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| Test ScriptSAP S/4HANA - 16-09-20 | public |
| Change Manufacturing Bill of Material for Production (3LO\_DE) |

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# Purpose

This scope item covers the change master controlled updates of a Manufacturing BOM which is used for the production process of components.

The change-number-controlled approach allows date-effectivity-based attributes management on the Manufacturing BOM (MBOM) header level and the Bill of Materials (BOM) items level. Setting the change number status to inactive releases the scope per change number. Once the status becomes inactive, changes are no longer possible. The MBOM header and items can only be changed with a new active change number. The change iteration process starts and ends again with setting the change number status to inactive.

The change-number-controlled update process is followed by the production process which uses the recently updated Manufacturing Bill of Material.

This document provides a detailed procedure for testing this scope item after solution activation, reflecting the predefined scope of the solution. Each process step, report, or item is covered in its own section, providing the system interactions (test steps) in a table view. Steps that are not in scope of the process but are needed for testing are marked accordingly. Project-specific steps must be added.

# Prerequisites

This section summarizes all the prerequisites for conducting the test in terms of systems, users, master data, organizational data, other test data and business conditions.

## System Access

|  |  |
| --- | --- |
| System | Details |
| System | Accessible via SAP Fiori launchpad. Your system administrator provides you with the URL to access the various apps assigned to your role. |

## Roles

Assign the following business roles to your individual test users. Alternatively, if available, you can create business roles using the following spaces with pages and predefined apps for the SAP Fiori launchpad and assign the business roles to your individual test users.

Note These roles or spaces are examples provided by SAP. You can use them as templates to create your own roles or spaces.

For more information about business roles, refer to Assigning business roles to a user in the [Administration Guide to Implementation of SAP S/4HANA with SAP Best Practices](https://help.sap.com/viewer/S4HANA2020_AdminGuide) .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name (Role) | ID (Role) | Description (Space) | ID (Space) | Log On |
| BOM Engineer | SAP\_BR\_BOM\_ENGINEER | BOM Management | SAP\_BR\_BOM\_ENGINEER |  |
| Production Supervisor - Discrete Manufacturing | SAP\_BR\_PRODN\_SUPERVISOR\_DISC | Discrete Manufacturing Execution Management | SAP\_BR\_PRODN\_SUPERVISOR\_DISC |  |

## Master Data, Organizational Data, and Other Data

The organizational structure and master data of your company has been created in your system during activation. The organizational structure reflects the structure of your company. The master data represents materials, customers, and vendors, for example, depending on the operational focus of your company.

Use your own master data or the following sample data to go through the test procedure.

|  |  |  |  |
| --- | --- | --- | --- |
| Master | Value | Details | Comments |
| Material | FG111 | Finished Good MTS for Discrete Industry (PD planning) |  |
| Material | RM27 | RAW Material Packaging Box |  |
| Material | RM27\_1 | RAW27\_1,PD,Packaging |  |
| Plant | 1010 | Plant 1 DE |  |

Bill of Material Structure

This overview shows the bill of material structure and the usage of each component if you have activated all optional enhancements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Material | Level | Material Type | Unit | Characteristics of Material | Optional Enhancements |
| FG111 | 0 | FERT | PC | Finished Good for MTS processing with Serial Number |  |
| RM27 | 1 | RAW | PC | External procured - Packaging Box |  |

For more information on creating master data objects, see the following [Master Data Scripts (MDS)](https://support.sap.com/content/dam/SAAP/Sol_Pack/BP_OP_ENTPR/BP_OP_ENTPR_S4HANA2020_7_Master_Data_EN_XX.htm) :

Table 1: Master Data Script Reference

|  |  |
| --- | --- |
| Master Data ID | Description |
| BNR | Create Product Master of Type "Raw Material" |
| BNS | Create Product Master of Type "Semi-Finished Good" |
| BNT | Create Product Master of Type "Finished Good" |
| BNK | Create Material BOM for Production and Sales |

## Business Conditions

Before this scope item can be tested, the following business conditions must be met.

|  |  |
| --- | --- |
| Scope Item ID | Business Condition |
| BNR - Create Product Master of Type "Raw Material" | You can create raw materials using the Create Material (MM01) App. |
| BNS - Create Product Master of Type "Semi-Finished Good" | You can create semi-finished products using the Create Material (MM01) App. |
| BNT -Create Product Master of Type "Finished Good" | You can create finished products using the Create Material (MM01) App. |

For testing purposes, the materials listed in Master Data, Organizational Data, and Other Data chapter were already created automatically in your system. If you want to test with your own materials, refer the Master Data Scripts above how to create them.

From a business process point of view, all parts used for the Bill of Material (BoM Header material and BoM Item materials) along with the related technical specifications and design documents (that is, part specifications, CAD documents, and schematics) need to be ‘released’ by the Design Engineer / Technical department so that they can be used by the BOM Engineer.

# Overview Table

This scope item consists of several process steps provided in the table below.

If your system administrator has enabled spaces and pages on the SAP Fiori launchpad, the homepage will only contain the essential apps for performing the typical tasks of a business role.

You can find all other apps not included on the homepage using the search bar.

If you want to personalize the homepage and include the hidden apps, navigate to your user profile and choose Settings > App Finder .

|  |  |  |  |
| --- | --- | --- | --- |
| Process Step | Business Role | App/Transaction | Expected Results |
| [Create Change Master](#unique_8) [page ] 8 | BOM Engineer | Create Change Master (CC01) | A new Change Master is created. |
| [Exchange a Component in the MBOM](#unique_9) [page ] 9 | BOM Engineer | Maintain Bill Of Material (F1813) | A new Bill of Material is changed with a Change Master assigned. |
| [Set Change Master Status to Inactive](#unique_10) [page ] 11 | BOM Engineer | Change Change Master (CC02) | Change Master Status is set to Inactive. |
| [Manually Create Production Order](#unique_11) [page ] 12 | Production Supervisor - Discrete Manufacturing | Create Production Order (CO01) | A production order is created. |
| [Create Change Master](#unique_12) [page ] 13 | BOM Engineer | Create Production Order (CO01) | A new Change Master is created. |
| [Change to Original Component in the MBOM](#unique_13) [page ] 15 | BOM Engineer | Maintain Bill Of Material (F1813) | A new Bill of Material is changed with a Change Master assigned. |
| [Set Change Master Status to Inactive](#unique_14) [page ] 16 | BOM Engineer | Change Change Master (CC02) | Change Master Status is set to Inactive. |
| [Manually Create Production Order](#unique_15) [page ] 17 | Production Supervisor - Discrete Manufacturing | Create Production Order (CO01) | A production order is created. |

# Test Procedures

This section describes test procedures for each process step that belongs to this scope item.

## Create Change Master

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to create the Change Master.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Change Master (CC01). |  |  |
| 3 | Enter Change Number | On the Create Change Master: Initial Screen, enter data provided in the following example and press Enter.Change Number: 3LO\_XX (XX can be any number)Remain default values in other fields. |  |  |
| 4 | Enter Change Master Data | On the Create Change Master: Change Header screen, enter data provided in the following example and press Enter.* In the empty field next to Change Number, enter Change Master for BOM FG111.
* Valid From: <Today +5 days>
* Change no. status: 01 Active
 |  |  |
| 5 | Select Checkboxes for Bill of Material | On the Create Change Master: Object Types screen, in the Object types table, Bill of Material row, select the following checkboxes:* Actv.
* Object
* MgtRec
 |  |  |
| 6 | Choose Save | Choose Save. | The Change Master is created. |  |

## Exchange a Component in the MBOM

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to exchange one of the materials with another material with which you can go ahead with production. Component RM27 has some quality problems in the current delivery, you want to use the same raw material RM27\_1 from supplier B to go ahead with your production.

You do a change in bill of material with change master to track this change and stay compliant.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Maintain Bill Of Material (F1813). |  |  |
| 3 | Search for the BOM to be changed | * Material: FG111
* Plant: 1010
* BOM Usage: Production
 | The BOM to be changed displays. |  |
| 4 | Choose the BOM to be changed | Choose the correct BOM to be changed. |  |  |
| 5 | Edit the Bill of Materials | Choose Edit (If the Edit button can't display on the screen, select More (depicted by three dots) and choose Edit) |  |  |
| 6 | Assign Change Master | Choose Assign Change Number, enter the following entry and choose OK.Use From Existing List: 3LO\_XX (The change master created in previous step) | The Assign Change Number dialog box displays. |  |
| 7 | Change BOM Item | In the BOM Item Number 0010 line in the Components tab, change the value to RM27\_1. |  |  |
| 8 | Choose Save |  | The BOM is changed. |  |
| 9 | Select a Change Number | Select one of the available change numbers from the Timeline tab. | The changed component will only display when the relevant Change Number is selected. |  |

## Set Change Master Status to Inactive

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to set the Change Master Status to Inactive so that this specific Change Master can't be used anymore for managing further changes.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Change Change Master (CC02). | The Change Change Master app launches. |  |
| 3 | Enter Change Number | On the Change Master: Initial Screen, make entries similar to the following example and press Enter.Change Number: 3LO\_XX (Change master created in previous step) |  |  |
| 4 | Set Change Master Status | In the Change no.Status field, select 02-Inactive | The Change Master Status is set to Inactive; then the Change Master can't be used anymore. |  |
| 5 | Choose Save | Choose Save. | The Change Master is changed. |  |

## Manually Create Production Order

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to create a production order and check if the new material RM27\_1 is adopted as component.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Production Supervisor - Discrete Manufacturing | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Production Order (CO01). | The Production Order Create: Initial Screen displays. |  |
| 3 | Enter the Order Information | Make the following entries and choose Enter* Material: FG111
* Production Plant: 1010
* Order Type: YBM1
 |  |  |
| 4 | Enter the Order Details | Make the following entries and choose Enter.* Total Qty: 10
* End: <Today's date +10 Days>
 | The Start date is calculated and the date falls after the valid-from date of change master. |  |
| 5 | Check Component | Choose Component. | Component RM27\_1 displays instead of RM27. |  |
| 6 | Save | Choose Save and make a note of your production order number. |  | You can continue process the production order by following the steps in Make-to-Stock Production - Discrete Manufacturing (BJ5) scope item to finish production of this production order. |

## Create Change Master

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to create a new change master.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Change Master (CC01). | The Create Change Master app launches. |  |
| 3 | Enter Change Number | On the Create Change Master: Initial Screen, enter data as provided in the following example and press Enter.Change Number: 3LO\_XX (XX change be any number)Leave default values in other fields. |  |  |
| 4 | Enter Change Master Data | On the Create Change Master: Change Header screen, enter data as provided in the following example and press Enter.* In the field beside Change Number: Change Master for BOM FG111.
* Valid From: <Today +5 days>
* Change no. status: 01 Active
 |  |  |
| 5 | Select Checkboxes for Bill of Material | On the Create Change Master: Object Types screen, from Object types table, Bill of Material row, select the following checkboxes:* Actv.
* Object
* MgtRec
 |  |  |
| 6 | Choose Save | Choose Save. | The Change Master is created. |  |

## Change to Original Component in the MBOM

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

For example, supplier A resolved the quality issues, and you are able to use again the original material/component RM27 in production FG111. You prefer using RM27 only because it’s less costs if you are using material from supplier A.

This process step shows you how to change bill of material with change master to track this change and stay compliant.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Maintain Bill Of Material (F1813). |  |  |
| 3 | Search for the BOM to be Changed | * Material: FG111
* Plant: 1010
* BOM Usage: Production
 | The BOM to be changed displays. |  |
| 4 | Choose the BOM to be Changed | Choose the correct BOM to be changed. |  |  |
| 5 | Edit the Bill of Materials | Choose Edit (If the Edit button can't display on the screen, select More (depicted by three dots) and choose Edit) |  |  |
| 6 | Assign Change Master | Choose Assign Change Number, enter the following entry and choose OK.Use From Existing List: 3LO\_XX (The change master created in previous step) | The Assign Change Number dialog box displays. |  |
| 7 | Change BOM Item | In the BOM Item Number 0010 line in the Components tab, change the value to RM27. |  |  |
| 8 | Choose Save |  | The BOM is changed. |  |
| 9 | Select a Change Number | Select one of the available change numbers from the Timeline tab. | The changed component will only displaye when the relevant Change Number is selected. |  |

## Set Change Master Status to Inactive

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to set the Change Master Status to Inactive so that this specific Change Master cannot be used anymore for managing further changes.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as a BOM Engineer | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Change Change Master (CC02). |  |  |
| 3 | Enter Change Number | On the Change Master: Initial Screen, make entries similar to the following example and press Enter.Change Number: 3LO\_XX (Change master created in previous step) |  |  |
| 4 | Set Change Master Status | In the Change No.Status field, select 02-Inactive. | The Change Master Status is set to Inactive; then the Change Master can't be used anymore. |  |
| 5 | Choose Save | Choose Save. | The Change Master is saved. |  |

## Manually Create Production Order

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | Duration | Enter a duration. |

Purpose

This process step shows you how to create a production order and check that the new material RM27\_1 is adopted as component.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as the Production Supervisor - Discrete Manufacturing | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Production Order (CO01). | The Production Order Create: Initial Screen displays. |  |
| 3 | Enter the Order Information | Make the following entries and choose Enter* Material: FG111
* Production Plant: 1010
* Order Type: YBM1
 |  |  |
| 4 | Enter the Order Details | Make the following entries and choose Enter:* Total Qty: 10
* End: <Today's date +10 Days>
 | The Start date is calculated and the date falls after the valid-from date of change master. |  |
| 5 | Check Component | Choose Component. | Component RM27 displays instead of RM27\_1. |  |
| 6 | Save | Choose Save and make a note of your production order number. |  | You can continue process the production order by following the steps in Make-to-Stock Production - Discrete Manufacturing (BJ5) scope item to finish production of this production order. |

# Appendix

## Process Integration

The process to be tested in this test script is part of a chain of integrated processes.

### Preceding Processes

You may first have completed the following processes and conditions before you start with the test steps:

|  |  |
| --- | --- |
| Process | Business Condition |
| BNR | Create Product Master of Type "Raw Material" |
| BNS | Create Product Master of Type "Semi-Finished Good" |
| BNT | Create Product Master of Type "Finished Good" |

### Succeeding Processes

After completing the activities in this test script, you can continue testing the following business processes:

|  |  |
| --- | --- |
| Process | Business Condition |
| BLD | Create Production Version |
| BJ5 | Make-to-Stock Production - Discrete Manufacturing |

Typographic Conventions

|  |  |
| --- | --- |
| Type Style | Description |
| Example | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.Textual cross-references to other documents. |
| Example | Emphasized words or expressions. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| Example | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| Example | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| <Example> | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| EXAMPLE | Keys on the keyboard, for example, F2 or ENTER. |

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