

# ERP-862 Prevent Ready for Shipment Status when batch status is restricted

|                     |                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status              | Approved                                                                                                                                                                        |
| Owner               | IVANOV-ext, Dragomir AGUADO-ext, Alvaro                                                                                                                                         |
| Stakeholders        | PALMER, Francine HOWES, JamieRIZOS, Antonios VENKAT-ext, Rama                                                                                                                   |
| Jira Request ID     |  <a href="#">ERP-327</a> - Jira project doesn't exist or you don't have permission to view it. |
| Jira Development ID |  <a href="#">ERP-862</a> - Jira project doesn't exist or you don't have permission to view it. |

## High- Level Specification

| Parameter                  | Value                                                                 |
|----------------------------|-----------------------------------------------------------------------|
| Application System         | S/4Hana ROW, S/4Hana China, S/4Hana CUI                               |
| Business Process Reference | 06.11.02.01. Manage Outbound Material Flow w/wo Discrepancies for EWM |

## Functional Overview

### Topic:

Prevent Ready for Shipping Status when batch or stock is restricted (**Integration Topic #287**).

### Description:

During the warehouse execution process after picking and packing is completed, but Goods Issue is not posted yet, it is possible that the batches or stock are moved back to restricted status by QM. In this case, the system should revert delivery status from "Ready for Shipment" to "Not-Ready for Shipping" in EWM and communicate it to TM, so the packing information of restricted batches/stock is prevented of being updated in TM accordingly.

### Requirement details:

1°.- A custom program is required, set as Application Job and run for the respective variant, to select relevant deliveries to set up "Ready for Shipping" status with additional check if all assigned batches and picked stock for respective delivery is Unrestricted.

2°.- Second step of this Application Job needs to cover additional check of the stock and batches assigned for every delivery with already set "Ready for Shipping" status but not yet posted Goods Issue, and in case of any batch moved to restricted or picked stock different then Unrestricted, to revert the status to "Not Ready for Shipping" for respective delivery.

## Scope and Objectives

### Scope:

The standard program cannot be executed automatically because the action needs to be repeated in respective time frames, and the Business Process requires to be scheduled to run as a Background Job.

The program needs to be created with a special variant for Application Job execution for every EWM Warehouse, where this process is applicable.

The following scenarios are in scope for the Application Job:

- Do not set "Ready for Shipping" status - if status of any batch assigned in the delivery is restricted or any of the picked stock for respective delivery is Blocked or in Quality Inspection.
- Set "Ready for Shipping" status only if the batch status of the batch assigned to a delivery is unrestricted and stock status of the stock picked for respective outbound delivery is unrestricted.
- If "Ready for Shipping" status already set for a delivery but not yet posted Goods Issue - Reverse to "Not-Ready for Shipping" status If status of any batch assigned to delivery is restricted or status of the stock for delivery is not Unrestricted.
- Error handling - collect the error messages for the Job run and provide the possibility to display the log, based on the execution date.

### Objectives:

As part of the SyWay EWM Outbound execution process, there is a requirement to set "Ready for Shipping" status automatically when picking is finished in EWM.

The "Ready for Shipping" status must be set only if all batches and stock, picked for respective delivery are Unrestricted.

The status change step "Ready for Shipping" sends the picking/packing details to Transportation Management system and update the respective FU /FO.

As the "Ready for Shipping" status is a prerequisite for Loading in TM, we need to prevent the Loading execution if any of the assigned batches or respective stock is other than Unrestricted for respective delivery.

In such way there is a need to automatically reverse back the status to "Not-Ready for Shipping" for a delivery with not yet posted Goods Issue, if any of the batches or stock was moved to other than Unrestricted status for respective delivery.

## Process Flow Diagram

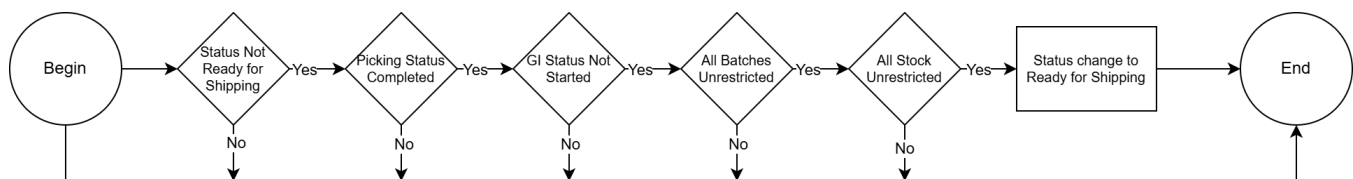
The following 2 scenarios are in scope:

### Scenario 1

Automatic Ready for Shipping process

> Variant 1) Set "Ready for Shipping" status only if the batch status of the batch assigned to a delivery is unrestricted and stock status of picked stock for respective outbound delivery is unrestricted.

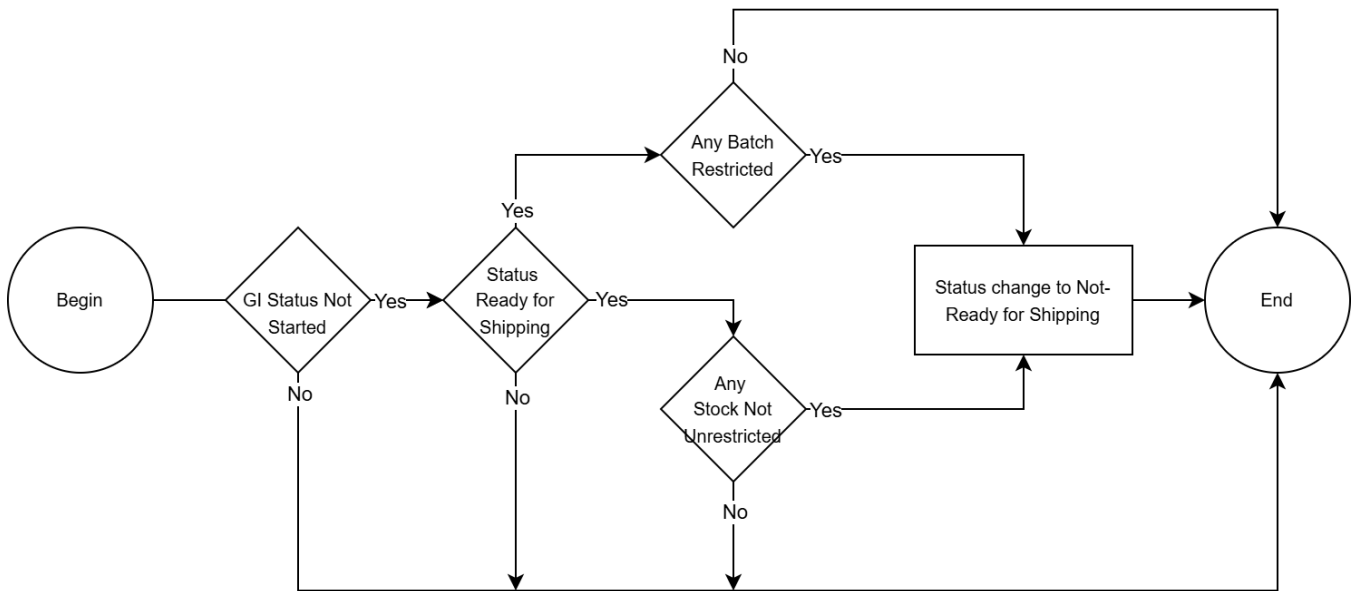
> Variant 2) Do not set "Ready for Shipping" status - if status of any batch assigned in the delivery is restricted or any of the picked stock for respective delivery is Blocked or in Quality Inspection.



### Scenario 2

Automatic revert from Ready for Shipping to Not-Ready for Shipping process

> Variant 1) If "Ready for Shipping" status already set for a delivery but not yet posted Goods Issue - Reverse to "Not-Ready for Shipping" status If status of any batch assigned to delivery is restricted or status of the stock for delivery is not Unrestricted.



Execution step, as part of SAP SIGNAVIO Outbound flow'

06.11.02.01. Manage Outbound Material Flow for EWM Storage Locations



## Execution Flow

| Step | Description                                                                                                                                | Comment                                                                                                                                            |
|------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | List Deliveries relevant for the changing the status to "Ready For Shipping", with EWM ODO picking status Completed.                       | This step will be done by the standard program / SCWM/R_SET_DSH_STAT_AUTOMATIC.                                                                    |
| 2.   | Loop through the list of selected EWM Outbound Delivery Orders.                                                                            |                                                                                                                                                    |
| 2.1. | Check if all of the batches, picked for EWM ODO are Unrestricted.                                                                          | field BATCHNO table /SCDL/DB_PROCI_O<br>select based on the batch number and check the field ZUSTD in table MCHA for blank value - "Unrestricted". |
| 2.2. | Check if all of the Stock, picked for EWM ODO is Unrestricted.                                                                             | field STOCK CATEGORY table /SCDL/DB_PROCI_O with value F Unrestricted                                                                              |
| 2.3. | Set the status "Ready for Shipping" for respective EWM ODO only if both previous checks are passed and stock and batches are Unrestricted. |                                                                                                                                                    |
| 2.4. | Confirm if the status "Ready for Shipping" is set or check the error messages.                                                             |                                                                                                                                                    |
| 3.   | Output the messages.                                                                                                                       |                                                                                                                                                    |

|      |                                                                                                                                                                                                  |                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.   | List Deliveries with status "Ready For Shipping" with not posted Goods Issue.                                                                                                                    | Based on field STATUS TYPE "Ready for Shipping" Status DSH with value 9 "Ready" table /SCDL/DB_STATUS<br><br>Based on field STATUS TYPE Goods Issue Status DGI with value 1 "Not Started" table /SCDL/DB_STATUS |
| 5.   | Loop through the list of selected EWM Outbound Delivery Orders.                                                                                                                                  |                                                                                                                                                                                                                 |
| 5.1. | Check if any of the batches, picked for EWM ODO is not Unrestricted.                                                                                                                             | field BATCHNO table /SCDL/DB_PROCI_O<br><br>select based on the batch number and check the field ZUSTD in table MCHA for value X - "Restricted".                                                                |
| 5.2. | Check if any of the stock, picked for EWM ODO is not Unrestricted.                                                                                                                               | field STOCK CATEGORY table /SCDL/DB_PROCI_O with value different then F Unrestricted                                                                                                                            |
| 5.3. | Reverse the status "Ready for Shipping" to "Not-Ready for Shipping", for respective EWM ODO, if any of the both previous checks are passed and any of the stock or batches are not Unrestricted. | "Ready for Shipping" Status DSH with value 1 "Not Ready" table /SCDL/DB_STATUS                                                                                                                                  |
| 5.4. | Confirm if the change of the status to "Not-Ready for Shipping" is set or check the error messages.                                                                                              |                                                                                                                                                                                                                 |
| 6.   | Output the messages.                                                                                                                                                                             |                                                                                                                                                                                                                 |

## Assumptions

It can be used the standard configuration option to change the status "Ready for Shipping" and enhancement is required to prevent change of the status if any of the batches are "Restricted" or any of the stock is not "Unrestricted".

It is planned to create an Application Job for automatic change of the status of respective deliveries to "Ready for Shipping", and in case of already set status revert it to "Not-Ready for Shipping" in case of any batch or stock not Unrestricted for deliveries not Goods Issue posted.

## Dependencies

N/A

## Security, Integrity and Controls

Authorization check to be done via Authorization Group for process execution.

A background system user will be used to run the background job.

## Configuration Requirements

Standard configuration for triggering the change of the status for respective delivery, after picking is "Completed".

## Language Requirements

[KDD055 - Multi-Language Support](#)

## Special Requirements

N/A

## Design Rationale

## Functional Requirements

Business requires to reach automatically the warehouse (EWM) status to "Ready for Shipping" only if all assigned Batches and Stock are Unrestricted and also have the capability to revert the status to "Not-Ready for Shipping" for all deliveries not yet Goods Issue posted if any of the assigned Batches or Stock are not Unrestricted.

The standard program /SCWM/R\_SET\_DSH\_STAT\_AUTOMATIC, for deliveries with Picking completed status, can be used as a base for the new custom program, and additional logic for the conditions of the batch and stock status will be added.

## Proposed Technology to Use

Application Job

## Data Source Considerations

| Table            | Field Name     | Comments/Calculation/Field Manipulation                                             |
|------------------|----------------|-------------------------------------------------------------------------------------|
| /SCDL/DB_PROCI_O | BATCHNO        | Batch                                                                               |
| /SCDL/DB_PROCI_O | STOCK CATEGORY | Stock Type (F*)                                                                     |
| MCHA             | ZUSTD          | Batch Restricted                                                                    |
| /SCDL/DB_STATUS  | STATUS TYPE    | DSH - Ready for Shipping Status<br>DGI - Goods Issue Status<br>DPI - Picking Status |

## Data Validation Considerations

| Table            | Field Name | Comments/Calculation/Field Manipulation                                          |
|------------------|------------|----------------------------------------------------------------------------------|
| /SCDL/DB_PROCI_O | DOCID      | Based on the Document ID we can find the Status in the table /SCDL/DB_STATUS     |
| /SCDL/DB_PROCI_O | BATCHNO    | Based on the Batch number we can find the Batch status in table MCHA field ZUSTD |

## Custom Tables

N/A

## Master Data

N/A

| Field | Description | Data Type/Length | Validation rule/ Value Help |
|-------|-------------|------------------|-----------------------------|
|       |             |                  |                             |
|       |             |                  |                             |

## Configuration Table

N/A

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

| Field | Description | Data Type/Length | Validation rule/ Value Help |
|-------|-------------|------------------|-----------------------------|
|       |             |                  |                             |
|       |             |                  |                             |

## Selection Screen Enhancement

N/A

| Field Name | Description | Select: | Data Type/Length | Default Value/ Validation rule/ Value Help | Selection Logic |
|------------|-------------|---------|------------------|--------------------------------------------|-----------------|
|            |             |         |                  |                                            |                 |
|            |             |         |                  |                                            |                 |

## Processing Logic

The new custom program, to be executed in background several times a day (periodicity to be aligned with business), needs to have a selection screen for creating a variant for Application Job execution.

The new Application Job program needs to perform the following steps:

A. Set status "Ready for Shipping" for all deliveries with picking status "Completed" only if Batch and Stock are "Unrestricted".

1. Select all deliveries with status "Not-Ready for Shipping" and picking status "Completed".
2. Check if all assigned batches for respective delivery are "Unrestricted".
3. Check if all picked stock for respective delivery is "Unrestricted".
4. If any of the 2 previous conditions (2 or 3) are not met - stop the process.
5. If all the first 3 conditions (1, 2 and 3) are met - set status "Ready for Shipping".

B. Revert status from "Ready for Shipping" to "Not-Ready for Shipping" for deliveries with batch or stock different then "Unrestricted".

1. Select all deliveries with Status "Ready for Shipping" and Goods Issue status "Not Started".
2. Check if all assigned batches for respective delivery are "Unrestricted".
3. Check if all picked stock for respective delivery is "Unrestricted".
4. If both of the 2 previous conditions (2 or 3) are met - stop the process.
5. If any of the 2 conditions (2 or 3) are not met - revert the status from "Ready for Shipping" to "Not-Ready for Shipping".

## Volumetrics

More than 20.000 deliveries per month.

## Performance Considerations

N/A

## Error Handling

As this will be an Application Job, the system will collect all errors in a message and log it to an error log object.

## Testing

### How to Test

**Prerequisites:**

- 1) EWM ODO created and

- 2) Delivery Picking Status - Completed and
- 3) Delivery Goods Issue status - Not Started

**Execution Steps:**

1. Execute the enhanced program.
2. Check the status of respective EWM ODO.

## Test Conditions and Expected Results

| ID                                                                                                                                                                                                                                 | Condition                                                                                                                                                                                          | Expected Result                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Positive Test 1</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| All assigned Batches and Stock are Unrestricted - the enhanced program will set the new status Ready for Shipping.                                                                                                                 |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for setting the status Ready for Shipping automatically, with all Batches and Stock Unrestricted for respective ODO.                                                      | The program set the status Ready for Shipping for respective EWM ODO.                                                                |
| 2                                                                                                                                                                                                                                  | Check the status of the EWM ODO.                                                                                                                                                                   | EWM ODO is with status Ready for Shipping.                                                                                           |
| <b>Positive Test 2</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| Some of the assigned Batches was moved to Restricted status - the enhanced program will change the EWM ODO status from Ready for Shipping to Not-Ready for Shipping.                                                               |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for revert the status from Ready for Shipping to Not-Ready for Shipping automatically, with one of the assigned Batches moved to status Restricted for respective ODO.    | The new program reverts the status from Ready for Shipping to Not-Ready for Shipping for respective EWM ODO.                         |
| 2                                                                                                                                                                                                                                  | Check the status of the EWM ODO.                                                                                                                                                                   | EWM ODO is with new status Not-Ready for Shipping.                                                                                   |
| <b>Positive Test 3</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| Some of the Stock items was moved to not Unrestricted - the enhanced program will change the EWM ODO status from Ready for Shipping to Not Ready for Shipping.                                                                     |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for revert the status from Ready for Shipping to Not-Ready for Shipping automatically, with one of the assigned Stock items moved to not Unrestricted for respective ODO. | The new program reverts the status from Ready for Shipping to Not-Ready for Shipping for respective EWM ODO.                         |
| 2                                                                                                                                                                                                                                  | Check the status of the EWM ODO.                                                                                                                                                                   | EWM ODO is with new status Not-Ready for Shipping.                                                                                   |
| <b>Negative Test 1</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| Delivery with any Batch moved to Restricted status - the enhanced program will not change the ODO status from Not-Ready to Ready for Shipping.                                                                                     |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for setting the status Ready for Shipping automatically, with one of the assigned Batches is with status Restricted for respective ODO.                                   | The new program did not set the status Ready for Shipping for respective EWM ODO.                                                    |
| 2                                                                                                                                                                                                                                  | Check the status of the EWM ODO.                                                                                                                                                                   | EWM ODO is with the initial status Not-Ready for Shipping.                                                                           |
| <b>Negative Test 2</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| Delivery with any of the Stock items moved to not Unrestricted - the enhanced program will not change the ODO status from Not-Ready to Ready for Shipping.                                                                         |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for setting the status Ready for Shipping automatically, with one of the already picked Stock item not Unrestricted for respective ODO.                                   | The new program did not set the status Ready for Shipping for respective EWM ODO.                                                    |
| 2                                                                                                                                                                                                                                  | Check the status of the EWM ODO.                                                                                                                                                                   | EWM ODO is with the initial status Not-Ready for Shipping.                                                                           |
| <b>Negative Test 3</b>                                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                      |
| Delivery with already set status Ready for Shipping and Goods Issue status Not Started with all Batches and Stock items Unrestricted - the enhanced program will not change the status. The status will remain Ready for Shipping. |                                                                                                                                                                                                    |                                                                                                                                      |
| 1                                                                                                                                                                                                                                  | Run the enhanced program for revert the status from Ready for Shipping to Not-Ready for Shipping automatically, with all Stock items and assigned Batches Unrestricted for respective ODO.         | The new program did not set the status Not-Ready for Shipping for respective EWM ODO.<br><br>No changes made for respective EWM ODO. |

|   |                                  |                                                        |
|---|----------------------------------|--------------------------------------------------------|
| 2 | Check the status of the EWM ODO. | EWM ODO is with the initial status Ready for Shipping. |
|---|----------------------------------|--------------------------------------------------------|

## Test Conditions and Expected Results

N/A

| ID | Condition | Expected Result |
|----|-----------|-----------------|
|    |           |                 |
|    |           |                 |
|    |           |                 |

## Test Considerations/Dependencies

N/A

## Other Information

N/A

## Development Details

### Package

| Package Name | Parent Package |
|--------------|----------------|
|              |                |
|              |                |

### Enhancement Implementation

| Enhancement Type | Standard Definition Name | Custom Implementation Name | Design Rationale Reference |
|------------------|--------------------------|----------------------------|----------------------------|
|                  |                          |                            |                            |
|                  |                          |                            |                            |

### Other Development Objects

| Object Type | Object Name | Purpose/High Level Logic | Design Rationale Reference |
|-------------|-------------|--------------------------|----------------------------|
|             |             |                          |                            |
|             |             |                          |                            |

## Appendix



# Custom Authorization Group Naming Convention

This table is based on the Syensqo development standards document. It provides the naming conventions for authorization groups to associated with custom reports and tables to comply with security requirements.

|        |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|
| ABAP   | ZFI  | ZMM  | ZPS  | ZCO  | ZSD  | ZBC  | ZFI  | ZCA  |
| TABLES | ZFIT | ZMMT | ZPST | ZCOT | ZSDT | ZBCT | ZFIT | ZCAT |

## See also

N/A

| File                                                   | Modified                             |
|--------------------------------------------------------|--------------------------------------|
| File Prevent Ready for Shipping d.1 draw.io diagram    | Nov 28, 2025 by AGUADO-ext, Alvaro   |
| File ~Prevent Ready for Shipping d.1.tmp draw.io Draft | Nov 28, 2025 by AGUADO-ext, Alvaro   |
| File Revert Ready for Shipping d.2 draw.io diagram     | Nov 17, 2025 by IVANOV-ext, Dragomir |
| File ~Revert Ready for Shipping d.2.tmp draw.io Draft  | Nov 17, 2025 by IVANOV-ext, Dragomir |

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## Change log

| Version                | Published                 | Changed By                         | Comment                      |
|------------------------|---------------------------|------------------------------------|------------------------------|
| <b>CURRENT (v. 93)</b> | <b>Dec 15, 2025 12:02</b> | <b>TORRES-ext, Benedict</b>        |                              |
| <a href="#">v. 92</a>  | Dec 15, 2025 01:42        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 91</a>  | Dec 15, 2025 01:41        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 90</a>  | Dec 11, 2025 10:55        | <a href="#">TURAN-ext, Mert</a>    |                              |
| <a href="#">v. 89</a>  | Dec 08, 2025 14:16        | <a href="#">TURAN-ext, Mert</a>    | batch job to application job |
| <a href="#">v. 88</a>  | Dec 01, 2025 12:00        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 87</a>  | Dec 01, 2025 11:58        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 86</a>  | Dec 01, 2025 11:07        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 85</a>  | Dec 01, 2025 10:30        | <a href="#">AGUADO-ext, Alvaro</a> |                              |
| <a href="#">v. 84</a>  | Dec 01, 2025 07:55        | <a href="#">AGUADO-ext, Alvaro</a> |                              |

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## Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

| Mar 24, 2026 | Actor                                                                                                | Type  | Activity                                           | Version             |
|--------------|------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------|---------------------|
| Approved     |  VENKAT-ext, Rama | State | changed state to <span>Approved</span> at 11:28 am | <a href="#">v93</a> |

|                                                               |                                                                                                        |       |                                                                                                                                                                                                                                                                                                                                              |     |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Lead Approval                                                 |  VENKAT-ext, Rama     | State | gave <i>POD Lead Review</i> approval at 11:28 am                                                                                                                                                                                                                                                                                             |     |
| Dec 15, 2025                                                  |                                                                                                        |       |                                                                                                                                                                                                                                                                                                                                              |     |
| Tech Review                                                   |  TORRES-ext, Benedict | State | changed expiry date to '22 Dec, 2025 03:30 pm' at 3:30 pm                                                                                                                                                                                                                                                                                    |     |
|                                                               |                                                                                                        | State | changed state to <a href="#">Lead Approval</a> at 3:30 pm                                                                                                                                                                                                                                                                                    | v93 |
|                                                               |  TORRES-ext, Benedict | State | gave <i>Tech Review</i> approval at 3:30 pm                                                                                                                                                                                                                                                                                                  |     |
| From Dec 01, 2025 to Dec 15, 2025                             |                                                                                                        |       |                                                                                                                                                                                                                                                                                                                                              |     |
| AGUADO-ext, Alvaro , TURAN-ext, Mert and TORRES-ext, Benedict |                                                                                                        | Edit  | multiple updates from  AGUADO-ext, Alvaro ,  TURAN-ext, Mert and  TORRES-ext, Benedict |     |