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Martin Murray

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Martin Murray

100 Things You Should Know About
Materials Management in SAP® ERP

Dear Reader,

If you're picking up this book, the chances are good that you've bought, or at least looked at, another MM book. In fact, the chances are excellent that the book you looked at was also written by Martin Murray, the author of this book. So you may be asking yourself: *Why* another *book on Materials Management*?

Dear reader, let me try to explain. While there are many resources on MM that will get you up to speed on working with the software in different capacities, there is nothing out there (until now) that will give you that specific, insider's knowledge to working with MM. In this book, you'll find information that could otherwise take you *years* to find out. With the expert advice and guidance of Martin Murray, you'll be sure to find little system tricks you've never known before, no matter your experience working with MM, that will get you on the road to saving essential time and money. Whether you're a consultant or business user, get ready to ditch some of those standard procedures you've been working with and view MM in a whole new way!

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Introduction

This book is part of a new series of reference books based on 100 tips and tricks for various SAP software components that come directly from industry experts. It's designed to make reading and understanding SAP topics more interesting and accessible for your day-to-day work. The tips in this book have been selected to help you gain access to the expert Materials Management knowledge that would otherwise take years of experience to accumulate. Each part of this book covers a particular area of Materials Management, but each tip is standalone, so you can look through the book to find the topic you want without having to read a whole chapter.

The Materials Management component in SAP ERP, also known as the MM component, contains many aspects of SAP functionality, including purchasing, goods receiving, material storage, consumption-based planning, and inventory. It's highly integrated with other modules, such as Finance (FI), Controlling (CO), Production Planning (PP), Sales and Distribution (SD), Quality Management (QM), Plant Maintenance (PM), and Warehouse Management (WM). Many of the tips in this book show the integration between Materials Management and these different components. This will give you a greater understanding of the integration points and appreciation of the intricacies of the Materials Management component.

How to Read This Book

This book is divided into a number of parts that are each based on a topic in MM, such as Purchasing, Planning, and Inventory Management.

Let's quickly discuss the different parts of this book.

- ▶ **Part 1**, **Master Data**, provides useful tips on how to easily maintain materials and basic organization in Materials Management.
- ▶ **Part 2**, **Purchasing**, provides tips on how to perform some less-used purchasing processes, as well as vendor evaluation, inspections, and mass maintenance.
- ▶ **Part 3**, **Inventory Management**, gives you some helpful ideas on how to process Inventory Management transactions. For example, you're shown how to use negative stocks, batch processing, and early warnings.

▸ **Part 4**, **Planning**, focuses on the system configuration settings that determine how you're able perform successful consumption-based planning. For example, you'll learn how to perform rescheduling and backflushing, as well as a number of tips on Material Requirements Planning (MRP).

▸ **Part 5**, **Configuration**, describes many configuration steps you can use to modify the system in a way your client needs, such as creating new movement types or purchase order document types. In addition, there are tips for material master records and some financial integration points, such as period closing and clearing accounts.

In the appendices, you'll find a glossary of terms you'll see in this book, as well as a comprehensive list of transactions available in Materials Management in SAP.

Who This Book Is For

Each tip in this book aims to replicate a scenario in which a skilled SAP expert is by your side, demonstrating how to best and most efficiently accomplish a task. It assumes a basic knowledge of functionality in the Materials Management component on the part of the user. This book aims to be a companion to other MM reference books for consultants and users working with the MM component in an efficient, user-friendly way.

Summary

This book is meant to help you explore different MM topics that will reinforce your current knowledge or help you to develop your skills in unfamiliar areas. I hope that you find yourself using this book as a companion in your current and future MM experiences.

Now that you have an idea of what this book is about and what it covers, you can either jump ahead to a specific tip or proceed to read through part by part.

Part 1

Master Data

Things You'll Learn in this Section

Master data is important to all functions within SAP. The majority of companies implementing SAP have master data issues, and without some kind of master data management, the master data issues can cause problems with functionality. Problems with a material, vendor, or customer master data creation can cause issues with business processes such as taking orders, producing finished goods, and getting those goods to the customer.

It's vital for companies to spend the necessary time rationalizing and cleansing master data before loading that data into SAP. Inaccurate data in the master data records can lead to transactional errors, and a significant cost is associated with correcting master data after it's been loaded.

This part of the book focuses on the master data that's considered part of the Materials Management function: the material master and vendor master. The material master record is important to many other components in SAP, and many of the material master record screens relate to areas that may not be familiar to you, such as sales and distribution, finance, and production. However, it's important that you understand how master data is created and how many of the fields in the material master record affect other functional areas.

Extending Materials for Additional Views

You can use a one-stop transaction to create additional views for materials in one step, rather than in multiple steps.

When you need to extend a material so that you can enter data for an additional view, the normal method would be to create the new material using the material master creation transaction, MM01. However, in many instances, many materials will require the additional view. It's time consuming to use the material master create a transaction if you have dozens or even hundreds of materials, so it's easier to use a transaction that allows you to select the views for which you need to enter data and the organizational level where it is required.

✅ And Here's How…

To reduce the manual effort involved in this process, execute Transaction MM50 or use this menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • OTHER • EXTEND MATERIAL VIEWS

In the initial screen of the transaction, enter the views you want extended and the selection criteria that let you restrict the materials to extend. Figure 1 shows that the MAINTENANCE STATUS field has the value "D" entered, which means that the relevant materials will be extended for the MRP views. Other selection criteria have been entered, such as the plant and a range of materials.

Extend Material View(s): Initial Screen

Selection Criteria

Maintenance status	D	to	
Created On		to	
Plant	2300	to	
Sales Organization		to	
Distribution Channel		to	
Warehouse Number		to	
Material	2160	to	2175
Material Type		to	
Industry sector		to	

⌃ *Figure 1 Selection Criteria for Extending Material Views*

When you've completed the selection criteria, the transaction will display a list of found materials that are relevant for the criteria entered and that don't have the MRP view already maintained. Figure 2 shows the materials that have been found; select the materials you want to extend and then click the MAINTAIN MATERIALS icon.

Extend Material View(s): Overview

Maintain materials 🗑 🖨 🖊 📄All   📄Current block   📄All

S	Created	Material	MTyp	Plnt	SLoc	Material Description
✓ D	05/15/2012	2169	HIBE	2300		Shaft 1/2" Steel – non
✓ D	05/15/2012	2170	HIBE	2300		Shaft 3/8" Steel – non
✓ D	05/15/2012	2171	HIBE	2300		Shaft 5/8" Steel – non
✓ D	05/15/2012	2172	HIBE	2300		Shaft 7/16" Steel – re

⌃ *Figure 2 List of Materials that Can Be Selected to Be Extended*

The transaction will then display the new MRP views for the first material in the list where you can enter the relevant data. When you complete and save the first material, the transaction automatically moves to the next material that has been selected. This significantly reduces the amount of effort in extending views for a large number of materials.

Tip **2**

Deactivating a Vendor

You can deactivate a vendor for a range of companies or purchasing organizations.

Vendors can be local to a single purchasing organization or be used across the enterprise. The request to deactivate a vendor may be due to a local determination and so required at just one company, while the vendor may still be used in other companies across the enterprise. Depending on local and national company policies, you may need to deactivate a vendor locally at a purchasing organization or a single company so that it can't be used, which we'll show you how to do in this tip.

✓ And Here's How…

To deactivate a vendor so that it can't be used, you need to know whether the vendor is to be deactivated for all companies, a single company, all purchasing organizations, or a single purchasing organization. To complete the process, access Transaction XK06 or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor • Central • Flag For Deletion

To deactivate the vendor, enter the vendor number and if necessary, the company code and purchasing organization, as shown in Figure 1.
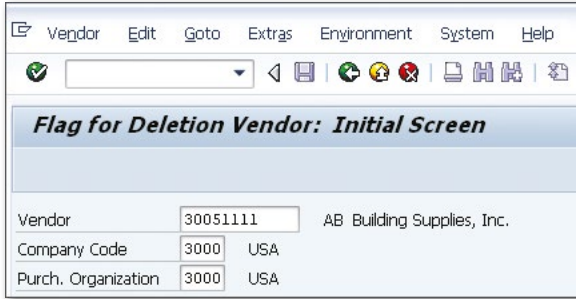
The transaction will display the detail screen, where you can select whether you want to deactivate the vendor for the specific company or purchasing organization, or for the entire enterprise, as shown in Figure 2.
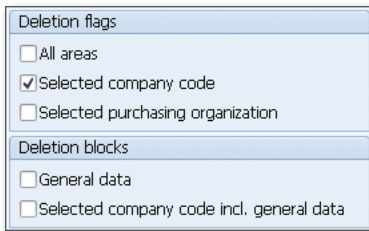
⌃ **Figure 2** *Selection Screen to Deactivate a Vendor*

This screen allows you to select the area in which you want to deactivate the vendor. If you want to deactivate the vendor for all company codes and purchasing organizations, select the first option, i.e. ALL AREAS. If you want to deactivate the vendor for the specific company or purchasing organization, select the other options (either selected company codes or selected purchasing organization).

This transaction allows one other option for the user. If you don't want to delete the general data that has been entered for the vendor, select the deletion block. You can retain the general data, such as address details, contacts, payment transactions, and reference data, for the master record or for the specific company code where the vendor is being deactivated.

After you've selected the options you require, save the transaction. A confirmation message is displayed, as shown in Figure 3.
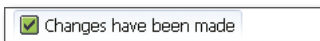
⌃ **Figure 3** *Confirmation that a Vendor Has Been Deactivated*

Deleting an Obsolete Material

You can delete a material if it's obsolete and will not be used again to help free up space in your SAP system.

Many companies will never delete their material master records, as they may be required to access them again in case of a return or repair. However, some companies have processes in place that allow them to remove a material from their system if it has not been used for a period of time or if a vendor communicates that the material is no longer available. In this tip, we'll show you how to delete an obsolete material that won't be used again.

✓ And Here's How…

To delete a material, you first need to determine the level at which the material is to be deleted. The material can be deleted across the enterprise or at an organizational level such as plant, storage location, valuation type, sales organization, or warehouse. Once you know at what level the deletion is to be processed, enter that information into the transaction. To complete the process, access Transaction MM06 or follow the SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • FLAG
> FOR DELETION • IMMEDIATELY

On the resulting screen, enter the relevant information, such as material number, plant, or storage location into the transaction, as shown in Figure 1.

⌃ **Figure 1** Initial Screen for Deleting a Material

After you've entered the material and the organizational level at which the material is to be deleted, the transaction show a second screen where you can make your final selection, as shown in Figure 2.

⌃ **Figure 2** Selection Screen for Deleting a Material

The data screen allows you to select the correct organizational level at which you want to delete the material. If the material is to be deleted at the client level (i.e., across the enterprise), check the indicator at that level. In this case, as Figure 2 shows, the material is to be deleted only for storage location 0001, and the indicator at that level has been checked. When you've made your selection, the transaction is processed and the material is flagged for deletion.

Tip 4

Changing the Price of a Material

You can easily change the price of a material by working with a simple transaction if it's incorrect or needs to be updated.

You may need to change material's price for a couple of different reasons. Sometimes the standard price of a material is significantly different from the moving average price, and needs to be corrected. Alternatively, if a material hasn't been used for a period of time, the finance department may want to change the price to reflect the current market price. Let's walk through the steps you'll need to follow to change a material price.

✓ And Here's How…

To change the price of a material or materials, determine the date when the price change is to occur and the organizational level of the price change, e.g., company code or plant. To process the material price change, access Transaction MR21 or follow the SAP menu path:

> SAP • Logistics • Materials Management • Valuation • Change In Material Price • Change Material Prices

On the resulting screen, enter the date of the price change, the company code, and the specific plant, if necessary, where the price change is to take place. Figure 1 shows the initial entry screen for Transaction MR21.

《 *Figure 1* *Initial Screen for a Material Price Change*

On the screen shown in Figure 1, enter the date when the material price will change and the company code where the price change will occur. If the price change is to occur at a specific plant, add that as well. If the price change for the material is to occur at more than one plant, leave the plant field blank. Press `Enter` after you've made your selections.

The detailed screen for the material price change, as shown in Figure 2, requires you to enter a material and a plant if you didn't enter one on the initial screen.

《 *Figure 2* *Specific Date for Material Price Change*

Once you've entered the material number and plant, the current price will be shown. Enter the new price of the material that will be triggered on the posting date. If you need to enter a new price for the material at another plant, enter the material number and the plant. The current value for that material will be shown; enter the new price for that material also. Continue this process for all the price changes you need to make. When you're finished, save your data. The transaction will return a message that a price change document has been posted, similar to the example shown in Figure 3.

☆ *Figure 3* *Price Change Document Posting Message*

Tip 5

Changing a Material's Base Unit of Measure

You can change an existing material's base unit of measure only by meeting specific criteria.

When a material is created, the base of unit of measure is entered at the client level and is defaulted across the enterprise. However, you may need to change the material's base unit of measure; for example, if a material is now being produced in centimeters rather than inches, or kilograms instead of pounds. In many cases, companies will just create a new material with the new base unit of measure, but there are instances when it's too difficult to change the material number in documentation, catalogs, or in other places.

✅ And Here's How…

To change the base unit of measure for a material, the following criteria must be true:

▶ There can't be any stock of the material in the current period or in the previous period.
▶ There can't be any existing purchase requisitions, purchase orders, or scheduling agreements for the material.

To process the change to the base unit of measure, use Transaction MM02 or follow the SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

Enter the material number into the initial screen and then select the Basic Data 1 view, as shown in Figure 1.
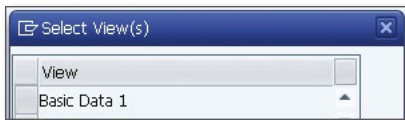
⌃ *Figure 1* *Select Basic Data 1 Screen*

On the following screen, change the base unit of measure to the new base unit of measure for the material. However, if there is an issue with the material (i.e., stock or documents), an error message will be generated that instructs the user to review the errors. To display this error message, use the Ctrl + F1 function keys or choose Edit • Display Errors in the header menu.

The transaction will show a list of errors triggered when you attempted to change the base unit of measure. Figure 2 shows an error message indicating that the change to the base unit of measure can't go ahead because of an outstanding purchase requisition that contains the material.
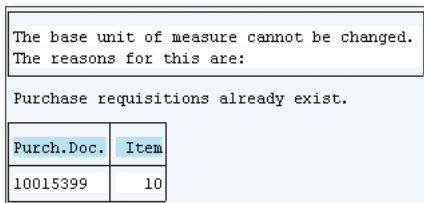
« *Figure 2* *Error Displayed when Changing the Base Unit of Measure*

You must address any errors before the base unit of measure can be changed. In this case, the purchase requisition can be deleted. If there is outstanding stock, this should be cleared. Once you've addressed the errors, you can reattempt to change the base unit of measure. When the field has been successfully changed, a message is displayed as shown in Figure 3.
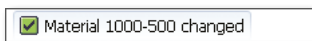
⌃ *Figure 3* *Message Showing that the Base Unit of Measure Has Been Successfully Changed*

Tip 6

Changing the Valuation Class in the Material Master

When your company or client has a specific business requirement, you can easily change a material's valuation class.

When a material is created, the valuation class is determined in the accounting screen. A particular material type will generally have one particular valuation class; for example, a finished good may have only one valuation class, 7920. However, depending on a company's business needs, the accounting department may require that valuation class to be amended.

✅ And Here's How…

For the valuation class for a material to be changed, the following criteria must be true:
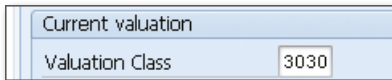
▶ There are no valuated stocks of the material in the current period or in the previous period.

▶ There are no existing purchase orders or scheduling agreements for the material.

To change the valuation class, use Transaction MM02 or follow the SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

Change the valuation class on the accounting screen of the material master change transaction, as shown in Figure 1.

Enter the material number into the initial screen, and then select the Accounting 1 view. The transaction will display a pop-up screen where you can enter the plant at which the valuation class should be changed.

⌃ *Figure 1 Valuation Class in Material Master Record*

Then, change the valuation class to the new valuation class as determined by your accounting group. You can save the material at this point; however, if there is a problem, an error message or a warning message is displayed. The severity of the message is determined by your company's configuration. Generally, if there is an issue due to outstanding purchase orders or valuated stock still exists, the error message displayed will be similar to that shown in Figure 2.
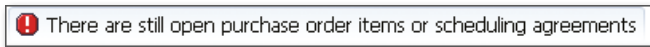
⌃ *Figure 2 Error Message Displayed while Changing the Valuation Class*

In this case, go back and review any purchase orders or scheduling agreements you may have missed and delete them before trying to change the valuation class again.

Once you've changed the valuation class of the material to the new required valuation class, a message is displayed to confirm that it has been changed, as shown in Figure 3.
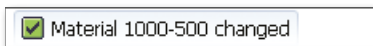
⌃ *Figure 3 Message Showing that the Valuation Class Has Been Successfully Changed*

Tip **7**

Changing the Moving Average Price for a Material

You can assign a moving average price to a material so that the system adjusts the price when price variances occur.

When a material is created, it can be given a standard price or a moving average price. The standard price is primarily used for finished goods or semi-finished goods, while other material types can be assigned a moving average price. Finished goods and semi-finished materials are assigned standard pricing to ensure that costs remain constant.

Moving average pricing creates daily fluctuations due to backflushing, production inefficiencies, and efficient production. Moving average pricing is assigned to material types that are subject to small cost fluctuations, such as raw materials, spare parts, and trading goods. If you are assigning moving average pricing to a material, it's important to understand how the price is calculated. In this tip, we'll help you understand the logic behind the moving average price and show you how to change it.

✅ And Here's How…

To identify whether a material type uses standard pricing or moving average pricing, review this information in the material type configuration. Follow the menu path:

> IMG • Logistics General • Material Master • Basic Settings • Material Types • Define Attributes of Material Types

Select a material type to review the entire configuration associated with that material type. One part of the configuration refers to VALUATION, as shown in Figure 1. The PRICE CONTROL field will show either standard pricing or in this case, moving average price.

⌃ *Figure 1* Valuation Configuration for a Material Type

The moving average price is automatically calculated for each goods movement. The moving average price is equal to the total stock value divided by the total stock quantity. The total stock value is equal to the value of the current stock plus the value of the new stock that has been received. For example, if the current inventory quantity is 100 and the moving average price for the existing stock is $9, the total value of existing stock is $900. If a goods receipt occurs for a quantity of 10 with a purchase order price of $8.50, the value of the new stock is $85.50. The new moving average price can be calculated as $900 plus $85.50, divided by the total inventory, 110, giving a new moving average price of $8.96.

Changing the Moving Average Price
The moving average price shouldn't need any amendment, but if a particular goods receipt affects the price unnaturally, perhaps due to a closeout price from a vendor or an unusually high discount, you can change the moving average price. To do this, use Transaction MR21 or follow the SAP menu path:

SAP • LOGISTICS • MATERIAL MANAGEMENT • PURCHASING • MATERIAL DATA • SUBSEQUENT SETTLEMENT • VENDOR REBATE ARRANGEMENTS • ENVIRONMENT • CONDITION/ARRANGEMENT • ENVIRONMENT • PRICING • ENVIRONMENT • VALUE ASSIGNMENT • PRICE DETERMINATION • CHANGE PRICE

The initial screen for Transaction MR21 requires you to enter a company code and plant. The detail screen, as shown in Figure 2, requires you to enter a material

number. Then the details will be shown, including the price control and current valuation. Enter a new moving average price for the material.

⌃ *Figure 2 Changing the Moving Average Price for a Material*

When you're finished, save your changes.

Manually Entering a Safety Stock Value in the Material Master

You can manually enter the safety stock level for a material to ensure that no shortages occur.

In a business or company, the production department determines the safety stock level and will be a reflection of the success of the forecasting process. The more accurate the forecasting process, the smaller the safety stock needs to be. The safety stock is entered into the material master record to ensure that production can continue without running out of material. The safety stock figure is not actually stock itself, but instead represents the cut-off number used in production planning.

If the stock level in the plant falls below this value, the system can be configured to immediately generate purchase requisitions in order to receive inventory for planned production orders. In this tip, we'll show you how to manually enter the safety stock into the material master.

✅ And Here's How…
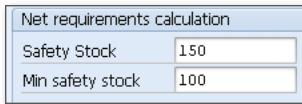
To add the safety stock figure to the material master, use Transaction MM02 (Material Change) or follow the SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

Navigate to the MRP 2 view of the material master change transaction to enter or change the safety stock level. On the initial screen of this transaction, enter

the material number and then select the MRP 2 view. The transaction displays a pop-up screen where you can enter the plant at which the safety stock should be changed.

There are two safety stock figures in the MRP 2 screen, as shown in Figure 1. The first of these, the SAFETY STOCK field, is used for manual reorder processing and can be entered manually. Note that in automatic reorder point planning, this figure is calculated automatically.
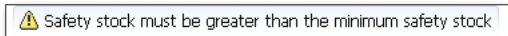
Net requirements calculation	
Safety Stock	150
Min safety stock	100

⇧ *Figure 1 Safety Stock Values in the Material Master Record*

The second of the safety stock fields is the MINIMUM SAFETY STOCK field, which is defined as the absolute lower limit for the plant's safety stock. If the automatic calculation for the SAFETY STOCK field returns a figure less than the value in the MINIMUM SAFETY STOCK field, the safety stock value is recalculated to be equal to the minimum safety stock.
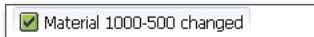
You can change the values in these two fields, but the system won't allow you to enter a value for the safety stock that is less than the minimum safety stock. If you do, a warning message is displayed, as shown in Figure 2.

⚠ Safety stock must be greater than the minimum safety stock

⇧ *Figure 2 Warning Message Indicating that a Safety Stock Level is Below the Minimum*

Once you've completed the entry of safety stocks required by your production department, save the material information. A message is displayed showing that it has been changed, as shown in Figure 3.

☑ Material 1000-500 changed

⇧ *Figure 3 Message Showing that the Safety Stock Has Successfully Been Changed*

Tip 9

Setting Up Automatic Creation for the Storage Location Data of a Material

You can configure the SAP system to automatically create storage location data for a material to save you time.

When you create material master records, you need to create the data at the plant level and storage location level. However, it isn't always necessary to create the storage location data because that can be done when a goods issue, goods receipt, or transfer posting is made into a new storage location. Setting up this automatic creation saves you time because you don't have to extend the material master data for storage locations that have been configured but not yet used to hold the material.

✅ And Here's How…

There are two configuration transactions that can be used to set up the automatic creation of storage location data in the material master. To set up the automatic creation of storage location data for goods issues and transfer postings, use Transaction OMB2 or follow the SAP menu path:

> IMG • MATERIALS MANAGEMENT • INVENTORY MANAGEMENT AND PHYSICAL INVENTORY • GOODS ISSUE/PHYSICAL INVENTORY • CREATE STORAGE LOCATION AUTOMATICALLY

To set up the automatic creation of storage location data for goods receipts, use Transaction OMB3 or follow the SAP menu path:
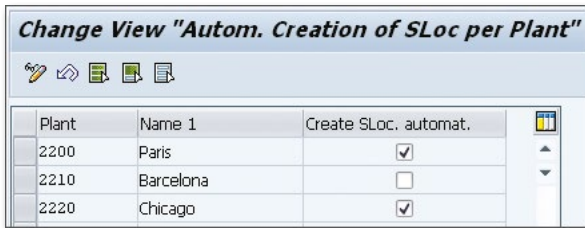
IMG • Materials Management • Inventory Management and Physical Inventory • Goods Receipt • Create Storage Location Automatically

In each of these transactions, there are two steps to configure the system to allow the automatic creation. First, set up the plants you want to allow to have automatic creation of storage location data in the material master, and then set up the movement types that are allowed to create the data. This is shown in Figure 1.
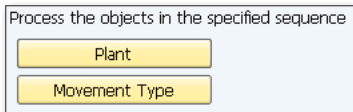
⌃ Figure 1 *Process for Configuring Automatic Creation of Storage Location Data in Transactions OMB2 and OMB3*
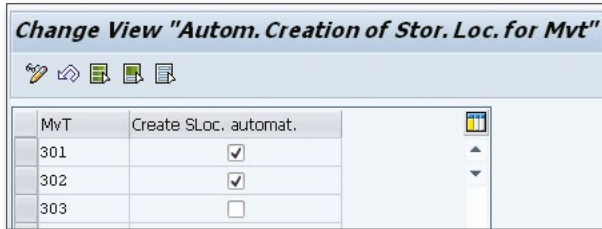
The first step is to configure the plants where you want the automatic creation of storage location data in the material master to occur. Click the Plant button; Figure 2 shows that you can set the indicator for each plant to allow automatic creation.

⌃ Figure 2 *Configuration Step for Allowing Plants to Trigger the Automatic Creation of Storage Location Data*

The second step in both configuration transactions is to define which movement types can trigger the automatic creation of storage location data. Navigate back to the screen shown in Figure 1 and click the Movement Type button; Figure 3 shows that you can set the indicator for each relevant movement type. This process is the same for Transactions OMB2 and OMB3.

⌃ *Figure 3* *Configuration Step for Allowing Movement Types to Trigger the Automatic Creation of Storage Location Data*

When these configuration steps have been completed, the system will automatically create storage location data for a material master. However, for this to occur, the material must already have been extended to at least one storage location.

Tip 10

Creating Default Storage Locations in Production

When a production order is created, you can default the storage locations for issue and receipt.

When a production order is created, the components for the order are taken from the bill of materials. When the material is issued to the production order, it should be withdrawn from specific storage locations. At the end of the production order, the material should also be placed into the correct storage locations. In this tip, we'll show you how to define these specific storage locations so that they're defaulted into the production order.

✓ And Here's How…

To define the storage location where the material should be issued to a production order, enter the storage location in the material master record. Then access Transaction MM02 or follow SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

Enter the storage location where material is issued and received for a production order into the MRP 2 screen in the material master record. To do this, enter the material number on the initial screen, then select the MRP 2 screen and the plant in which the production is to take place.

Figure 1 shows the MRP 2 view for the material QS300. The Prod. Stor. Location field should contain the storage location where material is issued to a production order, or where the material receipted from a production order should be sent.

⚹ *Figure 1* Entering a Storage Location in the MRP 2 View
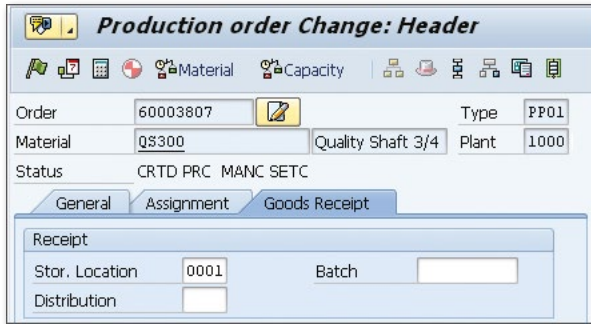
Once you've made the change, the material can be used in a production order and the Prod. Stor. Location field is defaulted into the production order component. Figure 2 shows the component view of the production order. The first component used in the production order is for material QS300, and the issuing storage location is 0001, defaulted from the material master record shown in Figure 1.

⚹ *Figure 2* Issuing the Storage Location for a Component in the Production Order

When a production order is complete, the finished material is good receipted into a storage location found in the header of the production order. This storage location is defaulted from the same Prod. Stor. Location field in the material master. Figure 3 shows the header of a production order for material QS300. The storage location for the goods receipt is 0001, defaulted from the material master record shown in Figure 1.

⌃ *Figure 3 Goods Receipt Storage Location for the Production Order*

Tip 11

Blocking Sales Orders for a Material from Being Created

You can stop sales orders from being created when you need to place a hold on a material.

A finished good material sold to customers can sometimes have quality issues or be subject to a recall. In these rare cases, it may be necessary to stop a sales order from being created. The issue may affect only a single sales organization or distribution channel and only require sales orders not to be created for those organizations. In this tip, we'll show you how to make the appropriate settings in your SAP system.

✅ And Here's How…

To stop sales orders from being created for a specific material, first define the correct status in configuration via the following SAP menu path:

IMG • LOGISTICS – GENERAL • MATERIAL MASTER • SETTINGS FOR KEY FIELDS • DATA RELEVANT TO SALES AND DISTRIBUTION • DEFINE SALES STATUSES

Then set the sales status on the material master for a specific sales organization and distribution channel. Figure 1 shows the configuration where a number of sales statuses have been configured. One of those is SALES NOT ALLOWED; check this status to ensure that the sales orders are blocked.
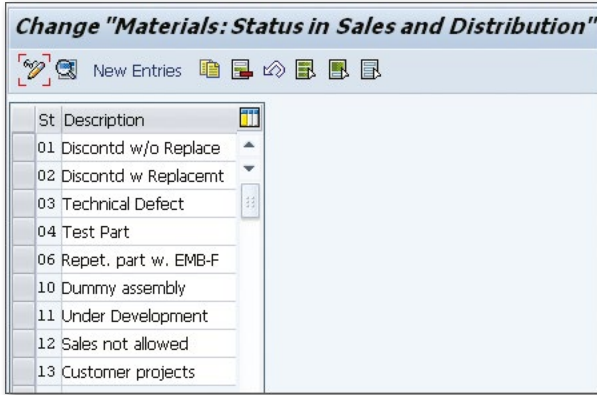
⤜ *Figure 1 Configuration Showing Sales Statuses*

To see the details of the status, select the status SALES NOT ALLOWED, and select GOTO • DETAILS from the header menu.

Figure 2 shows the detailed screen where you can choose the attributes for the selected status. Check the attribute BLOCK FOR ORDER. This attribute can have a value of A, which means a warning message is issued, or B, which means an error message is issued and the order cannot be created.
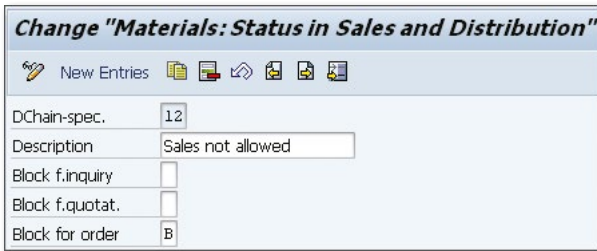
⤜ *Figure 2 Configuration Details for Sales Status*

After you've checked or corrected the configuration, enter the status in the material master. To add the sales status to the material master, use Transaction MM02 or follow SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

Enter the material number and select the Sales Organization Data 1 screen on the Select Views screen. On the Organizational Levels screen, enter the plant, sales organization, and distribution channel. Figure 3 shows the general data from the Sales Organization Data 1 screen. Here you can add the status to the Distribution-Chain-Specific Material Status field so that sales orders are blocked from being created for the specific distribution channel.

⤊ *Figure 3 Sales Organizational Data Showing the Material Status*

If you want to make the status the same across all distribution channels, enter the value in the Cross-Distribution-Chain Material Status field. This will stop sales orders from being created for any distribution channel in the specific sales organization you've selected.

After you've saved the material with the new status, sales orders for the material referencing the specific sales organization and distribution channel won't process and will return a message similar to that shown in Figure 4.
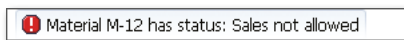
⤊ *Figure 4 Error Message Shown when Trying to Create a Sales Order for a Material*

Defaulting a Profit Center Assignment to a Sales Order

You can configure the system to automatically assign a profit center to a sales order using the material master instead of manually entering it.

It's necessary to assign a profit center in a sales order to ensure that the sales revenues and sales deductions are reported. When a sales order is created, the user can enter a profit center. The profit center is then passed on from the sales order to the delivery note, goods issue, and finally the billing document. This means that when the goods issue is posted, the revenues are passed to the profit center initially entered in the sales order. But the profit center can be defaulted into the sales order, so that it doesn't need to be entered each time.

✅ And Here's How…

To ensure that the profit center is defaulted into the sales order, enter the profit center into the material master. Each time a sales order is created for the material, the default profit center for the relevant sales organization and distribution channel is entered. To set up the profit center in the material master, use Transaction MM02 or the following SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

To enter the default profit center, enter the material number in the initial screen of the transaction and then select the Sales: General/Plant view. Enter the

relevant plant, sales organization, and distribution channel for the material where the default profit center is to be added. Figure 1 shows the detail from the Sales: General/Plant view where you enter the profit center.

⊼ *Figure 1 Sales General/Plant View where You Add the Profit Center*

After you've entered the appropriate profit center for the material and saved the material, the profit center is defaulted into a sales order. To create a sales order, use Transaction VA01 or use SAP menu path:

SAP • Logistics • Sales and Distribution • Sales • Order • Create

To create the sales order, enter the order type and material and select the sales organization and distribution channel. If you then select the Account Assignment view, you will see that the profit center that was entered into the material master now is defaulted into the sales order, as shown in Figure 2.

⊼ *Figure 2 Sales Order Creation Showing Defaulted Profit Center*

Working with the Availability Check Scope

You can configure the availability check to stop your company's inventory balance from dropping too low or becoming negative.

When a production order is created or released, the system can perform an availability check on the components to ensure that they will be available. The availability check is important to the production department because they need to have the materials at the correct time during the process. If they don't, the production process can stop, delaying customer orders and affecting customer satisfaction. To ensure that the correct availability checks are performed, it's important to learn how to make changes to the process.

✅ And Here's How…

The availability check is derived from two parts: the checking rule and the checking group. The combination of these two elements tells the system the scope of the check it is to perform.

The checking group is defined in the material master record, and you can enter it using Transaction MM02 or the following SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the initial screen, enter the material number, then the view you require—in this case, the MRP 3 view—then the plant where the production takes place. Figure 1

shows the MRP 3 view. Here, enter the availability checking group. In this instance, the checking group has been entered as 02, which is the checking group for individual requirements.

The second part of the availability check is the checking rule. This is created in configuration using the following menu path:

> IMG • PRODUCTION • SHOP FLOOR CONTROL • OPERATIONS • AVAILABILITY CHECK • DEFINE CHECKING RULE

The transaction shows a list of existing checking rules, but you can create new checking rules if required. Figure 2 shows the checking rules created in configuration.
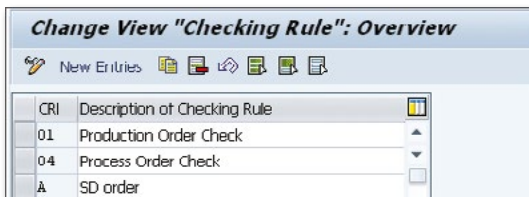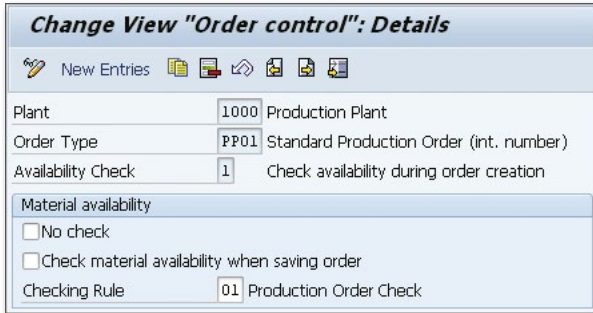
The checking rule is defined by the plant where the production it to take place, the order type, and whether the check is to occur during order creation or order release. To define the checking rule, use Transaction OPJK or use menu path:

> IMG • PRODUCTION • SHOP FLOOR CONTROL • OPERATIONS • AVAILABILITY CHECK • DEFINE CHECKING CONTROL

On the initial screen, select the option that you want to configure, i.e., the plant, order type, and whether you require order creation or order release. The next screen, as shown in Figure 3, allows you to enter the checking rule that you require.

When the two elements of the availability check are created, determine the scope of the availability check. In the scope of check, determine which stocks should be part of the availability check, for example, whether safety stock or blocked stock should be included. You can also include or exclude a variety of elements, including purchase orders, reservations, and deliveries. The transaction that controls this configuration is OPJJ, or use the following menu path:

> IMG • PRODUCTION • SHOP FLOOR CONTROL • OPERATIONS • AVAILABILITY CHECK • DEFINE

Figure 4 shows the changes you can make to the availability check that is derived from the combination of checking group 01 and checking rule 01. If you want the availability check for this combination to exclude stock in transit, uncheck the STOCKINTRANSFER field, as shown in Figure 4, and then the availability check won't take into account the stock that is in transit.

« *Figure 4 Determining which Stock Should Be Part of the Availability Check*

Tip **14**

Using Material Master User Exits to Create a New Material

When your company has requirements that the standard material master can't provide, you can use user exits to add procedures.

Although the material master file operates in the manner the majority of companies require, there are always exceptions to the rule, and this is where a user exit can help. A user exit allows us to add our own functionality to an SAP standard program without modifying it. The user exits in the material master can change some of the functions in the way the material master operates. This can give the customer added flexibility and allow the functions to operate as they require. In this tip, we'll show you the user exits that can be used in the material master transactions and how they can be used to help your customer achieve the extra functionality they need when creating new materials.

✅ And Here's How…

There are three user exits available for the material master: MGA00001, MGA00002, and MGA00003. We'll go over each of these user exits in the following sections and explain why they're important for you to know.

MGA00001

MGA00001 allows extra checks to be made of the data that is entered or changed in the material master. The user exit can be used both for material master creation and change, Transactions MM01 and MM02. If a company wants to add a check to a field that is not normally checked when the material is created, the user exit

could be used to perform that task. In the example in Figure 1, there are additional checks included in the material master, and the transaction has returned an error message that the storage bin entered is not in the plant. This wouldn't occur in the standard transaction because the STORAGE BIN field is not checked. But with the addition of the user exit, the company is now able to check that field for validation.
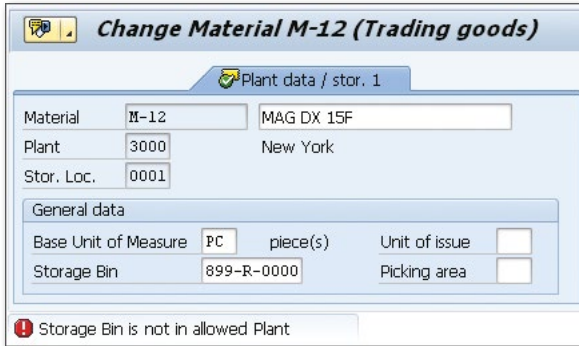
⌃   *Figure 1 Check Performed in the Material Master User Exit*

MGA00002

MGA00002 is a user exit that allows a company to change the way material numbering operates when a material is created. The user exit can be used with two function modules: one that can be used with internally assigned numbers, and the other that can be used for externally assigned numbers. The user exit is useful if your client wants to add a check digit to a material that is being entered. The user exit can contain code that appends a check digit to the material number based on the algorithm that needs to be used. For example, some companies require their materials to have a Global Trade Item Number (GTIN) with the respective check digit. If a company uses a GTIN-8 format, it can have a seven-digit material number with a check digit. So, if the company enters the number 7840020, the user exit can calculate the check digit, which is 7, so the final material number is 78400207. The MGA00002 user exit can also be used if your client wants to assign a material number generated by a custom program based on their specific needs.

MGA00003

MGA00003 is a user exit in the material master that can be used to allow material numbers to be displayed in a particular format rather than standard SAP format. Some modifications to the material number are allowed in standard configuration.

Use Transaction OMSL to allow leading zeros before the material number, change the length of the material number, and create a material number template. The MAG00003 user exit allows the user to make changes to modifications to the material number display so that you can have a material number such as XXX-12345. However, the XXX- prefix is added to the material number at display time, while just the number 12345 is stored in SAP as the material number.

Tip 15

Adding Documents to the Material Master Record

You can attach relevant material documents, such as technical specifications or CAD drawings, to the material master.

When you view a material master record, you can see all the relevant data that has been entered during data entry. However, there may be information relevant to the material that can't be entered into the material master file, such as scanned technical specifications or CAD drawings. In this tip, we'll show you how to attach these documents to the material master so that they can be viewed.

✅ And Here's How…

You can attach documents to the material master record either when the material is created or through the change function. To add or change documents, use material change Transaction MM02 or follow SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

When you've entered the material number and selected the Basic Data 1 view, the screen will show the basic data. Select the Additional Data icon, which shows a list of tabs, as shown in Figure 1.
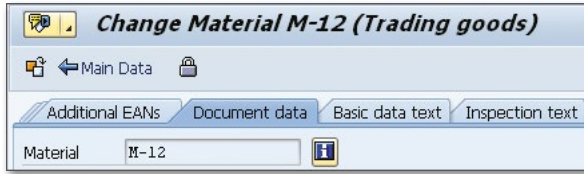
⌃ *Figure 1 Additional Data Tabs on the Material Master Record*

Select the DOCUMENT DATA tab; this will show any documents that have been attached to the material master. At this point, you can add a document to the material master. First, select the CREATE DOCUMENT icon. This displays a selection where you can choose which type of document to attach, as shown in Figure 2.
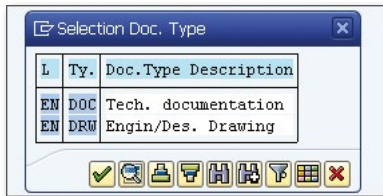
⌃ *Figure 2 Select the Document Type for the Document to be Attached*

After you select the document type, the transaction allows you to select a document from your hard drive or a drive on the company server. The transaction asks you to select an application that can be used to open the document, such as Microsoft Word or Excel. The next screen allows you to check-in the document; select the storage category for the document, as shown in Figure 3.
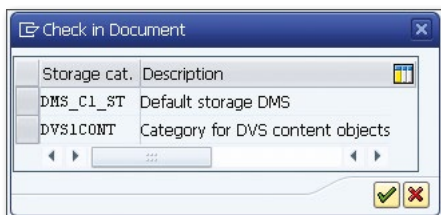
⌃ *Figure 3 Check in the Attached Document with the Correct Storage Category*

Once you've selected the storage category, the document is assigned a document number and shown in the DOCUMENT DATA tab for the material, as shown in Figure 4.
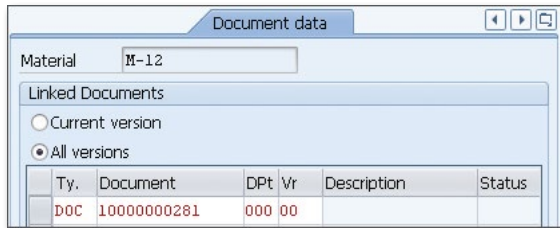
⌃ *Figure 4* *A Created Document Is Assigned a Number and Linked to the Material*

If you need to link another document to the same material, repeat the process.

Part 2
Purchasing

Things You'll Learn in this Section

Every company must purchase materials: raw materials, office supplies, services, and other items. Purchasing has become part of today's complex supply chain. The purchasing department can research and negotiate significant savings for a company through policies and the information they can ascertain from systems such as SAP.

SAP offers purchasing professionals detailed information on vendors, material purchasing, pricing, and many other aspects of the process. As Material Management consultants or business users, we should be able to assist the purchasing department by using the knowledge we have to show them how they can use the purchasing functionality to make their job more efficient and beneficial to the company.

This part of the book focuses on the purchasing functionality in the Materials Management area. The tips in this part cover all the aspects of purchasing, such as defaulting information to save time, vendor evaluation analysis to assist in negotiations, and identifying inactive vendors.

Reversing a Goods Receipt after an Invoice

You can easily configure your SAP system to allow the reversal of a goods receipt after the invoice has been posted.

When a goods receipt has been performed and an invoice has been posted in the system, a company can make a procedural decision about whether to allow or disallow reversal of the goods receipt. For most companies, a three-way match is performed between the purchase order, the goods receipt, and the invoice. If the quantities and prices on the three documents match, a company will pay the invoice and declare the process complete.

However, there are instances when the warehouse makes a mistake and there is an error with the quantity that was received. A reversal of the goods receipt can't be processed if the configuration hasn't been made to allow it after the invoice has been paid. Therefore, a company must make a decision about whether to permit the reversal of a goods receipt without cancelling the paid invoice. This requires a change in configuration, which we'll show you how to do in this tip.

✅ And Here's How…

When a decision has been made regarding whether to allow the reversal of a goods receipt or a delivery despite the posting of an invoice, the corresponding configuration changes can be made to the system. To change the configuration, use Transaction OMBZ or follow this SAP menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Goods Receipt • For GR-Based IV, Reversal of GR Despite Invoice

The transaction displays the relevant reversal goods movement types that can be configured, as shown in Figure 1.
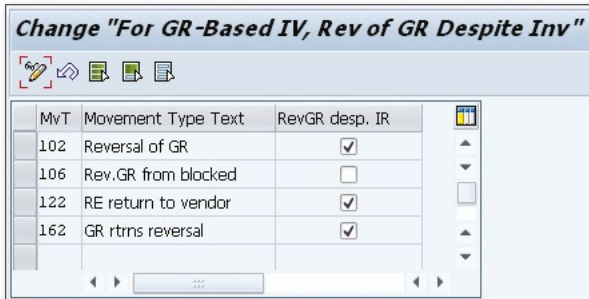
⌃   Figure 1 *Transaction to Allow Reversal of Goods Receipt after Invoice*

If your company is going to allow the reversal of a goods receipt after the invoice has been posted, check the field RevGR desp IR, as shown for movement type 102 in Figure 1. This allows you to perform a goods receipt reversal without first deleting the invoice. The invoice can be deleted at a later date.

If a goods receipt for a purchase order isn't allowed to be reversed once an invoice is paid, leave the RevGR desp IR field blank. This means that the invoice must be deleted before a reversal can be performed.

You can reverse a goods receipt using Transaction MIGO. However, if the configuration hasn't been made to allow a reversal of a goods receipt after an invoice is paid for the selected movement type, the transaction won't process. The system will return a message similar to that shown in Figure 2, where the transaction will indicate a deficit of material.
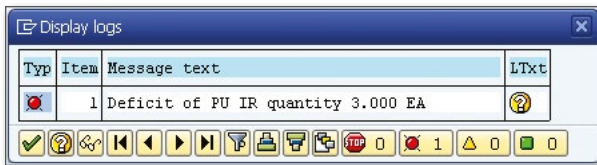
⌃   Figure 2 *Error Message if Goods Receipt Reversal Isn't Allowed*

Tip 17

Blocking a Vendor

You can block a vendor from being used in a purchase order, posting, or payment.

A company's relationship with a vendor can change. If the vendor has quality issues, problems with delivery dates, or even financial stability issues, a company may want to block that vendor from being used for new purchase orders or block any payments due to the vendor. In this tip, we'll show you how to block a vendor in three different ways: for payment, purchasing, and purchasing and payments.

✅ And Here's How…

There are three ways a vendor can be blocked. First, the vendor can be blocked for payment, but allowed for purchasing. Second, the vendor can be blocked for purchasing, but not for payments. Last, the vendor can be blocked for both payments and new purchase orders.

Block Vendor for Payment

To block a vendor for payment but not for use in purchasing, access Transaction FK05 or follow this SAP menu path:

> SAP • Accounting • Financial Accounting • Accounts Payable • Master Records • Block/Unblock

In the initial screen, enter the vendor you want to block and a company code if the block is specific to one company code; otherwise, leave it blank if the block is for all company codes (see Figure 1).

As Figure 1 shows, in this scenario, you can select to block payments to that one company code or to all company codes. Once you save the information, the payment block is in place.
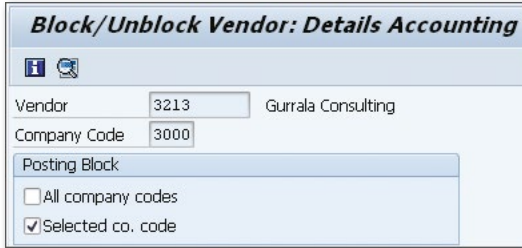
Block Vendor for Purchasing

To block a vendor for use in purchasing but not for payments, access Transaction MK05 or follow this SAP menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • VEN-DOR • PURCHASING • BLOCK

In the initial screen, enter the vendor you want to block and a purchasing organization if the block is specific to one purchasing organization; otherwise, leave it blank if the block is for all purchasing organizations.

Figure 2 shows the detail of the following screen; in this scenario, you can select to block the vendor for a single purchasing organization or all of them. Additionally, there is an option to enter a block for quality reasons. This is valid only for materials with active QM in procurement.
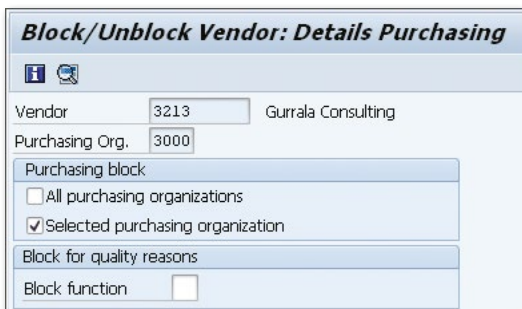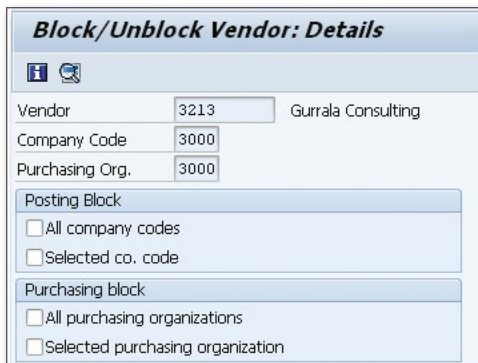
⌃   *Figure 2* Blocking a Vendor for Use in Purchasing

Block Vendor in Purchasing and Payments

To block a vendor for use in purchasing and payments, access Transaction XK05 or follow this SAP menu path:

SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor • Central • Block

The initial screen requires you to enter the vendor you want to block and an optional company code or purchasing organization. Figure 3 shows the detail of the screen; you're able to block a vendor for both payment and purchasing.

⌃ *Figure 3 Blocking a Vendor for Payments and Use in Purchasing*

Tip 18

Creating a Purchase Order for a Material with No Price

You can include a material on a purchase order even when it has no purchase price.

Sometimes when a company is negotiating with a vendor or a vendor is trying to introduce a new product, the price of the purchase order item can be zero. However, the material should still be seen on the purchase order because it may incur freight or other charges. In this tip, we'll show you how to ensure that the material appears on the purchase order, but at zero cost.

✓ And Here's How…

When a vendor has agreed to supply a quantity of material at zero cost, enter that material quantity to a purchase order. To create the purchase order, use Transaction ME21N (Purchase Order Creation) or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Create • Vendor/Supplying Plant Known

The initial screen on the transaction requires you to enter the vendor, then the purchasing organization and purchasing group. Next, enter the material number, quantity, and plant number and check the field that says Free. This is shown in Figure 1.

⌃ *Figure 1 Entering a Free Item into a Purchase Order*

When you check the FREE field, the transaction turns off the indicator for INVOICE RECEIPT and GR-BASED IV, as shown in Figure 2. Although the evaluated receipts (ERS) field and the FINAL INVOICE field are blank in Figure 2, you can check them and the free goods purchase order is still processed. You don't need to check these fields because the vendor won't be sending an invoice for the free goods.

⌃ *Figure 2 Invoice Selections for Purchase Orders*

If you try to enter a price for the material once you've checked the FREE field in the purchase order, the transaction won't take any value you may enter.

Once you've entered the materials for the purchase order, save it. If there are no errors, the transaction will generate a message with the purchase order number it has created, as shown in Figure 3.

⌃ *Figure 3 Message Displaying the New Purchase Order Number*

Tip 19

Adding an Attachment to a Purchase Order

There's an easy method you can use to attach documents that are supplied by the vendor to the purchase order.

When you create a purchase order for a vendor, some documents may be generated between the purchasing department and the vendor, or from the requisitioner. If these documents need to be kept with the purchase order, you can attach them to the purchase order without using the Document Management System, which may not have been configured in your SAP system.

✓ And Here's How…

Documents that are relevant to a purchase order can be attached to the purchase order so that they can be viewed when required. To add a document to a purchase order, use Transaction ME22N or follow the SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Change

Enter the purchase order number where you want to attach a document, and the purchase order overview is displayed. To attach a document, click the Services for Object icon next to the header, as shown in Figure 1.

⤊   *Figure 1 Services for Object Icon*

A pop-up menu is displayed; select the CREATE ATTACHMENT option, as shown in Figure 2.

⤊   *Figure 2 Services for Object Menu*

After you've selected the CREATE ATTACHMENT option from the menu, the transaction allows you to choose a document from your computer or a server. When you've selected the document, the transaction will process the attachment and return a message that the attachment was created, as shown in Figure 3.
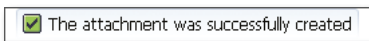
⤊   *Figure 3 Message Indicating that the Document Was Attached to the Purchase Order*

To check that your document was attached to the purchase order, go back to the SERVICES FOR OBJECT menu and select the ATTACHMENT LIST option (shown in Figure 2).

The transaction then shows you a list of documents that are attached to the purchase order, as shown in Figure 4.

«   *Figure 4 Documents that are Attached to the Purchase Order*

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Tip 20

Adding Returns to a Purchase Order for a Frequently Used Vendor

You can add returns to a purchase order if you use that vendor frequently to save your company time and money.

Returns to a vendor are a necessary part of the purchasing process, and to facilitate the process, you have to generate an order to return the item. However, if the vendor is used frequently, you can combine the return and the requirement for new material on the same new purchase order to the vendor. For instance, instead of having the purchasing department have a return picked up and create a single return order, when a new material is to be ordered, the return can be picked up when the new material arrives, and this can all be combined into one purchase order. This saves the purchasing department the time it takes to create unnecessary documentation and reduces overall procurement costs.

✓ And Here's How…

To initialize this process, create a purchase order with the vendor using Transaction ME21N or use the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Create • Vendor/Supplying Plant Known

After entering the vendor, purchasing organization, and purchasing group, enter the line items for the new materials and returns. Figure 1 shows the two lines, and the material to be returned has a checkmark in the RETURNS ITEM field.
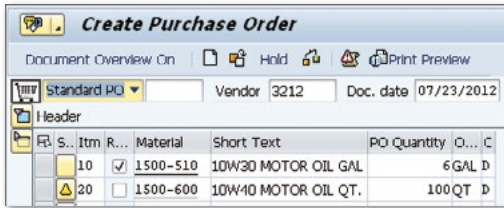
When you save the purchase order, the goods receipt is processed when the new items arrive and the return item leaves the plant. Figure 2 shows the goods receipt details with the two lines, one for the return and one for the new items. The new items are received with movement type 101, while the items are returned to the vendor with movement type 161.

« *Figure 2 Goods Receipt Showing Return to Vendor and New Items*

When the items are returned to the vendor, they can issue a credit memo for the parts returned, which can be processed by your accounts payable department. Figure 3 shows a credit memo for the material returned on the purchase order.
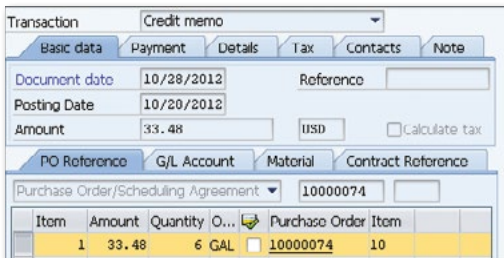
« *Figure 3 Credit Memo for Returned Material*

Tip (21)

Defaulting the Last Purchase Order Price for the Material

When creating a purchase order, you can default the material price from the last PO to make sure the purchase price is up to date.

When an info record is created for a specific material and vendor combination, you usually enter the agreed price information in the contract with the vendor. However, on occasion, the information on the info record can become incorrect; for example, if a price guaranteed by the vendor has expired. In those cases, it's more appropriate to have the purchase price for the material defaulted to the price from the last purchase order, even when the info record is still valid.

✅ And Here's How…

You can default the price for a material on the purchase order from a purchase info record if one exists for the specific material and vendor. To review the price in the purchase info record, use Transaction ME12 or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Info Record • Change

On the initial screen, enter the info record number or the vendor, material, or purchasing organization and then press Enter to continue. On the next screen, select the Conditions tab, select the validity period that is presently correct, and then click the Choose button. The following screen then shows the price conditions for the material, similar to what is shown in Figure 1.

⌃ **Figure 1** *Price Condition Found in the Purchasing Info Record*

When a purchase order is created for this material, vendor, and purchasing organization combination, the price value shown in Figure 1 will be defaulted into the purchase order line, as shown in Figure 2.

⌃ **Figure 2** *Purchase Order will Price from the Purchasing Info Record*

To ensure that the price in newly created purchase orders show the price of from the last purchase order and not from the info record, leave the price in the info record blank, as shown in Figure 3.

⌃ **Figure 3** *Price Is Removed from Condition Found in the Purchasing Info Record*

By removing the price condition, the price for the material in a newly created purchase order will default from the last valid purchase order. To view the last purchase price in the purchasing info record, Transaction ME12, select Environment • Order Price History from the header menu.

The purchase order price history is shown in Figure 4. You can see that the latest price for the material used in a purchase order was $6.73. This will be defaulted

into the price field the next time a purchase order is created for this material vendor/purchasing organization combination.

⌃ *Figure 4 Purchase Order Price History from the Info Record*

Tip 22

Configuring Purchase Order Conditions to Reflect the Correct Material Price

Discounts and taxes can be applied only on the gross price of the material and should be configured to be unaffected by other conditions.

When a purchase order is created, the price of the material will depend on the conditions applied. Some taxes and discounts are applied on the net price of the material after discounts, freight, and other surcharges. However, some taxes and discount conditions should be based on the original price of the material, instead of the net price. It's important to configure the conditions correctly, and we'll show you how in this tip.

✓ And Here's How…

The conditions that affect the purchase price of a material are found in the calculation schema. To review the conditions in the calculation schema, use Transaction M/08 or follow this SAP menu path:

> IMG • Materials Management • Purchasing • Conditions • Define Price Determination Process • Define Calculation Schema

In the initial screen, select the schema for the purchasing function you're using. Once you've selected the correct schema, click the Control Data tab in the dialog structure.

Figure 1 shows the schema and the relevant control data. To add a new condition, click the New Entries button or use the function key ⌐F5⌐. To ensure that the conditions you want are associated with the gross price and not subject to any other conditions, they should appear after the actual price. Also, new conditions should indicate in the Fro field that they're associated with Step 1, which is the gross price.

Procedure		RM0000	Purchasing Document						
Control data									

Step	Co...	CTyp	Description	Fro	To	Ma...	R...	St...	P
1	1	PB00	Gross Price			☐	☐	☐	X
1	2	PBXX	Gross Price			☐	☐	☐	X
2	0	VA00	Variants/Quantity			☐	☐	☐	X
3	0	A002	Material Rebate	2			☐	☑	
4	0		Actual Price	2	3	☐	☐	☐	
5	1	MM01	Minimum Qty (%)	1		☑	☐	☐	
8	0	VSTA	Non-Deductible Tax	1		☐	☑	☐	

« *Figure 1 Calculation Schema for Purchasing*

To check that this configuration will perform the correct calculation, create a purchase order using Transaction ME21N and review the conditions. Figure 2 shows the conditions for a purchase order created after the changes being made in the calculation schema RM0000. The minimum quantity discount shown in the conditions is 4% of the gross price, which is $24, and non-deductible tax is 10% of the gross price, $60. If the new discounts and taxes were configured so that they were applied not to gross price, the amounts would be applied to the actual price after other conditions were calculated.

Item	[10] 1500-510 , 10W30 MOTOR OIL GAL ▼

Material Data	Quantities/Weights	Conditions

Qty	100 GAL	Net	582.00 USD

Pricing Elements

N..	CnTy	Name	Amount	Crcy	per	U...	Condition value	Curr
🟩	PBXX	Gross Price	6.00	USD	1	GAL	600.00	USD
🟩	RL01	Vendor Discount %	7.000-	%			42.00-	USD
		Net incl. disc.	5.58	USD	1	GAL	558.00	USD
		Net incl. tax	5.58	USD	1	GAL	558.00	USD
		Actual Price	5.58	USD	1	GAL	558.00	USD
🟩	MM01	Minimum Qty (%)	4.000-	%			24.00-	USD
🟩	VSTA	Non-Deductible Tax	10.000	%			60.00	USD

« *Figure 2 Purchase Order Pricing Conditions*

Tip 23

Automatically Default Purchase Order Text

When creating a purchase order for a specific vendor, you can configure the system to display a certain text to appear on the purchase order.

Some companies require that for each vendor, a specific text should appear on the purchase order header. This text can be specific instructions for the vendor, or perhaps details relevant to the contract with the vendor and those instructions, that should be clearly shown on the purchase order. Whatever the requirement, that text should always be shown. In this tip, we'll show you how to configure the system to display the text properly.

✅ And Here's How…

Enter the specific text that should appear on the purchase order into the vendor master record. To enter the data, use Transaction MK02 or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor • Purchasing • Change

The initial screen will require you to enter the vendor master number and the purchasing organization. You'll also have to select the purchasing data view. On the next screen, select Extras • Texts from the header menu.

You're then able to enter the desired text in the Purchasing memo text field, as shown in Figure 1.

« *Figure 1 Entering the Purchasing Memo Text in the Vendor Master*

After the text has been entered in the vendor master, check that the copying rules have been set up in configuration so that the Purchasing Memo text will appear in the purchase order header text. To access the correct configuration step, use the following IMG menu path:

> IMG • MATERIALS MANAGEMENT • PURCHASING • PURCHASE ORDER • TEXTS FOR PURCHASE ORDERS • DEFINE COPYING RULES FOR HEADER TEXTS

Figure 2 shows the first part of the configuration step; select the header text of the purchase order and the text linkage option.
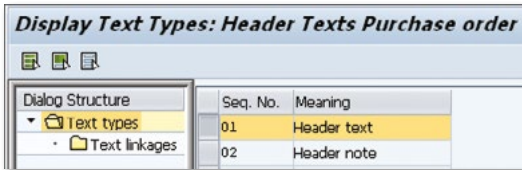
« *Figure 2 Selecting the Header Text of the Purchase Order*

Once you've selected the text linkage, the next screen is displayed as shown in Figure 3. In this screen, you can see if the correct link has been configured between the purchase order header and the purchasing text in the vendor master. If the configuration has been completed, the source object should show the "vendor master," and the source text should be "Purchasing memo." This is the field we entered in Figure 1. If the configuration is missing, add a new entry, select the vendor master, and assign the new entry to the purchase order header text, as shown in Figure 3.
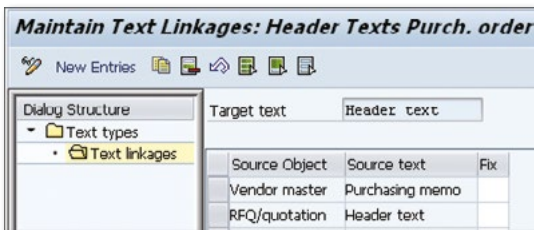
« *Figure 3 Maintaining the Link between the Vendor Master Text and the Purchase Order Header Text*

After you've confirmed that the configuration is correct, use Transaction ME21N to test that the vendor master purchasing memo text appears on the purchase order header by entering a new purchase order.

Create a purchase order for the vendor and the purchasing organization you entered previously and view the header TEXT tab. You should see that the text is the same as what you entered into the vendor master. Figure 4 shows the purchasing memo text from the vendor master that is now automatically defaulted into the purchase order.
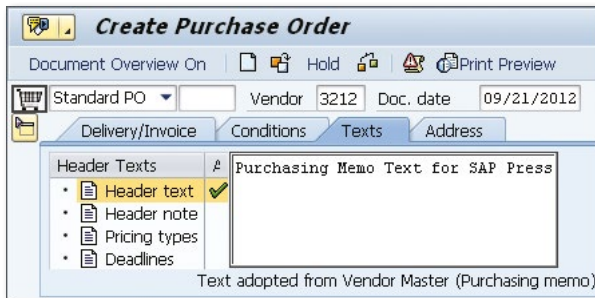
⬆ **Figure 4** *Purchase Order Shows the Header Text from the Vendor Master*

Tip **24**

Maintaining Purchase Orders en Masse

When changes in a company necessitate changes to be made to all documents in process, there's a simple way for you to maintain POs en masse.

Occasionally, changes within a company mean that documents that have been created, such as purchase orders, need to be modified to contain the new information. These changes are needed if a storage location becomes inoperable, a purchasing group is removed, or a plant has been sold, and the ordered items need to be received into a new plant. However, if changes in an organization require a large number of purchase orders to be changed, it can be time consuming and expensive for the purchasing staff to make the change to individual purchase orders. It's more efficient to perform mass maintenance on the open purchase orders, which we'll demonstrate in this tip.

✅ And Here's How…

To perform this task, use Transaction MEMASSPO or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Mass Maintenance

The initial screen allows you to select either the purchase order header table or the purchase order details table. Select the table that contains the field you need to change, and then select the EXECUTE button or function key F8. Figure 1 shows the next screen, where you enter the range of purchase orders that will be

part of the mass change. Select the Execute button or use the function key $\boxed{\text{F8}}$ to continue.
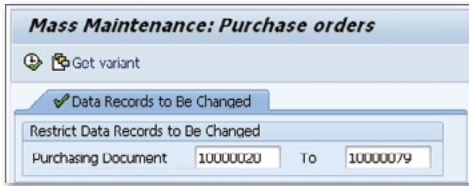
« **Figure 1** *Selecting Purchase Order Number Range for Mass Maintenance*

The subsequent screen shows the purchase orders in the given range; here, select the field or fields that should be changed. You can select up to 20 fields to change using the mass maintenance method. Figure 2 shows the field selection.
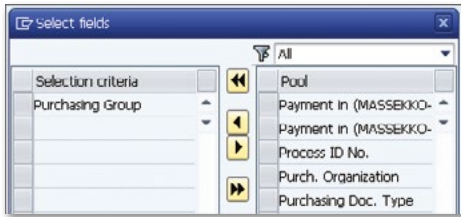
« **Figure 2** *Selecting Fields for Purchase Order Mass Maintenance*

The transaction then shows the current values for the field for each purchase order and a field where you can enter the new value for the field. After entering the new value, as shown in Figure 3, you can restrict the mass maintenance so that the new value only replaces certain values. For example, as Figure 3 shows, the new value entered for the purchasing group is 014, but you may want to replace only some purchasing groups. In this case, a restriction has been added so that the change occurs only in purchase orders with the existing purchasing group of 007.
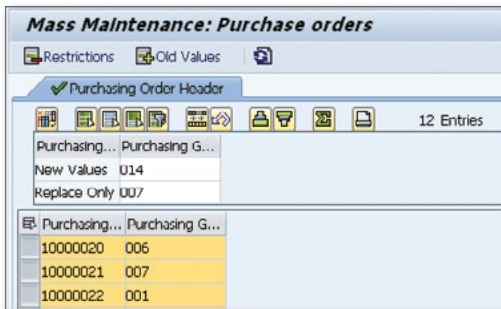
« **Figure 3** *Entering New Value for the Purchase Order Mass Maintenance*

After entering the new value for the mass maintenance and adding an optional restriction, select the field you want to update and then execute the transaction. If changes have been made to a selection of purchase orders, the transaction displays a screen showing you which orders have been changed, as shown in Figure 4.

Messages from the Update Task

&rLong text   &rObject   Object

Messages Were Saved in the Application Log MASS BUS2012 000738

Errors: 0   Warning: 0   Information: 1

Mass Maint. Status

Icon	Message Text	Notific
OOO	0010000021 : Standard PO 10000021 changed	06023

⌃   *Figure 4 Purchase Orders Changed via the Mass Maintenance Transaction*

Maintaining Purchase Requisitions en Masse

You can save a lot of time by maintaining existing purchase requisitions en masse, if your company requires a new field value to be input.

Occasionally, changes within a company mean that documents that have been created, such as purchase requisitions, need to be modified to contain the new information. These changes are needed if information relevant to the created purchase requisitions has changed. If changes in an organization require a large number of purchase requisitions to be changed, it can be time consuming and expensive for the purchasing staff to make the change to individual requisitions. It's more efficient to perform a mass maintenance on the requisitions, which we'll show you how to do in this tip.

✅ And Here's How...

To perform this task, use Transaction MEMASSRQ or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Requisition • Mass Maintenance

The initial screen shows that only one purchase requisition table can be selected. Select the purchase requisition table and move to the next screen. Figure 1 shows the detail screen where you enter the range of purchase requisitions that will be part of the mass change, then click the Execute button or the F8 function key.

The subsequent screen shows the purchase requisitions in the given range; here, select the field or fields that should be changed. You can select up to 20 fields to change using the mass maintenance method. Figure 2 shows the field selection.

The transaction then shows the current values for the field for each purchase requisition and a field where you enter the new value for the field. After entering the new value in the New Values field, as shown in Figure 3, you can restrict the mass maintenance so that the new value only replaces certain values. For example, in Figure 3, the new value entered for the promotion is Holiday13, but you may want to replace only specific promotions. In this case, a restriction has been added in the Promotion column so that the change occurs only in purchase requisitions with existing promotion code Xmas13.

After entering the new value for the mass maintenance and adding an optional restriction, select the field you want to update and then execute the transaction. If changes have been made to a selection of purchase requisitions, the transaction will display a screen showing you which requisitions have been changed, as shown in Figure 4.

⌃ *Figure 4* *Purchase Requisitions Changed via the Mass Maintenance Transaction*

Tip **26**

Setting Up Vendor Free Goods on the Purchase Order

If a vendor offers free goods based on the quantity you purchase from them, you can configure the system to reflect the free goods on the PO to the vendor.

When your purchasing department negotiates with a vendor, they negotiate for the best price, quality, and delivery time. Depending on the vendor, discounts may be offered, and sometimes there's a scheme whereby the vendor offers a certain number of free goods depending on the volume that's purchased. For example, if your company buys 100 units of a product, the vendor may then offer another 10 free units. This is different from the pricing scales that can be set up in the purchasing info record, and free goods can be set up to appear on the purchase order sent to the vendor.

✅ And Here's How…

When your company buys a product from a vendor offering free goods for a volume purchase, you need the free goods to appear in the purchase order sent to the vendor. This is so that the goods receipt quantity (i.e., the purchased items plus the free items) matches the quantity on the purchase order. The first step is to make sure the vendor has been set up for free goods. To change the vendor master, use Transaction MK02 or this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor • Purchasing • Change

The initial screen requires you to enter the vendor and purchasing organization, and select the Purchasing data view. Figure 1 shows the detail screen that includes the purchasing data for the vendor. Make sure that the Grant Discount in Kind field is checked; otherwise, the purchase order will not display the free goods.
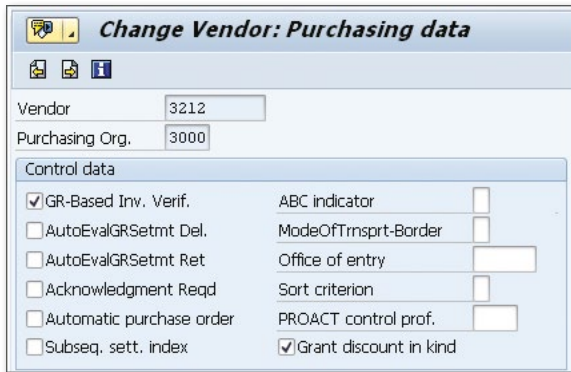
« *Figure 1 Vendor Master Record Showing the Discount in Kind Indicator*

Next, set the material up as an item that can be used for free goods. Use Transaction MM02 or the following menu path:

SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the initial screen, enter the material number, select the Purchasing view, and enter the plant where the free goods will be accepted. Figure 2 shows the Material master purchasing view. To ensure that this material can be used for free goods, the Qual.f.FreeGoodsDis field should have a value of 1 or 2.

« *Figure 2 Material Master Record Showing Free Goods Indicator*

If the QUAL.F.FREEGOODSDIS field has a value of 1, the material can be used for free goods in sales and purchasing. A value of 2 means the material is used for free goods in purchasing only. A value of 3 is used when the material can be used only for free goods for sales.

After checking the vendor and the material, change the purchasing info record to enter the correct information for the free goods condition, NR00. To change the purchasing info record, use Transaction ME12 or this SAP menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • INFO RECORD • CHANGE

On the initial screen, enter the vendor, material, purchasing organization, and plant. The next screen shows the general data; click the CONDITIONS button to get the conditions data screen. This screen will show condition type PR00. To get to the free goods settings, you can either use the function keys Ctrl + F1 or select GOTO • FREE GOODS from the header menu.

Figure 3 shows the free goods data that has been entered for this purchasing info record. This data shows that the minimum quantity for free goods is an order of 10 pounds, but for every 10 pounds ordered, the vendor will give 5 pounds free. The system has calculated this as 50%. Once this data has been entered, you can enter a purchase order.

Change Free Goods (M) (NR00)

Vendor	3212	
Material	2177	Stainless Chain
Purch. Organization	3000	
Plant	3000	
Valid On	07/07/2012	

Info Record: Plant-Specific per Order Unit   Free goods view - INCLUSIVE

	I.	O...	Name	Min. qty	From	Un...	are free goo	Ad...	in %	Calc.Rule
	0	LB	lb	10	10	LB	5	LB	50.00	3

⌃ *Figure 3 Free Goods Data on the Purchasing Info Record*

When a purchase order is created using Transaction ME21N, you can enter the material with the value you want to purpose. For example, you can enter a line item for a quantity of 70, but due to the free goods condition, the line has been

split into two: a line item for a quantity of 35 and a free goods line for a quantity of 35. Figure 4 shows the total quantity of 70, split between paid items and free goods items.

Create Purchase Order : Item Overview

Purchase Order			Order Type	NB		PO Date	07/15/2012
Vendor	3212					Currency	USD

PO Items

	Item	I	A	Material	Short Text	PO Qty	O..	Deliv. Date	Net Price	Per	O.
	10			2177	Stainless Chain	35	LB	07/23/2012	2.56	1	LB
	11			2177	Stainless Chain	35	LB	07/23/2012	0.00	1	LB
	20							07/23/2012			

∧ *Figure 4 Purchase Order Showing Free Goods*

Tip 27

Copying Purchase Requisition Text to a Complete PO

If a purchase order is created from a requisition, you can configure the system so that the item text is copied from the requisition to the order.

When a purchase requisition is created by a member of staff or a purchasing professional, the purchaser may make notes in the requisition that need to be passed on to the vendor. In this tip, we'll show you how to configure the system to copy those notes in the requisition into the completed purchase order.

✅ And Here's How…

When a user is creating a purchase requisition, they need to enter their notes into the Item text field.

To create a purchase requisition, use Transaction ME51N or follow this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Requisition • Create

In the initial screen for the purchase requisition, enter the material, plant, quantity, and delivery date. To attach text, enter the information into the Item Text field, as shown in Figure 1.
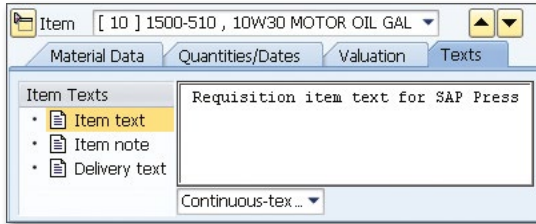
⚠ *Figure 1 Entering Item Text into the Purchase Requisition*

After the text has been entered in the purchase requisition, check that the copying rules have been set up in configuration so that the requisition item text will appear in the purchase order. To access the correct configuration step, use the following IMG menu path:

> IMG • Materials Management • Purchasing • Purchase Order • Texts for Purchase Orders • Define Copying Rules for Item Texts

Figure 2 shows the first part of the configuration steps: select the item text of the purchase order. You then need to select the Text linkages option.
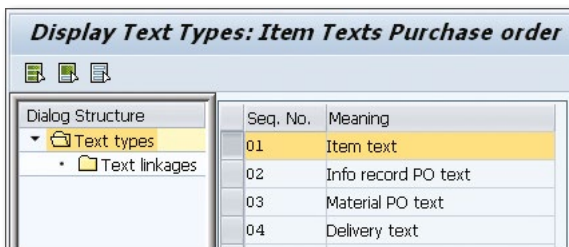
⚠ *Figure 2 Selecting the Item Text of the Purchase Order*

Once you've selected the text linkage, the next screen is displayed as shown in Figure 3. In this screen, you can see if the correct link has been configured between the purchase order item and the item text in the purchase requisition. If the configuration has been completed, the source object should show the "Purchase requisition," and the source text should be "Item text." This is the field you would have entered in Figure 1. If the configuration is missing, you can add a new entry and select the purchase requisition, then assign the new entry to the purchase order item text, as shown in Figure 3.
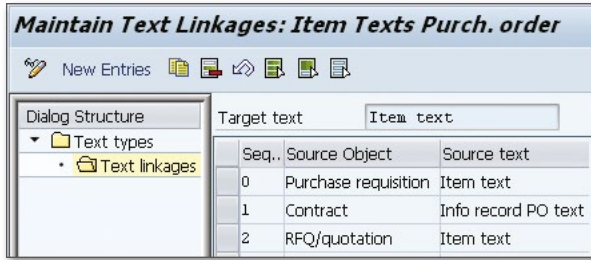
⌃ **Figure 3** *Maintaining the Link between the Requisition Item Text and the Purchase Order Item Text*

After you've confirmed that the configuration is correct, test that the requisition item text appears on the purchase order by entering a new purchase order.

Create a purchase order with reference to the purchase requisition that was originally created, with the relevant item text. Then, review the item text in the purchase order and compare it with the requisition item text. Figure 4 shows the purchasing requisition item text that's now automatically defaulted into the purchase order.
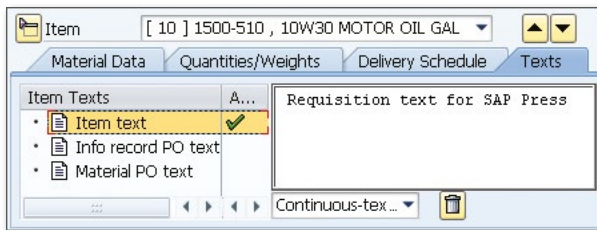
⌃ **Figure 4** *Purchase Order Shows the Item Text from the Requisition*

Tip 28

Identifying Inactive Vendors by Period

You can identify the periods when a vendor has been active and idle and then either archive the vendor to save space or approach them again for possible sales.

Many companies are very diligent in keeping their master data as current as possible in order to reduce the overall size of their data and avoid using incorrect master data. There are a number of reports in SAP that can show the purchasing department which vendors are used and how often. However, only one report shows which vendors have been inactive for each period. Using this report, a purchasing department can decide whether to remove a vendor to the archive or use the information to approach the vendor and negotiate an improved contract.

✓ And Here's How…

To run the report, use the information systems transaction, S_ALR_87010043, or follow this SAP menu path:

> SAP • Accounting • Financial Accounting • Accounts Payable • Information System • Reports for Accounts Payable Accounting • Vendor Balances • Vendor Business

In the initial screen, enter a company code and select additional criteria, such as the periods you want to review and the financial year. Figure 1 shows the selections made in this example, such as the company code and periods. To display vendors

with no purchasing transactions in the period entered, check the ACCOUNTS WITH
NO PURCHASES field.

⌃ *Figure 1 Initial Screen for Report Showing Inactive Vendors*

Execute the transaction when the relevant selection criteria have been entered, and
the report shows all the vendors with zero purchasing activity during the period
specified in the initial screen. Figure 2 shows the vendors with zero purchasing
activity. From this data, the purchasing department can make a decision to archive
the vendor or approach them for further business.

⌃ *Figure 2 Report Showing Inactive Vendors for the Specified Periods*

Tip 29

Editing Configuration Fields to Generate a Purchase Order Reprint

You can make changes to certain purchase order fields to generate or stop a reprint when edits are made to that field.

When a purchase order is completed and sent to the vendor, sometimes a change needs to be made; for example, to the quantity or delivery date. With standard configuration and business processes, this normally means that the purchase order will be reprinted and resent. However, the purchasing department may determine that, based on some changes to the purchase order, the documents should not be reprinted.

In these circumstances, you have the ability to change the configuration of specific fields to generate a reprint of a purchasing document. Conversely, if there is a field that currently does not produce a reprint but should, that field can be changed or added to the configuration.

✅ And Here's How…

When the purchasing department identifies a purchase order field that they feel should or shouldn't generate a reprint, you can find and edit the technical details of the field to manage this. For example, you can change a configuration to stop a reprint or add a field to a configuration that will require a reprint. Perform the configuration using Transaction OMFS or follow this SAP menu path:

IMG • MATERIALS MANAGEMENT • PURCHASING • MESSAGES • FIELDS RELEVANT TO PRINTOUTS OF CHANGES

The initial screen shows all the fields that will generate a reprint to a purchasing document if a change is made. Figure 1 shows the fields that have been configured to trigger a reprint of a purchasing document. If you were to remove the indicator for the CITY1 field, a reprint would not be triggered if a change were made on that field in the purchase order.

Change View "Print-Relevant Purch Doc Changes"

New Entries

Table Name	Reference field name	P	C	C	S	Te...	Ro...
ADRC	CITY1	✓	✓	✓	✓	P10	4
ADRC	COUNTRY	✓	✓	✓	✓	P10	4
ADRC	HOUSE_NUM1	✓	✓	✓	✓	P10	4
ADRC	NAME1	✓	✓	✓	✓	P10	4
ADRC	NAME2	✓	✓	✓	✓	P10	4
ADRC	NAME3	✓	✓	✓	✓	P10	4

⌃ *Figure 1 Purchasing Fields Configured to Trigger Reprint of Document*

Based on the configuration in the system, the salesperson field EKKO-VERKF is not part of the configuration and needs to be added. Click the NEW ENTRIES button, as shown in Figure 1, and then a screen appears where you can add the field. Figure 2 shows the entry of the EKKO-VERKF field into the configuration with the indicator set so that it triggers a reprint.

New Entries: Overview of Added Entries

Table Name	Reference field name	P	C	C	S	Te...	Ro...
EKKO	VERKF	✓	☐	☐	☐	K6	

⌃ *Figure 2 New Field Added to Generate a Reprint of a Purchasing Document*

Automatically Converting a Requisition to a PO

You can adjust your system settings so that purchase orders can automatically be generated from requisitions.

When a purchase requisition is created, it can go through an approval process that may depend on the type of material, value of the item, reliability of the vendor, or other factors. However, there are many occasions when companies would like to let purchase orders be automatically generated from the requisition so they don't hinder the purchasing process. In this tip, we'll show you how to set up the system to automatically convert requisitions to purchase orders.

✅ And Here's How…

To ensure that requisitions are automatically converted to purchase orders, you need to take a number of steps. First, make sure the material master record has the correct settings. To make a change to the material master, use Transaction MM02 or follow this SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

Enter the material number, select the PURCHASING view, and enter the relevant plant. Figure 1 shows the field on the PURCHASING view called AUTOM. PO. Check this field in order to trigger automatic purchase orders.
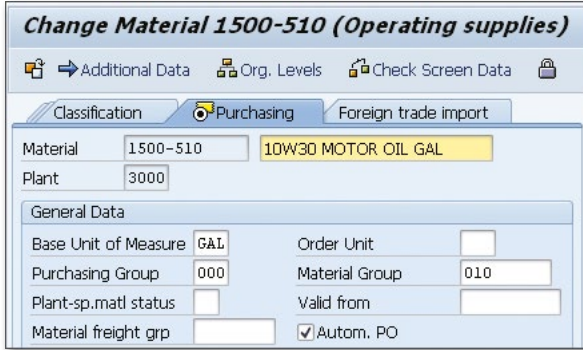
⌃ *Figure 1 Automatic PO Flag on the Purchasing View of the Material Master Record*

After checking the field in the material master, check the vendor master record for the AUTOMATIC PURCHASE ORDER field. To make a change to the vendor master record, use Transaction MK02 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • VENDOR • PURCHASING • CHANGE

On the initial screen, enter the vendor number and purchasing organization and select the PURCHASING DATA screen. The transaction displays the purchasing data screen, as shown in Figure 2. Under the CONTROL DATA section, you'll see the AUTOMATIC PURCHASE ORDER check box.
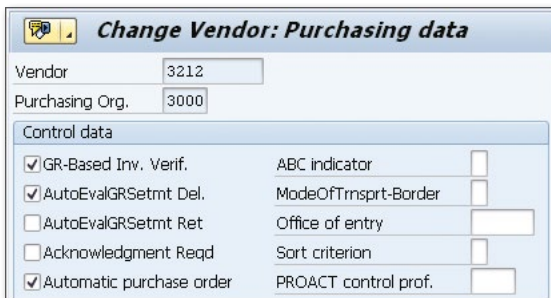
⌃ *Figure 2 Automatic PO Flag on the Purchasing Data Screen of the Vendor Master Record*

The next step is to ensure that the source list has been set up for the materials for which you need automatic purchase orders generated. To maintain the source list, use Transaction ME01 or the following SAP menu path:

SAP • Logistics • Materials Management • Purchasing • Master Data • Source List • Maintain

On the initial screen, enter the material number and plant number. The next screen, as shown in Figure 3, allows you to enter the vendor and purchasing organization and a specific validity period.

^ *Figure 3* *Maintaining the Source List*

Next, run the automatic creation program to check that purchase orders are being automatically generated from requisitions. To do this, execute Transaction ME59 or use the following menu path:

SAP • Logistics • Materials Management • Purchasing • Master Data • Source List • Maintain

The initial screen allows you to enter a range of selection criteria, such as purchasing group, vendor, plant, and delivery date. Once you've entered the information you require, the transaction can be executed. If there are any suitable requisitions, they'll be generated as purchase orders as shown in Figure 4.

^ *Figure 4* *Purchase Orders Automatically Generated*

Tip **31**

Posting Invoices en Masse

Instead of entering invoices one at a time, you can mass process them to save time on a single screen.

A company's accounts payable department can receive hundreds of invoices a day, but the normal invoice processing transaction allows the user to enter only one invoice at a time. Normally, an accounts payable clerk will enter an invoice total and then the corresponding purchase order. This is a time-consuming exercise, but there is a process in place that allows multiple invoices to be posted on a single screen, which we'll discuss in this tip.

✓ And Here's How…

To enter more than one invoice at a time, use Transaction MIRA or the following menu path:

> SAP • Logistics • Materials Management • Logistics Invoice Verification • Document Entry • Enter Invoice for Invoice Verification in the Background

The resulting screen shows the details normally shown on the single invoice entry transaction, MIRO, but the difference is that the transaction allows you to enter a number of purchasing documents at one time, as shown in Figure 1, in the Multiple Assgmnt view.
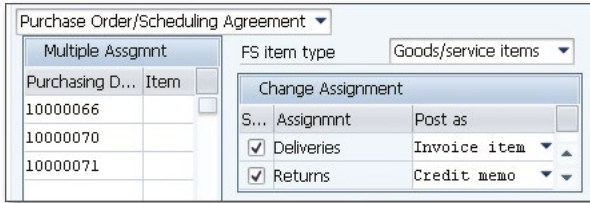
⌃ *Figure 1* *Entering Multiple Purchasing Documents in the Invoice*

After you've entered the purchasing documents that you have invoices for in the correct column, execute the transaction. This won't post the invoices, but schedules the invoice verifications to be performed as a background process, as shown in Figure 2.
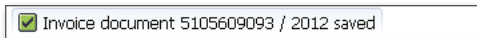
⌃ *Figure 2* *Invoice Document Created for Multiple Purchasing Documents*

To process the background verification, set up a daily job that runs overnight to process the invoices. Conversely, run the program, RMBABG00, on an ad hoc basis using Transaction SE38. The selection screen for the program is shown in Figure 3. By selecting a number of criteria, the program will process the invoices for the relevant purchasing documents.
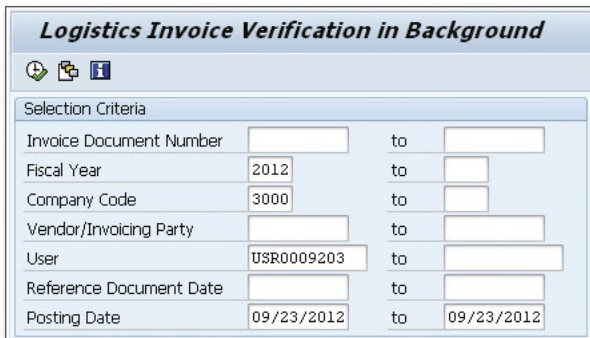
⌃ *Figure 3* *Processing Invoices in the Background*

Tip **32**

Choosing Vendors by Analyzing Vendor Evaluation Reports

You can search for vendors and evaluate them by performance or different trends to select vendors that meet your criteria.

The vendor evaluation process is important to a company because it allows it to select a vendor based on the criteria it defines. Companies spend millions of dollars each year on materials and services and need to evaluate whether the vendors they're using are giving them the best value on price, quality, or service. In this tip, we'll provide information to help the purchasing department understand how the reports and analyses can be executed in order to reap the benefits of the vendor evaluation process and choose the best vendors for the company.

✓ And Here's How…

The purchasing department has a number of reports that use data created via the vendor evaluation process. These reports can be used to see which vendors are performing better than others, as well as to evaluate which vendor is best for a particular material or material group. To identify which vendors are giving the company the best performance, use Transaction ME65 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • VEN-DOR EVALUATION • LIST DISPLAYS • RANKING LISTS

In the initial screen, enter the purchasing organization and the range of vendors you want to evaluate. This gives the purchasing department a snapshot of which

vendors are performing best across the materials they supply within a specific purchasing organization. After executing the transaction, the results screen, as shown in Figure 1, shows the ranking of the vendors for the purchasing organization.

« *Figure 1 Ranked List of Vendors for Purchasing Organization 3000*

The ranking list shows the overall scores for the vendors, which are calculated based on the weightings given to the different criteria. The report also shows the score broken out for the criteria: price, quality, delivery, and service. This allows the purchasing department to see if a vendor has the top score for a particular criterion even if it's lower on the overall ranking.

If the purchasing department wants to evaluate which vendor has given the best performance for a specific material or material group, it uses Transaction ME6B or the following menu path:

SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor Evaluation • List Displays • Evaluations per Material/Material Group

The purchasing department can select a purchasing organization and material, which will result in a ranked list of the vendors that supply that specific material to the company. The report, shown in Figure 2, identifies which vendor is performing best in supplying that particular material.

« *Figure 2 Ranked List of Vendors for a Specific Material or Material Group*

Sometimes a vendor that ranks high in the overall performance doesn't perform well for one specific material or range of materials. The purchasing department can identify this trend using the evaluation comparison report, Transaction ME64, or the following menu path:

SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor Evaluation • Compare Evaluations

In the initial screen for Transaction ME64, enter the vendor, purchasing organization, and either a material or material group. Once executed, the transaction will return a side-by-side comparison of the overall vendor evaluation score against the specific score for the material or material group that was entered. In Figure 3, you can see that the vendor scores high overall and for overall quality, but lower for the specific material. The purchasing department can use this information to discuss price reductions with the vendor or consider using a different vendor.

⌃ *Figure 3 Evaluation Comparison*

Understanding the Confirmation Control Key

If your company needs to display confirmations after a purchase order is created, you can create or modify the confirmation control key.

The confirmation control key controls the process that occurs after the creation of the purchase order. It controls whether confirmations are expected for specific purchase order items and whether these confirmations are relevant for goods receipt or materials planning. Many companies are looking for more visibility and control over their goods receipts, and adding a confirmation control key can do this. In this tip, we'll show you how to create a new confirmation control key or make modifications to an existing one.

✅ And Here's How…

The confirmation functionality is used when a company needs to get information about deliveries in the form of confirmations. To make a change to the confirmation control key, follow this SAP menu path:

> IMG • MATERIALS MANAGEMENT • PURCHASING • CONFIRMATIONS • SET UP CONFIRMATION CONTROL

In this configuration, you can change an existing confirmation control or set up a new one. The initial screen shows the confirmation control keys that have been set up. Figure 1 shows the confirmation control keys 0001, 0002, and 0003, but your company may have any number of confirmation control keys defined.

Figure 1 Confirmation Control Key Overview

You can set up these control keys so that an inbound delivery is created automatically. To do this, select the confirmation control key you want to review or change and then click the confirmation sequence. This shows the order in which the defined confirmations are expected and which confirmation categories are to be automatically monitored.

Figure 2 shows the confirmation control sequence for confirmation control key 0001. It shows that the first confirmation expected from the vendor is the order acknowledgement. The value in the monitoring period field (Moni.Per.) is 10 days, so the order acknowledgement should be received at least 10 days before the delivery is due. The second confirmation expected is the shipping notification, which is expected no later than five days before delivery. You can change these values depending on your company's requirements.

Figure 2 Sequence of Confirmations Expected from the Vendor

Once you've made the relevant changes to the confirmation control keys, you can assign the control key to a particular vendor in the Vendor Master Purchasing Data screen using the change vendor master Transaction MK02, or add the control key when creating purchase orders using Transaction ME21N. Figure 3 shows the confirmations in the purchase order item details that have been received for

a specific purchase order created with the confirmation control key 0001. Two confirmations have been received: the order acknowledgement and the shipping notification.

⌃ *Figure 3* *Confirmations Received for a Purchase Order*

Tip 34

Configuring Automatic Purchase Order Creation during Goods Receipt

If you receive raw material of an unknown quantity, you can configure the system to create a PO once the goods are received, rather than before.

In normal operations, a purchase order is created and communicated to a vendor, and then a goods receipt takes place against that PO. However, on occasion, the purchase order can't be created prior to the goods arriving at the plant. This can occur when a raw material is being received and the quantity of the material can't be determined until it's delivered. In this tip, we'll show you how to generate a purchase order on a goods receipt, which is needed so that your warehouse can perform a goods receipt when the material arrives without a purchase order from the vendor.
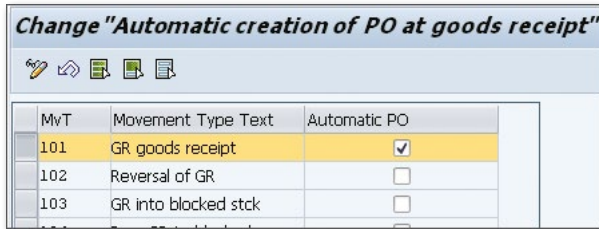
✅ And Here's How…

Setting up the configuration to generate a purchase order on a goods receipt requires the changes in Transaction OMB3, or use the following menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Goods Receipt • Create Purchase Order Automatically

The configuration screen simply allows you to check the AUTOMATIC PO box that allows the automatic generation of purchase orders during a goods receipt. Figure 1

shows that you can select a movement type that you want to use so that it generates an automatic purchase order. In this instance, movement type 101 has been configured to allow the automatic generation of purchase orders.

Change "Automatic creation of PO at goods receipt"

MvT	Movement Type Text	Automatic PO
101	GR goods receipt	☑
102	Reversal of GR	☐
103	GR into blocked stck	☐

⌃ *Figure 1* *Configuration of Automatic Purchase Order at Goods Receipt*

After you've completed that configuration, the next step is to ensure that a purchase info record is set up for the vendor and the material to be delivered. To create the purchase info record, use Transaction ME11 or the following SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • INFO RECORD • CREATE

Ensure that the info record is for the correct vendor, material, purchasing organization, and plant. In the purchasing organization data screen, enter the planned delivery time, standard quantity, and net price. After you've entered the purchase info record, perform a goods receipt that will generate a purchase order. To do this, use Transaction MIGO or this SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • INVENTORY MANAGEMENT • GOODS MOVEMENT • MIGO – GOODS MOVEMENT

Enter the movement type you require; in this instance, 101. Enter the remaining data, such as vendor, material, quantity, plant, and storage location, as shown in Figure 2.

Figure 2 Entering the Goods Receipt Information

After you've entered all the goods receipt information, post the transaction, and the purchase order will be generated in the background. When complete, the transaction will display a message with the material document generated, as shown in Figure 3.

Figure 3 Material Document Created by the Goods Receipt

To see the purchase order that was automatically created during the goods receipt, view the material document using Transaction MB03 or this SAP menu path:

SAP • Logistics • Materials Management • Inventory Management • Material Document • Display

Enter the material document number generated by the goods receipt, and on the first screen, select the Details from Item option. This will show the purchase order number that was automatically generated by the goods receipt. Figure 4 shows the purchase order number generated by the goods receipt.
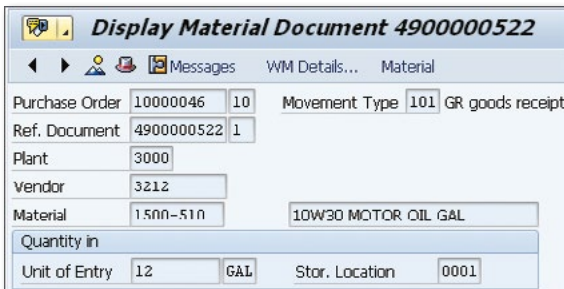
Figure 4 Material Document Shows a Purchase Order Automatically Generated by the Goods Receipt

Tip **35**

Changing the Purchase Order List Display

To help users quickly find the information most important to them, you can change how users see purchase order lists in the system.

When you're viewing lists of purchasing documents, the transactions are configured with a specific scope of list. This determines which values are displayed and how they're displayed. Sometimes there are fields that are irrelevant to some users, while other users want to see different information. So that one group of users can see information that is important to them, create a new scope of list by selecting the fields that need to be displayed. Then, assign them to specific transactions in configuration.

✓ And Here's How…

You can specify which information from the purchasing documents is to be shown in the lists. To make a change to the purchasing lists, follow this configuration menu path:

> IMG • Materials Management • Purchasing • Reporting • Maintain Purchasing Lists • Scope of List • Define Scope of List

Here, you can modify the existing scope of lists or create new entries. In Figure 1, you can see that a new scope of list is created. Select the options you want to include in your scope of list, such as line total quantity and total value, open quantity and value, stock in transfer, or open values.

⌃ *Figure 1 Entering the Details for a New Scope of List*

When you've completed your selection and saved the new scope of list or amended an existing scope of list, assign the new scope of list to a purchasing list transaction. To make a change to the purchasing lists, follow this configuration menu path:

> IMG • Materials Management • Purchasing • Reporting • Maintain Purchasing Lists • Scope of List • Define Default Values for Transactions

Figure 2 shows the initial screen where you can change the default scope of list for a variety of transactions by selecting a new scope of list from a dropdown selection. In this instance, the scope of list for Transaction ME2N, Purchase Orders by PO Number, has been amended to NEWLIST, which is the new scope of list we created.
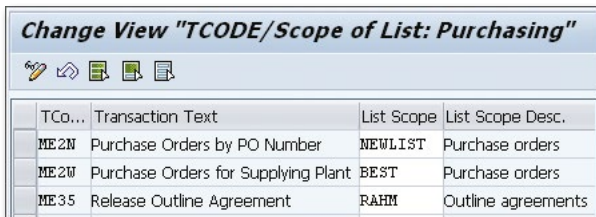
⌃ *Figure 2 Scope of List Amended for Transaction ME2N*

To test the change to the scope of list, use Transaction ME2N or this SAP menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • List Displays • By PO Number

Figure 3 shows the selection criteria for the transaction, and the new scope of list, NEWLIST, has been defaulted into the transaction. After entering the selection criteria you require, execute the transaction to display the list of purchase orders.

≫ Figure 3 *Selection Criteria for Transaction ME2N*

Figure 4 shows the list generated by the transaction and the orders with the criteria chosen for the new scope of list.

≫ Figure 4 *List of Purchase Orders Shown with the New Scope of List*

Tip **36**

Skipping Inspection for Vendors

When you have a vendor with an approved quality system, you can configure the system to skip checking its materials for quality upon receipt.

Vendors will provide a quality product, but often a company will want to test the quality using its own quality procedures. However, on occasion the vendor will use quality systems that are more advanced than its customers' and therefore eliminate the need for customers to perform quality testing upon goods receipt. We'll demonstrate how to configure the system to skip goods receipt inspections, depending on whether the testing can be skipped on all materials from a vendor or just selected materials.

✓ And Here's How…

Before proceeding with this tip, make sure that the vendor's quality system has been noted in the material master record.

Skip Inspection for a Vendor

Use Transaction MM02 or this SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

After entering the material number, select the Quality Management view and then enter the specific plant. Alternatively, enter the vendor's quality system into the Target QM System field. The values you can choose from would have been

entered into configuration already. In this instance, shown in Figure 1, the vendor's quality system is certified ISO 9001.

▲ *Figure 1* *Entering the Vendor's Quality System in the Material Master Record*

The next step is to ensure that the vendor's quality system has been entered into the vendor master record. To do this, use Transaction XK02 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • VENDOR • CENTRAL • CHANGE

Enter the vendor number and purchasing organization and check the CONTROL field in the GENERAL DATA section. Figure 2 shows the CONTROL screen; enter the vendor's quality system in the ACTUAL QM SYS field. If the vendor's system is certified only until a certain date, enter that date into the QM SYSTEM TO field. If you enter the vendor's quality system into the vendor master record, the inspection skip applies to all the vendor's materials.

▲ *Figure 2* *Entering the Vendor's Quality System in the Vendor Master Record*

Skipping Inspection for a Specific Combination

To skip inspections for a specific combination of material, vendor, and plant, enter the vendor's quality system into the quality info record. To change the quality info record, use Transaction QI02 or the following SAP menu path:

> SAP • Logistics • Quality Management • Quality Planning • Logistics Master Data • Quality Info Record: Procurement • Change

On the initial screen, enter the material, vendor, and plant. On the next screen, select the Inspection Control tab. Enter the vendor's quality system in the Existing QM Sys field and the certification validity date in the Valid to field, as shown in Figure 3. In the Inspection Control field, determine whether the inspection is to be skipped, or force an inspection even if the quality system has been entered in the vendor master.

⌃ *Figure 3 Entering the Vendor Quality System in the Quality Info Record*

Tip 37

Defining Standard Details of Forms for Company Codes

You can define which texts should be printed on forms for every company code.

When invoice forms are sent out by a company, there are a number of texts that the company may want to be displayed. It's possible to define which standard text should be used for letter headers, footers, and the sender address in the window of the envelope for every company code. There's often important information that needs to be displayed relating to a company code, such as tax identification information, VAT registration information, or simply an address, and it's vital that it appears when documents are sent out for a specific company code.

✅ And Here's How…

Before deciding which standard text should be defined for which company code, the standard texts should be defined in the system. To define a standard text, use Transaction SO10 or the following SAP menu path:

SAP • TOOLS • FORM PRINTOUT • SAPSCRIPT • STANDARD TEXT

Figure 1 shows the initial screen; enter a name for the text and then click the CREATE icon.
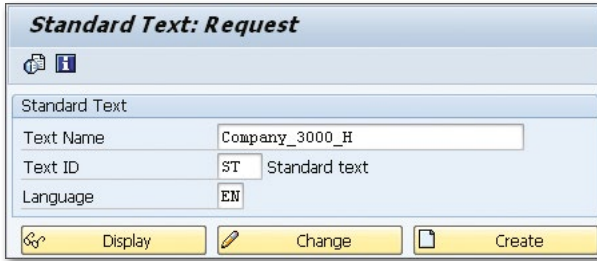
⌃   *Figure 1 Initial Screen to Create Standard Text*

The next screen allows you to enter the text in the format in which you want it to appear on the form. In this instance, shown in Figure 2, the company name is followed by the address on the next three lines.
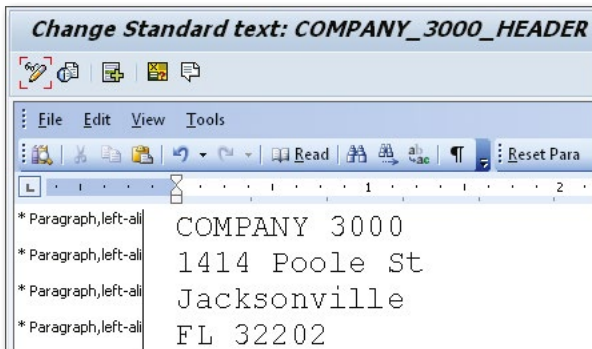
⌃   *Figure 2 Entering a Standard Text*

Once you save the standard text, it can be assigned to a company code for a header text, footer text, signature text, or sender. To do this, use Transaction OMRU or the following IMG menu path:

> IMG • Materials Management • Logistics Invoice Verification • Message Determination • Define Sender Details for Forms

The initial screen of the transaction shows the company codes to which you can assign standard texts. If the company code is not in the list, click the New Entries icon and create it. Figure 3 shows the screen where you can add the company code you require and the standard texts. These will appear on the invoice forms when they're sent to vendors associated with that particular company code.

⌃ *Figure 3 Entering the Company Code and the Standard Texts*

Tip 38

Limiting a User's Authorization to Create Purchase Orders

You can configure the system to issue requisitions, rather than just purchase orders, to buyers to review each order.

When the purchasing function is distributed to more users in a company than just the purchasing department, it can be necessary to require a purchase requisition before a purchase order can be created. Requiring users to create a purchase requisition allows the purchasing function to review the items required before an order is created or a release strategy to be followed so that management can review the requisition. In this tip, we'll show you how to configure the system for these requirements by issuing the user an authorization.

✅ And Here's How…

To require a user to create a purchase requisition prior to a purchase order, you can create an authorization that can be attached to the user's profile. To do this, use Transaction OMET or the following configuration menu path:

> IMG • Material Management • Purchasing • Authorization Management • Define Function Authorizations for Buyers • Function Authorizations: Purchase Order

This transaction allows you to create an authorization that can be attached to a user so that they can create a purchase order only with reference to an existing purchase requisition or other purchasing document. In the initial screen, enter a

FUNCTION AUTHORIZATION or change an existing one. Figure 1 shows an existing functional authorization, ZZ. To require a purchase order to reference a purchase requirement, check the REF. TO PURCHASE REQUISITION field.

⌃ *Figure 1 Function Authorization Configuration*

After the function authorization has been saved, you can add it to a user's profile. To do this, use Transaction SU01 or follow this configuration path:

IMG • MATERIAL MANAGEMENT • PURCHASING • AUTHORIZATION MANAGEMENT • DEFINE FUNCTION AUTHORIZATIONS FOR BUYERS • MAINTAIN USERS

To assign the function authorization to a user profile, enter the user and the parameter EFB, which is needed to activate the function authorization. Then, add the parameter you have just created, ZZ, to the user profile. Figure 2 shows the parameter and the function authorization entered into the user's profile.

⌃ *Figure 2 Function Authorization Added to a User's Profile*

To activate the change in the user's profile, the user is required to log out and then log back into the system. To test the new authorization, the user should be requested to create a purchase order, using Transaction ME21N, and check that

they can't complete the transaction. The user should receive an error message similar to that shown in Figure 3 when they try to complete the purchase order.
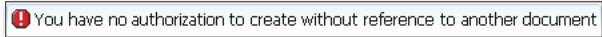
⌃   *Figure 3 Error Message Due to New Function Authorization*

Tip 39

Creating a One-Time Vendor

When you have a part or service that's so unique that it will be purchased only once, you can create a one-time vendor to reduce your effort.
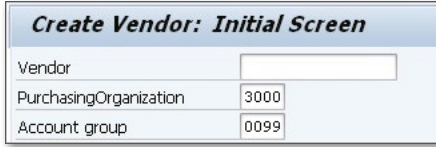
Normally when vendors are used for purchases, their full details such as address, payment methods, bank details, and terms of payment are entered into a vendor master record. This data entry requires some research and a resource is required to enter the information. If a vendor is used rarely, or even only once, it isn't cost effective to research and enter the information into the SAP system. In these cases, the supplier can be treated as a one-time vendor, which reduces the amount of effort needed. A company may want to use a one-time vendor when a material is needed in an emergency and the normal supplier of that material can't supply it. In this instance, a local or unapproved vendor may be used for this one-off purchase.

✓ And Here's How…

To use a one-time vendor, create a record in the vendor master via Transaction MK01 or the following menu path:

> SAP • Logistics • Material Management • Purchasing • Master Data • Vendor • Purchasing • Create

This transaction allows you to create a one-time vendor. The initial screen, as shown in Figure 1, requires you to enter an account group for the one-time vendor, which in this case is 0099. You can also enter the purchasing organization for which you're using this one-time vendor.

The transaction may ask for a search term, currency, or name based on the configuration your company has in place, but otherwise, you can complete the transaction. You should see a message similar to that shown in Figure 2.
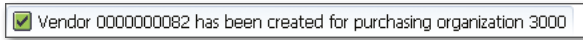
✩ **Figure 2** *One-Time Vendor Master Record Created*

Next, create a purchase order for a one-time vendor. Using Transaction ME21N, create a purchase order using the one-time vendor number; enter the purchasing organization, purchasing group, material, quantity, and price. If you try to save the purchase order, the transaction will display an error message similar to that in Figure 3, requiring you to enter the vendor's address.

« **Figure 3** *Error Message Requiring Address of One-Time Vendor*

To maintain the address for the one-time vendor in the purchase order, select the error message, which you can see in Figure 3, and click the EDIT button. This will take you to the vendor address screen, where you add the address details for your one-time vendor. The address is used only for that one purchase order and isn't saved in the vendor master file for the vendor number you used. When you create another purchase order using this one-time vendor, the transaction will require you to enter an address again to complete the purchase order.

When you've entered all the address information, save the purchase order. The transaction displays a message with the purchase order number it has created, as shown in Figure 4.
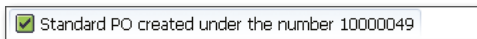
✩ **Figure 4** *Purchase Order Created Using the One-Time Vendor*

Tip **40**

Assigning a Reference Purchasing Organization to a Local Level

If your company's contracts are negotiated by a central organization and used by the local businesses, you can link the organizations so that they can use the contracts.

A company can operate with a number of purchasing organizations that negotiate with vendors independently. This may be because the vendors are local to a geographic area or a particular line of business not used elsewhere across the enterprise. But in large corporations where the same manufacturing occurs in a number of geographic locations, the company may decide to negotiate with suppliers using a central purchasing organization. The centrally created contracts can then be used by purchasing organizations at the local level. In this tip, we'll show you how to assign a local purchasing organization to a central purchasing organization so that centrally negotiated contracts can be used at many local purchasing levels.

✓ And Here's How...

So that the local purchasing organizations can use the contracts negotiated by the central purchasing organization, you need to complete some configuration in the SAP system. The central purchasing organization is known as the *reference purchasing organization* and has to be linked with the local purchasing organizations that will use the contracts it negotiates. You can set this up with the following menu path:

> IMG • Enterprise Structure • Assignment • Materials Management • Assign Purchasing Organization to Reference Create Purchasing Organization

This transaction allows you to allocate a reference purchasing organization to a purchasing organization. If the combination of purchasing organization to a reference purchasing organization hasn't been configured, click the New Entries icon and add the configuration you require. Figure 1 shows the assignment of purchasing organization 3000 to reference purchasing organization 3001.

Change View "Assignment of Purchasing Org."

New Entries

POrg	Ref.pur.org.	Purch. Org. Descr.	Reference purch. org.
3000	3001	US Purch Org	Central Purch Org

⌃ *Figure 1 Assigning a Purchasing Organization to a Reference Purchasing Organization*

Once the assignment has been made with the reference purchasing organization, test that the purchasing organization can use the contracts created by the reference purchasing organization negotiating on behalf of the other local purchasing departments.

Create a contract with a vendor using Transaction ME31K or the following menu path:

SAP • Logistics • Materials Management • Purchasing • Outline Agreement • Contract • Create

On the initial screen, enter the vendor, agreement type, and reference purchasing organization. On the next screen, enter the date the contract will terminate and the target quantity, if a value contract was selected. On the final screen, add the material number and the negotiated price, as shown in Figure 2.

Create Contract : Item Overview

| Agreement | | Agreement Type | WK | | Agmt Date | 07/11/2012 |
| Vendor | 3212 | | | | Currency | USD |

Outline Agreement Items

Item	I	A	Material	Short Text	I...	Net Price	Per	O...
10			1500–510	10W30 MOTOR OIL GAL	☐	10	1	GAL

⌃ *Figure 2 Creating a Contract Using the Reference Purchasing Organization*

Once the central contract is created, it can be used by purchasing organizations assigned to the reference purchasing organization. To create a purchase order using a centrally negotiated contract, create a contract release order using Transaction ME21N. Use the contract you created with the reference purchasing organization, and the material values will be defaulted. Enter the contract number in the Out-line Agreement field in the line item on the purchase order.

Figure 3 shows the Purchase order create screen with reference to the contract. The net price is defaulted from the contract details negotiated by the reference purchasing organization.

⚠ **Figure 3** *Creating a Contract Release Order Using the Contract Negotiated by the Reference Purchasing Organization*

Part 3

Inventory Management

Things You'll Learn in this Section

Companies that use any materials use inventory management processes inside a facility that change stock levels. The movement of stock is inbound from a vendor, outbound to a customer, a stock transfer between plants, or an internal transfer within a plant.

As well as moving material, the Inventory Management functionality in SAP covers other aspects of the material, such as determining whether stock can be selected, how and when inventory can be counted, and whether certain storage locations in the plant can be used. As Materials Management consultants or business users, we need to streamline plant processes that can help companies compress order-to-delivery time, decrease costs, reduce inventory, and improve customer service. The tips in this part of the book will give you the knowledge to help companies achieve this.

This part focuses on a number of areas in the Inventory Management functionality of Materials Management. The tips we've selected include how to use negative stocks, create early warnings, block materials and storage locations at the plant, as well as highlights of the benefits of using ABC analysis.

Tip 41

Manually Blocking a Storage Location

If a material is temporarily put off limits, you can manually block a non-warehouse managed storage location from use.

Sometimes you need to temporarily block a storage location from being used for a certain material or materials. If a material is in a location in the warehouse that cannot be accessed temporarily—for example, due to a safety issue or because the necessary equipment to remove the material is inoperable—the logistics staff must be able to quickly create a temporary block for that specific storage location.

✓ And Here's How…

To temporarily block a non-warehouse managed storage location, you can use the physical inventory functionality to perform the task. It's possible to block a storage location by creating a physical inventory document. Access Transaction MI01 or follow this SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PHYSICAL INVENTORY • PHYSICAL INVENTORY DOCUMENT • CREATE

Enter the plant and storage location you want to block temporarily and make sure that the POSTING BLOCK indicator has been checked, as displayed in Figure 1.

⌃ *Figure 1 Initial Screen for Physical Inventory Document*

The next screen requires you to enter a material or materials associated with the storage location you need to block, as shown in Figure 2.

⌃ *Figure 2 Entering a Material into the Physical Inventory Document*

After you've entered the materials or materials you need to have blocked for the storage location, save the physical inventory document.

When you then try to perform a goods movement for the specific material and storage location, the system doesn't process the transaction and returns an error message, such as the one shown in Figure 3.

⌃ *Figure 3 Error Message Showing Blocked Storage Location*

Once the issue with the storage location has been resolved, the temporary block can be removed. To do this, delete the physical inventory using the change physical inventory document transaction, MI02, or this SAP menu path:

SAP • Logistics • Materials Management • Physical Inventory • Physical Inventory Document • Change

On the initial screen of the transaction, enter the physical inventory document number and select the Delete icon, or use the `Shift` + `F2` function keys to delete the physical inventory document.

Tip 42

Blocking Materials from Inventory Posting

You can easily block a material from being processed in an inventory posting by changing a single field in the material master record.

There are many occasions when a business will want to restrict the goods movements of a material, such as if a material is new, a quality issue has been identified, or a material is due to be replaced or discontinued. In these instances, you can restrict materials from being processed at a particular plant, either via a goods receipt, goods issue, or transfer posting.

✅ And Here's How…

To block a material from being processed as part of an inventory posting, you need to change a field in the material master record. By changing the plant-specific material STATUS field, you can restrict the material from being processed as part of an inventory posting at a plant. To do this, access Transaction MM02 or follow this SAP menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

Enter the material number for the material you want to restrict. The transaction will then display the available screens to select. In the list of screens, click PURCHASING and then press `Enter`. The transaction displays a pop-up screen where

you enter the plant where the inventory postings should be restricted, as shown in Figure 1.

⌃ *Figure 1 Organizational Level Screen for Material Master*

The transaction displays the purchasing screen, which shows the Plant-Sp. Matl Status field. Normally, this field is blank, but if you enter the value "01" in this field, the material at this plant will be restricted from being processed in inventory postings, as shown in Figure 2. If you want to review the configuration associated with the plant-specific material status field, use Transaction OSM4.
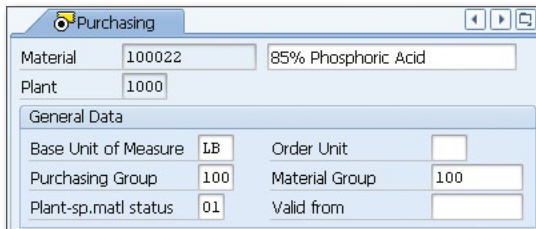
⌃ *Figure 2 Purchasing Screen Showing the Plant-Specific Material Status Field*

Once the value for the plant-specific material status field has been changed, save the material.

When you then try to perform a goods movement for the material at the specific plant, the system doesn't process the inventory posting and returns an error message such as the one shown in Figure 3.

E: Material 100022 has status Blocked for procment/whse in plant 1000

⌃ *Figure 3 Error Message Showing Material Blocked for Inventory Posting*

If the issue with the material at the plant is resolved and you want to perform inventory postings, remove the value you entered into the Plant-Sp. Matl Status field in the material master record.

Blocking a Storage Location from Further Posting

You can block a storage location from being processed in an inventory posting for a specific material.

There are many occasions when a business will want to restrict the goods movements of a storage location: for example, if the storage location can't be used due to a physical issue such as a damaged roof or a material that's spilled on the warehouse floor and needs to be cleaned up. In these instances, restrict the storage location from being used in any inventory posting via a goods receipt, a goods issue, or a transfer posting for a special material. You can do this with a physical inventory document, which we'll discuss in this tip.

✓ And Here's How…

You can put a posting block on a storage location when you create a physical inventory document for that storage location. To do this, access Transaction MI01 or follow this SAP menu path:

> SAP • Logistics • Materials Management • Physical Inventory • Physical Inventory Document • Create

The initial screen for creating the inventory document requires you to enter the plant and the storage location you want to block. In addition, check the Posting Block field, as shown in Figure 1.

Create Physical Inventory Document: Initial Screen

Document date	09/01/2012
Planned count date	09/01/2012

Loc.of phys.inv.

Plant	3000
Storage Location	WIP3
Special Stock	

Other information

☑ Posting Block

≫ Figure 1 *Create Physical Inventory Document to Block Storage Location*

In the second screen, enter the material you don't want processed for the specific storage location, add it to the physical inventory document, and then save the physical inventory document, as shown in Figure 2.

Create Physical Inventory Document: New Items

Deletion Indicator   Other Phys. Inventory Doc.

Plant	3000	New York, NY
Stor. Loc.	WIP3	WIP 3 Location

Items

Itm	Material	Material Description	Batch	STy	AUn	BD	Del
1	1500-5			1	☑	☑	☐

≫ Figure 2 *Material Added to the Physical Inventory Document*

Once the physical inventory document is created with the posting block, the materials associated with that document can't be used in a posting for that particular storage location. If you do try to move material from that storage location—for example, with a transfer posting, using Transaction MIGO_TR, or with movement type 311—you'll get an error message that the posting can't be completed, as shown in Figure 3.

Typ	Message text
🔴	Material 1500-5 3000 WIP3 blocked due to a physical inventory

≫ Figure 3 *Message Indicating that Material Is Blocked for Inventory Posting*

When you want to allow inventory postings for the material at the storage location, delete the physical inventory document using Transaction MI02 or use the following menu path:

SAP • Logistics • Materials Management • Physical Inventory • Physical Inventory Document • Change

Preventing an Inventory Back Posting to a Previous Period

You can adjust your system settings at the company code level to prevent users from posting inventory movements to previous periods.

When you post inventory movements, a goods receipt, or a goods issue, they can normally be posted to the current period, or sometimes to the previous period in MM. For example, if the period has just closed and the warehouse finds that an item was received but the movement was not recorded, this transaction can be given a posting date in the previous period. However, the finance department may not want to allow any postings to the previous period. In this tip, we'll show you how to achieve this without changing your system configuration.

✅ And Here's How…

To prevent any inventory postings to a previous period, change the setting at the company code level. This will force all inventory postings to be recorded in the current period. To do this, access Transaction MMRV or follow this SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Other • Allow Posting to Previous Period

The initial screen for this transaction requires you to enter the company code for which you want to prevent postings to previous periods. When you've entered the company code, the next screen shows the current and previous periods. To allow posting only in the current period, make sure that the Allow Posting to

PREVIOUS PER field is unchecked and that the DISALLOW BACKPOSTING GENERALLY field is checked, as shown in Figure 1.

Allow Posting to Previous Period

Company Code	3000

Posting periods (month/year)

Current period	09 2012
Previous period	08 2012
Last period in prev.year	12 2011

Post to previous period

☐ Allow posting to previous per.
☑ Disallow backposting generally

⌃ Figure 1 Disallowing Inventory Posting to a Previous Period

After you've saved the transaction, the system will no longer allow the posting of goods movements to the previous period. If you do try to post a goods receipt to a posting date in the previous period, you receive a message similar to that in Figure 2. The system only allows inventory posting in the current period.

Display logs

Typ	Item	Message text	LTxt
🔴		In plant 3000, post to current period 2012/09	❓

⌃ Figure 2 System Only Allows Posting in Current Period

However, this change doesn't apply to inventory adjustments that are a part of a physical inventory. You can still post a physical inventory adjustment for a material in a previous period even when you've indicated that there aren't any inventory postings to a previous period.

Performing Month-End Closing

When you're performing a month-end close, you need to close the Materials Management period to make sure that postings are in the correct period.

Each month, the finance department performs a month-end close for each company code. This close is performed to finalize a snapshot of transactional activity for the period. The month-end closing processes are performed for the last time for a particular period to ensure that all transactions are posted and reported correctly. The month is officially closed when all the month-end processes are complete. To ensure that new inventory movements are posted to the current period, the period needs to be closed in the MM area.

✅ And Here's How...

To ensure that all inventory movements are posted to the new period, make sure that the previous period is closed and the new period has been opened. Access Transaction MMPV or follow this SAP menu path:

> SAP • Logistics • Materials Management • Material Master • Other • Close Period

The initial screen for this transaction requires you to enter the company code for which you want to close the period, or you can enter a range of companies. Then, enter the period that will become the current period. For example, if the period you are closing is period eight, the next period will be nine, as shown in Figure 1.

It's also possible to close the period after a check has been made. The check looks at the data in the period you're about to close and highlights any data inconsistencies

or negative stock figures that may still need to be processed before the period can be closed.

⌃ *Figure 1 Closing the Period in Materials Management*

After you've executed this transaction, a log is displayed informing you of any issues that may have occurred, such as entering the next period incorrectly. If the period has closed successfully, the system displays a log entry similar to that in Figure 2.

⌃ *Figure 2 Log Showing Details of the Month-End Closing*

If your company uses the material ledger, that also needs to be closed at the end of a period. You can achieve this by using Transaction CKMI.

Tip 46

Performing Year-End Closing

When performing year-end closing, you can assist the FI team by making sure all physical inventory documents have been posted with the help of a simple transaction.

At a year-end closing, the finance team will have a long list of procedures that need to be completed, such as reviewing open accounts receivable and accounts payable, executing pending invoices, settling orders, and setting document number ranges. To assist in this process, the Materials Management team has one important task to complete: ensuring that all physical inventory documents have been posted. However, sometimes a physical inventory document is created and is either forgotten to be started or the count is never posted. Whatever the situation, the team should ensure that there are no outstanding documents.

✅ And Here's How…

To ensure that there are no physical inventory documents outstanding, process Transaction MI22 or follow this SAP menu path:

> SAP • Logistics • Materials Management • Physical Inventory • Environment • Physical Inventory Document For Material

The main screen allows you to enter the plant you want to open for inventory documents and then enter the values in the Selection According to Status section. Because you need to know which physical inventory documents are open, check the fields that will show open documents, such as PID Item Not Counted Yet and PID Item Counted Only. These are the physical inventory documents

that need to be closed before the year end. Figure 1 shows all the fields checked for Transaction MI22.

⌃ **Figure 1** Finding Incomplete Physical Inventory Documents for a Year End

When you've checked all the relevant fields to find the incomplete physical inventory documents, execute the transaction. The resulting screen, as shown in Figure 2, shows all the physical inventory documents that should be completed or deleted before year-end.

⌃ **Figure 2** Incomplete Physical Inventory Documents for Plant 3000

The physical inventory documents shown as a result of the transaction should be processed after a review. If the document can be processed because the count was completed but not executed, post the document. If the materials in the document were not counted, the physical inventory document can be deleted before year-end.

Run Transaction MI22 again after processing the outstanding physical inventory documents to ensure that there are no further outstanding documents before year-end is closed.

Tip **47**

Enabling the Use of Negative Stocks

While allowing negative stock balances isn't always recommended, you may find this practice necessary on occasion and can set it up with a simple procedure.

Depending on how your particular company operates, you may need to allow negative values to exist for some materials. The main reason to allow negative stock is that materials are issued to a production order prior to a goods receipt for the material being posted. For negative stocks to be allowed, two changes must be made to the system: first, change the configuration to allow negative stocks at the valuation, plant, and storage location level; and second, change the material to allow negative stock. One important aspect of dealing with negative stocks is ensuring that materials are receipted into stock as soon as possible to offset the negative stock balance.

Because the procedure to enable negative stocks isn't always known and can often cause confusion, this tip will teach you how to do just that.

✅ And Here's How…

The first change to allow negative stocks is made at the valuation, plant, and storage location level in the configuration using Transaction OMJ1 or the following menu path:

> IMG • MATERIALS MANAGEMENT • INVENTORY MANAGEMENT AND PHYSICAL INVENTORY • GOOD ISSUE/TRANSFER POSTING • ALLOW NEGATIVE STOCKS

The initial screen requires you to select a valuation area where you want to allow negative stocks. Choose the valuation area you want to allow negative stocks and activate the flag. You can then select that valuation area and go to the plant level.

If there is only one plant for the valuation area, you see the details screen, as shown in Figure 1, where you can select which special stocks can be negative.
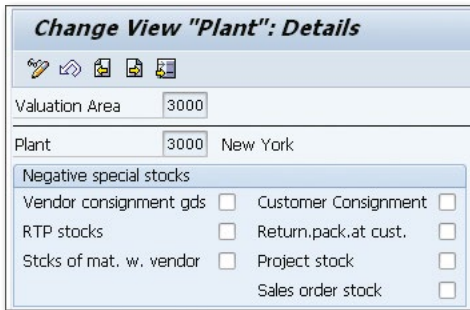
⌃ *Figure 1 Selecting Negative Stocks at a Plant*

From the plant detail screen, you can then select the storage locations at the plant where negative stocks are allowed. Figure 2 shows the list of storage locations at the plant. Select the storage location you require and make sure the Neg.Stocks field is checked.
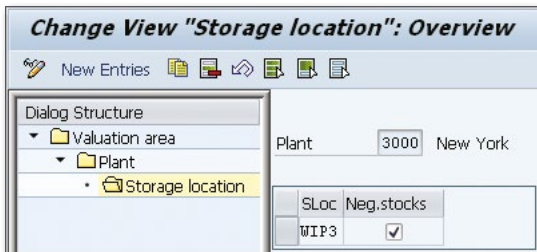
⌃ *Figure 2 Selecting Negative Stocks at a Storage Location*

When you've made the relevant changes to configuration to allow negative stocks at the plant and storage locations you require, change the material masters of the items that will be shown at a negative value.

To change the material master record, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the initial screen, enter the material number and select the Plant Data / Storage 2 screen. Enter the plant and storage location that has been configured to allow negative stocks. Also, check the field called Neg. Stocks in Plant, which is shown in Figure 3.

⌃ *Figure 3 Changing a Material to Allow Negative Stocks at a Plant*

Using Change Records to Formally Monitor and Document Changes

If your business requires documentation to change objects in the SAP system, you can set up master records so that changes are made more formally.

Depending on how your particular company manages its change management process, modifications to objects can be performed with or without a formal change process in SAP. If your company requires a process with a level of documentation on the change, such as limiting the change to a certain object, you can enable this process with the use of a change master record.

✓ And Here's How…

A change master record specifies the object type to be changed and specifically which object is to be changed. This can be achieved by using Transaction CC01 or the following menu path:
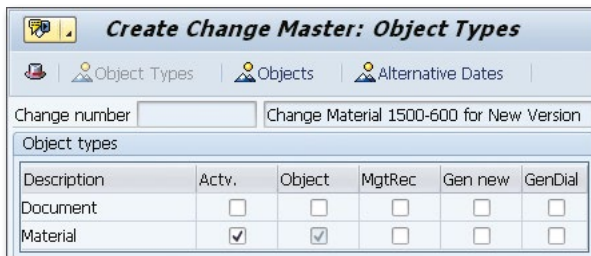
> SAP • Logistics • Central Functions • Engineering • Engineering Change Management • Change Number • Create

In the initial screen of the change master, enter a description for the change and a Valid From date, as shown in Figure 1.

⌃ **Figure 1** *Creating a Header for a Change Master Record*

When you've entered the basic details for the change, click the OBJECT TYPES button. This will take you to the OBJECT TYPES screen, as shown in Figure 2, where you can select the type of object that is allowed to be modified as part of the change record. If you want to change a material master, highlight the object type MATERIAL.

⌃ **Figure 2** *The Change Record Shows Object Types that Can Be Modified*

When you've selected the object types, select the OBJECTS button, which will display a screen where you can add the specific objects relevant for this change record. Figure 3 shows that for this change, one material has been added. If you want to add more, enter the material master numbers.

⌃ **Figure 3** *Adding Specific Objects to the Change Record*

When you've added all the objects you require for the change record, save the transaction, and a message appears with the change number, as shown in Figure 4.

✓ Change number 500000000081 created
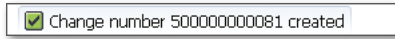
⌃ *Figure 4 Message Showing the Change Number Created*

When the change record has been created, you can modify the object if the validity date has been reached. If you try to modify the object prior to the date you entered into the change record, the system doesn't allow you to use that change number.

In this example, the change number has been created to make a change to material 1500-600, and this can be performed using Transaction MM02. When the initial screen is displayed, enter the material number and the appropriate change number, shown in Figure 5.

Change Material (Initial Screen)

Select View(s)   Org. Levels   Data

| Material | 1500–600 |
| Change Number | 500000000081 |
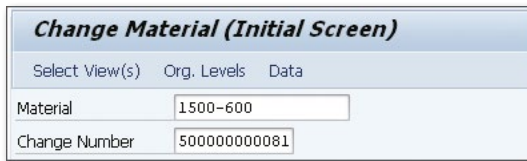
⌃ *Figure 5 Changing a Material with a Change Master Record*

Tip 49

Configuring Criteria and Cycle Counts for ABC Analysis

To exercise greater control over stock, you can configure and customize ABC analysis per unique business needs and requirements.

ABC analysis is used by the warehouse as an inventory categorization tool to allow tight control on materials that are most important to the company. The technique uses warehouse resources more efficiently as the tool triggers required cycle counts on the most important materials in the warehouse, while other materials are counted less frequently. Before assigning a value to a material, a company must decide on the criteria for each value. For example, "A" materials could be items that are just-in-time materials frequently used in production or items that are frequently used but over a certain value. After the criteria are established for assigning the values, the company can decide how many times they need each category to be counted, and then what materials are assigned a value.

Many companies implement an ABC analysis, but don't configure the proper analysis and instead use the default values in SAP. In this tip, we'll show you that establishing the criteria and configuring the cycle counts to the way a company operates will provide greater business benefits from this inventory technique.

✅ And Here's How…

After establishing the criteria for the ABC analysis, configure the decided ABC indicators. For example, if you require five levels of ABC indicators, enter the indicators, along with the requirements for counting, in configuration. To do this, use Transaction OMCO or the following configuration menu:

The initial screen shows the ABC indicators for each plant, along with the number of counts required per fiscal year, the float days (i.e., the number of workdays a planned count date may vary from the current date), and the percentage of materials that should be assigned to the indicator. If your company requires more than three indicators, you can add a fourth or fifth or whatever is needed, along with the number of counts per year and the percentage of materials. Remember that the percentages for the ABC indicators for a specific plant should add up to 100; otherwise, the system gives you an error message.

Figure 1 shows the ABC indicators for plant 3000; there are four indicators which vary from 12 counts a year to 1 count a year.

Plnt	CC phys. inv. ind.	No.of phys.inv.	Interval	Float time	Percentage
3000	A	12	20	5	56
3000	B	6	41	10	28
3000	C	3	83	20	14
3000	D	1	250		2

⌃ *Figure 1 ABC Indicators for Plant 3000*
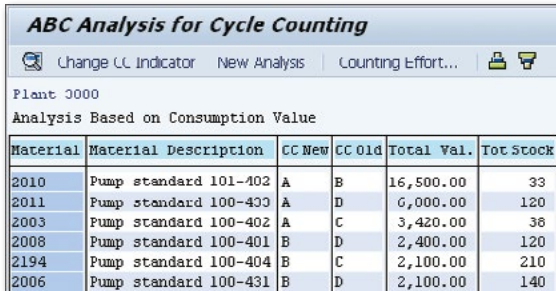
Configure the System to Automatically Assign ABC Indicators

The percentages are used when you want the system to automatically assign an ABC indicator to each of the materials in a plant. To automatically assign the correct ABC indicator to materials, use Transaction MIBC or the following menu path:

The initial screen shows a selection screen where you can enter a specific plant or material type. You can select to have the program assign ABC indicators on consumption or requirements and also determine the dates you'd like the analysis to cover. The program can be run with a display, where you can check the program's proposed values or just update the values. Figure 2 shows the display screen for

the proposed ABC indicators, such as the old and new indicators, as well as the value and stock level. If you approve of the changes, execute the program to update the values.
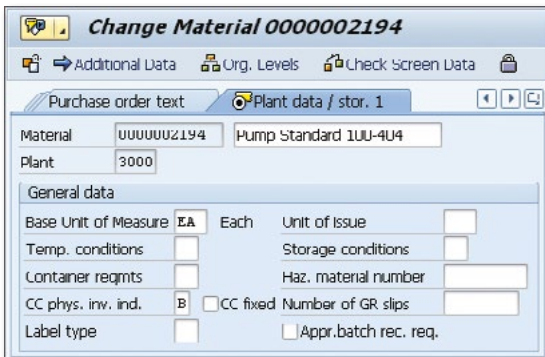
Manually Change ABC Indicators

If you don't want to run the analysis on a range of materials but do want to manually change the ABC indicator for a single material, use Transaction MM02 or the following menu path:

SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the initial screen of Transaction MM02, enter the material number, select the General Plant Data / Storage 1 view, and enter the relevant plant. The material screen will appear for the plant, and you can change the field CC Phys. Inv Ind to the value you require. Figure 3 shows that the ABC indicator has been changed manually to a "B."

Tip 50

Changing the Level of Inventory Management System Messages

System messages can be either a warning or an error; you can change the level if needed per your organization's requirements.

When you post inventory transactions, you may receive a warning or an error message. Usually the warning message will not stop you from posting the transaction, while an error message will. It's possible to change the level of a message in configuration so that a message that is normally a warning can become an error, and vice versa. Although it's possible to do this, any changes should be consistent with the policies and procedures of the company. For example, if you're performing a goods receipt and a warning message is displayed to inform you that you've have entered a document date in the future, you can change this in configuration if the procedures of the company require that no future document dates be entered.

✅ And Here's How…

To change the level of a specific message, use Transaction OMCQ or the following configuration menu:

> IMG • MATERIALS MANAGEMENT • INVENTORY MANAGEMENT AND PHYSICAL INVENTORY • DEFINE ATTRIBUTES OF SYSTEM MESSAGES • SETTINGS FOR SYSTEM MESSAGES

The transaction shows you the system messages that can be generated and whether they are warning messages or error messages. Figure 1 shows that the message generated during a goods receipt during a shortfall in the shelf life of the batch is currently an error message.

To show this, process a goods receipt for a material using MIGO. If the shelf life date for the batch is entered as less than the number of days required, based on the material master, the transaction displays an error as shown in Figure 2.

« *Figure 2* Error Message for
a Shortfall of Batch Shelf Life

Then, go into the configuration transaction for the inventory management system messages, OMCQ, and change the system message category for this message from error to warning. In Figure 3, you can see that the system message category field, Cat, has been changed from E for an error to W for a warning.

« *Figure 3* Message for a
Shortfall of Batch Shelf Life Is
Configured as a Warning

Now that the message is configured as a warning and not an error, a goods receipt (via Transaction MIGO) can be performed for exactly the same material and shelf life. This time, it doesn't produce an error, and the items post, despite the warning message. The warning message, as shown in Figure 4, is shown in the message log for the goods receipt transaction.

« *Figure 4* Warning Message for a Shortfall of Batch Shelf Life

Tip **51**

Adding Multiple Manufacturer Part Numbers to a Material

When some materials that are used at a plant are from multiple manufacturers, there's a simple way for you to adjust the manufacturer part numbers.

If your company uses manufacturer part numbers (MPN), the most common instance is that the MPN is added to the material master so that there's a 1:1 relationship. However, on occasion, you may have a material supplied through a vendor but manufactured by more than one company. In this instance, you can't have a 1:1 relationship between your internal material number and the MPN. To have multiple MPNs for a single internal material, you can create separate MPN material records.

✓ And Here's How...

To allow an internal material to have a relationship with manufacturer part number, the material must be flagged. To change the material master record, use Transaction MM02 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

On the first screen of the transaction, enter in the material number used at your company, followed by the organizational view (which in this case is purchasing), and the plant.

Figure 1 shows the Purchasing view for the material. To ensure that you can assign an MPN to this internal material, make sure that a Manufacturing Part Profile has been assigned. If there's a 1:1 relationship between the internal material and a manufacturer's material, enter the MPN in the Mfr Part Number field. However, if there's more than one MPN for an internal material number, leave the Mfr Part Number field blank.

⌃ *Figure 1* Material Master Record Changed to Allow Multiple MPNs

You can set up a manufacturer part number in the same way as an internal material, using Transaction MM01 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Create • Immediately

On the initial screen, enter the manufacturing part number if there's no internal number assignment. Also enter the industry sector you're using for your company and the material type, which is defined as HERS or described as manufacturer part, depending on your system.

On the next screen, select the Purchasing view. Figure 2 shows the Purchasing view for the MPN. In this screen, enter the Material Description, the internal material number this MPN refers to, and the specific MPN number used by the manufacturer.

After entering the information, save the transaction, and a new MPN is created. If there are many MPNs for one specific material, you can create more MPNs using this method. Each time, the new MPN should have the same internal material number entered.

Now that you have a number of MPNs associated with one internal material number, when creating a purchase order you can determine which MPN should be ordered from the vendor. Create a purchase order by using Transaction ME21N or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • PURCHASE ORDER • CREATE • VENDOR/SUPPLYING PLANT KNOWN

When you go to enter a material, use function key F4 to show the matchcodes available. One of those should be for the manufacturer part, and by entering the internal material number; you should see all the MPNs associated with that material. Figure 3 shows the two MPNs associated with material 2229.

From the matchcode, select the specific MPN you require and add it to the purchase order. Because the MPN has a material master record, the MPN number is shown on the purchase order.

Tip 52

Performing a Goods Receipt without Delivery

You can create a goods receipt for a material even when the delivery hasn't been made to facilitate the material check process.

Material is often checked by the quality department to establish that it's within tolerances and can be used in the production process. The process many companies would normally follow is to have the vendor send the stock to the plant, receive it, and then test it prior to its being used in production. If the material is outside the specified tolerances, it will have to be returned to the vendor, which can be time consuming and delay production due to waiting for suitable material.

It would be better for some companies to test the material at the vendor's site prior to shipment so that production can guarantee that the material being received can be used immediately. This can now be achieved by performing a goods receipt into valuated blocked stock. This means that a goods receipt is performed that generates an accounting document as the stock becomes the property of the customer, although it has not been delivered.

✅ And Here's How…

To perform a goods receipt while the material is still at the vendor's site, use Transaction MIGO or the following menu path:

> SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Goods Movement (MIGO)

The goods receipt is performed for a purchase order that has been created. Instead of performing a receipt using the normal movement type for a purchase order, which is 101, the receipt should be performed using movement type 107, as shown in Figure 1.

⌃ *Figure 1 Goods Receipt Using Movement Type 107*

The movement type 107 receives the material into a type of stock called *valuated blocked stock*. This means that the items are received and an accounting document is generated, but the goods are not delivered to the customer. The items remain at the vendor's site until the necessary tests and approvals can be made. The vendor can invoice for the material that's been receipted into valuated blocked stock. In this case, you can see in the purchase order overview that the items have been invoiced but not delivered, as shown in Figure 2.

To do this, use Transaction ME2M or the following menu path:

SAP • Logistics • Materials Management • Purchasing • Purchase Order • List Displays • By Material

⌃ *Figure 2 Purchase Order View Shows Items Invoiced but Not Delivered*

The items can remain in valuated blocked stock until they're tested and allowed to be shipped to the customer. However, if the items aren't suitable for the customer, they can be reversed out of valuated blocked stock while they're still at the vendor's site. This is achieved by using the reverse of movement type 107, which is movement type 108.

Once the items are shipped to the customer, they'll need to undergo another goods receipt when they arrive at the plant. Use Transaction MIGO again, this time with movement type 109, which will move the material from valuated blocked stock to unrestricted stock, as shown in Figure 3.

Figure 3 *Goods Receipt of Valuated Blocked Stock to Unrestricted Stock*

Processing Mass Changes to Multiple Batches

You can use a simple transaction to easily make a change to a large number of batches for a material.

When batches are created for a material, they're given certain values, such as date of manufacturer, shelf life expiry date, and date of next inspection. These values are specific to the batch, but on occasion there are instances when the same change needs to be applied to a large number of batches. For example, if a vendor calls and says that a number of batches have been found to be faulty, you should flag all those batches as restricted use so that they're not used in production. When this type of event occurs, you'll need to perform mass processing on selected batches, which we'll demonstrate in this tip.

✅ And Here's How…

It's easy enough to change the values on a single batch, but when you need to make the same change on dozens or hundreds of batches, the mass processing of batches is a faster and more accurate method. To do this, use Transaction MSC5N or the following menu path:

> SAP • Logistics • Materials Management • Central Functions • Batch Management • Batch • Mass Processing

The initial screen requires that you enter the material number or numbers associated with the batches, as well as the batch numbers, as shown in Figure 1.

The next screen, as shown in Figure 2, shows you the batches that have been found that correspond to the selection you entered. You can make changes to these batches. To the right of this list is the batch record relating to the batch you select from this list.

« *Figure 2* Batches that Will Be Part of the Mass Processing

Then, select the first batch you require, make the required change, save the change, and then click on the next batch, make that change, save, and so on. This method saves you from having to back out and then enter the batch using Transaction MSC2N, the change batch transaction.

When you save each batch, the transaction will display a message, similar to that shown in Figure 3.

⌃ *Figure 3* Change to a Batch Is Saved while Processing Transaction MSC5N

After each save, you aren't taken out of the transaction, so you can quickly select the next batch and carry on.

Tip 54

Setting Up Split Valuation with Batches

You can set up split valuation in your SAP system to treat a single material in different ways.

A company may have a single material type in stock, but the material may be valued differently for a number of reasons, which is called *split valuation*. A common reason for split valuation is when the warehouse contains batches manufactured in house and batches purchased from a vendor. Sometimes batches are valuated differently when the quality characteristics of the batches differ or if the batches are manufacturing in different countries. Although split valuation isn't used at many companies, it's important to understand the underlying principles and know how to set it up in the SAP system if required.

✓ And Here's How…

To allow a material to have split valuation, ensure that the valuation category has been entered in the Accounting view of the material master. To change the material master record, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the first screen of the transaction, enter the material number used at your company; followed by the organizational view, which in this case is accounting;

and the plant. Figure 1 shows the Accounting view, and the field that should be entered to allow split valuation is the Valuation Category field.

After you enter and save that field, go back in and create the valuation type views for the material using Transaction MM01. After you select the Accounting view, the transaction offers you the option of entering a valuation type. Figure 2 shows that you can enter a valuation type at this point.

Enter the details for the valuation type, such as the valuation class and moving average price of the material, in the following screen. Figure 3 shows these entries for the NEW valuation type.

When a goods receipt is performed for this material, you can select the valuation type for the batch that is received. To perform the goods receipt, use Transaction MIGO or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Goods Receipt • For Purchase Order • MIGO – PO Number Known

When entering the details of the material being received, the batch information, as shown in Figure 4, allows you to enter the valuation type for the batch, as the material is subject to split valuation.

⌃   *Figure 4 Entering Valuation Type for the Batch during Goods Receipt*

Creating a System Check for the Shelf Life Expiration Date

You can set up the maximum shelf life for a material in the system so that each batch expiry date is checked against the shelf life for the material.

When batches are created for a material, they may only be useful or within tolerance for a certain period of time. For example, food often has sell-by dates and expiry dates, and some finished goods are made from components that degrade over time, which also need expiry dates. When the batch is created through a goods receipt, it's possible to enter a shelf life expiration date. However, depending on the values entered into the material master, the shelf life expiration date entered at goods receipt time may not be valid, and the batch can't be accepted. If no maximum shelf life is set up for a material, not all batches received will be checked for the shelf life expiration date, and they may not be suitable for production purposes. This would lead to batches in the warehouse that can't be used and that would ultimately be scrapped. This tip shows how to create a system check for the shelf life expiration of a batch.

✅ And Here's How…

The material master record holds information about the maximum time a batch can be stored and the minimum shelf life a batch can have to be stored in the warehouse. This information is entered into the material master record on the GENERAL PLANT DATA/STORAGE 1 screen. To enter or review these values, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

Enter the material you want to change and select the General Plant Data/Storage 1 view, along with the plant where the batches will be stored. The General Plant Data/Storage 1 screen has a section for shelf life data, as shown in Figure 1.
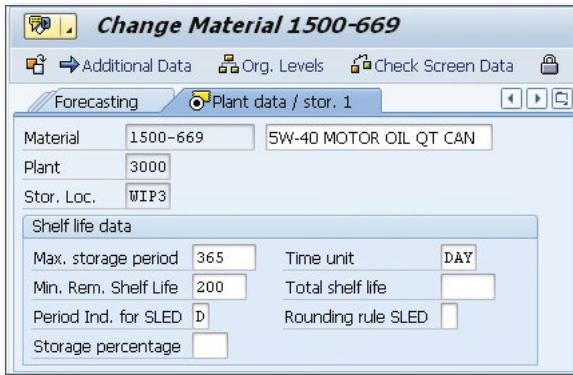
« *Figure 1 Shelf Life Data on Material Master Record*

In this material record, the Max. Storage Period field has been entered with a value of 365 days as the longest period a material can be stored in the warehouse, and the Min. Rem. Shelf Life field has a value of 200 days entered as the minimum shelf life a batch can have when it's receipted into the warehouse.

When you perform a goods receipt using Transaction MIGO, you're required to enter the shelf life expiry date of each batch entered, as shown in Figure 2.
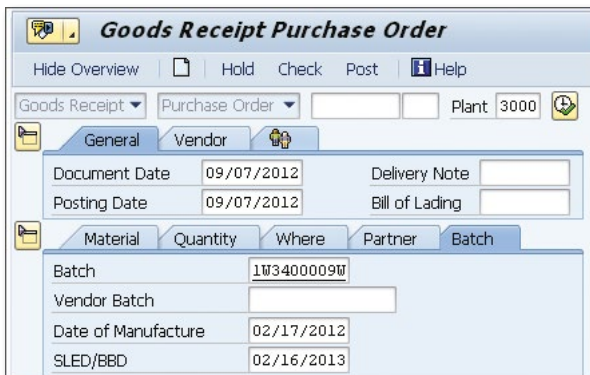
« *Figure 2 Shelf Life Expiry Date Entered for Incoming Batch*

The system then checks the shelf life you entered against the Min. Rem. Shelf Life field on the material master to verify that there's enough shelf life to allow the batch to be accepted. In this example, the minimum remaining shelf life accepted, per the material master record, is 200 days, but the incoming batch on the goods receipt has only 162 days' shelf life remaining. Therefore, the goods receipt doesn't post, and displays a message informing the user, as shown in Figure 3.

Typ	Item	Message text	LTxt
🔴	1	Shortfall of 38 days against remaining shelf life	

✓ 🔓 Choose 🔓 Save 🖨 🔍 🔍 🛑 0 🔴 1 ⚠ 0 ⬛ 0 ✖

⤊ *Figure 3 Error Message Showing a Shortfall of Shelf Life for a Batch*

Tip 56

Configuring the Reversal of Goods Receipt after Invoice

You can adjust your system configuration to return faulty items to a vendor even after the invoice has been paid.

In the normal goods receipt process, items are received in the warehouse and a three-way match is made by the accounts payable department to ensure that there are no variances among the purchase order, goods receipt, and invoice. Your company then pays the invoice, and the process is complete.

However, on occasion, the materials from the vendor are found at a later date to be incorrect or unusable. If possible, you want to return the materials to the vendor, but the SAP system won't allow you to because the invoice has already been paid. Your company can make an adjustment to the configuration to allow returns to be made to the vendor despite that the invoice has already been paid.

✓ And Here's How…

A number of movement types can be used to return material to a vendor, such as movement type 102, reversal of purchase order; or movement type 122, return to vendor. You can make changes to the configuration to allow specific movement types to be used to return a material to a vendor, despite an invoice having been processed. To select the movement types your company wants to use to allow material to be returned to a vendor, despite an invoice being processed, select Transaction OMBZ or use the following configuration menu:

The transaction displays a list of valid movement types configured to allow material to be returned. Figure 1 shows that there is a checkbox beside each movement type; highlight it if you want the associated movement type to be used for returns to a vendor. Note that this configuration is across the client and valid for all plants. Give consideration before performing this configuration.
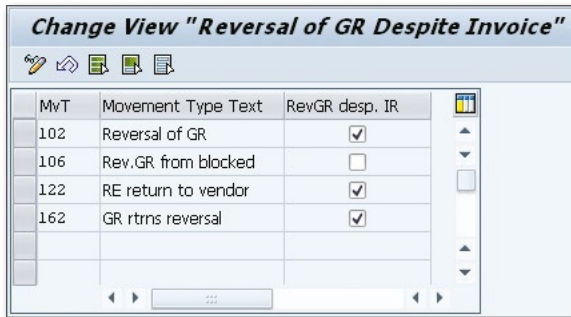
⌃ *Figure 1 Configuration for Allowing Returns Despite an Invoice*

When you want to perform a reversal of a goods receipt, use Transaction MIGO or the following menu path:

The movement type for a reversal depends on the original document. For example, movement type 106 is for the reversal of items from blocked stock. If the configuration isn't set to allow a return despite an invoice, you get an error message when you try to perform a return, as shown in Figure 2.

⌃ *Figure 2 Error Message when Performing a Reversal that is Not Allowed*

Tip 57

Activating Storage Location Authorization

Some storage locations may require additional security due to the nature of the goods stored there; you can easily configure your system to trigger specific layers of authorization.

Inventory staff generally has access to storage locations within the plant they work in. However, depending on the nature of the goods your company manufactures or the raw materials used in the production of your goods, there may be instances when your company wants to restrict access to certain storage locations. For example, in facilities that manufacture high-value finished goods, the company may want to restrict the visibility of those goods to inventory supervisors only. To implement this additional security, the company can configure the system to trigger a layer of authorizations specifically to restrict some users from having system goods movement access to certain storage locations. So, based on a user's authorization, they may not be allowed to perform a goods receipt into a specific storage location.

✅ And Here's How…

To restrict users from having visibility to certain storage locations, configure the system so that the authorization is available to the security team. Use the following configuration menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Authorization Management • Authorization Check for Storage Locations

This transaction allows you to require additional authorization for visibility for the storage locations you highlight. Figure 1 shows that for plant 3000, storage locations 0001 and 0003 require additional authorization in order to perform goods movements or have other visibility.

« *Figure 1 Configuration for Authorization of Specific Storage Locations*

Once you enter this configuration, the system looks at the authorization object M_MSEG_LGO for each user to determine if they have authorization to perform certain processes for this storage location. Your security team can use this authorization object to allow a user to create a goods movement for that specific storage location, have change access to a goods movement, or have just display access to a goods movement. The authorization can also be changed to allow certain goods movements or disallow others. Figure 2 shows the M_MSEG_LGO authorization object, whereby a role assigned to a user can be authorized to access specific movement types for a storage location.

« *Figure 2 Authorization Object M_MSEG_LGO for Goods Movement at a Storage Location*

As a result of this configuration change, the level of sophistication of the authorization process in inventory management is certainly increased, but with it comes a significant increase in maintenance for the inventory team and your security team. It should be stressed to management that the decision to use storage location authorization should be weighed against the increased resources required to implement and maintain the authorization changes.

Tip 58

Processing a Free-of-Charge Delivery

If your vendor sends a shipment of goods for free, whether as a rebate or a gesture of goodwill, you can process it without triggering a financial document.

When items are received into the warehouse, they're usually received against a purchase order or from production. Whatever the receipt, the transaction triggers a financial document. On occasion, a vendor sends a shipment that isn't related to a purchase order, but will be a free-of-charge delivery that may be a result of a specific rebate program or goodwill from a vendor. You need to be able to receive these items so that they update the quantity of the goods in stock but don't trigger a financial document. We'll show you how to accomplish that in this tip.

✓ And Here's How…

To receive the free-of-charge items from the vendor, use the transaction you normally use for goods receipt, MIGO, or the following menu path:

> SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Goods Movement (MIGO)

The goods receipt transaction for a free-of-charge delivery uses movement type 511. Figure 1 shows that the movement type, material, and quantity have been entered. Enter the vendor and, if appropriate, the batch number, in the partner screen.
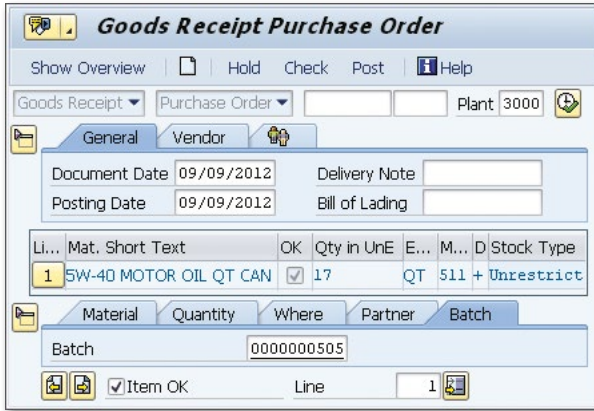
⌃ *Figure 1 Goods Receipt for Free-of-Charge Delivery*

The goods receipt moves the free-of-charge goods into stock, as shown in Figure 2, but no general ledger documents are created.

⌃ *Figure 2 Stock Overview Showing the Batch Received Free of Charge*

To view the receipt of the materials, use the stock overview Transaction MMBE or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Environ-ment • Stock • Stock Overview

Tip **59**

Reviewing Inventory Turnover

You can selectively review a company's inventory turnover, which is an important indicator of how efficiently a company manages its assets.

The inventory turnover ratio is represented as a measure of the number of times a company sells through its inventory during the year. So if a company has an inventory turnover ratio of six for an item, it's selling through the item once every two months. Companies with fast-moving stocks will see very high inventory turnover ratios, while slow-moving stock will have a very low turnover ratio.

Companies should review the inventory turnover ratios for their items to understand which items aren't selling. With this information on their materials, they can make informed production and pricing decisions. In this tip, we'll show you how to access and display the inventory turnover figures that will help a company make decisions about production and material pricing.

✅ And Here's How…

A company may be interested in the inventory turnover of specific materials or materials at a particular plant or for sales organization. The transaction used to display inventory turnover is MC44 and can be found using the following menu path:

> SAP • Logistics • Materials Management • Inventory Management • Environment • Inventory Controlling • Environment • Document Evaluations • Inventory Turnover

Transaction MC44 has a wide range of selection criteria that allows inventory turnover to be displayed in a number of different ways. Figure 1 shows the initial screen of the transaction and the different areas that can be analyzed.

« *Figure 1 Areas that Can Be Analyzed for Inventory Turnover*

In addition to these areas, you can also view the materials with the greatest or lowest inventory turnover ratios on a scope of ranking list on the initial screen of the transaction, as shown in Figure 2.

« *Figure 2 Selection Criteria for the Inventory Turnover Report*

Figure 3 shows the inventory turnover report for the materials with the greatest inventory turnover, based on the selection in Figure 2.

« *Figure 3 Materials with the Greatest Inventory Turnover Ratios*

The inventory turnover report gives management a great deal of information quickly for many different selection criteria. By periodically considering the inventory turnover ratios of its materials, a company can make decisions about the production and sale of the materials it produces.

Clearing Differences between Inventory and Warehouse Management Inventories

You can configure and impose limitation in the SAP system when clearing differences between Inventory Management (IM) and Warehouse Management (WM).

Because the Inventory Management (IM) and Warehouse Management (WM) applications operate at different levels, material quantities in the WM locations sometimes don't synchronize with the quantities in IM. This discrepancy can occur after a cycle count has been performed for storage bins in the warehouse. The count may lead to a value in the warehouse that differs from the amount in the IM storage location.
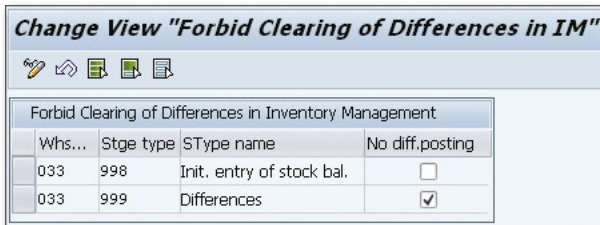
To ensure that the IM and WM quantities are in sync, a transaction offsets the differences. However, the count in the warehouse may result in a difference that can't be explained and requires more investigation. The finance or logistics staff may want to keep that IM/WM difference in place until the investigation is complete but allow other minor differences to be corrected. You need to configure the system to allow this to occur.

✓ And Here's How…

The logistics staff can clear the differences between the IM stock and WM stock, so configuration needs to stop any differences still being investigated from being cleared. To do this, stop the clearing transaction from being applied to certain storage types in a warehouse using the transaction in the following menu path:

> IMG • Logistics Execution • Warehouse Management • Activities • Physical Inventory • Clear Differences (Interface to Inventory Management) • Do Not Allow Clearing in Storage Types

The transaction shows a list of warehouses and the associated storage types, as shown in Figure 1. The third column, No diff. posting, is a checkbox where you highlight the field so that the IM/WM clearing program doesn't look at the contents of that storage type.

Change View "Forbid Clearing of Differences in IM"

Whs...	Stge type	SType name	No diff.posting
033	998	Init. entry of stock bal.	☐
033	999	Differences	☑

⌃   *Figure 1*   *Configuration to Stop the Clearing of Differences in Specific Storage Types*

This means that if you have one storage type per warehouse, you can designate it as the storage type where differences are placed while they're being investigated. SAP suggests that only one storage location per warehouse not allow the clearing of inventory differences.

To clear the differences between IM and WM, execute Transaction LI21 or use the following menu path:

> SAP • Logistics • Logistics Execution • Internal Warehouse Processes • Physical Inventory • In Warehouse Management • Clear Differences • Inventory Management

The initial screen of LI21, as shown in Figure 2, requires you to enter the warehouse number and storage location, as well as other optional fields, such as storage bin.

Clearing of Differences in Inventory Management

Warehouse number	033
Storage type	999
Storage bin	to
Additional Info for Posting	
Document Date	09/10/2012
Posting Date	09/10/2012

⌃ *Figure 2 Initial Screen for Clearing IM/WM Differences*

Because we've changed the configuration to stop the clearing program from pro-
cessing data from storage type 999 in warehouse 033, the program will error out
with a message as shown in Figure 3.

🛑 Clearing differences not possible for storage type 999
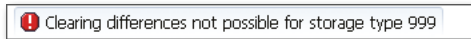
⌃ *Figure 3 Error Message when Trying to Clear IM/WM Differences*

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Tip 61

Setting Up Early Warnings to Improve Warehouse Efficiency

You can set up early warnings in the system to improve the efficiency of the warehouse and alert management of important changes.

As changes occur in the warehouse, it's important for management to be informed quickly, especially if these changes affect the production of materials. You can achieve this by setting up early warnings that immediately send a message to management if certain requirements are triggered. The early warning uses the information structures to determine when certain events have occurred.

✅ And Here's How…

The early warning system allows you to create exceptions that, when triggered, send a message to the appropriate manager. The exceptions use information structures that include batches, inventory controlling, stock and requirement analysis, and warehouse stock. It's important that you understand the characteristics of each of the information structures before creating an exception.

To create an exception in the early warning system, use Transaction MC/1 or the following menu path:

> SAP • Logistics • Materials Management • Inventory Management • Environment • Inventory Controlling • Early Warning System • Exception • Create

The initial screen for the exception requires you to enter an exception number, description, and the information structure you'll be using. Figure 1 shows that

for exception 2, we'll use the information structure S094, which contains data for stock/requirements analysis.

⌃   *Figure 1 Creating an Early Warning Exception*

The next screen allows you to select the characteristics, which can be found as part of the information structure. In this case, all the characteristics are selected. Then, select the REQUIREMENTS button, which allows you to select the key figures for the exception. Figure 2 shows that in this case, just the safety stock is selected for the exception.

⌃   *Figure 2 Selecting the Key Figures for the Exception Requirement*

At this point, click on the DEFINE REQUIREMENT button; here, define what the requirement is that will trigger an early warning exception. Figure 3 shows that in this instance, the early warning is triggered when the safety stock of a material falls below 20.

≪   *Figure 3 Requirement that Triggers an Early Warning*

After entering the requirement, click the FOLLOW-UP PROCESSING button. Here, add in the person who will be contacted when the exception occurs. Figure 4 shows that in this instance, the production manager is to be emailed in the event of an early warning.

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⌃ *Figure 4 Entering the Person Who Is Contacted When an Exception Occurs*

When you've entered all the information, save the exception. Run the exception using Transaction MCYG or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Environment • Inventory Controlling • Early Warning System • Exception Analysis

The transaction allows you to enter the parameters you require, such as plant, material, or the period to analyze. Many companies automate this by creating a variant of the parameters they require and setting up a job to run the transaction for the exceptions they require. This can be run periodically, hourly, or daily as required. When an exception is triggered and a report is sent to the user defined in the exception, the report displays information similar to that found in Figure 5.

⌃ *Figure 5 Early Warning Exception Report Sent to User*

Re-Opening a Period Closing to Make a Change

If a period is accidentally closed before all postings have been made, you can re-open it with certain precautions.

Each month, the finance department performs a month-end close for each company code. However, sometimes the inventory postings that need to be made are missed, or postings that were made need to be reversed. Whatever the case, you have the ability to re-open a period after it's been closed in the Materials Management area. Opening a period to make a change isn't something that should be performed without approval and can cause inconsistencies if used incorrectly; we'll explain the essential prerequisites you need to perform before this can happen.

✓ And Here's How…

To re-open a period that's been closed for inventory transactions, use Transaction MMPI. However, before using the transaction, follow certain steps and, preferably, perform this task when there are no other users on the system or transactions being processed. You may want to check with the finance department before making changes; they may require a report, such as MB5B, which shows the stock on a specific posting date.

First, only use the transaction when you have all the information for the transactions that need to be reversed. Go to Transaction SU01, enter your user ID, and add the user parameter MMPI_READ_NOTE with the date on which you're making the changes. This limits any possibility that changes will be made on any other day.

Then execute Transaction MMPI, making sure you enter the correct period information, as shown in Figure 1.

After re-opening the period, quickly perform the needed changes. Re-close the period once you've made the relevant checks. To close the period, use Transaction MMPV or follow this SAP menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • OTHER • CLOSE PERIOD

The initial screen of MMPV requires you to enter the company code for which you want to close the re-opened period. Then, enter the period that will become the current period. For example, if the re-opened period you're closing is period eight, the current period will be nine, as shown in Figure 2.

Tip 63

Creating Automatic Scheduling Agreement Lines

You can configure the system to automatically create scheduling agreement lines.

If a scheduling agreement has been created with a vendor for a material, the scheduling agreement lines can be automatically generated from the MRP process if the correct steps have been taken. The schedule will be generated by MRP based on the requirements of the production department or the values in the material master. Let's walk through the procedural steps to execute this little-known process.

✅ And Here's How…

The first step is to create the scheduling agreement with the vendor for the material required. The transaction to create the scheduling agreement is ME31L and can be found using the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Outline Agreement • Scheduling Agreement • Create • Vendor Known

After you've created the scheduling agreement, enter it into the source list that should exist for the material. Use Transaction ME01 or the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Source List • Maintain

In the initial screen, enter the material and the plant where the source list is maintained. The next screen shows you all the vendors that are valid suppliers of the specific material at that plant. In Figure 1, vendor 1011 is the only valid vendor for the material.
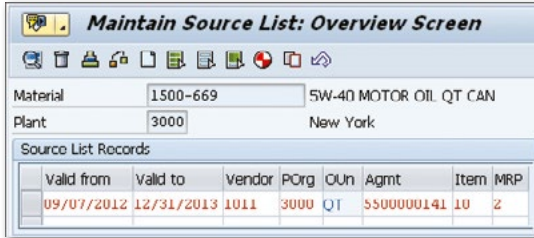
« *Figure 1 Source List with Scheduling Agreement Added*

Maintain the record with the scheduling agreement number you've just created with that vendor, in the A<small>GMT</small> field. In the field marked MRP, enter a value that represents the usage of the source list. Entering a "2" into the field means that the source of supply is a scheduling agreement, and MRP can create a delivery schedule line with respect to any requirement it finds.

Next, save the source list and then run MRP using Transaction MD03 or the following menu path:

SAP • L<small>OGISTICS</small> • M<small>ATERIALS</small> M<small>ANAGEMENT</small> • M<small>ATERIALS</small> R<small>EQUIREMENT</small> P<small>LANNING</small> • MRP • P<small>LANNING</small> • S<small>INGLE</small>-I<small>TEM</small>, S<small>INGLE</small>-L<small>EVEL</small>

The initial screen requires you to enter the material and plant, as shown in Figure 2. Ensure that the SA D<small>ELIV</small>. S<small>CHED</small>. L<small>INES</small> field has the correct value, "3" for schedule lines, and that the D<small>ISPLAY</small> R<small>ESULTS</small> <small>BEFORE</small> T<small>HEY</small> A<small>RE</small> S<small>AVED</small> field is checked.
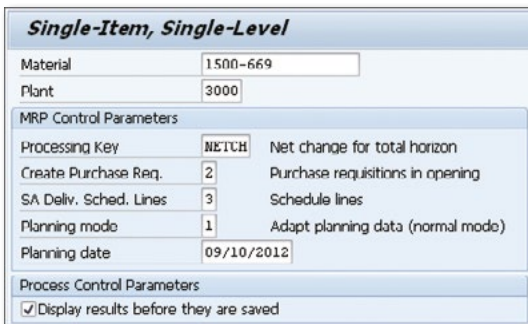
« *Figure 2 Initial Screen for Running Single-Item, Single-Level MRP*

When you execute the transaction, the MRP list is displayed for the material before it's saved so you can check the results. Figure 3 shows the results for the material; the current stock, 60, is less than the safety stock, which is 200, so there's a requirement. The MRP run found a purchase order for a quantity of 6, but this still left a requirement of 134. The system then found the scheduling agreement and automatically created a scheduling agreement line for a quantity of 134.

Planning Result: Individual Lines

	Firm date		Procurement proposal		Production order		

Material	1500-669		5W-40 MOTOR OIL QT CAN			
MRP Area	3000		New York			
Plant	3000	MRP Type	P1	Base Unit	QT	

A..	Date	MRP ...	MRP element data	E..	Rec./reqd qty	Avail. quantity
	09/10/2012	Stock		96		60
	09/10/2012	SafeSt	Safety Stock		200-	140-
	09/11/2012	----->	End of Planning			
	09/24/2012	PchOrd	0010000116/00010	10	6	134-
	09/28/2012	SchLne	5500000141/00010	30	134	0

⌃ *Figure 3 Scheduling Agreement Line Automatically Created by MRP*

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Tip 64

Changing the Layout of the Stock Overview Report

Depending on the needs of the warehouse, you can alter the appearance of the online Stock Overview Report.

Warehouses all operate differently, and not everyone who works in the warehouse wants to see the same information in the same format. For example, someone working in an area that supplies materials to production wants to see the unrestricted stock. Someone else working in the returns area may not be interested in unrestricted stock, but may be more interested in the quantity of returns for a material.
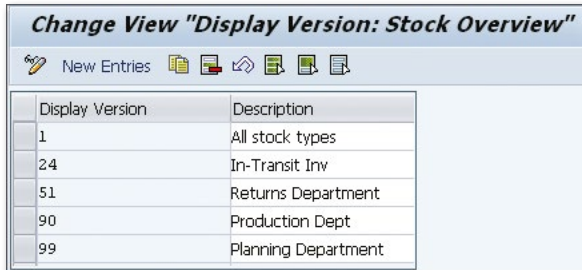
When inventory personnel look at the stock overview report, they don't have to see the same layout. Each department should decide how it wants the data to appear on its version of the Stock Overview Report. You can give them a list of fields to select from based on the fields available in the configuration. When the departments decide how they want their versions to appear, you configure those in the system. In this tip, we'll show you how this report can be tailored to the ways each department would like to see the data.

✅ And Here's How…

You can alter the Stock Overview Report using Transaction OMBG or by following configuration menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Reporting • Define Stock List Display

The first screen gives you three options. Select the first option, DISPLAY VERSION, which shows a list of the current versions of the Stock Overview Report that have already been configured, as seen in Figure 1.
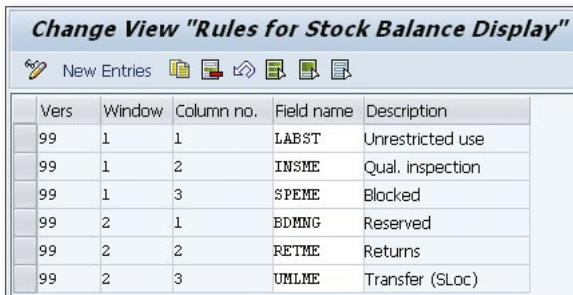
Change View "Display Version: Stock Overview"

New Entries

Display Version	Description
1	All stock types
24	In-Transit Inv
51	Returns Department
90	Production Dept
99	Planning Department

⌃ **Figure 1** Versions of the Stock Overview Report

In this screen, add your new versions; in this case, version 99 for the planning department has been added. Save your entries and return to the previous screen. After adding the new version name, structure the report based on the fields required by the department personnel. Select the RULES FOR DISPLAY OF STOCK BALANCES, which then shows you a list of screens for each of the existing versions.

Figure 2 shows that for the new version created, version 99, you can add the fields you want to display. In this case, the version shows only six fields: UNRESTRICTED USE, QUALITY INSPECTION, BLOCKED, RESERVED, RETURNS, and STOCK LOCATION TRANSFERS.

Change View "Rules for Stock Balance Display"

New Entries

Vers	Window	Column no.	Field name	Description
99	1	1	LABST	Unrestricted use
99	1	2	INSME	Qual. inspection
99	1	3	SPEME	Blocked
99	2	1	BDMNG	Reserved
99	2	2	RETME	Returns
99	2	3	UMLME	Transfer (SLoc)

⌃ **Figure 2** Fields to Be Displayed for the New Version of the Stock Overview Report

After adding the fields you want in the new version, save the data and exit configuration.

Next, select the new version of the Stock Overview Report from the initial screen of Transaction MMBE or use the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Environment • Stock • Stock Overview

Figure 3 shows part of the initial selection screen; here, enter the material, plant, and version 99 in the Display Version field.

⌃ **Figure 3** Selection of New Stock Overview Screen

Change your user profile to ensure that each time you use Transaction MMBE, your version is defaulted in the Display Version field. The parameter ID of this field is VNR, so enter this with the parameter value 99, or whatever value you require, into your user profile. Access your user profile from the header menu of any screen via the following menu path:

System • User Profile • Own Data • Parameters

Resetting Count Totals to Zero in Count Documents

Instead of deleting unfinished or incorrect count documents, you can save time by resetting those count documents to zero.

When a physical inventory count is started, it's usually completed and the changes are made in the inventory where appropriate. However, sometimes the counts are started and for some reason not completed, or completed but never posted. This can occur if there are problems with the count: for example, if material is incorrectly identified or labeled or if the count has to be abandoned due to an emergency.

Whatever the reason, the count would leave a number of count documents half-completed, and the decision has to be made to delete all the count documents or reset the totals to zero and start the count again. By resetting the count documents to zero, you'll save time by not having to delete all the documents and then recreate a new set.

✓ And Here's How…

There are usually a large number of physical inventory documents created for each plant each year, so it's important that the correct documents are selected to be reset. To alter the Stock Overview Report, use Transaction MI35 or the following menu path:

SAP • Logistics • Materials Management • Physical Inventory • Sessions • Set Zero Count

The initial screen, as shown in Figure 1, allows you to restrict the selection of documents you want to reset to zero. Therefore, you can enter a plant, count date, or a range of physical inventory documents. In this example, we're restricting the physical count documents to be associated with plant 3000 in fiscal years 2011 and 2012.

⤊   *Figure 1 Initial Screen for Resetting Count Documents to Zero*

The transaction then displays a list of the relevant physical count documents based on the criteria you enter. Figure 2 shows the count documents that are processed, and the count totals are reset to zero.

⤊   *Figure 2 List of Count Documents where the Count Totals Can Be Reset*

The transaction allows you to check that the documents are the ones for which you want to have the totals reset. If they aren't, cancel the transaction; otherwise, click the GENERATE SESSION icon to reset the totals for those documents.

Setting Up an Alternative Unit of Measure for a Material

When a material has different possible units of measure (for example, 1 box versus 12 units inside the box), you can ensure that all units of measure for a material have been defined correctly.
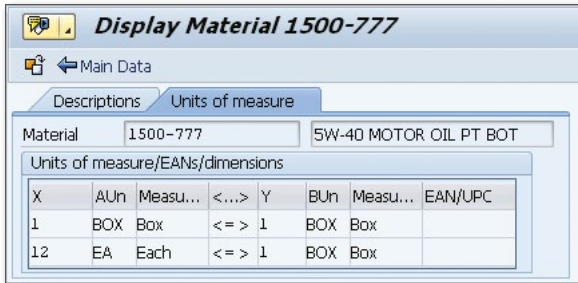
When a material is created, it's assigned a base unit of measure. This normally reflects the way the material is bought, sold, and stored. For example, an exhaust manifold for a vehicle is purchased as a single unit, stored as a single unit, and finally shipped as a single unit. However, some materials can be stored, bought, and sold as different units of measure. It's important for the unit of measure to be correctly maintained so as not to introduce errors. One common error can occur when a material is originally created with a unit of measure that reflects how the material was moved at the time of creation, but subsequently changes. In this tip, we'll show you how to convert to the unit of measure that more accurately reflects the quantity of materials.

✅ And Here's How…

A material can be created with a unit of measure that reflects how it was bought from a vendor, stored in the warehouse, and used in production. For example, a company may have purchased a material from a vendor that was always supplied in a box. The box is the base unit of measure because it was bought by the box, stored by the box, and subsequently used in production per box. An alternative unit of measure could have been set up to reflect that each box contains 12 bottles. This is set up on the material master record using Transaction MM01 or the following menu path:

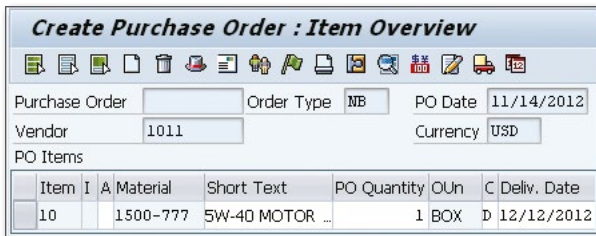SAP • Logistics • Materials Management • Material Master • Material • Create (General) • Immediately

Enter the base unit of measure on the Basic Data 1 screen; create an alternative unit of measure in the Purchasing or MRP 1 screen. The material master transaction requires that you enter the appropriate conversion for the base unit of measure to the alternate unit of measure, as shown in Figure 1.

Display Material 1500-777

Main Data

Descriptions / Units of measure

Material	1500-777				5W-40 MOTOR OIL PT BOT	

Units of measure/EANs/dimensions

X	AUn	Measu...	<...>	Y	BUn	Measu...	EAN/UPC
1	BOX	Box	< = >	1	BOX	Box	
12	EA	Each	< = >	1	BOX	Box	

⌃ *Figure 1 Conversion from Base to Alternate Unit of Measure*

In this instance, Figure 1 shows that the base unit of measure is a BOX and the alternate unit of measure is EACH, and that for each box there are 12 individual items.

When purchase orders are made with the vendor, the unit of measure uses the order unit of measure or the base unit of measure if the order unit isn't maintained. In this instance, the base unit of measure is used to order items from the vendor, as shown in Figure 2.

Create Purchase Order : Item Overview

Purchase Order			Order Type	NB	PO Date	11/14/2012
Vendor	1011				Currency	USD

PO Items

Item	I	A	Material	Short Text	PO Quantity	OUn	C	Deliv. Date
10			1500-777	5W-40 MOTOR ...	1	BOX	D	12/12/2012

⌃ *Figure 2 Creating a Purchase Order with the Base Unit of Measure*

Using the base unit of measure of a BOX is fine when all transactions are made with this unit of measure. However, if the vendor supplies part of a box and the alternate unit of measure is used, errors could appear.

In Figure 3, the goods receipt for the purchase order of one BOX can't be processed because the vendor has supplied a box with one bottle missing. In this case, the alternate unit of measure is used for the goods receipt, i.e., not a box of 12 bottles, but 11 individual bottles. Notice on the goods receipt that the system calculates these 11 bottles as 0.917 of a BOX. This is when the error can be introduced into the system. Due to the three decimal places used, there is a rounding error on this calculation. The system rounds up the figure, and when this is repeated over time, the error can be substantial.

⤊ *Figure 3 Goods Receipt of a Partial Base Unit of Measure*

In order to stop these types of errors from being introduced, it's important to always ensure that the base unit of measure is the smallest unit possible. In this instance, the individual BOTTLE should have been the base unit of measure, and the BOX should have been the alternate unit of measure for purchasing and issuing.

Part 4

Planning

Things You'll Learn in this Section

Companies that manufacture finished goods have to ensure that their customers receive their items on the date they were promised. To do this, they need to adopt a planning strategy that requires them to control the quantities of materials they purchase, plan which materials are to be produced and in what quantities, and

ensure that they're able to meet current and future customer demand at the lowest possible cost.

The planning department needs accurate information about whether items at the plant will be available at the precise time required for production. In Materials Management, we need to have the knowledge to help the planning department benefit most from the information in the system. This can be supplying them with material consumption information or helping them develop planning for several plants or exclude storage locations completely.

This part focuses on many areas in the planning functionality of materials management, such as consumption-based planning and Material Requirements Planning (MRP). The tips in this part include how to reschedule planned items, backflushing, MRP areas for subcontractors, production versions, and discontinuing materials.

Creating a Factory Calendar for a Specific Plant

You can create a factory calendar to reflect the working days and holidays of a particular company or plant.

The SAP system is loaded with a number of factory calendars that specify certain workdays and holidays. However, it's important to realize that every company may have certain workdays and holidays that are not the same as every other company. Because the goods receipts of materials and production of finished goods use the factory calendar to determine which days are working days and not days when the location is closed, it's important to make sure that the factory calendar accurately reflects your individual company's workdays and holidays. Also, be aware that some plants within the same company may recognize some federal or state holidays, while others don't.

This tip will help you to create factory calendars specific to a particular plant.

✅ And Here's How…

To create a factory calendar that has all the relevant holidays and workdays, use Transaction SCAL or the following configuration menu path:

> IMG • SAP NetWeaver • General Settings • Maintain Calendar

The initial screen, as shown in Figure 1, shows you an option to review the public holidays that have been entered, holiday calendars that have been created, and factory calendars that have been created. If you need to create a holiday calendar

because the plant or company recognizes different holidays, select the HOLIDAY CALENDAR option and click the CREATE option.
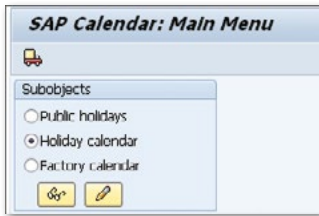

« *Figure 1 Initial Screen to Create a Holiday and Factory Calendar*

Once you've determined the holidays you need to enter into a new holiday calendar, enter them as shown in Figure 2.

« *Figure 2 Creating a New Holiday Calendar*

Assign the new holiday calendar to a new or existing factory calendar, which you select from the initial screen of SCAL, as shown in Figure 1. If the plant or company works on weekends or public holidays, enter that information, along with the holiday calendar, into the factory calendar as shown in Figure 3.
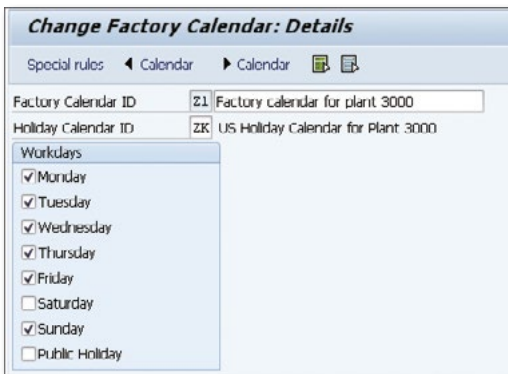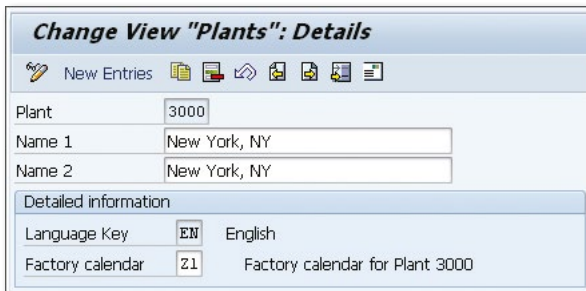

« *Figure 3 Creating a Factory Calendar*

To assign the new factory calendar to each appropriate plant, use the following configuration menu path:

> IMG • ENTERPRISE STRUCTURE • DEFINITION • LOGISTICS – GENERAL • DEFINE, COPY, DELETE, CHECK PLANT

Figure 4 shows the plant details with the new factory calendar assigned. This determines whether a certain day is a workday or holiday in planning transactions.

⌃ *Figure 4 Assigning the New Factory Calendar to the Plant*

Defining the Planning Calendar into Different Periods

The planning calendar is created so that you can define flexible period lengths for planning at the plant level.

Companies parse the calendar year into a number of periods, usually based on the financial calendar. In production, the same can be performed using the planning calendar. Unlike the financial periods, the planning calendar can define periods in a number of different ways, such as weeks and days. The benefit of doing this is that periods of different lengths can be defined to replicate how the plant is operated. Defining the correct period lengths is most important when you're using the period lot sizing procedure for a material. If the planning calendar periods aren't defined correctly, the lot sizes can be incorrect. This tip explains how you can define periods with the correct lengths that can be used successfully in the production process.

✓ And Here's How…

Before defining a planning calendar, it's important to obtain the correct information when it comes to the period lengths. Although the system generates planning periods based on the information entered, it's sometimes necessary to manually adjust them to take into account unique operational variances at the plant. To create a planning calendar, use Transaction MD25 or the following menu path:

> SAP • Logistics • Materials Management • Material Requirements Planning (MRP) • MRP • Master Data • Planning Calendar • Create Periods

On the initial screen, enter the plant and the new three-character identifier for the planning calendar you're creating. The next screen allows you to enter a description for the planning calendar and to select what happens when the first day of a period isn't a workday. Then, select the icon for PERIODS, where you determine how your periods are structured, whether it's days or weeks. Also, select which day of the week the periods are to start. Figure 1 shows that the period starts on day one, which is a Monday.

« *Figure 1* *Entering Details for the Planning Calendar*

After deciding on the periods for the new planning calendar, select the second PERIODS icon; the system generates the periods for the validity dates you enter. Figure 2 shows that the system calculates periods based on the values entered. You can manually alter the periods if they don't coincide with the workdays at the plant. After making any adjustments, save the planning calendar so that it can be used in material records.
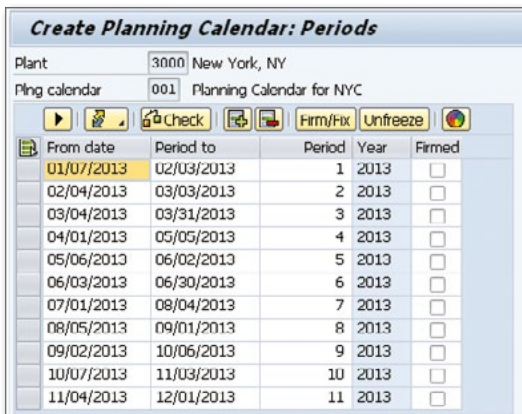
« *Figure 2* *Calculated Periods for the New Planning Calendar*

When the planning calendar is available, it can be used in the material master to assist with planning processes. Most important are materials that have a lot size linked to the planning calendar. Figure 3 shows the MRP 1 tab for a material with the lot size for planning of PK, which means that the MRP process collects the requirements for the material in the period from the planning calendar. Based on those cumulative requirements, the lot size is determined.
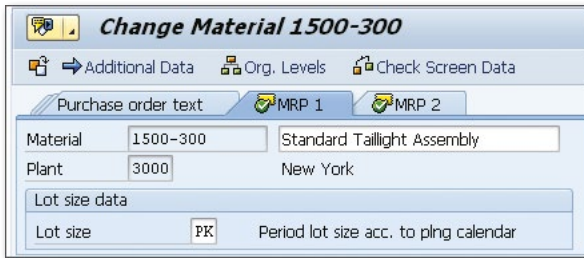

⌃ *Figure 3 Lot Size in the Material Master Record*

The planning process knows the dates from the period because the planning calendar is entered in the MRP 2 screen of the material master, as shown in Figure 4.

⌃ *Figure 4 Planning Calendar Entered into Material Master Record*

Understanding and Entering Lead Times Correctly

There are three different, helpful lead times you can enter in the system when material is brought in for production to help determine when it will be ready.

On a production order, there can be items that need to be purchased and received into the plant before they can be used. The MRP process has to be given the correct data in order calculate when the material will be available to the production order. It does this by taking into account all the different lead times that can be associated with purchasing and receiving materials. In this tip, we'll help you understand this important process to ensure that all the lead times are understood and entered correctly.

✅ And Here's How…

We'll discuss three different types of important lead times in the following sections.

Goods Receipt

The first lead time we need to consider is the *goods receipt* lead time. This is the time it takes to process a material once it arrives at the plant from the vendor. If all deliveries are processed immediately and the items arrive at the dock and are placed into the warehouse or production area, this value could be zero. However, in many facilities, there may be a backup of trailers waiting to be unloaded, and this can mean that it takes a day or two to unload trailers, process documentation, perform quality inspections, and move the goods into storage. This lead time may not apply to all materials but does need to be recorded to ensure that the MRP

process includes the delay. To enter a value for the goods receipt processing time, use Transaction MM02 or the following menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

To enter the goods receipt processing time, enter the material, select the MRP2 view from the organizational structure, and enter the relevant plant. Figure 1 shows the goods receipt processing time for the specific material.

Change Material 100-200 (Semi-finished product)

⇒Additional data   Organizational levels   Check screen data

| MRP 1 | MRP 2 | MRP 3 | MRP 4 | Forecasting |

| Material | 100-200 | 100mm Clamp - Special Order |
| Plant | 1000 | |

Scheduling

| In-house production | | days | Planned Deliv. Time | | days |
| GR Processing Time | 6 | days | Planning calendar | | |

⌃   *Figure 1 Goods Receipt Processing Time Shown in the Material Master Record*

Planned Delivery Time

The other important lead time is the length of time the vendor expects the material to take to arrive at the plant. Figure 1 shows the planned delivery time for the material, but this is an average for all vendors for that specific material. To specify a more accurate delivery time, enter the delivery time on the info record for the specific material and vendor. Use Transaction ME11 or use the following menu path to create the purchasing info record:

SAP • LOGISTICS • MATERIALS MANAGEMENT • PURCHASING • MASTER DATA • INFO RECORD • CREATE

The info record should be created for the vendor, material, purchasing organization, and plant. In the PURCHASING ORGANIZATION DATA 1 screen, add the specific planned delivery time the vendor will take to deliver the material.

⌃ *Figure 2 Planned Delivery Time for the Material*

Lead Time Based on Lot Size

There is one other lead time you can enter to give MRP more accurate information to work from. The work scheduling view on the material master allows you to enter the in-house production lead times either based on lot size or independent of lot size. Figure 3 shows the work scheduling view; if you can, enter the accurate lead times for setup, inter-operation, and processing based on a lot size. If you can't give an accurate figure or the lead time doesn't vary based on lot size, enter a number of days in the INHSEPRODTIME field, as shown in this case.

⌃ *Figure 3 In-House Production Lead Times for a Material*

Tip **70**

Planning for External Processing Time for Vendors

You can adjust the planned delivery time for each vendor since the external processing time can vary depending on the vendor the material is sourced from.

When a material is being sourced from different vendors, the time it takes for the material to arrive can vary considerably. If a vendor is local, the time it takes for the material to arrive at a plant may be a matter of days. However, if the vendor is overseas, the processing time may be weeks or months.

The material master record does allow you to enter a time for a plant-specific planned delivery time, but this doesn't take into account the vendor's ability to ship the material to the plant. It's important, therefore, to make sure you've taken the appropriate steps to define the correct planned delivery time for each vendor. We'll walk through this process in this tip.

✅ And Here's How…

The material master record has a field where you can enter the planned delivery time for the material to arrive at a specific plant. This is an average time and isn't appropriate for creating detailed plans for the production of finished goods. To enter a value into the planned delivery time, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

To enter the planned delivery time, enter the material, select the MRP 2 view from the organizational structure, and enter the relevant plant. Figure 1 shows the Planned delivery time field, which is the average delivery time for the material to arrive at the specific plant for all vendors used.

« *Figure 1 Planned Delivery Date in MRP 2 View*

However, if you want to ensure that there is a vendor specific planned delivery time for a plant, this should be added to the purchasing info record. Use Transaction ME11 or the following menu path to create the purchasing info record:

SAP • Logistics • Materials Management • Purchasing • Master Data • Info Record • Create

Create the info record for the vendor, material, purchasing organization, and plant. In the Purchasing Organization Data 1 screen, add the specific planned delivery time relevant for this vendor. Figure 2 shows that the planned delivery time for this vendor–material combination is nine days.

« *Figure 2 Planned Delivery Time in the Purchasing Info Record*

Also, change the configuration for the planned delivery time in the purchasing info record to be used in the planning process. Make the changes in the plant parameters for planning, Transaction OMI8, or use the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • CONSUMPTION BASED PLANNING • PLANT PARAMETERS • CARRY OUT OVERALL MAINTENANCE OF PLANT PARAMETERS

Enter the specific plant to maintain and then select the EXTERNAL PROCUREMENT option from the PLANNING RUN section of the PLANT PARAMETERS screen. Figure 3 shows the plant parameters; ensure that the SCHEDULING: INFO REC/AGREEMT field is checked. This allows the planning process to select the planned delivery time from either the purchasing info record or a scheduling agreement, if one has been created. This overrides the average value entered in the material master record and makes sure that the correct time is adopted by the planning process.
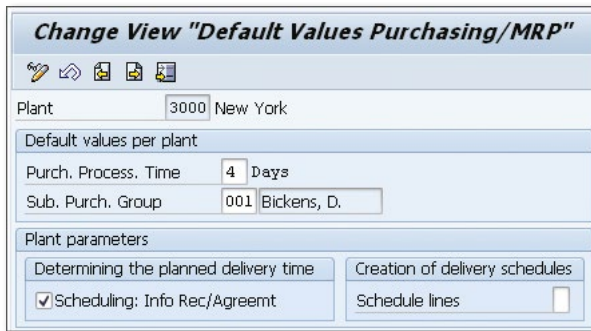
⌃ *Figure 3 Plant Parameters for the Planning Run*

Tip **71**

Adjusting the Rescheduling Horizon

You can enter new requirements so that the MRP process can reschedule existing orders.

When an additional requirement is added for a material, the MRP process reviews the planned orders that are scheduled to be processed and identify whether the additional requirement can be covered by an existing order. If the existing orders can't cover the new requirement, the MRP process can reschedule an existing order to accommodate the new requirement. This is not always possible and it will depend on the rescheduling horizon that has been entered in configuration.

The rescheduling horizon can be defined for a plant or a particular MRP group within a plant. In this tip, we'll show you how to adjust the rescheduling horizon so that the new requirements can be covered by existing planned orders.

✓ And Here's How…

To review or change the rescheduling horizon, use Transaction OMDW or the following configuration menu path:

> IMG • Materials Management • Consumption-Based Planning • Planning • MRP Calculation • Define Rescheduling Horizon

The initial screen requires you to review the configuration for a plant or MRP group. In this instance, we've selected the configuration for a plant. The first screen

allows you to select a plant, and the details show the elements of the rescheduling check, as shown in Figure 1.
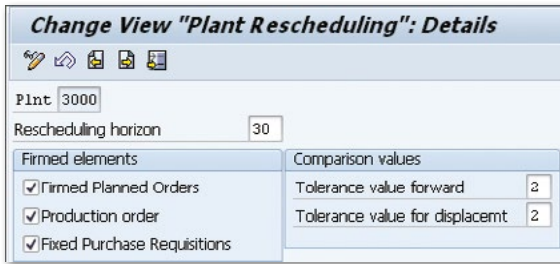
The configuration shows that for plant 3000, the rescheduling horizon is only 30 working days and will check only during that horizon whether planned orders can be rescheduled. The other detail in the configuration is the FIRMED ELEMENTS. If these elements are highlighted, they're included in the rescheduling check. For example, if FIXED PURCHASE REQUISITIONS were not highlighted, the rescheduling check wouldn't try to amend their dates in the case of a new requirement.

If a new reservation is entered for a material, the next MRP run should perform a rescheduling check. Figure 2 shows that for material 1500-510, a new reservation has been made for 10/23/2012. There was an existing purchase requisition for 11/22/2012.

« *Figure 2 Rescheduling a Purchase Requisition*

The rescheduling check proposes that the date of the purchase requisition be moved to October 23 to cover the new requirement. The exception message, 10, is now displayed against the purchase requisition, which means "Bring Process Forward."

If the rescheduling horizon had been 10 days and not 30 days, the purchase requisition wouldn't have been rescheduled, and the MRP process would have proposed a new purchase requisition or planned order.

Tip **72**

Changing the Material Master to Trigger Assembly Subcontracting

Depending on production capacity, you can make changes to the material master to enable a subcontractor to perform external assembly.

During busy periods, a company may decide to use subcontractors to perform simple assembly processing to increase the production of finished goods. The assembly of finished goods necessitates sending the components to the subcontractor and then receiving the finished goods back. In order to trigger the subcontractor process, you need to make some changes to the material master record of the finished goods.
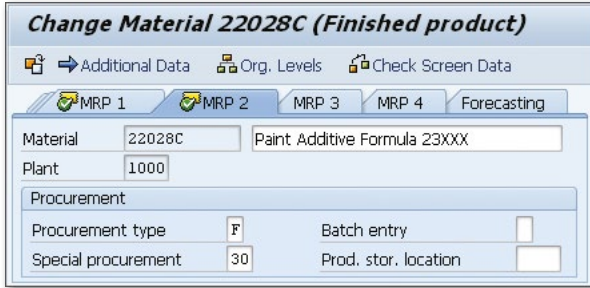
✅ And Here's How…

For the finished material and components that are used in the assembly of the finished product, change the special procurement key to indicate that subcontracting is required. To change the material master record, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the first screen of the transaction, enter the material number of the finished product that is used at your company, followed by the organizational view, which in this case is the MRP 2 view, and the plant.

Figure 1 shows the MRP 2 view of the material master. To make the material suitable for subcontracting, change the procurement type to F, for external procurement, and change the special procurement type to 30, which indicates subcontracting.
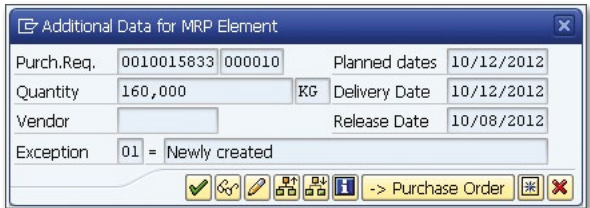
Change Material 22028C (Finished product)

🖳 ➡ Additional Data   🖧 Org. Levels   🔓 Check Screen Data

| MRP 1 | MRP 2 | MRP 3 | MRP 4 | Forecasting |

| Material | 22028C | Paint Additive Formula 23XXX |
| Plant | 1000 | |

Procurement

| Procurement type | F | Batch entry | |
| Special procurement | 30 | Prod. stor. location | |

⌃ *Figure 1 Changing the Material Master to Allow Subcontracting*

Make the same changes to the components in the bill of materials for the finished good. Once this is done, you can process an MRP run for that material using Transaction MD02 or the following menu path:

> SAP • Logistics • Production • MRP • Planning • Total Planning • Multilevel Single-Item Planning

In the initial screen of this transaction, enter the material number and the plant ensure that the Display Results before They Are Saved field is checked.

The results of the MRP run show a purchase requisition for the material being sent to the subcontractor. Click the line in the MRP run and the transaction will show the details, as shown in Figure 2.

Additional Data for MRP Element

Purch.Req.	0010015833	000010	Planned dates	10/12/2012
Quantity	160,000	KG	Delivery Date	10/12/2012
Vendor			Release Date	10/08/2012
Exception	01 = Newly created			

✔ 🔍 ✏ 🖧 🖧 ℹ -> Purchase Order ✳ ✖

⌃ *Figure 2 Purchase Requisition Created by MRP*

To convert the purchase requisition to a purchase order for the components to be sent to the subcontractor, click the Purchase Order button in Figure 2 to create

the purchase order by entering a vendor and adopting the information from the requisition. When you save, a message appears on the MRP screen indicating that a purchase order has been created, as shown in Figure 3.

☑ Standard PO created under the number 10000131
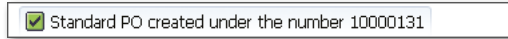
⌃ *Figure 3 Purchase Order Created from Purchase Requisition*

Transfer the materials to the subcontractor using Transaction MIGO_TR or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Transfer Posting (MIGO)

In this transaction, enter the purchase order and movement type 541, which is for transferring material to the subcontractor. The transaction shows the components that are in the bill of materials for the finished good, as shown in Figure 4.

Transfer Posting Purchase Order 10000131

Show Overview | ☐ | Hold   Check   Post | ⛶ Help

Transfer Posting ▾ | Purchase Order ▾ | | GI whse to subc.stck | 541 |

| General | 👥 |

| Document Date | 10/27/2012 | Material Slip | |
| Posting Date | 10/27/2012 | Doc.Header Text | |

Line	Mat. Short Text	OK	Qty in UnE	E...	M...	SLoc
1	HiTEC 611 Bulk	☐	28,515.200	KG	541	
2	HiTEC 1932X Bulk	☐	23,761.600	KG	541	
3	Process Oil, 150SNB...	☐	13,355.200	KG	541	
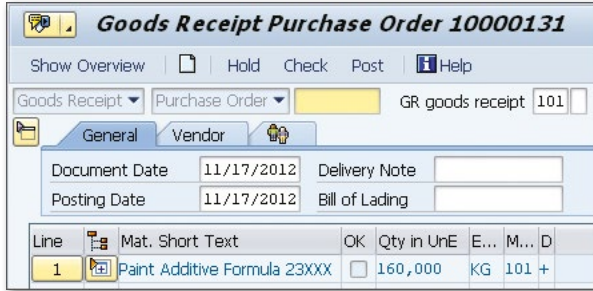
⌃ *Figure 4 Transfer of Components to Subcontractor*

When the subcontractor has completed the assembly, you can receive the purchase order back into stock for the completed items using Transaction MIGO or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Goods Receipt • For Purchase Order • PO Number Known

Enter the purchase order number created for the assembly and movement type 101, as shown in Figure 5. The goods receipt is posted and the finished assembly items are received into stock.

⌃ *Figure 5 Assembled Goods Are Received into Stock from the Subcontractor*

Tip **73**

Setting Reorder Point Planning for Different Materials

You can use reorder point planning to set different levels for the times you need to replenish specific non-critical materials.

Many materials used at a manufacturing plant aren't critical to the production of finished goods, and warehouse stock will only need to be replenished when levels have reached a certain point. The consumption of these materials isn't necessarily consistent, but it's important to have these items on hand.

To ensure that the stock is replenished, use a consumption-based planning procedure called *reorder point planning*. When the plant has consumed enough stock that the level falls below a reorder point, this triggers a purchasing requirement. In this tip, we'll show you how to adjust this level for a specific material and set automatic or manual reorder points.

✅ And Here's How…

To subject a material to reorder planning, set the material to allow automatic or manual reordering. To change the material master record, use Transaction MM02 or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

On the first screen of the transaction, enter the material number used at your company, followed by the organizational view, which in this case is the MRP 1 view, and the plant.

To set up the material for automatic reorder point planning, make sure the MRP Type is VM, which refers to automatic reorder point planning. In addition, initially enter a number for the Reorder Point, as shown in Figure 1.
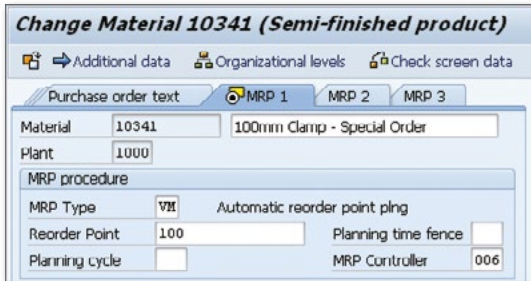
« *Figure 1 Automatic Reorder Point Planning for a Material*

However, in the automatic reorder point planning process, the reorder point is recalculated by the material forecast based on material consumption values. Each time the forecast is refreshed, the reorder point varies based on the consumption of the material.

If you don't want the material forecast to automatically change the reorder point, set the MRP Type of the material to be manual reorder point planning. In this case, make sure the MRP Type is VB, as shown in Figure 2.
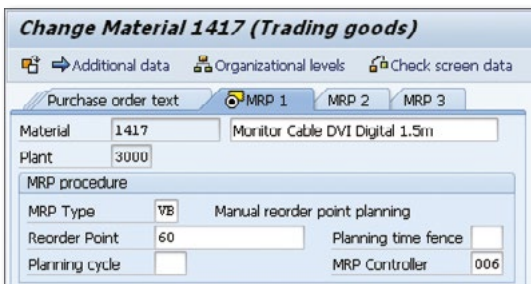
« *Figure 2 Manual Reorder Point Planning for Material*

The reorder point isn't affected by material forecasts and therefore needs to be monitored periodically to ensure that it still reflects the correct value. For example, if the consumption of the material becomes very low, a high reorder point may not be necessary, and you can lower it.

Configuring Your System to Allow Backflushing

You can enable your SAP system to perform goods issues when the final total is known by facilitating backflushing.

When a production or process order is progressing, the warehouse issues items to the order for either a specific amount or an unknown amount. In some instances, the warehouse doesn't know how much of an item to issue, as it can vary for each order. For example, in the production of a manufactured part, the process may use a coolant to stabilize the metal. Depending on the ambient temperature or humidity, the amount of coolant may vary. Therefore, each time the order is processed, the amount of coolant used in the order varies, as will the amount finally issued to the order. Some time after the finished goods are completed, the total amount of the coolant used can be calculated and the goods issue can be performed. This is known as *backflushing*, and for this to occur, you need to make some changes to the system.

✓ And Here's How…

For each material that will be used in an order and subject to backflushing, you need to alter the material master record. The indicator must be set in order for the backflushing process to occur. To change the indicator, use Transaction MM02 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

To change the backflushing indicator, enter the material, select the MRP2 view from the organizational structure, and enter the relevant plant. Figure 1 shows the MRP2 screen with the BACKFLUSH field having the value 1. This value means that the material is always relevant for backflushing. You can enter a value of 2, which means that the material is relevant for backflushing depending on the work center in the order.
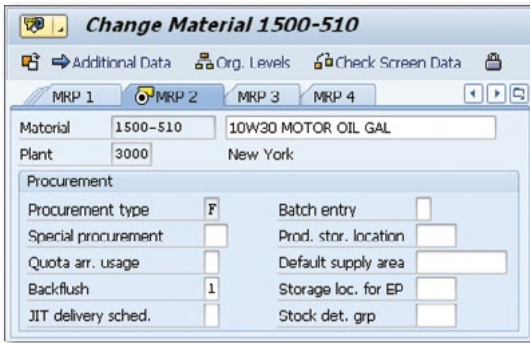
« *Figure 1 Backflushing Indicator Set for Material*

When a production order is completed and the confirmation is performed, the backflushing of materials occurs. The confirmation process issues the materials to the production order in the background using movement type 261. After the production order is completed, view the material goods issue using Transaction MB51 or the following menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • INVENTORY MANAGEMENT • ENVIRONMENT • LIST DISPLAYS • MATERIAL DOCUMENTS

On the initial screen, you can enter a number of selection criteria, such as material number, plant, movement type, and posting date. For this example, you can enter the material number, plant, and movement type, which is 261. Figure 2 shows the material documents found for that combination of selection criteria.

« *Figure 2 Material Documents for the Selected Material*

The material documents shown in Figure 2 are for movement type 261, goods issue to an order. The material is flagged as relevant for backflushing, so these material movements refer to the backflush for a production order. If we select the first of these material documents and select ENVIRONMENT • MATERIAL DOCUMENT from the header menu, the details of the material document are displayed, as shown in Figure 3.

Figure 3 *Material Document Showing Backflush for a Production Order*

The material document shows that for this movement of 81 pieces, the goods issue was made as a backflush to production order 100004003 when it was confirmed.

Tip 75

Creating a Storage Location for the MRP Area

You can create and assign a plant or a storage location to MRP areas to easily create a more logical and organized structure in the plant.

When your company is determining how the planning process will function, a decision must be made about what's incorporated within a specific Material Requirements Planning (MRP) area. The MRP area is the organizational unit for which MRP can be carried out independently outside a total plant level MRP run.

In plants where different types of manufacturing takes place, it can be advantageous to create a number of separate MRP areas that take into account the stock in specific storage locations. By creating different storage locations for different production, you can link different storage locations with different MRP areas, creating a more organized structure. This tip shows you how to associate a new storage location with an MRP area.

✅ And Here's How…

You can create an MRP area for a plant, subcontractor, or storage location. To create MRP areas, use the following configuration menu path:

> IMG • Materials Management • Consumption-Based Planning • Master Data • MRP Areas • Define MRP Areas

Add a new MRP area from the initial screen by selecting the New Entries button. You're then able to add the new MRP area, as shown in Figure 1.
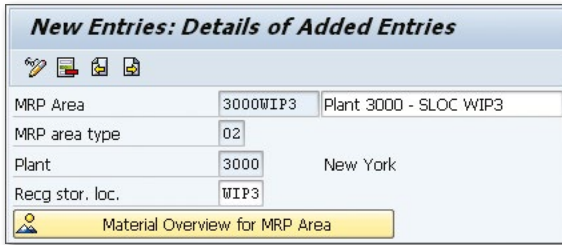
⌃ *Figure 1 Creating a New MRP Area*

When creating a new MRP area for a storage location, add an MRP area number, which must be more than four characters. Only MRP areas for plants can be up to four characters. To ensure that the MRP area is for a storage location, set the MRP Area Type field to 02.

When you save the new MRP area, add the storage location. Figure 2 shows the screen where you can add the storage location or locations that are covered by the MRP area.
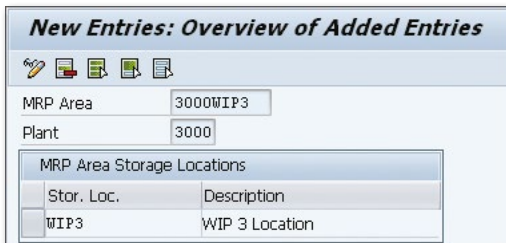
⌃ *Figure 2 Adding Storage Locations to the New MRP Area*

After you create the new MRP area, you have the option to add it to the relevant material records. These items are to be planned for the storage location identified on the MRP area. To do this, use Transaction MM02 or the following menu path:

SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

To add the new MRP area, enter the material, select the MRP1 view from the organizational structure, and enter the relevant plant. In the MRP1 screen, click the MRP Areas button to add the new MRP area, as shown in Figure 3.

⌃ *Figure 3 Adding New MRP Area in the Material Master MRP1 Screen*

After the new MRP area is added and the material saved, you can perform an MRP run using Transaction MD03 or the following menu path:

SAP • Logistics • Materials Management • Material Requirements Planning (MRP) • MRP • Planning • Single-Item, Single Level

Figure 4 shows the planning for the material and the new MRP area. This produces the planning results for material in the storage location associated with the new MRP area.
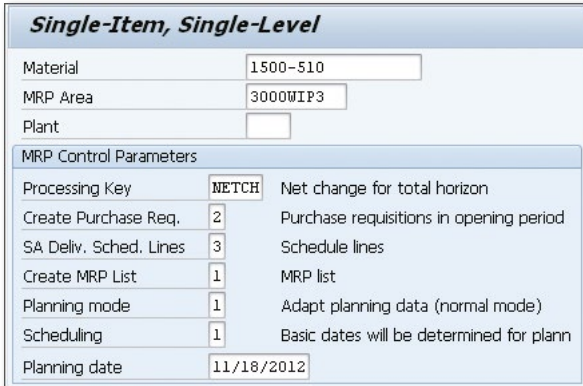
⌃ *Figure 4 Planning Run for the New MRP Area*

Excluding a Storage Location from MRP Planning

You can configure the system to exclude certain storage locations from the MRP process if the materials are already allocated.

The planning process at a plant usually looks at the unrestricted stock to determine if there's enough stock to cover the upcoming production orders. However, sometimes the unrestricted stock in certain storage locations should be excluded from the MRP process because it's pre-allocated to a customer or the storage location contains only partial pallets.

In this tip, we'll show you how to configure the system so that the storage location is excluded from the plant MRP process totally or temporarily if there are short-term issues with the storage location.

✓ And Here's How…

To exclude a storage location from the plant MRP run, use the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • CONSUMPTION-BASED PLANNING • PLANNING • DEFINE STORAGE LOCATION MRP PER PLANT

The transaction immediately requires you to enter the plant associated with the storage location you're excluding from the MRP run. The next screen, as shown in Figure 1, displays all the storage locations associated with the plant.
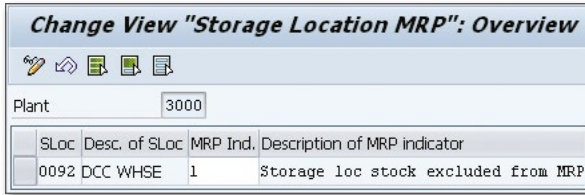
⌃ *Figure 1 Storage Location Excluded from the MRP Process*

Now, enter a value in the MRP IND field to exclude the storage location from the MRP process. Enter the value "1" to exclude the storage location and save the transaction.

Next, exclude the materials from the MRP process for that specific storage location. To do this, flag the material as being excluded from the MRP planning process. For a specific material, use Transaction MM02 or the following menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

The field you need to flag for excluding the material from the MRP at a certain storage location is on the MRP 4 screen, so enter the material number and select the correct plant and storage location. Figure 2 shows the SLOC MRP INDICATOR, which should have a value of "1" to exclude the material stock from MRP for this particular storage location.
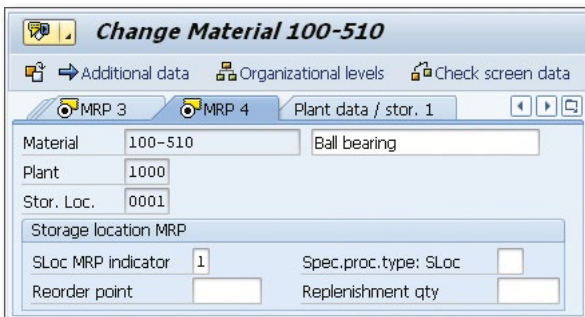
⌃ *Figure 2 Excluding Material Stock from the MRP Process for a Storage Location*

To show that the stock has been excluded from the MRP process, use Transaction MD04, which shows you the stock and requirements list. To show the stock and

requirements, enter the plant and the material into the initial screen. The transaction then shows you the stock and requirements, as shown in Figure 3.

⌃ *Figure 3 Stock and Requirements for the Material Showing Excluded Storage Location Stock*

The MD04 results show that for the 100-510 material at plant 1000, only five units are available for MRP, while the 1084 units of stock in storage location 0001 aren't part of the planning scenario. Since the storage location is now excluded from the MRP process, the stock located in that storage location isn't included in the MRP calculations.

Running MRP for Multiple Plants with a Planning Scope

You can create a planning scope so that the planning process can apply to a number of plants within the same company.

The planning process usually incorporates the stock found at a single plant. For example, at a manufacturing plant, the stock required for the production order is normally stored at the plant. However, due to temporary space limitations or the layout of the facility, the stock may be held at a satellite facility or an offsite warehouse. These locations could be identified as plants, so the scope of the planning process has to incorporate all the plants where the stock is being held for the upcoming production orders.

The MRP process can be run for a single material, a single plant, or a number of plants structured using a planning scope. This tip will teach you how to set this up.

✅ And Here's How…

First, create a planning scope using Transaction OM0E or the following configuration menu path:

IMG • Materials Management • Consumption-Based Planning • Planning • Define Scope of Planning for Total Planning

The transaction shows the existing planning scope that has been configured, but you can create a new one by clicking the New Entries button. Figure 1 shows the screen where you add the header details for the new planning scope.
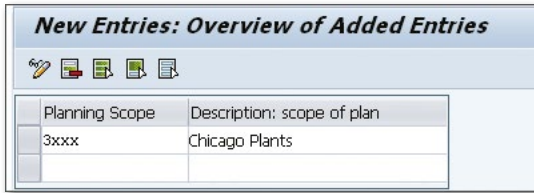
⌃ *Figure 1 New Scope of Planning for Several Plants*

After entering the planning scope description, add the plants you want the planning scope to cover. Click the Sequence of Plants/MRP Areas button in the dialog structure and you're given the option to enter the plants you require to be part of the planning scope. Figure 2 shows that five plants have been added as part of the planning scope.
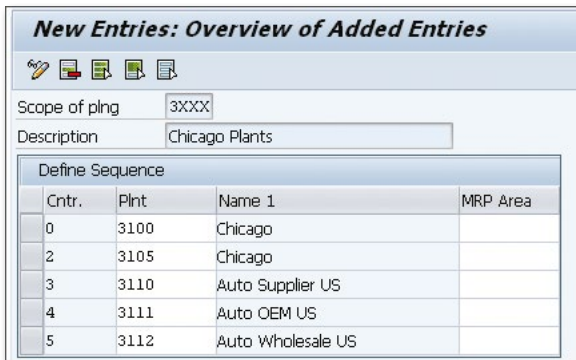
⌃ *Figure 2 Adding Plants to the New Planning Scope*

After you save the planning scope, you can use it for planning purposes. To do this, use Transaction MD01 or the following menu path:

SAP • Logistics • Materials Management • Material Requirements Planning (MRP) • MRP • Planning • Total Planning • Online

Figure 3 shows that for this transaction, you can enter the planning scope instead of just a plant. The planning process then uses the stock from all the plants that are part of the planning scope, not just a single plant.

MRP Run

Scope of planning	3XXX	Chicago Plants
Plant		

MRP control parameters

Processing key	NETCH	Net change for total horizon
Create purchase req.	2	Purchase requisitions in opening period
Schedule lines	3	Schedule lines
Create MRP list	1	MRP list
Planning date	11/22/2012	

❯❯ *Figure 3 Planning Run for the New Planning Scope*

Setting Up an MRP Area for a Subcontractor

If the planning process needs to apply to just one subcontractor, you can easily configure a new MRP area for them in the system.

Normally the planning process applies to a plant or series of plants, but sometimes the production of finished goods depends on work manufactured by subcontractors. In this instance, you need to configure the planning process in such a way that the stock at a subcontractor can be reviewed separately from the stock in the plant that's waiting to be used in production. If you don't use a separate MRP area for a subcontractor, the system plans the whole plant, and you can lose visibility of the materials set aside for the subcontractor.

✅ And Here's How…

We've seen that the MRP process can be completed for a plant or series of plants; however, depending on the manufacturing process employed at a company, there may be a requirement to perform MRP for a subcontractor. To do this, create a new MRP area specifically for a subcontractor using the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • CONSUMPTION-BASED PLANNING • MASTER DATA • MRP AREAS • DEFINE MRP AREAS

The transaction shows the existing MRP areas that have been configured. To create a new one, click the New Entries button. Figure 1 shows that you can enter the new MRP area name, description, and plant.

⌃ **Figure 1** Adding a New MRP Area for a Subcontractor

To ensure that this MRP area is appropriate for subcontractors, make sure that the MRP area type field has the correct value—in this case, 03 for vendors.

After adding the initial information, click the Subcontractor button in the dialog structure. This allows you to add the subcontractor's information, as shown in Figure 2.

⌃ **Figure 2** Entering the Subcontractor Details for the MRP Area

When the new MRP area is created, you can use it for planning purposes. The MRP area can be added to a planning scope or used in a single-item, single-level planning run. If MRP is to be performed for a single material at the subcontractor, use Transaction MD03 or the following menu path:

> SAP • Logistics • Materials Management • Material Requirements Planning (MRP) • MRP • Planning • Single-Item, Single-Level

Figure 3 shows the initial screen for the MRP run where you enter the material that needs to be planned, as well as the new MRP area specifically relevant to the stock at the subcontractor.

⌃ *Figure 3* *MRP Run for the New MRP Area Created for the Subcontractor*

Tip (79)

Creating MRP Profiles with Default Values

When you have similar material master activities, you can save time on data maintenance by creating MRP profiles.

When you're creating material master records for new materials, you can create MRP profiles for similar materials that ensure that the correct values are entered and save time on data entry. You can create the MRP profile so that the user selects a profile that either defaults values into the MRP screens or enters a fixed value that can't be changed. For example, if users select a profile with a fixed value for the MRP controller, that value can't be changed. We'll show you how to set this up in this tip.

✓ And Here's How…

You can create the MRP profile to allow users to select a specific profile when they create a material master. The MRP profile can be created to default a number of values into the MRP screens of the material master, such as MRP type, MRP controller, safety stock, and reorder point. To create an MRP profile, use Transaction MMD1 or the following configuration menu path:

> SAP • Logistics • Materials Management • Material Master • Profile • MRP Profile • Create

The transaction requires you to enter a unique, four-character MRP profile. You're then shown a list of fields where you can either select the field to be a fixed,

mandatory value or a default value that can be overwritten. Figure 1 shows the fields that have been selected for the MRP profile.

⌃   *Figure 1 Fields Added to the MRP Profile*

After you select the fields you require for the MRP profile, select the DATA SCREEN 1 and DATA SCREEN 2 buttons, where you can then add the values for the fields selected. Figure 2 shows the values entered in the DATA SCREEN 1 screen.

After you save the MRP profile, you can use it to create a new material master or extend an existing material master. Create a new material master using Transaction MM01 or the following menu path:

SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CRE-ATE (GENERAL) • IMMEDIATELY

Once you enter the material number, select the organizational levels you require and then enter the plant number, along with the MRP profile you just created. Figure 3 shows the new MRP profile.
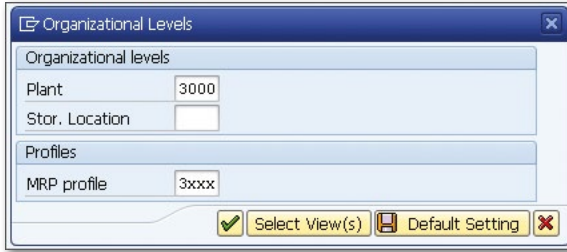
⌃   *Figure 3 Creating a New Material Master with an MRP Profile*

The MRP 1 tab displays the fields entered into the MRP profile, as Figure 4 shows. The MRP type is shown as a display-only field, as determined from the MRP profile, while the other fields are only defaulted and can be changed.
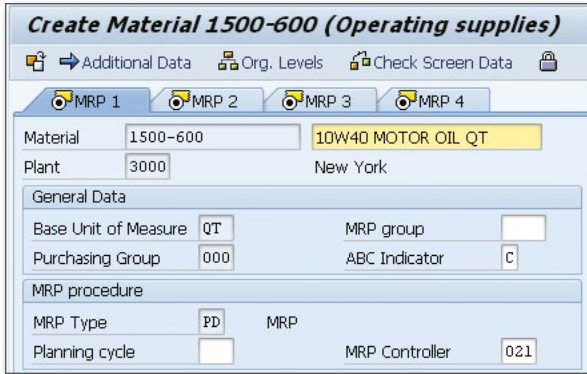
⌃   *Figure 4 MRP 1 Screen Showing Fields Defaulted from the MRP Profile*

Tip 80

Maintaining Different Production Versions for a Material

When your company has complex materials that are used in manufacturing and costed in different ways, you can maintain different production versions so that all differences are accounted for.

A manufacturing company may have a number of different production lines used to manufacture an item. If the lines are different in size and use different work centers, the manufacture of a finished good may require different bills of materials or routings and may be costed differently. To achieve this variation, you need to maintain different production versions of the material master, which we'll explain in this tip.

✅ And Here's How…

The production version of a material is created from the MRP 4 view of the material master. Create a production version by using Transaction MM02 (Material Master Change) or the following menu path:

> SAP • Logistics • Materials Management • Material Master • Material • Change • Immediately

In the initial screen of the material master, enter the material master number and then select the MRP 4 organizational view and the plant number. As shown in Figure 1, the MRP 4 screen has an icon for Production Versions. Click this icon to access all the production versions for the material or to add new ones.

« **Figure 1** MRP 4 View of the Material Master Record

The material can have more than one production version, and Figure 2 shows that in this example, the material has a number of production versions. To create a new version, enter a unique production version number, description, and valid "to" and "from" date. The material can have more than one production version valid at one time.
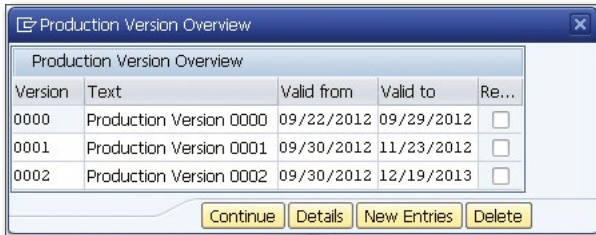
« **Figure 2** Production Versions for a Material

After entering the production version header information, click the DETAILS icon to enter the planning data, as shown in Figure 3.
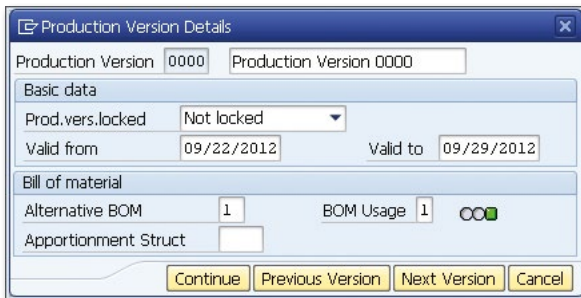
« **Figure 3** Details from the Production Version

When you have entered the information relevant for the production version, such as the alternative bill of materials, save the material. Saving the material also saves the production versions.

Transferring the Use of Discontinued Materials to Updated Materials

When a material is discontinued due to release of new versions, you can seamlessly transfer the use to the updated version with minimal cost.

When you're manufacturing finished goods, the parts you purchase from vendors never stay exactly the same because the materials they supply change over time. This change can be due to a change in their supply or changes required due to required improvements. Whatever the change, the materials you've been using can, over time, be discontinued. When that happens, the vendor would probably offer a new, improved material as a replacement, or in some cases you'd have to find a replacement material from another vendor.

In this case, there needs to be an orderly transfer from the discontinued material to the new material. If no new material is identified before the old material is discontinued, production could stop as some components may be unable to be sourced. If the parts are used in manufacturing, a date must be specified when the material is no longer used.

✅ And Here's How…

First, change the material master record to reflect the fact that it's being discontinued and shouldn't be used in planning. Vendors may replace their items due to packaging, federal requirements, new raw material sourcing, or improved tolerances. This isn't the same as marking a material for deletion since the material

could still be sold as a spare part to customers who have finished goods that contain the old material that's being updated. To change the material master, use Transaction MM02 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • MATERIAL • CHANGE • IMMEDIATELY

Enter the material number and select the MRP 4 organizational view, followed by the plant where the material is being discontinued.

Figure 1 shows the MRP 4 view where you enter a material that's replacing the material being discontinued. Enter the date when the discontinued material should no longer be used. This date is used by the planning process for the replacement material.
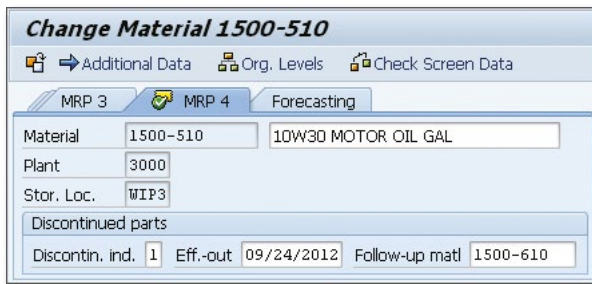
⋀   *Figure 1 Material Showing the Date when It Is to Be Discontinued*

After you enter the discontinued parts information in the material master, run the planning process for the material using Transaction MD03 or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL REQUIREMENTS PLANNING (MRP) • MRP • PLANNING • SINGLE-ITEM, SINGLE-LEVEL

Figure 2 shows the initial screen for the MRP run. Enter the material to be discontinued, plant, and planning date.

⌃ *Figure 2* Run MRP for the Discontinued Material

The planning process takes into account the fact that material is being discontinued and display results based on that fact. Figure 3 shows the results of the MRP run.

⌃ *Figure 3* Results of Planning for Discontinued Material

The planning results show the effective-out date based on the information from the material master. There were two purchase orders for the material scheduled to be delivered after the date when the material discontinued. The two scheduled purchase order lines have the exception message number of 20. This represents the message that the process should be cancelled. In this case, the message implies that the purchase orders should be cancelled because they're no longer needed by production for the manufacturing process.

Accessing Material Consumption Statistics to Improve Purchasing Practices

You can access the information the system keeps for reporting purposes regarding the consumption of materials in the production of finished goods to help improve your MM practices.

Companies have a number of reporting requirements that have to be produced on either a monthly or yearly basis. Although a great many reports are available from standard SAP, sometimes there is a requirement with no standard report, but the information can still be displayed using the Logistics Information System (LIS).

Every time a transaction is processed, some of the data is written to information structures. These are files that contain statistical data generated by transactions that have been executed. For example, for production, data is written to the information structures when a production order is released or confirmed. The LIS contains a number of standard analyses that allow the user to review and drill down on data from these information structures.

Material consumption statistics are useful to the purchasing department when they're negotiating with suppliers. They can easily run a standard analysis on material consumption to show precisely the quantity and value of a specific material consumed by production in any given period. In this tip, we'll show you how to access the data in the information structures via standard or custom reports (also known as flexible analysis).

✅ And Here's How…

In this tip, we're using the standard analysis for material consumption. To review the consumption for a material, use Transaction MCRE or the following menu path:

> SAP • Information Systems • Logistics • Production • Material • Material Consumption

If you leave the selection parameters blank on the initial screen, you find all material consumption for all plants from the period since the system was implemented. To focus on the information you require (i.e., material consumption), you want to enter the plant, material number, and a date range, as shown in Figure 1.

Material Usage Analysis: Selection

Characteristics				
Plant	3000	to		
Material	P-101	to		
Order		to		

Period to analyze				
Date	01/01/2012	to	12/31/2012	

⌃ *Figure 1 Entering Selection Parameters for Consumption Statistics*

The material consumption transaction reviews the data contained in the information structure, and the highest level of data is displayed for the parameters you enter, as shown in Figure 2.

Material Usage Analysis: Basic List

No. of Plant: 1

Plant	Requirement Qty	Withdrawal Qty	Issued Value
Total	1,362.56 M2	918.40 M2	22,652.11 USD
New York	1,362.56 M2	918.40 M2	22,652.11 USD

⌃ *Figure 2 Material Consumption for Plant 3000*

Figure 2 shows that for plant 3000, in the calendar year 2012, there was a requirement from production orders for 1,362.56 square meters of steel, but only 918.40

square meters were issued to production at a value of $22,652.11. The required and withdrawn quantities can be different if the production order was still open at the end of period entered in the selection criteria.

You can drill down on the material total consumption for plant 3000, and the transaction shows you the individual orders that have been combined to produce the overall material consumption. Figure 3 shows that there are 50 production orders processed for the material during the year.

Material Usage Analysis: Drilldown

Plant   New York   Material   Sheet metal ST37
No. of Order: 50

Order	Requirement Qty	Withdrawal Qty	Issued Value
Total	1,362.56 M2	918.40 M2	22,652.11 USD
000060002425	12.80 M2	6.40 M2	127.87 USD
000060002602	0.64 M2	0.64 M2	15.05 USD
000060002605	0.64 M2	0.64 M2	15.05 USD
000060002611	0.64 M2	0.64 M2	15.05 USD

≫ **Figure 3** *Material Consumption at the Production Order Level at Plant 3000*

With this information, the purchasing department can evaluate what the consumption of the material will be over the upcoming periods and work with vendors to obtain the best possible price for the material in future purchases.

Part 5
Configuration

Things You'll Learn in this Section

Configuration means that you tailor the SAP system to meet the specific business needs of a company. As a Materials Management consultant, you're required to analyze business processes and offer recommendations based on your experience about the best way to configure the system to support and enhance those processes.

The tips in this part will allow you to offer customers solutions to issues and problems they may have without any custom reports or unnecessary, expensive customization. And if you're a business user, these tips will prove invaluable in helping you take the initiative to working with the MM component in SAP ERP.

This part will show you how you can help a company benefit from your knowledge. The tips in this section include how to create material numbering for material types, plant-specific material master configuration, material determination, and batch configuration.

Tip **83**

Creating a New Movement Type by Copying an Existing Movement Type

You can easily save time by creating a new movement to distinguish certain movements by copying from an existing, similar movement type.

Each time an inventory movement occurs, it's driven by a movement type, which determines how the material is moved and what occurs. Sometimes, specific business requirements may require that you create a movement type, such as requiring that certain fields are mandatory in a goods receipt for trading goods but not for raw materials. In this instance, you can create a new movement type by copying a similar movement type, such as goods receipt for purchase order, movement type 101.

✅ And Here's How…

To create a new movement type, review the existing movement types to see which is closest to the requirements. Once you've established a movement type to copy from, use Transaction OMJJ or the following configuration menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Movement Types • Copy, Change Movement Types

On the initial screen you'll see the field selections; check the MOVEMENT TYPE field. The next screen, as shown in Figure 1, allows you to enter the movement type you're copying from and the new movement type, which in this case is Z01.

《 Figure 1 *Copying an Existing Movement Type for the New Movement Type*

When you copy the existing movement type to a new movement type, all the components of the old movement type are now in the new movement type. At this point, you can change the components to reflect the way you want the movement type to work. If your new movement type has short texts, select that element from the dialog structure of the movement type, as shown in Figure 2.
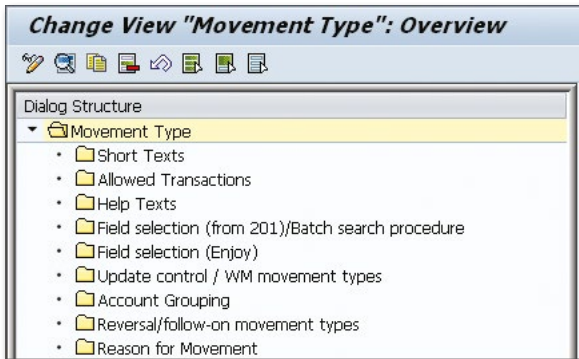
《 Figure 2 *Components that Can Be Changed for the Movement Type*

For the new movement type in this example, we're changing the field selection; therefore, click the FIELD SELECTION (ENJOY) field, shown in the dialog structure in Figure 2. In the old movement type, 101, all the fields were optional. In the new movement type, we're making some fields mandatory and some optional. Figure 3 shows the changes to the fields for the new movement type.

《 Figure 3 *Changes to the Field Selection for the New Movement Type*

If your new movement type requires changes to other fields, such as the account grouping or reason for movement, change those before saving the new movement type.

After you create the new movement, it can be used in the appropriate transaction. In this instance, we've created a movement type that can be used for a goods receipt; use the new movement type in Transaction MIGO or the following menu path:

SAP • Logistics • Materials Management • Inventory Management • Goods Movement • Goods Movement (MIGO)

Figure 4 shows a goods receipt for a purchase order with the new movement type.

⌃   *Figure 4 Goods Receipt with the New Movement Type*

Tip 84

Deactivating Standard Movement Types

To stop people from using certain movement types, you can delete those linked transaction codes so they aren't available.

Although the standard inventory movement types are commonly used, companies may sometimes create new movement types and not want employees to use superseded movements types. For example, if a company has created one or more movement types for the receipt of purchase orders, it may not want users to be able to see the standard movement type. In this tip, we'll show you how to deactivate the standard movement types in configuration, rather than delete them, so they can't be used by specific users.

✅ And Here's How…

To make changes to the movement type, use Transaction OMJJ or the following configuration menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Movement Types • Copy, Change Movement Types

On the initial screen, you see the field selections. Check the movement type field. In the next screen shown in Figure 1, enter the movement type you want to make changes to.

⋀   *Figure 1 Movement Type to Be Deactivated*

After you enter the movement type, the next screen shows a list of areas where you can make changes. Figure 2 shows the different areas; to deactivate a movement type, select the Allowed Transactions entry.
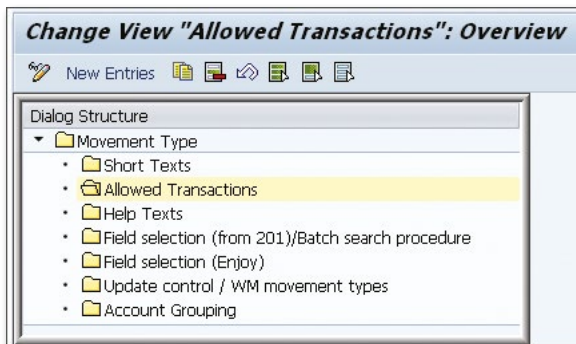
⋀   *Figure 2 Overview of the Movement Type to Be Changed*

The Allowed Transactions selection shows the transactions where you can use the particular movement type. In the case of movement type Z99, the only transactions where it can be used are MB11, MB1A, and MB21, as shown in Figure 3.

⋀   *Figure 3 Allowed Transactions for Movement Type Z99*

So that users can't use this movement type, delete these allowed transactions. This means that the movement type will still exist but won't be allowed to be used in any transactions. If at any time the movement type is to be used again, add the relevant transactions using this same transaction.

Figure 4 shows that Transaction MB11 and movement type Z99 have been entered. Because movement type Z99 is no longer valid for this transaction, an error message is displayed at the bottom of the screen.

⌃ *Figure 4 Movement Type Z99 is No Longer Valid for Transaction MB11*

Tip 85

Configuring the System to Allow Consignment Stock

You can configure the system to delay payment to a vendor for a material until it's consumed when it's being held at a plant.

When a company has geographically remote plants, it may take some time for vendors to get materials to the facility. In this instance, it's often prudent to have stock at the plant that can be used when unexpected circumstances arise. Due to long delivery times, stock may not arrive by the time it's needed, and production may stop as a result. Instead of purchasing the material ahead of time, a company could negotiate with a vendor to provide material on consignment and receive payment when it's consumed. In this tip, we'll show you how to set this situation up in the system.

✓ And Here's How…

The first step of consignment is to configure the system to allow the pricing to be generated from the purchasing info records. To do this, use Transaction OMEV or the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • GENERAL SETTINGS FOR MATERIALS MANAGEMENT • ACTIVATE CONSIGNMENT PRICES VIA INFO RECORDS

Figure 1 shows the simple configuration you must do to allow consignment pricing from the info records.

Activate Consignment Info Record

Consignment info record
○ Consignment info record inactive
◉ Consignment info record active

⌃ *Figure 1 Making Consignment Info Records Active*

Next, enter the information in a consignment info record for the material and vendor using Transaction ME11 or the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Info Record • Create

Figure 2 shows the initial screen where you enter the vendor, material, purchasing organization, and plant. In addition, highlight the radio button for Consignment.

Create Info Record: Initial Screen

Vendor   1011
Material   1500-EEE
Purchasing Org.   3000
Plant   3000

Info category
○ Standard
○ Subcontracting
○ Pipeline
◉ Consignment

⌃ *Figure 2 Initial Screen for the Consignment Info Record*

Figure 3 shows the next screen: the Conditions section of purchasing organization data screen where you enter the delivery time, purchasing group, and the net price. After entering this information, save the info record.

Conditions

Net Price	18.00	USD	/ 1	EA	Valid to 12/31/9999
Effective Price	18.00	USD	/ 1	EA	☐ No Cash Disc.
Qty Conv.	1	EA	<-> 1	EA	Cond. Grp
Incoterms					

⌃ *Figure 3 Pricing Condition in the Consignment Info Record*

Now that the consignment info record exists, the price can be carried through when the material is consumed. The price isn't shown on the purchase order. To create a purchase order, use Transaction ME21N or use the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Create • Vendor/Supplying Plant Known

Figure 4 shows the purchase order line details for the consignment material. No price is shown because the material won't be purchased until it's consumed. It remains the property of the vendor until that time.
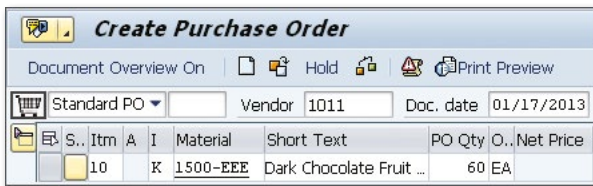
⌃ *Figure 4 Purchase Order for Consignment*

When the material is consumed from the consignment stores, the transaction picks up the price of the material from the consignment info record. View the price of consignment stock using Transaction MB54 or the following menu path:

> SAP • Logistics • Materials Management • Inventory Management • Environment • Consignment • Consignment from Vendor • Stock

On the initial screen, enter the material number, vendor, and plant. Figure 5 shows the resulting screen, which displays the material on consignment from the vendor and the price from the consignment info record.
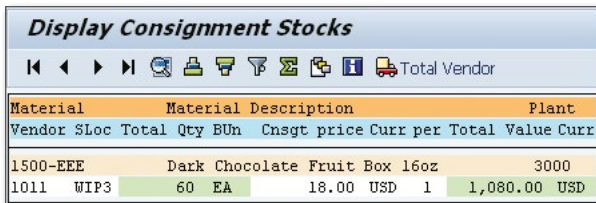
⌃ *Figure 5 Consignment Stock in the Plant*

Creating a New Purchase Order Document Type to Establish Different Purchases

You can create a new document type to differentiate purchases made from different plants or regions.

The standard SAP system is delivered with standard purchase order document types, such as NB for standard purchase orders and UB for stock transport orders. However, your company may want to distinguish between the purchases made in one region or purchasing organization from another because of differences in the procurement process or differences in the fields required on the purchase order. To establish these differences, create a new purchase order document type with different characteristics, such as the internal and external numbering of the purchase orders.

✓ And Here's How…

To create a new purchase order document type, use the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • PURCHASING • PURCHASE ORDER • DEFINE DOCUMENT TYPES

The initial screen shows all the purchase order document types that have been created. Each document type has an internal and external number range, field

selection key, and item number interval. In this example, we'll create a new purchase order document type called ZB, which will be an alternative standard purchase order document type to be used by purchase organization 3000. To do this, select the standard document type NB, as shown in Figure 1.

Select the NB document type and click the COPY button. This displays a screen where you can add a description for the new document type as well as enter any changes, such as to the layout or internal or external number ranges.

Figure 2 shows the new document type, ZB, which has a new description. The internal and external number ranges for the new document type have been changed to Z1 and Z2, respectively.

After you create the new document type, the appropriate company, plant, purchasing group, or other organization can use it. In this instance, purchasing organization 3000 has been asked to use the new ZB document type for its standard purchase orders, as shown in Figure 3.

Configuring the System to Assign a Valuation Class to a Specific Material Group

When purchases are made for non-material items, you can configure different accounts for each material group.

If you create a purchase order for an item without a material number, the account assignment usually points to a generic general ledger account. However, a generic general ledger account may not always be required, and for specific material groups, the account assignment should be something other than the default.

To point to something other than a generic general ledger account, configure a valuation class to be associated with a specific material group that would point to a different general ledger account when a purchase order is created. In this tip, we'll walk you through the steps of assigning a valuation class to a material group, assigning the correct chart of accounts, and creating a new PO.

✅ And Here's How…

To assign a valuation class to a material group, use the following configuration menu path to reach the necessary transaction:

> IMG • Materials Management • Purchasing • Material Master • Entry Aids for Items without a Material Master

Once in the transaction, you can see the material groups that have been created, and you can add a valuation class to a specific material group. In this case, for material group 007, we're assigning valuation class 3200.

Change View "Material Groups: Non-Stock Items

Mat. Grp	Mat. Grp Descr.	ValCl	PurValK
007	Services	3200	
00700	Training		
00701	Consultation		

⌃ *Figure 1 Entering a Valuation Class for a Material Group*

Next, a specific general ledger account is proposed when we create a purchase order.

To find out which general ledger code will be shown, we can use Transaction OBYC or the following the menu path:

IMG • Materials Management • Valuation and Account Assignment • Account Determination • Account Determination without Wizard • Configure Automatic Posting

On the initial screen, select the transaction key GBB, which represents the offsetting entry for inventory posting. In the next pop-up screen, enter the chart of accounts relevant for your company. The resulting screen shows the configuration for automatic postings.

Configuration Accounting Maintain: Automatic Post

◀ ▶ ☐ ⎗ 🖫 Posting Key ⚷Procedures Rules

| Chart of Accounts | CAUS | Chart of accounts - United States |
| Transaction | GBB | Offsetting entry for inventory posting |

Account assignment

Valuati...	Gen...	Valuation ...	Debit	Credit	
US01	VBR	3200	417000	417000	

⌃ *Figure 2 General Ledger Account Assigned to a Valuation Class*

Figure 2 shows that for valuation class 3200, which was assigned to material group 007, the general ledger account has been configured as 417000. This is the account

number that should appear in the account assignment when a purchase order is created for non-stock items entered with material group 007.

To create a new purchase order, use Transaction ME21N or the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Purchase Order • Create • Vendor/Supplying Plant Known

Create a purchase order for a non-stock material with account assignment category K and material group 007. Figure 3 shows the account assignment information for the non-stock line item. Material group 007 was used for the line item, and the general ledger account of 417000 was defaulted into the purchase order account assignment.

⌃   *Figure 3 Purchase Order Account Assignment for Material Group 007*

Freezing Stock for a Physical Inventory Count

Because physical inventory counts can be difficult if movements continue during the counting process, you can easily trigger the system to freeze warehouse inventory until the count is posted.

Physical inventory counts can be very straightforward if the warehouse isn't processing movements and the counters have as much time as they need to complete the count. However, modern warehouses can operate 24 hours a day, and it's impossible to stop all inventory movements while the count takes place. While you might be able to perform the count during quieter periods, material may still be received or issued from the after the count takes place but before it's posted can fluctuate. To minimize this fluctuation, you can trigger the system to freeze the inventory level until the count is posted.

✅ And Here's How…

To freeze the book inventory in a storage location during the physical inventory count, use the following configuration menu path:

> IMG • Materials Management • Inventory Management and Physical Inventory • Physical Inventory • Allow Freezing of Book Inventory Balance in Storage Location

In the initial pop-up screen, enter the plant where the storage location is entered. Figure 1 shows that for plant 3000, the WIP3 storage location has been configured

so that the book inventory is frozen and isn't changed during a physical inventory count. As soon as the inventory document is posted, the freezing of the book inventory balance is removed. The warehouse can still perform all normal functions despite the book inventory balance being frozen. The book inventory balance is only important to the inventory document, while the actual stock figure increase or decrease based on movements that are still occurring.

Change View "Storage Locations": Overview

| Plant | 3000 | New York, NY | NEW YORK |

Stor. Loc.	Freeze book inv.SLoc
VAN3	☐
WIP1	☐
WIP3	☑

⌃ *Figure 1 Freezing the Book Inventory for a Storage Location*

Configuring the storage location freeze the book inventory while the physical inventory count is performed means that the count is compared against the amount in the storage location when the count document was generated. If the book inventory isn't frozen, the count is compared against the book inventory plus any changes that have been made due to inventory movements.

If a goods receipt or goods issue is made to stock in the storage location after a count but before the count is entered, there will be an unnecessary variance. This leads to a waste of time and resources because the count is then repeated or an investigation performed.

Creating Views for User Groups in the Batch Information Cockpit

Since the Batch Information Cockpit provides a lot of data that can be found about a batch, you can create and assign user groups to see only specific views to avoid information overload.

Batches are created for materials, and the information they contain is important for Materials Management and production. In order to keep track of batch information, such as which batches are under the control of which MRP controller or which batches' shelf life will expire soon, there's a transaction called the Batch Information Cockpit. This transaction allows you to discover information about batches and gives you the ability to control follow-on functions.

The Batch Information Cockpit is delivered with a standard selection of fields, but different views can be created specific to job roles that may need to look at batch information differently. Some users may want to look only at specific data, such as batch shelf life, but don't need information on batch stock levels or batch characteristics. To accommodate the different sets of users, each user can be assigned to a user group that has a different view of the batch information.

✅ And Here's How…

The SAP standard selection for the Batch Information Cockpit can't be amended, but if you have different sets of users that need to see specific batch information, you can create views based on user groups. To do this, use Transaction OBIC or the following configuration menu path:

> IMG • Logistics - General • Batch Management • Batch Information Cockpit • Define User-Group-Specific Selection

Figure 1 shows the initial screen for the transaction, where you can define a user group for a specific view. In this case, we define a new user group called Food Safety.

⌃ Figure 1 *User Group Created for Batch Information Cockpit*

After defining the user group, define which tabs the users will see in the Batch Information Cockpit. Figure 2 shows the five tabs selected to be shown on the Batch Information Cockpit for the user group, Food Safety.

⌃ Figure 2 *Selection Tabs for Batch Information Cockpit*

On the next screen, select the fields that will be shown for each tab. Figure 3 shows that for the Material tab, there are a number of fields that will be shown. They will appear on the screen in the order defined in the ItmTabTtl field, which is shown in Figure 4. In this instance, the first field is Batch, and the second is Vendor Batch, followed by Material Description.

⌃   *Figure 3 Field Selection for the Batch Information Cockpit*

To assign a user to the user group, access the Batch Information Cockpit using Transaction BMBC or the following menu path:

SAP • LOGISTICS • CENTRAL FUNCTIONS • BATCH MANAGEMENT • BATCH INFORMA-TION COCKPIT

On the initial screen, access the user group by going to the header menu of the transaction and selecting UTILITIES • USER SETTINGS.

Select the user group and the save the settings. The Batch Information Cockpit then displays the tabs and fields that are configured for that user group, as shown in Figure 4.

⌃   *Figure 4 Batch Information Cockpit for the Food Safety User Group*

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Tip 90

Restricting Batches for Batch Determination

To avoid having users select an incorrect batch for sales orders, production orders, and inventory movements, you can restrict batches for certain types of actions.

When you move items in the warehouse, it's possible to restrict the batches that can be moved. For example, you can restrict the batches that can be selected for movements that will be moved to scrap. This is a good practice to employ so that batches that shouldn't be scrapped, can't be selected by users.

✅ And Here's How...

There are a number of steps that need to be taken to implement batch determination for processes in Inventory Management. First, create a strategy type that indicates the batch class you'll be referring to in the batch determination. Use the following menu path:

> IMG • LOGISTICS - GENERAL • BATCH MANAGEMENT • BATCH DETERMINATION AND BATCH CHECK • STRATEGY TYPES • DEFINE INVENTORY MANAGEMENT STRATEGY TYPES

The resulting screen shows the existing strategy types. To enter a new one, click the NEW ENTRIES button. Figure 1 shows the next screen, where you enter the details of the new strategy type, including the batch class, which are used to determine whether a batch can be selected.
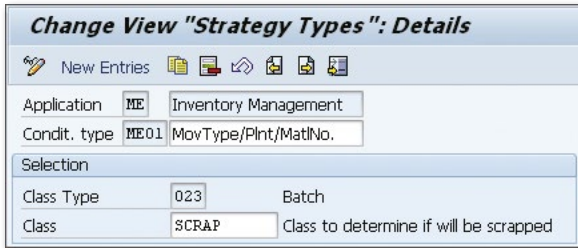
Next, create a new search procedure for the batch determination you want to process and assign the strategy type using the following menu path:

> IMG • Logistics - General • Batch Management • Batch Determination and Batch Check • Batch Search Procedure Definition • Define Inventory Management Search Procedure

Now, assign the search procedure to the movement type or types that will be affected by the batch determination. Perform this assignment using the following menu path:

> IMG • Logistics - General • Batch Management • Batch Determination and Batch Check • Batch Search Procedure Allocation and Check Activation • Allocate IM Search Procedure/Activate Check

Figure 2 shows the allocation of the search procedure to the movement type used for scrapping, 551.
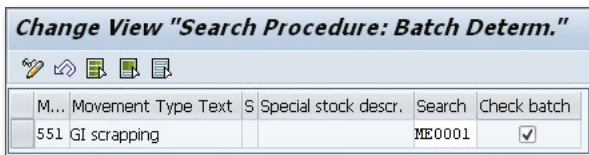
After the configuration is complete, set up the conditions for the batch determination. Use Transaction MBC1 or the following menu path:

> SAP • Logistics • Central Functions • Batch Management • Batch Determination • Batch Search Strategy • For Inventory Management • Create

On the initial screen, enter the strategy type you entered in Figure 1. On the following screen, enter the information you want to use for the batch determination. Figure 3 shows the information we're entering for this example, which is movement type 551 for scrapping, the plant, and the material number.

« *Figure 3 Entering the Details for the Batch Determination*

Access the next screen by using the F7 function key or selecting GOTO • SELECTION CRITERIA from the header menu. Figure 4 shows the details of the condition used for the batch determination.
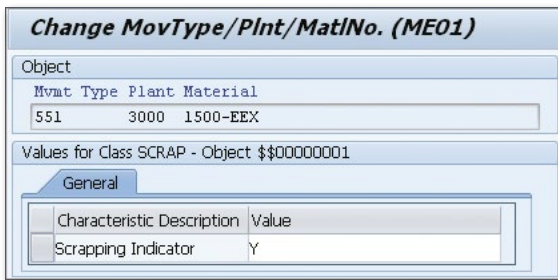
« *Figure 4 Value Used for Batch Determination*

When you process a goods movement for the movement type you've configured, the batch determination process is triggered. For example, if you use Transaction MIGO for good issue scrapping, movement type 551, the batch determination checks to see whether the batch has the characteristic value set to Y for the scrapping indicator characteristic. If not, the transaction returns a message, as shown in Figure 5.
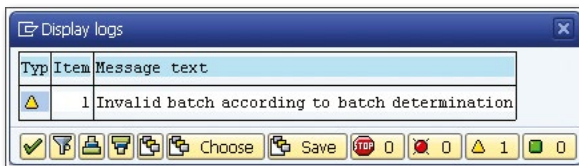
⌃ *Figure 5 Message Triggered by the Batch Determination Process*

Configuring Time-Based Material Substitution

If your company needs or wants to substitute one material for another in the sales process, there's an easy way to set up that situation in the system.

A company manufacturers finished goods it sells to its customers. These finished goods can, in specific cases, be substituted for other materials for a number of reasons. For example, for a company that manufactures bags of candy, the packaging for the candy may reflect seasonal occasions, such as Easter and Halloween, during certain times of the year. For a period before each of those occasions, the company wants to substitute the regular candy for that with the seasonal packaging.

It's a resource-intensive job to ensure that the correct products are being substituted during the correct time period. For example, you want to substitute a product in Halloween packaging only for the month of October. We'll show you how to configure this situation in the system.

✅ And Here's How...

Check the material determination reason configuration using Transaction OVRQ or the following menu path:

> IMG • SALES AND DISTRIBUTION • BASIC FUNCTIONS • MATERIAL DETERMINATION • DEFINE SUBSTITUTION REASONS

The initial screen shows the configured substitution reasons. Figure 1 shows the configuration for seasonal material substitution, and advertising campaign

substitution has been entered. For seasonal material substitution, we check the WARNING column to force a warning message to be displayed. When we enter an A in the OUTCOME field, the substitute materials are shown as sub-items in the sales order.

Change View "Material Substitution: Reasons"

	SbstReason	Description	Warning	Outcome	Strategy
	0000	Seasonal	☑	A	
	0001	Advertising campaign	☐		

⌃   *Figure 1*   Material Determination Configuration

After the configuration has been updated, enter the material substitution details in Transaction VB11 or use the following menu path:

> SAP • LOGISTICS • SALES AND DISTRIBUTION • MASTER DATA • PRODUCTS • MATERIAL DETERMINATION • CREATE

Figure 2 shows the entry of the material substitution details. In this instance, we enter a substitute material in Halloween packaging. Note that the validity dates are just for the period around Halloween. This means that when a sales order is created for material 1500-EEE during this period, the order displays the item 1500-EEX as a sub-item, and this is what the customer receives as a substitute.

Create Material Entered (A001) : Fast Entry

Valid From	09/20/2012
Valid to	10/29/2012
Proposed reason	0000 Seasonal

Material Entered

	MatEntered	Name	Reasn	Material	Description
	1500-EEE	16oz Dark Chocolate	0000	1500-EEX	Halloween 16oz Dark C

⌃   *Figure 2*   Material Substitution Details

To show that the material substitution is working according to your configuration, create a sales order using Transaction VA01 or the following menu path:

> SAP • LOGISTICS • SALES AND DISTRIBUTION • SALES • ORDER • CREATE

Figure 3 shows the entry of the material substitution details. In this sales order, we've entered material 1500-EEE, and the sales order has automatically displayed the substitute material 1500-EEX as a sub-item. The customer receives the substitute item but will see that they did order the original item.

⌃ *Figure 3 Sales Order Showing Material Substitution*

Tip **92**

Excluding Materials from Being Sold to Certain Customers

Because some customers can be sold only certain materials, you can create an exclusion list for specific customers.

Usually, customers are able to purchase any of the products sold by a company; however, sometimes certain customers can purchase only a limited number of items or are barred from purchasing specific items. For customers based in certain countries, there may be restrictions on what they can purchase, either due to boycotts or items that are on the US Bureau of Industry and Security's commerce control list. In addition, some companies may exclude certain products from being sold to competitors.

Some sales departments receive thousands of orders every day, and it's important that customers aren't sold materials that they're not allowed to purchase by accident. In this tip, we'll show you how assign an exclusion directly to a material and set up the system to exclude items from being sold to specific customers.

✅ And Here's How…
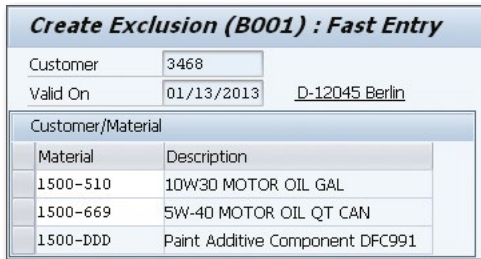
To restrict materials, use Transaction VB01 or the following menu path:

SAP • LOGISTICS • SALES AND DISTRIBUTION • MASTER DATA • PRODUCTS • LISTING/ EXCLUSION • CREATE

On the initial screen, enter a value to create either an exclusion list or a list of materials that a customer can purchase. If you're creating a list of materials to exclude, enter the value that refers to exclusions.

Figure 1 shows the next screen, where you can enter the customer number and a list of materials to be excluded from being purchased.

« *Figure 1 Creating an Exclusion List for a Customer*

After you create the exclusion list, customers aren't able to purchase the materials on it within the specified validity dates. If a customer does try to purchase a material on the exclusion list, an error message is immediately returned during the sales order creation. To validate this, you can create a sales order using Transaction VA01 or the following menu path:

SAP • Logistics • Sales and Distribution • Sales • Order • Create

Figure 2 shows the creation of a sales order with a line item for a material on the exclusion list. The sales order transaction immediately sends back an error message indicating that the material has been excluded.

⌃ *Figure 2 Sales Order Showing an Error Message for an Excluded Material*

Scheduling the Period Close to Run Automatically with Dynamic Variation

Instead of manually processing the material period close, you can schedule it to run automatically via a background job, while taking variable dates into account.

The period close for Materials Management can be run manually so that the new period can commence. An issue may arise if the transaction is delayed in being run and inventory movements are processed before the new period is open. The best method to stop that scenario is to set up the transaction as a background job. However, because the dates of each period will vary from year to year, the job needs to be created so that it takes the variation into account. Therefore, you need to create a job with a dynamic variation that can deal with this issue.

✅ And Here's How…

To run the period closing transaction manually, use Transaction MMPV or the following menu path:

> SAP • LOGISTICS • MATERIALS MANAGEMENT • MATERIAL MASTER • OTHER • PERIOD CLOSE

In the initial screen, enter the company codes you want to close for the period. Then, go to the header menu and select the following menu path:

Figure 1 shows the screen that is displayed. In this screen, set up the variant so that it can trigger the job on the first day of every month.

  ▲ *Figure 1 Creating a Variant for the Period Close Transaction*

On this screen, enter a variant name and description. Then, select the date field and select D, which represents the dynamic date calculation, for the SELECTION VARIABLE field. After that, for the NAME OF VARIABLE field, select the entry called FIRST DAY OF THE CURRENT MONTH. After selecting the variable, save the variant.

To schedule the transaction to run each month, create a job using Transaction SM36 or the following menu path:

In the first screen, shown in Figure 2, add the job name and then click the START CONDITION button.

  ▲ *Figure 2 Job Creation Initial Screen*

In the next screen, enter the time for the job to start. Click the DATE/TIME button and you'll see the screen where you enter the date of the next period and the time

you want to job to start, as shown in Figure 3. Pick a time after the last shift of the last day of the period so that there aren't any more inventory transactions.
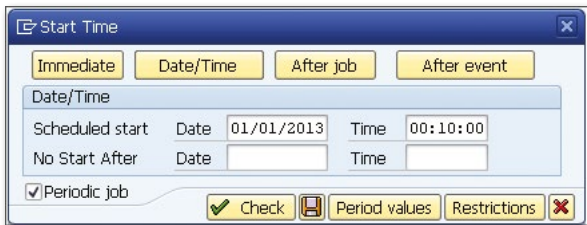
⌃ *Figure 3 Start Date and Time for the Job*

Then, click the Period Values button to select that the job runs monthly. You're returned to the Start Time screen; save the information on this screen. You're then returned to the initial screen, shown previously in Figure 1, where you can select the Step button.

Figure 4 shows the screen where you create the first step. Here, enter the program associated with the MMPV transaction, RMMMPERI, into the Name field and enter the variant you've created into the Variant field.
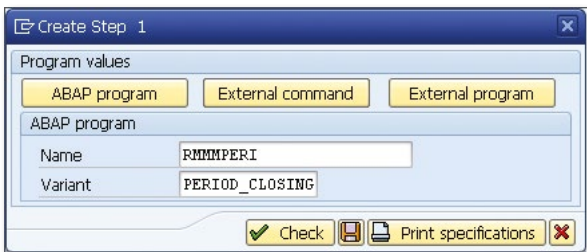
⌃ *Figure 4 Creating a Job Step*

Save the information in this screen, and the job creation program shows you a list of job steps that have been created, as shown in Figure 5.

No.	Program name/command	Prog. type	Spool list	Parameters
1	RMMMPERI	ABAP		PERIOD_CLOSING

⌃ *Figure 5 List of Job Steps*

Then, save the job as a background job. The period close then runs on the first day of every month, without requiring any further changes.

Maintaining the GR/IR Account to Process Variances

When variances don't clear automatically due to vendor delays, you need to manually maintain the GR/IR account.

When items are received from vendors, a goods receipt is performed, and an invoice is normally sent from the vendor. These items match up and are cleared during normal automatic processing. However, sometimes the goods receipt takes place and an invoice isn't received from the vendor in the usual timeframe. This means there's an open amount on the goods receipt/invoice receipt (GR/IR) account. There are also occasions when the invoice doesn't match the goods receipt amount, or the invoice is received, but no goods receipt is recorded. In these events, the automatic routine doesn't process these items and they remain on the GR/IR account. To process these variances, you need to manually maintain the items on the GR/IR account.

✅ And Here's How…

When the invoice comes in from the vendor, it's posted, and it if the amount posted equals the amount on the GR/IR clearing account, then that amount is removed and posted to the vendor account. When there's a variance, it must be handled manually. To do this, use Transaction MR11 or the following menu path:

> SAP • Logistics • Materials Management • Logistics Information Verification • GR/IR Account Maintenance • Maintain GR/IR Clearing Account

Enter a company code in the initial screen of the transaction, and the system defaults a certain number of dates. This includes the Posting Date and the Last Movement before Key Date, which is used to show transactions before that date. Figure 1 shows part of the initial screen.

Additionally, in the Qty. Var Less than/Equal to field, specify a percentage; variances below this percentage are processed. If you enter 100%, the transaction processes all variances, including those for which the invoice hasn't been received. If you enter 10%, variances that are ten percent or less—for example, caused by variances such as invoice value or quantity differences—are processed on the goods receipt.

« *Figure 1* *Initial Screen for GR/IR Maintenance Transaction*

When you enter the selection values you require, the following results screen shows the relevant variances. Figure 2 shows that you can select the individual variances and post them so that they create open items in the GR/IR that are the equal but opposite value to the discrepancies that are to be written off. When the automatic GR/IR clearing program is run, these values are cleared from the GR/IR account.

⌃ *Figure 2* *Variances that Can Be Selected to Be Cleared from the GR/IR Account*

Editing the Field Display in the Service Master Record

To simplify the entry of service master records and to decrease potential errors, you can configure the display of the fields and choose specific users to see the records.

Service master records are entered in the SAP system to act as a source of data that can be used when you create service specifications. There are many planned services that can be performed by external companies, such as consulting, janitorial services, and landscaping, as well as many unplanned services, such as plumbing emergencies and roofing repairs.

The service master record has a large number of fields that your company may or may not require. To reduce the possibilities of data entry errors, you can modify which users can see the service master record.

✓ And Here's How…

To create a service master record, use Transaction AC03 or the following menu path:

> SAP • Logistics • Materials Management • Service Master • Service • Service Master

Figure 1 shows the service master entry screen, which has a number of tabs where you can add data. Enter a description for the service master, a service category, and a unit of measure. There are a number of tabs you can expand; enter the fields that are relevant for the service master you're creating.

⌃ *Figure 1 Creating a Service Master Record*

The service master record has a large number of fields that can be entered, and not all of them are relevant for your company. Configure the fields in the service master to be displayed, hidden, required, or highlighted.

To maintain the fields in the service master, use Transaction OXA2 or the following menu path:

> IMG • Materials Management • External Services Management • Service Master • Field Display for Service Master • Define Field Selection for Service Master (Individual Maintenance)

Figure 2 shows the configuration screen for the service master fields. In this example, we're hiding the Authorization Group field and the Division field because they aren't required. In this example, we're also setting the tax indicator field to be highlighted, by checking the HiLi field, and making it a required field.

⌃ *Figure 2 Configuring the Fields in the Service Master Record*

After you've made the configuration changes to the service master fields, you can create another service master, using Transaction AC03, to see the effect of the changes.

Figure 3 shows that the authorization group and division now aren't shown, while the tax indicator is highlighted and a required field.

⌃ *Figure 3 Service Master after Configuration Changes*

Tip 96

Defining Default Values for Buyers in Common Documents

You can set default values for your procurement professionals, or groups of users, so that they save time when working with common purchasing transactions.

Each member of the purchasing department may have a different function, and therefore performs different tasks. To assist them, you can set default values for different purchasing transactions, which saves them considerable time if they repeat certain tasks many times a day. Anything that saves users time in performing their tasks reduces the overall cost of performing certain transactions, such as creating requisitions, and in turn improves general efficiency. You can also set up a number of default values and group them together so that, if a number of users all perform the same task, they can all be assigned the same default values.

✅ And Here's How…

Creating a set of default values and assigning those to a user can reduce the number of entries a purchasing team member has to perform each day. To do this, use Transaction OMFI or the following configuration menu path:

> IMG • Materials Management • Purchasing • Environment Data • Define Default Values for Buyers • Settings for Default Values

On the initial screen, you'll see the configured default values that already exist. These can be assigned to different groups of users. Select an existing value or click the New Entries button to create a new default value. Figure 1 shows the existing

default values; in this instance, we select the ZV value for purchasing managers and approvers.

Figure 1 *Default Values for Purchasing*

The details of the default value are shown over seven tabs: INDICATORS, OVERVIEW SCREENS, FAST PROCESSING, VARIANTS, ADDITIONAL SCREENS, PRICE ADOPTION, and SOURCE DETERMINATION. Figure 2 shows the INDICATORS screen, where you can highlight fields so that the fields on the purchase order can be defaulted.

For example, on the INDICATORS tab in Figure 2, you can put a check against the purchase order field, which flags the item as being subject to the order acknowledgment requirement. The same is true for contracts and scheduling agreements if you check them.

⌃ **Figure 2** *Configuring the Fields for the ZV Default Value*

Select the other tabs in the transaction and select the defaults your particular group requires. After saving the default value, assign it to a user.

To add the default to the user, use Transaction SU01 or the following menu path:

IMG • MATERIALS MANAGEMENT • PURCHASING • ENVIRONMENT DATA • DEFINE DEFAULT VALUES FOR BUYERS • MAINTAIN USERS

Add the default value for purchasing to the user by entering the parameter ID named EVO, as shown in Figure 3.

⌃ *Figure 3 Entering Purchasing Default Values for a User*

For each parameter ID, enter the parameter value, which is the configured default value for purchasing. In this case, enter the parameter value of ZV, which has just been configured. The default values are then shown each time the user performs certain transactions.

Tip 97

Configuring Non-Standard Payment Terms After Negotiation

You can configure special payment terms in the system as part of the purchasing negotiation if your vendor falls outside of the standard procedures.

Vendors use many standard payment terms for their customers. For many companies, the payment terms negotiated with vendors may be very standard, such as Net 30, which is a trade credit for which the payment is due in full 30 days after the item is purchased. However, when a company is negotiating with a vendor, more favorable payment terms may be offered. Usually, non-standard payment terms need to be configured in the system. The purchasing department should be aware that most kinds of payment terms can be configured and that they can use this fact in their negotiations with vendors.

✅ And Here's How…

If your company has negotiated a unique set of payment terms with a vendor, define them in the system using Transaction OME2 or the following configuration menu path:

> IMG • MATERIALS MANAGEMENT • PURCHASING • VENDOR MASTER • DEFINE TERMS OF PAYMENT

The purchasing department informs you of the details of the payment terms defined in the contract with the vendor. From these details, create new payment terms. On the initial screen of the transaction, enter a four-character payment

terms number, and because it's custom, it can begin with a Z. (However, this depends on your company's data governance.) Click Create.

Figure 1 shows the detail screen for the new payment terms. The Sales Text field is only necessary if the payment terms are being used for customers; otherwise, enter a description in the Own Explanation field.

⌃ *Figure 1 Details of the New Payment Terms from a Vendor*

Enter the details of the agreement with the vendor in the Payment terms section. Here, add the cash discount percentage rate, which is valid if the payment is made to the vendor within the specified period. In this case, the vendor is offering a 4.175% discount for payments made with ten days. This drops to a 2.645% discount if the payment is made between 11 and 15 days. There is no discount after 15 days, and the payment to the vendor is due in no later than 20 days.

Add Payment Terms to Relevant Records
After you enter the new payment terms, add those to the relevant records, such as the vendor master record. To add the payment terms to a vendor, use Transaction MK02 or the following menu path:

> SAP • Logistics • Materials Management • Purchasing • Master Data • Vendor • Purchasing • Change (Current)

On the initial screen, enter the vendor number and purchasing organization. Then, check the Purchasing Data indicator. Figure 2 shows the next screen, where

you add the payment terms for the vendor with respect to the specific purchasing organization.

⌃ *Figure 2 Payment Terms in the Vendor Master Record*

Setting Up Different Numbering Schemas for Material Types

Instead of numbering all materials using the same number range, you can configure the system so that each material type can be separately numbered.

In a great many instances, a company decides to use some kind of intelligent numbering schema for its materials, or an internal number range in which the new material number has no meaning. However, there's an alternative to these material numbering options.

In configuration, you have the ability to number materials for a certain material type differently than other material types. For example, you can set up a number range for finished goods that is different from raw materials. Each new material would have an internally generated number with no intelligent meaning, but would be in a completely different number range. The separate numbering of material types can be especially useful for companies that want to see a distinction between different types of materials, so that is some resemblance of intelligent numbering without having to develop a numbering schema. If all finished goods were in the range 10000 to 39999, then anyone in the company would instantly know that a material with the number 38953 is a finished good.

✅ And Here's How…

If it's been decided by your data governance team to create different numbering schemas for different material types, use Transaction MMNR or the following configuration menu path:

> IMG • Logistics – General • Material Master • Basic Settings • Material Types • Define Number Ranges for Each Material Type

From the initial screen, select the Groups button or use the F6 function key. This displays the current groups that have been created and the material types assigned to those groups. If there are no groups, create a new group by selecting the following from the header menu: Group • Insert.

To create a new group, enter a text and then the relevant number range for the internal and external number ranges. Figure 1 shows a new group and the assigned internal number range. It's important to remember that you can only enter a number range that doesn't overlap with any other existing number ranges.

Maintain Number Range Intervals

 Interval

| NR Object | Material master |
| Group............. | New Material Type Group |

Intervals

From number	To number	Current number	Ext
030000000000000000	039999999999999999	30000000000000009	☐

⌃ *Figure 1 Number Range for the New Material Type Group*

When you create a new group, you can then assign material types to it, and it adopts the number range. If you assign more than one material type to the group, each new material for any of the material types is assigned the next number in the range.

Figure 2 shows that for the new material type group, only one material type has been assigned: the non-valuated material type.

Maintain Number Range Groups

🖉 Element/Group

☑ New Material Type Group
  UNBW Non-valuated material

⌃ *Figure 2 Assigning a Material Type to the New Material Type Group*

After assigning the material types to the group, each new material is assigned a number in that range if an internal number range has been used.

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Figure 3 shows the creation of a new non-valuated material using Transaction MMU1. The material has been assigned the first number in the internal number range for the material type group.

⌃ *Figure 3 New Non-Valuated Material Assigned Number from the New Range*

Configuring the Views in the Plant-Specific Material Master

You can adjust the views in the material master so that different plants see the fields and requirements that are specific and relevant to their needs.

The material master record has a number of screens where information can be entered and viewed. In many companies, plants operate differently: one facility may be a manufacturing plant, while another may be only a warehouse location. In these instances, material created at one plant may not need the same information that's required at another.

For example, if a material is created and used at a manufacturing plant, the site needs material information about quality inspections, whereas a warehouse location may not need that same quality information. Depending on your location requirements, you can restrict certain views of the material master so that unnecessary screens are excluded for data entry based on the plant.

✅ And Here's How…

If you need to exclude certain views from the material master record for specific plants, use Transaction OMSA or the following configuration menu path:

> IMG • Logistics - General • Material Master • Field Selection • Material Types • Define Plant-Specific Field Selection and Plant-Specific Screen Selection

Figure 1 shows the details of the transaction. Each plant has a list of views shown in the Maintenance Status field.

If a particular plant is required to have access to enter data only into specific screens, remove certain screens from the MAINTENANCE STATUS field. If you're unsure of what each letter represents in this field, click the field and press the function key F4. Figure 2 shows a selection of which screen each letter represents.

After it's been decided which screens won't be displayed at specific plants, remove the corresponding letter from the MAINTENANCE STATUS field in Figure 1. For plant IND5, the MAINTENANCE STATUS field has been changed so that the QUALITY MANAGEMENT screen is no longer accessible for data entry. If other screens weren't required, the field would be changed to remove the appropriate value.

If you then try to create a semi-finished material using Transaction MMB1, you aren't able to enter data in the quality management screen for the IND5 plant. Figure 3 shows the error message displayed when you try to access the QUALITY MANAGEMENT view when creating a material master.

Tip 100

Manually Creating an Inspection Lot

You can manually create an inspection lot for some goods movements if the inspection is only required at a specific point in the movement process.

The quality department may insist that an inspection lot be automatically created for some materials when a goods movement is performed. However, in some instances the creation of the inspection lot may not be required at the time of the movement, but could be required later in the process. In that instance, an inspection lot can be created manually. For example, a material may be set up to trigger an inspection on a stock transfer; however, for some movement types, especially customer-created movement types, the automatic inspection lots may not be required.

✅ And Here's How…

If your company decides that you should just have the ability to create manual inspection lots for certain movement types, use the following configuration menu path:

> IMG • QUALITY MANAGEMENT • QUALITY INSPECTION • INSPECTION LOT CREATION • INSPECTION FOR GOODS MOVEMENTS

Figure 1 shows the initial screen, where you select DEACTIVATE QUALITY INSPECTION FOR A MOVEMENT TYPE.
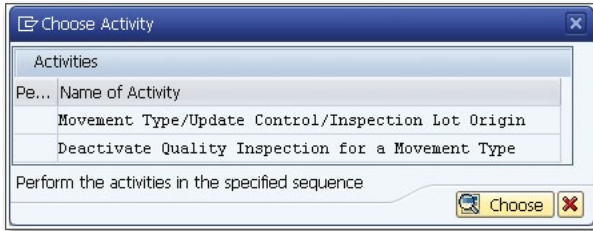
⌃   *Figure 1*   *Option to Deactivate Inspection for a Movement Type*

Figure 2 shows the configuration for the movement types, where for each movement type and special stock indicator, you can determine whether quality inspection lots aren't required. To configure a movement type to *not* create an automatic inspection lot, add a checkmark to the QM NOT ACTIVE field. This customer-created movement type, Z99, has been configured so that it doesn't automatically create an inspection lot when the movement occurs.
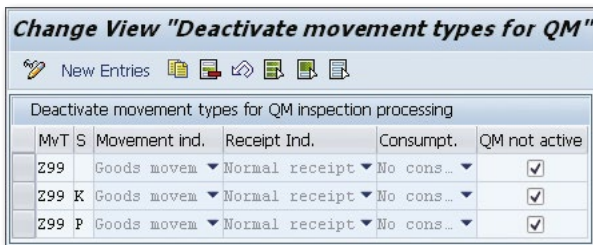
⌃   *Figure 2*   *Configuration for Movement Type Z99 to Restrict Automatic Inspection Lots*

If you determine that an inspection lot is required, manually create an inspection lot using Transaction QA01 or the following menu path:

> SAP • LOGISTICS • QUALITY MANAGEMENT • QUALITY INSPECTION • INSPECTION LOT •
> PROCESSING • CREATE

Figure 3 shows the inspection lot created for the received material using movement type Z99. The automatic inspection lot wasn't triggered, so a manual inspection lot for the goods receipt can be created.

❯ *Figure 3* Manual Inspection Lot Created After the Goods Receipt

Glossary

Account assignment When creating an SAP requisition, charging the goods and/or services to a specific cost object and general-ledger account on the Account Assignment screen.

Account assignment category Determines which account assignment details are required for the purchase order item (e.g., cost center or account number).

Account determination A system function that automatically determines the accounts in financial accounting to which the amount(s) in question should be posted for the user during any posting transaction.

Authorization Access to a transaction in the SAP system is based on a set of authorized values for each of the fields in the system. Users are given access to the appropriate fields, screens, and data using the authorization or security programs.

Authorization check Check performed to determine whether a user is authorized to execute a particular function.

Automatic reorder point planning In consumption-based planning, if a material falls below its reorder point, a purchase requisition is created during the MRP run.

Availability check Check that's run as part of a goods movement to ensure that the material stock balance doesn't go negative.

Backflushing Automatic issue of materials after they've been used in a production order or physically moved.

Base unit of measure The unit of measure for a material from which all other units of measure for the material are converted.

Batch An amount of material that's unique and managed separately from others.

Batch determination Function that allows a program (e.g., a sales order) to select a batch based on selection criteria.

Blanket order Standing purchase order (contract) with fixed start and end dates for repetitive purchases from a single vendor. Requisitioners can purchase against the order until the amount of the blanket order is depleted or the blanket order expires.

Bill of materials (BOM) List of all the items, including quantity and unit of measure, that make up a finished product or assembly.

Blocked stock Valuated stock of a material that can't be used. In the availability check, blocked stock is "not available."

Characteristic Description of a material that's defined by the user, such as color, viscosity, etc.

Characteristic value The value assigned to a characteristic when it's used to describe

a material, e.g., for the characteristic *color*, the value may be entered as blue.

Chart of accounts Consists of a group of general ledger accounts. For each G/L account, the chart of accounts contains the account number, name, and any technical information.

Class Grouping of characteristics that, in total, describe an object.

Client A self-contained unit in the SAP system with its own separate master records and set of tables.

Company code Used to represent an organizational unit with its own complete, self-contained set of cost objects for reporting purposes.

Condition Used to calculate prices, discounts, taxes, etc., according to the selection of vendor, customer, material, etc.

Configuration The formal process of establishing the SAP settings to support a company's specific business rules, validations, and default values.

Consumption-based planning A generic term for the procedure in Material Requirements Planning (MRP) for which stock requirements and past consumption values are critical.

Contract Long-term outline purchase agreement against which materials or services are released according to user requirements over a specified period of time.

Cost center Organizational unit within a controlling area that represents a separate

location of incurred cost. Cost centers can be set up based on functional requirements, allocation criteria, activities or services provided, location, or area of responsibility.

Customer A business partner with whom a relationship exists that involves the issue of goods or services.

Customizing The process of configuring the SAP system to meet the business needs of the company.

Cycle counting The physical inventory that is performed on materials several times during the year, unlike a yearly physical inventory.

Dialog box Part of the GUI. It's a window called for by the main transaction and displayed in the main window.

Document The electronic record of a transaction, entered in SAP. Examples include a material document and an accounting document.

Document management system (DMS) The system that captures and manages documents within an organization.

Electronic data interchange (EDI) Electronic communication of business transactions, such as orders, confirmations, and invoices, between organizations.

Factory calendar Defined on the basis of a public holiday calendar. Shows the work days for the client.

Financial accounting The SAP functionality that monitors real-time values from

financially relevant transactions and maintains a consistent, reconciled, and auditable set of books for statutory reporting and management support.

First in, first out (FIFO) Materials and products are withdrawn from stock for sale or use in the order of their acquisition.

Forecast Estimation of the future values in a time series.

General Ledger (G/L) account A six-digit code that records value movements in a company code and represents the G/L account items in a chart of accounts.

Goods issue A reduction in warehouse stock due to a withdrawal for consumption in house or the delivery of goods to a customer.

Handling unit (HU) A physical item consisting of a material and packaging material. A handling unit has an identification number that can be used to recall the data on the HU.

Intermediate document (IDoc) Data container for data exchange between SAP systems or between an SAP system and an external system.

Implementation guide (IMG) Explains the steps in the implementation process. The structure of the IMG is based on the application-component hierarchy and lists all the documentation relevant to implementing the SAP system.

Inventory adjustment Correction to the material stock level due to physical inventory or goods movements.

Inventory valuation Process of calculating the value of the material in the plant.

Invoice Bill sent to the client from a vendor for goods and/or services delivered.

Item category Indicator that identifies whether certain fields are allowed for a material.

Kanban A procedure for controlling production and material flow based on a chain of operations in production.

Last in, first out (LIFO) Materials and products are withdrawn from stock for sale or use in the order of the most recent purchase.

Lot size A defined quantity to purchase or produce.

Manufacturer part number (MPN) A material number that the vendor uses to identify their material.

Material group A group that classifies materials by commodity or service type and is used by the purchasing department for reporting purposes.

Material type A grouping of materials with the same basic attributes, such as raw materials, semi-finished products, or finished products.

Material valuation The determination of the value of the material in stock.

Movement type Indicates the type of goods movement. It enables the system to use predefined posting rules determining how

the accounts are to be posted and how the material master record is to be updated.

Material Requirements Planning (MRP) A term for procedures in production planning that take into account and plan future requirement during the creation of order proposals.

MRP controller The person responsible for a group of materials in MRP at a plant.

MRP list A document in SAP that shows an overview of the result of the MRP run.

MRP type A key that controls the MRP process for a material.

Navigation path Transactions are organized into folders in a directory structure in the navigation area. A navigation path is the series of folders you access in order to find and launch an SAP transaction.

Negative inventory A logical situation when the inventory is below zero due to a goods issue being performed before the goods receipt has been entered.

One-step stock transfer Issue of material one step where the material is issued and received simultaneously.

One-time vendor A term for a vendor master record used for processing transactions with vendors who are not normally or have never been used.

Operation A manufacturing activity step in a routing. Used in production planning.

Physical inventory The recording of actual stock levels of materials by counting,

weighing, or measuring at a given location at a specific time.

Plant An organizational unit within the company code where material is produced, purchased, and planned.

Purchase order Document generated by the purchasing department. A purchase order is an official order sent from the client to a vendor requesting goods and services.

Purchase requisition A request by a user or a process to the purchasing department to purchase certain material at a specific time.

Purchasing group A person or group of people in the purchasing department responsible for purchasing a type of good or service.

Purchasing information record An information record that defines the specific details for a vendor/material combination.

Purchasing organization An organizational unit that procures materials or services and negotiates the conditions of purchase with vendors.

Putaway Used in Warehouse Management to describe the physical movement of the material into the bin locations.

Quota arrangement A purchasing concept that allows the source of supply for a material to be determined via quotas decided upon with a number of vendors. For example: Vendor A supplies 40 %, Vendor B supplies 35%, and Vendor C supplies 25%.

Quotation A reply to a request for quotation from a vendor specifying its terms

and conditions for the materials or servers required by the purchasing department.

Release To approve a purchase requisition or a purchasing document.

Release strategy A set of business rules used to evaluate a purchase document or line item to determine the type of approvals needed before it can be released.

Request for quotation (RFQ) A request to a vendor or number of vendors for a quotation to supply materials or services.

Reservation A request to the warehouse to ensure that certain materials are available on a certain date.

Routing Defines one or more sequences of operations for the production of a material

Safety stock The level of material in stock below which a material shortage may occur.

Scheduling agreement A purchasing agreement with a vendor whereby they supply material to the customer at agreed upon days and times.

Serial number A unique number assigned to a single item. Each item has a unique number. For example, each vacuum cleaner produced at a plant has its own serial number.

Subcontracting A form of outsourcing whereby an external vendor produces material for the customer.

Tolerance The dollar amount or percentage by which a document may exceed specification. For example, a tolerance for a purchase order could be no more than 10 % per line item and no more than $500 for the total of the purchase order.

Transfer order A Warehouse Management term that describes the request to move material to or from a storage bin.

Two-step stock transfer A procedure whereby the stock is issued from one plant and then received at the receiving plant. This is the same for transfers between storage locations.

Unit of measure (UOM) Defines the amount or size of the material or service, such as bottle (BT), each (EA), hour (Hr), etc.

Universal product code (UPC) Standardized number used in the U.S. to uniquely identify a material. The EAN is used in Europe.

Valuation The process of estimating the value of a company's stock.

Vendor A business partner from whom materials and services are purchased.

Vendor evaluation The functionality that allows the vendors to be evaluated based on price, quality, service, and delivery reliability. The evaluation can determine how a material is sourced.

Warehouse An organizational structure that resides within the Warehouse Management functionality. It can be linked to materials management via the storage location.

Work center A location used in production planning where a manufacturing operation is performed.

Materials Management Transaction Codes

Transaction Number	Description
ME01	Maintain Source List
ME03	Display Source List
ME04	Changes to Source List
ME05	Generate Source List
ME06	Analyze Source List
ME07	Reorganize Source List
ME08	Send Source List
ME0M	Source List for Material
ME11	Create Purchasing Information Record
ME12	Change Purchasing Information Record
ME13	Display Purchasing Information Record
ME14	Changes to Purchasing Information Record
ME15	Flag Purchasing Information Record for Deletion
ME16	Purchasing Information Records for Deletion
ME17	Archive Information Records
ME18	Send Purchasing Information Record
ME1A	Archived Purchasing Information Records
ME1B	Re-Determine Information Record Price
ME1E	Quotation Price History
ME1L	Info Records per Vendor
ME1M	Info Records per Material
ME1P	Purchase Order Price History
ME1W	Info Records per Material Group
ME1X	Buyer's Negotiation Sheet for Vendor
ME1Y	Buyer's Negotiation Sheet for Material

Transaction Number	Description
ME21	Create Purchase Order (Traditional)
ME21N	Create Purchase Order
ME22	Change Purchase Order (Traditional)
ME22N	Change Purchase Order
ME23	Display Purchase Order (Traditional)
ME23N	Display Purchase Order
ME24	Maintain Purchase Order Supplement
ME25	Create Purchase Order with Source Determination
ME26	Display Purchase Order Supplement (IR)
ME27	Create Stock Transport Order
ME28	Release Purchase Order (Traditional)
ME29N	Release Purchase Order
ME2A	Monitor Confirmations
ME2B	Purchase Orders by Requirement Tracking Number
ME2C	Purchase Orders by Material Group
ME2J	Purchase Orders for Project
ME2K	Purchase Orders by Account Assignment
ME2L	Purchase Orders by Vendor
ME2M	Purchase Orders by Material
ME2N	Purchase Orders by Purchase Order Number
ME2O	SC Stock Monitoring (Vendor)
ME2S	Services per Purchase Order
ME2V	Goods Receipt Forecast
ME2W	Purchase Orders for Supplying Plant
ME308	Send Contracts with Conditions
ME31	Create Outline Agreement
ME31K	Create Contract
ME31L	Create Scheduling Agreement
ME32	Change Outline Agreement
ME32K	Change Contract

Transaction Number	Description
ME32L	Change Scheduling Agreement
ME33	Display Outline Agreement
ME33K	Display Contract
ME33L	Display Scheduling Agreement
ME34	Maintain Outline Agreement Supplement
ME34K	Maintain Contract Supplement
ME34L	Maintain Scheduling Agreement Supplement
ME35	Release Outline Agreement
ME35K	Release Contract
ME35L	Release Scheduling Agreement
ME36	Display Outline Agreement Supplement
ME37	Create Scheduling Agreement
ME38	Maintain Scheduling Agreement Schedule
ME39	Display Scheduling Agreement Schedule
ME3A	Transmit Release Documentation Record
ME3B	Outline Agreements per Requirement Number
ME3C	Outline Agreements by Material Group
ME3J	Outline Agreements per Project
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Transaction Number	Description
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Transaction Number	Description
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Transaction Number	Description
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Transaction Number	Description
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A native of London, England, **Martin Murray** joined the computer industry upon his graduation from Middlesex University in 1986. In 1991, he began working with SAP R/2 in the Materials Management area for a London-based multi-national beverage company. In 1994, he moved to the United States to work as an SAP R/3 consultant. Since then, he's been implementing the Materials Management (MM) and Warehouse Management (WM) functionality in projects throughout the world. He works for IBM Global Business Services.

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