



Infor CloudSuite Industrial Automotive Industry Pack User Guide

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About the Automotive Industry Pack

This book contains help topics that describe the Automotive industry pack overviews, procedures, and forms. To use these forms, you must have access to the Automotive Industry Pack group authorization.

Enhancements Overview

- **Retroactive Billing** - unit pricing is now at the blanket line release level. Existing re-pricing functionality is then modified to reflect the changes at the blanket line release level.
- **Failure Mode Effects Analysis (FMEA)** - This is a common analysis used in the auto industry to determine the risk of certain types of failure and to implement corrective action to prevent those failures. Each operation has a potential risk and certain preventative measures. Although not exclusive to the auto industry it is representative of repetitive manufacturing and is normally expressed in the terms of parts per million. It is important to document the risk and the resulting outcome to insure that a procedure implemented to reduce risk is not removed due to undue circumstance. 100% radiographic inspection could be required to detect a flaw that otherwise would be virtually undetectable and removal of this requirement could have significant impact to the overall quality and performance of the product.
- **Advanced Product Quality Planning (APQP)** - These are somewhat independent actions of the ERP that are required to be performed to be said to be in compliance with a Quality Program. Each program has an independent set of requirements, they can only be said to be complete or incomplete.
- **Match Delivery Notice to Invoice** - Provide a way to match a payment to an invoice during AR Payment Distribution. Not all customers reference the invoice during payment. They may reference the ASN, the order, or some other identifier generated on their end. You may now specify which reference type they will provide with payments. When payments are being distributed, you can launch a form that allows you to enter the reference number provided with the payment. The system will then find the invoice that matches this reference number.
- **Customer and Vendor Contracts** - You can now use the various customer and vendor master contracts forms to create and manage a contractual agreement regarding customer and vendor order lines and releases.
- **Returnable Containers Management** - Provides for the management of containers in accordance with Automotive Industry requirements by adding data fields to the Automotive Containers form for the definition of physical dimension and capacity and for recording the codes and markings necessary for compliance with ISO 6346. Containers can be defined for repeated use, and you may specify general container types. You may also include containers inside other containers.
- **Due Date Add Time Stamp** - To facilitate highly repetitive manufacturing with JIT models that require multiple shipments a day for a particular part, customer and purchase order due dates can now include the time of day.

- **Overall Equipment Effectiveness (OEE)** - Overall Equipment Effectiveness, a key metric that defines the percentage of production that is truly productive, can now be viewed on the Job Operations and Resource Group Load Profile - Scheduler forms.

Designing FMEA

Set Up FMEA Data

- 1 On the **FMEA Classifications** form, specify all possible failure classifications.
- 2 On the **FMEA Failure Modes** form, specify all possible failure modes.
- 3 On the **FMEA Ratings** form, accept the default ratings standard or specify your own.

Design the FMEA

- 1 Open the FMEA Maintenance form.
- 2 In the header, specify the item, operation, and work center.
- 3 In the Causes and Controls section, specify the type of failure, its potential causes, and other factors. When you specify the Classification, its description displays in the Potential Causes field.
- 4 Select ratings in the Severity, Occurance, and Detection fields. These fields are used to calculate the RPN field, using the following formula: $\text{Severity} * \text{Occurance} * \text{Detection}$.
- 5 In the Action Information section, specify how to respond to the potential failure, as well as what steps have already been taken and how they affected the RPN.
- 6 Select ratings in the Action Severity, Action Occurance, and Action Detection fields. These fields are used to calculate the Action RPN, which represents the effect your actions had on the original RPN.

Managing Automotive Containers

This topic describes the setup and use of containers for the auto industry.

Setup

If you wish to reuse container numbers, select the Reuse Container Numbers check box on the **Inventory Parameters** form.

ISO Container Specification

Use these forms to review ISO container heights, lengths, and types:

- ISO Container Heights
- ISO Container Lengths
- ISO Container Types

Container Types

Use the **Container Types** form to define common characteristics that provide default values for container types. The types you create on that form are used elsewhere in the system for automotive containers.

- 1 On the **Container Types** form, create a new container type and add a description.
- 2 Specify the ISO codes for country, length, height, and type.
- 3 Select or clear appropriate check boxes for including air surface symbol, overhead electrical warning, and height mark.
- 4 Specify weights, heights, widths, lengths, and cubic capacity along with their units of measure.

Containers

On the **Automotive Containers** form, specify effective date, container type, parent container, ISO 6346 marks and codes and values for capacity, dimensions, and units of measure. .

- 1 Create a new container on the **Automotive Containers** form and give it a description if you like.

- 2 Specify the warehouse, location, and usage reference.
- 3 Specify the effective date, container type, and parent container.
- 4 Specify the owner code, the ISO codes, and container serial number.
- 5 Select or clear check boxes to determine whether to include air surface symbol, overhead electrical warning, and height mark.
- 6 Specify weights, heights, widths, lengths, and cubic capacity along with their units of measure. The Check Digit field is populated automatically upon save.
- 7 The Grouping tab displays the hierarchy where other containers have the current container defined as the parent container. Use the right arrow to remove subordinate containers from the current container. Use the left arrow to assign the current container to the parent container for containers displayed in the Free Containers tree view. The free containers are ones that do not have a parent container assigned.

Managing Customer and Vendor Master Contracts

Creating a customer order, or purchase order, master contract involves several forms:

- Customer Order Master Contracts
- Purchase Order Master Contracts
- Customer Order Master Contract Lines
- Purchase Order Master Contract Lines
- Customer Order Master Contract Line Prices
- Purchase Order Master Contract Line Prices

Create a Customer/Vendor Master Contract

- 1 Open the Customer/Purchase Order Master Contracts form.
- 2 Select System > Actions > New to create a new master contract.
- 3 Specify a contract number, or leave the field blank to cause the system to automatically generate a number when the record is saved.
- 4 Specify a customer/vendor, effective date, and status. You may also specify an expiration and review date, if desired.
- 5 Save the record.

Add Contract Lines

- 1 On the **Customer/Purchase Order Master Contracts** form, click the **Contract Lines** button to open the **Customer/Purchase Order Contract Lines** form and filter the form by the selected contract.
- 2 Select **System > Actions > New** to create a new master contract line.
- 3 Specify a customer/purchase order and line.
- 4 If applicable, specify an initial and contract total quantity, as well as a vendor item number.
- 5 Save the record.

Define Contract Line Prices

- 1 On the Customer/Purchase Order Contract Lines form, click the Prices button to open the Customer/Purchase Order Master Contract Line Prices form and filter the form by the selected line.
- 2 Specify an effective date.
- 3 If applicable, you may also specify the contract price, as well as expiration and review dates.
- 4 Save the record and close the form.

Reprice a Purchase Order

You may reprice a purchase order at the line, blanket line, or blanket release level. After opening the repricing form, you may

Open the Recalculating Form

- 1 Open the Purchase Order Lines, Purchase Order Blanket Lines, or Purchase Order Blanket Releases form.
- 2 Select the order/line/release to recalculate.
- 3 Click the **Recalculate Cost** button. For lines, the **Purchase Order Lines Reprice** form displays. For blanket lines, the **Purchase Order Blanket Lines Reprice** form displays. For releases, the **Purchase Order Blanket Releases Reprice** form displays.

Modify the Pricing Method

On any of the six repricing forms, use the **Contract Pricing Method** field to select a new contract pricing method, if available.

Modify the Line/Release Price

On any of the six repricing forms:

- 1 Enter a new amount in the Reprice field.
- 2 Save the record.

Recalculate the Price

Click the **Recalculate Cost** button to get an up-to-date vendor contract price or item cost. This button is available if the line is a non-inventoried item, if the line status is not Planned or Ordered, or if the purchase order was not created by the current site.

Referencing a Payment

For customers that send payments using a reference number other than the invoice number, you can specify which reference type they will provide with payments.

- 1 Open the EDI Customer Profiles form and select a customer.
- 2 Ensure that Ship To 0 is selected.
- 3 In the Payment Ref Type field, select the reference type that your customer includes with their payment.
- 4 If the External type is selected, map the EDI element that contains the reference to the **Ext Payment Ref** field on the **EDI Customer Orders** form.
- 5 When posting EDI customer order invoices, the system looks up the reference type for the customer and sets the reference number accordingly.
- 6 When you are distributing a payment, click the **Payment Reference** button on the **A/R Payment Distributions** form to open the **Payment Reference Lookup** form.
- 7 On the **Payment Reference Lookup** form, enter the reference sent with the payment.
- 8 Click **Search** to display, in the grid, all invoices that match that reference you entered.
- 9 Select the appropriate invoice and click **Ok** to return to selected invoice number to the A/R Payment Distributions form.

Note: If you are using the **A/R Quick Payment** form, the reference number displays in the grid.

Reprice a Customer Order

You may reprice a customer order at the line, blanket line, or blanket release level. After opening the repricing form, you may

Open the Repricing Form

- 1 Open the Customer Order Lines, Customer Order Blanket Lines, or Customer Order Blanket Releases form.
- 2 Select the order/line/release to reprice.
- 3 Click the Reprice button. For lines, the Customer Order Lines Reprice form displays. For blanket lines, the Customer Order Blanket Lines Reprice form displays. For releases, the Customer Order Blanket Releases Reprice form displays.

Modify the Pricing Method

On any of the six repricing forms, use the **Contract Pricing Method** field to select a new contract pricing method, if available.

Modify the Line/Release Price

On any of the repricing forms:

- 1 Enter a new amount in the Reprice field.
- 2 Save the record.

Recalculate the Price

Click the **Reprice** button to recalculate the Unit Price based on the pricing set up in **Price Formulas** and its related forms.

Print/Post the Invoice

On the customer order reprice forms, click the **Print/Post Invoice** button to open the **Print Price Adjustment Invoice** form.

Create Vouchers and Adjustments

On the purchase order reprice forms, click the **Voucher Builder** button to open the **Voucher Builder** form.

Specifying Order Pricing Methods

Create a Customer Pricing Method

- 1 Open the **Customers** form.
- 2 Select a customer record.
- 3 In the **Customer Contract Pricing** field, select Order Date or Due Date to specify which date will be used to determine pricing.
- 4 In the **Contract Pricing Method** field, select whether the pricing information will come from the **Customer Order Master Contracts** form or the **Customer Contracts** form.
- 5 Save the record and close the form.
- 6 If a master contract exists for the customer, open the **Customer Order Master Contracts** form and filter the form to display the customer's master contracts.
- 7 For each master contract, the **Contract Price Method** selected on the **Customers** form displays by default, but it may be updated as needed.
- 8 Save the record and close the form.

Create a Vendor Pricing Method

- 1 Open the **Vendors** form.
- 2 Select a vendor record.
- 3 In the **Customer Contract Pricing** field, select Order Date or Due Date to specify which date will be used to determine pricing.
- 4 In the **Contract Pricing Method** field, select whether the pricing information will come from the **Purchase Order Master Contracts** form or the **Vendor Contracts** form.
- 5 Save the record and close the form.
- 6 If a master contract exists for the vendor, open the **Purchase Order Master Contracts** form and filter the form to display the customer's master contracts.
- 7 For each master contract, the **Contract Price Method** selected on the **Customers** form displays by default, but it may be updated as needed.
- 8 Save the record and close the form.

Tracking Equipment Effectiveness

Overall equipment effectiveness (OEE) is used to evaluate how effectively a job operation is utilized. There are two places to view OEE data: the **Job Operations** and **Resource Group Load Profile - Scheduler** forms.

Job Operations

On the **Job Operations** forms, select the OEE tab to view effectiveness data for the latest 30 days of reported labor that requires the resource to have labor reported against the operation's work center.

Resource Group Load Profile - Scheduler

On the **Resource Group Load Profile - Scheduler** form, use the OEE graphs to view effectiveness data for the specified date range of reported labor that requires the resource to have labor reported against the operation's work center.

OEE Factors

Factor	Calculation
Availability	$([\text{Available Production Time}] - [\text{Unavailable Production time Shift Exceptions}]) / [\text{Available Production Time}]$
Performance	$[\text{Total Pieces}] / [\text{Operation Time}] / [\text{Ideal Cycle Time}]$
Quality	$[\text{Good Pieces}] / [\text{Total Pieces}]$
Overall OEE	$\text{Availability} * \text{Performance} * \text{Quality}$

Notes

- Performance, Availability, or Quality calculated at greater than 100% are artificially capped at 100% and display in red. This typically indicates a problem with reporting or your ideal cycle time.
- To ensure an accurate measurement of piece quality, scrap should be reported against the operation.
- If you do not report shift exceptions against the resource, Availability will always be calculated as 100%.
- OEE calculations are not related to specific jobs.
- OEE is not applicable to back flushed materials or fixed schedule hours, which are always 100%.

Ideal Cycle Time

The ideal cycle time refers to the highest possible rate at which a work center can possibly operate, and is dependent on the **Schedule Driver** field. For example, if the work performed is with a saw, the ideal cycle time is the time used to cut the material only, with no time allotted to reposition the material for additional cuts. Ideal cycle time should be reflected in the cycle time Labor/Machine hours per piece, or Labor/Machine pieces per hour. For the planning engine, percent efficiency represents the production. For example, welding 8 feet in an hour is considered average the ideal cycle time then would be calculated at 12 feet in an hour and be said to be 60% efficient which is considered average. For repetitive manufacturing, ideal cycle time is the highest possible rate the at which the work center can operate.

Calculation Definitions

- Good Pieces = Pieces completed.
- Ideal Cycle Time (Fixed Hours) = Fixed Hours.
- Ideal Cycle Time (Machine) = [Hours per piece] / [pieces per machine hour].
- Ideal Cycle Time (Labor) = [Hours per piece] / [pieces per labor hour].
- Operating Time = Reported time for the quantity completed.
- Ideal Cycle Time = Theoretical minimum time to produce one piece.

Using Time-Sensitive Dates

For manufacturing models that utilize multiple shipments per day, you can specify the time of day that orders are due.

Customer Orders

- 1 Open the Customer Order Lines or Customer Order Blanket Releases form and select an order.
- 2 In the Projected Date field, select a date.
- 3 When the date populates in the Projected Date field, the default time of 12:00am displays. Accept the default or enter a new time.
- 4 In the Due Date field, select a date.
- 5 When the date populates the Due Date field, the default time of 12:00am displays. Accept the default or enter a new time.

Purchase Orders

- 1 Open the Purchase Order Lines or Purchase Order Blanket Releases form and select an order.
- 2 In the Promise Date field, select a date.
- 3 When the date populates in the Promise Date field, the default time of 12:00am displays. Accept the default or enter a new time.
- 4 In the Due Date field, select a date.
- 5 When the date populates the Due Date field, the default time of 12:00am displays. Accept the default or enter a new time.

EDI Customer Orders

- 1 Open the **EDI Customer Profiles** form and select a customer profile.
- 2 In the **Hours** field, enter the number of hours to offset the order due date, or accept the default of zero to create a due date time of 12:00am.

Note: When determining the offset due date and time, the order recipient's travel time and the time zone should be taken into account.

Utilizing QA Processes

Define a QA Process Template

- 1 Open the QA Process Definitions form.
- 2 Define a process type by specifying a name, description, and duration (in days).
- 3 Save the record, then click the Phases button to open the QA Process Phase Definitions form.
- 4 Create the QA phases for the selected process type by specifying the sequence number, name, description, and duration (in days). To insert a sequence between existing sequences, add a new phase with a sequence number between the two sequences in which the new sequence will exist.
- 5 Save the record, then click Resequence to adjust all sequence numbers to be multiples of 10, as well as arrange all records in sequential order. For example, if you created three sequences for process 1, and numbered them 10, 15, and 20, when you click Resequence, the adjusted sequence numbers will be 10, 20, and 30.
- 6 When you are satisfied with the existing process phase definitions, click the Activities button to open the QA Process Phase Activities Definitions form
- 7 Define the phase activities by specifying a sequence number, name, description, and duration (in days).
- 8 Save the record and close the form.

Create a QA Process

- 1 Open the QA Processes form.
- 2 In the **Process** field, specify a process template created on the **QA Process Definitions** form.
- 3 Specify a process ID, description, status, and duration (in days).
- 4 You may also specify which party owns, and originated, this process ID.
- 5 Select start and target dates.
- 6 Click the **Calculate** button to populate the **Projected Date** field. This date is determined by adding the duration to the start date.
- 7 Click the **Phases** button to open the **QA Process Phases** form.
- 8 Specify a phase number, name, and description.

- 9 Select a start and target date.
- 10 Create more phases as needed. To insert a sequence between existing sequences, add a new phase with a sequence number between the two sequences in which the new sequence will exist. After adding all new records, save the record, then click Resequence to adjust all sequence numbers to be multiples of 10, as well as arrange all records in sequential order. For example, if you created three sequences for process 1, and numbered them 10, 15, and 20, when you click Resequence, the adjusted sequence numbers will be 10, 20, and 30.
- 11 Click the **Phase Activity** button to open the QA Process Phase Activities form.
- 12 For each activity, specify a sequence number, name, description, and duration (in days).
- 13 Create more phase activities as needed. To insert a sequence between existing sequences, add a new activity with a sequence number between the two sequences in which the new sequence will exist. After adding all records, save the record, then click Resequence to adjust all sequence numbers to be multiples of 10, as well as arrange all records in sequential order. For example, if you created three sequences for process 1, and numbered them 10, 15, and 20, when you click Resequence, the adjusted sequence numbers will be 10, 20, and 30.
- 14 Open the **QA Process Sources** form.
- 15 Select a process template or process ID.
- 16 Specify the items, orders, or jobs that are impacted by this process. This information displays on the **QA Processes** form.

Note: To reorder phase or activity sequences, add a new phase with a sequence number between the two sequences in which the new sequence will exist, then click the Resequence button. For example, if you want to add a new phase sequence between 10 and 20, create a new phase with sequence number 15, then click Resequence to adjust the sequence numbers.

Complete a QA Process

- 1 Open the QA Process Phase Activities form.
- 2 For each completed activity, specify who completed it, and when it was completed.
- 3 Save the record and close the form.
- 4 Open the **QA Process Phases** form.
- 5 If all activities in a phase are complete, specify who completed the phase.
- 6 Select **Complete**.
- 7 Save the record and close the form.
- 8 Open the QA Processes form.
- 9 When all phases are complete, specify who completed the phase, and the date on which it was completed.
- 10 Select **Completed**.

- 11 Save the record and close the form.

Generate a Report

- 1 Open the QA Process Report form.
- 2 Select the QA Processes checkbox to include actual processes on the report.
- 3 Select the QA Process checkbox to include process templates on the report.
- 4 Specify a range of sources.
- 5 Click Print or Preview.

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