

TOTA360 Manufacturing

User Guide

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This guide covers every function and feature of the TOTA360 Manufacturing app as of version 1.2. It is written for users who will be setting up master data, creating production orders, executing operations, and monitoring manufacturing performance.

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1. Getting Started

1.1 What Is TOTA360 Manufacturing?

TOTA360 Manufacturing is a standalone production management application built on Zoho Creator. It connects to TOTA360 Core for stock control, FIFO costing, and Zoho Books integration, giving you end-to-end manufacturing management within the Zoho ecosystem.

Key capabilities:

- Multi-level Bills of Materials with versioning and approval
- Manufacturing Orders that cascade into Works Orders per assembly level
- Backward scheduling engine with At Risk detection and alternative work centre selection
- Real-time operation execution - start, pause, finish with time tracking and QC
- Per-operation cost recovery - material, labour, and overhead - posted to Zoho Books automatically
- Movement Tasks for WIP transfers between work centres and warehouses
- Subcontract PO auto-generation in Core
- Work Centre Capacity Heat Map for forward capacity planning
- Operation Logs with QC outcome tracking and WorkDrive attachment retention
- Built-in reports: cost variance, scrap rate, rework rate, BOM version history

1.2 Navigation

The Manufacturing app has a sidebar with the following main areas:

- Manufacturing Dashboard - scheduler view, dashboard tabs, WO and MO lists, reports
- Manufacturing Orders - create and manage MOs
- Works Orders - view and manage all WOs
- Setup - Bills of Materials, Routes, Operations, Operators, Work Centres, Shift Calendars
- Settings - app configuration, record number counters

The Manufacturing Dashboard contains the following tabs:

- Manufacturing Dashboard - scheduler view with At Risk flags and WO sequencing
- Work Centre Capacity Heat Map - per-WC capacity utilisation by week
- Manufacturing Orders - MO list with status filter
- Works Orders - WO list with status filter
- Reports - Cost Variance, Scrap Rate, Rework Rate, BOM Version History, Operation Logs

1.3 Prerequisites

Before creating production orders, ensure the following are configured:

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- TOTA360 Core deployed with: WIP and Storage Warehouse Locations, WIP Control GL account, Labour Recovery GL account, Overhead Recovery GL account
- Items synced from Core to Manufacturing (Items, Warehouses, GL Accounts, Suppliers)
- At least one Shift Calendar configured
- Work Centres configured with Scheduling_Mode
- Operations and Routes defined and approved
- Bills of Materials approved
- For Rework: Rework GL account in Core (system_name = 'rework'), Rework Route configured, ZCRT_ID set in App Settings

2. Master Data Setup

Configure master data in this order: Shift Calendars → Work Centres → Operators → Operations → Routes → Bills of Materials.

2.1 Shift Calendars

Shift Calendars define your working hours and days. The scheduler uses Shift Calendars to calculate realistic Plan Start and Plan End times for each Works Order.

Creating a Shift Calendar

- 1 Navigate to Setup → Shift Calendars. Click New Shift Calendar.
 - 2 Enter calendar details: Name (e.g. Standard Week), description.
 - 3 Add Shift Lines - one row per shift per day. Fields: Day of Week, Shift Name, Start Time, End Time, Break Minutes, Is Working Day.
 - 4 Save. Total Hours Per Week is calculated automatically.
-  Multiple shifts per day are supported - use Shift Name to differentiate (e.g. Morning, Afternoon).
-  End Time must be after Start Time. Break Minutes cannot exceed the shift duration. A Shift Calendar cannot be set to Active status with zero total working hours per week - at least one working day must have valid Start Time, End Time, and (if entered) a Break Minutes value less than the shift's duration.

2.2 Work Centres

Work Centres represent physical production areas or machines. Each Work Centre has a Scheduling Mode and an optional Shift Calendar.

Creating a Work Centre

- 1 Navigate to Setup → Work Centres. Click New Work Centre.
 - 2 Enter details: Name, Work Centre Type, Shift Calendar (lookup).
 - 3 Set Scheduling Mode: Work Centre - scheduler uses machine capacity only. People and Machine - scheduler considers both machine and operator availability, taking the longer duration.
 - 4 Set Alternative Work Centres - select other Work Centres to use when this one is at capacity. Scheduler auto-selects alternatives during conflict resolution.
 - 5 Work Stations (individual machines within this Work Centre) are enabled app-wide, not per Work Centre - see Section 2.3.
 - 6 Set Percentage Efficiency to adjust effective capacity (100% = full capacity).
-  Cost recovery rates (Setup, Overhead, Labour) are configured on Operations, not on Work Centres. See Section 2.5.

2.3 Work Stations

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Work Stations represent individual machines within a Work Centre. Work Station records can only be created once an administrator has enabled Work Stations for the app via App Setting (manufacturing.work_stations_enabled - see Section 13.1). This is a one-time, app-wide setting, not a per-Work-Centre toggle. Attempting to create a Work Station before this is enabled is blocked with a clear message.

Navigate to the Work Centre record and use the Work Stations tab to create Work Station records. Fields: Name, Shift Calendar, Percentage Efficiency, maintenance fields.

2.4 Operators

Operators are the people who execute operations. They can be linked to a Zoho user profile (optional - external contractors can be Operators without app logins).

- 1 Navigate to Setup → Operators. Click New Operator.
- 2 Enter name and details. Optionally link to a User Profile.
- 3 Save. Operator is now available in the Operation Start UX for selection.

💡 *Setting an Operator to Inactive removes them from active selection lists but preserves their history.*

2.5 Operations

Operations define individual production steps. They carry quality point types, flush method defaults, and cost recovery items.

Key Operation Fields

- Name - the operation name shown in the Operations Panel
- Quality Point Type - what happens at this step (Record Process Scrap, Record Output Scrap, etc.)
- Setup Recovery Item - Item (Product_Type = Overhead) charged at Setup_Time_Minutes / 60 hours per operation completion
- Overhead Recovery Item - Item (Product_Type = Overhead) charged at Run_Time_Minutes_Per_Unit × WO quantity / 60 hours per operation completion
- Labour Cost Item - Item (Product_Type = Labour) charged at actual duration minutes / 60 hours per operation completion

⚠️ Leave cost items blank if this operation has no overhead or labour to recover. Items must have Product_Type = Overhead or Labour respectively.

2.6 Routes

Routes define the sequence of Operations for a production process. A Route is assigned to a BOM and drives the scheduling and execution sequence on Works Orders.

Creating a Route

- 1 Navigate to Setup → Routes. Click New Route.
- 2 Add Route Lines - one row per operation. Fields: Order of Operation, Operation (lookup), Work Centre (lookup), Shift Calendar override.

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3 Set concurrent options (optional): Starts Concurrently with Previous - the operation starts before the previous one finishes. Overlap Percentage - how much of the previous operation must complete before this one starts (0–100%).

4 Set Transfer Required (optional): if the output of this operation must be physically moved before the next can start, set Transfer Required = true. Set Transfer To Work Centre or Transfer To Warehouse.

5 Approve the Route. Status → Approved. Route Lines are locked.

 *Transfer Required creates a Movement Task at operation completion - see Section 6.6.*

2.7 Bills of Materials

A Bill of Materials (BOM) defines the components, quantities, and structure for assembling a finished item. Each BOM version is a standalone record. Multiple Approved versions of the same Assembly Item's BOM can coexist by design - you select which version to use at Manufacturing Order creation time. Superseded is an exclusively manual action, available from the BOM's own button bar.

Creating a BOM

1 Navigate to Stock → BOMs. Click New.

2 Select Assembly Item and Route. The Route defines the operation sequence for this BOM.

3 Add BOM Lines - one row per component. Fields: Item, Quantity, UoM, Flush Method, Operation (which operation consumes this component). The Operation field only offers Operations that are present on the BOM's currently-selected Route.

4 Set Flush Method per line: Back-flush - automatically issued at operation completion. Manual - operator reviews and confirms quantity in the Operation Finish dialog before issue (not Material Edit UX, which is Additional Material only).

5 Add By-Products (optional) - items produced as a by-product of assembly. Cost Method: Average Cost (default) or Zero.

6 Add Subcontract lines (optional) - set Supplier on Subcontract lines for automatic PO generation.

7 Approve. Status → Approved. BOM Lines locked. BOM available for Manufacturing Order creation.

 Circular reference detection runs at Approve. A BOM that references itself (directly or indirectly) will be blocked.

Changing a BOM's Route clears the Operation selection (and exits Edit mode) on every existing component line - the previous Route's Operation choices may not exist on the new Route. Each line needs to be re-opened for editing and its Operation re-selected.

 *BOM Component Types: Goods and Subcontract only. Labour is not a BOM line item - use Operation cost items instead.*

3. Manufacturing Orders

A Manufacturing Order (MO) is the top-level production instruction. It captures a BOM snapshot and creates a cascade of Works Orders - one per assembly level.

3.1 Creating a Manufacturing Order

- 1 Navigate to Manufacturing → Manufacturing Orders. Click New.
- 2 Select Assembly Item. The BOM picklist filters to approved BOMs for that item.
- 3 Select BOM. The BOM snapshot is taken at this point - component quantities and structure are frozen.
- 4 Set Quantity Planned, Warehouse, Expected Delivery Date (**Required by Date**). Warehouse is where the finished good will be received in Core.
- 5 Review component lines. The Manufacturing Line UX shows all BOM components. You can override Suppliers on Subcontract lines.
- 6 Save. MO created with Status = Draft.

3.2 MO Lifecycle

- Draft → Review (send for approval)
- Review → Approved
- Review → Draft (rejection - reset)
- Approved → Confirmed
- Confirmed - Create WOs available
- Auto-completes to Completed when the last Recursion Level 1 WO finishes
- Void (from any pre-Started status)

3.3 Creating Works Orders (Cascade)

Once the MO is Confirmed, click Create WOs to cascade Works Orders from the BOM snapshot.

- Child WOs (sub-assemblies) are created first - Recursion Level 2 and above
- Parent WO (finished good) is created last - Recursion Level 1
- Each WO is linked to the MO and to its parent WO via Related Transactions
- Stock check runs automatically - WOs with sufficient stock are set to Stock Reserved



Create WOs is idempotent - running it again will not duplicate existing WOs.

4. Works Orders

4.1 WO Lifecycle

- Draft → Review → Approved → Confirmed → Scheduled → Started → Finished
- On Hold (from Confirmed, Scheduled, or Started)
- Void (from any pre-Started status)
- Note: Parent WO cannot be Confirmed before child WOs are Confirmed
- Note: Parent WO Finish is blocked until all child WOs are Finished

4.2 WO Confirm

Confirming a WO commits it to production. At Confirm:

- Subcontract lines are validated - all must have a Supplier set
- Draft Purchase Orders are auto-created in Core against each Subcontractor (grouped by Supplier)
- WO is linked to the MO and ready for scheduling

4.3 Editing a WO

Component lines can be amended at Confirmed or Scheduled status by authorised users. Amendments create delta records - original lines are preserved. Adjustment Reason is required.

4.4 WO Void

Voiding a WO reverses all component issues and the assembly Stock Transfer in Core. All FIFO lots are restored. Void is only available pre-Started.

4.5 Start No Earlier Than

Planners can set a Start No Earlier Than date on a WO to constrain the scheduler. The scheduler will not place the WO start before this date. The field is editable at Confirmed, Scheduled, and On Hold status. Saving a change triggers an automatic reschedule.

5. Scheduling

The scheduling engine calculates Plan Start Time and Plan End Time for each Works Order based on the Route, Operations, Shift Calendar, and required delivery date.

5.1 How Scheduling Works

- Backward scheduling - starts from Expected Delivery Date and works backward
- Each operation duration is calculated from Route_Line timing and Work Centre Shift Calendar
- People and Machine mode Work Centres consider both machine and operator pools - the longer duration is used
- Capacity conflicts are detected - if a time slot is occupied by another WO, the scheduler finds the next available slot
- Alternative Work Centres are tried automatically on conflict
- At Risk is flagged with a reason when the WO cannot meet its required date

5.2 Running the Scheduler

- Schedule All WOs - Manufacturing Dashboard → Schedule All WOs button. Reschedules all active WOs.
- Schedule single WO - open the WO record and click Schedule.
- Daily automatic reschedule - runs overnight via the scheduled Admin Task.

5.3 At Risk Reasons

- Lead Time Insufficient - cannot meet the delivery date even without conflicts
- Capacity Unavailable - time slot occupied and no alternative available
- Sequence Conflict - depends on a predecessor WO that is also delayed
- Dependency Blocked - predecessor WO not yet at a status that permits scheduling

6. Executing Operations

Once a WO is Started, operators execute operations one by one using the Operations Panel on the WO record page. The panel shows all operations in sequence with real-time status badges and action buttons.

6.1 Starting an Operation

- 1 Open the WO record. Navigate to Works Orders and open the relevant WO.
- 2 Find the operation in the Operations Panel. Operations are listed in sequence. The first available operation shows a Start button.
- 3 Click Start. The Operation Start dialog opens. Select the Operator from the picklist.
- 4 Submit. An Operation Log record is created. The Operations Panel updates to show In Progress with the operator name.

 *If the operation shows Awaiting Transfer instead of Start, a Movement Task must be completed first - see Section 6.6.*

6.2 Pausing and Resuming

Click Pause on an In Progress operation to record a break. The total duration accumulates across all sessions for the same operation.

Click Resume on a Paused operation to start a new session. Select the Operator (may be different from the original).

6.3 Recording Materials

Click Materials on an In Progress or Paused operation to open the Material Edit dialog. This dialog is for unplanned Additional Material only - planned Manual-flush component lines are not reviewed here. Item is fixed; only Quantity can differ from planned, and only for genuinely new lines added through this dialog.

- Planned Manual flush lines are not on this dialog - their quantity is reviewed and adjusted in the Operation Finish dialog itself, at the point the operation is finished (see Section 6.5)
- Unplanned materials - add additional components not on the original BOM. These are flagged as additional material lines.

 *Back-flush lines are issued automatically at operation completion - you do not need to record them here.*

6.4 Quality Control Tasks

If the operation has QC tasks defined, the Inspect button appears after the operation starts. Click Inspect to work through each pending task.

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- Pass - task is complete, no further action
- Fail with scrap - enter scrap quantity. A Stock Transfer is created in Core to write off the scrap.
- Batch or serial number entry is enforced if the item being QC'd requires tracking

💡 All QC tasks must be completed before the operation can be finished.

6.5 Finishing an Operation

- 1 Click Finish on an In Progress operation. The Operation Finish dialog opens.
- 2 Enter Output Qty. If any Manual-flush components are on this operation, their Materials section becomes editable here - confirm or adjust the Quantity actually consumed (Item is fixed). If this is the final operation in the Route, Scrap_Qty and Scrap_Reason fields are also available - Scrap_Reason is a required picklist (Keyword Category "Scrap Reason") whenever Scrap_Qty is greater than 0.
- 3 Complete any QC tasks shown.
- 4 Submit. Cost recovery fires automatically.

At operation completion the system automatically:

- Issues Back-flush component lines from stock in Core (G033a) - FIFO cost returned
- Issues Labour and Overhead cost items if defined on the Operation
- Posts a journal to Zoho Books: Dr WIP Control / Cr Labour Recovery + Cr Overhead Recovery
- Creates a Movement Task if Transfer Required is set on this Route Line

💡 Scrap_Qty is only available on the final operation in the Route (the last step before WO completion).

6.6 Movement Tasks

A Movement Task is created automatically when an operation with Transfer Required = true completes. It tracks the physical movement of WIP material to the next work centre or warehouse.

Movement Task Lifecycle

- Confirmed - created automatically at operation completion. Next operation shows Awaiting Transfer.
- In Transit - click In Transit in the Operations Panel. Material is being moved.
- Delivered - click Delivered when material arrives at destination. Next operation Start button becomes available.

When the destination is a different warehouse from the WO source warehouse, Delivered triggers an automatic inter-warehouse WIP stock transfer in Core (Transfer Stock Transfer, full FIFO, no journal entry required).

⚠ Do not start the next operation until the Movement Task is Delivered. The system blocks this - the Start button shows Awaiting Transfer until delivery is confirmed.

7. Works Order Completion

When all operations are complete and all QC tasks are passed, the WO can be Finished.

7.1 Finishing a Works Order

- For Recursion Level 2+ (sub-assembly) WOs: the assembly item lands at the WIP warehouse location in Core. It is available for issue to the parent WO.
- For Recursion Level 1 (finished good) WOs: the assembly item lands at the Storage warehouse location in Core. The Dr Stock / Cr WIP Control journal is posted to Zoho Books.
- Serial or Batch Number is auto-generated in Core at completion (per item tracking settings).
- By-products are received into stock in Core at average cost.

 *The Finish button on the parent WO is disabled until all child WOs are Finished.*

7.2 Cost Accumulation

By the time a WO is Finished, the full cost has already been accumulated per-operation:

- Material cost - from FIFO issues via G033a at each operation completion
- Labour cost - from Labour Items issued at each operation completion
- Overhead cost - from Setup and Overhead Recovery Items issued at each operation completion

The WO completion journal (Dr Stock / Cr WIP Control) closes out the WIP balance for the finished assembly.

8. Subcontract Operations

When a BOM line has Supplier set, the system automatically creates a Draft Purchase Order in Core when the WO is Confirmed.

8.1 Subcontract Workflow

- 1** Set Supplier on BOM Line. The default Subcontractor is set on the BOM Line.
- 2** Override Supplier at MO creation (optional). The Subcontractor field on the Manufacturing Line UX allows override per component.
- 3** Confirm WO. Draft PO is created in Core against the Subcontractor. One PO per Supplier grouping all their lines.
- 4** Review and Confirm PO in Core. Navigate to Core → Purchase Orders. Review the Draft PO and Confirm it.
- 5** Start WO. The system checks all Subcontract POs are no longer Draft before allowing WO Start. Blocked if any PO is still Draft.

 *Subcontract PO backlinks are visible on the WO Transaction Lines - Related Transaction Line links to the Core PO line.*

9. Rework

When a finished assembly fails quality inspection, a Rework WO can be created to bring it back through production.

9.1 Prerequisites for Rework

Before using Rework, the following must be configured:

- A Rework GL account in Core with system_name = 'rework' and Is_System_Account = true
- A Rework Route in Manufacturing - at least one operation, with Labour and/or Overhead cost items set on the operation, and Status = Active
- App Settings: manufacturing.rework_zcrt_id set to the ZCRT_ID of the Rework Route

⚠ The Rework button is disabled if manufacturing.rework_zcrt_id is not set in App Settings, or if the referenced Route is not Active.

9.2 Rework Workflow

- 1 Open a Finished WO that is not itself a Rework WO. The Rework button is visible in the action bar.
- 2 Click Rework. A new Draft Rework WO is created automatically and you are redirected to it.
- 3 Confirm the Rework WO - follow the standard Confirm flow.
- 4 Schedule the Rework WO - the Rework Route's operations are used for scheduling.
- 5 Start the Rework WO.
- 6 Add materials if needed - the Materials button appears at Started status. Select Item, Quantity, and Reason. Additional material lines appear in the Components panel.
- 7 Execute operations using the Operations Panel - Start, Finish each operation in sequence.
- 8 Finish the Rework WO. The system posts Dr Rework Expense / Cr WIP Control to Zoho Books. No new stock quantity is added - the rework item was already in stock.

The assembly item's On Hold quantity is released in Core when the Rework WO is Finished. The item is then available for allocation and shipment.

💡 Additional materials added to a Rework WO are visible in the Operation Finish dialog for the relevant operation.

⚠ Rework WOs cannot themselves be reworked. The Rework button does not appear on Is_Rework = true WOs.

10. Capacity Heat Map

The Work Centre Capacity Heat Map gives a forward view of capacity utilisation per Work Centre per week. It helps planners identify bottlenecks before they affect production schedules.

10.1 Generating the Capacity Heat Map

- 1 Navigate to Manufacturing Dashboard → Work Centre Capacity Heat Map tab.
- 2 Click Generate. The system calculates Shift_Minutes available per Work Centre per week and compares against scheduled WO minutes committed to each Work Centre.
- 3 Review the heat map. Rows show Work Centres; columns show weeks. Cells are highlighted where a Work Centre is over capacity for that week.

Over-capacity cells indicate that scheduled work exceeds available shift minutes. Review At Risk WOs and consider adjusting routes, delivery dates, or alternative Work Centre assignments.

 *Run the scheduler first (Schedule All WOs) before generating the Capacity Heat Map, to ensure scheduled assignments are current.*

11. Operation Logs

Operation Logs record every start, pause, resume, and finish event for each operation on a WO. They include the operator, actual duration, output quantity, scrap quantity, QC task outcomes, and any attachments captured during inspection.

11.1 Viewing Operation Logs - Dashboard Report

- 1 Navigate to Manufacturing Dashboard → Reports → Operation Logs.
- 2 The report shows all Operation Log records across all WOs - searchable and filterable.
- 3 Each row shows: WO reference, operation name, operator, duration, output qty, QC Outcome chip, and attachment links.
- 4 Click a row to open the full Operation Log record page showing the QC Tasks detail and any WorkDrive attachments.

11.2 Viewing Operation Logs - WO Record Tab

- 1 Open a WO record.
- 2 Navigate to the Operation Logs tab.
- 3 All Operation Logs for this WO are shown with a colour-coded QC Outcome chip per row.

QC Outcome chip colours:

- Green - all QC tasks for that operation were passed
- Amber - some QC tasks passed, some incomplete or failed
- Red - no QC tasks completed

💡 Attachment links in the Operation Logs tab open the relevant WorkDrive file directly. Attachments are stored in a dedicated folder per Operation Log and are not lost if the *Inspect_UX* form record is deleted.

12. Reports and Dashboard

12.1 Manufacturing Dashboard

Navigate to Manufacturing Dashboard for the scheduler view. Shows all active WOs with sequence, Plan Start/End times, At Risk flags, and status. Use Schedule All WOs to reschedule everything in one click.

12.2 Built-in Reports

Navigate to Manufacturing Dashboard → Reports tab for the following reports:

- WO Cost Variance - planned vs actual cost by WO (last 90 days). Grouped by Material, Labour, Overhead. KPI cards: WO count, planned, actual, variance, variance %.
- Scrap Rate - scrap rate by Item/Operation/Work Centre (last 90 days). Scrap_Qty is recorded by operators at the final operation of each WO. Threshold colouring: >10% = red, >5% = amber. KPI cards: output, scrap, overall rate.
- Rework Rate - rework WOs as % of finished WOs (last 90 days). KPI cards: finished, rework raised, rework open, rework finished, rate %.
- BOM Version History - all BOM versions with status. Uses the standard BOMs list report.
- Operation Logs - all Operation Logs across all WOs, with QC outcome chips and attachment links.

For stock demand and replenishment information, refer to the Stock Planner in TOTA360 Core, which shows committed WO demand, available stock, and projected positions across items.

13. Configuration Reference

13.1 App Settings

Navigate to Settings → App Settings for:

- Default Storage Warehouse Location - where finished goods land at WO completion (Recursion Level 1)
- manufacturing.rework_zcrt_id - ZCRT_ID of the Rework Route. Must be set for the Rework button to be available.
- manufacturing.work_stations_enabled - must be set to true by an administrator before any Work Station record can be created. App-wide, not per Work Centre.
- Manufacturing Order Number prefix and starting counter
- Works Order Number prefix and starting counter

13.2 GL Account Requirements

The following system GL accounts must be configured in Core with Is System Account = true:

- Work-in-Progress Control - debited at component issue (G096 fix), credited at WO completion
- Labour Recovery - credited at operation completion (labour cost recovery)
- Overhead Recovery - credited at operation completion (overhead cost recovery)
- Goods Received Not Invoiced (GRNI) - used for Subcontract PO receipt
- Rework - debited at Rework WO completion (Dr Rework / Cr WIP Control). system_name = 'rework'

13.3 Warehouse Location Types

The following Warehouse Location types must be configured in Core:

- work-in-progress - where sub-assemblies land after G033c (Recursion Level 2+)
- storage - where finished goods land after G033c (Recursion Level 1)
- disposal - excluded from stock availability calculations

13.4 Flush Methods

- Back-flush - component issued automatically at operation completion. No operator input required.
- Manual - operator reviews and confirms the quantity in the Operation Finish dialog's Materials section when the operation is finished (see Section 6.5). Item is fixed; Quantity can be adjusted. Not handled in the Material Edit dialog - that dialog is for unplanned Additional Material only.
- Forward Flush - planned for future release. Not yet active.

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14. Troubleshooting

Symptom	Resolution
WO Confirm blocked - Subcontractor not set	Set the Supplier on the Subcontract BOM Line, or override on the MO component subform. Then re-confirm.
WO Start blocked - Subcontract PO still Draft	Navigate to Core → Purchase Orders. Confirm the Draft PO. Return to Manufacturing and try Start again.
Start button shows Awaiting Transfer	A Movement Task for the previous operation is pending. Click In Transit then Delivered on the Movement Task row in the Operations Panel.
WO scheduling shows At Risk	Check the At Risk Reason field. Common causes: delivery date too close (Lead Time Insufficient), all Work Centres at capacity (no alternative available). Adjust the Expected Delivery Date or check capacity on the Heat Map.
WO Finish button greyed out	All child WOs must be Finished before the parent WO can be Finished. Check child WO statuses.
Component not issued at operation completion	Check the BOM Line Flush Method. Back-flush lines are auto-issued; Manual lines must be confirmed in the Operation Finish dialog's Materials section (not Material Edit UX, which is Additional Material only). Check the Operation field on the BOM Line matches the completing operation.
Journal not posted after operation completion	Check that WIP Control, Labour Recovery, and Overhead Recovery GL accounts exist in Core with Is System Account = true. Check that the Operation has cost items configured if labour/overhead recovery is expected.
Assembly item not in stock after WO Finish	Check Core → Stock Transfers for the Assembly Receive ST. If absent, the G033c call may have failed - check the WO record's Record Settings JSON for the completion details.
Serial-tracked item: MO rejected	MO Quantity Planned must be 1 for serial-tracked assembly items. One MO per unit.
Rework button not visible	Rework button only appears on Finished WOs that are not themselves Rework WOs. Ensure the WO Status is Finished and Is_Rework is not true.
Rework button disabled	Check App Settings: manufacturing.rework_zcrt_id must be set to the ZCRT_ID of an Active Rework Route. If the setting is blank or the referenced Route is not Active, the button is disabled.
Capacity Heat Map shows no data	Click Generate on the Capacity Heat Map tab. Ensure Works Orders have been scheduled (Plan_Start_Time populated) - run Schedule All WOs first if needed.
Operation Logs tab shows no records	Operation Logs are only created when operations are Started and Finished. If no operations have been executed on the WO, the tab will be empty.
QC attachments missing from Operation Log	Attachments are stored in a WorkDrive folder linked to the Operation Log. Check that the WO WorkDrive folder was created correctly. If the attachment was added before MAD044 was deployed, it may have been lost on form delete.