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SAP S/4HANA Repetitive Manufacturing Simplified

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info@ambikeya.com||www.ambikeya.com||+917746805189

What is Repetitive Manufacturing in SAP?

SAP supports a wide range of industrial processes, including SAP Repetitive Manufacturing (REM). This manufacturing technique is particularly suited to certain sectors. When selecting a manufacturing process, factors such as production rates, consumer needs, and product complexity play a crucial role.

Repetitive Manufacturing Overview

Repetitive manufacturing is a production method primarily based on time, as opposed to order or lot quantities. In this method, the same product is produced for a specific duration, and changes in production are infrequent. Interim items are not stored, as products are processed at a continuous rate. Back-flushing is used to confirm orders, and settlement is handled by the product cost collector. Shop floor activities can be executed with planned orders.

Types of Manufacturing Processes

SAP encompasses several manufacturing processes, with the most commonly used ones being:

- Discrete Manufacturing
- Repetitive Manufacturing
- Process Manufacturing
- Repetitive Manufacturing in Practice

Repetitive Manufacturing in Practice

Repetitive manufacturing is particularly applicable to industries where production is quantity-based rather than order-based. This approach is time-based, often spanning months or years. Industries such as Electronics and Automobiles often utilize SAP Repetitive Manufacturing.

For example, consider a product like a smartphone. Once the design is finalized, it is mass-produced, not based on specific orders. The objective is to produce a certain quantity within a defined time frame, which may extend beyond the launch of a new model. Hence, manufacturing is determined by quantity and time.

Repetitive manufacturing is characterized by a predictable pattern of activities, resulting in straightforward routing with limited route options. To further illustrate the differences, here's a comparison between discrete and repetitive production.

SAP Repetitive Manufacturing Processes

SAP supports both Make-To-Order (MTO) and Make-To-Stock (MTS) repetitive manufacturing processes:

- MTS: This process doesn't reference a specific order during production. Instead, planned independent needs drive demand within the system. When sales orders are received, they are fulfilled from warehouse stock.
- MTO: Known as sales order-based manufacturing, each production order is associated with a sales order. Stocks are updated in real-time to align with the sales order.

SAP Repetitive Manufacturing Profile

An essential element of a successful REM setup in SAP is the Repetitive Manufacturing (REM) profile. This profile defines how REM is executed within the system. You can create or modify REM profiles using transaction code OSPT or follow the SAP configuration method as outlined below. Additionally, transaction code OSP2 is used to modify existing REM profiles.

IMG -> Logistics -> Production -> Repetitive Manufacturing -> Control -> Create repetitive manufacturing profile using assistant.

The REM profile contains the below information:

1. Types of REM production: The first step in creating a profile is to choose a production type. We must decide whether to adopt the MTO or MTS manufacturing approach.
2. During inventory management, reporting points are used to record consumption data such as work in progress and stock management. This is similar to a discrete manufacturing milestone activity.
3. Automatic goods movement: Determines if a backflush or goods movement is required during reporting point confirmation.
4. Backflush activities posting: Determines whether backflush activities must be recorded to a product cost controller.
5. Plan orders are being firmed up: This option ensures that the MRP run does not alter the plan order.
6. Automatic stock determination: The system will offer available stocks for consumption if the automatic stock determination mechanism is defined.
7. Batch determination method: If the material is batch-managed, a batch determination technique can be defined and assigned to the REM profile. The system will then make batch recommendations based on the stated criteria.
8. Posting movement types: We may describe the movement types that will be utilized for various postings. The default movement kinds will be suggested by the system. 261 is the movement type for products issue, for example. We can keep track of all the customizable movement kinds in the REM profile if there are a lot of them.

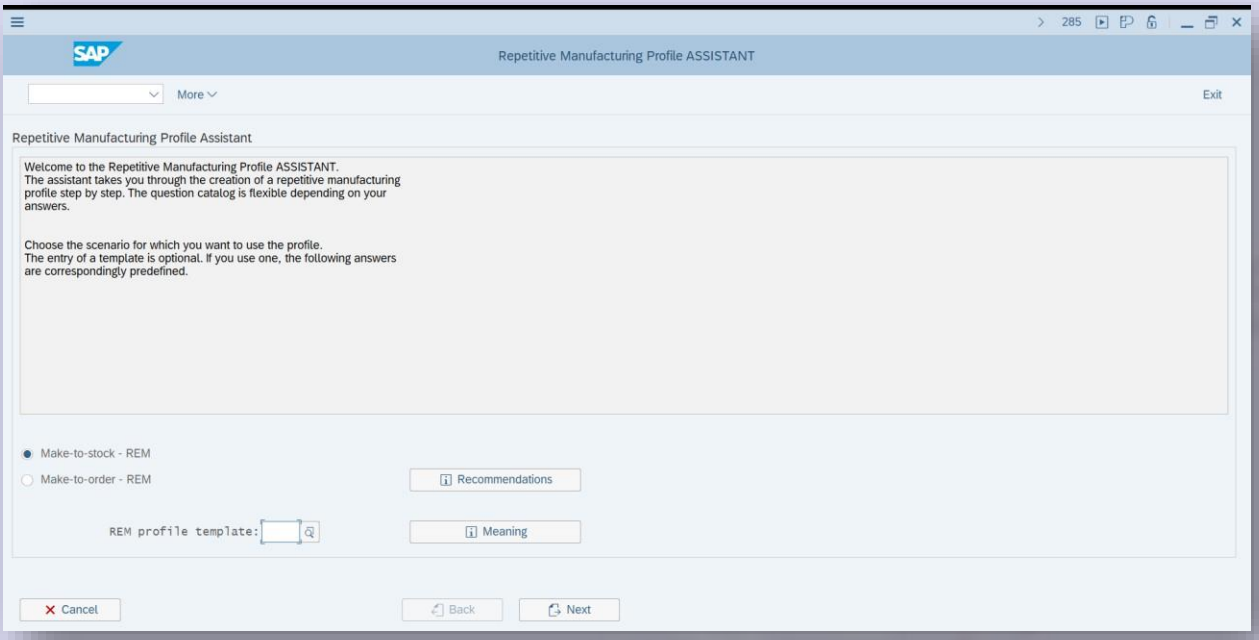
SAP REM full cycle scenario with basic step

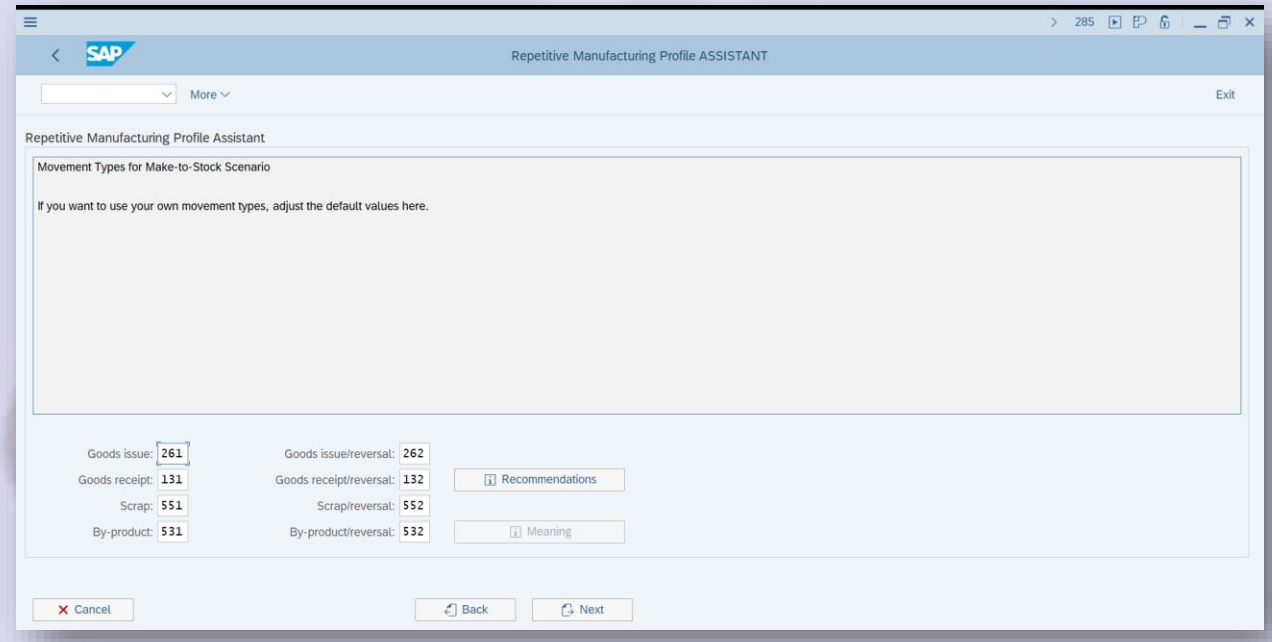
1. Company manufactures product in large numbers and production is quantity-based and period based not order-based.
2. Repetitive manufacturing is mainly used for production scenarios with high product stability, high repetition rates, and low product complexity.
3. In master data **production versions** and **product cost collector** is must where this is not mandatory in discrete manufacturing.
4. Product will not change frequently.
5. Confirmation is from Back flushing.
6. Planned orders are sufficient to carry out shop floor activity.
7. In REM there is no process to convert planned order to production order.

SAP REM Full Cycle scenario

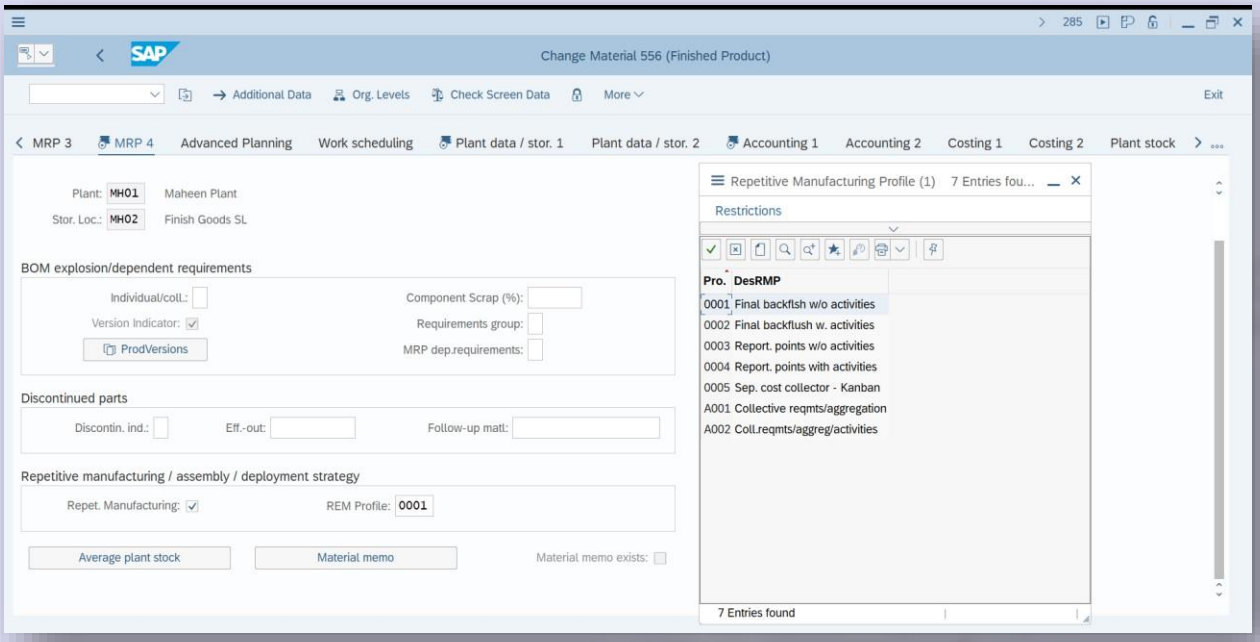
1. Material Master- MM01/MM02
2. BOM- CS01/CS02
3. WC- CR01/CR02
4. Rate Routing- CA21/CA22
5. Production Version- C223
6. REM Profile- OSP2
7. PIR Creation- MD61/62
8. MRP RUN- MD02/MD41
9. Product Cost Collector- KKF6N
10. REM Confirmation- MFBF

Create the REM Profile: By using T-code OSP2

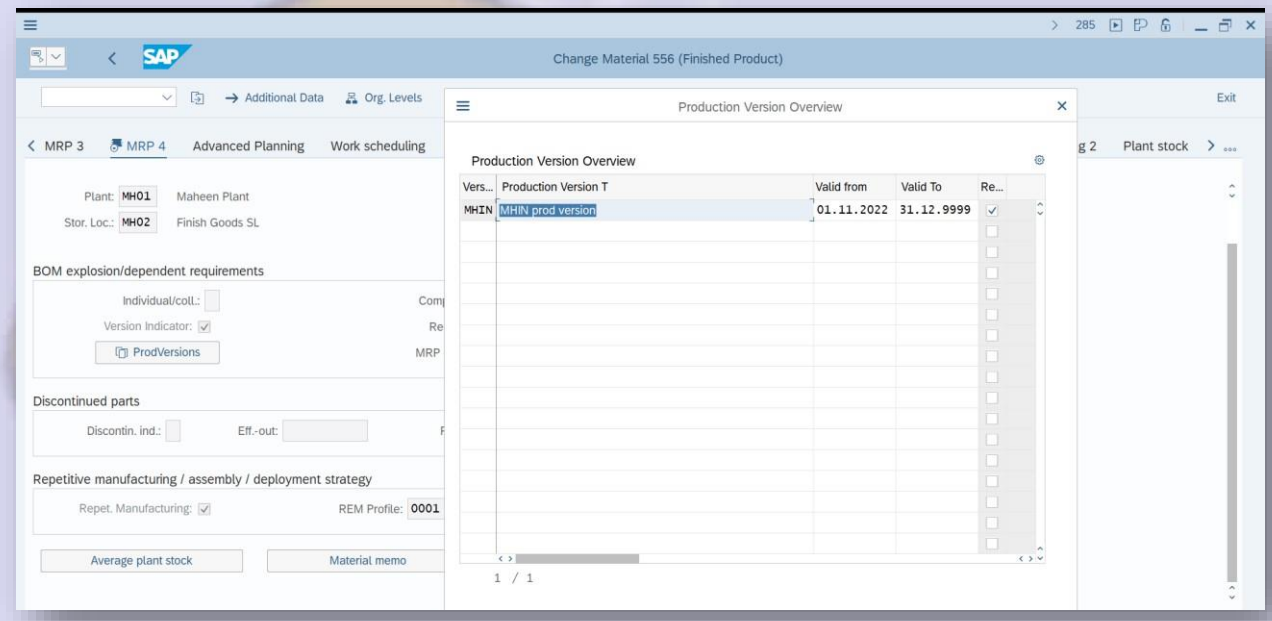


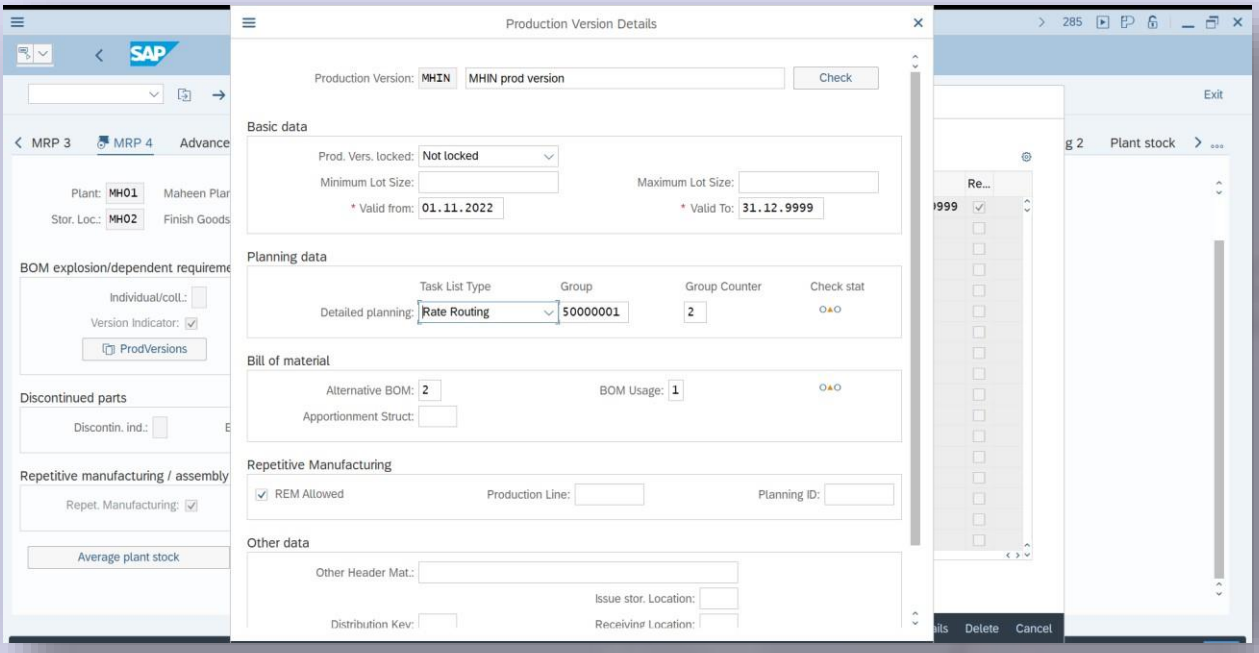


- Create the finished material with Repetitive mfg. indicator and REM profile maintained in material master see view MRP 4 views, (MM02)

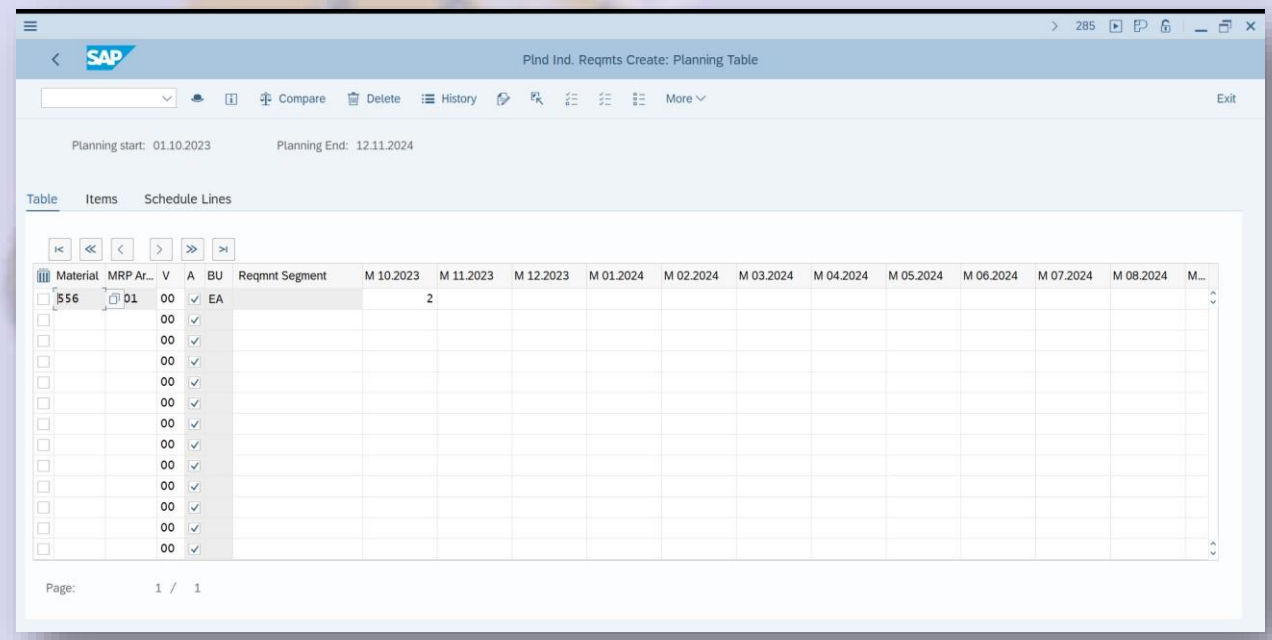


Create production version on same view

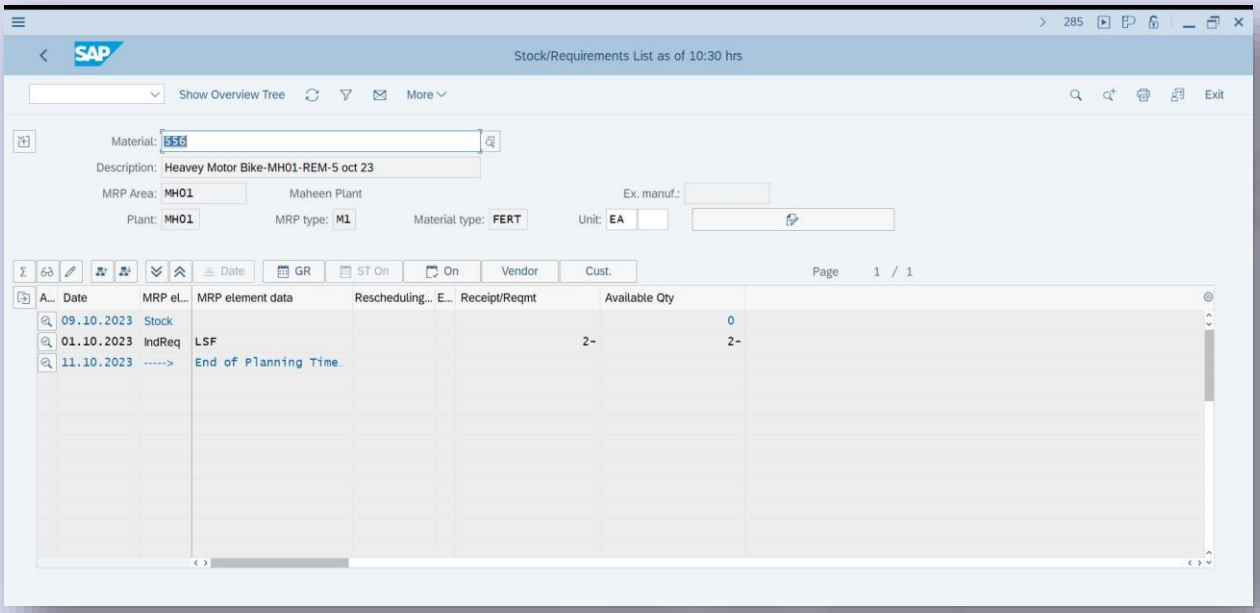




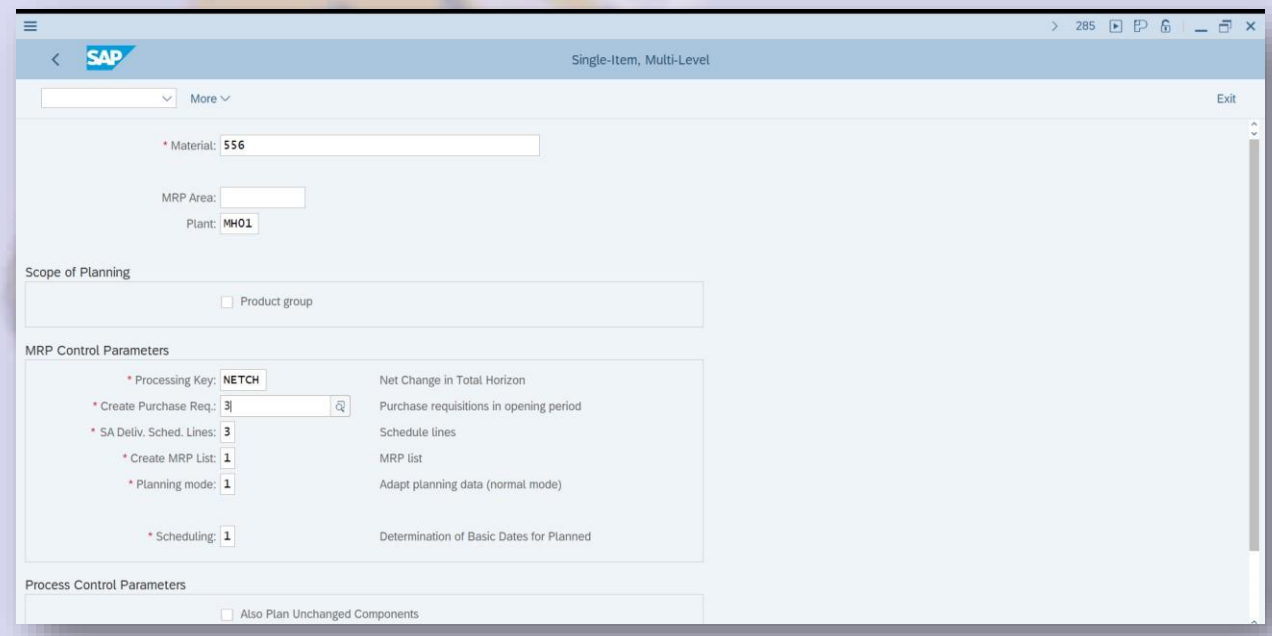
Create the Plnd.Ind. Reqmnt (PIR) for the finished material “Heavy Motor Bike-MH01-REM-5 oct 23” with help of the T-code: MD61

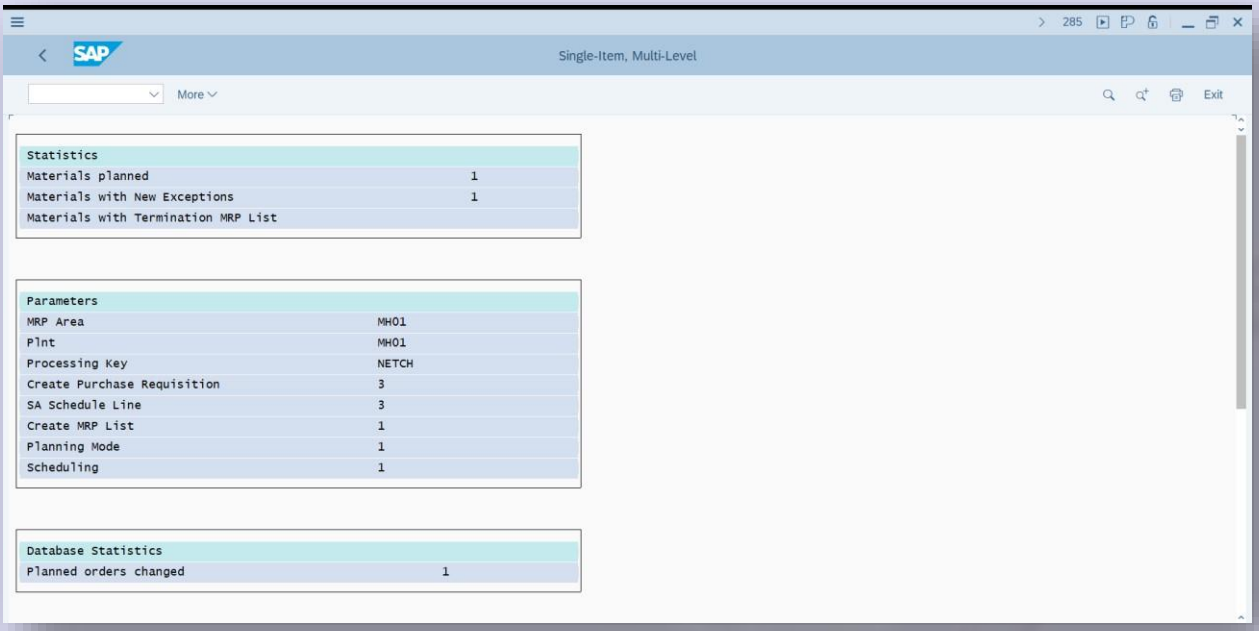


- In below pic of the stock requirement list after generating the demand without MRP RUN. (T-codes: MD04)



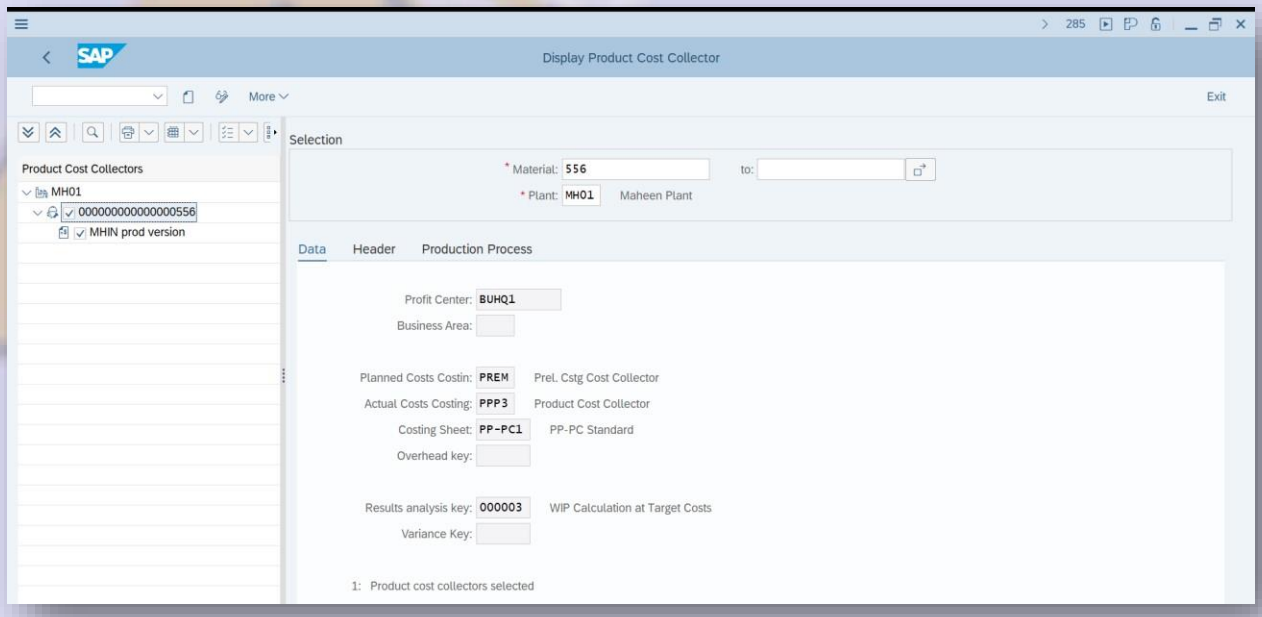
- After MRP RUN with the help of MD41 for finished material.

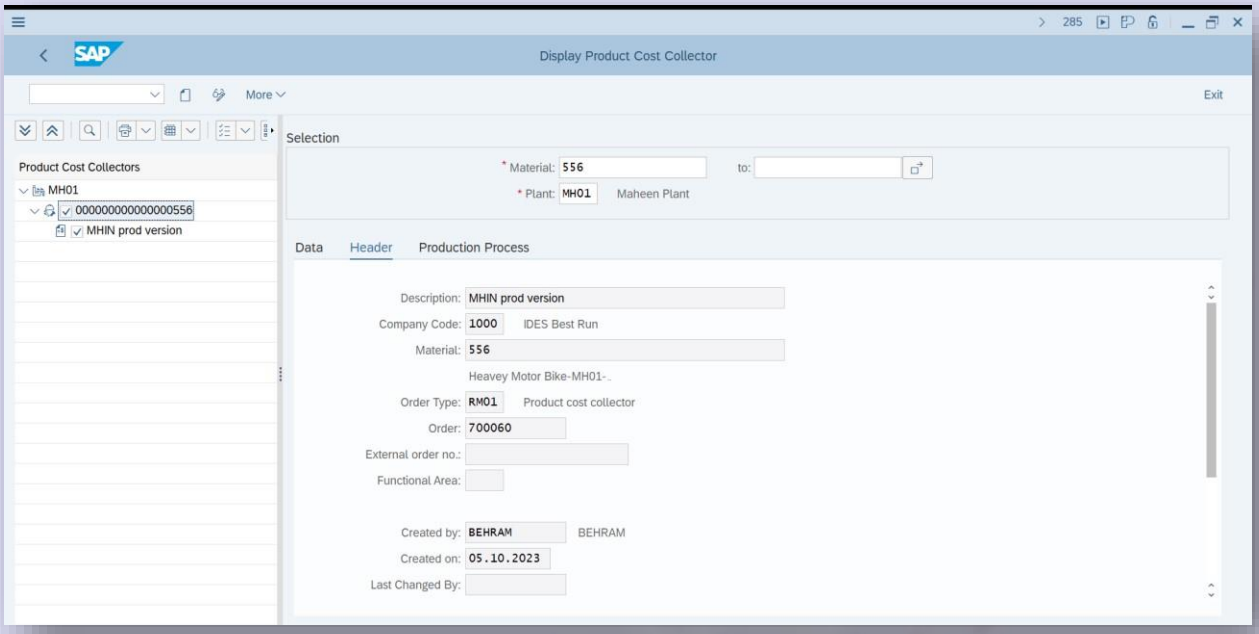


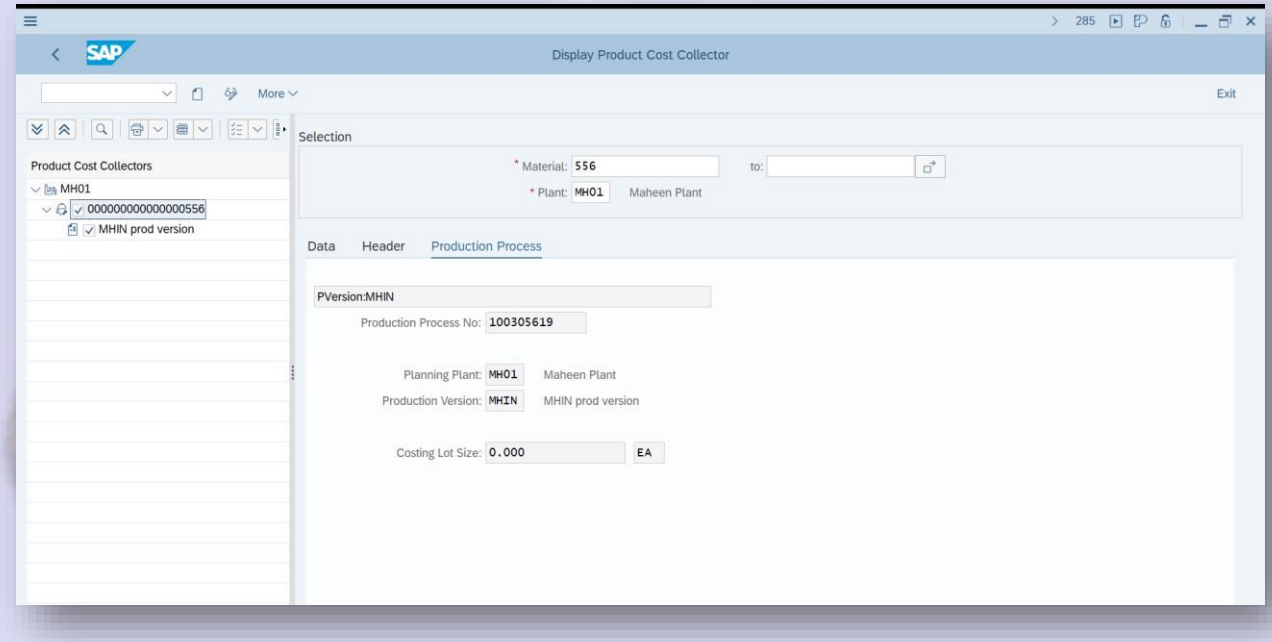


- Preliminary costing for the product cost collector.

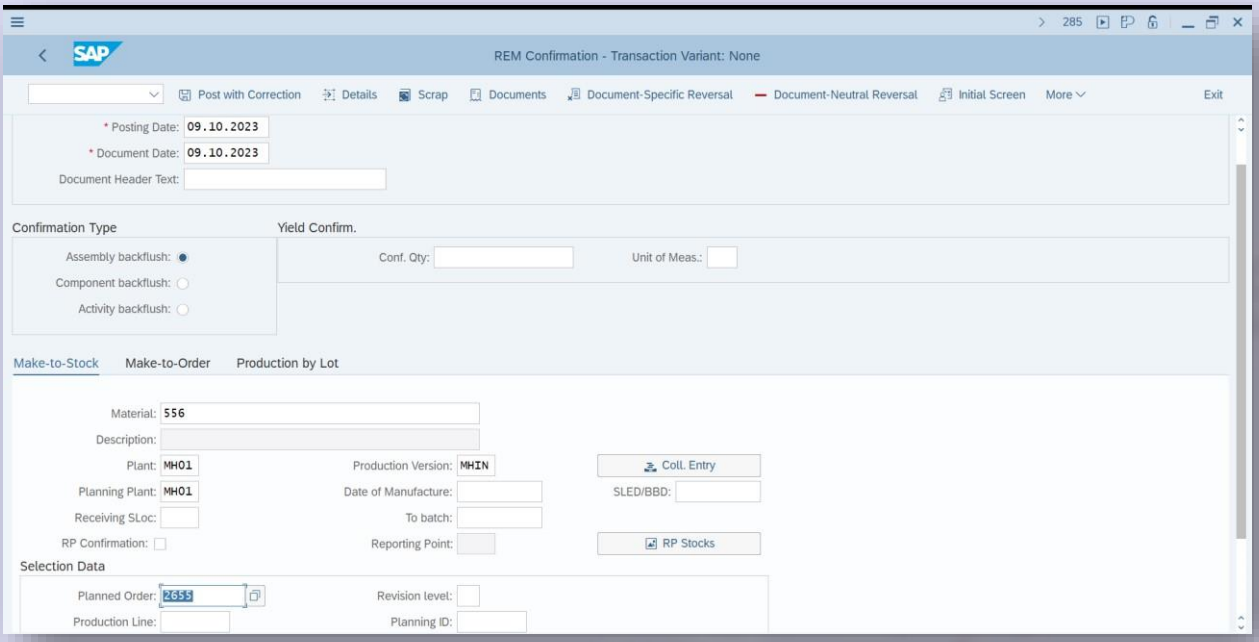
  Using T-code: **KKF6N** for create Preliminary cost estimation in REM.



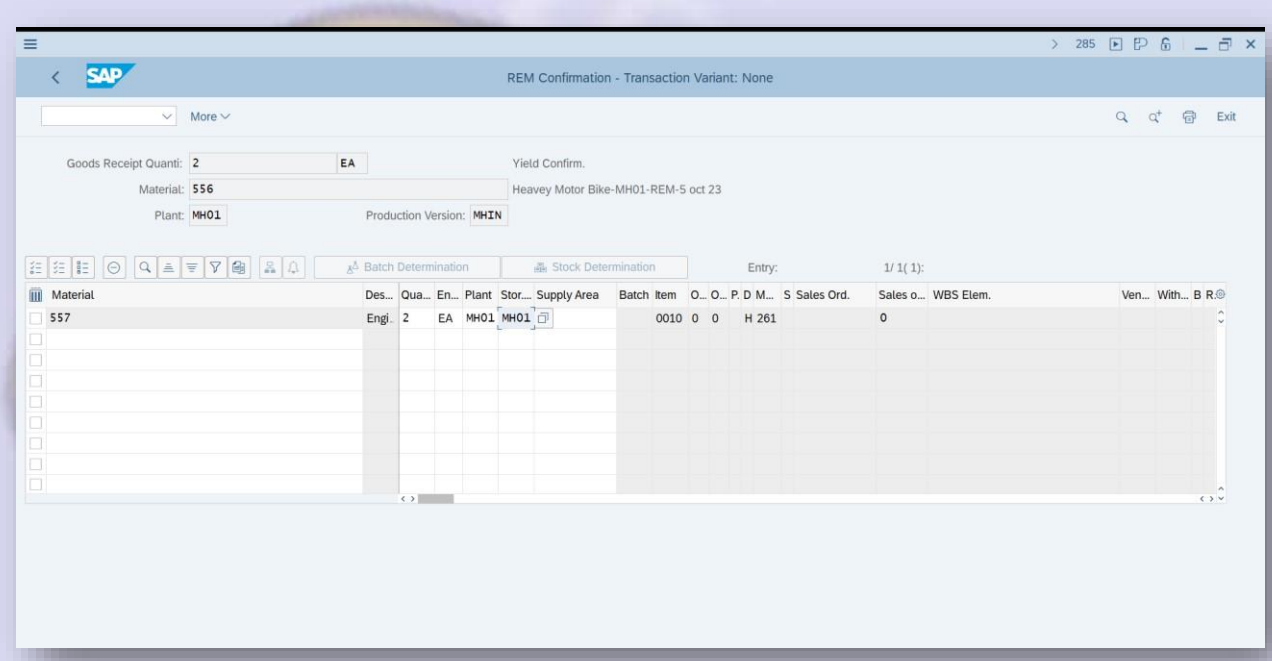




- REM Confirmation through planned order or finished material using **MFBF**, here we selected the planned order.

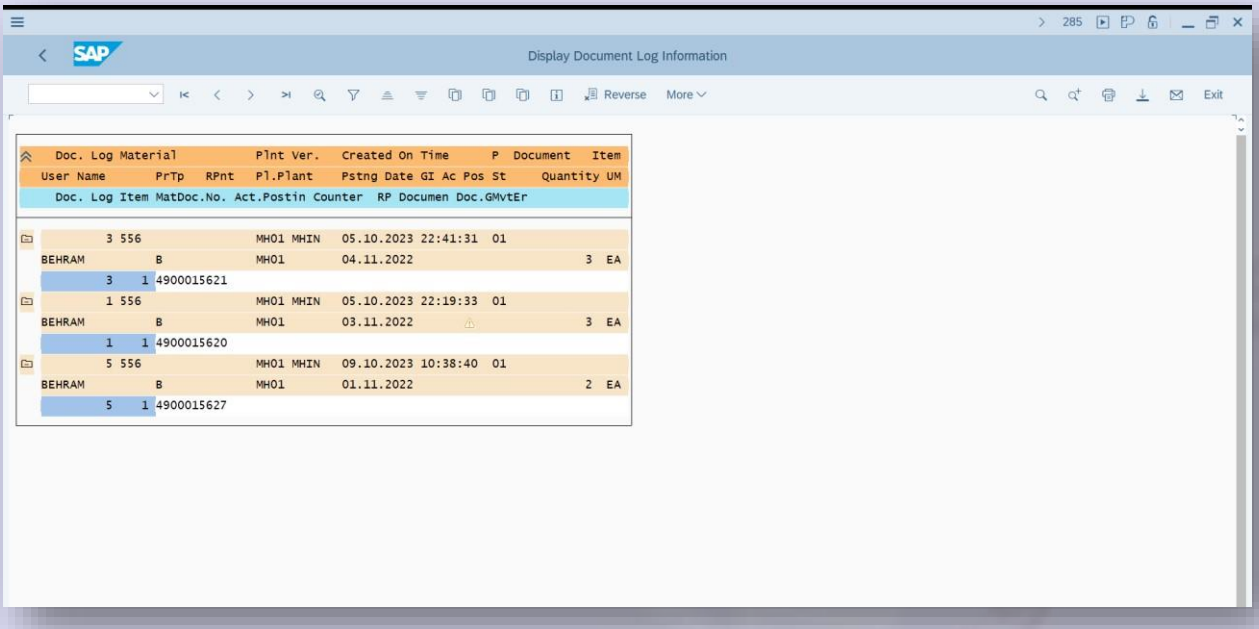


Post with correction in tool bar of REM confirmation.

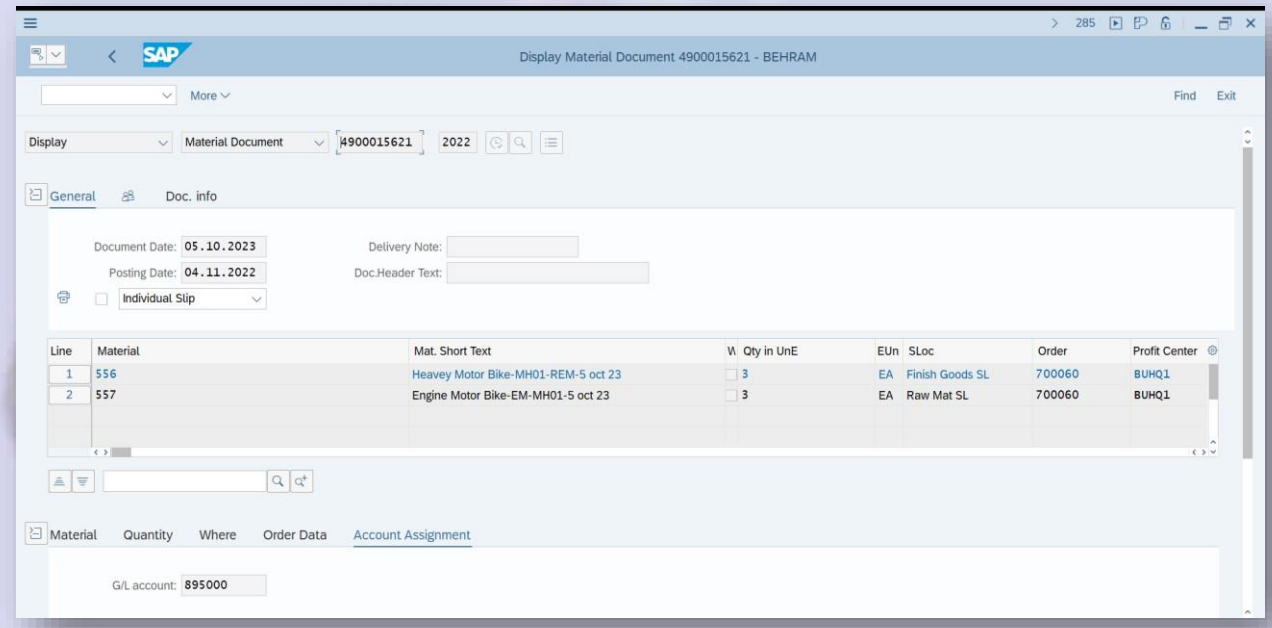


GR and GI with document 4900015627 posted

Display document log information

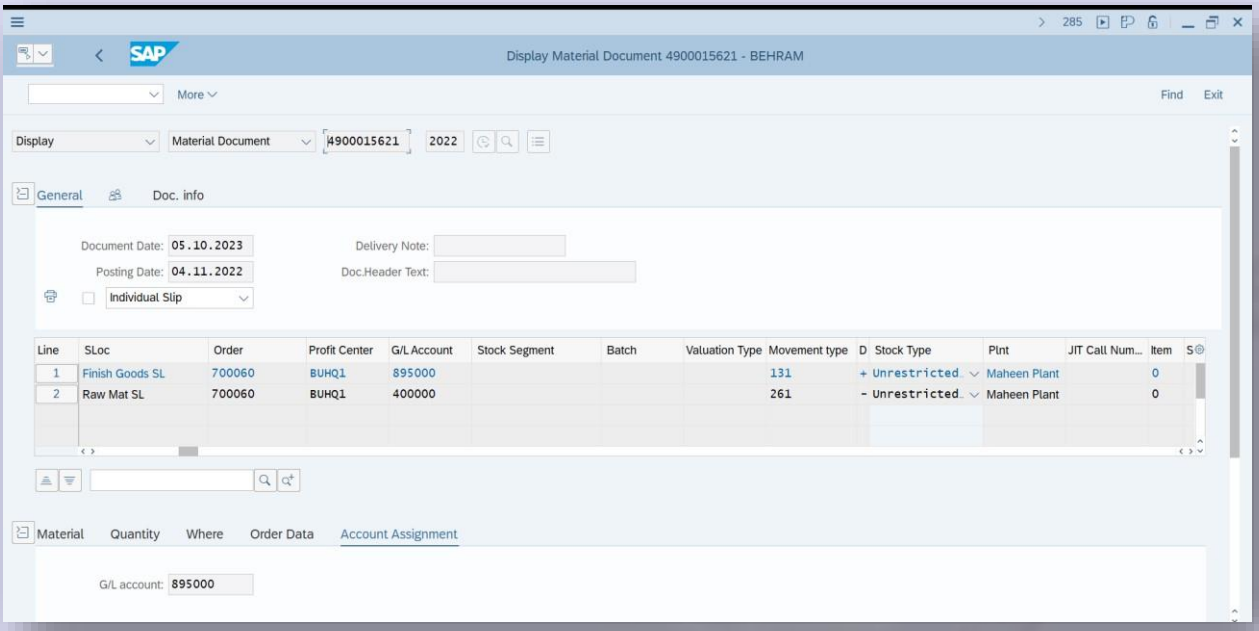


See Material document where GR & GI done automatically

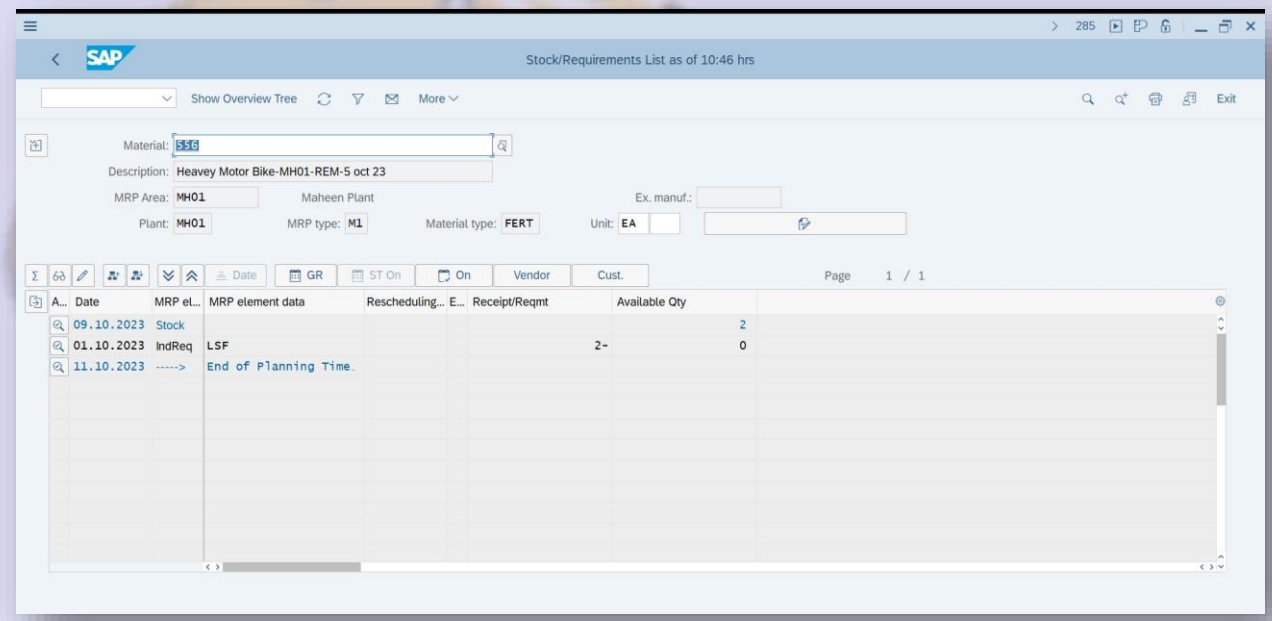


MVT 131 for Goods received

MVT 261 for Goods Issuance



Go to T code MD04 & see stock level



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