)
  - Change of operating mode (Line, Automatic, Setup, ...)
- The audit trail is kept batch-related. A filter can be used to fade out events outside the batch (before and during interruptions of the batch).
- Example for batch-related: All events before starting the batch, during a batch interruption and during the batch are written to the audit trail, which is concluded at the end of the batch.
- If no batch management has been realized, the audit trails are managed by a different logical system, such as e.g. by days.
- Audit trails can be neither modified nor deleted.

- Audit trails are stored with a security system, any later entries/modifications are detected by the system (FDA 21 CFR Part 11 §11.10(c)/GMP Vol.4 Annex 11: 7.1, 12.1)
- All audit trail entries show the action, the complete user name, date and time (FDA 21 CFR Part 11 §11.10(e)/GMP Vol.4 Annex 11: 12.1, 12.3, 12.4)
- The audit trails can be according to criteria such as user, activity, date and time filtered and printed online.
- The user can enter a free comment to the log at any time, e.g. via the superimposed keyboard.
- The audit trails are part of the production report.

Example of an audit trail:

Time	**User**	**Text**
08/20/2020 3:11:44 pm	Maier	User logged on (name: group_xyyxx)
08/20/2020 3:12:44 pm	Maier	switch <30> Data from <off> to <on>
08/20/2020 3:15:44 pm	Maier	User logged out (name: group_xyyxx)

4.3 Test procedure

The procedure for executing each test is defined in the test scope table (see chapter 7.2) and/or in the test protocol.

4.4 Test prerequisites

If applicable the prerequisites for each test are listed in the test protocol.

4.5 Data to be recorded

A data specification that needs to be retained as documented evidence, will be stored in the relevant test procedure.

4.6 Test result

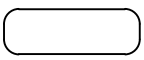
During test execution, individual test results have to be compared with the expected results, and an assessment has to be made for each acceptance criteria separately whether the result complies (yes) or does not comply (no).

A final assessment will close a test. “Results comply: Yes” (Passed) will be used if all acceptance criteria have been met. In case one or more acceptance criteria can not be met, the test will be assessed as failed (“Results comply: No”).

The final assessment of a test (or retest) will then be recorded in the test scope (see chapter 7.2).

4.7 Handwritten entries and comments

Data entries, comments, corrections or signatures manually written onto the prepared test protocol will be performed in accordance with [3] into the rounded boxes of the document as the test is executed.

Example: 

Any correction to handwritten data will be made by the person entering the data. Each page used for executing the qualification is to be signed and dated.

Data that is gathered by instrumentation onto a recorder will be printed and attached to a test protocol. Applicable data calculations will be transferred to a computer and the calculation will be printed and attached to a test protocol. All attachments will be signed by the responsible author.

4.8 Deviation handling

All exceptions that are discovered during execution are to be entered into the deviations sheet according to [2] using the deviation sheet in chapter 7.3.

The deviation sheets are collected in the Alarm and Function Testing deviation chapter of the Alarm and Function Testing folder.

4.9 Change control

Changes during the qualification activities of this document shall be treated according to GDP.

4.10 Test summary

Status of the Alarm and Function Testing execution, and follow up actions after completion of the Alarm and Function Testing, are shown in [5].

4.11 Personnel involved in testing

All personnel involved in the qualification activities of this document will be listed using the table in chapter 7.1.

5 Test scope

A list of tests to be performed including the test procedures and acceptance criteria to be used during the Alarm and Function Testing can be found in the table in chapter 7.2: Test scope.

Following execution, the completed table will contain the final result for each test. It will then be placed in the “test scope chapter“.

6 Glossary

AFT	Alarm and Function Testing
CFR	Code of Federal Regulations
FDA	Food and Drug Administration
FLT	Fault (message)
GDP	Good Documentation Practice
GMP	Good Manufacturing Practice
ME	Message
PLC	Programmable Logic Controller
QD	Qualification Documentation
SOP	Standard Operating Procedure
SWS	Software Switch
SWSOPM	Software Switch for Operation Mode
URS	User Requirement Specification
WA	Warning (message)
n.a.	not applicable

7 Appendix

7.1 Identification of all Personnel involved

All personnel involved in the qualification activities of this document will be listed in the table below and identified in the relevant test protocols.

The involved personnel must be authorized and familiar with the machine operation.

Name	Position/Company	Date	Signature	Initials

7.2 Test scope

A list of all tests to be performed during the Alarm and Function Testing (AFT), including information on the execution of the tests and acceptance criteria, are listed in the following table. After the execution of the tests, this table also contains all final results for each test.

The test protocols for the executed tests listed in the following table are filed as an appendix to the Alarm and Function Testing Plan in index 2 as “Alarm and Function Testing Execution“.

Cartoning machine CUC 2002

No.	Test title	Acceptance criteria	Deviation (No.)	Results comply		
				Test (yes/no)	Retest (yes/no)	Date/Signature
1	Software version	• The software version is documented.				
2	Check HMI menu, buttons and switches					
2.1	Spotcheck HMI	• HMI menu and page tab spotcheck is OK				
3	Access protection					
3.1	USER CONFIGURATION FOR VALIDATION	• User settings are adjusted according to data of table				
3.2	(Domain) Log-in	• No function can be actuated until a valid user is logged in • Successful login, functions can be induced • Only one user can be logged in at a time				
3.3	(Domain) Automatic log-out	• Automatic logout after x minutes inactivity x = _____ • Entry to audit trail that user has been logged out automatically				

No.	Test title	Acceptance criteria	Deviation (No.)	Results comply		
				Test (yes/no)	Retest (yes/no)	Date/Signature
3.4	(Domain) Log-out	• No operation can be actuated • Entry to audit trail about the implemented steps				
4	Audit trail					
4.1	Audit trail entries (parameter)	• All entries show the activity, user name, date and time correctly				
4.2	Audit trail entries	• All entries in the audit trail show the activity, user name, date and time • The entries can be filtered and printed online based on various criteria (user, activity, date and time) • Entries can not be modified or deleted				
5	Version management for recipe					
5.1	Version management in case of new recipe (product version)	• When creating a new recipe, it will be generated with the designation count up number ”x”; a new version with count up number “y” • After enabling the draft version (only) the status changes				
5.2	Disable recipe version (product data)	• Versions can be deleted or disabled • When the corresponding filters are selected, all existing versions are open for viewing • Entry to audit trail is correct				
5.3	Recipe versions for production	• Disabled recipe versions can not be activated for production • Only recipe versions with status “Draft“ or “Enabled“ can be activated for production				

No.	Test title	Acceptance criteria	Deviation (No.)	Results comply		
				Test (yes/no)	Retest (yes/no)	Date/Signature
5.4	Create new recipe on the basis of an existing recipe version	• A new recipe can be created on the basis of an existing recipe version • A new draft version can be created on the basis of a current recipe version				
5.5	Delete disabled recipe version	• Status of selected recipe version changes to “Deleted” • Deleted recipe versions can no longer be enabled or activated				
6	Batch Management					
6.1	Create new batch	• A new batch can only be created if previous batch has been completed				
6.2	Start batch	• Only the new created batch can be started				
6.3	Interrupt and resume batch	• Batch can be interrupted and resumed				
6.4	Complete batch	• After batch is completed, batch data can be saved or printed and batch cannot be resumed again				
6.5	Batch history	• “Batch history“ displays when and by whom status of batch has been changed				
6.6	Store batch data	• Batches are stored as .zip-file in selected folder with correct name (+ date and time)				
6.7	Restore batch data	• Batch is restored from .zip-file and listed in “Batch management“				

No.	Test title	Acceptance criteria	Deviation (No.)	Results comply		
				Test (yes/no)	Retest (yes/no)	Date/Signature
6.8	Delete batch data	• Batches with status “Restored“ can be deleted from “Batch management“ • Batches with status “Stored“ can be deleted from “Batch management“ • Batches with status “Completed“ can not be deleted from “Batch management“				
6.9	Print history of batch data	• Recipe data and results can be viewed and printed				
6.10	Print batch data	• Batch data can be printed when active batch is completed or after a batch has been selected for history • Batch data can be printed on connected printer • Batch data can be exported to a selected folder as .pdf-file				
7	Reports and print outs					
7.1	Batch print out	• Batch data can be printed (as pdf-file) after a batch has been selected for history • Batch data can be exported				
7.2	Parameter: Machine settings (Recipe)	• Print out from the machine settings (Recipe) is possible				
7.3	User right print out	• It is possible to print or save the user rights				
8	Basic function					

No.	Test title	Acceptance criteria	Deviation (No.)	Results comply		
				Test (yes/no)	Retest (yes/no)	Date/Signature
8.1	Service: Clean Display	• Display turns grey and no touch input can be done • After 30 seconds the HMI appears again				
8.2	Alarmlists	• Lists of the Faults, Warnings and Messages can be selected • Lists of Faults, Warnings and Messages can be printed or saved as pdf				
8.3	Operating hours counter	• Operating hours counter is shown				
8.4	Parameter limits	• A value greater than the maximum limit cannot be confirmed • A value smaller than the minimum limit cannot be confirmed • A value between the minimum and maximum limit can be confirmed				
8.5	HMI Language	• The HMI language switches to the chosen language				

For Chapter 9 note only the execution protocols where deviations occurred

9	Alarm Function Tests

9.1	Test protocols - Function tests software switches operating mode (SWSOPM)

Chap./ SWSOPM No.	Deviation No.	Chap/ SWSOPM No.	Deviation No.

9.2	Test protocols - Function tests software switches operating mode drive (SWSOPM_DRV)

Chap./ SWSOPM No.	Deviation No.	Chap/ SWSOPM No.	Deviation No.

9.3	Test protocols - Function tests software switches (SWS)

Chap./ SWS No.	Deviation No.	Chap./ SWS No.	Deviation No.

9.4	Test protocols - Messages (ME)

Chap./ ME No.	Deviation No.	Chap./ ME No.	Deviation No.

9.5	Test protocols - Warnings (WA)

Chap./ WA No.	Deviation No.	Chap./ WA No.	Deviation No.

9.6	Test protocols - Faults (FLT)

Chap./ FLT No.	Deviation No.	Chap./ FLT No.	Deviation No.

Comments	Results comply	yes/no	Date/Initials

7.3 Deviation sheet

After execution the filled in deviation sheets will be attached to this document and the final number of attached pages has to be documented.

Empty forms are in chapter 7.5 “Forms“, page 21.

Number of attached pages: _____

7.4 Change control sheet

After execution the filled in change control sheets will be attached to this document and the final number of attached pages has to be documented.

Empty forms are in chapter 7.5 “Forms“, page 21.

Number of attached pages: _____

7.5 Forms

	INFORMATION
	Please use the following forms as master copies when a deviation sheet or a change control sheet is required.

Test phase: _____	Deviation sheet / *Formular für Abweichungen*	Deviation / *Abweichung* N°_____

Refering to test (binder/chapter) /
dazugehöriger Test (Ordner/Kapitel): _____

I) Description of the Deviation / *Beschreibung der Abweichung (Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

II) Proposed solution / *Vorgeschlagene Lösung (Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

III) Decision – follow up action (customer) / *Entscheidung - weitere Aktion (Kunde):*		
❑ Proposed solution accepted / *Vorgeschlagene Lösung akzeptiert*	❑ NOT accepted / *NICHT akzeptiert =>* Comments / *Kommentar:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

IV) Result (customer) / *Ergebnis (Kunde):*		
❑ Conform and accepted / *konform und akzeptiert* ❑ NOT conform, but accepted / *NICHT konform aber akzeptiert* Rationale / *Begründung:*	❑ NOT conform and NOT accepted / *NICHT konform und NICHT akzeptiert =>* Comments / *Kommentare:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

V) Deviation closed (customer and/or Syntegon) / *Abweichung vollständig bearbeitet (Kunde und/oder Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*
Name:	Date / *Datum:*	Initials / *Handzeichen:*

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Test phase: _____	Deviation sheet / *Formular für Abweichungen*	Deviation / *Abweichung* N°_____

Refering to test (binder/chapter) /
dazugehöriger Test (Ordner/Kapitel): _____

I) Description of the Deviation / *Beschreibung der Abweichung (Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

II) Proposed solution / *Vorgeschlagene Lösung (Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

III) Decision – follow up action (customer) / *Entscheidung - weitere Aktion (Kunde):*		
❑ Proposed solution accepted / *Vorgeschlagene Lösung akzeptiert*	❑ NOT accepted / *NICHT akzeptiert =>* Comments / *Kommentar:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

IV) Result (customer) / *Ergebnis (Kunde):*		
❑ Conform and accepted / *konform und akzeptiert* ❑ NOT conform, but accepted / *NICHT konform aber akzeptiert* Rationale / *Begründung:*	❑ NOT conform and NOT accepted / *NICHT konform und NICHT akzeptiert =>* Comments / *Kommentare:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

V) Deviation closed (customer and/or Syntegon) / *Abweichung vollständig bearbeitet (Kunde und/oder Syntegon):*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*
Name:	Date / *Datum:*	Initials / *Handzeichen:*

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Change Control Sheet / *Formular für Change Control*	Change Control N°_____

Refering documentation (binder/chapter) /
dazugehörige Dokumentation (Ordner/Kapitel):_____

I) Description / *Beschreibung:*		
Reason for change / *Grund der Änderung:*		
❑ Re-Qualification necessary, if yes, how? / *Requalifizierung nötig, wenn ja, wie?*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

II) Customer's comments / *Kommentar des Kunden:*		
❑ Change accepted / *Change akzeptiert* ❑ NOT accepted, see comments / *NICHT akzeptiert, siehe Kommentar*	Comments / *Kommentar:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

III) Follow up action / *Aktionsverfolgung:*		
❑ Re-Qualification executed / *Requalifizierung durchgeführt*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

IV) Review:		
Name:	Date / *Datum:*	Initials / *Handzeichen:*
Name:	Date / *Datum:*	Initials / *Handzeichen:*

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Change Control Sheet / *Formular für Change Control*	Change Control N°_____

Refering documentation (binder/chapter) /
dazugehörige Dokumentation (Ordner/Kapitel):_____

I) Description / *Beschreibung:*		
Reason for change / *Grund der Änderung:*		
❑ Re-Qualification necessary, if yes, how? / *Requalifizierung nötig, wenn ja, wie?*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

II) Customer's comments / *Kommentar des Kunden:*		
❑ Change accepted / *Change akzeptiert* ❑ NOT accepted, see comments / *NICHT akzeptiert, siehe Kommentar*	Comments / *Kommentar:*	
Name:	Date / *Datum:*	Initials / *Handzeichen:*

III) Follow up action / *Aktionsverfolgung:*		
❑ Re-Qualification executed / *Requalifizierung durchgeführt*		
Name:	Date / *Datum:*	Initials / *Handzeichen:*

IV) Review:		
Name:	Date / *Datum:*	Initials / *Handzeichen:*
Name:	Date / *Datum:*	Initials / *Handzeichen:*

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Alarm and Function Testing Execution

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10 Notes 317

1 Software version

Test objective	• Documentation of software version used for test execution
Test procedure	
Required operations	• Write down in table below the installed software version (Baseline) before execution of alarm and function testing.

Software/Firmware	Version
Baseline	

Test result		**yes/no**
Acceptance criteria	• The software version is documented.	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

2 Check HMI menu, buttons and switches

2.1 Spotcheck HMI

Test objective	• Menu check of HMI menu tree
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User Admin is logged in
Required operations	• Copy the menu tree from the operation manual chap. 5 • Select longest tree as example (or one of the longest trees) • Go step by step through the selected tree • Control the menu and the names of the page tabs • Attach the copy to this test
Comments	• This is a spotcheck test. Only the longest menu tree needs to be checked
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• HMI menu and page tab spotcheck is OK	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

3 Access protection

3.1 USER CONFIGURATION FOR VALIDATION

Test objective	• This configuration is neccessary to create an user for the following validation procedure
Test procedure	
Required operations	• Log in with user “adminlocal” • Select the menu ”System configuration” • Select the submenu “User management” • In submenu “User Management”, press “General settings” Create following configuration:
	GENERAL SETTINGS
	User
	• Display last user (min.) 0

Test result		**yes/no**
Acceptance criteria	• User settings are adjusted according to data of table	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

3.2 (Domain) Log-in

Test objective	• No action without logged in user • Login requires the individual user name and password • Checking the number of user-login actions
Test procedure	
Test prerequisites	• Adminlocal has created a new group to execute all the following tests Name of the group • Machine is operational • No user is logged in
Required operations	• Press “Start” • Warning 29 “Operator: No user logged in” is indicated • Touch any function key (no function can be actuated) • Call up function ”Log in user” • Log in with user name and password • Operate any function key (function is actuated) • Try to log in a second user with name and password (not possible)
Comments	• Activation of machine stop (Normal Stop) and Emergency-Stop possible without logged in user
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• No function can be actuated until a valid user is logged in	
	• Successful login, functions can be induced	
	• Only one user can be logged in at a time	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

3.3 (Domain) Automatic log-out

Test objective	• Check of access protection: Time log-out
Test procedure	
Test prerequisites	• Machine is operational • No user is logged in
Required operations	• Call up function „Log in user“ • Enter user name and password • No action for x minutes Time of last action: ☐ • Enter user name and password • Select submenu ”Diagnostics“ → press ”Audit view“ • Check in audit trail the correct entry with userID, date, time and action „Auto log-out“
Comments	• Print out audit trail after having finished all tests
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Automatic logout after x minutes inactivity x = _____	☐
	• Entry to audit trail that user has been logged out automatically	☐
Comments	☐	

Results comply	yes/no ☐	Date/Initials ☐
Results approved	Date/Initials ☐	

3.4 (Domain) Log-out

Test objective	• Check of User log-out
Test procedure	
Test prerequisites	• Machine is operational • User is logged in
Required operations	• Log out user
	• Time of log-out:
	• Press any function key - no function can be activated • Log in user > enter user name and password • Select submenu “Diagnostics“ → “Audit view“ • Check in audit trail the correct entry with userID, date, time and action ”Auto log-out“
Comments	• Activation of machine stop (Normal Stop) and Emergency-Stop possible without logged in user
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• No operation can be actuated	
	• Entry to audit trail about the implemented steps	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

4 Audit trail

4.1 Audit trail entries (parameter)

Test objective	• All user actions related to process, quality and product as well as all parameter changes must be recorded in the audit trail
Test procedure	
Test prerequisites	• User “adminlocal” is logged in • Machine is ready in automatic mode • Date and time are identical to external clock
Required operations	Time code hr : min / Confirmation in audit trail ✓ • Press Emergency Stop : ☐ • Release Emergency Stop : ☐ • Complete the batch • Select submenu “Diagnostics” > press ”Audittrail viewer” > press “Display/ Viewer” • Check entries for correctness and confirm with ”✓” • Print out the “Audit trail” and attach the document to the test protocol
Comments	• 21 CFR Part 11: §11.10(d,g), §11.200(a), §11.300(a,b,d) • GMP Vol.4 Annex 11: 12.1; 12.3
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• All entries show the activity, user name, date and time correctly	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

4.2 Audit trail entries

Test objective	• Structure of entries
Test procedure	
Test prerequisites	• Machine is operational
Required operations	• Log in user “adminlocal” • Log out user “adminlocal” • Log in user “adminlocal” • Open guard door • Close guard door: • Press “Reset” • Select “Diagnostics” • Call up function ”Audittrail viewer” • Press “Filter setting” • Select filter “User name” by activating the checkmark • Press “Setting” within the filter setting “User name” • Move one of the given users from field “All” to the field “Selected” (e.g. validation) • Select filter “Time period” • Press “Setting” within the filter setting “Time period” • Adjust the time period to the last 10 minutes • Confirm with the checkmark • Close the menu “Filter setting” by using of the checkmark • Press “Display” within the “Audittrail viewer” • The corresponding audit view of user “adminlocal” is displayed • Call up function “Print” • The audit trail printout displays the selected date and time • Select filter settings button • Select filter “Faults” • Confirm with the checkmark • Press “Refresh” • The corresponding audit view is displayed • Try to modify or delete last entry in audit trail • Print out audit trail after completion of the tests
Consequence	• All entries in the audit trail show the activity, user name, date and time • The entries can be filtered and printed online based on various criteria (user, activity, date and time, batch) • Entries can not be modified or deleted

Test procedure	
Comments	• Select an audit trail in “Audittrail viewer” within a time frame showing actions • 21 CFR Part 11: §11.10(d,g), §11.200(a), §11.300(a,b,d) • GMP Vol.4 Annex 11: 12.1; 12.3
Acknowledgement	• Remove “Filter setting” • Close “Audit trail viewer” • Several filter settings can be activated for the next start of the “Audittrail viewer”

Test result		**yes/no**
Acceptance criteria	• All entries in the audit trail show the activity, user name, date and time	
	• The entries can be filtered and printed online based on various criteria (user, activity, date and time)	
	• Entries can not be modified or deleted	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

5 Version management for recipe

5.1 Version management in case of new recipe (product version)

Test objective	• All recipe data are managed in menu “Recipe” > submenu “Recipe management”
Test procedure	
Test prerequisites	• Machine is operational • User “adminlocal” is logged in
Required operations	• Select menu “Recipe” > select submenu ”Recipe management” • Select one recipe and press ”Versions” • Select the current version and press “Create new recipe” • Recipe version number “x” = ( ) is created • Change the recipe name of recipe version “x” (e.g. “Validation A 500 mg”) • Call up the new generated recipe in the window “recipe version” (e.g. “Validation A 500 mg”) • Select a version and press “New draft version” • A new version draft with count up number “y” = ( ) is created • Select draft “y” and press “Enable” • Confirm message • Select the current recipe version in the window • Press “Activate” • In the overview “Current recipe” the recipe is shown (e.g. Validation A 500 mg) Version x.y = ( ) (e.g. 0002.0001) released
Comments	• 21 CFR Part 11: §11.10 (b) • GMP Vol.4 Annex 11: 8.1

Test result		**yes/no**
Acceptance criteria	• When creating a new recipe, it will be generated with the designation count up number ”x”; a new version with count up number “y”	
	• After enabling the draft version (only) the status changes	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

5.2 Disable recipe version (product data)

Test objective	• Check whether recipe version can be deleted
Test procedure	
Test prerequisites	• Machine is operational • User “adminlocal” is logged in
Test 1	**Delete a version**
Required operations	• Select menu “Recipe” > selet submenu “Select recipe management” • Select the new recipe (e.g.Validation A 500 mg) • Press “Versions” • Create a new draft version • Select the new draft version • Press ”Delete” and confirm (note time of action) • Leave menu „Recipe versions product“ • Leave menu “Recipe list product” • Select menu “System configuration” > select submenu “Diagnostic” • Select “Audittrail viewer” • Select “Filter settings“ • Activate checkmarks for “Function” • Select “Function setting” • Select “Size management” and change to selected • Select “Size management” and press “Events” • Select “Recipe deleted” and change to selected • Confirm tree times with “Checkmark” and press button “Display” • Check the entry in the audit trail • Print out audit trail after completion of the tests
Consequence	• Versions can be deleted • When the corresponding filters are selected, all existing versions are open for viewing • Entry to audit trail is correct
Comments	• If no active version is available create a “New draft version” • Inactive versions can be deleted by the Admin only • Enabled recipes can not be deleted
Acknowledgement	• None

Test procedure	
Test 2	**Block a recipe version**
Required operations	• Select menu “Recipe” > selet submenu “Recipe management” • Select the new recipe (e.g.Validation A 500 mg) • Press “Versions” • Create a new draft version of the draft version • Select the new draft version • Press ”Disable” (note time of action) • Press filter ”Disable” • Leave menu „Recipe versions product“ • Leave menu “Recipe list product” • Select menu “System configuration” > select submenu “Diagnostic” • Select “Audittrail viewer” • Select “Filter settings“ • Activate checkmarks for “Function” • Select “Function setting” • Select “Size management” and change to selected • Select “Size management” and press “Events” • Select “Recipe disabled” and change to selected • Confirm tree times with “Checkmark” and press button “Display” • Check the entry in the audit trail • Print out audit trail after completion of the tests
Consequence	• Versions can be blocked • When the corresponding filters are selected, all existing versions are open for viewing • Entry to audit trail is correct
Comments	• If necessary create a “New draft version” to perform the test
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Versions can be deleted or disabled	
	• When the corresponding filters are selected, all existing versions are open for viewing	
	• Entry to audit trail is correct	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

5.3 Recipe versions for production

Test objective	• Check that only recipe versions with status “Draft” or “Enabled” can be activated for production
Test procedure	
Test prerequisites	• User “adminlocal” is logged in • Machine is ready in automatic mode • Recipe e.g. “Validation A 500mg” is created • “Recipe Version” is created as disabled • “Recipe Version” is created as deleted • “Recipe Version” is created as enabled version • “Recipe Version” is created as draft version
Required operations	• Select menu “recipe management” > select “recipe management” > SWS “recipe management” • An overview of all recipes is displayed • In overview window of recipes select recipe e.g. “Validation A 500mg” and press SWS “Versions” • All filters are switched on • Select a recipe version with status “Disabled” • SWS “Activate” is not active
Consequence	• Selected recipe version cannot be activated
Required operations	• Select a recipe version with status “Deleted” • SWS “Activate” is not active
Consequence	• Selected recipe version cannot be activated
Required operations	• Select a recipe version with status “Enabled” • Press SWS “Activate”
Consequence	• Activated version is highlighted in green • All settings for this recipe are taken over by program
Required operations	• Select a recipe version with status “Draft” • Press SWS “Activate”
Consequence	• Activated version is highlighted in green • All settings for this recipe are taken over by program
Required operations	• Press SWS “Print” and attach printout to the test *)
Comments	• *) If no printer is available create pdf-file and print on an external printer

Test result		yes/no
Acceptance criteria	• Disabled recipe versions can not be activated for production	
	• Only recipe versions with status “Draft“ or “Enabled“ can be activated for production	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

5.4 Create new recipe on the basis of an existing recipe version

Test objective	• Create new recipe on the basis of an existing recipe version
Test procedure	
Test prerequisites	• Machine is operational • User “adminlocal” is logged in
Required operations	• Select menu “Recipe” > select submenu ”Select recipe management” • Select one recipe and press ”Versions” • Select the current version and press “Create new recipe”
Consequence	• Recipe version number “x” = ( ) is created • A new recipe can be created on the basis of an existing recipe version
Required operations	• Press “Change Recipe name”, change the name of recipe version “x” (e.g. “Validation A 500 mg”) • Call up the new generated recipe in the window “recipe version” (e.g. “Validation A 500 mg”) • Select a version and press “New draft version”
Consequence	• A new version draft with count up number “y” = ( ) is created • A new draft version can be created on the basis of a current recipe version

Test result		**yes/no**
Acceptance criteria	• A new recipe can be created on the basis of an existing recipe version	( )
	• A new draft version can be created on the basis of a current recipe version	( )
Comments	( )	

Results comply	yes/no ( )	Date/Initials ( )
Results approved	Date/Initials ( )	

5.5 Delete disabled recipe version

Test objective	• Check whether disabled recipe version can be deleted
Test procedure	
Test prerequisites	• User “adminlocal” is logged in • Machine is ready in automatic mode • Recipe version to be deleted is not active (e.g. “Validation A 500 mg“)
Required operations	• Select menu “recipe management” > select “recipe management” > SWS “recipe management” • An overview of all recipes is displayed • In overview window of recipes select recipe e.g. “Validation A 500 mg“ and press SWS “Versions” • All filters are switched on • Select a recipe version with status “Disabled“ • Press SWS “Delete” and confirm indicated message
Consequence	• Status of selected recipe version changes to “Deleted” and can not be enabled or activated
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Status of selected recipe version changes to “Deleted”	
	• Deleted recipe versions can no longer be enabled or activated	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6 Batch Management

6.1 Create new batch

Test objective	• Check whether new batch can be created
Test procedure	
Test prerequisites	• Recipe is enabled and active
Required operations	• Select menu “production” > select submenu “production” • Enter in window “Batch” number “123” and confirm • New batch is created • Press SWS “Start” to start new created batch and confirm indicated message • Try to insert name and number for a new batch in window “Batch“
Consequence	• Creation of new batch is not possible (Number and name are deactivated fields while the previous batch is activated)
Required operations	• Press SWS “Complete” to complete the active batch and confirm indicated message • Press SWS “X” to close window “Print batch data” and confirm indicated message • Enter in window “Batch” number “1234” and confirm • New batch is created
Consequence	• A new batch can only be created if previous batch has been completed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• A new batch can only be created if previous batch has been completed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.2 Start batch

Test objective	• Check whether batch can be started
Test procedure	
Test prerequisites	• A new batch has been created but not yet started
Required operations	• Press SWS “Start” and confirm indicated message
Consequence	• Status of created and started batches changes from “Completed” to “Started” • Batch information is displayed in submenu “Production”, SWS “Show batch data” in window “Batch”
Comments	• It is not possible to create or start a new batch
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Only the new created batch can be started	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.3 Interrupt and resume batch

Test objective	• Check whether batch can be interrupted and resumed again
Test procedure	
Test prerequisites	• A batch has been started
Required operations	• Select menu “production” > select submenu “production” • In window “Batch” press SWS “Interrupt” and confirm indicated message • Press SWS “X” to close window “Print batch data”
Consequence	• In overview Batch management status of active batch changes from “Started” to “Interrupted”
Required operations	• Select menu “production” > select submenu “production” • In window “Batch” press SWS “Resume” and confirm indicated message
Consequence	• In overview Batch management status of active batch changes from “Interrupted” to “Resumed”
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batch can be interrupted and resumed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.4 Complete batch

Test objective	• Check whether batch can be completed
Test procedure	
Test prerequisites	• A batch has been started or interrupted
Required operations	• Select menu “production” > select submenu “production” • In window “Batch” press SWS “Complete” and confirm indicated message • Press SWS “X” to close window “Print batch data” and confirm indicated message
Consequence	• In overview Batch management status of active batch changes to “Completed”
Required operations	• Try to resume batch
Consequence	• After batch is completed it cannot be resumed again
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• After batch is completed, batch data can be saved or printed and batch cannot be resumed again	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.5 Batch history

Test objective	• Check whether batch history can be displayed
Test procedure	
Test prerequisites	• Batch is completed
Required operations	• Select menu “Batch history” > select SWS “Batch management” • Select a batch with status “Completed” and press SWS “Show” • Window “Batch view” opens and batch information such as “Batch-ID.”, “Batch name”, “Batch size” and “Batch part size” as well as active recipe version are displayed • Press SWS “History”
Consequence	• “Batch history” displays when and by whom the status of the batch has been changed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• “Batch history“ displays when and by whom status of batch has been changed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.6 Store batch data

Test objective	• Check whether batch data can be stored
Test procedure	
Test prerequisites	• A batch with status “Completed” is created

Required operations	• Select menu “Batch History” > select SWS “Batch management”
	• Select a batch with status “Completed”
	• Batch-ID.: ( )
	• Press SWS “Store”
	• Select a folder and press SWS “✓”
	  • “Message (“Store”) “
	  • Do you want to delete the sources after batch storage is complete?” is displayed” is displayed
	• Press SWS “No”
	• Confirm indicated message (“Store”)
	• Close window
	• In “Batch History” press SWS “Batch management”
	• Choose the batch and press SWS “Show”
	• Press SWS “History”
	• Note time when .zip-file has been stored ( )

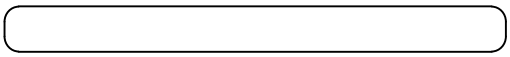
Consequence	• Batch is still listed in overview “Batch management” • Status has changed from “Completed” to “Stored” • Batch is stored in selected folder with file name: batch number +_Date +_Time?? + “.zip” Example: batch no.: 12345 file name: 12345_20140128_122935.zip

Test procedure	
Required operations	• Select menu “Batch management” > select submenu “Batch history” > select SWS “Batch management” • Select a batch with status “Completed” • Batch-ID.: ( ) • Press SWS “Store” • Select a folder and press SWS “✓” • Message (“Store”) “The storage result is good. Do you want to delete the sources?” is displayed • Press SWS “Yes” • Confirm indicated message (“Store”) • Close window • Press SWS “Batch management”
Consequence	• Batch is no longer listed in overview
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batches are stored as .zip-file in selected folder with correct name (+ date and time)	( )
Comments	( )	

Results comply	yes/no	Date/Initials
	( )	( )
Results approved	Date/Initials	
	( )	

6.7 Restore batch data

Test objective	• Check whether stored batch data can be restored
Test procedure	
Test prerequisites	• A batch with status “Stored” is created
Required operations	• Select menu “Batch management” > select submenu “Batch history” > select SWS “Batch management” • Press SWS “Restore” • Select a stored file • Batch-ID.:  • Select a folder and press SWS “✓” • Message (“Store”) “The target already exists. Do you really want to overwrite?” is displayed • Press SWS “Yes” • Select restored file in window “Batch management”and press SWS “Show” • Press SWS “History”
Consequence	• .zip-file is not deleted • Batch is listed in overview with status “Restored” • Existing data is replaced in overview
Required operations	• Select menu “Batch management” > select submenu “Batch history” > select SWS “Batch management” • Press SWS “Restore” • Select same file as before and press SWS “✓” • Message (“Store”) “The target already exists. Do you really want to overwrite?” is displayed • Press SWS “No”
Consequence	• Action is interrupted
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batch is restored from .zip-file and listed in “Batch management“	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.8 Delete batch data

Test objective	• Check whether only stored batch data can be deleted
Test procedure	
Test prerequisites	• Batch with status “Stored”, “Restored” and “Completed” are created
Required operations	• Select menu “Batch management” > select “Batch history” > Select SWS “Batch management” • Select batch with status “Stored” • Press SWS “Delete” • Message (“Store”) “Do you really want to delete 1 batches?” is displayed • Press SWS “Yes”
Consequence	• Batch is no longer listed in overview
Required operations	• Select batch with status “Restored” • Press SWS “Delete” • Message (“Store”) “Do you really want to delete 1 batches?” is displayed • Press SWS “Yes”
Consequence	• Batch is no longer listed in overview
Required operations	• Select batch with status “Completed”
Consequence	• SWS “Delete” is not active • Batch cannot be deleted
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batches with status “Restored“ can be deleted from “Batch management“	
	• Batches with status “Stored“ can be deleted from “Batch management“	
	• Batches with status “Completed“ can not be deleted from “Batch management“	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.9 Print history of batch data

Test objective	• Check whether history of batch data can be printed
Test procedure	
Test prerequisites	• Batch with status “Completed” is created
Required operations	• Select menu “Batch management” > select submenu “Batch history” > select SWS “Batch management” • Select batch with status “Completed” • Press SWS “History” • Message (“History”) “The *selected batch* was chosen for the history.” is displayed • Press SWS “Ok” • Select menu “Batch history” • Recipe data and results can be viewed for the selected batch • Press SWS “Print batch”
Consequence	• Selected batch data can be printed as hard copy on connected printer or as pdf-file to be saved on a selected drive
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Recipe data and results can be viewed and printed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

6.10 Print batch data

Test objective	• Print batch data
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User ”validation“ is logged in
Required operations	• Select menu “Batch management” > select submenu “Batch History” > select SWS “Batch management” • Select batch with status “Completed” • Press SWS “History” • Message (“History”) “The *selected batch* was chosen for the history” is displayed • Press SWS “Ok” • Change to submenu “History” • Result and Recipe data can be viewed for the selected batch • Press SWS “Print batch” • Select pdf for “Result“ and “Recipe data“ • Select printer for “Result“ and “Recipe data” • In “Configuration“ select target File path for storage and printer • Press SWS “✓”
Consequence	• Result and recipe data are exported to selected folder as .pdf-file with file name “batch number + _Result.pdf” resp. “batch number + _RecipeData.pdf” *)cted folder as .pdf-file with file name “batch number + _Result.pdf” *) • Recipe data are printed on connected printer

Required operations	• Select menu “Production” > select submenu “Production”
	• Create a new batch
	• Start the new batch and confirm indicated message
	• Complete the new batch
	  • Message “Do you really want to complete the batch?” is displayed
	• Press SWS “OK”
	  • Message “Print batch data” is displayed
	• Select pdf for “Alarms” and “Parameter change”
	• Select printer for “Parameter change”
	• In “Configuration“ select target File path for storage and printer
	• Press SWS “✓”

Consequence	• Batch alarm list and parameter change are exported to selected folder as .pdf-files with file names “batch number + _Alarm.pdf” and + “batch number + _Parameter.pdf“ *) • Batch parameter change is printed on connected printer.

Test procedure	
Comments	• *) Date and time can be added in file name if needed
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batch data can be printed when active batch is completed or after a batch has been selected for history	
	• Batch data can be printed on connected printer	
	• Batch data can be exported to a selected folder as .pdf-file	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

7 Reports and print outs

7.1 Batch print out

Test objective	• Check whether batch data can be printed
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User “adminlocal” is logged in
Required operations	• Select “Archive“ • Select menu “Batch management” • Select batch with status “Completed” • Press SWS “History” • Message (“History”) “The *selected batch* was chosen for the history” is displayed • Press SWS “Ok” • Press “Show > Press “History“ • Change to submenu “Batch history” > Press “Show batch data” > Press “Print”
	• Result and Recipe data can be viewed for the selected batch
	• Change to “Batch history” • Select pdf for “Result” and “Recipe data” • In “Configuration“ select target File path for storage • Press SWS “✓”
Consequence	• Result and recipe data are exported to selected folder as .pdf-file with file name “batch number + _Result.pdf” resp. “batch number + _RecipeData.pdf” *)
Comments	• Attach the printout to this test (can be done at the end of testing). • *) Date and time can be added in file name if needed
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Batch data can be printed (as pdf-file) after a batch has been selected for history	
	• Batch data can be exported	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

7.2 Parameter: Machine settings (Recipe)

Test objective	• Parameter: Mechanical settings
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User “adminlocal” is logged in *)
Required operations	• Call up “Recipe” • Press “Print active recipe”
Comments	• Attach the printout to this test (can be done at the end of testing). • *)Test can be done by all users of the “Group Management”
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Print out from the machine settings (Recipe) is possible	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

7.3 User right print out

Test objective	• Check whether list of user rights can be printed
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User “adminlocal” is logged in
Required operations	• Call up “Settings” -> page tab “User management” -> select “Group Management” • Choose the user group “Admin customer” (or “Administrator”) and press “Configure” -> select “all rights” • Press “Print”, save as a PDF-File and print it later.
Comments	• Attach the printout to this test (can be done at the end of testing).
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• It is possible to print or save the user rights	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

8 Basic function

8.1 Service: Clean Display

Test objective	• Check of the “Clean Display” function
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User adminlocal is logged in
Required operations	• Call up “Settings” -> “Service” and press “Clean Display” • If you press the button, a dialog window appears, where you can choose “Ok” or “Cancel” • With “Ok” the display turns grey and no touch inputs can be done, and the time of 30 seconds runs down and is shown on the display • After 30 seconds the HMI appears again
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Display turns grey and no touch input can be done	
	• After 30 seconds the HMI appears again	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

8.2 Alarmlists

Test objective	• Availability of Alarmlists
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Call up “Settings” -> “Documentation” • Lists of Faults, Warnings or Messages can be selected • The complete lists of Faults, Warnings and Messages can be printed or saved as pdf
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Lists of the Faults, Warnings and Messages can be selected	
	• Lists of Faults, Warnings and Messages can be printed or saved as pdf	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

8.3 Operating hours counter

Test objective	• Display of Operating hours counter
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Go to “Settings” -> “Information” submenu “Machine” to see “Operating hours” • On the display the operating hours counter is shown
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Operating hours counter is shown	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

8.4 Parameter limits

Test objective	• Test of limitation of Parameter limits
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • User adminlocal is logged in
Required operations	• Call up “Recipe Management” -> “Recipe Data” • Select Parameter [1] in “Speeds” : [1] Automatic • Click on value • Try to enter a value greater than the maximum limit of the machine speed • Try to enter a value smaller than the minimum limit of the machine speed • Enter a value within the limits
Comments	• Limit values are shown in window
Acknowledgement	• Enter original value

Test result		**yes/no**
Acceptance criteria	• A value greater than the maximum limit cannot be confirmed	
	• A value smaller than the minimum limit cannot be confirmed	
	• A value between the minimum and maximum limit can be confirmed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

8.5 HMI Language

Test objective	• Availability and change of HMI languages
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Call up “System configuration” -> “Language” and press “German” • After pressing the button “German”, the complete HMI texts change into German • After pressing the button “English”, the complete HMI texts change into English • Call up “System configuration” -> “Language” and press “French” • After pressing the button “French”, the complete HMI texts change into French
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• The HMI language switches to the chosen language	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9 Alarm Function Tests

Important Information

The following table lists the fault messages, warning messages, messages and software switches which are displayed on the control panel but can be simulated only by program changes and are therefore not tested.

WARNING

To perform a test procedure, it may be necessary to start the machine while the doors are open and the door contact switches are bridged.

Safety functions are not-active.

Severe injuries may result.

- ▶ Only authorized/trained persons are allowed to run the machine.
- ▶ Special attention must be given and care taken when working in the danger zone without protection.

☞ Please note that some fault messages, warnings or messages may contain a variable which is generated e.g. from the servo drive or profibus and gives further information about this device. The variable depends on the actual fault and therefore may vary.

Message number	Message text
162	Motion control: Data transmission to motion drives
164	Motion control: Synchronizing
2003	Codereader leaflet: read error
2004	Codereader carton: read error
2005	Codereader brochure: read error
2006	Codereader glued-in brochure: read error

Warning number	Warning text
5	Machine: Compressed air switched off
15	Control-PC: Used disk space exceeds 80%

Fault number	Fault text
8	HMI: Fault communication to control
12	Motion controller: 0 : No error code active
13	Machine: Reference not set to zero

Fault number	Fault text
15	Control-PC: Used disk space exceeds 90%
20	Batch control: Partial batch obtained
21	Batch control: Complete batch obtained
26	Control cabinet: Com error safety plc
27	Servo drives: Incorrect cam data
28	Control cabinet: Monitoring error safety plc
43	Control cabinet: Voltage monitoring
45	Control cabinet: UPS not ready
77	Machine: Fault monitoring contactors dropped away
78	Emegency stop: Safety circuit not active
82	Machine: Fault speed monitoring Inching mode - IF91_F50
83	Guard basic machine: Safety circuit not active
178	Motion drive slide in table: Fault
179	Motion drive slide in table: 0 : No error code active
186	Motion drive horizontal preinsertion: Fault
187	Motion drive vertical preinsertion: Fault
188	Motion drive insertion: Fault
191	Motion drive insertion: 0 : No error code active
192	Motion drive horizontal preinsertion: 0 : No error code active
193	Motion drive vertical preinsertion: 0 : No error code active
196	Motion drive main drive: Fault
198	Motion drive main drive: 0 : No error code active

Fault number	Fault text
285	Motion drive carton setup: Fault
288	Motion carton setup: 0 : No error code active
401	Robot 1: Motion drive: Fault
455	Robot 1: Collision range
478	Robot 1: Motion control: Fault
480	Robot 1: Motion drive axis A: Fault
481	Robot 1: Motion drive axis B: Fault
482	Robot 1: Motion drive axis C: Fault
483	Robot 1: Motion drive rotary axis: Fault
486	Robot 1: Motion drive axis A: 0 : No error code active
487	Robot 1: Motion drive axis B: 0 : No error code active
488	Robot 1: Motion drive axis C: 0 : No error code active
489	Robot 1: Motion drive rotary axis: 0 : No error code active
555	Robot 2: Collision range
580	Robot 2: Motion drive axis A: Fault
581	Robot 2: Motion drive axis B: Fault
582	Robot 2: Motion drive axis C: Fault
583	Robot 2: Motion drive rotary axis: Fault
586	Robot 2: Motion drive axis A: 0 : No error code active

Fault number	Fault text
587	Robot 1: Motion drive axis B: 0 : No error code active
588	Robot 2: Motion drive axis C: 0 : No error code active
589	Robot 2: Motion drive rotaty axis: 0 : No error code active
809	Leaflet inserter: Motion drive: Overload power supply
812	Leaflet inserter: Motion drive: Fault
819	Leaflet inserter: Motion drive: 0 : No error code active
901	Brochure infeed: Fault code reader
1238	Motion drive outfeed belt, slide in: Fault
1239	Motion drive outfeed belt, slide in: 0 : No error code active
1240	Motion drive outfeed belt, opp. slide in: Fault
1241	Motion drive outfeed belt, opp. slide in: 0 : No error code active
1433	Robot 1: Vacuum monitor: Suction cup 1
1434	Robot 1: Vacuum monitor: Suction cup 2
1435	Robot 1: Vacuum monitor: Suction cup 3
1443	Robot 1: Control cabinet: Voltage monitoring
1533	Robot 2: Vacuum monitor: Suction cup 1
1534	Robot 2: Vacuum monitor: Suction cup 2
1535	Robot 2: Vacuum monitor: Suction cup 3

Fault number	Fault text
1543	Robot 2: Control cabinet: Voltage monitoring
2006	Robot 2: Frequency conveyer puck outfeed belt
2007	Robot 2: Frequency conveyer puck infeed belt
2008	Robot 2: Frequency conveyer diskus belt
2028	Leaflet inserter: Motion drive leaflet reject wheel: 0 : No error activated
2030	Motion drive discharge belt front: @Fault
2031	Motion drive discharge belt front: 0 : No error code active
2032	Motion drive discharge belt back: @Fault
2033	Motion drive discharge belt back: 0 : No error code active
2034	Motion drive discharge belt top: @Fault
2035	Motion drive discharge belt top: 0 : No error code active
2047	Code reader carton: no Code loaded
2048	Code reader leaflet: no Code loaded
2049	Code reader brochure: no Code loaded
2050	Code reader glued-in brochure: no Code loaded
2051	Robot 1: Motion drive infeed belt master: Fault
2052	Robot 1: Motion drive infeed belt master: 0 : No error code active
2053	Robot 1: Motion drive infeed belt ahead: Fault
2054	Robot 1: Motion drive infeed belt ahead: 0 : No error code active
2063	Infeed 2: Monitoring sensor: Reducer accumulation pressure 1 -W166_B64
2064	Infeed 2: Monitoring sensor: Reducer accumulation pressure 1 -W166_B65
2065	Infeed 2: Monitoring sensor: Reducer accumulation pressure 2 -W166_B67
2066	Infeed 2: Monitoring sensor: Reducer accumulation pressure 2 -W166_B68
2067	Number of requested tara parts reached

9.1 Test protocols - Function tests software switches operation mode (SWSOPM)

9.1.1 SWSOPM 1: AUTOMATIC

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWSOPM 1 ”Automatic“ • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME40 “Operating mode: Automatic”)
Comments	• Test can be done together with test ME 40
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 2 “Setup“ • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME41 “Operating mode: Setup”)
Comments	• Test can be done together with test ME 41
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 1 “Automatic” is activated, Operating mode “Automatic“ is active	
	• Test 1: SWSOPM 1 “Automatic” is activated, Message is displayed on control panel (ME 40)	
	• Test 2: SWSOPM 2 “Setup“ is activated, Operating mode “Automatic“ is not active	
	• Test 2: SWSOPM 2 “Setup“ is activated, Message is displayed on control panel (ME41)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.2 SWSOPM 2: SETUP

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 2 “Setup“ • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME41 “Operating mode: Setup”)
Comments	• Test can be done together with test of ME 41
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWSOPM 1 “Automatic“ • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME40 “Operating mode: Automatic”)
Comments	• Test can be done together with test of ME 41
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 2 “Setup“ is activated, Operating mode “Setup“ is active	
	• Test 1: SWSOPM 2 “Setup“ is activated, Message is displayed on control panel (ME 41)	
	• Test 2: SWSOPM 1 “Automatic” is activated, Operating mode “Setup“ is not active	
	• Test 2: SWSOPM 1 “Automatic” is activated, Message is displayed on control panel (ME 40)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.3 SWSOPM 3: INCHING PANEL

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 3 “Inching panel” • Press “Reset” • Press “Start” and hold the button “Start”
Consequence	• Message is displayed on control panel (ME42 “Operating mode: Inching mode panel”) • Operating mode “Inching panel“ is active
Comments	• Test can be done together with test of ME 42
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in inching mode panel
Required operations	• Activate SWSOPM 1 “Automatic” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME40 “Operating mode: Automatic”) • Operating mode “Inching panel“ is not active
Comments	• Test can be done together with test of ME 40
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 3 “Inching panel” is activated, Operating mode “Inching panel“ is active	
	• Test 1: SWSOPM 3 “Inching panel” is activated, Message is displayed on control panel (ME 42)	
	• Test 2: SWSOPM 1 “Automatic” is activated, Operating mode “Inching panel“ is not active	
	• Test2: SWSOPM 1 “Automatic” is activated, Message is displayed on control panel (ME 40)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.4 SWSOPM 4: INCHING CABLE

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Plug in inching cable • Activate SWSOPM 4 “Inching cable“ • Run the machine with inching cable
Consequence	• Message is displayed on control panel (ME 43 “Operating mode: Inching mode cable front”) • Operating mode “Inching cable“ is active
Comments	• Test can be done together with test of ME 43
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in inching mode cable
Required operations	• Remove inching cable • Press “Reset” • Activate SWSOPM 1 “Automatic” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME 40 “Operating mode: Automatic”) • Operating mode “Inching cable“ is not active
Comments	• Test can be done together with test of ME 43
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 4 “Inching cable“ is activated, Operating mode “Inching cable“ is active	
	• Test 1: SWSOPM 4 “Inching cable“ is activated, Message is displayed on control panel (ME 43)	
	• Test 2: SWSOPM 1 “Automatic” is activated, Operating mode “Inching cable“ is not active	
	• Test 2: SWSOPM 1 “Automatic” is activated, Message is displayed on control panel (ME 40)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.5 SWSOPM 6: OPEN STOP BRAKE

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
Test prerequisites	• Machine is ready in inching mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Select one of the drives
Consequence	• Chosen drive can be moved manually • Warning is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• SWSOPM 6 “Open stop brake” is activated, chosen drive can be moved manually	
	• SWSOPM 6 “Open stop brake” is activated, Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.6 SWSOPM 7: ZERO DRIVE

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
Test prerequisites	• Machine is ready in setup mode • Servo drives are set to zero position
Required operations	• Activate SWSOPM 7 “Zero drive” • Choose one of the drives • Confirm with the checkmark
Consequence	• Drive is zeroed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• SWSOPM 7 “Zero drive” is activated, Drive is zeroed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.7 SWSOPM 8: INCHING SINGLE AXIS

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in inching mode
Required operations	• Activate SWSOPM 8 “Inching single axis” • Select one of the robot axis • Press “Start” and hold the button “Start”
Consequence	• Message is displayed on control panel (ME47: “Operating mode: Inching mode single axis“) • Operating mode “Inching single axis“ is active
	TEST 2
Test prerequisites	• Machine is ready in inching mode single axis
Required operations	• Activate SWSOPM 1 “Automatic” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME40 “Operating mode: Automatic“) • Operating mode “Inching single axis“ is not active
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: Operating mode „Inching single axis“ is active	
	• Test 1: Message is displayed on control panel (ME 47)	
	• Test 2: Operating mode „Inching single axis“ is not active	
	• Test 2: Message is displayed on control panel (ME 40)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.8 SWSOPM 11: INCHING INFEED

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 11 “Inching infeed“ • Press “Reset” • Press “Start” at the operating panel of the infeed system
Consequence	• Message is displayed on control panel (ME49 “Operating mode: Inching mode infeed”) • Operating mode “Inching infeed“ is active
Comments	• Test can be done together with test of ME 49
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in inching mode panel
Required operations	• Activate SWSOPM 1 “Automatic” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel (ME40 “Operating mode: Automatic”) • Operating mode “Inching infeed“ is not active
Comments	• Test can be done together with test of ME 40
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 11 “Inching infeed” is activated, Operating mode “Inching panel“ is active	
	• Test 1: SWSOPM 11 “Inching infeed” is activated, Message is displayed on control panel (ME 49)	
	• Test 2: SWSOPM 1 “Automatic” is activated, Operating mode “Inching infeed” is not active	
	• Test2: SWSOPM 1 “Automatic” is activated, Message is displayed on control panel (ME 40)	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.9 SWSOPM 60: LINE MODE DOWNSTREAM EQUIPMENT

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 60 “Line mode downstream equipment” • Press “Start” • Create fault at downstream machine
Consequence	• Machine stops • Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWSOPM 60 “Line mode downstream equipment” • Press “Start” • Try to create fault at downstream machine
Consequence	• Machine is running in automatic mode • Fault message is not displayed in control panel
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 60 “Line mode downstream equipment” is activated: Machine is in line mode. In case of faults fault message will be displayed on control panel and machine stops.	
	• Test 2: SWSOPM 60 “Line mode downstream equipment” is deactivated: Machine is not in line mode. In case of faults fault message is not displayed on control panel, machine continues run in automatic mode.	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.10 SWSOPM 62: MACHINE: AUTOMATIC RESTART

Test objective	• Function test of operating mode switch (SWSOPM)
Test procedure	
	TEST 1
Test prerequisites	• SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • Line is running at reduced speed
Required operations	• Create FLT 2041 ”Robot 2:Emergency stopp activated: Diskus belt”
Consequence	• Fault message is displayed on control panel
Required operations	• Press “Reset”
Consequence	• Machine restarts automatically after acknowledgement of FLT 2041
Comments	• Test can be done together with test of FLT 2041
Acknowledgement	• Press “Stop”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 62 “Machine: Automatic restart” is deactivated
Required operations	• Press “Start” • Create FLT 2041 ”Robot 2:Emergency stopp activated: Diskus belt”
Consequence	• Machine stops • Fault message is displayed on control panel
Required operations	• Acknowledge FLT 2041 • Press “Reset”
Consequence	• Machine does not restarts automatically after acknowledgement of FLT 2041
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 62 “Machine: Automatic restart” is activated, Machine restarts automatically after acknowledgement of the fault message	
	• Test 2: SWSOPM 62 “Machine: Automatic restart” is deactivated, Machine does not restart automatically after acknowledgement of the fault message	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.1.11 SWSOPM 63: LINE MODE UPSTREAM EQUIPMENT

Test objective	• Function test of operating mode switch (SWSOPM)

Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 63 “Line mode upstream equipment“ • Activate SWS 400 “Robot 1” • Activate SWS 500 “Robot 2” • Press “Start”
Consequence	• Machine is running in line mode
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWSOPM 63 “Line mode upstream equipment“ • Deactivate SWS 400 “Robot 1” • Deactivate SWS 500 “Robot 2” • Press “Start”
Consequence	• Machine is running without product infeed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: SWSOPM 63 “Line mode upstream equipment“ is activated, Machine is running with product infeed	
	• Test 2: SWSOPM 63 “Line mode upstream equipment“ is deactivated, Machine is running without product infeed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2 Test protocols - Function tests software switches operation mode drive (SWSOPM_DRV)

9.2.1 SWSOPM_DRV 1002: INSERTION

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Set drive “Insertion” mechanically to position "zero” • Close guard door: • Press “Reset” • Activate SWSOPM 7 “Zero drive” • Activate SWSOPM_DRV 1002
Consequence	• Message is displayed on control panel “Do you really want to set drive to zero”
Comments	• The position of the drive should not be adjusted, as it has already been adjusted.
Acknowledgement	• Message “Do you really want to set drive to zero” - Cancel input • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• SWSOPM_DRV 1002 “Insertion“ is activated, Message is displayed on control panel “Do you really want to set drive to zero”	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.2 SWSOPM_DRV 1003: PREINSERTION HORIZONTAL

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1003
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.3 SWSOPM_DRV 1004: PREINSERTION VERTICAL

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1004
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.4 SWSOPM_DRV 1007: CARTON SETUP

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1007
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.5 SWSOPM_DRV 1008: LEAFLET DEVICE

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Set drive “Insertion” mechanically to position "zero” • Close guard door: • Press “Reset” • Activate SWSOPM 7 “Zero drive” • Activate SWSOPM_DRV 1008
Consequence	• Message is displayed on control panel “Do you really want to set drive to zero”
Comments	• The position of the drive should not be adjusted, as it has already been adjusted.
Acknowledgement	• Message “Do you really want to set drive to zero” - Cancel input • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• SWSOPM_DRV 1008 “Leaflet device“ is activated, Message is displayed on control panel “Do you really want to set drive to zero”	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.6 SWSOPM_DRV 1015: MAIN DRIVE

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in setup mode
Required operations	• Set drive mechanically to position "zero” • Close guard door: • Press “Reset” • Activate SWSOPM 7 “Zero drive” • Activate SWSOPM_DRV 1015 “Main drive“
Consequence	• Message is displayed on control panel “Do you really want to set drive to zero”
Comments	• The position of the drive should not be adjusted, as it has already been adjusted.
Acknowledgement	• Message “Do you really want to set drive to zero” - Cancel input • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• SWSOPM_DRV 1015 “Main drive“ is activated, Message is displayed on control panel “Do you really want to set drive to zero”	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.7 SWSOPM_DRV 1016: INSERTION TABLE

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Set drive “Insertion” mechanically to position "zero” • Close guard door: • Press “Reset” • Activate SWSOPM 7 “Zero drive” • Activate SWSOPM_DRV 1016
Consequence	• Message is displayed on control panel “Do you really want to set drive to zero”
Comments	• The position of the drive should not be adjusted, as it has already been adjusted.
Acknowledgement	• Message “Do you really want to set drive to zero” - Cancel input • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• SWSOPM_DRV 1016 “Insertion table“ is activated, Message is displayed on control panel “Do you really want to set drive to zero”	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.8 SWSOPM_DRV 1017: CARTON ALIGNMENT

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Set drive “Insertion” mechanically to position "zero” • Close guard door: • Press “Reset” • Activate SWSOPM 7 “Zero drive” • Activate SWSOPM_DRV 1017
Consequence	• Message is displayed on control panel “Do you really want to set drive to zero”
Comments	• The position of the drive should not be adjusted, as it has already been adjusted.
Acknowledgement	• Message “Do you really want to set drive to zero” - Cancel input • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• SWSOPM_DRV 1017 “Carton alignment“ is activated, Message is displayed on control panel “Do you really want to set drive to zero”	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.9 SWSOPM_DRV 1054: ROBOT 1: DRILL AXIS

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1054
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.10 SWSOPM_DRV 1055: ROBOT 1

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Press button “CAR1-W150-S20P”
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.11 SWSOPM_DRV 1059: ROBOT 2: DRILL AXIS

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1059
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.12 SWSOPM_DRV 1060: ROBOT 2

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Press button “CAR1-W250-S20P
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.13 SWSOPM_DRV 1061: ROBOT 1: CYCLE BELT 1

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1061
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.2.14 SWSOPM_DRV 1062: ROBOT 1: CYCLE BELT 2

Test objective	• Function test of operating mode drive (SWSOPM_DRV)
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 6 “Open stop brake” • Activate SWSOPM_DRV 1062
Consequence	• Brake can be moved manually
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Brake is released/ open	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3 Test protocols - Function tests software switches (SWS)

9.3.1 SWS 52: COMPRESSED AIR

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • SWS 400 “Robot 1” is activated
Required operations	• Activate SWS 405 “Robot 1: Call product“ • Activate SWS 52
Consequence	• Robot 1 is running
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Robot 1 is running
Required operations	• Deactivate SWS 52
Consequence	• Robot 1 stops running
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 52 is activated, the robot 1 is running	
	• Test 2: If SWS 52 is deactivated, the robot 1 stops running	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.2 SWS 53: PERMANENT READING CODE

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 53 “Permanent reading code“ • Activate button for network navigator keyence and log in • Within the menu select the active format • Open “Production” • Select “code reader, sensor carton” • In navigator keyence setup select “diagnose” • Place carton in front of reading head of carton
Consequence	• Code is displayed on control panel within the ”Keyence navigator-menu“ • Code reading is active at standstill
	TEST 2
Test prerequisites	• Code reading is active at standstill
Required operations	• Deactivate SWS 53 “Permanent reading code“
Consequence	• Code is not displayed on control panel within the ”Keyence navigator-menu“ • Code reading is not active at standstill
Comments	• During continuous code reading a lamp at the code reader carton is blinking
Acknowledgement	• Deactivate SWS 53 “Permanent reading code“

Test result		**yes/no**
Acceptance criteria	• Test 1: Code is displayed on control panel within the ”Keyence navigator-menu“	
	• Test 1: Code reading is active at standstill	
	• Test 2: Code is not displayed on control panel within the ”Keyence navigator-menu“	
	• Test 2: Code reading is not active at standstill	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.3 SWS 54: VACUUM

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 208 “Continuous call carton“ • Activate SWS 54 “Vacuum“
Consequence	• Vacuum pump is running
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Vacuum pump is running
Required operations	• Deactivate SWS 54 “Vacuum“
Consequence	• Vacuum pump is not running
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 54 “Vacuum” is activated, the vacuum pump is running	
	• Test 2: If SWS 54 “Vacuum” is deactivated, the vacuum pump is not running	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.4 SWS 56: MACHINE INSIDE LIGHT OFF

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 56 “Machine inside light off“
Consequence	• Lamps in production room don't shine
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWS 56 “Machine inside light off“
Consequence	• Lamps in production room shine
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 56 “Machine inside light off“ is activated: Lamps in production room don't shine	
	• Test 2: SWS 56 “Machine inside light off“ is deactivated: Lamps in production room shine	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.5 SWS 100: INSERT DEFECTIVE PRODUCT

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 100 “Insert defective product“ • Insert leaflet with faulty code in stack • Insert some product in the infeed • Press “Start” • Call some products
Consequence	• Carton with faulty leaflet is loaded but ejected on discharge belt
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWS 100 “Insert defective product“ • Insert leaflet with faulty code in stack • Insert some product in the infeed • Press “Start” • Call some products
Consequence	• Leaflet is ejected • No carton call • Product is ejected at insertion
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 100 is activated: In case of defective product or defective leaflet, carton will be loaded but rejected on discharge belt	
	• Test 2: SWS 100 is deactivated: In case of defective product or defective leaflet, product will be rejected without loading	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.6 SWS 106: CONTINUOUS INSERTION

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 106 “Continuous insertion“ • Press “Start”
Consequence	• Insertion pushers are activated
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in setup mode
Required operations	• Deactivate SWS 106 “Continuous insertion“ • Press “Start”
Consequence	• Insertion pushers are deactivated
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: Insertion pushers are activated	
	• Test 2: Insertion pushers are deactivated	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.7 SWS 119: CONTINUOUS PREINSERTION

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 119 ”Continuous preinsertion“ • Press “Start”
Consequence	• Preinsertion moves in continuous operation
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode
Required operations	• Deactivate SWS 119 ”Continuous preinsertion“ • Press “Start”
Consequence	• Preinsertion does not move
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: Preinsertion moves in continuous operation	
	• Test 2: Preinsertion does not move	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.8 SWS 120: PREINSERTION UPPER FRONT POSITION

Test objective	• Function test of software switch (SWS)
Testdurchführung	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Guard doors are closed
Required operations	• Activate SWS 120 “Preinsertion upper front position“ • Press “Reset”
Consequence	• Preinserter moves into an upper front position (assembly position)
Comments	• None
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Guard doors are closed • Preinserter is in upper front position
Required operations	• Deactivate SWS 120 “Preinsertion upper front position“ • Press “Reset”
Consequence	• Preinserter moves back to original position
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: Preinserter moves into an upper front position (assembly position)	☐
	• Test 2: Preinserter moves back to original position	☐
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.9 SWS 121: PREINSERTION PLATE 1 DOWN

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Activate SWS 121 ”Preinsertion plate 1 down“ • Press “Reset”
Consequence	• Plate 1 at preinsertion lowers
Comments	• Plate 1 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Deactivate SWS 121 ”Preinsertion plate 1 down“
Consequence	• Plate 1 at preinsertion raises
Comments	• Plate 1 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 121 is activated plate 1 at preinsertion lowers	☐
	• Test 2: If SWS 121 is deactivated plate 1 at preinsertion raises	☐
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.10 SWS 122: PREINSERTION PLATE 2 DOWN

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Activate SWS 122 ”Preinsertion plate 2 down“ • Press “Reset”
Consequence	• Plate 2 at preinsertion lowers
Comments	• Plate 2 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Deactivate SWS 122 ”Preinsertion plate 2 down“
Consequence	• Plate 2 at preinsertion raises
Comments	• Plate 2 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 122 is activated plate 2 at preinsertion lowers	
	• Test 2: If SWS 122 is deactivated plate 2 at preinsertion raises	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.11 SWS 123: PREINSERTION PLATE 3 DOWN

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Activate SWS 123 ”Preinsertion plate 3 down“ • Press “Reset”
Consequence	• Plate 3 at preinsertion lowers
Comments	• Plate 3 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Deactivate SWS 123 ”Preinsertion plate 3 down“
Consequence	• Plate 3 at preinsertion raises
Comments	• Plate 3 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 123 is activated plate 3 at preinsertion lowers	
	• Test 2: If SWS 123 is deactivated plate 3 at preinsertion raises	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.12 SWS 124: PREINSERTION PLATE 4 DOWN

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Activate SWS 124 ”Preinsertion plate 4 down“ • Press “Reset”
Consequence	• Plate 4 at preinsertion lowers
Comments	• Plate 4 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Preinsertion is located outside of folding carton
Required operations	• Deactivate SWS 124 ”Preinsertion plate 4 down“
Consequence	• Plate 4 at preinsertion raises
Comments	• Plate 4 at preinsertion lowers only if it is located outside folding carton
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 124 is activated plate 4 at preinsertion lowers	
	• Test 2: If SWS 124 is deactivated plate 4 at preinsertion raises	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.13 SWS 127: PREINSERTION

Test objective	• Function test of software switch (SWS)	
Test procedure		
	TEST 1	
Test prerequisites	• Machine is ready in setup mode	
Required operations	• Activate SWS 127 “Preinsertion“ • Press “Start”	
Consequence	• Preinsertion is active	
Comments	• None	
Acknowledgement	• Press “Stop”	
	TEST 2	
Test prerequisites	• Machine is ready in setup mode	
Required operations	• Deactivate SWS 127 “Preinsertion“ • Press “Start”	
Consequence	• Preinsertion is not active	
Comments	• None	
Acknowledgement	• Press “Stop” • Press “Reset”	
Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 127 “Preinsertion“ is activated, preinsertion is active	☐
	• Test 2: If SWS 127 “Preinsertion“ is deactivated, preinsertion is not active	☐
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.14 SWS 200: CODE READER CARTON

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Prepare two (2) cartons with wrong / manipulated carton code • Product is available
Required operations	• Insert cartons with wrong / manipulated code into magazine • Activate SWS 200 ”Code reader carton“ • Press “Start”
Consequence	• Wrong or non-coded cartons are ejected
	TEST 2
Required operations	• Insert cartons with wrong / manipulated code into magazine • Deactivate SWS 200 ”Code reader carton“ • Press “Start”
Consequence	• Wrong or non-coded cartons are not recognized and ejected
Comments	• None
Acknowledgement	• Activate SWS 200 ”Code reader carton“ • Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS200 is activated: wrong or non-coded cartons are ejected	
	• **T**est 2: SWS200 is deactivated: wrong or non-coded cartons are not recognized and ejected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.15 SWS 201: CARTON LASER PRINTING

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 63 “Line mode upstream equipment“ • Activate SWS 201 “Carton laser printer” • Press “Start”
Consequence	• Machine is running in line mode • Laser printer unit is running
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 63 “Line mode upstream equipment“ is activated • SWS 201 “Carton laser printer” is activated
Required operations	• Press “Start” • Deactivate SWS 201 “Carton laser printer”
Consequence	• Carton laser unit stops running • Machine stops • Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 201 “Carton laser printer” is activated: Machine is in line mode and laser printer unit is running.	
	• Test 2: If SWS 201 “Carton laser printer” is deactivated: Machine is in line mode but carton laser unit is not running. In case of faults fault message will be displayed on control panel and machine stops.	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.16 SWS 203: BLOWING AIR CARTON

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Folded cartons are available
Required operations	• Activate SWS 203 “Blowing air carton” • Press “Start”
Consequence	• Folding of the side flap is supported by blowing air
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Required operations	• Deactivate SWS 203 “Blowing air carton”
Consequence	• Folding of the side flap is not supported by blowing air
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: Folding of the side flap is supported by blowing air	
	• Test 2: Folding of the side flap is not supported by blowing air	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.17 SWS 208: CONTINUOUS CALL CARTON

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • Cartons are available
Required operations	• Activate SWS 54 ”Vacuum“ (only with vacuum pump…) • Activate SWS 208 ”Continuous call carton“ • Press “Start”
Consequence	• Folding cartons are drawn off and erected without product with each cycle
Comments	• No packaged goods required for the function “Continuous call carton“
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in setup mode • Cartons are available
Required operations	• Deactivate SWS 208 ”Continuous call carton“
Consequence	• Cartons are not drawn off and not erected without product with each cycle
Comments	• No packaged goods required for the function “Continuous call carton“
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: Folding cartons are drawn off and erected without product with each cycle	
	• Test 2: Folding cartons are not drawn off and not erected without product with each cycle	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.18 SWS 256: CHECK CARTON OPEN COVER FLAP

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 256 “Check carton open cover flap” is activated • Counter 256 “Carton: Consecutive fault open flap“ is set to 3
Required operations	• Press “Start” • Press “Stop” until some cartons has been closed • Put out one cover flap of the carton before the cartons reach the sensors “CAR1.B86-B01”/ “CAR1.B86-B02“ • Press “Start”
Consequence	• Carton with open cover flap is detected • Carton with open cover flap is carried out as bad
Acknowledgement	• None
Comments	• None
	TEST 2
Required operations	• Deactivate SWS 256 “Check carton open cover flap” • Press “Start” • Press “Stop” until some cartons has been closed • Put out one cover flap of the carton before the cartons reach the sensors “CAR1.B86-B01”/ “CAR1.B86-B02“ • Press “Start”
Consequence	• Carton with open cover flap is not detected • Carton with open cover flap is carried out as good
Acknowledgement	• None
Comments	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 256 “Check carton open cover flap” is activated: Carton with open cover flap is detected	
	• Test 2: If SWS 256 “Check carton open cover flap” is deactivated: Carton with open cover flap is not detected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.19 SWS 257: CHECK CARTON OPEN SIDE FLAP

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 257 “Check carton open side flap” is activated • Counter 257 “Carton: Consecutive fault open flap“ is set to 3
Required operations	• Press “Start” • Press “Stop” until some cartons has been closed • Put out one side flap of the carton before the cartons reach the sensors “CAR1.B86-B03”/ “CAR1.B86-B04“ • Press “Start”
Consequence	• Carton with open side flap is detected • Carton with open side flap is carried out as bad
Acknowledgement	• None
Comments	• None
	TEST 2
Required operations	• Deactivate SWS 257 “Check carton open side flap” • Press “Start” • Press “Stop” until some cartons has been closed • Put out one side flap of the carton before the cartons reach the sensors “CAR1.B86-B03”/ “CAR1.B86-B04“ • Press “Start”
Consequence	• Carton with open side flap is not detected • Carton with open side flap is carried out as good
Acknowledgement	• None
Comments	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 257 “Check carton open side flap” is activated: Carton with open side flap is detected	
	• Test 2: If SWS 257 “Check carton open side flap” is deactivated: Carton with open side flap is not detected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.20 SWS 300: LEAFLET DEVICE

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode with product
Required operations	• Activate SWS 300 ”Leaflet device“ • Press “Start”
Consequence	• Leaflet device is active • Leaflets are called
	TEST 2
Required operations	• Deactivate SWS 300 “Leaflet device“
Consequence	• Leaflet device is not active • Leaflets are not called
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 300 is activated: Leaflet device is active, leaflets are called	
	• Test 2: SWS 300 is deactivated: Leaflet device is not active, leaflets are not called	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.21 SWS 302: CODE READER LEAFLET REAR

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Prepare the leaflet with the manipulated code (e.g. use a black pen to draw an additional line in the code or combine two narrow lines to form a thick line).
Required operations	• Activate SWS 300 “Leaflet device” • Activate SWS 302 ”Code reader leaflet rear“ • Insert leaflets with wrong or manipulated code (rear) • Press “Start”
Consequence	• All wrong or non-coded leaflets are ejected • Counter “Code reader rear“ increases by one per defective leaflet
Comments	• Consecutive fault after repeated defective leaflets • Leaflet ejection in leaflet unit
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in automatic mode • Prepare the leaflet with the manipulated code (e.g. use a black pen to draw an additional line in the code or combine two narrow lines to form a thick line).
Required operations	• Activate SWS 300 “Leaflet device” • Deactivate SWS 302 ”Code reader leaflet rear“ • Insert leaflets with wrong or manipulated code (rear) • Press “Start”
Consequence	• All wrong or non-coded leaflets are not ejected
Comments	• Leaflet ejection in leaflet unit
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 302 ”Code reader leaflet rear“ is activated, all wrong or non-coded leaflets are ejected	
	• Test 1: If SWS 302 ”Code reader leaflet rear“ is activated, counter “Code reader rear“ increases by one per defective leaflet	
	• Test 2: If SWS 302 ”Code reader leaflet rear“ is deactivated, leaflets with wrong or missing code on rear side are not ejected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.22 SWS 303: CHECK LEAFLET PRESENT

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Run the machine with product • Activate SWS 300 ”Leaflet device” • Deactivate SWS 303 ”Check Leaflet present“ • Press “Stop” • Open guard and remove leaflet out of carton before leaflet sensor ”=CAR1.B75-B04“ • Press “Reset” • Press “Start”
Consequence	• Carton without leaflet will not be ejected
Acknowledgement	• None
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Run the machine with product • Activate SWS 300 „Leaflet device” • Activate SWS 303 ”Check Leaflet present“ • Press “Stop” • Open guard and remove leaflet out of carton before leaflet sensor ”=CAR1.B75-B04“ • Press “Reset” • Press “Start”
Consequence	• Carton without leaflet will be ejected • Counter 315 “Leaflet: Fault cross check in carton“ increases by one per defective leaflet
Acknowledgement	• Press “Stop” • Press “Reset”
Comments	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 303 ”Check Leaflet present“ is deactivated: Carton without leaflet will not be ejected	
	• Test 2: SWS 303 ”Check Leaflet present“ is activated: Carton without leaflet will be ejected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.23 SWS 304: INSERT DEFECTIVE LEAFLET

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 304 “Insert defective leaflet“ • Insert leaflet with faulty code in stack • Insert some product in the infeed • Press “Start” • Call some products
Consequence	• Carton with faulty leaflet is loaded but ejected on discharge belt
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWS 304 “Insert defective leaflet“ • Insert leaflet with faulty code in stack • Insert some product in the infeed • Press “Start” • Call some products
Consequence	• Leaflet is ejected • No carton call • Product is ejected at insertion
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 304 is activated: In case of defective leaflet, leaflet will be loaded but rejected on discharge belt	
	• Test 2: SWS 304 is deactivated: In case of defective leaflet, leaflet will be rejected without loading	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.24 SWS 307: CONTINUOUS CALL LEAFLET

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 300 ”Leaflet device“ • Activate SWS 54 “Vacuum” (only with vacuum pump…) • Activate SWS 307 ”Continuous call leaflet“ • Press “Start”
Consequence	• Leaflets are drawn off and folded without product with each cycle
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST2
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWS 300 ”Leaflet device“ • Activate SWS 54 “Vacuum” (only with vacuum pump…) • Deactivate SWS 307 ”Continuous call leaflet“ • Press “Start”
Consequence	• Leaflets are not drawn off and folded without product with each cycle
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 307 ”Continuous call leaflet“ is activated, Leaflets are drawn off and folded without product with each cycle	
	• Test 2: SWS 307 ”Continuous call leaflet“ is deactivated, Leaflets are not drawn off and folded without product with each cycle	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.25 SWS 400: ROBOT 1

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 400 “Robot 1” • Press “Start”
Consequence	• “Robot 1” is active
	TEST 2
Test prerequisites	• Cartoning machine is running and “Robot 1” is active
Required operations	• Press “Stop” • Deactivate SWS 400 “Robot 1” • Press “Start”
Consequence	• “Robot 1” stops and is not active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 400 “Robot 1” is activated, “Robot 1” is active	
	• Test 2: If SWS 400 “Robot 1” is deactivated, “Robot 1” stops and is not active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.26 SWS 401: ROBOT 1: RUN EMPTY

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Activate SWS 401 “Robot 1: Run empty” • Press “Start”
Consequence	• Cartoning machine starts operation and product on infeed belt run empty • Machine is running with predefined cycles
	TEST 2
Required operations	• Deactivate SWS 401 “Robot 1: Run empty” • Press “Stop”
Consequence	• Cartoning machine and product infeed stop
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 401 “Robot 1: Run empty” is activated, infeed belt runs empty and stops automatically after predefined cycles	
	• Test 2: If SWS 401 “Robot 1: Run empty” is deactivated, cartoning machine and product infeed stop	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.27 SWS 405: ROBOT 1: CALL PRODUCT

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Activate SWS 405 “Robot 1: Call product” • Press “Start”
Consequence	• Cartoning machine is running and products are called at the infeed
	TEST 2
Required operations	• Deactivate SWS 405 “Robot 1: Call product”
Consequence	• No products are called
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 405 “Robot 1: Call product” is activated, products are called at the infeed belt	
	• Test 2: If SWS 405 “Robot 1: Call product” is deactivated, no products are called at infeed belt	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.28 SWS 500: ROBOT 2

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 500 “Robot 2” • Press “Start”
Consequence	• Robot 2 is active
	TEST 2
Test prerequisites	• Cartoning machine is running and Robot 2 is active
Required operations	• Press “Stop” • Deactivate SWS 500 “Robot 2” • Press “Start”
Consequence	• “Robot 2” stops and is not active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 500 “Robot 2” is activated, “Robot 2” is active	
	• Test 2: If SWS 500 “Robot 2” is deactivated, “Robot 2” stops and is not active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.29 SWS 505: ROBOT 2: CALL PRODUCT

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Activate SWS 505 “Robot 2: Call product” • Press “Start”
Consequence	• Cartoning machine is running and products are called at the infeed
	TEST 2
Required operations	• Deactivate SWS 505 “Robot 2: Call product”
Consequence	• No products are called
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 505 “Robot 2: Call product” is activated, products are called at the product infeed	
	• Test 2: If SWS 505 “Robot 2: Call product” is deactivated, no products are called at infeed belt	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.30 SWS 900: BROCHURE INFEED

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 900 “Brochure infeed” • Press “Start”
Consequence	• Infeed of brochures is running
	TEST 2
Required operations	• Deactivate SWS 900 “Brochure infeed”
Consequence	• Cartoning line is in operation without brochures infeed
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 900 “Brochure infeed” is activated, infeed of brochures is running	
	• Test 2: If SWS 900 “Brochure infeed” is deactivated, cartoning line is in operation without brochures infeed	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.31 SWS 901: BROCHURE INFEED: CODE READER

Test objective	• Function test of software switch (SWS)

Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Prepare brochures with manipulated code (e.g. put a line between the code with a black pen or combine two small lines to one bold line)
Required operations	• Activate SWS 900 “Brochure infeed” • Activate SWS 901 “Brochure infeed: Code reader” • Insert the brochures with wrong or manipulated code • Press “Start”
Consequence	• Manipulated brochures and product are rejected, no carton call • Counter 901 “Brochure infeed: Consecutive fault code reading“ increases by one per manipulated brochure code
	TEST 2
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Deactivate SWS 901 “Brochure infeed: Code reader” • Insert brochures with wrong or manipulated code • Press “Start”
Consequence	• Manipulated brochure is packed together with the product into the carton
Comments	• None
Acknowledgement	• Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 901 “Brochure infeed: Code reader” is activated, brochure will be rejected in case of wrong code	
	• Test 1: If SWS 901 “Brochure infeed: Code reader” is activated, counter 901 “Brochure infeed: Consecutive fault code reading“ increases by one per manipulated brochure code	
	• Test 2: If SWS 901 “Inserter: Code reader” is deactivated, insert is inserted into carton together with product	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.32 SWS 902: BROCHURE INFEED: CONTINUOUS CALL

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in setup mode • SWS 900 “Brochure infeed” is activated • SWS 902 “Brochure infeed: Continuous call” is activated • The magazine belt of the brochure infeed is empty
Required operations	• Press “Start”
Consequence	• The brochure infeed can be started without product (brochures) • The brochures are called continuously
Acknowledgement	• Press “Stop” • Press “Reset”
	TEST 2
Test prerequisites	• Machine is ready in setup mode
Required operations	• Deactivate SWS 902 “Brochure infeed: Continuous call” • Press “Start”
Consequence	• The brochure infeed cannot be started • No brochures are called
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Test 1: If SWS 902 “Brochure infeed: Continuous call” is activated, brochures are called continuously	
	• Test 2: If SWS 902 “Brochure infeed: Continuous call” is deactivated, no brochures are called	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.33 SWS 2001: ROBOT 2: RUN WITH FLOW-PACK

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 63 “Line mode upstream equipment“ is activated • SWS 400 “Robot 1” is activated • SWS 500 “Robot 2” is activated
Required operations	• Activate SWS 2001 “Robot 2: Run with Flow-Pack” • Press “Start”
Consequence	• Machine is running with flow-packs
	TEST 2
Test prerequisites	• Cartoning machine is running with flow-packs
Required operations	• Press “Stop” • Deactivate SWS 2001 “Robot 2: Run with Flow-Pack” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS 2001 “Robot 2: Run with Flow-Pack” is activated: Machine is running with flow-packs	☐
	• Test 2: SWS 2001 “Robot 2: Run with Flow-Pack” is deactivated: Fault message is displayed on control panel	☐
	• Test 2: SWS 2001 “Robot 2: Run with Flow-Pack” is deactivated: Machine cannot be started as long as fault is active	☐
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.3.34 SWS 2002: CODE READER GLUED-IN BROCHURE

Test objective	• Function test of software switch (SWS)
Test procedure	
	TEST 1
Test prerequisites	• Machine is ready in automatic mode • Prepare two (2) booklets with wrong / manipulated code • Product is available
Required operations	• Insert booklets with wrong / manipulated code into magazine • Activate SWS 2002 ”Code reader glued-in brochure“ • Press “Start”
Consequence	• Wrong or non-coded booklets are ejected
	TEST 2
Required operations	• Insert booklets with wrong / manipulated code into magazine • Deactivate SWS 2002 ”Code reader glued-in brochure“ • Press “Start”
Consequence	• Wrong or non-coded booklets are not recognized and ejected
Comments	• None
Acknowledgement	• Activate SWS 2002 ”Code reader glued-in brochure“ • Press “Stop” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Test 1: SWS2002 is activated: wrong or non-coded booklets are ejected	
	• **T**est 2: SWS200 is deactivated: wrong or non-coded booklets are not recognized and ejected	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4 Test protocols - Messages (ME)

9.4.1 ME 25: BATCH CONTROL: BATCH IS INTERRUPTED

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • A released recipe is active • A new batch has been created but not started
Required operations	• Start batch • Press “Interrupt” on “Batch control”
Consequence	• Message is displayed on control panel
Comments	• Test can be done together with test of ME 27
Acknowledgement	• Press “Interrupt“ button and confirm indicated message to activate the batch again

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.2 ME 26: BATCH CONTROL: BATCH IS NOT ACTIVE

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Release a recipe
Consequence	• Message is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.3 ME 27: BATCH CONTROL: BATCH IS ACTIVE

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • A released recipe is active • A new batch has been created
Required operations	• Start batch
Consequence	• Message is displayed on control panel
Comments	• Test can be done together with test of ME 25 and ME 26
Acknowledgement	• Press “finish” on “Batch control” and confirm indicated message

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.4 ME 40: OPERATING MODE: AUTOMATIC

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWSOPM 1 “Automatic” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel
Comments	• Test can be done together with test of SWSOPM 1
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.5 ME 41: OPERATING MODE: SETUP

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 2 “Setup” • Press “Reset” • Press “Start”
Consequence	• Message is displayed on control panel
Comments	• Test can be done together with test of SWSOPM 2
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.6 ME 42: OPERATING MODE: INCHING MODE PANEL

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 3 “Inching panel“ • Close all guard doors • Press “Reset” • Press “Start” and hold the button “Start”
Consequence	• Message is displayed on control panel as long as the button ”Start“ is pressed“
Comments	• Test can be done together with test of SWSOPM 3
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.7 ME 43: OPERATING MODE: INCHING MODE CABLE FRONT

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in inching mode
Required operations	• Plug in “inching cable front“ • Activate SWSOPM 4 “Inching cable” • Close all guard doors • Press “Reset” • Press button on “inching cable front”
Consequence	• Message is displayed on control panel as long as the button on inching cable is pressed“
Comments	• Test can be done together with test of SWSOPM 4
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.8 ME 47: OPERATING MODE: INCHING MODE SINGLE AXES

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in inching mode
Required operations	• Activate SWSOPM 8 “Inching single axis” • Activate SWSOPM_DRV 1054 “Robot 1: Drill axis“ • Press “Start” and hold the button
Consequence	• Message is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.9 ME 49: OPERATING MODE: INCHING MODE INFEED

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWSOPM 11 “Inching infeed” • Press “Start” at the operating panel of the infeed system
Consequence	• Message is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.10 ME 160: MACHINE: OPERATIONAL

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • No fault messages pending
Required operations	• Press “Reset” in case of pending fault messages
Consequence	• Message is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.11 ME 448: ROBOT 1: REFERENCE RUN

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Robot arm is not installed
Required operations	• Activate SWSOPM 9 “Infeed: Reference run” • Confirm indicated message • Press “Start”
Consequence	• Message is displayed on control panel • Reference run of robot is performed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.4.12 ME 548: ROBOT 2: REFERENCE RUN

Test objective	• Test whether correct message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Robot arm is not installed
Required operations	• Activate SWSOPM 9 “Infeed: Reference run” • Confirm indicated message • Press “Start”
Consequence	• Message is displayed on control panel • Reference run of robot is performed
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5 Test protocols - Warnings (WA)

9.5.1 WA 27: CONTROL-PC: M-GUARD ENABLED

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Turn key at control cabinet to “I” to enable M-Guard
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Switch off key

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.2 WA 28: CONTROL-PC: REMOTE MAINTENANCE ENABLED

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Enable M-Guard with key at control cabinet • In menu “Setup” activate button “Service” and following “Remote control” • Activate “Remote control”
Consequence	• A window with “Remote control software successful started!” opens
Required operations	• Press “ok”
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Switch off “Remote control“ • Disable M-Guard with key at control cabinet

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.3 WA 29: OPERATOR: NO USER LOGGED IN

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• User is logged in
Required operations	• Log out user • Press “Start”
Consequence	• Warning is displayed on control panel
Comments	• Window “Please log in first!” is displayed on control panel
Acknowledgement	• Log in user • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
	• Machine cannot be started as long as warning is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.4 WA 45: CONTROL CABINET: UPS NOT READY

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Switch off the machine at the main switch • Wait until all LED lamps on the displkay of the USV are off completely • Remove USV (XUSB in) • Switch on the machine • Log in a user
Consequence	• Warning is displayed on control panel
Comments	• Together with the warning message FLT 45 “CONTROLCABINET: UPS NOT READY“ is displayed on control panel • In order to acknowledge the fault message follow: menu “system configuration“ > submenu “diagnostic“ > Button “device diagnostic“ > submenu “diagnostic USV“ > Press button “Monitoring USV off“ • The simulation of the warning WA “45“ can be done together with fault message FLT “45“
Acknowledgement	• Close the HMI and shut down the IPC • Switch off the main switch • Reconnect the USV • Switch on the main switch • Log in a user

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.5 WA 220: CARTON: PREWARNING LOW STOCK - IB32_B01

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Remove folding cartons from the magazine until sensor “=CAR1.B32-B01“ is uncovered
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Fill cartons into magazine

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.6 WA 380: LEAFLET INSERTER TURRET MAGAZINE: PREWARNIN LOW LEVEL

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device“ is activated
Required operations	• Disconnect input: “CAR1.X161-KI02:2“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.X161-KI02:2“

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.7 WA 381: LEAFLET INSERTER TURRET MAGAZINE: NOT READY

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device“ is activated
Required operations	• Disconnect input: “CAR1.X161-KI02:3“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.X161-KI02:3“

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.8 WA 800: LEAFLET INSERTER : MINIMAL SUPPLY

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Leaflets are available
Required operations	• Activate SWS 300 “Leaflet device“ • Call up leaflets until these are below the sensor ”IX161” for minimum accumulation
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.9 WA 900: BROCHURE INFEED: MINIMAL SUPPLY

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Brochures are available
Required operations	• Activate SWS 900 “Brochure infeed“ • Call up brochures until this are below the sensor for minimum accumulation
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.10 WA 980: BROCHURE INFEED: TURRET MAGAZINE: MINIMAL SUPPLY

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Brochures are available
Required operations	• Activate SWS 900 “Brochure infeed“ • Disconnect input “CAR1.X261-KI02:2”
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.11 WA 981: BROCHURE INFEED: TURRET MAGAZINE: NOT IN OPERATION MODE

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 900 “Brochure infeed“ is activated
Required operations	• Disconnect input “CAR1.X261-KI02:3“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.12 WA 2001: ROBOT 1: UPLINE MACHINE IS NOT RUNNING

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1“ is activated
Required operations	• Disconnect input: “CAR1.W150-KI10:4“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.W150-KI10:4“

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.13 WA 2002: ROBOT 2: UPLINE MACHINE IS NOT RUNNING

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2“ is activated
Required operations	• Disconnect input: “CAR1.W250-KI10:1“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.W250-KI10:1“

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.5.14 WA 2003: ROBOT 2: DOWNLINE MACHINE IS NOT READY

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2“ is activated
Required operations	• Disconnect input: “CAR1.W250-KI10:16“
Consequence	• Warning is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.W250-KI10:16“

Test result		**yes/no**
Acceptance criteria	• Warning is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6 Test protocols - Faults (FLT)

9.6.1 FLT 3: OPERATOR: NORMAL STOP ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Press “Stop”
Consequence	• Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.2 FLT 4: OPERATOR: INCORRECT OPERATING MODE SELECTED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in setup mode
Required operations	• Activate SWSOPM 4 “Inching cable“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Activate SWSOPM 2 “Setup” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.3 FLT 5: COMPRESSED AIR: MONITORING INLET PRESSURE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Close the compressed air supply on cartoning machine
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Open the compressed air supply on cartoning machine • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.4 FLT 6: ETHERCAT: FAULT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect ethernet plug • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• Observe without fail! Control Cabinet door is open! • Additionally other fault messages are displayed on control panel • The variable contains further information about ethercat connection
Acknowledgement	• Reconnect ethernet plug • Switch off the main switch of the machine • Switch on the main switch of the machine

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.5 FLT 7: COMPRESSED AIR: MONITORING SAFE SHUTDOWN

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect “=CAR1.G95-Q01:S1“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect “=CAR1.G95-Q01:S1“

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.6 FLT 11: MOTION DRIVES: OVERLOAD POWER SUPPLY - IK00_Q10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect input: “=CAR1.K00-KI04:10“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect input: “=CAR1.K00-KI04:10“

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.7 FLT 17: OPERATOR: OPERATING MODE CHANGE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in setup mode
Required operations	• Change over to automatic mode
Consequence	• Machine is ready in automatic mode • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.8 FLT 22: VACUUM: OVERLOAD PUMP

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Switch off protective motor switch: “=CAR1.G05-Q10“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.G05-Q10“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.9 FLT 23: VACUUM: MONITORING NEGATIVE PRESSURE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Activate SWS 54 “Machine vacuum” • Disconnect sensor “=CAR1.G05-B80“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.G05-B80“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.10 FLT 34: MACHINE: REPAIR SWITCH DRIVES SWITCHED OFF - IW00_Q02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Switch off the repair switch
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on the repair switch • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.11 FLT 35: CONTROL CABINET: MONITORING MAIN SWITCH - IW00_Q01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Switch off main switch and switch on immediately
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch off the main switch of the machine • Switch on the main switch of the machine

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.12 FLT 42: CONTROL CABINET S1: OVERTEMPERATURE - IW00_B13

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Adjust value of temperature controller “=CAR1.W00-B13” less than the actual temperature in the control cabinet
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Set temperature controller “=CAR1.W00-B13” back to previous value of 45 ^{0}C

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.13 FLT 79: EMERGENCY STOP ACTIVATED: LINE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button of downstream/ upstream machine
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button of downstream/ upstream machine • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.14 FLT 81: EMERGENCY STOP ACTIVATED: OPERATING PANEL - IF91_S90

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is running with reduced speed
Required operations	• Press “EMERGENCY STOP” strike button
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.15 FLT 86: GUARD OPEN: BOTTOM [7]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: botton
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: bottom • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.16 FLT 87: GUARD OPEN: CARTON BELT [5]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: front carton belt
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: front carton belt • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.17 FLT 88: GUARD OPEN: INSERTION REAR [20]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: insertion rear
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: insertion rear • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.18 FLT 111: PRODUCT SENSING: CONSECUTIVE FAULT - IB10_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Counter 112 “Product: Consecutive fault sensing“ is set to 3 • Product scanner is switched on • Product is available
Required operations	• Press “Start” and run the machine until enough product is in front of the sensor “=CAR1.B10-B01“ • Press “Stop” • Remove 3x product from product chain successively in front of sensor “=CAR1.B10-B01“
Consequence	• Machine stop after detecting a missing product three times • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.19 FLT 112: PRODUCT SENSING: SENSOR MONITORING - IB10-B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: ”=CAR1.B10-B01“ permanently • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1.B10-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.20 FLT 120: INSERTION: SAFETY SENSOR - IB36_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Press “Start” and stop the machine after placing the product and inserts into the carton • Simulate incomplete insertion (e.g. pull leaflet out of the carton which has just been inserted or insert a piece of paper so that it protrudes out of the carton about 2 cm) • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Remove carton • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.21 FLT 122: PRODUCT CHAIN: OVERFILL COLLECTING BOX - IB80_B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: at insertion • Cover sensor ”=CAR1.B80-B02”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.22 FLT 126: INSERTION: OVERLOAD PREINSERTION

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: at insertion • Simulate overload at sensor " =CAR1.W40-B02" (or disconnect input "=K00-KI12:1") • Press "Start"
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press "Reset"

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.23 FLT 129: INSERTION: MONITORING SENSOR SAFETY SENSOR - IB36_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.B36-B01”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.B36-B01” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.24 FLT 200: MACHINE: JAM AT DISCHARGE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: ”=CAR1.X85-B01“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1.X85-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.25 FLT 201: DOWNSTREAM: STOP FROM MACHINE 1

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode Downstream equipment“ is activated
Required operations	• Press “Start” on cartoning machine • Press Stop on machine 1
Consequence	• Cartoning machine stop from machine 1 • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset” on cartoning machine • Press “Reset” on machine 1

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.26 FLT 203: DOWNSTREAM: STOP FROM MACHINE 2

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode Downstream equipment“ is activated
Required operations	• Press “Start” on cartoning machine • Press Stop on Laser unit
Consequence	• Cartoning machine stop from laser unit • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset” on cartoning machine • Press “Reset” on laser unit

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.27 FLT 210: GUARD OPEN: CARTON MAGAZINE [6]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: carton magazine
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• Test can only be performed at standstill, because guard is locked while running
Acknowledgement	• Close guard door: carton magazine • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.28 FLT 212: GUARD OPEN: DISCHARGE TOP [2]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: discharge top
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: discharge top • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.29 FLT 213: CARTON: OVERLOAD SIDE FLAP FOLDER - IB37_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: of cartoner • Simulate overload at sensor “=CAR1.B37-B01“ (move side flap folder back)
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Place side flap folder back to current position • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.30 FLT 220: CARTON: STOCK AT THE END - IA30_B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Empty carton magazine nearly to sensor “=CAR1.A30-B02“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Fill up carton magazine • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.31 FLT 221: MACHINE: COVER RAIL OPEN - IA30-B03

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Guard doors are closed
Required operations	• Turn on “=CAR1.A30-S20” and lift up the cover rail
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Lower cover rail • Turn off “=CAR1.A30-S20” • Press „Reset“

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.32 FLT 222: CARTON: CONSECUTIVE FAULT CROSSCHECK - IA30_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • Counter 210 “Carton: consecutive fault cross check“ is set to 3
Required operations	• Remove ≥ 3x cartons from carton magazine in front of sensor “=CAR1.A30-B01” one after the other • Press “Start”
Consequence	• After 3 undetected cartons machine stops • Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• After 3 undetected cartons machine stops	
	• Fault message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.33 FLT 223: CARTON: PICKUP CHECK - IA30_B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: “=CAR1.A30-B04” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.A30-B04” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.34 FLT 224: CARTON BELT: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Switch off protective motor switch: “=CAR1.W31-Q10”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W31-Q10” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.35 FLT 225: CARTON: CONSECUTIVE FAULT CODE READER - IB75_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode with product • SWS 200 “Code reader carton“ is activated • Counter 240 ”Carton: fault code reading” is set to 3
Required operations	• Place 3 cartons without or with wrong code in the carton magazine • Press “Start”
Consequence	• Machine stop after detecting a defective bar code three times • Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.36 FLT 226: CARTON:\FAULT CODE READER - IB75_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode with product • SWS 200 “Code reader carton“ is activated • Counter 240 ”Carton: fault code reading” is set to 3
Required operations	• Disconnect input ”=CAR1.K00-KI04:12“ • Press “Start”
Consequence	• Fault message is displayed on control panel
Comments	• None
Acknowledgement	• Reconnect input ”=CAR1.K00-KI04:12“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.37 FLT 227: CARTON: SENSOR MONITORING CROSSCHECK - IA30_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: ”=CAR1-A30-B01“ • Press “Start” and run the machine more than 1 cycle
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1-A30-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.38 FLT 237: CARTON: SENSOR MONITORING PICKUP CHECK - IA30_B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Put 24 V to input “=CAR1.K00-KI08:7“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• None

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine stops	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.39 FLT 243: LASER PRINTING: DEVICE NOT READY

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode Downstream equipment“ is activated • SWS 201 “Carton laser printing“ is activated
Required operations	• Disconnect input: “CAR1.P78-KI00:7”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect input: “CAR1.P78-KI00:7” • Press “Reset” on cartoning machine • Press “Reset” on laser unit

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.40 FLT 250: CARTON EJECTION 1: OVERFILL COLLECTING CONTAINER - IQ82_B03

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: ”=CAR1.Q82-B03“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1.Q82-B03“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.41 FLT 251: CARTON EJECTION 1: CROSS CHECK - IQ82_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: “=CAR1.Q82-B01“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.Q82-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.42 FLT 254: CARTON REJECT 1: SENSOR MONITORING CROSS CHECK - IQ82_B01

Test objective	• Test whether correct warning message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: discharge top • Bridge guard door discharge top • Press “Start” • Disconnect sensor “=CAR1.Q82-B01”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.Q82-B01“ • Remove bridge guard door discharge top • Close guard door: discharge top • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.43 FLT 270: CARTON: OPEN FLAP: SENSOR MONITORING COVER FLAP FRONT - IB86_B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 256 “Check carton open cover flap“ is activated
Required operations	• Disconnect sensor “CAR1.B86-B01”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “CAR1.B86-B01” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.44 FLT 271: CARTON: OPEN FLAP: SENSOR MONITORING COVER FLAP REAR - IB86_B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 256 “Check carton open cover flap“ is activated
Required operations	• Disconnect sensor “CAR1.B86-B02”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “CAR1.B86-B02” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.45 FLT 272: CARTON: OPEN FLAP: SENSOR MONITORING SIDE FLAP FRONT - IB86_B03

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 257 “Check carton open side flap“ is activated
Required operations	• Disconnect sensor “CAR1.B86-B03”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “CAR1.B86-B03” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.46 FLT 273: CARTON: OPEN FLAP: SENSOR MONITORING SIDE FLAP REAR - IB86_B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 257 “Check carton open side flap“ is activated
Required operations	• Disconnect sensor “CAR1.B86-B04”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “CAR1.B86-B04” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.47 FLT 289: CARTON: OPEN FLAP: CONSECUTIVE FAULT COVER FLAP -IB86_B01 / IB86_B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 256 “Check carton open cover flap” is activated • Counter 256 “Carton: Consecutive fault open flap“ is set to 1
Required operations	• Press “Start” • Press “Stop” until some cartons has been closed • Put out one cover flap of the carton before the carton reach the sensors “CAR1.B86-B01”/ “CAR1.B86-B02“ • Press “Start”
Consequence	• Machine stop after detecting a open cover flap • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Remove open carton • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stop after detecting a open cover flap	☐
	• Fault message is displayed on control panel	☐
	• Machine cannot be started as long as fault is active	☐
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.48 FLT 294: CARTON: OPEN FLAP: CONSECUTIVE FAULT SIDE FLAP -IB86_B03 / IB86_B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 257 “Check carton open side flap” is activated • Counter 257 “Carton: Consecutive fault open flap“ is set to 3
Required operations	• Press “Start” • Press “Stop” until some cartons has been closed • Put out one side flap of the carton before the cartons reach the sensors “CAR1.B86-B03”/ “CAR1.B86-B04“ • Press “Start” and stop the machine before the next carton is checked • Remove open carton • Press “Reset” • Put out one side flap of the carton before the cartons reach the sensors “CAR1.B86-B03”/ “CAR1.B86-B04“ • Press “Start” and stop the machine before the next carton is checked • Remove open carton • Press “Reset” • Put out one side flap of the carton before the cartons reach the sensors “CAR1.B86-B03”/ “CAR1.B86-B04“ • Press “Start”
Consequence	• Machine stop after detecting a open side flap three times • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stop after detecting a open side flap three times	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.49 FLT 301: LEAFLET: CONSECUTIVE FAULT CROSS CHECK IN PRODUCT CHAIN - IX161_B10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated • Product is available
Required operations	• Activate SWS 300 “Leaflet device” • Deactivate SWS 100 “Insert defective product“ if necessary • Press “Start” with product until leaflet gripper chain is filled up • Press “Stop” • Remove leaflet before sensor ”=CAR1.X161-B10“ and after sensor ”=CAR1.X161-B11“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.50 FLT 302: LEAFLET: CROSS CHECK EJECTION - IX161_B12

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Cover sensor: “=CAR1.X161-B12” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.X161-B12” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.51 FLT 304: LEAFLET: CONSECUTIVE FAULT CROSS CHECK IN UNIT - IX161_B11

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Counter 310 “Leaflet: Consecutive fault cross check in device“ is set to 3 • SWS 300 “Leaflet device” is activated • Product is available
Required operations	• Deactivate SWS 100 “Insert defective product“ if necessary • Disconnect sensor “=CAR1.X161-B11” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.X161-B11” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.52 FLT 321: LEAFLET: CONSECUTIVE FAULT CODE READER REAR - IB75_B05

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Counter 331 “Leaflet: consecutive fault code reader rear“ is set to 3 • leaflets with no or wrong code are prepared
Required operations	• Activate SWS 300 “Leaflet device” • Deactivate SWS 100 “Insert defective product” • Activate SWS 302 “Leaflet: code reader rear” • Insert 3 leaflets with no or wrong code in leaflet stack successively • Press “Start” with product
Consequence	• Leaflets with wrong / missing code will be ejected • After 3 defective leaflets machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• To manipulate the code of the leaflet use a black felt-tip pen (e.g. Edding)
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Leaflets with wrong / missing code will be ejected	
	• After 3 defective leaflets machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.53 FLT 322: LEAFLET: CONSECUTIVE FAULT CROSS CHECK IN CARTON - IB75_B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated • Counter 303 “Leaflet: Consecutive fault cross check in carton“ is set to 3 • Product is available
Required operations	• Press “Start” and run the machine until enough product is in front of the sensor “=CAR1.B75-B04” • Press “Stop” • Open guard door: • Remove 3x leaflet before sensor “=CAR1.B75-B04” • Close guard door: • Press “Reset” • Press “Start” with product
Consequence	• After 3 missing leaflets machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• Cartons without leaflets will be ejected
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• After 3 missing leaflets machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.54 FLT 324: LEAFLET: FAULT CODE READER REAR - IB75_B05

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Prepare one leaflet with no or wrong code
Required operations	• Activate SWS 300 “Leaflet device” • Deactivate SWS 100 “Insert defective product” • Activate SWS 302 “Leaflet: code reader rear” • Disconnect input: “=CAR1.X161-KI00:11” • Press “Start” with product
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• To manipulate the code of the leaflet use a black felt-tip pen (e.g. Edding)
Acknowledgement	• Reconnect input: “=CAR1.X161-KI00:11” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.55 FLT 325: LEAFLET: SENSOR MONITORING CROSS CHECK IN CARTON - IB75-B04

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: “=CAR1.B75-B04“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.B75-B04“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.56 FLT 326: LEAFLET: SENSOR MONITORING CROSS CHECK IN PRODUCT CHAIN - IX161_B10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Cover sensor: “=CAR1.X161-B10“ • Press “Reset” • Press start
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.X161-B10“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.57 FLT 408: ROBOT 1: SENSOR MONITORING PRODUCT SENSING EXCEED HEIGHT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Disconnect sensor ”=CAR1-W150-B02“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: ”=CAR1-W150-B02“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.58 FLT 412: ROBOT 1: EMERGENCY STOP FRONT ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 400 “Robot 1” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on Robot 1
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• Test can be done together whit test of SWSOPM 62 “Machine: Automatic restart“
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on Robot 1 • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.59 FLT 421: ROBOT 1: GUARD OPEN: FRONT LEFT [17]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Open guard door: front left
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: front left • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.60 FLT 422: ROBOT 1: GUARD OPEN: FRONT RIGHT [16]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Open guard door: front right
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: front right • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.61 FLT 430: ROBOT 1: BELT 1: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Switch off protective motor switch: “=CAR1.W166-Q20” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W166-Q20” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.62 FLT 432: ROBOT 1: BELT 2: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Switch off protective motor switch: “=CAR1.W166-Q30” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W166-Q30” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.63 FLT 450: ROBOT 1: PRODUCT SENSING: EXCEED HEIGHT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Cover sensor: ”=CAR1-W150-B02“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1-W150-B02“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.64 FLT 451: ROBOT 1: BELT 1: PRODUCT JAM

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Cover sensor: ”=CAR1-W166-B05“ • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1-W166-B05“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.65 FLT 457: ROBOT 1: MONITORING COMPRESSED AIR

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Close the compressed air supply on robot 1
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Open the compressed air supply on robot 1

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.66 FLT 477: ROBOT 1: CONTROL CABINET: OVERTEMPERATURE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Adjust value of temperature controller “=CAR1.W150-B19" less than the actual temperature in the control cabinet
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Set temperature controller “=CAR1.W150-B19" back to previous value of 45ºC

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.67 FLT 512: ROBOT 2: EMERGENCY STOP FRONT ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 500 “Robot 2” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on Robot 2
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• Test can be done together whit test of SWSOPM 62 “Machine: Automatic restart“
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on Robot 2 • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.68 FLT 521: ROBOT 2: GUARD OPEN: FRONT LEFT [19]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Open guard door: front left
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: front left • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.69 FLT 522: ROBOT 2: GUARD OPEN: FRONT RIGHT [18]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Open guard door: front right
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: front right • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.70 FLT 547: ROBOT 2: EMPTYING

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Lock the cylinder “=CAR1.W266-M2661“ in the middle position (between end position “=CAR1.W266-B50“ and “=CAR1.W266-B51“) • “=CAR1.W266-B05“ • Press “Reset” • Press start
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock cylinder “=CAR1.W266-M2661“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.71 FLT 577: ROBOT 2: CONTROL CABINET: OVERTEMPERATURE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Adjust value of temperature controller “=CAR1.W250-B19" less than the actual temperature in the control cabinet
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Set temperature controller “=CAR1.W250-B19" back to previous value of 45ºC

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.72 FLT 807: LEAFLET INSERTER: NOT IN OPERATIONAL

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 300 “Leaflet device” is activated
Required operations	• Disconnect input: “=CAR1.X161-KI00:1“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect input “=CAR1.X161-KI00:1“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.73 FLT 808: LEAFLET INSERTER: GUARD OPEN: REAR [23]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Open guard door: rear
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: rear • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.74 FLT 822: LEAFLET INSERTER: EMERGENCY STOP ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 300 “Leaflet device” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on leaflet unit
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.75 FLT 843: LEAFLET INSERTER: CONTROL CABINET: VOLTAGE MONITORING

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Switch off fuse “=CAR1.X161-F3090“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on fuse “=CAR1.X161-F3090“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.76 FLT 902: BROCHURE INFEED: CONSECUTIVE FAULT CODE READER

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 100 “Product: Insert defective product” is deactivated if necessary • SWS 900 “Brochure infeed” is activated • SWS 901 “Brochure infeed: Code reader“ is activated • Counter 901 for “Brochure infeed: Consecutive fault code reading“ is set to 3
Required operations	• Generate 3 brochures with a defective ID code with a black felt-tip pen (e.g. Edding 400) • Put these brochures one after the other into the brochure stack • Press “Start”
Consequence	• Machine stop after detecting a defective ID code three times • Fault message is displayed on control panel • Machine cannot be started as long as fault is active • The defective brochures are transferred out
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stop after detecting a defective ID code three times	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.77 FLT 903: BROCHURE INFEED: CONSECUTIVE FAULT CROSS CHECK

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 100 “Insert defective product“ is deactivated (if necessary) • SWS 900 “Brochure infeed” is activated • Counter 903 “Brochure infeed: Consecutive fault cross check” is set to “1”
Required operations	• Press “Start” with product until brochure gripper chain is filled up • Press “Stop” • Remove all brochures (in front of sensor ”=CAR1.B75-B05“) • Cover sensor cross-check sensor 93B1 (rontech unit) • Press “Reset” • Press “Start”
Consequence	• If a brochure is missing the machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• If a brochure is missing the machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.78 FLT 907: BROCHURE INFEED: NOT IN OPERATIONAL

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 900 “Brochure infeed” is activated
Required operations	• Disconnect input: “=CAR1.X261-KI02:3“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect input “=CAR1.X261-KI02:3“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.79 FLT 916: BROCHURE INFEED: GUARD OPEN: PRODUCT CHAIN INFEED [14]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 900 “Brochure infeed” is activated
Required operations	• Open guard door:, product chain infeed
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door:, product chain infeed • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.80 FLT 920: BROCHURE INFEED: NOT IN CORRECT POSITION [15]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 900 “Brochure infeed” is activated
Required operations	• Pull out the brochure infeed from the CUC line
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.81 FLT 922: BROCHURE INFEED: EMERGENCY STOP ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 900 “Brochure infeed” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on brochure unit
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on brochure unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.82 FLT 943: BROCHURE INFEED: CONTROL CABINET: VOLTAGE MONITORING

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 900 “Brochure infeed” is activated
Required operations	• Switch off fuse “=CAR1.X261-F3090“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on fuse “=CAR1.X261-F3090“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.83 FLT 1212: GUARD OPEN: COLLECTING CONTAINER 1 [3]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: Guard ejector (=CAR1.Q82-B802) • Close guard door: Collecting box (=CAR1.Q82-B801)
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Guard ejector (=CAR1.Q82-B802) • Open guard door: Collecting box (=CAR1.Q82-B801) • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.84 FLT 1213: CARTON EJECTION 1: OVERFILL GUARD COLLECTING CONTAINER

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Counter 214 for ”Carton ejection 1: Overfill guard collecting container” is set to 1
Required operations	• Create a defective item (e. g. incorrect code), run the machine until the defective item is rejected • Close guard door: Guard ejector (=CAR1.Q82-B802) • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Open guard door: Guard ejector (=CAR1.Q82-B802) • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.85 FLT 1230: DOWNSTREAM: GUARD OPEN: MACHINE 1

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated
Required operations	• Open guard door: Machine 1
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Machine 1 • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.86 FLT 1413: ROBOT 1: REMOVE PRODUCT BEFORE REFERENCE/ SYNCHRON RUN

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated • SWS 500 “Robot 2“ is activated • Product is available
Required operations	• Set product data ”2010: product width cycle belt“ to 50 mm • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Set product data ”2010: product width cycle belt“ to originale length • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.87 FLT 1416: ROBOT 1: EMERGENCY STOP REAR ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 400 “Robot 1” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on Robot 1 rear
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• Test can be done together whit test of SWSOPM 62 “Machine: Automatic restart“
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on Robot 1 rear • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.88 FLT 1417: ROBOT 1: GUARD OPEN: REAR LEFT [25]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Open guard door: Rear left
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Rear left • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.89 FLT 1418: ROBOT 1: GUARD OPEN: REAR RIGHT [24]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Open guard door: Rear right
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Rear right • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.90 FLT 1419: ROBOT 1: RANGE LIMIT REACHED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Open guard door: • Turn safety switch “=CAR1.W150-S20” (Open stop break robot) to position “1” • Move the robot arm outside the operational limit by hand manually • Turn safety switch “=CAR1.W150-S20” (Open stop break robot) to position “0” • Close the guard doors from robot • Press “Reset”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Move the robot arm to the initial position by hand manually • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.91 FLT 1516: ROBOT 2: EMERGENCY STOP REAR ACTIVATED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated • SWSOPM 62 “Machine: Automatic restart” is activated • SWS 500 “Robot 2“ is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on Robot 2 rear
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• Test can be done together whit test of SWSOPM 62 “Machine: Automatic restart“
Acknowledgement	• Unlock “EMERGENCY STOP” strike button on Robot 2 rear • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.92 FLT 1517: ROBOT 2: GUARD OPEN: REAR LEFT [27]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2“ is activated
Required operations	• Open guard door: Rear left
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Rear left • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.93 FLT 1518: ROBOT 2: GUARD OPEN: REAR RIGHT [26]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2“ is activated
Required operations	• Open guard door: Rear right
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Rear right • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.94 FLT 1519: ROBOT 2: RANGE LIMIT REACHED

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 500 “Robot 2” is activated
Required operations	• Open guard door: • Turn safety switch “=CAR1.W250-S20” (Open stop break robot) to position “1” • Move the robot arm outside the operational limit by hand manually • Turn safety switch “=CAR1.W250-S20” (Open stop break robot) to position “0” • Close the guard doors from robot • Press “Reset”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Move the robot arm to the initial position by hand manually • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.95 FLT 2001: GUARD OPEN: BACK SIDE BELOW LOADING [21]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: Back side below loading
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Back side below loading • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.96 FLT 2002: GUARD OPEN: BACK SIDE VACUUM PUMP [22]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: Back side vacuum pump
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Back side vacuum pump • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.97 FLT 2004: GUARD OPEN: PRODUCT EJECTION COLLECTING BOX [4]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Open guard door: Product ejection collecting box
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Product ejection collecting box • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.98 FLT 2005: LASER: SENSOR MONITORING PRODUCT TRIGGER - IP78_B11

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode Downstream equipment“ is activated • SWS 201 “Carton laser printing“ is activated
Required operations	• Disconnect sensor “=CAR1.IP78-B11”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.IP78-B11” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.99 FLT 2009: LEAFLET INSERTER: POSITION CHECK LEAFLET INSERTER

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Disconnect sensor “=CAR1.X161-B820“ or “=CAR1.X161-B505“ on leaflet unit • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.X161-B820“ or “=CAR1.X161-B505“ on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.100 FLT 2010: LEAFLET INSERTER: GUARD OPEN: BOTTOM LEFT [12]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Open guard door: Bottom left on leaflet unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Bottom left on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.101 FLT 2011: LEAFLET INSERTER: GUARD OPEN: BOTTOM RIGHT [11]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Open guard door:, bottom right on leaflet unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: bottom right on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.102 FLT 2012: LEAFLET INSERTER: GUARD OPEN: TOP LEFT [9]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Open guard door: Top left on leaflet unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Top left on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.103 FLT 2013: LEAFLET INSERTER: GUARD OPEN: TOP RIGHT [8]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Open guard door: Top right on leaflet unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Top right on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.104 FLT 2014: LEAFLET INSERTER: POSITION CHECKINFEED BELT [10]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated
Required operations	• Disconnect sensor “93W5“ on leaflet unit • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor “93W5“ on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.105 FLT 2015: LEAFLET INSERTER: EMERGENCY STOP ACTIVATED: TURRET MAGAZINE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 “Leaflet device” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on leaflet unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button “ on leaflet unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.106 FLT 2016: BROCHURE INFEED: EMERGENCY STOP ACTIVATED: TURRET MAGAZINE

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 900 “Brochure infeed” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on brochure unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button “ on brochure unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.107 FLT 2017: BROCHURE INFEED: COVER OPEN: TRANSFER SECTION [13]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 900 “Brochure infeed” is activated
Required operations	• Open cover transfer section on brochure unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close cover transfer section on brochure unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.108 FLT 2019: GUARD OPEN: LASER DOOR [1]

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 201 “Carton laser printing” is activated
Required operations	• Open guard door:, Laser unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Close guard door: Laser unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.109 FLT 2021: EMERGENCY STOP ACTIVATED: LASER

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 201 “Carton laser printing” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button on laser unit
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button “ on laser unit • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.110 FLT 2022: LEAFLET: MONITORING PROPER SIGNAL CODE READING LEAFLET REAR - IB75_B05

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 300 ”Leaflet unit” is activated • SWS 302 “Code reader leaflet rear“ is activated
Required operations	• Put 24 V to input “=CAR1.X161-KI00:10” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Remove the 24 V from input “=CAR1.X161-KI00:10” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.111 FLT 2023: BROCHURE INSERTER: MONITORING PROPER SIGNAL CODE READING BROCHURE - IB75_B06

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 201 “Carton laser printing” is activated
Required operations	• Put 24 V to input “=CAR1.X261-KI00:10” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Remove the 24 V from input “=CAR1.X261-KI00:10” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.112 FLT 2024: BROCHURE: MONITORING PROPER SIGNAL CODE READING BROCHURE IN CARTON - IB75_B07

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 2002 “Code reader glued-in brochure” is activated
Required operations	• Put 24 V to input “=CAR1.K00-KI14:3” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Remove the 24 V from input “=CAR1.K00-KI14:3” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.113 FLT 2025: CODE READER GLUED-IN BROCHURE NOT READY

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 2002 “Code reader glued-in brochure” is activated
Required operations	• Disconnect input: “=CAR1.K00-KI14:4” • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect input: “=CAR1.K00-KI14:4” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.114 FLT 2026: GLUED IN BROCHURE: CONSECUTIVE FAULT CODE READER - IB75_B07

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 100 “Product: Insert defective product” is deactivated if necessary • SWS 2002 “Code reader glued-in brochure” is activated • Counter 2001 “Glued-in brochure: Consecutive fault code reader“ is set to 3
Required operations	• Generate 3 booklets with a defective ID code • Put these booklets with defective ID codes into the insert stack • Press “Start”
Consequence	• Machine stop after detecting a defective code three times • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• The defective booklets are transferred out
Acknowledgement	• Press “Reset” • Attach booklets with manipulated ID code to this document

Test result		**yes/no**
Acceptance criteria	• Machine stop after detecting a defective ID code three times	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.115 FLT 2029: LASER: PRODUCT JAM

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 201 ”Carton laser printing“ is activated
Required operations	• Cover sensor: ”=CAR1.P78-B01“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: ”=CAR1.P78-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.116 FLT 2036: ROBOT 1: CROSS CHECK EJECTOR

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Cover sensor: “=CAR1.W166-B03” • Cover sensor: “=CAR1.W166-B01” • Cover sensor: “=CAR1.W166-B02” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.W166-B03” • Uncover sensor: “=CAR1.W166-B01” • Uncover sensor: “=CAR1.W166-B02” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.117 FLT 2037: ROBOT 1: EXCESS FILL COLLECTING BOX ACCELERATION BELT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Cover sensor: “=CAR1.W166-B04” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.W166-B04” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.118 FLT 2038: ROBOT 1: EXCESS FILL COLLECTING BOX CYCLE BELT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWS 400 “Robot 1” is activated
Required operations	• Cover sensor: “=CAR1.W166-B10” • Press “Start”
Consequence	• Machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.W166-B10” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.119 FLT 2040: ROBOT 2: EMERGENCY STOP ACTIVATED: PUCK OUTFEED BELT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated • SWS 500 “Robot 2” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button at puck outfeed belt
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button at puck outfeed belt • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.120 FLT 2041: ROBOT 2: EMERGENCY STOP ACTIVATED: DISKUS BELT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • SWSOPM 60 “Line mode downstream equipment” is activated • SWS 500 “Robot 2” is activated • Line is running at reduced speed
Required operations	• Press “EMERGENCY STOP” strike button at diskus belt
Consequence	• Line stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Required operations	• Press “Reset”
Comments	• None
Acknowledgement	• Unlock “EMERGENCY STOP” strike button at diskus belt • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Line stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.121 FLT 2043: ROBOT 2: PUCK OUTFEED BELT: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Activate SWS 500 “Robot 2”
Required operations	• Switch off protective motor switch: “=CAR1.W266-Q10”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W266-Q10” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.122 FLT 2044: ROBOT 2: PUCK INFEED BELT: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Activate SWS 500 “Robot 2”
Required operations	• Switch off protective motor switch: “=CAR1.W266-Q20”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W266-Q20” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.123 FLT 2045: ROBOT 2: DISKUS BELT: OVERLOAD

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Activate SWS 500 “Robot 2”
Required operations	• Switch off protective motor switch: “=CAR1.W266-Q30”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Switch on protective motor switch: “=CAR1.W266-Q30” • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.124 FLT 2046: ROBOT 2: PUCK NOT EMPTY AT OUTFEED BELT

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Activate SWS 500 “Robot 2”
Required operations	• Cover sensor: ”=CAR1.W266-B04“ • Press “Start”
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor “=CAR1.W266-B04“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.125 FLT 2055: ROBOT 1: MONITORING SENSOR PRODUCT CYCLE BELT -W166_B06

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.W166-B06“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.W166-B06“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.126 FLT 2056: ROBOT 1: MONITORING SENSOR FLOWPACK CYCLE BELT -W166_B07

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: “=CAR1.W166-B07“ • Press “Reset” • Press start
Consequence	• Machine starts but stop after some cycles • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.W166-B07“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine starts but stop after some cycles	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.127 FLT 2057: CARTON REJECT 1: CROSS CHECK CARTON REJECT IQ82_B10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode • Product is available • SWS 100 “Product: Insert defective product” is deactivated • SWS 200 “Code reader carton“ is activated • Counter 240 for “Carton: Consecutive fault code reader“ is set to 3
Required operations	• Put one carton with manipulated ID Code into the carton stack • Press “Start” wait until the carton is scanned by sensor “CAR1.B75-B01” • Stop the machine when the out-feed belt conveys the carton out of the machine • Remove the carton out of the out-feed belt • Press “Reset” • Press “Start”
Consequence	• If the sensor “CAR1.Q82-B10 detects that the faulty carton is missing, the machine stops • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Press “Reset”

Test result		**yes/no**
Acceptance criteria	• If the sensor “CAR1.Q82-B10 detects that the faulty carton is missing, the machine stops	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.128 FLT 2058: CARTON REJECT 1: SENSOR MONITORING CROSS CHECKCARTON REJECTED - IQ82_B10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Cover sensor: “=CAR1.Q82-B10“ • Press “Reset” • Press start
Consequence	• Machine starts and stop after some cycles • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Uncover sensor: “=CAR1.Q82-B10“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine starts and stop after some cycles	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.129 FLT 2059: ROBOT 1: MONITORING SENSOR DISTANCE CONTROL 1 INFEED BELT -W166-B01

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.W166-B01“ • Press “Reset” • Press start
Consequence	• Machine starts and stop after some cycles • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.W166-B01“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine starts and stop after some cycles	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.130 FLT 2060: ROBOT 1: MONITORING SENSOR DISTANCE CONTROL 2 INFEED BELT -W166-B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.W166-B02“ • Press “Reset” • Press start
Consequence	• Machine starts and stop after some cycles • Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.W166-B02“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Machine starts and stop after some cycles	
	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.131 FLT 2061: INSERTION: MONITORING SENSOR: OVERLOAD PREINSERTION -W40-B02

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.W40-B02“ • Press “Reset” • Press “Start“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.W40-B02“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

9.6.132 FLT 2062: ROBOT 1: MONITORING SENSOR: EXCESS FILL COLLECTION BOX CYCLE BELT -W166_B10

Test objective	• Test whether correct fault message is displayed on control panel
Test procedure	
Test prerequisites	• Machine is ready in automatic mode
Required operations	• Disconnect sensor “=CAR1.W166-B10“ • Press “Reset” • Press “Start“
Consequence	• Fault message is displayed on control panel • Machine cannot be started as long as fault is active
Comments	• None
Acknowledgement	• Reconnect sensor: “=CAR1.W166-B10“ • Press “Reset”

Test result		**yes/no**
Acceptance criteria	• Fault message is displayed on control panel	
	• Machine cannot be started as long as fault is active	
Comments		

Results comply	yes/no	Date/Initials
Results approved	Date/Initials	

10 Notes

Alarm and Function Testing Report

CUC 2002
Cartoning machine

100223

Glaxowellcome Production
France

Alarm and Function Testing Report approval by ROTZINGER PharmaPack GmbH (after execution)

Function	Name	Position/Company	Signature	Date
Approved by				
Approved by				

The AFT was performed in _____ from _____ until _____ .

Summary result The test execution has shown that, …	**yes/no**
the AFT has been completed successfully without deviations.	
the AFT has been performed with deviations. A deviation report has been created and follow up actions have been defined.	

Final conclusion	**yes/no**
The next qualification step can be started.	
Before starting the next qualification step, the deviations must be closed.	

Alarm and Function Testing Report approval by Glaxowellcome Production (after execution)

Function	**Name**	**Position/Company**	**Signature**	**Date**
Approved by				
Approved by				
Approved by				

Document history:

4.0	28.Mar.2023	Version for approval Rev. 4.0, software changes after FAT 3	Lorena Fausten
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