

QAD Production Orders Release Notes

September 2019

These release notes include information about fixes and enhancements related to the version 3.1 release of QAD Production Orders. The 4.3 release of the QAD Planning and Scheduling Workbenches is included in the 3.1 release of Production Orders.

Note The Production Orders 3.1 version depends on the Serialization, Item Attributes, and Quality Control (SAQ) product, version 2.7.1. See the QAD document library posting of the release notes and other documents related to the 2.7.1 SAQ release.

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Release Notes for Current Release

QAD Production Orders Version: 3.1

QAD Planning and Scheduling Workbenches Version: 4.3

Production Order Enhancements

Phantom Usage

The phantom use-up logic is now available in this release. It applies to global phantom items whose Allocation Policy is set to Detail.

The phantom use-up logic first allocates and consumes available inventory for the phantom item. It then explodes the remaining requirements to the phantom's components.

This feature applies to the following programs:

- Production Order Maintenance (16.3.1)
- Production Order Split (16.3.11)
- Production Order Bill Maint (16.3.4)
- Production Order Allocate (16.5.1)
- Prod Order Manual Allocation (16.5.2)
- Bulk Item Picklist Calculate (16.5.3)
- Production Picklist Pick (16.5.7)
- Production Picklist Transfer (16.5.9)
- Operation Activity Transaction (16.13.13)
- Production Order Receipt (16.13.1)
- Production Order Picklist Issue (16.5.11)

For details about usage of phantom items and phantom use-up logic, refer to the *QAD Production Orders User Guide*.

Support for Routable Production Orders

You can set the Pur/Mfg code for an item to Routable in Item Master Maintenance (1.4.1) or Item Planning Maintenance (1.4.7).

When routable components are included in a production order bill, the system automatically creates production orders for the routable components once the parent order is allocated or released.

Routable production orders can be allocated, released, and used for processing component issues, inventory receipts, and shop floor control transactions.

This new feature affects the Planning and Scheduling Workbenches (MSW/PSW) and the following programs:

- Production Order Maintenance (16.3.1)
- Multiple Order Status Change (16.4.3)
- Production Order Allocate (16.5.1)
- Bulk Item Picklist Calculate (16.5.3)

- Production Order Release/Print (16.4.2)

Enhanced Production Order Release/Print

Production Order Release/Print (16.4.2) has been enhanced, allowing you to re-print order sheets or picklists for released orders.

A new filter, Print Bar Code, has been added. This enables you to print the production order ID and operation number in bar code format.

In this program, you now have options to:

- Print the production order sheet.
- Release the order along with a printed shop paper.
- Calculate a picklist.
- Print a picklist.
- Print shortage tags.
- Dispatch the shop paper along with any picked materials to the shop floor.
- Print the production order ID and operation number in bar code format.

If released production orders are included, the system does not release such orders again, but supports all the other functions such as reprinting order sheets or picklists.

If you set Print Bar Code to Yes, the production order ID and operation number are printed in bar code format with the alphabetic codes beside it. If this field is set to No, only the alphabetic codes print.

Calendar Considerations

The system can now take production line calendars and exception settings into account:

- When you create a production order, the system uses the manufacturing lead time to calculate the due date starting from today by default. If there is a primary production line defined for the item on the order site, the primary production line calendar takes precedence over the other kinds of calendars, and should be used first.
- When no routing scheduling logic is involved and the production line is assigned, if you leave the release date or due date blank, the system uses the specified production line calendar first.

The calendar priorities in such scenarios are listed in descending order as follows:

- Production Line Calendar
- Site Calendar
- Domain Calendar

Support for Planned Orders in Certain Reports

The option P (Planned) is now available for the Order Status field in the following programs:

- Production Order Release/Print (16.4.2)
- Production Order Allocate (16.5.1)
- Bulk Item Picklist Calculation (16.5.3)

If you leave the Order Status field blank or set it to P, planned orders are included in the generated report.

Updated Options for the Include WO/Rep/Both Field

The WO option for the Include WO/Rep/Both field has been renamed Discrete.

The Include WO/Rep/Both field now contains the following options:

- Both
- Repetitive
- Discrete

This update applies to the following programs:

- Production Order Release/Print (16.4.2)
- Production Order Allocate (16.5.1)
- Bulk Item Picklist Calculation (16.5.3)

Restructured Prod Order Accounting Close to Support QRF Version

The production order number is added to some temporary tables, so that Prod Order Accounting Close (16.20.10) works properly.

Added QRF Versions for Multiple Order Status Change and Post Production Order Usage Variances

The QRF report Multiple Order Status Change (16.4.25) has been added. In this release, the CHUI report (16.4.3) and the QRF report (16.4.25) co-exist for Multiple Order Status Change.

You can use Multiple Order Status Change to update the status of multiple production orders in batches.

Post Rep Accum Usage Variances has been renamed Post Production Order Usage Variances (16.20.7).

Post Production Order Usage Variances shares the function of calculating usage variances as Production Order Accounting Close does, and makes sure that variances are not posted repeatedly.

Enhanced Support for Negative Backflush of Components

The system supports negative backflush of components.

If there is no backflush location or production reserved location defined for components, the system returns the inventory of components back to the primary location of the item during negative backflush processing.

This new feature affects the following programs:

- Operation Activity Transaction (16.13.13)
- Production Order Receipt (16.13.1)
- Purchase Order Receipt (5.13.1)
- PO Shipper Receipt (5.13.20)
- Purchase Order Returns (5.13.7)
- Components reverse when Zero Balance WIP is Yes

Production Order GL Details Report (16.20.28)

A new report, Production Order GL Details (16.20.28), has been added. This allows you to view a report about the GL details of a production order.

Using this report, you can view all GL transactions posted for a production order. Each GL transaction related to an order is displayed with Debit and Credit accounts shown as two separate lines in the output. Debit values are positive while Credit values are negative.

You can check the differences and see whether all GL transactions are recorded correctly. You can also export the report to an Excel file for further analysis.

Production Order Split Enhancement

The system allows you to create a discrete production order with Quantity to Complete or Quantity to Start set to 0 (zero). During order splitting, however, Quantity to Complete or Quantity to Start cannot be 0 (zero). Therefore, when splitting an order, whose Quantity to Complete or Quantity to Start is set to 0, the system displays error messages like the following:

- Quantity to Start cannot be zero.
- Quantity to Complete cannot be zero.

In addition, when a production order is split into schedule orders A and B, the system also displays an error message if Quantity to Complete or Quantity to Start of order A or order B is 0.

Zero Not Allowed for Quantity to Start in Repetitive Orders

When you create a repetitive order using Production Order Maintenance (16.3.1), the value of Quantity to Start cannot be 0 (zero).

Support for Routable Items During Planned Order Approval

A new filter criterion, Include Routable Items, has been added to Planned Production Ord Approval (23.10) and Planned Purchase Order Approval (23.11).

This field determines whether planned orders for routable items are to be included during planned order approval.

If this field is set to Yes, the planned orders for routable items (Pur/Mfg code = Routable) are displayed and can be approved as production orders or purchase requisitions.

New Reports Added

The following reports have been added to this release:

- Production Order Routing Report (16.3.28): allows you to view routing details by production order.
- Efficiency by Production Order Report (16.13.20.26): allows you to view routing efficiencies by production order.
- Operations by Production Order (16.13.20.27): allows you to view operation details by production order.

Enhanced Rebuild 'mrp_det' Table

The system calculates the open quantity on a production order based on the Open Quantity Method setting defined in Production Order Control (16.3.24):

- When Open Quantity Method is set to QtyComp:

Open quantity on a production order = Quantity to Complete - Completed Quantity

- When Open Quantity Method is set to QtyProc:

Open quantity on a production order = Quantity to Start - Quantity Processed

If the calculated open quantity is 0 (zero), the production order is deemed completed.

Rebuild 'mrp_det' Table (23.25.1) now no longer rebuilds MRP requirements for completed production orders.

Automatic Backflush for Lot-Controlled Items If No Detail Allocation Exists

In earlier releases, if there was insufficient allocated inventory for lot- or serial-controlled items during backflush, the system automatically displayed the component list regardless of the Modify Inventory setting.

In this release, the system displays the Component Issue frame only when Modify Inventory is selected. If there is insufficient inventory for lot-controlled items at a lot, the system displays an error message, prompting you to cancel the transaction.

Logic for Determining Backflush Component Required Quantity When Substitute Items Issued on Order

During backflush of components, different logic is used to determine the quantity required for component issuing:

- You can manually modify the component quantity required in Production Order Bill Maint to fulfill production requirements. During backflush component issuing, the system reflects the modification by using a dynamic quantity per (Component quantity required/Order quantity) to determine the quantity required for component issuing.

If there is no substitute item issued, the quantity required for component issuing is calculated according to the following formula:

Quantity required for component issuing = Quantity processed x Dynamic quantity per,

Where Dynamic quantity per = (Component quantity required/Order quantity)

- When you process a repetitive CUM order and no schedule could be consumed, the system uses the quantity per from the standard product structure to calculate the quantity required.
- When you process a discrete CUM order and no schedule could be consumed, the system uses the quantity per in the order BOM to calculate the quantity required.
- If you have issued substitute items to replace the original components, this affects the dynamic quantity per.

Then the quantity required for component issuing is calculated according to the following formula:

Quantity required for component issuing = Quantity processed x Quantity per in order BOM

A validation has also been added. If you have set up substitute item relationships, the system does not allow you to add any substitute item directly in the backflush frame.

Removed Order Status B

Beginning with this release, Production Orders does not support order status B (Batch).

Order status B was applied in earlier releases to speed up the processing of a large number of orders. In this way, the system did not create or explode bills or routings for these orders until the order status was changed from B to F, E, A, or R. Material Planning did not consider the demand for production order components when the order status was B, either. This helped the system respond to user operations swiftly.

As system performance is greatly improved in this release, status B is no longer required, and therefore has been removed to simplify user operations.

You are now not allowed to create or import production orders with status B. When you run Multiple Order Status Change, you cannot set Current Status (or Change From Status) or New Status (or To) to B. In addition, the default for Current Status (or Change From Status) is now F.

Production Order Cost Analysis (16.13.21)

A new browse, Production Order Cost Analysis (16.13.21), has been added to Production Orders 3.1.

This browse is available only in Production Orders and is not accessible in environments with Work Orders.

The Production Order Cost Analysis browse displays the cost information for each production order, such as total standard cost, total actual cost, total cost variance, standard unit cost, actual unit cost, and so on.

As a Cost Accounting Manager, you can easily analyze standard and actual costs in the browse, therefore better understanding the true costs for a production order, and where the issues may be.

Program Replacement

The following Production Order programs were removed in this release:

Table 1
Programs Removed and Replaced

Removed Program	Replaced By
Cumulative Order Delete/Archive (18.23.2 and 18.22.23.2)	Production Order Delete/Archive (16.3.50)

Production Order QDoc APIs

This table provides QDoc API information for the 3.1 version of Production Orders.

Table 2
APIs by Version

QDoc	Version 3.1	Procedure	Method Name	Menu
maintainProductionLineCalendar	ERP3_1	us/re/rescmt.p		Production Line Calendar (16.1.13.1)
allocateProductionLine	ERP3_1	us/sp/splamt.p		Production Line Allocation (16.1.6)
maintainWorkCtrReserveLoc	ERP3_1	us/rw/rwrlgmt.p		Work Ctr Reserve Loc Maintenance (1.1.18.13)

QDoc	Version 3.1	Procedure	Method Name	Menu
maintainProductionOrderBill	ERP3_1	us/wo/wowamt.p		Production Order Bill Maint (16.3.4)
maintainProdLineReserveLoc	ERP3_1	us/sp/sprldmt.p		Prod Line Reserve Loc Maintenance (1.1.18.16)
maintainProductionOrderRouting	ERP3_1	us/wo/woopmt.p		Production Routing Bill Maint (16.3.6)
reportNonProductiveLaborFeedback	ERP3_1	us/re/renplfapi.p	processNonProductiveLaborFeedba ckAPI	Non-productive Labor Feedback (16.13.5)

Production Orders Fixes

Table 3

Production Orders Fixes

QAD Internal Ticket ID	Description
CRMFG-19166	Previously, in an average cost repetitive order with WIP transfer, the floor stock was transferred at the last operation, instead of the operation it was linked to. This issue has been fixed.
CRMFG-19326	Prod Order Cost Variance Report (16.20.15) and WIP Valuation Report (16.13.20.4) have been removed and replaced by other reports in Production Orders. Prod Order Cost Report (16.20.27) and WIP Valuation Report as of Date Report (16.20.16) have been enhanced to report posted material costs correctly.
CRMFG-19356	When there is a production order with an operation set in a subcontract work center, if you run Production Order Allocate (16.5.1) to allocate this order with Include Subcontract Work Center set to Yes, the system takes the subcontract operation into consideration and allocates components properly.
CRMFG-19380	In a product structure, the same items in one operation may have different effective dates. During production order explosion, this kind of product structure can now be processed correctly. Such items are accumulated for component backflush or creation of production order BOM.
CRMFG-19386	During routing scheduling, if some operation transactions have been completed for an order, Open Qty of an operation is calculated by following the formula: Open Qty of an operation = Qty to Start of the operation - Run Complete (field in production order routing) - Qty Scrap - Sub Complete Note: If the value of Qty to Start, Qty Scrap, or Sub Complete is less than 0, the system takes it as 0 during calculation.
CRMFG-19389	You can change the status of a discrete production order from F to R and then back to F. If you then run Production Order Split (16.3.11) to split the order, the value in the Move In field is 0 in the WIP Queue.
CRMFG-19390	The open quantity of a scheduled order is now taken into consideration during routing scheduling. In other words, routing scheduling now does not apply if the open quantity of a scheduled order is equal to or less than 0 (zero) during production order splitting.
CRMFG-19391	Production Order Routing Maint (16.3.6) now does not allow you to delete an operation from a discrete CUM order if the operation has labor reported.
CRMFG-19399	If a production order is closed or its open quantity is less than 0 (zero), Production Order Split (16.3.11) now does not allow you to split this order and 0 is displayed in the Open Quantity field for this order.
CRMFG-19400	A discrete production order can be split into two or more scheduled orders. If you change the production line for any of the scheduled orders, you can still enter the discrete CUM order ID in Production Order Maintenance (16.3.1) or Operation Activity Transaction (16.13.13) to search for all of the scheduled orders.
CRMFG-19404	Split Cum Order Maintenance (16.3.12) does not allow you to edit the routing code or BOM/formula code for a discrete CUM order with component issuing information.

QAD Internal Ticket ID	Description
CRMFG-19405	Assume that there is a discrete production order that has been split into two or more scheduled orders. If you run Split Cum Order Maintenance (16.3.12) to change the CUM order status to C and change the BOM code and routing code as well, the BOM and routing codes of the scheduled orders are changed accordingly.
CRMFG-19426	Previously, after you added a line item with an earlier effective date in Production Order Maintenance with “Add Item to Production Line with an earlier effective date” set to Yes, the results displayed in Production Line Allocation Maint (16.1.6) were incorrect. This issue has been fixed.
CRMFG-19427	After you split a discrete order into two scheduled orders, if the open quantity of each scheduled order is 0, allocations are released for both of them.
CRMFG-19432	Previously, the Qty Allocated value shown in Inventory Detail Report (3.6.5) was incorrect after you split an order and removed some picked quantity to the picklist. This issue has been fixed. The Qty Required value is now reduced in Inventory Detail Report after you decrease the value of Qty to Start.
CRMFG-19435	You can link a production line to two line items with different Start Effective dates. If you delete the line item whose Start Effective date is earlier after conducting Production Line Allocation Maint (16.1.6), the system can now display the allocation percentage of this production line correctly.
CRMFG-19436	Previously, if a scheduled order has picked more quantity than the quantity required and then been split, and the newly generated order had a higher priority than the original order, both the total allocated quantity and picked quantity displayed were incorrect after you ran Allocated Inventory Inquiry (3.18). This issue has been fixed.
CRMFG-19438	The Qty Required value in inventory details is now updated correctly after you change the status of a discrete scheduled order from F to E, A, or R.
CRMFG-19439	An error message is now displayed if you run Production Order Component Issue (16.5.12) to issue an item that does not exist in the order BOM.
CRMFG-19440	Previously, Production Order Receipt did not record the setup time when the production order quantity was inconsistent with the order quantity maintained in Item Master. This resulted in incorrect labor setup usage variances during Prod Order Accounting Close. This issue has been fixed.
CRMFG-19442	After you run Production Order Delete/Archive (16.3.50) to delete a discrete CUM order, its discrete scheduled orders are now deleted accordingly.
CRMFG-19455	Previously, there might be an error message when Production Orders were in use and you updated the item-site inventory record. This issue has been fixed.
CRMFG-19464	Previously, after you reconfigured the pick policy and issue policy for a component, an incorrect value was displayed for Quantity Issued in Production Order Bill Maint (16.3.4). This issue has been fixed.
CRMFG-19467	When multiple users run Production Order Maintenance (16.13.1) concurrently, the system now displays an error message to indicate that this program is being used by another user.
CRMFG-19473	Production Order Receipt now correctly posts overhead costs for RCT-WO transactions where costs have overheads, and does not post MTHD CHG transactions.
CRMFG-19491	In Production Order Maintenance (16.3.1), if you clean up the release or due date for co- or by-product production orders at E status and set Adjust Co/By Order Date to No, the system fills in the release or due date with the corresponding date set in the base process production order.
CRMFG-19492	Previously, if you used Operation Activity Transaction (16.13.13) to issue a substitute item with the Substitute field selected, it resulted in a method change variance instead of a material usage variance. This issue has been fixed.
CRMFG-19500	You can create a production line with an item in a future date in Production Line Maintenance. If you then create a production order with this production line and add the preceding line item with an earlier effective date, the following fields default from the settings in Production Line Maintenance: Number of Lines, Setup Time, Duration Buffer, and Units/Hours.

QAD Internal Ticket ID	Description
CRMFG-19508	Post Rep Accum Usage Variances has been renamed Post Production Order Usage Variances (16.20.7) to post usage information for both repetitive and work orders. Post Production Order Usage Variances shares the function of calculating usage variances as Production Order Accounting Close does, and makes sure that variances are not posted repeatedly. Previously, if you reported extra labor and then ran Post Rep Accum Variances for a CUM order, the labor variance was created correctly. During accounting close, however, a labor variance was being created again for the same transaction, and a method variance was created to balance out the extra variance. This issue has been fixed, making sure that the variances are not calculated repeatedly and correct values are displayed on Production Order Cost Report.
CRMFG-19513	A picklist is updated based on the Picklist Maximum value after you increase the Qty to Start value using Production Order Maintenance.
CRMFG-19518	In Production Schedule Leveling (PSL), setup time is not calculated repeatedly for orders generated during order splitting since these orders are for manufacturing the same item.
CRMFG-19519	After leveling, production orders are sorted according to their Run Sequence values. For example, if Run Sequence of items A and B are set to 1 and 2 separately, after leveling, production orders for item A are displayed ahead of production orders for item B.
CRMFG-19534	Previously, when you used Production Order Receipt (16.13.1) for production orders with subcontract operations, the system might mistakenly process Qty Complete for such operations and components at that same operation were backflushed. This resulted in overstated Qty Complete value and components backflushed at that subcontract operation. This issue has been fixed. Production Order Receipt now calculates the labor for subcontract operations only when Auto Labor is set to Yes.
CRMFG-19540	Previously, after you ran Inventory Detail Report (3.6.5), the system might display incorrect Qty Required values for components whose Pick Policy was set to No Pick and Issue Policy set to No Issue. This issue has been fixed.
CRMFG-19546	Previously, after you increased the value of Qty to Start for a production order, the system might display incorrect Qty Allocated values. This issue has been fixed.
CRMFG-19549	In Production Order Receipt and Operation Activity Transaction API, if the process quantity is a decimal, the system displays an error message.
CRMFG-19553	The Mfg Type field has been added to Prod Order Accounting Close (16.20.10). The fields Machine, Work Center, and Account Description have been added to Post Production Order Usage Variances (16.20.7).
CRMFG-19555	The Production Orders API has been enhanced to resolve the issues detected during QMI data setup.
CRMFG-19561	The performance of the Supplier Schedule Release browse has been improved. This browse is no longer locked or takes a long time to return when there are a large number of agents are running it concurrently.
CRMFG-19584	When Zero Balance Work in Process is set to Yes in Production Order Control, the system now calculates and displays correct Qty Issued values in BOMs for repetitive CUM orders.
CRMFG-19585	The control for calculating the issue date of a component now works properly when MRP is running.
CRMFG-19591	When creating a firmed order or firming a planned order, the system now uses the longest CUM lead time to calculate the issue date for the component.
CRMFG-19602, CRMFG-19601	Previously, when you used Post Production Order Usage Variance (16.20.7) to post floor stock, incorrect values were displayed in the Qty Prev Expensed column of the generated report. The issue has been fixed.
CRMFG-19650	A record can now be successfully created after you change the domain and use Production Order Maintenance QDoc to send a request.
CRMFG-19654	After you add a component to a discrete CUM order, Qty Req of the new component in Inventory Master is now updated.
CRMFG-19655	After you create a production order with a component serving as the key item in Production Order Maintenance (16.3.1), the order quantity is kept even if there is no inventory available for the component and a key item error occurs.
CRMFG-19658	Previously, when you entered a CUM order number in the Prod Order field in Operation Activity Transaction (16.13.13), incorrect Routing and BOM values might be displayed in the header frame. In addition, an improper new CUM order was created after the transaction. This issue has been fixed.

QAD Internal Ticket ID	Description
CRMFG-19659	When the UM of a component is different from that of its substitute item, the UM of the substitute item in the Component Issue panel of Operation Activity Transaction (16.13.13) is the same as its UM set in Item Master Maintenance (1.4.1).
CRMFG-19662	Serialized inventory can now be issued in Production Order Component Issue (16.5.12).
CRMFG-19663	Previously, you could not launch Production Order Maintenance (16.3.1) after you generated a picklist by using any of the following programs: • Production Order Allocate (16.5.1) • Production Order Release/Print (16.4.2) • Bulk Item Picklist Calculation(16.5.3) This issue has been fixed.
CRMFG-19683	You can create a production order with Order Status set to E, Component Issue Date Method set to Order, and the component's Issue Date set differently from the order's Release Date. Previously, if you modified the order quantity, the component's Issue Date was then automatically changed to the order's Release Date. This issue has been fixed, and order quantity change no longer leads to issue date update.
CRMFG-19702	When you use Production Order Bill Maint (16.3.4) to modify the BOM of a repetitive scheduled order, the system no longer displays the detail allocation frame. The system now displays an error message, stating that editing the BOM of a repetitive scheduled order is not allowed.
CRMFG-19726	By default, when creating a joint production order set, the system should use the manufacturing lead time of the base item to calculate the due date. Previously, if you started with a co-/by- product, the system calculated the order's due date based on the co-/by-product's manufacturing lead time. This issue has been fixed and the system now uses the base item's manufacturing lead time to calculate the due date or release date for production orders related to co-/by-products.
CRMFG-19729	Work order sets are renamed production order sets to keep consistency. When you delete a co-/by-product production order set, the system now displays a message "Delete co-/by-product production order set" instead of "Delete co-/by-product work order set."
CRMFG-19865	The system no longer hangs on data merging when leveling Kanban items.
CRMFG-19880	Previously, the Qty Required value of a component was incorrect in Inventory Master after you ran Operation Activity Transaction (16.13.13) for an exploded order. This issue has been fixed.
CRMFG-19891	Assume that Qty Required is less than Quantity Allocated, and the quantity detail-allocated is the same as Quantity Allocated in Production Order Bill Maint. If you set Quantity Allocated to a value less than Qty Required by using Prod Order Manual Allocation, the Quantity Allocated value shown in Production Order Bill Maint is now changed accordingly.
CRMFG-19893	The following fields in Production Picklist Transfer (16.5.9) now support up to nine decimal places: • Total Open Balance • Total Transaction Qty • Transaction Quantity This is consistent with the quantity to transfer displayed on the picklist.
CRMFG-19894	Previously, creating a variant item failed in Configurator Questionnaire and an error message was displayed. This issue has been fixed.
CRMFG-19928	Post Production Order Usage Variances (16.20.7) has been enhanced and no longer processes orders that are not released; for example, planned orders.
CRMFG-19931	The order number instead of the picklist number is now recorded in transaction history for picklist issue.
CRMFG-19937	When Component Issue Date Method is set to Order in Production Order Control (16.3.24), the issue date for a component on a production order bill is the production order release date, adjusted for the component lead time offset. If you change the parent order status from E to F and then back to E, the system now updates the component issue date correctly, with the component lead time offset considered.
CRMFG-19948	When both the batch size and the quantity per batch are involved during the calculation for component backflush, the calculation of the quantity to process and that of the quantity per are now combined. This ensures that Operation Activity Transaction does not over-issue inventory during auto backflush.
CRMFG-19959	MPS/MRP Detail Report can now be launched successfully.

QAD Internal Ticket ID	Description
CRMFG-19965	Previously, the system might display “Quantity to issue is greater than quantity required” on Operation Activity Transaction (16.13.13) even though the Qty Required and Total Issue Qty values displayed on the UI were the same. That is because the system rounded decimals and then displayed them on the UI, which led to inconsistency between the actual values and the values displayed. This issue has been fixed and the anchor field “open quantity” is now rounded to match UI operations.
CRMFG-19966	Running Selective Materials Plan (23.3) for the parent item no longer leads to incorrect Qty Required values of its components.

Workbenches for Production Orders Enhancements

The following section describes enhancements to QAD Planning and Scheduling Workbenches for Production Orders.

Support for Co-/By-Products

You can use the MSW/PSW to manage co-/by-product production orders, such as creation, modification, deletion, and scheduling.

For information about the co-/by-product features supported by the MSW/PSW, refer to the *QAD Planning and Scheduling Workbenches User Guide*.

Verification upon Views Stored on ERP-version Workbenches

When loading stored views from ERP-version Planning and Scheduling Workbenches to the Production Orders-compliant Workbenches, the Production Orders-compliant Workbenches may encounter errors and then go down. So, after installing Production Orders 3.1, which includes the Production Orders-compliant Workbenches, you are advised to re-create the stored views to ensure that they can be opened on the Workbenches properly.

Validation logic has been added to the Production Orders-compliant Workbenches to check whether the stored views are for ERP-version Workbenches. If so, an error message is displayed, prompting you to re-create such views.

Enhanced Production Line Switching

Previously, when there were two production lines, each of which was linked to a large number of items, switching between the two lines on the MSW took a long time.

In this release, the MSW performance is improved and the switching duration between such two lines is shortened.

Improved Order Saving Performance

Previously, when saving a large number of production orders on the MSW, the client GUI was locked until the save was completed. No user operation was allowed during the saving process.

In this release, the logic has been updated and the client GUI is available during order save. This enables you to take actions when orders are being saved, thereby facilitating user operations and improving efficiency.

Updated Setup Time Logic for Production Line Items

You can link multiple items to one production line for manufacturing those items on the line. You can also specify attributes and options for each item, such as setting different Setup Time values.

When you use the MSW to level a production line item whose setup time is 0, the system now uses the Setup Time value defined for the production line during EPEI calculations.

Production WIP Status

The Production CUM Activity window has been renamed Production WIP Status.

The Production WIP Status window displays WIP status information for discrete orders, repetitive scheduled orders, and split scheduled orders.

Leveling with Fixed Orders

Production orders can now be leveled within a time bucket that includes fixed orders, those with production order status E, A, or R, as well as non-fixed orders, those with production order status P or F.

Before this release, production schedules were leveled correctly only when there were non-fixed orders within a time bucket. The required production capacity for fixed orders within a time bucket was not calculated correctly, resulting in the miscalculation of the available capacity for scheduling and leveling non-fixed orders.

Recording Modified Fields in Client Log File

If you load a production order record to the MSW, modify it, and then save it on the MSW, the MSW checks whether this order has been modified by another user or in another program after you load it to the MSW. If so, the MSW displays an error, indicating the commit failure. The error message, however, does not contain any information about which fields have been modified for the order.

The MSW now automatically records the field inconsistencies in the client log file. In this scenario, you can check the log file to identify the modified fields. This helps you to locate the root cause.

Enhanced Record Processing Performance

Previously, if a large number of supply or demand records existed on the MSW, the MSW might take several minutes to load, unload, or refresh the records.

In this release, the MSW functionality has been enhanced, therefore improving the processing performance.

The following fields are now available on the Data Load tab page of the Preferences dialog box, allowing you to define the record loading horizon and filter items:

- Include active item in window only
- Backward Days
- Forward Days

If you select “Include active item in window only,” and enter values in Backward Days and Forward Days, the system calculates the start date and end date of the loading horizon as follows:

Start date = Today's date - Value in Backward Days

End date = Today's date - Value in Forward Days

Note If both values are 0 (zero), no filtering takes effect.

Then the system loads only the items that fall in the loading horizon.

Important When “Include Items with No Activity” is selected, search functions return data for all items associated with the resources retrieved, and the settings of the other fields in the Include activity window are ignored.

The MSW now performs well and responds promptly when loading, unloading, or refreshing a large number of records.

Minimum Interval Parameter Applied for Leveling Non-Kanban Items

A new field, Minimum Interval, has been added to Production Line Maintenance (16.1.1) and Item Production Line Maintenance (16.1.4).

Use the Minimum Interval parameter to:

- Control how frequently items are produced within a time bucket when leveling.
- Reduce the number of orders that are created by leveling.

The minimum interval:

- Is the shortest number of hours for producing an item.
- Determines the frequency at which an item is produced.

Setting the minimum interval to the number of hours for a workday prevents leveling from creating more than one order for an item in a day.

Leveling uses the:

- Minimum Interval instead of EPEI for scheduling items within a time bucket when the calculated EPEI is less than the minimum interval.
- Greater of the minimum interval set for the item and production line, the production line, and the calculated EPEI.
- Calculated EPEI when minimum interval is set to 0.

As rule, set Minimum Interval for a production line, rather than setting it for items on a production line.

- Production Line Maintenance

Set Minimum Interval in hours to determine the smallest production interval for leveling every item.

For example, if Minimum Interval is set to 16 hours when the calendar consists of six 8-hour work days, it limits the production to one interval for every two workday, or three intervals per 48-hour week.

- Item Production Line Maintenance

Set Minimum Interval for an item only when there is an exception for that item.

Set Minimum Interval in hours to determine the smallest production interval for a particular item.

Use this menu when the interval for the item is different than for the production line.

No Required Quantity Lost During EPEI Leveling

During EPEI leveling, if all of the production line capacity in a time bucket is consumed but there is a leftover quantity waiting for production, the system now generates a supplementary order on the last day of the time bucket, making sure that all quantity required is produced.

Removed Order Status B

The Workbenches no longer support production order status B (Batch) since this status has been removed from Production Orders 3.1.

Supported for Two Decimal Places in Required Capacity in PSW

In earlier releases, only one decimal place was supported in the Required Capacity field in the PSW while this field in the Production Order Maintenance Details tab supported up to two decimal places.

The Required Capacity field in the PSW now supports two decimal places to ensure consistency.

Workbench Fixes

Table 4
Workbench Fixes

QAD Internal Ticket ID	Description
CRMFG-18982	You can define shifts in Production Line Calendar Maint (16.1.13.1) and add calendar exceptions for a shift in Production Line Cal Except Maint (16.1.13.3). If the sum of the working hours defined for a shift in Production Line Calendar Maint and those defined as an exception for the shift is smaller than 0, the system considers the total working hours in the shift is 0. The MSW/PSW has been enhanced to apply the same logic, making sure that the total capacity in a day calculated by the MSW/PSW is consistent with that shown in Production Line Calendar Maint.
CRMFG-19308	Previously, after you reconfigured the Process value for a co-/by-product on the Order Relationships tab page, the order status was automatically changed from F to E on the Production Order Maintenance tab page. This issue has been fixed.
CRMFG-19367	After you select a work center resource on the MSW, if you open Production Order Maintenance on a separate tab page, update the due date, and then back to refresh the MSW, the change is updated accordingly.
CRMFG-19395	After a production order is generated during leveling, its BOM and routing information is automatically obtained and displayed on the MSW. This improves operation efficiency.
CRMFG-19429	When you change the quantity of an order on the MSW, the BOM and routing quantities are now changed accordingly.
CRMFG-19430	If you create a production order again on the MSW/PSW, the system automatically copies the BOM and routing from the existing production order to the one you are creating. This saves time and improves efficiency.
CRMFG-19437	Previously, the MSW/PSW used the due date to check whether a CUM order should be loaded. So if a repetitive CUM order had a blank end date (due date for a CUM order), the MSW/PSW could not load it. This issue has been fixed.
CRMFG-19445	The Post variances at SFC field has been removed from the Accounting Data tab page of the MSW/PSW.
CRMFG-19456	Both the Batch and Lot Number fields on the Compliance tab page can now support up to 18 digits in length while the Grade field supports up to 2 digits.
CRMFG-19466	The MSW can obtain the production line calendar that has just been created and displayed on the detail tab page, but EPEI leveling cannot. The system displays an error message instead, saying there is no time for EPEI leveling.
CRMFG-19481	Previously, if you clicked the Delete button on the keyboard to remove a resource group, the system deleted the group from the ResourceGroupMaster.xml file. As a result, the production line was unavailable in the MSW/PSW navigation panel. This issue has been fixed.
CRMFG-19487	On the MSW/PSW, if you change the order quantity when Adjust Co/By Order Quantities is selected, the system adjusts the order quantity of all joint order sets regardless of the order status.
CRMFG-19488	If you expand a production line or work center and load orders on the MSW, and then collapse or expand any folder, the folder is now opened successfully and all .NET UI applications are running properly.

QAD Internal Ticket ID	Description
CRMFG-19524	Previously, if you selected “Include Items with No Activity” and loaded a production line on the MSW, No was displayed in the Activity column for all items in the Schedule grid. If you cleared “Include Items with No Activity,” Yes was displayed. This issue has been fixed, and correct values are displayed in the Activity column.
CRMFG-19552	When you close the MSW/PSW for Production Orders, the system checks whether there is any running background processor. If any exists, the system displays an error message: “Background processor is running. Please try again later.”
CRMFG-19647	After you choose Option > Preferences on the MSW and press Ctrl+A on the Data Load tab page in the Settings dialog box, the As of Date field is displayed, allowing you to change today to a specific date. Previously, if you changed the PC locale setting from the US time format to the UK time format and then opened the MSW, the system would go down or read the wrong As of Date value. This issue has been fixed.
CRMFG-19680	Filters now work properly on the PSW.
CRMFG-19864	The unload function on the MSW now works properly when Display Shifts is set to Yes.
CRMFG-19899	Previously, after you used the MSW to load a production line at a site and level the line, you could not load another production line at the same site. This issue has been fixed.
CRMFG-19900	Previously, if you used the MSW to level two production lines at one site in sequence, the leveling results of the production lines were affected mutually and became incorrect. This issue has been fixed.
CRMFG-19917	When loading views with different horizon settings, the MSW now ignores the column resizing error to avoid .NET UI crashes.
CRMFG-19933	After you use the MSW to level a production order, the MSW automatically splits the order that crosses one day into two scheduled orders, and the setup time of the second scheduled order is 0. If you click Save and then check the details of the second scheduled order, the setup time is saved successfully.
CRMFG-19986	Previously, when you refreshed resources on the PSW, the PSW might leave column names untranslated and display them in disorder. Now, the Production Scheduling panel can display the correct column names and sort the columns in order.

Release Notes for Production Orders Version 3.0

QAD Production Orders Version: 3.0

QAD Planning and Scheduling Workbenches Version: 4.2.0.16

Changes to Planning and Scheduling Workbenches

In the Compliance tab, the Batch field value can be up to 18 digits in length now. Previously the maximum field length was 8 digits.

In the Compliance tab, the Lot Number field value can be up to 18 digits in length now. Previously the maximum field length was 8 digits.

To be consistent with fields in other tabs and menus, the Grade field is now 2 digits in length in the Compliance tab.

Production Order Enhancements

New Production Order Control Field

A new Component Issue Date Method field was added to Production Order Control (16.3.24).

Component Issue Date Method determines how the system calculates the issue date for production order bill components. The issue dates for those components determine the gross requirements for production orders, Material Requirements Planning, and Lean Material Planning.

There are two options available for the field. In the first case, the focus is on the production order release date and the lead time offset for the component, and in the second case, the focus is on the production order operation start date. The default is Order Release Date.

Order Release Date

The issue date for a component on a production order bill is the production order release date, adjusted for the component lead time offset. Order release date is an appropriate choice in most cases. The factors that determine the release date include the production order due date, the manufacturing lead time for the item (or item and site), and the calendars that are used to schedule orders at that site.

Note Set Component Issue Date Method to the Order option to schedule the issue date for production order components with the same logic used for Enterprise Edition before Production Orders.

Operation Start Date

The issue date for a component on a production order bill is determined by the start date for the production order routing operation that is referenced by the component. Operation start date is an appropriate choice for a site when the data for scheduling production orders and operations has been set up and the accuracy of schedules for all items, routings, and order quantity has been validated.

This is necessary so that the start dates for the operations are aligned to the dates when component materials for those operations are required. When the data is not accurate, then the start and issue dates may be scheduled much earlier or much later than when component materials are actually required, on dates that differ significantly from the production order release date.

The factors that determine the production routing operation start date include those for scheduling a production order, together with those for scheduling production order operations such as machines per

operation, overlap units, yield percent, queue time, wait time, setup time, run time, and move time, together with calendars for work centers, production lines, and domain.

When the component references an operation that is not included among the production order routing operations; then, component issue date is determined by the start date for the previous production order routing operation. For example, when the component references operation 25 and production order contains routing operations 10, 20, and 30, the issue date for the component is the start date for operation 20. When the component operation is blank (not defined), the issue date is the start date for the first production order operation. When there are no production order routing operations, the component issue date is the production order release date, adjusted for the component lead time offset.

Fig. 1 Production Order Control (16.3.24)

The screenshot displays the 'Production Order Control' window with the following details:

- Production Order Data:**
 - Next Order Number: 11983
 - Next Picklist: 14883
 - P/L Prefix: RP
 - Production Order Comments: ☐
 - Routing Comments: ☒
 - Move First Operation: ☒
 - Include Yield: ☒
 - Quantity Complete Method: SUM (Search icon)
 - Open Qty Method: QtyProc (Search icon)
 - Component Issue Date Method: (Search icon)
 - Reason Code Criticality: W
 - Auto Add Item To Production Line: ☒
 - Auto Add Alternate BOM/Routing: ☒
 - Zero Balance Work in Process: ☐
 - Post Scrap To GL: ☐
- Component Issue Date Method Search Window:**
 - Search: Mnemonic starts at
 - Viewing 1 - 2 Records per page: 100
 - Table:

Mnemonic	Label
Op	Operation Start Date
Order	Order Release Date

New Production Shop Floor Collection

The Production Shop Floor Collection is a UI shop floor reporting function that is designed for shop floor production operators. For the operators, the collection provides a simplified rule-driven UI that reports production, issues materials, and prints packaging labels.

The collection provides real-time released production orders (from the QAD Planning and Scheduling Workbenches. The simplified UI to report and issue materials is enabled through the QAD Automation Solutions framework. Shop floor users have access to this collection and the supporting tabs when they are licensed to use the QAD Automation Solutions Production banner.

Specifically, the collection contains the following functions:

- **Production Order Browse.** The top browse—the Production Order browse (16.3.2)—lets shop floor operators view schedule data from the Production Scheduling Workbench, which is part of the QAD Planning and Scheduling Workbenches. You can set schedule-related fields to display data in the browse that are extracted from the PSW.
- **Production Order Component List.** The Production Order Component List browse (23.25.6) displays the component items for the parent item associated with the selected production order.

- **Packaging.** The Packaging (16.25.30) tab lets shop floor users create serial IDs or a package for production orders, or print labels for a package.
- **Issue.** The Issue (16.25.31) tab lets users issue materials to production.
- **Receipt.** The Receipt (16.25.32) tab lets users receive materials into stock and receive serial/lot/item into a pack for production orders.
- **Transactions by Item Browse.** The Transactions by Item Browse (3.21.2) displays inventory transaction history for an item number ordered by transaction date, starting with the most recent.
- **Serial Master Browse.** The Serial Master Browse (3.17.22.2) tab displays the serialized items that are associated with selected production order.

For more information on performing tasks in the collection, refer to the Production Activities chapter of the QAD Production Orders User Guide, version 3.0, Rev 1, dated December 2018.

Fig. 2 Production Shop Floor Collection

File Edit Tools Workpace Window Help

Test: 10USA USA Division [USD] > 10USACO USA DIVISION (2) - QAD Enterprise Applications

Processes > Production Shop Floor Collect...

Actions Setup Cancel Add to Favorites

Search (Order Status = R)

Site equals Search Clear All

Work Center equals

Order Status equals R

Viewing 1 - 100 of 4360 Records per page 100

Production Order	ID	Parent Item	Sequen	Order Status	Component Status	Location Availability	Quantity Open	Release Date	Destination	Production Line	Work Center	Op	Sales/Job	Due Date
8014	090612	cnz-b		R	Shortage	Not Enough Inventory	12.0	9/6/2017	cnz-a	cnzwc001	10			9/6/2017
8014	090612	cnz-b		R	Shortage	Not Enough Inventory	12.0	9/6/2017	cnz-a	cnzwc002	20			9/6/2017
8014	090612	cnz-b		R	Shortage	Not Enough Inventory	12.0	9/6/2017	cnz-a	cnzwc003	30			9/6/2017
8591	090617	cnz-b		R	Shortage	Not Enough Inventory	17.0	9/7/2017	cnz-a	cnzwc001	10			9/7/2017
8591	090617	cnz-b		R	Shortage	Not Enough Inventory	17.0	9/7/2017	cnz-a	cnzwc002	20			9/7/2017
8591	090617	cnz-b		R	Shortage	Not Enough Inventory	17.0	9/7/2017	cnz-a	cnzwc003	30			9/7/2017
090801	090801	cnz-a		R	Shortage	Not Enough Inventory	10.0	9/8/2017	kp001	cnz-a	cnzwc001	10		9/8/2017
090801	090801	cnz-a		R	Shortage	Not Enough Inventory	5.0	9/8/2017	kp001	cnz-a	cnzwc002	20		9/8/2017
090801	090801	cnz-a		R	Shortage	Not Enough Inventory	9.0	9/8/2017	kp001	cnz-a	cnzwc003	30		9/8/2017

Production Order Component List Package Issue Receipt Transactions by Item Browse Serial Master Browse

Actions Setup Cancel

Viewing 1 - 3 of 3 Records per page 100

ID	Component Item	Gross Req	PQOH	Component Status	Location Availability	Item Description	Qty Required	Quantity Picked	Quantity Issued	Allocation Policy	Issue Policy	Pick Policy	Key Item
091402	cnz-a-001	10.0	36.0 Available		Backflush	component item 001	10.0	0.0	0.0	Detail	Direct	Issue	
091402	cnz-a-002	10.0	-166.0 Shortage		Not Enough Inventory	component item 002	10.0	0.0	0.0	Detail	Backfish	Transfer	
091402	cnz-a-003	10.0	-177.0 Shortage		Not Enough Inventory	component item 003	10.0	0.0	0.0	Detail	Backfish	Transfer	

Component/Component Issue List Enhancements

The following programs now display more information for component lists and component issue lists:

- Operation Activity Transaction (.NET UI)
- Production Order Receipt (16.13.1)
- Production Order Component Issue (16.5.12)

When lot-controlled items with a blank lot display in component lists, the system now displays a message informing you that a lot/serial number is required for the item.

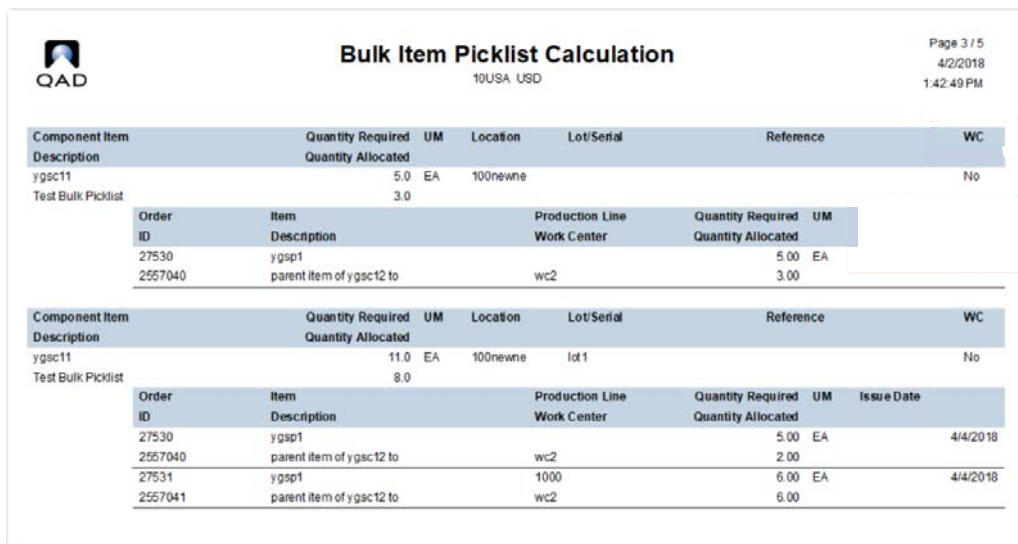
Previously, when there was a lot-controlled component with a blank lot on a component issue list, the system displayed data that indicated that the lot/serial number was required, but did not identify the component in question.

On component issue lists, when a valid inventory detail record is added to the component issue list, the system now checks whether there is an invalid issue record for the same item with a blank lot/ref. When Yes, the system now prompts you to remove the issue record with a blank lot and blank reference; when No, the system does not remove the issue record and saves the current issue data.

Bulk Item Picklist Calculation Layout Improvements

Bulk Item Picklist Calculation (16.5.3) now has an improved detail output for calculation. Now all orders on one picklist line are listed under the picklist line, making it easy to understand.

Fig. 3 Bulk Item Picklist Calculation Output



Component Item	Quantity Required	UM	Location	Lot/Serial	Reference	WC
Description	Quantity Allocated					
ygsc11	5.0	EA	100newne			No
Test Bulk Picklist	3.0					

Order ID	Item Description	Production Line Work Center	Quantity Required	UM
27530	ygsp1		5.00	EA
2557040	parent item of ygsc12 to	wc2	3.00	

Component Item	Quantity Required	UM	Location	Lot/Serial	Reference	WC
Description	Quantity Allocated					
ygsc11	11.0	EA	100newne	lot 1		No
Test Bulk Picklist	8.0					

Order ID	Item Description	Production Line Work Center	Quantity Required	UM	Issue Date
27530	ygsp1		5.00	EA	4/4/2018
2557040	parent item of ygsc12 to	wc2	2.00		
27531	ygsp1	1000	6.00	EA	4/4/2018
2557041	parent item of ygsc12 to	wc2	6.00		

Improved Logic for Orders

Production activity transaction programs now have improved logic when you search for an order in the order search frame or attempt to enter an order in the operation or labor frames. The system now displays a warning only once in the operation frame, informing you that a production order or scheduled order does not exist.

Previously, without an open order to report, and despite the fact that the system creates a new cumulative order, a warning repeated throughout several production activity frames to inform you that the production order or scheduled order did not exist.

Improved BOM/Routing Logic

The following programs now have improved BOM/routing logic when you leave the BOM/routing blank or specify a production order:

- Operation Activity Transaction (.NET UI)
- Production Order Receipt (16.13.1)
- Production Order Component Issue (16.5.12)
- Operation Labor Transaction (16.13.14)
- Reject/Scrap Transaction (16.13.15)
- Rework Transaction (16.13.16)
- Move Transaction (16.13.17)
- WIP Adjust Transaction (16.20.19)
- WIP Status Inquiry (16.13.20.3)

Note WIP Status Inquiry does not create cumulative orders.

Logic was improved for the programs as follows:

- When you leave the BOM/Routing field blank in the search frame, the system searches for orders as follows:
 - When you specify a production order or ID, the system ignores the BOM/routing in search criteria.
 - When you do not specify a production order/ID, the system does not use the BOM/routing to filter orders.
- When you leave the BOM/routing blank in the search frame, the system creates cumulative orders as follows:
 - When you specify a production order/ID, the system uses the BOM/routing to create a CUM order.
 - When you do not specify a production order/ID, the system uses the default BOM/routing on the item production line to create a CUM order. The system validates that the BOM/routing are valid codes when it creates the CUM order.

Enhanced Calculation Support for Transferred WIP

The calculation of the value for moved-in quantity that appears in the following functions has been enhanced to better represent the transfer of work-in-process when using Prod Order Accounting Close (16.20.10):

- WIP Status Inquiry (16.13.20.3)
- WIP Status Report (16.13.20.4)

The calculation of the moved-in quantity now considers the beginning quantity when WIP is transferred by Prod Order Accounting Close.

Support for Production Scrap with Average Costing

This Production Orders version now supports average costing for scrap related to production. Production scrap can be recognized for:

- Scrap for a work-in-process quantity from a production order operation queue when using the Production Activity Transaction (16.13.13) or similar transaction
- Scrap for a completed quantity for a production order when using the Production Order Receipt (16.13.1) transaction

Note For a list of Production Orders programs that produce scrap transactions, see “Scrap Transaction Enhancements” on page 42.

When a quantity is scrapped at the output queue or reject queue of an operation, the system scraps it at the value of the operation. When the scrap is at the operation input queue, the system scraps it at the value of the prior operation.

Average Costing and Functions to Process Scrap

Transactions and the valuation of scrap is different when using average costing with functions such as Operation Activity Transaction (16.13.13) to record scrap from an operation queue than when using Production Order Receipt (16.13.1) to record scrap together with the receipt of quantities into inventory from a production order.

In general, when transaction activity is recorded for any operation for a production order, functions such as the Operation Activity Transaction should always be used for recording scrap and receipt of completed quantities from the last operation for that production order.

When transaction activity is never recorded for an operation on a production order, you can use the Production Order Receipt function for a production order only when quantities are not reported for production operations.

Production Scrap and Floor Stock

The value for scrap from a production operation queue includes the value of materials issued or backflushed at operations, together with the value of floor stock. In addition to the scrap transaction, the system now creates an additional floor stock transaction to recognize the cost of floor stock issued to work-in-process for the quantity scrapped, when the value of scrap at an operation includes a floor stock component. This additional floor stock transaction is necessary for the consistent recognition and processing of costs for floor stock by the Prod Order Accounting Close (16.20.10) function.

Programs Removed

Two Production Order reports were removed in this release because other Production Order .NET UI reports already contained the information reported:

Table 5
Reports Removed and Replaced

Removed Report	Replacement Report
Prod Order Cost Variance Report (16.20.15)	Prod Order Cost Report (16.20.27)
WIP Valuation Report (16.13.20.4)	WIP Valuation as of Date Report (16.20.16)

Production Order QDoc APIs

The table below lists QDoc API information for the 3.0 version of Production Orders. For a list of APIs that were modified for this release, see Table 7.

Note For API information for earlier Production Order versions, see “Production Order QDoc APIs by Version” on page 44.

Table 6
APIs by Version

QDoc	Version 3.0	Procedure	Method name	Menu
maintainComponentPickingData	ERP3_1	us/bm/bmcpmtai.p	maintainComponentPickingData	Component Picking Data Maint(13.17)
maintainItemInventoryData	ERP3_3	ppptmt01.p		Item Inventory Data Maintenance (1.4.5)
maintainItemMaster	ERP3_9	ppptmt.p		Item Master Maintenance (1.4.1)
maintainItemProductionLine	ERP3_1	woiplmt.p		Item Production Line Maintenance (16.1.4)
maintainItemSiteInventory	ERP3_3	pppsmt01.p		Item-Site Inventory Data Maint (1.4.16)
maintainProductionLine	ERP3_2	splnmt.p		Production Line Maintenance (16.1.1)
maintainProductionOrder	ERP3_1	us/wo/wowoapi.p	maintainProductionOrderAPI	Production Order Maintenance (16.3.1)
maintainWorkCenter	ERP3_2	rwwcmt.p		Work Center Maintenance (14.5)

maintainPOShipperReceipt	ERP3_4	rsporc.p		PO Shipper Receipt (5.13.20)
maintainPOShipperUnloading	ERP3_4	papoul.p		Pending PO Shipper Unload (5.13.12.13)
recordIssueComponentByPack	ERP3_2	us/wo/woisordapi.p	runAPIForProductionOrderCompIss	Production Order Component Issue (16.5.12)
recordIssueComponent	ERP3_2	us/wo/woisapi.p	issueComponentForProdOrder	Production Order Component Issue
recordManualAllocation	ERP3_1	us/wo/womallai.p	runAPIForManualAllocation	Prod Order Manual Allocation (16.5.2)
recordMove	ERP3_1	us/wo/womvapi.p	processMoveTransactionAPI	Move Transaction (16.13.17)
recordOperationActivity	ERP3_3	us/wo/woopapi.p	processOperationActivity TransactionAPI	Operation Activity Transaction (16.13.13)
recordOperationLabor	ERP3_2	us/wo/wolbrapi.p	processOpLaborTransactionAPI	Operation Labor Transaction (16.13.14)
recordPickedInventoryAPI	ERP3_1	us/wo/wopkapi.p	recordPickedInventoryAPI	Production Picklist Pick (16.5.7)
recordPicklistIssue	ERP3_2	us/wo/woispckapi.p	issuePicklist	Production Order Picklist Issue (16.5.11)
recordPickListPickByPackAPI	ERP3_1	us/wo/wopkapi.p	recordPickListPickByPackAPI	Production Picklist Pick (16.5.7)
recordPickListTransfer	ERP3_1	us/wo/wopkisasi.p	runAPIForPickListTransfer	Production Picklist Transfer (16.5.9)
recordReceiptBackflush	ERP3_2	us/wo/worcptapi.p	processProductionOrderReceipt BackflushAPI	Production Order Receipt (16.13.1)
recordRejectScrap	ERP3_2	us/wo/worjapi.p	processRejectScrapTransactionAPI	Reject/Scrap Transaction (16.13.15)
recordSplitOrder	ERP3_1	us/wo/wowospai.p	runAPIForProductionOrderSplit	Production Order Split (16.3.11)
returnPOPack	ERP3_3	paporvpk.p		Purchase Order Returns by Pack (5.13.12.16)
receivePurchaseOrder	ERP3_5 (prod_order 2016 higher)	us/po/porcapi.p	receivePurchaseOrder	Purchase Order Receipts (5.13.1)
returnPurchaseOrder	ERP3_3	porvis.p		Purchase Order Returns (5.13.7)
recordReworkTransaction	ERP3_1	us/wo/worwapi.p	processReworkTransactionAPI	Rework Transaction (16.13.16)

Modified API

The following APIs were modified for this release:

Table 7
Modified APIs for Production Orders 3.0

Transaction Name	Modification Details
Production-Order-Component-Issue-by-Item.xml Production-Order-Component-Issue-by-Item---Standalone.xml Production-Order-Component-Issue-by-Pack.xml Production-Order-Component-Issue-by-Pack---Standalone.xml	Changed dataset signature (temp table updated for additional fields and added temp tables to dataset)
Production-Orders-Reporting---Parent.xml	Added link transaction for production reporting, using production order ID, serial ID, or production line and item
Operation-Activity-Reporting---Production-Only.xml	- Added prompt for component issue when component issue policy is set for Direct - Corrected pack code and bop code when reporting with serial IDs
Production-Order-Pick-Transfer-Issue.xml	- Corrected location validation in Production Order transaction. - Modified pick-transfer-issue replenishment method to look for production line backflush location when work center backflush locations are not defined
Production-Order-Parent-Component-Issue---SubCon-Linked.xml	Corrected validation for location
Production-Order-Transfer-Parent.xml	- Prod Order Transfer Parent transaction fixed for item number default value based on lot number - Corrected location validation in Production Order transaction
Production-Order-Parent-Component-Issue.xml	- Production Order Component issue transaction fixed for operation value format - Corrected location validation in Production Order transaction
Inventory-Transfer-with-Lot-Serial-Change---Item.xml Pack-Create-by-Production-Line.xml Pack-Create-by-Production-Order.xml Production-Order-Item-Putaway.xml Purchase-Order-Receipts-with-SubContract-Reporting.xml	Removed customer name references from Data Collection transaction notes

Schema Changes

The following table depicts schema changes, including both table modifications and additions, for this release.

Table 8
Schema Changes

Table	Area	Module	Modified Field	Description
Modifications				
cal_det	Base	Shop Floor Calendar	cal_ref	Updated the group identifier for this detail record. Changed the format from x(8) to x(18), which is the standard in EE2017+.
dsr_mstr	Supply chain	Distribution Orders	oid_dsr_demand	Added oid_dsr_demand as a decimal field. This is the OID to the demand record for this supply requisition.

Table	Area	Module	Modified Field	Description
dsr_mstr	Supply chain	Distribution Orders	dsr_demand_dataset	Added the dsr_demand_dataset as a character field. This is the name of the Materials Planning demand record for this supply requisition.
lad_det	Mfg	Inventory	lad_timestamp	Added the lad_timestamp field as the date and time of the transaction.
ln_mstr	Mfg	Engineering	ln_backflush_loc	Added ln_backflush_loc as a character field. This is the location used for backflushing at this production line.
lna_det	Mfg	Engineering	lna_start_date	Added the lna_start_date field as the start date to which the production line allocation percentage applies.
lna_det	Mfg	Engineering	lna_siteline	Renamed the index for lna_siteline to temp-13109.
lna_det	Mfg	Engineering	lna_sitepart	Renamed the index for lna_sitepart to temp-36034.
lna_det	Mfg	Engineering	lna_siteline	Added an index for lna_siteline.
lna_det	Mfg	Engineering	lna_sitepart	Added an index for lna_sitepart.
lna_det	Mfg	Engineering	lna_siteline	Updated the primary index for lna_siteline.
lna_det	Mfg	Engineering	temp-13109	Dropped the index for temp-13109.
lna_det	Mfg	Engineering	temp-36034	Dropped the index for temp-36034.
lna_det	Mfg	Engineering	lnd_part_site	Added the index for lnd_part_site.
lna_det	Mfg	Engineering	lnd_site_part	Added index for lnd_site_part.
mrp_det	Mfg	Planning	mrp_supply_sequence	Added the index for mrp_supply_sequence.
mrpc_ctrl	Mfg	Planning	mrpc_smoothing_key	Added mrpc_smoothing_key as a character field. This is a smoothing key for identifying which smoothing rule to use for scheduling production orders.
mrpc_ctrl	Mfg	Planning	mrpc_grc_supply_data	Added mrpc_grc_supply_data as a logical field. This is used to create pegging data from an upstream GRC order to its downstream (higher-level) planned orders and production orders for items with an Order Policy set to GRC so that data can be accessed by reporting tools for Kaizen analysis.
mrpc_ctrl	Mfg	Planning	mrpc_grc_action_message	Added the mrpc_grc_action_message as a logical field. This is for action messages for items planned using gross requirements.
mrpc_ctrl	Mfg	Planning	mrpc_order_count_max	Added mrpc_order_count_max as an integer field. This is the maximum number of orders Materials Planning plans for an item/site combination.
ps_mstr	Mfg	Engineering	ps_all_pol	Added the ps_all_pol as a character field. This is a language detail field used to manage production order allocation policies set to Detail or General.
ps_mstr	Mfg	Engineering	ps_comp_iss_pol	Added ps_comp_iss_pol as a character field. This is the language detail field used to manage production order issue policies.

Table	Area	Module	Modified Field	Description
ps_mstr	Mfg	Engineering	ps_pick_pol	Added ps_pick_pol as a character field. This is the language detail field used to manage production order component pick policies.
pt_mstr	Base	Base module	pt_pk_ord	Added pt_pk_ord as an integer field. The system uses the field to sort the picklist as: 1-Location, 2-Lot/Ser, 3-Date, or 4-Exp.
pt_mstr	Base	Base module	pt_pk_ord_ascend	Added pt_pk_ord_ascend as a logical field. This is used to indicate when picking logic sorts in ascending or descending order.
pt_mstr	Base	Base module	pt_pick_pol	Added pt_pick_pol as a character field. This language detail field used to manage prod order component pick policies.
pt_mstr	Base	Base module	pt_all_pol	Added pt_all_pol as a character field. This language detail field is used to manage production order allocation policy: 1-Detail and 2-General.
pt_mstr	Base	Base module	pt_xfer_all_pol	Added pt_xfer_all_pol as a character field. This language detail field is used to manage production order transfer allocation policy: 1-Retain and 2-Drop
pt_mstr	Base	Base module	pt_picklist_ord_mult	Added pt_picklist_ord_mult as a decimal field. This is the order multiple quantity for the picklist calculation.
pt_mstr	Base	Base module	pt_picklist_ord_max	Added the pt_picklist_ord_max as a decimal field. This is the maximum order quantity used for the picklist calculation.
pt_mstr	Base	Base module	pt_picklist_ord_min	Added the pt_picklist_ord_min as a decimal field. This is the minimum order quantity for the picklist calculation.
pt_mstr	Base	Base module	pt_comp_iss_pol	Added the pt_comp_iss_pol as a character field. This is language detail field used to manage production order issue policies.
pt_mstr	Base	Base module	pt_nve1_code	Updated the pt_nve1_code field. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve2_code	Updated the pt_nve2_code field. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve4_code	Updated the pt_nve4_code field. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve5_code	Updated the pt_nve5_code field in pt_mstr. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve6_code	Updated the pt_nve6_code field. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve7_code	Updated the pt_nve7_code field. This is the statistical and customs value code.
pt_mstr	Base	Base module	pt_nve8_code	Updated the pt_nve8_code field. This is the statistical and customs value code.
pti_det	Mfg	Base module	pti_pk_ord	Added the pti_pk_ord as an integer field. The system uses the field to sort the picklist as: 1-Location, 2-Lot/Ser, 3-Date, 4-Exp.

Table	Area	Module	Modified Field	Description
pti_det	Mfg	Base module	pti_pk_ord_ascend	Added pti_pk_ord_ascend as a logical field to indicate when picking logic is sorted as ascending or descending.
pti_det	Mfg	Base module	pti_pick_pol	Added the pti_pick_pol as a character field. This language detail field is used to manage production order component pick policies.
pti_det	Mfg	Base module	pti_all_pol	Added pti_all_pol field as a character field. This language detail field is used to manage production order allocation policies: 1-Detail and 2-General.
pti_det	Mfg	Base module	pti_xfer_all_pol	Added pti_xfer_all_pol as a character field. This language detail field manages the production order transfer allocation policy: 1-Retain and 2-Drop.
pti_det	Mfg	Base module	pti_picklist_ord_mult	Added pti_picklist_ord_mult as a decimal field. This is the order multiple quantity used for the picklist calculation.
pti_det	Mfg	Base module	pti_picklist_ord_min	Added the pti_picklist_ord_mi as a decimal field. This is the minimum order quantity for the picklist calculation.
pti_det	Mfg	Base module	pti_comp_iss_pol	Added the pti_comp_iss_pol as a character field. This is the language detail field used to manage prod order issue policies.
pti_det	Mfg	Base module	pti_comp_iss_pol	Added the pti_comp_iss_pol as a character field. This language detail field is used to manage production order issue policies.
ptp_det	Base	Base module	ptp_iss_pol	Updated the ptp_iss_pol field. This field specifies when the item is printed on pick lists.
rpc_ctrl	Mfg	Push production	rpc_begin_consumption	Added rpc_begin_consumption as a character field. This is a language detail field that indicates when to consume the schedules: 1-Effective date or 2-Earliest date.
serd_det	Mfg	Inventory	serd_oid_ser_mstr	Added the index serd_oid_ser_mstr field.
serh_hist	Mfg	Inventory	oid_pickh_hist	Added oid_pickh_hist as a decimal field.
wc_mstr	Mfg	Engineering	wc_backflush_loc	Added wc_backflush_loc as a character field. This is the location used for backflushing at this work center.
wc_mstr	Mfg	Engineering	wc_vend	Added wc_vend field as a character field. This is the supplier code associated with the work center.
wc_mstr	Mfg	Engineering	wc_sched_horizon	Added wc_sched_horizon as an integer field. This is the number of future schedule days that are under manual control.
wo_mstr	Mfg	Push production	wo_need_date	Added wo_need_date as a date field.
wo_mstr	Mfg	Push production	wo_priority	Added wo_priority field as an integer field. This is the priority assigned to this order.
wo_mstr	Mfg	Push production	wo_restriction	Added wo_restriction as a character field.

Table	Area	Module	Modified Field	Description
wo_mstr	Mfg	Push production	wo_allow_splits	Added wo_allow_splits as a logical field. This indicates when order splits are allowed.
wo_mstr	Mfg	Push production	wo_qty_exp_complete	Added wo_qty_exp_complete as a decimal field. This is the quantity expected to complete.
wo_mstr	Mfg	Push production	wo_qty_exp_scrap	Added the wo_qty_exp_scrap field as the decimal quantity expected to scrap.
wo_mstr	Mfg	Push production	wo_mfg_type	Added wo_mfg_type field as a character field. This is a code specifying the manufacturing type of work order.
wo_mstr	Mfg	Push production	wo_cum_lot_id	Added wo_cum_lot_id field as a character field. This is a code used to identify the CUM work order associated with this order.
wo_mstr	Mfg	Push production	wo_need_time	Added the wo_need_time as an integer field. This is the time (in seconds past midnight) that the work order needs to be completed.
wo_mstr	Mfg	Push production	wo_mps_auto_reschedule	Added wo_mps_auto_reschedule as a logical field to indicate when the order can be rescheduled.
wo_mstr	Mfg	Push production	oid_wo_demand	Added oid_wo_demand field as a decimal field to indicate the Materials Planning demand record for this supply order.
wo_mstr	Mfg	Push production	wo_demand_dataset	Added wo_demand_dataset as a character field to indicate the name of the Materials Planning demand record for this supply order.
wo_mstr	Mfg	Push production	oid_demand	Added the oid_demand index.
wo_mstr	Mfg	Push production	wo_cum_lot_id	Added the wo_cum_lot_id index.
woc_ctrl	Mfg	Push production	woc_var	Updated the woc_var field. This field is reserved for QAD use.
woc_ctrl	Mfg	Push production	woc_status_req_discr	Added woc_status_req_discr as a character field. This status is required before the system lets discrete orders have activity.
woc_ctrl	Mfg	Push production	woc_status_req_sched	Added woc_status_req_sched as a character field. This status is required before the system lets repetitive orders have activity.
woc_ctrl	Mfg	Push production	woc_print_barcodes	Added the woc_print_barcodes as a logical field. This is the default for print bar code fields for production orders.
woc_ctrl	Mfg	Push production	woc__qadl04	Added woc__qadl04 as a logical, QAD-reserved field.
woc_ctrl	Mfg	Push production	woc_open_qty_mthd	Added the woc_open_qty_mthd as a character field. This is the language detail value indicating the method used to calculate open quantity.

Table	Area	Module	Modified Field	Description
woc_ctrl	Mfg	Push production	woc_exec_consume_mthd	Added the woc_exec_consume_mthd as a character field. This is the language detail value indicating the method used to execute production order consumption logic.
woc_ctrl	Mfg	Push production	woc_earliest	Added woc_earliest as an integer field. This is the past due consumption days that the system uses to process the earliest consumption method logic.
woc_ctrl	Mfg	Push production	woc_rcpt_setup	Added the woc_rcpt_setup as a logical field to indicate whether to automatically backflush setup at receipt.
woc_ctrl	Mfg	Push production	woc_rcpt_labor	Added woc_rcpt_labor as a logical field to indicate whether to automatically backflush labor at receipt.
woc_ctrl	Mfg	Push production	woc_comp_iss_date_mthd	Added woc_comp_iss_date_mthd as a character field. This is the language detail value indicating the method used to calculate component issue date.
wod_det	Mfg	Push production	wod_all_pol	Added wod_all_pol to wod_det as a character field. This is a language detail field that manages production order allocation policies: 1-Detail and 2-General.
wod_det	Mfg	Push production	wod_qty_xfer	Added wod_qty_xfer as a decimal field. This is the component quantity transferred to the shop floor.
wod_det	Mfg	Push production	wod_comp_iss_pol	Added wod_comp_iss_pol field as a language detail field to manage production order issue policies.
wod_det	Mfg	Push production	wod_pick_pol	Added wod_pick_pol as a character field. This is the language detail field that manages production order component pick policies.

Production Orders Fixes

The following table lists fixes for Production Orders.

Table 9
Production Orders Fixes

QAD Internal Ticket ID	Description
CRMFG-18661	WIP Valuation Report (16.20.17) no longer encounters and displays Progress errors when you run the report for repetitive orders and set the Cost Set selection criteria for option 2, Cum Order Average. Previously, in this scenario, the report displayed Progress errors.
CRMFG-18681	When processing an item where the site uses average costing in Operation Activity Transaction, the labor now is correctly averaged into the total item cost and averaged correctly through all operations. Previously, in this scenario, the system did not average the labor on the last operation into the time cost.
CRMFG-18721	Prod Order Accounting Close (16.20.10) now correctly processes floor stock for repetitive orders during accounting close. Previously, the system did not include floor stock in inventory or include it in the item cost after you ran the program.
CRMFG-18752	The system now correctly averages labor into the total item cost in Operation Activity Transaction when you process an item where the site uses average costing. Previously, in this scenario, the system posted labor to inventory discrepancy instead of applying labor to the item cost.

CRMFG-18978	Purchase Order Receipts (5.13.1) for subcontracting now posts rate variances and simultaneously updates the database records. The system posts usage variances only when closing the production order. Previously, only the rate variances were posted, and the database routing and production order records were not updated.
CRMFG-19025	The system now correctly reports scrap transactions in Item Browse (3.21.2) after you update scrap amounts through Production Order Collection (.NET UI), save changes, then update scrap transactions a second time. Previously, when you updated a scrap amount in the collection a second time, the system displayed an incorrect scrap transaction quantity.
CRMFG-19034	The system no longer creates a bulk item picklist with blank pick policies. Previously, when pick list lines were not linked to a production order, the system displayed blank pick policies in the picklist.
CRMFG-19042	Production Order Receipts and the Op Activity Transaction (.NET UI) no longer display a Progress error in the Total Qty Field when the quantity is over 1 million. Previously, the field displayed question marks for quantities over that amount.
CRMFG-19045	Memory leaks in production order code were corrected. Specifically, Operation Labor Transaction now correctly updates the database when rate variances are identified during the transaction. Previously, with a labor/burden rate variance, the system created a GL transaction when the variance occurred; however, the rate variance amounts were not recorded into the proper database records due to memory-leak issues.
CRMFG-19059	When you select Transfer Work in Process in Transfer – Prod Order Accounting Close (16.20.10), the program now correctly processes all labor usage variances and method variances before transferring remaining WIP costs from an existing repetitive CUM order to a new repetitive CUM order. Previously, in this scenario, the transfer caused incorrect labor usage variances.
CRMFG-19060	Production Line Allocation Maint (16.1.6) now lets you select additional production lines that have a valid item, site, and production line. Previously, in this scenario, the program would not let you select or enter a valid production line while allocating percentages for additional lines.
CRMFG-19061	The lookup for the Production Seq field in various Production Order programs now correctly displays sequence data for production orders. Previously, the field's lookup was blank, even though you had valid sequence numbers defined for existing production orders.
CRMFG-19068	The system now correctly defaults the setup time from a production line when you add a non-defined item to a production line in production order creation/maintenance programs. Previously, when you edited a production order by adding an item and production line, the setup time was incorrect.
CRMFG-19070	Production Order Routing Maintenance (16.3.6) now correctly creates operation history records and GL transactions when you close an operation. Previously, when the operation had labor feedback reported, the system did not create the record or the transaction.
CRMFG-19075	When the operation is the last operation, the Milestone field is now editable. This lets the system treat the field as a milestone operation. Previously, the field was not editable.
CRMFG-19076	When you reopen a closed production order operation in Production Order Routing Maintenance, the system correctly uses the setup operation history to update the actual setup time. Previously, in this scenario, the system searched for labor setup time for reopened operations.
CRMFG-19077	When you add a production order routing operation when creating an order in a production order maintenance program, the system now correctly sets the Qty Ordered field to equal the quantity in the Qty Start field. Previously, in this scenario, the system set an incorrect value for the Qty Ordered.
CRMFG-19083	Pending PO Shipper Unload (5.13.12.13) no longer displays an error when you unload a purchase order or packing slip. Previously, during the unload, when you unloaded more units for an item than fit into a standard pack and chose to create multiple packs with standard quantities, the system displayed an error.
CRMFG-19086	Transactions Detail Inquiry (3.21.1) no longer displays duplicate data for PO shipper receipts and shipper unload. Previously, in this scenario, a second redundant frame displayed duplicate data with an incorrect quantity change.
CRMFG-19093	Production Order Cost Report (16.20.27) now correctly includes material costs for a repetitive average cost order in the detail section. Previously, the report only displayed the data in the grand total.
CRMFG-19094	The system now correctly declines the quantity (in_qty_all) required when you change the order status from R(eleased) to F(irm). Previously, in this scenario, the system, the quantity required was not correct when you changed the status.

CRMFG-19098	Unposted scrap transactions now correctly populate with the entity, and therefore, they now are included in the unposted transaction register and post to GL. Previously, with a production order with scrap transactions, the entity was missing when you viewed the transaction in Unposted Transaction Browse (25.13.15).
CRMFG-19100	The lookup for the Production Line field in Item-Element Cost Calculation (30.17.10) now correctly displays production lines to peruse. Previously, the lookup displayed product lines.
CRMFG-19107	Prod Order Cost Variance Report (25.13.15) now correctly includes material cost in the Std Cost Rcvd (standard cost received) field for repetitive and discrete orders. Previously, in this scenario, the report excluded the material cost, even though the production order total cost was correct.
CRMFG-19113	Operation Activity Transaction no longer displays an error and correctly processes milestone operations when there is a closed, non-milestone operation before the current processing milestone operation. Previously, the program displayed an error even though the current operation input queue had sufficient quantity to process the current milestone operation.
CRMFG-19118	The system now correctly displays an error, informing you that orders do not meet the minimum production activity threshold when you: • Set the Production Activity Threshold field to R(eleased) in Production Order Control. • Create a subcontract purchase order and combine it with a discrete order with a F(irm) status. • Receive a purchase order. Previously, in this scenario, the system did not display an error, even though the order did not meet the minimum production activity threshold.
CRMFG-19128 CRMFG-19133	The system no longer defaults the setup time from an existing production line when you create a new production line in Item Production Line Maintenance (16.1.4). Previously, the system incorrectly defaulted the setup time rather than set it to zero for a new line. Also, the system no longer defaults the unit hour from a production line or defaults the unit hour to zero in this scenario.
CRMFG-19129	Item Production Line Maintenance (16.1.4) now correctly defaults the Number of Lines field from the production line. Previously, the program defaulted incorrect values, such as zero, for the field.
CRMFG-19132	The system now correctly transfers the beginning quantity from an existing repetitive CUM order to a new repetitive CUM order when you: • Close the existing repetitive CUM order in Prod Order Accounting Close • Set Transfer Work in Process to Yes Previously, in this scenario, the system did not transfer the quantity to the input queue current quantity of the new order's first operation.
CRMFG-19140	When the order has detail allocations in multiple lots, the system now correctly considers the descending sequence when you set the Ascending or Descending field to Descending in Inventory Control (3.24) and set Calculate Backflush for a component in Operation Activity Transaction. Previously, in this scenario, when you set the backflush function, the system issued the wrong quantity for the component.
CRMFG-19167	For average cost orders (discrete and repetitive), the system now correctly calculates scrap. Specifically, the system no longer transfers: • Floor stock to the last operation instead of the operation linked to it when you transfer an average cost repetitive order • WIP quantity to the incorrect operation in a new order when WIP for the quantity that was completed in a previous operation was moved to the input queue of the next operation.
CRMFG-19210	The AS recordOperationActivity API now correctly posts labor when you set Auto Labor to Yes on the routing operation and no labor values pass to the API. Previously, when you used the API to report production in this scenario, the system did not report labor transaction for the last operation of the route.
CRMFG-19228	The system no longer lets you complete a transaction that has restricted settings through an API for AS transactions. Previously, the API for operation activity transaction completed processing of transactions and created transaction history records for transactions that had set restrictions.

Workbenches for Production Orders Enhancements

The following section describes enhancements to QAD Planning and Scheduling Workbenches for Production Orders.

Workbenches Over-Capacity Issues Corrected in EPEI Leveling

The feature to level production orders using Every Part Every Interval (EPEI) methodology in the Planning and Scheduling Workbenches has been updated so that the required capacity for a production line does not exceed the available capacity during the leveling interval. When the calculated EPEI for an item and number of setups for the item was a non-integer value, the leveling process would sometimes create and schedule orders so that the required capacity exceeded the available capacity. To prevent this, the system now rounds the number of setups for an item down to the nearest integer value before creating and scheduling orders, reducing the total load on a production line and averting the possibility of a negative remaining capacity for a day.

Days on Hand (DOH) Processing Added to Workbenches

This release introduces features that provide visibility of nettable inventory quantity in terms of the projected days on hand (DOH). The DOH calculation determines the number of *working days* that the projected available balance (PAB) can supply demand. It serves as a useful metric for planners, buyers, and materials managers for gaining insight into supply of inventory for critical materials, visibility of potential supply problems, and/or visibility of excess inventory. DOH is determined by subtracting the total net demand—which is demand minus supply—from the projected available balance for each day.

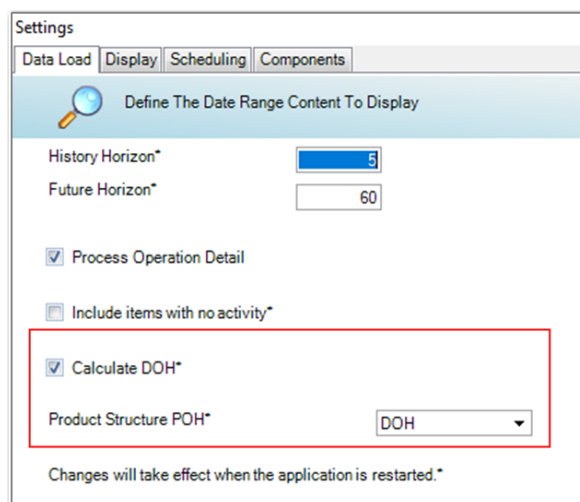
The following topics describe the DOH capabilities in more details. Refer to the Days on Hand chapter of the *QAD Planning and Scheduling Workbenches for Production Orders User Guide*, version 4.2, for detailed information, including examples and calculations.

New DOH Preferences

Two new options were added to the Data Load tab in the workbenches preferences.

- Calculate DOH
- Product Structure POH

Fig. 4 Workbenches Data Load Preferences



Calculate DOH

Select Calculate DOH to display the days on hand in the MSW Schedule Grid and in the Supply/Demand Panel. You select *both* Calculate DOH and set Product Structure POH to DOH to display the days on hand in the Product Structure Projected on Hand Panel. You can choose to display the Supply/Demand panel below the MSW Schedule Grid or the Supply/Demand Panel.

DOH data in the MSW Schedule Grid uses a DOH calculation that is based on nettable quantities on hand. Nettable is an inventory status attribute that determines whether Materials Planning includes items when planning.

The Supply/Demand Panel and the Product Structure Projected on Hand Panel use a different DOH calculation. For these panels, DOH calculations are based on projected available balance, not nettable quantities on hand. For detailed calculations, refer to the Days on Hand chapter of the *QAD Planning and Scheduling Workbenches for Production Orders User Guide*, version 4.2.

The DOH calculation determines the number of working days that the projected inventory balance can supply demand. DOH appears as 0 (zero) when there is less than one day of projected available balance. DOH appears as 999 when the projected available balance is greater than the total demand.

Fig. 5

Master Scheduling

02200 1000

Capacity

Production Line	Horizon End	Record Type	Past Due	Wednesday	Thursday	Friday	Saturday	Week 38	Sunday
1000	09/19/2018	Remaining Capacity	0	34	34	34	4	106	0

Schedule

Activity	Production Line	Item Number	Days On Hand	Nettable QO	Past Due	09/19	09/20	09/21	09/22	09/19 - 09/23	09/23
Yes	1000	02301	0							0	
Yes	1000	02001	999	61131						0	
Yes	1000	02200	6	672						0	
Yes	1000	02210	2	251						0	
Yes	1000	02220	0	10						0	
Yes	1000	52201	999	1123						0	
Yes	1000	52220	0	65						0	
Yes	1000	52221	2	1037						0	

Supply/Demand

Record Type	Past Due Quantity	09/19	09/20	09/21	09/22	09/19 - 09/23	09/23
Projected On Hand	331.6	331.6	331.6	331.6	331.6	331.6	331.6
Projected Available Balance	420.6	420.6	420.6	420.6	420.6	420.6	420.6
Days On Hand		10	9	8	8	8	8
Supply	213					0	

Product Structure POH

Set Product Structure POH to display either the projected on-hand (POH) quantity or the DOH for component quantities that display for each day within the future horizon in the Product Structure Projected on Hand Panel:

POH: Set this field to POH to display the projected on hand quantities for components of the item of focus in the Schedule Grid. For POH calculations, refer the MSW chapter of the *QAD Planning and Scheduling Workbenches for Production Orders User Guide*.

DOH: Set this field to DOH to display DOH for components of the item of focus in the Schedule Grid. You must also set the Calculate DOH field in the Data Load Preferences so that the system calculates DOH.

When Calculate DOH is selected, you can choose to display the Supply/Demand Panel below the Product Structure components. When you do, the Supply/Demand Panel displays both the POH and DOH for the selected component, even when the projected on hand quantities are display in the Product Structure Projected on Hand Panel.

Fig. 6 Product Structure Projected On Hand Panel

Record Type	Past Due Quantity	10/13 - 09/	10/01	10/02	10/03	10/04	10/05	10/06	09/30 - 10/	10/07	10/08
Projected On Hand	331.6	271.6	-88.4	-88.4	-88.4	-88.4	-88.4	-88.4	-88.4	-88.4	-148.4
Projected Available Balance	420.6	420.6	420.6	420.6	420.6	420.6	420.6	420.6	420.6	420.6	420.6
Days On Hand		8	11	10	10	9	8	8	8	8	999
Supply	213	149	360						360		60
Demand	464.4	420	360						360		60
Cumulative ATP	420.6								0		
Seasonal/Safety Stock		0							0		
Receipts		0							0		

New Resource-Item Data Added to Workbenches

You can now add column data for resource items in the workbenches. A new Resource-item field in the Workbench Control File (22.20.24) lets you add the item data. In the new field, you enter a comma-delimited list of additional default fields to display in the MSW Scheduling Grid.

Example To show resource items in test, you set the Resource-Item field to `resource_test`. You set the `resource_test` field value to `test`. You save the control file, then start the Workbenches and load data to view the resource-item data in the new column. See Figure 7.

You should complete all steps for adding columns to the workbenches for the example. For detailed information on adding columns to the workbenches, refer to the Personalization Architecture chapter of the *QAD Planning and Scheduling Workbenches Administration Guide*.

Fig. 7 Workbenches Control File, Resource-Item Field

Set the control file field to see resource-item column data in workbenches

Value of field you entered in control file.

Renamed Label for Component Projected On-Hand Tab

The Component Projected On-Hand Tab is renamed the Product Structure Projected On-Hand tab.

New Functions in Resource Navigator

The following new functions are available when you right-click on resources to display the context menu.

- Refresh
- Unload
- Calculate Component Availability

Refresh

You can refresh data that you previously loaded into the workbenches from the Resource Navigator. You can refresh a user-created resource group, or individually selected resources.

When you select the Refresh for a resource or resource group, the system:

- Validates that the resources do not have any pending changes. When there are pending changes, then the system cancels the Refresh.
- When no pending changes exist, the system unloads each resource and then reloads the resource.
- Refresh adheres to the workbenches user preference function for calculating component availability automatically on load or on demand.

The system follows rules when loading and refreshing.

Unload

You can unload previously loaded resource data from the Resource Navigator's context menu. You can load an entire resource group, then unload some resources in the group, letting you focus on only resources of interest.

Also, when you make changes on the data, and then decide that you do not want to commit those changes, you can use the Unload function to undo the changes that you made so long as you did not save the changes. When you Refresh, the system clears the Schedule Grid of data for the resource. You cannot unload at the resource group level or site level.

Calculate Component Availability

You can choose to run the calculations at any time from the context menu by selecting the Calculate Component Availability function for loaded resources only.

You can select the function to calculate component check at the resource level or at the user-created group level. At the user-created resource group and resource level, when there are loaded resources, the right-click context menu displays both the Refresh and Calculate Component Availability functions.

When all resources are not loaded, only the Load and other functions display.

Expand Column and Collapse Column in Context Menu

In any Planning and Scheduling Workbench Schedule Grid, when you enable right-click on the week total or month total columns, a context menu displays. The Expand and Collapse functions in the context menu are renamed to Expand Column and Collapse Column, respectively. The new names better reflect the functionality which is to expand a column within the grid and not add a new level of display to the grid itself.

The Expand Column and Collapse Column are now only available on the week total and month total columns. It is no longer available on all columns.

Now, when you select Collapse Column, the daily columns are hidden, and when you select Expand Column, the daily columns are displayed.

Supporting Data for Selected Items in the Product Structure POH Tab

When you make a selection in the Product Structure POH tab, the supporting tabs within the workbenches display data for your selection.

Previously, the supporting tab's data —Production Order Maintenance, Demand Details, and so on at the bottom of the workbenches—did not reflect the item you selected in the Product Structure POH tab.

Note The system may not always display supporting data in the supporting tabs for the item you selected in the Product Structure POH display; for example, there may be no data when:

- Orders do not exist.
- Data may exist on the server, but may not be on the client.
- Supporting tab data is production line related, and the item you selected is not tied to a production line.

Default BOM Code Used for Components in Product Structure POH Data

The system uses the BOM code specified for an item tied to a production line in Production Line Maintenance when the production line:

- Is the primary production line
- Has a detail entry for the item, effective as of today's date

When no such production line detail exists, the system uses the BOM Code from either Item-Site Planning Maintenance (1.4.17) or Item Planning Maintenance (1.4.7).

Work centers still consider the BOM code for an item based on the BOM code settings in Item-Site Planning Maintenance (1.4.17), then Item Planning Maintenance (1.4.7) respectively.

Component Changes Reflected in Product Structure POH Data

The system considers changes you make to components and reflects those changes in the Product Structure POH tab data. Previously, component changes did not display in the tab's data.

Now, when you make a schedule change to an item in the Schedule Grid, the following grids are updated:

- In the Product Structure POH Data Grid:
 - The supply data for the item whose schedule data was modified
 - The demand data for the item's components
- In the Supply/Demand Data Grid
 - The supply data for the item whose schedule was modified
 - The demand data for the item's components

Projected On Hand quantities are updated for all affected items in the Product Structure POH and Supply/Demand Data Grids.

Component Effective Date

The system considers the effective date of components when you make updates to the schedule. Previously, component data did not reflect updates in the Product Structure POH display; therefore, effective dates were not considered.

Now, when you make schedule changes, the system applies the changes to those components that are effective as of the release date of the modified work order(s).

Example You have three components for item A as A1, A2, and A3. A1 has a WO with an effective date of today, A2 has a WO with an effective date of tomorrow, and A3 is in effect now and in the future. WO1 is released today, and WO2 is released tomorrow. Based on this setup, when you make a change to WO1, then demand for A1 is effected because the BOM has that component effective until today. When you make a change to WO2, then demand for A1 is not effected and the system instead effects demand for A2. A3 is always affected in both cases.

Note The system considers the release date as always when making updates; therefore, changes that you make today can reflect in updates being made on previous days, depending on the release date setting.

Component Demand Calculations

When you change the schedule for a parent item, the system determines the effected component. For calculation speed and application performance, this calculation does not take in account many parameters that MRP considers. **Users should note that this calculation is not exact.**

A few examples of why this calculation is not exact are as follows:

- To determine components, the system uses the BOM code specified for the item's primary production line in Production Line Maintenance (18.22.1.1); however, this BOM may not be the WO BOM. So, the system may:
 - Display demand for components that are not effected
 - Not display demand for effected components
- Component demand is set for the production order's release date, disregarding lead time offset that MRP would have considered. This may cause component demand to show up later than it should.
- When a component that previously did not load onto the client is loaded onto the client, the system must ensure that POH is current with schedule changes that occurred in client memory. In other words, the system has to make the component demand catch up with schedule changes made previously in client memory. This *catch-up logic* does not take component effective dates into consideration and may introduce inaccuracy in component demand.

Dynamic Update of Product Structure POH Display One Level Down

When you make updates to an item's schedule, this causes the following changes to be made in the Product Structure POH display:

- In the top-level row, the supply for the item is changed per the item's schedule change, and Projected On Hand is recalculated.
- In each of the next-level rows (component items), the demand for the item is changed per the parent item's schedule change, and Projected On Hand is recalculated.
- In the third (and beyond) level rows (subcomponents), no changes are made, and Projected On Hand is not recalculated.

Additional Product Structure POH Column Data

The following optional data is available in the Product Structure Projected On Hand tab display:

- Primary production line
- BOM level
- Qty per from BOM
- Item description and type
- Buyer/planner

To add the fields, while in the Product Structure POH Data Grid, right-click on an existing column header; then, select Columns from the right-click context menu. In the Columns list, select any of the new fields.

Product Structure Projected On Hand Data Considers Lead Time

The system uses the following:

- For items on a production line, the maximum firm day

This is the maximum of all production lines where the item is produced, for example, when production line 1 has one day for that item and production line 2 has two days for that item then the maximum is 2 days.

- For items not on a production line, then the system uses the lead time for:
 - Manufactured item, using the manufacturing lead time
 - Purchased items, using the purchase lead time

Note For both the Supply/Demand panel and the product structure POH horizon, the system considers the lead time when there is no production line-item setup for the item; otherwise, the system considers firm days for the horizon.

Now, for manufactured items not produced on production lines, the system determines how to color the horizon based on the following for lead-time:

$$pt(p)_{mfg_lead} + pt(p)_{sfty_lead}$$

For purchased items, the system determines how to color the horizon based on the following for lead-time:

$$pt(p)_{pur_lead} + pt(p)_{insp_lead} + pt(p)_{sfty_lead}$$

Workbenches Fixes

The following table lists fixes for the Planning and Scheduling Workbenches for Production Orders.

Table 10
Workbenches Fixes

QAD Internal Ticket ID	Description
CRMFG-13188	When the saveWorkOrderInternal API calls validateNewOrder, you can now correctly add a co-, by-, or base order. Previously, calling validateNewOrder prevented you from adding these orders.
CRMFG-15300	The MSW Schedule Grid now correctly displays and lets you select co-/by-order types. Previously, these types only displayed in supporting order relationship panels.
CRMFG-18578	The MSW now correctly refreshes the screen, even when the production line name differs in case (uppercase versus lowercase). Previously, when the same production line existed under both an uppercase and lowercase name, the system failed to refresh the screen.
CRMFG-18667	The workbenches no longer create another joint order set when you create co-/by-orders for a base or co-product item; then, try to save. Previously, in this scenario, the system correctly created a joint set for the product order on the client side, but also created a second joint set when you saved.
CRMFG-18690	The workbenches no longer let co-/by-product orders remain when you undo changes for their base production order. Previously, when you created a base production order and the system created the co-/by-product production orders, the system only reversed the base production order and not the co-/by-orders when you clicked the Undo function.
CRMFG-18692	The system no longer changes the order status to E(xploded) in the workbenches when you change production lines for co-/by-product orders. Previously, in this scenario, the system changed the order status.
CRMFG-18693	The workbenches no longer fail, and now correctly display an error message, when you attempt to save an order to a production line not defined for the item. Previously, when you defined an item for a production line, then attempted to move the order to another line and save, the program =ed.
CRMFG-18702	The system now automatically moves a base order and co-/by-product order to a production line when you have not defined the co/by item, but did define the base item for that production line. Previously, in this scenario, when you changed to the production line not defined for the co-/by-product, the system did not automatically move the joint order set to the line.

CRMFG-18703	When you add co-/by-product order in the MSW, the system now correctly adds the co-/by-product production line data automatically when you have the base item defined for the production line. Previously, in this scenario, the system did not automatically add the base item's production line data, and the program crashed when you attempted to save the co-/by-product order to another production line with an alternative process.
CRMFG-18713	The MSW now correctly displays the BOM code when you create a new order in the MSW Schedule Grid. Previously, in this scenario, when you created the order in Schedule Grid without saving, the newly created order did not have a BOM code.
CRMFG-18716	The system no longer changes the order status when you click on the embedded Production Order Maintenance Order Relationship tab and change data in the either the Adjust Co/By Order Quantities or Adjust Co/By Order Date field. Previously, in this scenario, when the order had a status of E(xploded), A(ctive), R(eleased), or C(losed), the system changed the status to E.
CRMFG-18719	The workbenches now correctly ignore the setting of the Adjust Co/By Order Date field when you modify a base item order date, and they correctly synchronize all other order dates. Previously, the workbenches considered the field and let you set a different order date for base item orders only.
CRMFG-18727	The system now correctly updates the order quantity when you first change the co-/by-process value in the Order Relationships tab. Previously, when you changed the co-/by-process value, the system changed the order status from E to F(irm), but did not update the quantity to match the process value.
CRMFG-18731	The system no longer displays an error message and no longer creates two base item orders when you create an order for a co-product item with a quantity type set to P(ercent) in Process/Formula Maintenance (15.18) or Co/By-Product Maintenance (15.12.1).
CRMFG-18732	The system now correctly creates an order in the workbenches-embedded Production Order Maintenance when a co-product has two base processes on a single production line. Previously, in this scenario, when you created two processes for one co-product, and tied them to a single production line, the system did not create an order.
CRMFG-18733	The system now successfully changes the production line when you define a base item for two production lines; then, change a co-/by-product order from one line to the second line. Previously, in this scenario, when you changed to the second line and saved, the system saved the data, but displayed an error message.
CRMFG-18735	The system now displays the correct warning when you select an order to delete in the workbenches-embedded Production Order Maintenance and you chose to view by grouped production orders. Previously, when you selected a group-by mode, the system displayed a warning that was not related to deleting orders when you attempted to delete an order.
CRMFG-18736	You can now undo a change for a co-/by-product order when an error exists. Previously, when you attempted to delete a co-product order or add a new co/by order set, and clicked the Undo function, the system did not respond.
CRMFG-18738	The system no longer displays an error message when you create multiple co-/by-product order sets for the same base item or different base items on the same due date, then save. Previously, in this scenario, the system displayed error messages.
CRMFG-18740	The Yield field is now read only in the embedded Production Order Maintenance Details tab for all co-/by-product joint orders and order sets. Also, the display-only Yield field is always 100% for items of a co-/by-product order. Previously, in this scenario, you could edit the Yield for co-/by-product or base product orders, and the Yield value was incorrect.
CRMFG-18741	The system now deletes co-/by-product joint order sets. Previously, when you deleted a base order, the system only deleted the co-and by-product order, but left the base item order.
CRMFG-18758	The system no longer displays an error message when you change the base order due date and save in the Workbenches. Previously, when a joint order set contained orders on different due dates, and you changed the base order due date and saved, the system displayed an error message.
CRMFG-18759	The system now correctly creates order for by-products. Previously, when you tried to create an order for a by-product, the system stopped responding.
CRMFG-18768	You can now set the sequence for base order. Previously, you could set the sequence in the workbenches-embedded Production Order Maintenance or the PSW; however, in the MSW, when set a new sequence value, the system replaced it with a 0 (zero).
CRMFG-18769	The workbenches now synchronize the sequence value of co-, by-, and base joint order sets. Previously, When you updated the sequence value to any order of the various types, the system only changed the order you updated and did not automatically synchronize the value to the other orders in the set.

CRMFG-18936	The workbenches now refresh data in the Supply/Demand Summary tab when you update a production order and save. Previously, after updating an order quantity and saving, the system updated quantities in the Component tab but not the Supply/Demand Summary tab.
CRMFG-18937	If a work order is assigned to an alternate routing (with completely different work centers) then it is shown in the work center with the original routing as well as the alternate routing.
CRMFG-18938	Production orders no longer display in alternate work centers. Previously, when you assigned an order to an alternate routing with a different work center, the system displayed the order in the work center with the original routing as well as the alternate routing.
CRMFG-18939	The scheduled quantity in the Capacity Panel now displays correctly when you change a planned order quantity. Previously, when you changed the quantity of a Materials Planning-created order in the workbenches embedded Production Order Maintenance, the system erroneously calculated the value by adding the delta value—that is, the difference between the previous and currently changed value.
CRMFG-19084	You can now use the workbenches built-in leveling functions when your system is set for a European country. Previously, when you set your system's locale to operate under a European country, then attempted leveling in the workbenches, the system log displayed invalid data format.
CRMFG-19112	The Horizon End Date now displays correctly in the workbenches and is based on the calculated horizon end date from either a production line or work center. Previously, the date was from the future horizon end date, which you set in the Workbenches preferences.
CRMFG-19197	You can now correctly add a new order and enter a quantity on the order in the MSW Schedule Grid. Previously, when you dragged the Product Structure Projected On Hand panel so that it displayed in the MSW Schedule Grid, you could not create an order on your first attempt.
CRMFG-19198	The system no longer displays a red box in the MSW Schedule Grid after you load and select a work center. Previously, in this scenario, internal errors caused the red box to display.
CRMFG-19200	The MSW now creates a production order in the workbenches-embedded Production Order Maintenance; then, go to the Schedule Grid to create an order for another item. Previously, in this scenario, the system did not create the order.
CRMFG-19239	The workbenches now calculate the order quantity only once for the same order ID in the Schedule Grid. Previously, the workbenches displayed the incorrect quantity at work center level in the Schedule Grid when an item has a routing with the same work center on many operations.
CRMFG-19253	The MSW now correctly calculates the selected item's product structure POH value. Previously, when the cursor was on the Product Structure Project Qty On Hand tab, and you right-clicked to select the Calculate Projected On Hand option, the system did not calculate the POH.

Release Notes for Production Orders Version 2.0

QAD Production Orders Version: 2.0

QAD Enterprise Edition: Enterprise Edition 2016 and 2017

Release Date: April 2018

Prerequisites:

- 2016 or 2017 Enterprise Edition
- .NET UI 2.9.5 + CP2 (Cumulative Patch #2)
- Java Runtime Environment (JRE) 1.6 or above
- Progress 10.2B06 and above
- YAB: YAB 1.6.4.9 is the minimum version required.
- QAD Planning and Scheduling Workbenches, plug-in version 4.1 is included in the On-Premise Production Orders package.

Note The Planning and Scheduling Workbenches package installs when you install the Production Orders package.

- The following hotfix package must be installed with Production Orders 2.0:

<https://knowledgebase.qad.com/kmp/article/AB-15143/519/Hot-Fixes-for-Production-Orders-2.0.html>

- Serialization, Item Attributes, and Quality Control (SAQ), version 2.7.1

Production Orders version 2.0 depends on SAQ 2.7.1. Refer to your SAQ 2.7.1 installation documentation for information on installing SAQ.

Important When you install SAQ 2.7.1 with Production Orders 2.0, you must:

- a** Install the following hotfix package:

<https://knowledgebase.qad.com/kmp/article/AB-15182/0/Production-Order-2.0-and-SAQ-2.7.1-Overlapping-Files.html>

- b** Update the `configuration.properties` file. (Refer to the *QAD Production Orders Installation Guide*, version 2.0, dated April 2018 for more information.)

- QAD E-Signature

Note You must also install E-Signature seed data for use with Production Orders 2.0. Refer to your Production Orders installation documentation.

- Enterprise Asset Management (EAM)

For customers on 2016 EE, the EAM minimum version required is 13.3. This is a prerequisite for 2016 EE Cloud customers even when they do not actively use EAM. EAM automatically installs with 2016 EE on the Cloud, and Production Orders 2.0 requires a minimum version to exist in the environment. Customers using 2017 EE already have the correct EAM version available.

On-Premise installations do not include EAM; therefore, when you previously installed EAM, you must ensure that you have version 13.3 at a minimum.

- Data Collections

To use the Data Collection transactions that optionally install with Production Orders, you must have a minimum version 2.1.0 of the Automation Solutions: Data Collections framework installed.

User Guide Information:

- *QAD Production Orders User Guide*, version 2.0, April 2018

- *QAD Planning and Scheduling Workbenches User Guide*, version 4.1, March 2018

Installation Information: *QAD Production Orders Installation Guide*, version 2.0, April 2018

Conversion Information: Conversion information is in *QAD Production Orders Installation Guide*, version 2.0, April 2018.

Production Order Enhancements

SAQ Integrated with Production Orders

Because license plate inventory management and item serialization play a role when you process production orders, QAD Serialization, Item Attributes, and Quality Control (SAQ) are prerequisites for Production Orders.

Serialization production-related functions let you perform many functions, including but not limited to:

- Booking serial ID ranges
- Creating serial IDs
- Receiving production orders and capturing serialization data during the receipt
- Creating packs
- Printing labels
- Receiving or transferring serialized goods
- Backflushing, reversing receipts for, or issuing serialized goods

For detailed information on how SAQ is integrated with Production Orders, refer to the SAQ chapter of *QAD Production Orders User Guide*, version 2.0.

Scrap Transaction Enhancements

When you use any of the following programs to record scrap, the system now optionally creates GL transactions for quantities scrapped or rejected at an operation, based on the setting of a new Post Scrap to GL field in Production Order Control (16.3.24):

- Operation Activity Transaction
- Production Order Receipt
- Kanban Fill and Ship Transaction
- Reject/Scrap Transaction
- Subcontract Scrap Maintenance

For scrapped quantities, the system creates consumed transaction history transactions (CONS-WO)—regardless of the operation—for scrapped amounts for discrete, scheduled (repetitive and split), and co-product orders. The system increments the quantity scrapped on these orders regardless of the scrap operation. The system posts scrap to GL based on the setting of the Post Scrap To GL field.

For scrap transactions, the system automatically rolls up and totals material, run-time labor and burden, and subcontract costs by operation. The system determines the value of the scrap at the operation where it is scrapped, based on the production order reporting the scrap and the order's routing and bill data.

When the quantity scrapped is from the output or reject queue (SCRAP-O or SCRAP-R type), the system scraps at the value of the operation where material is scrapped. When scrapped out of the input queue (SCRAP-I type), the system scraps at the value of the prior operation.

For co/by-products, the scrap amount is the standard cost for the co- or by-product multiplied by the quantity scrapped.

Scrap Transaction Browse Enhanced

Scrap Transaction Browse (16.13.20.46) has been enhanced to include the scrap transaction value and other key fields from the operation transaction table. This lets you organize relevant data to meet your business requirements.

Note Scrap Valuation Report (16.20.18) is obsolete in this version; it did not contain scrap value and had limited organizability.

WIP Lot Trace Integrated with Production Orders

WIP Lot Trace (WLT) is now integrated with the Production Orders module, letting you trace serialized inventory.

The following enhancements were made for WLT integration and are active when WLT is enabled:

Program	WLT Updates
Production Order Receipt (16.13.1)	A message displays informing you to use Operation Activity Transaction when the order is WLT-controlled for receipts or backflush operations. Note that an order is WLT controlled when: • Trace Parents is Yes in WIP Lot Trace Control, or • A WLT routing registration is active for the parent item being manufactured and Trace Parents is Yes for that registration.
Production Order Component Issue (16.5.12)	The program issues components with an Issue Policy set to direct to the WIP lot.

Program	WLT Updates
Production Order Picklist Issue (16.5.11)	The program issues components with an Issue Policy set to direct to the WIP lot. When you issue packs and the order is WLT controlled, you enter a valid operation in the header. The scanned pack should contain only the components picked to the selected operation; otherwise, an error displays. Note: When the order is not WLT controlled, the Operation field uses standard logic. When WLT controlled, the system displays a WLT window to identify the WIP lot to which components are consumed. You can manually enter the lot or let the system generate it. The system uses the Check Combine Components Lot flag to determine whether multiple lots of the same component can be consumed into a single WIP lot/serial. You can enter a negative quantity. The system generates a WIP lot convert transaction. When Trace Component is Yes, the system generates a consume component transaction record.
Operation Activity Transaction (.16.13.13)	The system captures WIP lot trace information by using either Production Order Component Issue or Production Order Picklist Issue to identify the material issued to the WIP lot; then, it uses Operation Activity Transaction to issue the WIP lot, report production, and receive finished goods into inventory. For components with an Issue Policy set to Backflush, you can use Operation Activity Transaction to report backflush and WIP Lot production. When the order is WLT controlled, the header operation cannot be blank. When the operation is the first operation, WIP Lot data displays as follows: • The destination work center and machine display when Move to Next Operation is Yes, and the operation is not the last operation. • WIP lot output queue receipt data displays for you to capture WIP-lot produced components in the current operation. When Move to Next Operation is Yes, the system moves the WIP item to the input queue of the next operation; otherwise, it moves WIP items to the output queue of the current operation. You can manually enter the lot or leave it blank to let the system generate the WIP lot. The expected receipt quantity should be the total of the following: Qty Complete, Qty Scrapped and Qty Rejected Note the following: • When split WIP lots are not allowed, you can work with only one WIP lot. • When combined WIP lots are not allowed, multiple input WIP lots cannot be combined into a single output WIP lot. • The lot size cannot exceed the maximum lot size; when it does, the system displays an error. You cannot enter a negative quantity for the receipt.

Production Order QDoc APIs by Version

The table below lists QDOC API information by version (V1.1, V1.2, or V2.0).

Table 11
API by Version

QDoc	V 1.1	V1.2	V 2.0	Procedure	Method name	Menu
maintainComponentPickingData	ERP3_1	ERP3_	ERP3_	us/bm/bmcpmtai.p	maintainComponentPickingData	Component Picking Data Maint(13.17)
maintainItemInventoryData	ERP3_3	ERP3_3	ERP3_3	ppptmt01.p		Item Inventory Data Maintenance (1.4.5)
maintainItemMaster	ERP3_9	ERP3_9	ERP3_9	ppptmt.p		Item Master Maintenance (1.4.1)

maintainItemProductionLine	ERP3_1	ERP3_1	ERP3_1	woiplmt.p		Item Production Line Maintenance (16.1.4)
maintainItemSiteInventory	ERP3_3	ERP3_3	ERP3_3	pppsmt01.p		Item-Site Inventory Data Maint (1.4.16)
maintainProductionLine	ERP3_2	ERP3_2	ERP3_2	splnmt.p		Production Line Maintenance (16.1.1)
maintainWorkCenter	ERP3_2	ERP3_2	ERP3_2	rwwcmt.p		Work Center Maintenance (14.5)
maintainProductionOrder			ERP3_1	us/wo/wowoapi.p	maintainProductionOrderAPI	Production Order Maintenance (16.3.1)
maintainPOShipperReceipt		ERP3_3	ERP3_4	rsporc.p		PO Shipper Receipt (5.13.20)
maintainPOShipperUnloading		ERP3_3	ERP3_4	papoul.p		Pending PO Shipper Unload (5.13.12.13)
recordIssueComponentByPack	ERP3_1	ERP3_1	ERP3_2	us/wo/woisordapi.p	runAPIForProductionOrderComplss	Production Order Component Issue (16.5.12)
recordIssueComponent	ERP3_1	ERP3_1	ERP3_2	us/wo/woisapi.p	issueComponentForProdOrder	Production Order Component Issue
recordManualAllocation	ERP3_1	ERP3_1	ERP3_1	us/wo/womallai.p	runAPIForManualAllocation	Prod Order Manual Allocation (16.5.2)
recordMove			ERP3_1	us/wo/womvapi.p	processMoveTransactionAPI	Move Transaction (16.13.17)
recordOperationActivity	ERP3_1	ERP3_2	ERP3_3	us/wo/woopapi.p	processOperationActivityTransactionAPI	Operation Activity Transaction (16.13.13)
recordOperationLabor	ERP3_1	ERP3_1	ERP3_2	us/wo/wolbrapi.p	processOpLaborTransactionAPI	Operation Labor Transaction (16.13.14)
recordPickedInventoryAPI	ERP3_1	ERP3_1	ERP3_1	us/wo/wopakapi.p	recordPickedInventoryAPI	Production Picklist Pick (16.5.7)
recordPicklistIssue	ERP3_1	ERP3_1	ERP3_2	us/wo/woispckapi.p	issuePicklist	Production Order Picklist Issue 16.5.11)
recordPickListPickByPackAPI	ERP3_1	ERP3_1	ERP3_1	us/wo/wopakapi.p	recordPickListPickByPackAPI	Production Picklist Pick (16.5.7)
recordPickListTransfer	ERP3_1	ERP3_1	ERP3_1	us/wo/wopkisai.p	runAPIForPickListTransfer	Production Picklist Transfer (16.5.9)
recordReceiptBackflush	ERP3_1	ERP3_1	ERP3_2	us/wo/worcptapi.p	processProductionOrderReceiptBackflushAPI	Production Order Receipt 16.13.1)
recordRejectScrap	ERP3_1	ERP3_1	ERP3_2	us/wo/worjapi.p	processRejectScrapTransactionAPI	Reject/Scrap Transaction (16.13.15)
recordSplitOrder	ERP3_1	ERP3_1	ERP3_1	us/wo/wowospai.p	runAPIForProductionOrderSplit	Production Order Split (16.3.11)
returnPOPack		ERP3_2	ERP3_3	paporvpk.p		Purchase Order Returns by Pack (5.13.12.16)
receivePurchaseOrder		ERP3_3	ERP3_5	us/po/porcapi.p	receivePurchaseOrder	Purchase Order Receipts (5.13.1)
returnPurchaseOrder		ERP3_2	ERP3_3	porvis.p		Purchase Order Returns (5.13.7)

Enhanced Allocation Calculations

Allocation Calculations are enhanced so that the picklist calculation now determines when there is excess inventory in the backflush location that the order can use when calculating the picklist.

When you set the Transfer Allocation policy to Keep, the system now examines the detailed allocations at the backflush location to determine any excess inventory. When the Transfer Allocation Policy is Drop, the system considers the earlier transfers for other orders as implicitly allocated when determining the excess inventory.

The picklist calculation now:

- Nets the excess against the quantity required by the order to determine the net quantity to transfer
- Transfers additional quantity when other orders have consumed (backflushed) more inventory than expected when they transferred inventory

Modified Trade Activity Management Programs Merged with Production Orders

Programs that you modify with the QAD Trade Activity Management module are now merged with Production Orders programs and included in the Production Orders package.

QAD Trade Activity Management structures and controls the implementation, administration, and evaluation of pricing activities such as promotions and rebates. This structure and control brings the fluid pricing activities under effective management. For more information, refer to *QAD Trade Activity Management User Guide*.

The TAM-modified programs install during normal installation. Refer to *QAD Production Orders Installation Guide*, version 2.0.

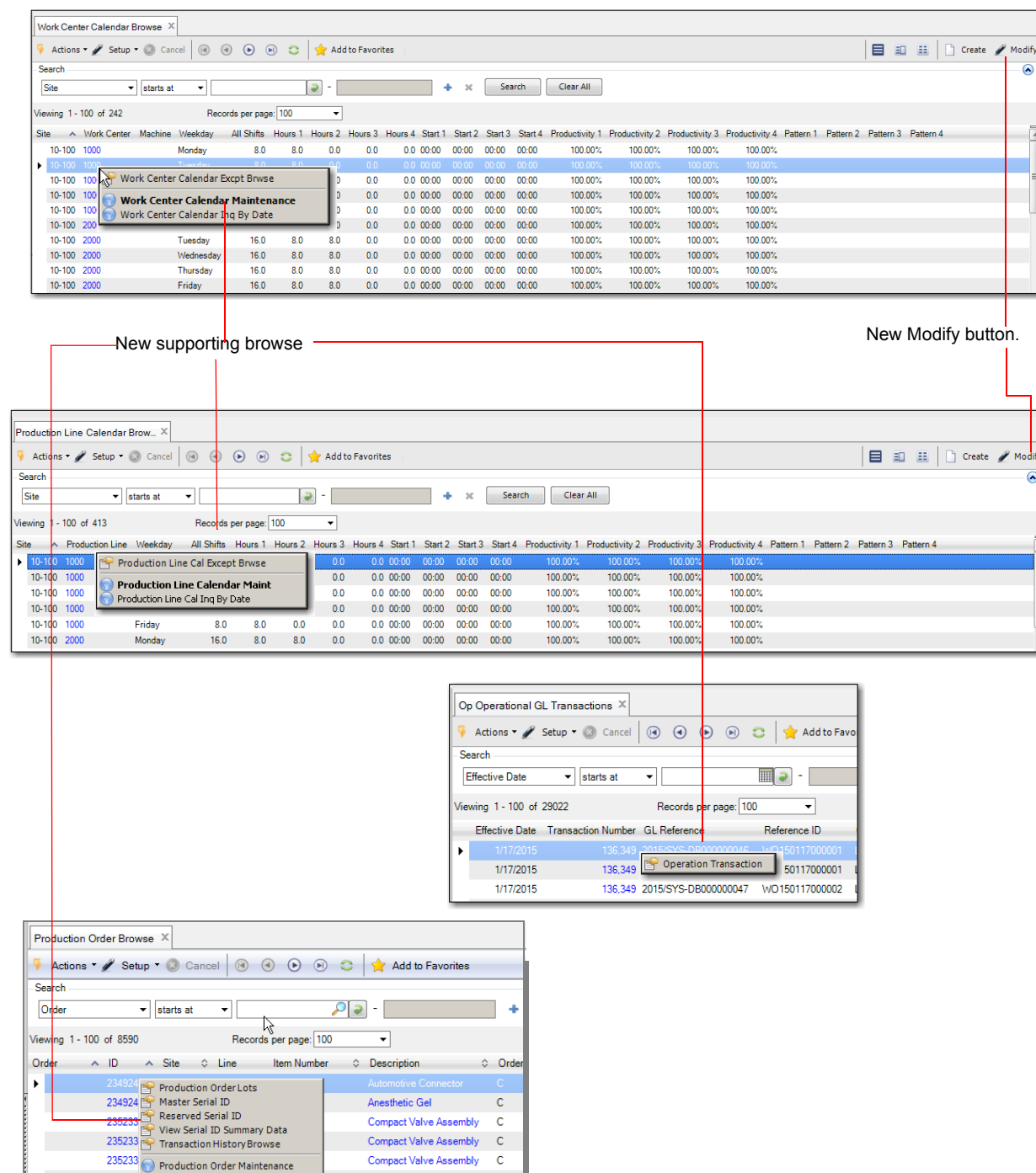
Browse Enhancements

The following browses were enhanced:

- Work Center Calendar Browse (14.18.2) now includes a supporting browse for Work Center Calendar Maintenance and Modify functionality.
- Production Line Calendar Browse (16.1.13.2) now includes a supporting browse for calendar exceptions and Modify functionality. Also, columns were adjusted to easily view the supporting browse menu.
- Inv Operational GL Transactions (30.5.13.19) and Op Operational GL Transactions (30.5.15.14) now include a supporting browse for Operation Transactions.
- A new Available to Allocate column was added to the Picklist Shortage Browse (16.5.15). The new column displays the detailed allocated available on site.
- Production Order Browse (16.3.2 and 16.25.17) now include a supporting browse containing drill downs on the ID field for Master Serial ID, Reserved Serial ID, and View Serial ID Browsers.
- Production Picklist Browse (16.5.4) has a Conforming Column that displays a value when items conform or do not conform to specifications.
- Work Center Browse (14.6) now includes a Backflush Location field.
- Scrap Transaction Browse (16.13.20.46) was enhanced; see “Scrap Transaction Browse Enhanced” on page 43.

The following graphic depicts some of the new supporting browses that were added in this release.

Fig. 8
Browse Enhancements



Co/By-Product Processing Enhanced with Product Orders

Production Order programs/functions are enhanced in this release when you process co/by-product orders, including recyclable by-product orders. The following topics discuss the enhancements.

Creating a Joint Set

When you enter a production order in Production Order Maintenance (16.3.1) for a base process or co-product, the system creates a joint order set comprised of a production order for the base process and one for each of its co-products and by-products.

All production orders in the joint set (termed *joint orders*) share the same production order number, site, production line, status, release date, sequence and accounting data, but have different order IDs. The base process order includes a production order bill and routing for the base process.

You can create joint order sets for regular work orders (where the Type is blank), but not for expense, rework, and final assembly order types or repetitive. Note the following about joint order sets:

- Yield percent of all orders in a joint order set is always 100%.
- When the system calculates the quantity to start of the orders in the joint order set:
 - The system disables the yield percent on co/by-product orders and the base process order.
 - Each co/by-product order has separate regulatory attributes settings.

You can also create a joint order set for an alternate base process. When you enter an alternate base process and alternate base process routings on a production order, the system creates a joint order set based on the entered base process and routing.

Modifying a Joint Order Set

You can perform any of the following operations on joint orders in Production Order Maintenance:

- Add or delete joint orders for co/by-products from a joint set when the status of the set is E(xploded), A(llocated), or R(eleased).
- Manually create an order with the same production order number of the joint order set.
- Add/delete orders for co/by-products.

When you add a new order to a joint set, you must specify the quantity type and co/by-product type. Note the following about the quantity type:

- When set to B or blank, you can update the Qty Ordered field.
- When set to P, you can update the Process Percent field, and the system calculates the quantity ordered. You can change the quantity ordered; when you do, the system automatically updates the process percentage.

Since a joint order set must have only one base process order and at least one co-product order, when you delete the base process order or the only co-product order, the system deletes the entire set.

When you update the quantity to complete or start on any order in a joint order set, the system follows normal processing when rescaling order quantities in the joint order set. The system rescales order quantities based on the quantity to start.

A new co/by-product production order frame now displays in Production Order Maintenance. Use the frame to maintain the quantity ordered and process a percentage of the orders in joint order set.

Fig. 9

Production Order Maintenance

Go To

Actions

Copy

Print

Preview

Attach

Prod Order: 0908-pr1

BOM/Formula Code: 0908-base-process

Order Status: E

Qty To Start: 90 EA

Standard Batch: 1 EA

Co/By-Product Production Orders

Item Number	Description	Qty To Start	UM	Process	ID	CT
0908-base-process		90.0	EA		2457398	P
0908-by-prod		90.0	EA		2457400	B
0908-co-prod		90.0	EA		2457401	C
0823-prod		0.0	EA		2458585	C
0802-prod		0.0	EA		2458586	C

Item Number:

ID:

Process:

Quantity Type:

Qty To Start:

Co/By Type:

Qty Completed:

New Co/By-Product Production Order Browse

A new Co/By-Product Production Order Browse (16.3.19) is added in this release. You can search by item number, production order number/ID, BOM/formula, due date, site, and more. Only co/by-product orders and base process orders display in the browse.

Note The Co/By-Product Prod Order Inquiry (13.22.2) was removed in this release.

Fig. 10

Co/By-Product Production Bro... X												
Actions ▾ Setup ▾ Cancel Add to Favorites												
Search												
Production Order ▾ starts at ▾ - + X Search Clear All												
Viewing 1 - 100 of 1923 Records per page: 100 ▾												
Production Order	ID	Site	Production Line	Item Number	Description	Co/By Type	Qty To Start	Actual Qty Completed	Actual Qty Scrapped	UM	Due Date	Status
0908-pr1	2457398	10-100		0908-base-process		P	90.0	0.0	0.0	EA	9/8/2017	E
0908-pr1	2457400	10-100		0908-by-prod		B	90.0	0.0	0.0	EA	9/8/2017	E
0908-pr1	2457401	10-100		0908-co-prod		C	90.0	0.0	0.0	EA	9/8/2017	E
0908-pr1	2458585	10-100		0823-prod		C	0.0	0.0	0.0	EA	9/8/2017	E
0908-pr1	2458586	10-100		0802-prod		C	0.0	0.0	0.0	EA	9/8/2017	E
10012	2460579	mts1e1	mt13	MT13	MT11 coby base item	P	10.0	5.0	0.0	EA	9/26/2017	R
10012	2460580	mts1e1	mt13	MT13by1	MT11 by products 1	B	30.0	15.0	0.0	EA	9/26/2017	R
10012	2460581	mts1e1	mt13	MT13co1	MT10 co products 1	C	10.0	3.0	0.0	EA	9/26/2017	R
10012	2460582	mts1e1	mt13	MT13co2	MT10 co products 1	C	20.0	16.0	0.0	EA	9/26/2017	R
10018	2460618	mts1e1	mt13	MT13	MT11 coby base item	P	10.0	1.0	0.0	EA	9/27/2017	R
10018	2460619	mts1e1	mt13	MT13by1	MT11 by products 1	B	30.0	3.0	0.0	EA	9/27/2017	R
10018	2460620	mts1e1	mt13	MT13co1	MT10 co products 1	C	10.0	1.0	0.0	EA	9/27/2017	R
10018	2460621	mts1e1	mt13	MT13co2	MT10 co products 1	C	20.0	2.0	0.0	EA	9/27/2017	R
10023	2460671	ygssite1	1000	ygscsco1		C	10.0	1.0	0.0	EA	9/27/2017	C
10023	2460672	ygssite1	1000	ygscbase2		P	10.0	3.0	2.0	EA	9/27/2017	C
10023	2460673	ygssite1	1000	ygscby1		B	150.0	65.0	6.0	PL	9/27/2017	C

Additional Support for Co/By-Product Orders

Additional functions were added to support co/by-products. You can now:

- Approve them in Planned Production Ord Approval (23.10).

You specify base processes by entering a BOM/Formula code range. The program changes the status on all orders in a joint set from P(lanned) to F(irm).

- Firm all the orders in the joint order set using Auto Firm Planned Orders.
- Change the status of all the orders in the joint order set when any order is included in the selection criteria in Multiple Order Status Change (16.4.3).
- Delete or archive all orders within a joint order set when you select any single order within the set in Production Order Delete/Archive (16.3.50).
- Create picklists when you enter an order in a joint order set in Bulk Item Picklist Calculation (16.5.3).
- Allocate orders when you enter an order in a joint order set in Production Order Allocate (16.5.1).
- When allocating a joint order set with a status of F or E, the system changes the status of the joint order set to A(Allocated); then, allocates components to base process orders. When there is a shortage, the system creates a shortage allocation for the component on the base process order.
- Issue components using Production Order Picklist Issue (16.5.11) or Production Order Component Issue (16.5.12).

When using Production Order Picklist Issue, the system issues the component on the base process order. When using Production Order Component Issue, the system displays the base process order in the joint order set when you select a co/by-product order; then issues the component on the base process order.

- Manually allocate items for a co/by-product order using Prod Order Manual Allocation (16.5.2).
When users enter a co-product order or a by-product order, the system changes it to the base process order.
- Release or print a co/by-product order using Production Order Release/Print (16.4.2).
When you release, the system releases the joint order set when you select one order in the set. When you select the order sheet as output, the system displays the order information for the base process order in the routing section and displays the co/by-products when printing.

Transactions

New co/by-product transaction enhancements are added in this release. In Operation Activity Transaction, the following transaction enhancements now exist:

- Search on a co/by-product order; the system displays the base process order in the joint order set.
- Process quantity completion with reject/scrap material:
 - The system reports the quantity for the base process order.
 - For the last operation, the system uses the quantity complete/scrap to update the actual quantity completed and actual quantity scrapped of the base process order and creates a SCRAP-I, SCRAP-O, or SCRAP-R transaction for the base process order.
- Consume materials for work orders for co/by-products.
- Backflush materials; the system determines the component quantities of the base process order quantity processed.
- Report labor; the system reports labor on the base process order as for regular production orders.
- Close base process orders; the system closes all orders in the joint order set.
- Calculate the open quantity based on the base order quantity complete:
 - The quantity complete defaults from the Open Qty field, but you can update the quantity.
 - The system records the quantity complete and the scrap quantity for the corresponding co/by-product orders.
 - The system creates a SCRAP-O transaction for co/by-product orders when you enter the quantity scrapped.

- Maintain regulatory attributes for each co-product/by-product order.
- Maintain item attributes for each co/by-product order.
- Receive all co-/by-products in a the joint order set into inventory:
 - When reporting at the final operation, Move to Next Operation must be set to Yes.
 - The system displays a new Co/By-Product Receipt frame in Operation Activity Transaction.

Fig. 11

Co/By-Product Production Order Receipts Frame, Operation Activity Transaction

Co/By-Products Production Order Receipts				
Item Number	ID	Open Qty UM	Received Qty UM	Scrapped Qty UM
0802-prod	2458586	0.0 EA	0.0 EA	0.0 EA
0823-prod	2458585	0.0 EA	0.0 EA	0.0 EA
0908-by-prod	2457400	10.0 EA	10.0 EA	0.0 EA
0908-co-prod	2457401	10.0 EA	10.0 EA	0.0 EA

Item Number: 0802-prod

ID: 2458586

Substitute: ☐

Description:

Received Qty:

UM:

Conversion:

Scrapped Qty:

UM:

UM Conversion:

Site:

Location:

Lot/Serial:

Reference:

Multi Entry: ☐

Chg Attributes: ☐

Total Units:

Transaction List

The system creates inventory transactions as shown in the following table:

Table 12

Co/By-Product Transactions

Transaction Type	Order	Item Number	Lot/Serial	Update Inventory
ISS-WO	Base process order	Actual component	Actual Lot	Yes
RCT-WO	Base process order	Base process Item	Base process order ID	No
ISS-WO	Co-product order	Base process Item	Base process order ID	No
ISS-WO	By-product order	Base process Item	Base process order ID	No
RCT-WO	Co-product order	Co-product Item	Actual lot	Yes
CONS-WO	Co-product order	Co-product Item	Actual lot	No
RCT-WO	By-product order	By-product Item		Yes
CONS-WO	By-product order	By-product Item		No

Co/By-Product Receipt Backflush Enhancements

Enhancements are added to Production Order Receipts to support receipt backflush for co/by-product orders.

- You can search on co/by-product orders in the order search frame; the system displays the base process order in the joint order set.
- When you close an order in the joint order set, the system closes all orders in the joint order set.
- When you receive co/by-product orders, the system displays the new Co/By-Products Receipts frame regardless of the Modify Inventory field setting.
- The Calculate Backflush field only works when you receive all co/by-products.

- The system updates the queue and routing for the base process order.
- For a move transaction from the last operation, the system assumes all co/by-product orders are received and displays the Co/By-Products Receipts frame.
- You can enter negative quantities in all the transactions.

The transactions that support co/by-product orders in this program include:

- Operation labor
- Reject/scrap
- Rework
- Move
- WIP adjust

The system does not:

- Update the queue or routing or record labor when you only receive a specific co-product/by-product order.
- Issue component by default when you only receive a specific co/by-product order.

Note You can set Modify Inventory to Yes to issue components manually.

Recyclable By-Product Enhancements

For recyclable by-products, Production Order Bill Maintenance (16.3.4) now lets you enter negative values in the Qty Required field. When there is inventory picked for the component, you cannot change a positive value in the field to a negative value.

Material Planning recognizes the demand and supply of the recyclable materials; by-product supply is a negative demand.

When the order is allocated for recyclable by-products, the system:

- Sets general allocation to zero (0)
- Does not create detail allocation when the order is allocated

You can now receive recyclable by-products for the operation where a by-product is expected to be received. You do this by entering a negative quantity to receive the by-product, rather than a positive quantity to issue it. You can receive recyclable by-products using any of the following:

- Production Order Component Issue (16.5.12)
- Production Order Receipts (16.13.1)
- Operation Activity Transaction (16.13.13)

Support Limitations

QAD Serialization does not support co/by-products; therefore, Production Order functions do not support the integration between co/by-products and Serialization.

Note You cannot create repetitive co/by-product orders or discrete scheduled orders.

Limitations with Serialization and co/by-products include the following:

- When a co/by-product is serialized, the system does not generate a production order.
- Production Order Serial Booking (16.3.14) does not support co/by-product orders.

- Pack Create by Production Order (16.5.17) does not support co/by-product orders
When you select an order in a joint order set in the program, the system disables the Receive by Pack and Gen Pack Serial options.
- You cannot subcontract co/by-product production orders.
When you try, Purchase Order Maintenance (5.7) and Supplier Scheduled Order Maintenance (5.5.1.13) display an error message, informing you that you cannot process a subcontract the co/by-product production orders.

Mass Update Programs Added to Production Line Menu

Three EE programs, previously used primarily with the QAD Planning and Scheduling Workbenches, were added to the Production Line menu (16.1):

- Production Line Item Create (16.1.15)
When you have production orders, but may not have items set up on those production lines, use this program to avoid manual re-entry of setup data. You can:
 - Mass process items for a work center or machine
 - Mass assign items to a site/production line
 Since this program automates the setup of items on production lines, it also reduces the chances of newly introduced items not being added to a production line, which would prevent you from scheduling the item.
- Production Line Item Update (16.1.16)
After you associate items with the resource—that is, the work center, machine, or production line—you can update in mass using Production Line Item Update.
- Production Line/Order Update (16.1.17)
Use Production Line/Order Update to mass update existing production orders with production line settings when you have updated fields on a production line.

For more information on the using these programs, refer to the section that describes production line setup in the Setup chapter of *QAD Production Orders User Guide*, version 2.0.

Production Orders Fixes

The following table lists fixes for Production Orders.

Table 13
Production Orders Fixes

QAD Internal Ticket ID	Description
CRMFG-12164	Production Order Browse (16.2.2) now displays all columns correctly. Previously, two column labels displayed incorrectly.
CRMFG-12444	Prod Order Accounting Close (16.20.10) now uses the correct lookup on both the Production Line and To fields. Previously, the fields used the lookup for product lines, not production lines.
CRMFG-12615	See “Production Order QDoc APIs by Version” on page 44.
CRMFG-13180	A new maintainProductionOrder API was added to Production Order APIs. See “Production Order QDoc APIs by Version” on page 44.

CRMFG-16085	The following programs no longer incorrectly detail allocate inventory with non-conforming configured attributes when creating a picklist: • Production Order Allocate (16.5.1) • Production Order Picklist Print (16.5.5) • Production Order Release/Print (16.4.2) Previously, they created detail allocations for lot/serial quantities that included non-conforming inventory, regardless of inventory status.
CRMFG-16388	See “Scrap Transaction Enhancements” on page 42.
CRMFG-16675 CRMFG-16677 CRMFG-16679 CRMFG-16680 CRMFG-16782 CRMFG-16797	See “Browse Enhancements” on page 46.
CRMFG-16918	Split CUM Order Maintenance (16.3.12) now closes the orders that are linked to a split CUM order that you close. Previously, the system did not restrict the order status setting, so when you changed to status to C, the system did not close all scheduled linked to the split CUM order.
CRMFG-17079	Prod Order Receipt Backflush (16.13.1) and Operation Activity Transaction (16.13.13) now consider inventory in work center and production line backflush locations. Previously, the programs ignored inventory in the backflush locations.
CRMFG-17191	Production Order Allocate (16.5.1) and Production Order Release/Print (16.4.2) no longer consider the multiple or minimum item-picking setting when you create a picklist for a rework production order. Previously, in this scenario, the system applied the minimum or maximum item-picking setting.
CRMFG-17192	When working with a reworked production order in Production Picklist Transfer (16.5.9), the program now correctly keeps the detail allocation to the parent item even when you set the Item Picking Transfer Allocation Policy to Drop. Previously, when set to Drop, the programs dropped the detail allocation to the parent item.
CRMFG-17216	See “Enhanced Allocation Calculations” on page 45.
CRMFG-17272	The Conforming column in the Inventory Detail Browse (1.15.40.12) now correctly displays the correct value when the item conforms and does not conform to specification. Additionally, the Conforming column has also been added to Production Picklist Browse (16.5.4).
CRMFG-17273	The Production Line field in Production Line Cal Except Maint (16.1.13.3) now has a lookup window that lets you locate the production line.
CRMFG-17450	The OperationActivity API now displays information, including error information, when it was unable to backflush production order components. Previously, in this scenario, the API did not process or provide errors.
CRMFG-17500	See information on Production Order Control in “Scrap Transaction Enhancements” on page 42.
CRMFG-17539	See “Modified Trade Activity Management Programs Merged with Production Orders” on page 46.
CRMFG-17679	Source code delivered with earlier versions of Production Orders no longer causes compilation errors when you compile in an environment where the Enterprise Asset Management (EAM) module is also installed.
CRMFG-17680	The Operation Activity API now supports item lot attribute data during work order receipt.
CRMFG-17683	When recording scrap with a reason code in Production Order Receipt with a backflush operation, the system now updates the associated inventory history record with the reason code provided with the recorded scrap quantity. Previously, the system did not capture the reason code in the inventory history record.
CRMFG-17720	The system now records component issues against a CUM order, and thereby collects CUM order costs, without having the production order be a work order or a repetitive schedule. Previously, the system did not record component issues against a CUM order, unless the production order was a WO type or a repetitive schedule.
CRMFG-17745	The system no longer locks MRP tables after you run Production Order Component Issue (16.5.12). Previously, when you processed in Production Order Component Issue, the tables locked, requiring you to close the program to release the locked tables.

CRMFG-17752	Production Order Maintenance now displays the consistent values in the MFG Type field in all frames. Previously, the field displayed data that was not congruent with the Order Status field in some frames.
CRMFG-17789	Production Order Receipt now correctly uses the lot number you enter on the production order when the lot number exists. When the lot number is blank and you enable Auto Lot Number, the system generates the lot number. Previously, the program inconsistently used the production order lot number when it existed, and always generated a new lot number when Auto Lot Number was set to Yes.
CRMFG-17792	You can now enter the production order lot number in Production Order Maintenance when the following conditions exist: • Parent item has Lot Control set to L. • Auto Lot Number is set to Yes. • Lot Group is set to blank. Also, when the parent item has Lot Control set to L, Auto Lot Number enabled, and the item-site record exists for a production order item and site, the system now correctly uses the lot group when creating the lot number, except during receipts. Previously, in this scenario, the program treated the lot group as blank and defaulted the production order lot number to the ID instead of using the lot group to create the lot during a receipt.
CRMFG-17851	The receivePurchaseOrder API now correctly creates the RCT-WO transaction and updates inventory for the received lot number when the following conditions exist: • You receive with a subcontract PO or a supplier schedule for the last operation in the routing. • Move to Next Operation is set to Yes. • The components to backflush are not lot or serial controlled. Previously, in this scenario, the system did not create the RCT-WO transaction and did not update inventory. In addition, when you set Auto Lot Number to Yes and specify a lot group for the receipt item, the system no longer supersedes the auto lot number in the API when created in the API.
CRMFG-17874	When you run the recordOperationActivity API, the system no longer displays an error when you process with valid routing and BOM codes with start dates. Previously, in this scenario, the API stopped processing.
CRMFG-17942	Prod Order Accounting Close (16.20.10) now only processes: • Discrete type production orders that have a status of (C)losed • Repetitive cumulative type orders that have a status of (R)eleased Previously, the program processed discrete and repetitive cumulative type orders regardless of their status.
CRMFG-17950	The system now correctly uses the lot number when you receive a production order and you: • Enable auto lot numbers. • Enter a lot number. • Use group lots. When you do not enter a lot number, the system correctly generates the number based on group lot logic. Previously, in this scenario, the system did not use the lot number.
CRMFG-18034	The recordIssueComponent API now correctly clears previous transaction issue component records. Previously, when the system processed records from a prior transaction along with the current transaction and the prior transaction failed, the system also failed the current transaction.
CRMFG-18048	The recordReceiptBackflush API now accepts lot attribute data, letting the system record a receipt backflush with lot data. Previously, when receiving finished products into inventory from a production order, the API did not capture the lot data.
CRMFG-18058	Prod Order Accounting Close (16.20.10) now correctly credits the floor stock account for floor stock items when: • The Issue Policy is set to No Issue in Item Inventory Data Maintenance (1.4.5). • The items are not assigned a routing operation in Product Structure Maintenance (13.5). Previously, in this scenario, floor stock items would have their value credited to the Material Variance Account.
CRMFG-18070	The Move Transaction is now included as a tab in the Production Operation Activity Collection. Previously, the collection did not include the transaction.
CRMFG-18141	See “Browse Enhancements” on page 46.

CRMFG-18286	Production Order Browsers now includes Materials Planning-created planned purchase orders with the Pur/Mfg code set to M or L and orders with an order status set to P for the items or item-site items. Previously, the browsers included item-site and item planned orders with the Pur/Mfg code set to P.
CRMFG-18287	Fields in the Production Order Routing and Production Order Bill supporting browsers in the Production Order Collection are now in the correct order. Previously, the order, order ID, site, production line, and other fields displayed in the wrong order, following the Tools ID field.
CRMFG-18317	You can now correctly maneuver to the Location Availability column in the Monitor Material Shortages program. Previously, when you tried, an error displayed.
CRMFG-18325	Operation Activity Transaction no longer auto updates fields when you enter a new CUM order that does not have schedule data. Previously, when you created a new CUM order, then entered the order in the program's Production Order field and pressed Next, the system incorrectly populated fields with data for a discrete order with the earliest release date.
CRMFG-18357	New Component Status and Location Availability columns were added to the supporting Production Order Routing Browsers in both the Production Order and Production Operation Activity Collections. Previously, the data was missing from supporting browsers. Note that the Machines Per Operation and Order Date columns were replaced by the new Component Status and Location Availability columns.
CRMFG-18359	The Production Picklist Collection now includes the following new tabs: • Prod Order Manual Allocation • Production Picklist Pick • Production Picklist Transfer • Production Order Picklist Issue • Picklist Shortage Browse • Production Picklist Undo Report
CRMFG-18372	The receivePurchaseOrder API no longer truncates the item attribute value when you enter a character value that is greater than eight characters. Previously, in this scenario, the system truncated the value.
CRMFG-18376	The Operation Activity API now supports item lot attribute data during work order receipt. Previously, the API could not handle item lot attribute data for a work order receipt.
CRMFG-18390	Production Order Routing (16.3.6) no longer displays a Progress error when you use the program to enter operation data. Previously, when you entered operation data associated with an order with E status, then pressed GO, the error displayed.
CRMFG-18400	The Operation Activity Transaction API and Production Order Receipt now display the correct attribute data. Previously, when you processed an auto-generated-lot-controlled item using the Operation Activity Transaction API, and left the Lot/Ser blank, the system did not display the correct attributes using View Item Lots.
CRMFG-18410	Regenerate Materials Plan (23.2) no longer displays Progress errors. Previously, Progress errors associated with WO master (wo_mstr) or Action Message Detail (oa_det) tables displayed when you processed items with the Plan Orders field set to No in Item Planning Maintenance (1.4.7) or Item-Site Planning Maintenance (1.4.17).
CRMFG-18415	Picklist Multiple 1 is ignored when Qty Per in Product Structure is decimal.
CRMFG-18432	Operation Activity Transaction no longer records the actual quantity scrapped at the last operation for a split or repetitive order. Previously, in this scenario, the program added the actual quantity scrapped to the CUM order.
CRMFG-18434	Production Order Receipt (16.13.1) no longer displays an error when you try to add a new order ID. Previously, when you entered a non-existent order ID in the Co/By Products Production Order Receipts frame, then pressed Go, an error displayed.
CRMFG-18442	Production order routing of REWORK orders should be able to add operation.
CRMFG-18457	For discrete orders, the milestone flag in routing operation should be applied.
CRMFG-18489	Automated Solutions can now process the maintainPOShipperReceipt API. Previously, when you set up Automated Solutions to process the API, the system displayed a Progress error, indicating that the file name for some temp-tables exceeded the 32 character restriction.
CRMFG-18490	In Operation Activity Transaction, when trying to use a non-serial method to return serialized inventory, the system pops up invalid error message.

CRMFG-18505	Production Order Accounting Close now correctly posts variances to the Labor Usage Variance Account when closing an order with a run time usage variance. Previously, in this scenario, the variance was posted to the Method Variance Account.
CRMFG-18506	Operation Labor Transaction no longer creates method variances when the system records labor. Previously, when reporting labor with a rate variance, the costs for the rate variance were reported to the Method Variance Account, and not the Labor Rate Variance Account.
CRMFG-18507	Operation Labor Transaction now correctly reports to the Labor Rate Variance Account when reporting labor with a rate variance. Previously, when reporting labor with a rate variance, the program reported the costs for the rate variance to the Method Variance Account.
CRMFG-18513	Operations Accounting Report (16.20.14) no longer displays reports with blank content.
CRMFG-18539	Operation Activity Transaction and Production Order Receipt now display the correct quantity in messages that confirm a lot/serial quantity transaction. Previously, the message quantity was not correct.
CRMFG-18542	The system now correctly displays an error in Operation Activity Transaction when you attempt to issue a component with the same lot/serial ID but a different reference. Previously, in this scenario, the error message did not display, informing you that the operation could not be performed. Also, for component inventory with a blank lot/serial and a blank reference, you can no longer combine other component inventory with the non-blank lot/serial and non-blank reference. Previously, you could incorrectly perform this transaction when you set Trace Reference to No in BOM Registration Maintenance (3.22.13.4).
CRMFG-18546	Prod Order Cost Variance Report (16.20.15) now correctly displays all report material. Previously, report header and end data did not display.
CRMFG-18556	Production Order Picklist Issue no longer displays a Progress error when you attempt to issue components to a split order. Previously, when you split a discrete order in Production Order Split, then used Production Order Picklist Issue to issue components for one of the split orders, the system displayed the error.
CRMFG-18561	The system no longer displays a Progress error in the following programs when you clear either the Setup or Run Time fields, then press F1 to continue: • Operation Activity Transaction (16.13.13) • Operation Labor Transaction (16.13.14) • Rework Transaction (16.13.16)
CRMFG-18562	The system now correctly displays an error in Production Order Picklist Issue (16.5.11), informing you that an effective date is required, when you issue the picklist. Previously, when you left the Effective Date field blank, the system did not display an error.
CRMFG-18563	Production Order Collection now navigates to the correct order. Previously, when you selected a production order number with different IDs, then selected either the Screen View or Modify button, the system displayed the highest production order ID and not the selected order to view or modify.
CRMFG-18564	When you select to modify a record in a Work Center Browse, the system now displays the correct record for the work center/machine combination. Previously, in this scenario, the system displayed the last work center/machine combination and ignored the row selected to modify.
CRMFG-18566	When you split a discrete order into two orders in Production Order Split (16.3.11), the system now creates the correct order type. Previously, in this scenario, when you checked the split cumulative orders in Production Order Maintenance (16.3.1), the Order Type field was incorrect.
CRMFG-18571	Production Order Receipt (16.13.1) no longer duplicates serial history records for the same serial ID when you return a pack in the program.
CRMFG-18591	See “SAQ Integrated with Production Orders” on page 42.
CRMFG-18611 CRMFG-18612 CRMFG-18613	The system now only creates a single transaction with the correct \$ amount for the following GL transactions: • Issue (ISS-WO) • Receipt (RCT-WO) • Close (WO-CLOSE) • Scrap (SCRW-WO) Previously, for each transaction, the system created two transactions: one with the correct amount and a duplicate with a \$0 amount.

CRMFG-18614 CRMFG-18615	Production Operation Activity Collection now correctly creates labor usage variances when creating production order transactions. Previously, the program incorrectly processed standard cost and variance for some transactions, such as receipt transactions.
CRMFG-18618	Production Operation Activity Collection no longer displays the production order (wo_mstr) records multiple times for an order when there are multiple item-site planning data records for the item.
CRMFG-18649	Items with cost, but no quantity on hand (QOH), no longer display as \$0 for new production order receipts. Previously, in this scenario, the average cost receipt for the order displayed as \$0.
CRMFG-18650	Average Cost- RCT-WO transactions now include dollar amounts and the average cost receipt work order. Also, for average cost, the system now submits the correct amounts and no longer submits RCT-WO transactions to GL with \$0. Also, the system now correctly submits the amounts to GL, and no longer submits them to the cost adjustment (CST-ADJ) accounts.
CRMFG-18742	The system now correctly posts the variance to the Labor Usage Variance Account when you close an order with a setup time usage variance in Production Order Accounting Close. Previously, the system posted the variance to the Method Variance Account.
CRMFG-18756	The following programs no longer create erroneous material rate variance transactions when issuing a component that is not part of a repetitive production order standard BOM: • Production Order Receipt • Operation Activity Transaction • Production Order Component Issue The system now correctly books the non-standard bill component cost to the Material Usage Variance Account at the time of production order accounting close.
CRMFG-18878	Production Order Accounting Close no longer creates method change variance transactions for costs associated with global and local phantom items when the system issues the item's components to an operation that is not listed in the production order's routing.
CRMFG-18884	The following programs now correctly update the issue date of components on planned orders when you change the due date of the planned order: • Net Change Materials Plan (23.1) • Regenerative Materials Plan (23.2) • Selective Materials Plan (23.3)
CRMFG-18889	Production Order Maintenance now automatically reopens all operations in the routing and places the operations in running status when you reopen an order. The system reinstates requirements and demand for component items associated with the reopened order, including those components issued to operations not formally in the production order routing.
CRMFG-18933	The system no longer generates a method variance during final operation and when you receive final goods into inventory in Operation Activity Transaction when the BOM detail did not map to a routing record. Also, the system now includes all component data when determining operational costs and no longer creates a method variance when production order roll up costs match the standard costs.
CRMFG-18934	See "Scrap Transaction Browse Enhanced" on page 43.

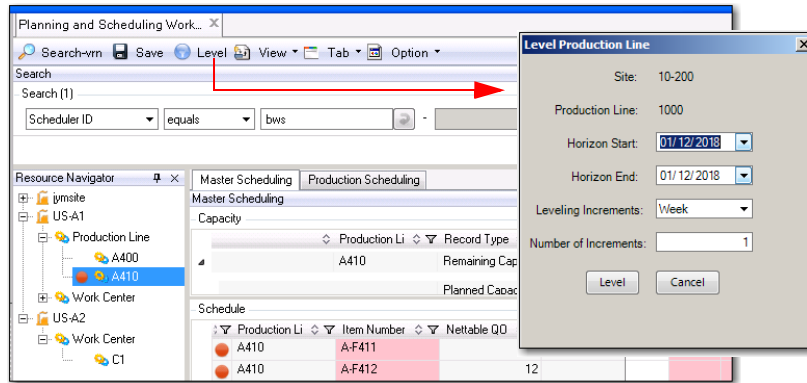
Workbenches Enhancements

The following topics discuss enhancements that were made for the 4.1 version of the QAD Planning and Scheduling Workbenches.

Leveling Features Added

The QAD Planning and Scheduling Workbenches now include features that let you level production across a user-specified horizon. A new Level button invokes the leveling panel that lets you set the horizon start and end dates, leveling increments (day, week, and so on), and the number of increments; then, start the leveling process.

Fig. 12
Level Button and Panel



When you use leveling, the system invokes the Every Part Every Interval (EPEI) type of production leveling. The underlying idea of EPEI leveling is to distribute the demand evenly across a period of time. EPEI leveling functions consider production orders allocated to production lines and can level by item based on production capacity and production line setup.

Once you set leveling through the MSW/PSW leveling window, the system loads fixed orders first; then, schedules them, working backward from their due date. The system loads the fixed order to the maximum quantity for the due date. The fixed order has a status of E(xploded), A(llocated), and R(eleased).

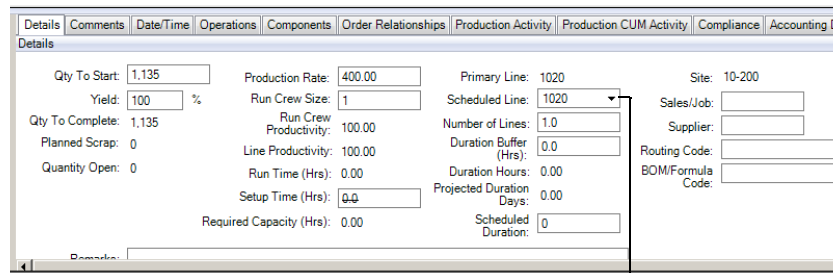
For information on EPEI calculations, leveling calculations, and leveling processing, refer to the *QAD Planning and Scheduling Workbenches User Guide*, version 4.1, dated March 2018.

Ability to Update Scheduled Line to an Unloaded Line

The workbenches now let you update a production order's scheduled line to another, unloaded production line. The Scheduled Line field in the embedded Production Order Details panel is now an editable drop-down list so that you can edit the line, changing to a loaded or unloaded scheduled line.

When you change to another production line after entering a line in the Details panel, the system removes the order data temporarily; however, you can maneuver to the Production Line node in the Resource Navigator Panel to find the updated order or load that target production line.

Fig. 13
Editable Scheduled Line Field



Enter a new line for a loaded or unloaded production order or use the drop-down to select an order.

Workbenches Fixes

Table 14

Workbenches Fixes

QAD Internal Ticket ID	Description
CRMFG-16698	See “Ability to Update Scheduled Line to an Unloaded Line” on page 59.
CRMFG-18378	The Workbenches now display the correct demand quantity for components in the Product Structure Projected On Hand (POH) panel. Previously, the program doubled the demand quantity for components in the Product Structure POH panel.
CRMFG-18412	The POH in the workbenches no longer increases when you refresh. Previously, when you loaded multiple resources; then, refreshed the display, the system increased the POH quantity.
CRMFG-18579	The workbenches no longer hang when you load, then unload resources. Previously, when you loaded a work center resource, then unloaded it, the system froze.
CRMFG-18637	You can now filter data at the production line and work center group levels and the resource level in the Workbenches. Previously, you could only view one item's shortage report for a selection in the MSW.

Release Notes for Production Orders Version 1.2

QAD Production Orders Version: 1.2

QAD Enterprise Edition: Enterprise Edition 2016

Release Date: October 2017

Prerequisites:

- .NET UI 2.9.5 + CP2 (Cumulative Patch #2)
- Java Runtime Environment (JRE) 1.6 or above
- Progress 10.2B06 and above
- YAB: The latest 1.5 Patch
- QAD Planning and Scheduling Workbenches, plug-in version 4.0.0.19, is included within the On-Premise v1.2 Production Orders package. For information, refer to the *QAD Production Orders Installation Guide*, version 1.2, October 2017.

User Guide Information:

- *QAD Production Orders User Guide*, version 1.2, October 2017
- *QAD Planning and Scheduling Workbenches User Guide*, version 4.0.0, April 2017.

Installation Information: *QAD Production Orders Installation Guide*, version 1.2, October 2017.

Conversion Information: Conversion information is in the *QAD Production Orders Installation Guide*, version 1.2, October 2017.

Enhancements

New Browsers Added

New Item Inventory Data Browse (1.6.6) and Item-Site Inventory Data Browse (1.6.7) were added to the Item Browse Menu (1.6). The new browses let you view item data and item inventory data parameters for the item or the item-site.

Additional supporting browses display in both browses when you right-click on the fields as depicted in the following table:

Table 15
Supporting Browses

Browse	Field to Right-Click	Supporting Browse Displayed
Item Inventory Data Browse		
	Item	Item Master Maintenance Item Inventory Data Maintenance Item Planning Maintenance Item Cost Maintenance Item Data Maintenance
	UM	Unit of Measure Maintenance
	Description	Item Description
	Site	Sites
	Location	Location Master Inventory Locations

Browse	Field to Right-Click	Supporting Browse Displayed
	Production Order Receipt Status	Inventory Status Codes
	Volume UM	Code Master
Item-Site Inventory Data Browse		
	Item	Item Master Maintenance Inventory Value and Usage Item-Site Inventory Data Maintenance Item-Site Inventory Planning Maintenance Item-Site Cost Maintenance
	UM	Unit of Measure Maintenance
	Description	Item Description
	Site	Sites Item Site Planning Data Action Messages Item-Site Inventory Data Maintenance Item-Site Inventory Planning Maintenance Item-Site Cost Maintenance

Fig. 14
New Item Inventory Data and Item-Site Inventory Data Browsers

The image shows two overlapping software windows from a QAD system. The top window is titled 'Item Inventory Data Browse' and the bottom window is titled 'Item-Site Inventory Data Browse'. Both windows have a search bar at the top with fields for 'Item Number' and 'starts at', and buttons for 'Search' and 'Clear All'. Below the search bar, both windows display a table of inventory data. The 'Item Inventory Data Browse' window shows a table with columns: Item Number, UM, Description, Serial Control, Lot Control, Site, Location, Location Type, Automatic Lot Numbers, Lot Group, Article Number, and ABC Class. The 'Item-Site Inventory Data Browse' window shows a table with columns: Item Number, Description, Site, UM, ABC Class, Serial Control, Lot Control, Location, Location Type, Automatic Lot Numbers, and Average I. Both windows show a list of items, with the first item in each list being '01010 Medical Ultrasound'.

Record Lot Attributes During Subcontract Receipt

You can now record lot attributes when you receive subcontract items at the last operation, regardless of Regulatory Attributes Control (1.22.24) settings.

When you enter subcontract receipts and the following conditions exist, the system now displays an inventory receipt frame, letting you capture lot attributes at the source. Note the following:

- The system prompts for lot attributes during subcontract receipt.
- The subcontract operation must be the last operation on the routing.
- Regulatory Attributes must be in use.

Inventory Movement Codes

Several production order functions now generate inventory movement codes to support global shipping. Inventory movement codes identify the reason for a transaction and the type of transaction. Inventory movement codes let you create shippers for inventory issues not related to a sales order.

Transactions

Table 16 details the various shipping groups and associated inventory movement codes that you set up for production orders to support global shipping. In the table, note the following:

- The Transaction column depicts the transaction to be performed by the relevant function.
- When this transaction occurs, the system checks for the existence of the shipping group defined in the Shipping Group column.
- When found, the system next checks that the shipping group has been set up with an inventory movement code that represents the transaction shown in the Inventory Movement Code column.

Note Consider the following when the system processes inventory movement codes:

- Only the primary transaction must be associated with the inventory movement code. For example, a production order component issue between sites involves a transfer (ISS-TR and RCT-TR), and with a production order issue (ISS-WO), only the ISS-WO is associated with the inventory movement code.
- When you use a backflush location, and you have not defined a backflush location for the work center/production line, the system does not create global shipping documents.

Table 16
Inventory Movement Codes

Function	Transaction	Shipping Group	Inventory Movement Code
• Production Order Component Issue (16.512) • Production Order Picklist Issue (16.5.11)	• A production order component issue where the site issuing the component is not the same as the production order site. • A production order component issue where the location issuing the component is not the same as the backflush location.	• Source address must match the issuing site, and the destination address must match the production order site. • Source address match the address of the issuing location, and the destination address match the address of the backflush location.	ISS-WO
• Operation Activity Transaction (16.13.13) • Production Order Receipt (16.13.1) • Rework Transaction (16.13.16)	• A backflush where the site issuing the component is not the same as the order site. • A backflush where the location issuing the component is not the same as the backflush location.	• Source address must match the issuing site, and the destination address must match the order site. • Source address match the address of the issuing location, and the destination address match the address of the backflush location.	ISS-WO
Production Picklist Transfer (16.5.9)	• A picklist transfer where the component is transferred from a site which is not the order site. • A picklist transfer where the component is transferred from a location which is not the backflush location.	• Source address must match the from site, and the destination address must match the production order site. • Source address match the address of the from location, and the destination address match the address of the backflush location.	ISS-TR

Function	Transaction	Shipping Group	Inventory Movement Code
• Operation Activity Transaction • Production Order Receipt • Move Transaction (16.13.17) • Purchase Order Receipts(5.13.1) • PO Shipper Receipt(5.13.20) • Pending PO Shipper Unload ((5.13.12.13)	• A production receipt where the site receiving the finish goods is not the same as the order site. • A production receipt where the location receiving the finish goods is not the same as the backflush location.	• Source address must match the order site, and the destination address must match the receiving site. • Source address match the address of the backflush location, and the destination address match the address of the receiving location.	RCT-WO

Note If Shipment Info for Receipts is Yes in Container/Shipper Control (7.8.24), a Shipment Information frame displays for input of data for receipt. You need to manually enter the inventory movement code. Set the location address as Physical Address in Location Maintenance.

New Location Availability Functions

New location availability functions are now included in component availability collections. The new function lets you determine when you have enough inventory at either the resource backflush location or reserved location to process firm production orders.

A new Location Availability column, Location Availability Summary browse, and Location Availability Detail browse were added to the following .NET UI collections:

- Monitor Material Shortages
- Manage Materials for Production Line
- Manage Materials for Work Center
- Release Production Orders by Production Line
- Release Production Orders by Work Center

Figure 15 depicts the new column and new browses.

The Location Availability column provides information as follows:

Table 17
Location Availability Information

Availability Status	Description
Backflush	Production order required component inventory is available at the work center/production line backflush locations.
General	Production order required component inventory is available at general inventory locations.
Not Enough Inv	Production order required component inventory (gross qty) is not available.
Reserved	Production order required component inventory is available at the work center/production line reserved locations.

The system displays the lowest status. That is, when the system finds production order required inventory at more than one location type—reserved, backflush, general—and finds a partial amount at a reserved location, the component availability displays as not available. When it finds a partial amount at the backflush location and the remaining at a reserved location, the component availability displays as reserved.

Fig. 15
Location Availability Functions

The screenshot shows the 'Monitor Material Shortages' application window. It features a search bar with a filter expression: 'Search ((Site = 'enter site id') and (Item Status matches "Shortage") and (Due Date < 10/1/2017) and (Component Item = 'enter item number'))'. Below the search bar are five filter rows: Site (equals, enter site id), Buyer/Planner (equals,), Item Status (contains, Shortage), Due Date (less than, Next 'Week'), and Component Item (equals, enter item number). The results section shows 'No records found' and a 'Records per page' dropdown set to 500. A table header is visible with columns: Component Item, Item Description, Item Status, Location Availability (highlighted with a red box), Gross Req, Quantity Short, Next Scheduled Receipt, Quantity, Receipt Source, and Receipt Reference. A 'Summaries' section shows 'Sum = 0.0'. Below the main window, a secondary window titled 'Location Availability Summary' is open, showing a table with columns: ID, Component Item, Type, Status Category, Prior Demand, Demand, On-Hand/PQOH, Authorized Rcpts/PQOH, Scheduled Rcpts/PQOH, and Planned Rcpts/PQOH. The secondary window also shows 'No records found' and a 'Records per page' dropdown set to 100.

Location Availability Summary

The Location Availability Summary supporting browse provides the following information:

Table 18
Location Availability Summary Browse

Starting On-Hand	Shop Floor Location	Reserved Location	General Location
	Quantity available in work center and production line backflush locations	Quantity on-hand in work center and production line reserved locations	Quantity available in general location, excluding backflush location of other work centers/production lines
Production Order Demand	Component requirement of prior orders in the same shop floor location	Component requirement of prior order in the same reserved location	Component requirement of prior orders in general location
This Order Demand	Component requirement of this order that is available in the backflush location	Component requirement of this order that is available in the reserved location	Component requirement of this order that is available in general location
Projected Remaining	Starting on-hand minus prior order demand minus this order demand	Starting on-hand minus prior order demand minus this order demand	Starting on-hand minus prior order demand minus this demand

Note the following:

- Orders are sorted by order release date, then sequence.
- Expired inventory is not factored.
- Component demand records with a P(lanned) status are excluded.

Location Availability Details

The Location Availability Details supporting browse provides the following information:

Table 19
Location Availability Details Browse

Site	Location	Lot/Serial	Reference	Inventory Status	Expire Date	Qty on Hand	Qty Allocated	Location Type
Inventory detail				Inventory detail status	Inventory expire date	- Quantity available in backflush location - Quantity on-hand in reserved location - Quantity available in general location	Quantity allocated to the current order	- Backflush - Reserved - General

Note the following exceptions:

- The logic in the table does not apply to the Demand/Supply Detail Frame of standard component availability functions; this is because the calculations in the Demand/Supply Detail frame are a time ordering of all supply/demand records, and since inventory location status has no relation to time ordering, this level of detail is not applicable.
- The solution is limited to on-hand inventory. The solution does not factor in incoming receipts, such as a purchase order with an inventory location destination to a reserved location. All incoming receipts are considered available by any production order and production line/work center.
- The function does not factor in customer reserved locations. Inventory that is in a customer reserved location, when nettable, is considered on-hand general inventory, unless specified as a production line reserved location in addition to a customer reserved location.

Restricted Transactions Now Available

Restricted transactions are now available for several Production Order programs.

You can use inventory status codes to control and manage how items, sites, and locations are used in the system. When you process an item transaction, the system checks the item's status code to verify that the transaction is not restricted. If it is, an error message displays and you cannot proceed. For information on restricting transactions, refer to the *QAD Master Data User Guide*.

In the following programs, you can restrict entering an order or changing the production order status (restricted WO-ADD transaction):

Note For program numbers, refer to the Production Menu subsection in the *QAD Production Orders User Guide*, version 1.2.

- Production Order Maintenance
- Production Order Release/Print
- Production Order Allocate
- Prod Order Manual Allocation
- Bulk Item Picklist Calculation
- Multiple Order Status Change

Production Order Release/Print now lets you restrict the automatic release of an order (REL-WO).

The following programs now let you restrict the automatic release of an order (ISS-WO):

- Production Order Picklist Issue
- Production Order Component Issue

- Prod Order Receipt Backflush
- Operation Activity Transaction
- Rework Transaction
- Purchase Order Receipt
- PO Shipper Receipt
- Pending PO Shipper Unload

The following programs now let you restrict receipt (RCT-WO):

- Prod Order Receipt Backflush
- Operation Activity Transaction
- Rework Transaction
- Move Transaction
- Purchase Order Receipt
- PO Shipper Receipt
- Pending PO Shipper Unload

The following programs now let you restrict item rejections (RJCT-WO):

- Prod Order Receipt Backflush
- Operation Activity Transaction
- Reject/Scrap Transaction
- Purchase Order Receipt
- Subcontract Scrap Maintenance
- PO Shipper Maintenance

WIP Adjust Transaction now lets you restrict WIP adjustments (WIP-ADJ).

The following programs now let you restrict issues (ISS-TR):

- Production Picklist Transfer
- Subcontract Shipper Issue

Note The ADD-RE transaction type was removed for production orders.

New Error Message

For all production order transactions, when the item is restricted for ADD-WO or the REL-WO transaction, the system checks whether there are open schedule orders with a R(eleased) status; when there are no orders with this status, the system now displays an error, indicating that the procedure is restricted for the item status code.

Production Order Fixes

The following table lists fixes for Production Orders.

Table 20 Production Order Fixes (1 of 2)

QAD Internal Ticket ID	Description
CRMFG-11558	See Inventory Movement Codes

Table 20 Production Order Fixes (2 of 2)

CRMFG-12975 CRMFG-12976 CRMFG-12978	See Restricted Transactions Now Available
CRMFG-16641	See New Location Availability Functions
CRMFG-17046	See New Browsers Added
CRMFG-17787	See Record Lot Attributes During Subcontract Receipt
CRMFG-17919	Production Operation Activity Collection is now a part of the Production Activities Menu (16.13).
CRMFG-17949	Pending PO Shipper Unload (5.13.12.13) and Purchase Order Returns by Pack (5.13.12.16) now correctly generate receipt and issue transactions (RCT-TR and ISS-TR) for a production order. Previously, the system generated the transactions for a purchase order. Also, the pack receipt transaction (PCK-RCT) is now correctly linked to RCT-WO transaction with a negative quantity.
CRMFG-18082	The system now correctly validates the lot/serial numbers in Pending PO Shipper Unload (5.13.12.13). This is true when: • The item is lot controlled. • You set Auto Lot Numbers to Yes in Item Inventory Data programs. • The lot group is provided. Previously, in this scenario, the system always defaulted the lot/serial number based on the lot group.
CRMFG-18058	When you close a production order with floor stock, the system now correctly debits the WIP account and credits the floor stock account. Previously, the system did not correctly consider these accounts when you closed a production order.
CRMFG-18079	The system no longer validates controls for lot control when the receipt quantity is negative. Previously, the system checked the lot control level and always displayed information indicating that the lot is in use when the receipt quantity was negative.
CRMFG-18090	The following production order receipt functions now correctly displays the item's UM and correctly display the UM lookup browse: • Prod Order Receipt Backflush (16.13.1) • Operation Activity Transaction (16.13.13) • Reject/Scrap Transaction (16.13.15) • Rework Transaction (16.13.16) • Move Transaction (16.13.17)
CRMFG-18141	The Backflush field now displays on Work Center Browse (14.6), making the setup view and validation easier.

Planning and Scheduling Workbenches Fixes

The following table lists fixes for the version 4.0 of QAD Planning and Scheduling Workbenches:

Table 21
Workbenches Fixes (1 of 2)

QAD Internal Ticket ID	Description
CRMFG-13234	Information in the workbenches Compliance tab's Regulatory Attributes frame is now consistent with production order functionality. To this end, the system now: - Disables the Compliance tab fields and does not display values for split and repetitive scheduled orders. The tab and fields are active for discrete orders. - Validates compliance data when you validate/save data. - Sets the Single Lot field default to Yes when you create a new discrete work order and the following exist: - Single Lot Per WO Receipt is Yes in Regulatory Attributes Control (1.22.24). - The Auto Lot Number field for the item is No. - The lot group is specified. - Lets you set the Single Lot field to No when there are no receipts for the order. - Sets the ID to the discrete order ID and defaults Single Lot to No when Auto Lot Numbers is Yes for the item and no lot group is specified. You cannot modify the default.
CRMFG-15510	The system now correctly opens the QAD Planning and Scheduling Workbenches after you previously opened other workbenches (Lot Trace Workbench, Kanban Workbench). Previously, in this scenario, the QAD Planning and Scheduling Workbenches did not open.
CRMFG-16698	The system now correctly displays all production lines for items. Previously the system displayed all loaded production lines, not just one production line.
CRMFG-16856	The MSW no longer displays an error when you enter a quantity in the Schedule Grid, leave the cell, then return to the cell to clear the entered quantity. Previously, in this scenario, the system displayed an error.
CRMFG-16938	You can now edit the BOM Code and Routing Code fields in the Production Order Browse. Previously, the fields were display only.
CRMFG-17061	The system now correctly refreshes Resource Navigator data. Previously, when you simultaneously loaded both production line and work center resource data, the data overlapped; then, when you refreshed or unloaded data from one resource, the system retained the modified data. Additionally, when you loaded data from one resource type, then attempted to load data from another resource type, the system retained the first loaded data.
CRMFG-17146	An error message text now correctly displays as production order, not work order. Previously, when you selected a production order, changed the status, did not save, and selected to calculate component availability status, the system displayed an error that reflected a work order.
CRMFG-17196	The system now correctly validates multiple resource data when you update and refresh the multiple resource data. Previously, when you loaded multiple resources, updated data for one of the resources without saving, selected all resources (including the updated resource), and refreshed, the system failed.
CRMFG-17285	The system now correctly displays an error, indicating an item is not defined, when you create a new production order with an invalid item number. Previously, when you clicked New in the embedded Production Order Maintenance, the system filled the Item Number with a string that is in use in orders that already displayed in the Schedule Grid.
CRMFG-17354	In the embedded Production Order Maintenance, when you click New, the system now correctly defaults the item number from the Production Order Maintenance active row when you did not select an order from the Schedule Grid. Previously in this scenario, the item number was blank.
CRMFG-17443	In the Data Load tab of the User Preferences, the <i>Include no demand/supply activity items</i> field was changed to <i>Include items with no activity</i> .
CRMFG-17630	The Undo Changes option now correctly displays in the Resource Navigator when you attempt to save an order with an error in its data. Previously, when you attempted to save a production order with an error, such as a negative quantity error, the Undo Changes option did not display in the Resource Navigator.
CRMFG-17631	The Resource Navigator now indicates when you choose to calculate component availability after you modify a production order but did not save it. Previously, in this scenario, the Resource Navigator did not provide an indication.

Table 21
Workbenches Fixes (2 of 2)

CRMFG-17602	The system now correctly displays the Resource label when you select a site in the Resource Navigator. Previously, when you selected a site in the Resource Navigator, the system displayed a Production Line or Work Center label in the Schedule Grid.
CRMFG-17689	The system now saves a modified Supply/Demand Grid as a customized view. Previously, when you altered the grid, then saved, the grid did not display the updated grid as a customized view
CRMFG-17730	In the Details tab of the embedded Production Order Maintenance, the CUM ID field label now displays as Split CUM ID. This label change follows Production Order Maintenance (16.3.1) logic that only displays the value for split schedule orders with an order type of S and a Mfg type as WO and does not display values for repetitive schedule orders with an S order type and a Mfg type mfg as Rep.
CRMFG-17746	The Undo changes option now functions correctly, and the system now correctly checks for unsaved data before unloading data. Previously, when the Resource Navigator loaded a production order for both a production line and work center resource, and you modified the order without saving it, the system applied the change to both resources; however, the Undo Changes option did not display. When you attempted to unload the work center, the system did not display an error message, indicating unsaved data, and unloaded without notification.
CRMFG-17771	In the embedded Production Order Maintenance Compliance tab, the link between the single lot number and lot number now takes effect immediately. Previously, when you edited a checked Single Lot field; then, disabled the Lot Number field, unchecked the Single Lot field, then re-checked it to edit it, the effect did not take place immediately. Note that the two fields—Single Lot Number and Lot Number—work in conjunction. The system conditionally controls the Lot Number value by the Single Lot value. When Single Lot Number is unchecked, the Lot Number field is editable. When checked, it is read only.
CRMFG-17773	In the embedded Production Order Maintenance Details tab, repetitive schedule orders now correctly display the Mfg type. When the order is a repetitive schedule order, the Mfg type now displays as REP, which is consistent with the Production Order Maintenance (16.3.1) program.
CRMFG-17774	In the embedded Production Order Maintenance Details tab, when you select a split scheduled order as the production order, you can no longer update the order type. This is consistent with behavior in the Production Order Maintenance (16.3.1) program. When you select a discrete work order or repetitive schedule order, the system has not recorded activities, and status is F(irm), you can change the order type.
CRMFG-17834	In the embedded Production Order Maintenance Details, the system now displays the correct CUM ID after saving. Previously, the CUM ID did not display correctly after you change data, and you were required to refresh to display it correctly.

Release Notes for Production Orders Version 1.1.1

QAD Production Orders Version: 1.1.1

QAD Enterprise Edition: Enterprise Edition 2016

Release Date: July 2017

Prerequisites:

- .NET UI 2.9.5 + CP2 (Cumulative Patch #2)
- Java Runtime Environment (JRE) 1.6 or above
- Progress 10.2B06 and above
- YAB: The latest 1.5 Patch
- QAD Planning and Scheduling Workbenches, plug-in version 4.0.0, is included within the On-Premise Production Orders package. For information, refer to the *QAD Production Orders Installation Guide*, version 1.1.1, July 2017.

User Guide Information: *QAD Planning and Scheduling Workbenches User Guide*, version 4.0.0, April 2017.

Installation Information: *QAD Production Orders Installation Guide*, version 1.1.1, July 2017.

Conversion Information: Conversion information is in the *QAD Production Orders Installation Guide*, version 1.1.1, July 2017.

Production Order Enhancements

Record Production Order Component Issues without WO/Repetitive Schedule

You can now record production order component issues without have a production order type that is either a work order or a repetitive schedule (type S). Since your order type is not restricted to a WO or type S, you can now record component issues directly against a CUM order, and the system now collects cost for the CUM order.

Also, note that Component Picking Data Maint and browses were enhanced to include more data, including added supporting browses and more descriptions of the parent and components, the reference and operation. The added data provides more visibility of the existing (default) values for those parameters for the item.

Note With this enhancement, Production Order Component Issue (16.5.12) no longer locks the mrp_det table after completing the transaction.

Production Order Fixes

The following table lists fixes for Production Orders.

Table 22
Production Orders

QAD Internal Ticket ID	Description
CRMFG-17745	Refer to the enhancement, Record Production Order Component Issues without WO/Repetitive Schedule.

CRMFG-17683	The system now correctly records the scrap reason code when you enter scrap quantity in Production Order Receipt Backflush (16.3.1). Previously, in this scenario, the system created the correct transaction but did not record the scrap reason code in the transaction history table (tr_hist).
CRMFG-17679	The system no longer reports ambiguous errors with EAM tables when you compile with OpenEdge.
CRMFG-17539	Production Order programs no longer conflict with Trade Activity Management (TAM) programs. Previously, when you installed Production Orders into an environment with TAM 2.1 installed, the system displayed Progress errors.

Release Notes for Production Orders Version 1.1

QAD Production Orders Version: 1.1

QAD Enterprise Edition: Enterprise Edition 2016

Release Date: July 2017

Prerequisites:

- .NET UI 2.9.5 + CP2 (Cumulative Patch #2)
- Java Runtime Environment (JRE) 1.6 or above
- Progress 10.2B06 and above
- YAB: The latest 1.5 Patch
- QAD Planning and Scheduling Workbenches, plug-in version 4.0.0, is included within the On-Premise Production Orders package. For information, refer to the *QAD Production Orders Installation Guide*, version 1.1, July 2017.

User Guide Information: *QAD Planning and Scheduling Workbenches User Guide*, version 4.0.0, April 2017.

Installation Information: *QAD Production Orders Installation Guide*, version 1.1, July 2017.

Conversion Information: Conversion information is in the *QAD Production Orders Installation Guide*, version 1.1, July 2017.

Production Order Enhancements

The following topics list enhancements included in the 1.1 version of Production Orders.

Production Order Split Enhancement

You can now split a discrete order in Production Order Split (16.3.11), letting you schedule the same discrete order over multiple days or multiple times per day.

The system collects costs and WIP inventory associated with the discrete order as a single order, even though the scheduling of the order is split into multiple deliveries. You manage production order allocations, picking, releasing, and order completions for the individual scheduled deliveries.

Note You set the order type in Production Order Maintenance (16.3.1).

Using the new features, the following occurs when you split a discrete order, repetitive order, or discrete scheduled order:

- For a repetitive scheduled order, the system creates a new repetitive schedule.
- For a discrete schedule, the system creates a new discrete scheduled order and links it to the same discrete cumulative order.
- For an order with the Mfg Type set to WO that you split for the first time, the system creates two new discrete scheduled orders and changes the original order to a discrete cumulative order.
- The system:
 - Uses the quantity to start as the quantity to split.
 - Assigns the same status and order number as the original order to the split order.
 - Assigns the status to R for the discrete cumulative order.

- Splits the quantity to complete, actual quantity completed, and the actual quantity scrapped between orders.

The order with the earliest release date, sequence number, and smaller order ID receives the actual quantity completed and scrapped, depending on the open quantity method.

When the method is set to Qty Complete, the system calculates the open quantity of split orders as the order quantity to complete. When the method is set to Qty Processed, the system calculates the split order open quantity as the following:

Qty to Start – Qty Completed – Qty Scrapped

- Copies all the operations and components as the original order (with an adjustment of the quantity).
- Splits the component requirement between orders to update/create the order bill.

When the order has component issues, the system adds issues up to the requirements to the order with the earliest release date, sequence number, and smaller order ID; it applies the remainder to the other order. Over-issues are applied to the latest date (the future date furthest out).

- Allocates both orders when the order has general allocations; allocates open orders when the order has detail allocations.

For detail allocations, the system adds allocations up to open requirements to the order with earliest release date, sequence number, and smaller order ID; it applies the remainder to the other order.

- Splits the picked quantity in the same way allocation occurs when the order has picked quantities; then, updates the picklist, and if applicable picked packs.
- Calculates the component issue date, based on order release date plus lead time offset for the component.

Production Order Maintenance Impacts

You can only create repetitive schedule (S type) orders in Production Order Maintenance now. You cannot create discrete schedule (S type) orders. Discrete scheduled orders are now created by Production Order Split. For a discrete scheduled order, you cannot modify the following:

- Order type
- Routing code
- BOM/formula code

Also, the Accounting frame no longer displays for scheduled, repetitive (S) type orders in Production Order Maintenance, and the Cum ID and Mfg Type fields were added. When the order type is S, the system sets the Mfg Type to R; otherwise, the Mfg Type is D.

Split CUM Order Maintenance Impacts

You can now modify cumulative order account data on a discrete CUM order in Split CUM Order Maintenance (16.3.12). For a split CUM order, the system only supports the R(eleased) and C(losed) order status. When the order status is C, the system automatically closes all split orders linked to the split CUM order.

You can modify the routing/BOM on CUM orders as long as no issues or production activity were done and scheduled orders do not have a status of E,A,R, or C. The system replicates the BOM/routing to all open scheduled orders.

Production Order Bill Maintenance and Production Order Routing Maintenance Impacts

You cannot maintain discrete scheduled orders in Production Order Bill Maintenance (16.3.4) and Production Order Routing Maintenance (16.3.6).

When you add or modify components on discrete cumulative orders, the system automatically makes the same changes to the components of all related discrete schedule production orders. The system displays a warning when the scheduled orders have a status of E or A, R, or C.

When you remove components, the system automatically removes components from all scheduled orders. The system displays an error message when the component was issued. You cannot modify existing components.

When you add an operation to the production order routing, the system automatically adds operations to all discrete scheduled orders.

When you remove an operation, the system automatically removes operations from all scheduled orders. The system displays an error message when the operation was processed.

Additional Program Impacts

The Cum ID and Mfg Type field were added to all programs that let you create a production order. When creating:

- Repetitive orders, the system creates orders with the Mfg Type set to Repetitive.
- Discrete scheduled orders, the system creates orders with the Mfg Type set to Repetitive and CUM ID set to the linked discrete CUM order.
- Discrete orders, the system creates orders with the Mfg Type set to WO and Cum ID set to blank.

Consignment Integrated with Production Order Functions

The QAD Consignment Inventory module is now integrated with Production Order functions. Enhancements were added in two areas:

- Consignment Now Integrated with Production Order Inventory Transactions
- Consignment Now Integrated with Allocation Calculation

The following topics describe each area.

Consignment Now Integrated with Production Order Inventory Transactions

When you include supplier consigned inventory in the following functions, the system now creates the RCT-PO and CN-ISS supplier-consignment transactions:

- Production Picklist Transfer
- Production Order Picklist Issue
- Production Order Component Issue
- Prod Order Receipt Backflush
- Operation Activity Transaction
- Rework Transaction
- Pack Transfer
- Pack Transfer -Multi Pack
- Subcontract shipper issue

- PO Receipt
- All reversal transactions for transfer programs

Note For Production Picklist Transfer, Production Picklist Transfer, Pack Transfer, Pack Transfer - Multi Pack, and Subcontract Shipper Issue, consignment transactions occur only when Transfer Ownership is Yes for the receiving location.

Consignment Now Integrated with Allocation Calculation

The system now considers Supply Consignment Inventory control settings when processing allocations.

When creating allocations, the system searches in the following order:

- 1 Work center backflush location
- 2 Production line backflush location
- 3 Work center reserved locations for the item
- 4 Production line reserved locations for the item
- 5 Work center reserved location for any item
- 6 Production line reserved location for any item
- 7 As defined in picking logic

When the system searches locations in 1 through 6, once a location is identified, the system applies the logic below to allocate inventory:

- When Use Consigned First is Yes, the system allocates consigned inventory first.
- When No, the, system allocates non-consigned inventory first.
- When Use Consigned First is the default in Supplier Consignment Control, the system applies picking logic.

After searching locations 1 through 6, the system searches all inventory in other locations and applies the Use Consigned First logic as above.

Regulatory Attributes Integration

Production Orders functions are now integrated with QAD Regulatory Attributes. The Regulatory Attributes module lets you manage compliance with current Good Manufacturing Practices; with government regulations, such as those from the FDA; and with international agreements such as NAFTA and GATT. The functions on the Controlled Substances menu associate customers, items, or sites with regulatory agency codes for import/export and international agreement compliance.

Integrating the features of Regulatory Attributes with Production Orders ensures that regulatory attributes functionality—already implemented in the shop floor, work order, and repetitive functions— is extended to Production Orders.

Major areas of Production Orders modifications for the integration include the following:

- Lot Control
- Component Issue Control
- Rework Order Enhancement

Lot Control

Regulatory Attributes Control (1.22.24) settings for lot control were modified to ensure that production orders are pre-assigned lot numbers when control conditions are met. The following changes were made:

- The Single Lot per WO Receipt field was relabeled as Single Lot per Discrete Order Receipt in Regulatory Attributes Control.
- The Work Order Attribute Maintenance Menu was renamed Production Order Attribute Maint.
- All work order-related menu labels in the Regulatory Attributes menu now reflect production orders.

Production Order Impacts

In Production Order Maintenance, the system now validates that:

- The Single Lot Field defaults to Yes when the:
 - Auto Lot Number field in Item Master Maintenance for the item is No
 - Auto Lot Number field for the item is Yes and you specify a lot group

Note When Auto Lot Number is Yes, you can set to No when there are no receipts against the order.

- The ID of the discrete order is assigned to the order when Auto Lot Numbers is Yes for the item and a lot group is not assigned. When these conditions exist, the system defaults the order Single Lot to No, and you cannot modify the default.
- Single Lot is No for a rework order.
- Defaults and lot numbers are maintained when you create production orders in Production Orders functions that let you create the orders and in Production Orders-related functions such as MRP, MPS Leveling Calculation, Production Order Line Allocate, RMA release to Production Order, and so on.

Additionally, the Regulatory Attributes frame for repetitive and split orders no longer displays. The frame does not display in Production Order Split as well.

Production Order Receipts - Single Lot Receipt Impacts

Production activity transactions that receive lot-controlled items into inventory were updated to ensure that you can receive only a single lot per transaction when Single Lot is Yes on the production order or Single Lot per Repet Receipt is Yes in Regulatory Attributes Control. The system validates single lots for transactions in:

- Production Order Receipt Backflush
- Operation Activity Transaction
- Move Transaction
- PO Receipt
- PO Shipper Receipt
- Pending PO Unloading

Note PO Receipt, PO Shipper Receipt, and Pending PO Unloading are modified for subcontract orders.

The system now verifies that:

- Only a single lot number is received per transaction for discrete orders.

The system verifies this when you receive an order—with blank Order Type and discrete Mfg Type—in Production Order transactions, and the:

- Order has single lot set to Yes.
- Order item is lot controlled.

- Lot control level is set to 1 or 2 in Regulatory Attributes Control.

When these conditions exist, you can still assign different locations for the receipt. When the Multi Entry field is Yes in production order receipt functions, you can assign the single lot number.

- Only a single lot number is received per transaction for split orders.

In Production Order transactions, when you receive lot-controlled items for a discrete scheduled order—with an S Order type and a discrete Mfg Type—the system ensures that only a single lot can be received per transaction when the:

- Split CUM order has single lot set to Yes.
- Lot control level is set to 1 or 2 in Regulatory Attributes Control.

When these conditions exist, you can still assign different locations for the receipt.

- Only a single lot number is received per transaction for repetitive schedules.

In Production Orders transactions, the system verifies that only a single lot can be received per transaction when you receive a lot-controlled item for a repetitive schedule and:

- Single Lot Per Repet Receipt is set to Yes in Regulatory Attributes Control.
- The Lot control level is set to 1 or 2 in Regulatory Attributes Control.

When these conditions exist, you can still assign different locations for the receipt.

Production Activity Transactions with Auto-Lot Numbering Impacts

The system now verifies that auto-lot numbering for inventory receipt in production activity transactions comply with lot controls for the item.

Note When you implement auto-lot numbering, the system lets you receive a single lot number per receipt regardless of the single-lot setting and lot control level set in Regulatory Attributes Control.

The system validates auto-lot numbering in the following:

- Production Order Receipt Backflush
- Operation Activity Transaction
- Move Transaction
- PO Receipt
- PO Shipper Receipt
- Pending PO Unloading

Note PO Receipt, PO Shipper Receipt, and Pending PO Unloading are modified for subcontract orders.

When you set auto-lot numbering and receive lot-controlled items, the system validates that:

- The transaction pre-fills the receipt lot number based on the lot number assigned to the order when you do not assign a lot group for discrete orders.

Rework and expense work orders cannot be assigned automatic lot numbers.

- The transaction pre-fills the lot number to be received based on the first scheduled order being consumed when you do not assign a lot group for repetitive schedules.
- The transaction pre-fills the lot number based on the lot number assigned to the split cum order when you do not assign lot groups for split CUM orders.
- The transaction pre-fills the receipt lot number with the next lot number based on the lot group assignment when you have lot groups for all order types.

The system verifies that only a single lot number per receipt exists, but you can assign different locations for the receipt.

Lot groups do not apply to rework orders; you manually enter lot numbers either on the order or receipt.

Subcontract Receipt and Serialization Impacts

For subcontract receipts, when the subcontract operation is the last operation, a frame displays to enter lot information. The same production receipt rules apply to subcontracting receipts.

For Serialization-related subcontract receipts:

When you confirm the receipt of unloaded packs in Pending PO Shipper Unload (5.13.12.13):

- The system displays a frame to enter lot information.
- When the item is lot controlled, and a unit pack is linked with a subcontract PO line, you cannot link it with other order lines; otherwise, the system could not copy the ASN.

For Serialization:

- When you build inventory for a pending unit pack or create a new unit pack on a pending assembly pack, the system defaults the lot from the pending pack when single lot is set for the receipt.
- When you build inventory for an active unit pack, the system defaults the lot from the pack. When the lot for received inventory is different due to regulatory-attribute calculations, the system displays an error.

Component Issue Control

When you set Modify Component Issue to No in Regulatory Attributes Control, the system now validates that only items or their valid substitutes on the order BOM can be issued in production order transactions. You cannot add items on the fly that are not on the order BOM during production order transactions. The system validates this for any transaction that issues components to an order in the following programs:

- Production Order Receipts Backflush
- Operation Activity Transaction
- Rework Transaction
- Production Order Component Issue

Inventory Attributes

Inventory attributes are now integrated with the Production Orders module. The system prompts for inventory attributes in the following transactions:

- Production Order Receipt Backflush
- Operation Activity Transaction
- Move Transaction
- PO Receipt
- PO Shipper Receipt
- Pending PO Unloading

Batch Control

Split orders from one split CUM order share the same batch number.

In Production Order Split, the New Batch field was removed. The system records the batch processing of split CUM orders in transaction history.

Inventory Attribute Enhancements in Transactions

The WO Receipt Status field was changed to Prod Receipt Status in Item-Site Inventory Data Maintenance (1.4.6), Item Inventory Data Maintenance (1.4.5), and Item Master Maintenance (1.4.1) as well as browses, reports, and inquiries.

In production order transactions, when you set Set Attributes to Yes, the system displays the Receipt Attributes frame that lets you update attributes, activate the attributes, or use the updated active-only attributes as defaults. For attributes, the following now occurs:

- When you set Use As Default to Yes, the system assigns the entered attributes as defaults for the current and future receipts for the order.
- When Active is No, but Use as Default is Yes, the system sets all attributes to blank.
- When inventory exists for a location, lot, and reference combination with attributes that are different from the ones for the order, the system displays an error message. Set Active to No for the conflicting attributes to correct the error.

Rework Order Enhancement

Enhancements were made to rework order processing in Production Orders programs.

- Rework orders must be discrete orders with a parent item as its only component, and no routing; however, you can specify routing in Production Order Maintenance. The system sets the initial status to Allocated for a rework order.
- You cannot change the status of a rework order to E or F or split the order.
- No automatic allocation for the parent item of a rework order. The system ignores allocation policy of the parent item.
- For components that you manually add, the system follows Allocation Policy settings. The system follows Pick and Issue Policy settings for components as with regular orders.
- For the parent item in the order's bill, the system ignores the picking minimum and multiple when you create an order picklist.
- In Production Picklist Transfer (16.5.9), the system maintains the allocation of the parent item regardless of the Transfer Allocation policy.

SSM Integration Enhancement

Service/Support Management (SSM) is now integrated with production orders. For SSM RMAs released to Production Orders, the following changes were made:

- RMA Release to Work Order was renamed to RMA Release to Production Order.
- The system uses RMA Release to Production Order to create rework orders for all RMA receipt lines with a quantity already received and a W processing option. The system creates the rework orders with the following:
 - Rework orders have an Order Type of R(ework).
 - The system uses the item's repair routing as defined in SSM's Service Item Maintenance (11.3.7) or Service Item by Site Maintenance (11.3.9). When you do not define repair routing, the system creates the order without routing.
 - The initial status is R(eleased.)
 - The Sales/Job is the RMA number.
- The system issues the component (the parent item itself) and creates an ISS-WO inventory transaction.

- For Call Activity Recording (CAR), each CAR report you generate is a rework order. The following changes were made for the rework orders:
 - The report creates production order transactions and affects similar accounts.
 - The rework order status is 1.
 - The system creates the ISS-WO inventory transaction when items are issued in CAR.
 - The system creates a labor operation transaction when labor is reported in CAR.
 - Bill and routing records are created; however, the system does not maintain the records.

Refined Allocation Calculation

Allocation Calculations were enhanced in this revision. The picklist calculation now determines when there is excess inventory in the backflush location that can be used by the order for which the picklist is calculated. The calculation:

- Skips the backflush locations of work centers or production lines when the system creates detail allocations
- Nets the excess against the quantity required by the order to determine net quantity to transfer
- Transfers additional quantity when other orders have consumed (backflushed) more inventory than expected when they were transferred at an earlier point
- Increases the quantity to be transferred when other orders have consumed (backflushed) more inventory than expected when they were transferred at an earlier point

When the Transfer Allocation policy is set to Keep in Item-Site Inventory Data Maintenance, Item Inventory Data Maintenance, or Item Master Maintenance, the system examines the detailed allocations at the backflush location to determine any excess inventory. When the Transfer Allocation Policy is Drop, the system considers the earlier transfers for other orders as *implicitly allocated* when determining the excess inventory.

Production Order Allocate and Bulk Item Picklist Calculation Changes

Production Order Allocate (16.5.1) and Bulk Item Picklist Calculation (16.5.3) no longer include search criteria for Picklist Prefix and Number, making it easier to search for records.

Also, for both programs, the system always uses the value in Production Order Control (16.3.24) to create picklists, and you can no longer manually change them on the two programs.

Production Picklist Undo Enhancement

When you run Production Picklist Undo (16.5.10), the system now deletes detail allocations for items that have the Allocation Policy set to General. The system does not delete detail allocations that have the Allocation Policy set to Detail.

Note You set the Allocation Policy in Item-Site Inventory Data Maintenance, Item Inventory Data Maintenance, and Item Master Maintenance.

Detail Allocation Enhancement

To verify attributes-conforming allocation for the calculation, the system considers from which location inventory is supplied and for which production order to attribute allocations when it creates detail allocations.

Also, Production Order Allocate (16.5.1), Production Order Picklist Print (16.5.5), and Production Order Release/Print (16.4.2) no longer create detail allocations for inventory with non-conforming configured attributes when creating a picklist.

New Order Number Fields Added to Repetitive CUM Order Maintenance Programs

The following repetitive CUM order-related programs now include the Production Order Number field and an associated lookup browse for the field:

- Repetitive Cum Order Maintenance (16.3.9)
- Split CUM Order Maintenance (6.3.12.0)
- Repetitive Cum Order Create (16.3.8)

Browse Enhancements

The following enhancements were added to browses:

Op Operational GL Transaction Browse (30.5.15.14) was enhanced to include a lookup browse on the Transaction Number field.

Picklist Shortage Browse (16.5.15) has a new Available to Allocate column that displays the quantity available on site minus the detailed allocated quantity.

New Create and Modify Buttons Added to Calendar Exception Browses

Calendar Exception browses now include both Create and Modify buttons so that you can easily access these functions while you view data. The two buttons were added to the following:

- Site Calendar Exception Browse (1.1.22.5)
- Supplier Calendar Exception Browse (5.5.1.5)
- Process Calendar Exception Browse (17.1.18)
- Domain Calendar Exception Browse (36.2.4.5)

Production Order Component Issue Date is Set to Operation Start Date

Components that are linked to operations now have their issue date (the date of the component demand) set to the same date as the start date of the operation. The component issue date is always updated when you or the system updates the start date of the operation. Components that are not linked to an operation have an issue date equal to the start date of the first operation. When the production order does not have a routing, the system uses the release date of the order as the issue date of the components. The system applies any lead time offset as defined for the component in the product structure to the issue date of the component.

Note MRP calculates the routing records when you set MRP Plan Order Routing Create to Yes in the Workbench Control File (22.20.4).

Item and Lot Attributes Added to Programs

You can now choose to print or view item attribute and lot attribute information in:

- Production Order Release/Print (16.4.2)
- Production Order Sheet Print (16.4.5)
- Production Order Picklist Print (16.5.5)

The attribute data includes selections for: Print Test Data, Print Attribute Profile, Print Profile Source, Print Item Level Attributes, Group Attributes by Category, and Print Lot Attributes.

Production Order Fixes

The following table lists fixes for Production Orders.

Table 23
Production Orders

QAD Internal Ticket ID	Description
CRMFG-16063	A receipt in Modify Prod Order Receipt Backflush (16.13.1) now prompts for lot attribute values for an item when you set: • At least one item attribute level to Lot • The lot and input method to User With these settings, the system creates lot master data with attribute values that you can view using View Item Lots (.NET UI). Previously, the system did not prompt for lot attribute values in this scenario.
CRMFG-17226	The system now displays the correct error-display wording for <i>production order</i> and not <i>work order</i> in production order programs. Previously, the system displayed <i>work orders</i> in the error messages.
CRMFG-17137	Production Order Collection now selects the correct production order to modify when there are multiple orders with the same order number. Previously, when multiple production orders with the same order number existed, after you split the a repetitive or production order, the collection did not select the correct order,
CRMFG-17232	Production Line Calendar Exception Maintenance and Production Line Calendar Exception Browse no longer no longer has issues with the Next/Prev buttons. Previously, when you clicked the buttons, the system scrolled through records but not the correct calendar detail records. Also, the Production Line field now includes a lookup browse, and the browse now displays all shift fields, where it previously displayed only some shift fields.
CRMFG-16647	Production Order Collection now correctly displays the machine in supporting browses. Previously, supporting browses in Production Order Collection left the machine field blank in supporting browses. This led to the system displaying incorrect operations as you drilled down further into data in lower browses.

Planning and Scheduling Workbenches Fixes

The following table lists fixes for the Planning and Scheduling Workbenches

Table 24
Workbenches Fixes

QAD Internal Ticket ID	Description
CRMFG-17144	The system now correctly sets the MSWPSW Release/Print field to No in the Details panel of the workbenches-embedded Production Order Maintenance once you print or release the production order. Previously, the field was set to Yes after you released or printed an order.

