Lean Manufacturing Process Run Instructions

Important Notices

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Chapter 1
Introduction to Infor LX

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Overview of Infor LX

This topic contains information that pertains to all applications of the Infor LX product. This information enables you to perform the following tasks:

- Navigate through menus and screens
- Specify information in the fields on the screens
- Use the screen actions
- Access the online help text
- Become familiar with terms used throughout Infor LX

Navigation

The features described in the following paragraphs help you navigate within and between Infor LX screens and programs quickly and easily.

Menus

Use Infor LX menus to choose individual programs to process or view information. You can call individual applications directly from any menu.

Dates

Infor LX includes full support for dates up to and beyond the year 2000. Although most date fields display six characters, Infor LX stores the date as eight characters to include century information. Use Company Name and Date Format, SYS820, in the System Parameters Generation program, SYS800, to configure century dates and specify dates beyond 1999.

Attention key and quick access icon

The character-based user interface uses the attention key to directly access other programs, menus, and applications. On an Infor LX screen, press the Esc key.

The Webtop user interface uses the Quick Access icon to directly access programs. On an Infor LX screen, click the Quick Access icon.

You must have security authorization to use these features.

Look-up features

On the character-based user interface, a plus sign (+) indicates a prompt-capable field. Use F4 to display a look-up screen.

On the Webtop user interface, an arrow indicates a prompt-capable field. Click the arrow to display a look-up screen.

Most screens called from inquiry programs allow you to search for alphanumeric strings.

Remembered keys

Infor LX remembers certain key values, such as item number, salesperson, or container, in your workstation memory as you process information in certain programs. You can assign one of the following values to each field:

- 0. Infor LX automatically retrieves this value from remember key memory. Infor LX updates this value on a continual basis.
- 1. Infor LX automatically retrieves the value you specify in Display Remembered Keys, SYS080. It does not update the value from any other program.
- 2. Infor LX does not retrieve or update remembered key fields.

Use the Display Remembered Keys program, SYS080, to set up remembered keys.

Standard online help features

Many Infor LX programs display generic help text. Use F1 from within a field on the character-based user interface. Click the Show/Hide Help icon on the Webtop user interface. This generic help text includes help for standard line actions, standard screen actions, which are also called function keys or F keys, the run time parameter, and some screens types.

The information in the generic help text for line actions and screen actions in this document is not included in the help text for individual Infor LX programs and screens. If a line action or screen action other than those defined in the generic help text occurs in a program, the help text for that program describes the specific action.

Additional generic help text is stored in the SSARUNHT document for users of the character-based UI. You can print this document and the individual application run instructions, SSARUN01, SSARUN02, and so on, from the DOC menu on the IBM(R) iSeries(TM) in the character-based user interface.

Generic help text for line actions

Line actions

The following line actions are valid in numerous screens. They have the functions described in the following sections.

1=Create

Specify Create on the prompt line and a value in at least one key field to add new information to the file. The system displays maintenance screens on which you can specify the new data. The system prints the new data on the audit report.

Note: You cannot specify Create next to existing data.

1=Select

On a prompt screen, specify 1 to return the selected data to the original screen.

2=Revise

Specify Revise to change the information for a line. Specify 2 and a value in at least one key field or specify 2 next to a line. The audit report lists the change. If you specify Revise next to a line with inactive information, the system reactivates the information.

3=Copy

Specify Copy to copy existing information. You can specify 3 and a value for at least one key field or you can specify 3 next to a line. The system displays a maintenance screen on which you can specify new data and change existing data.

4=Delete

Specify Delete to deactivate the information on a line. You can specify 4 and a value in the key fields or you can specify 4 next to the line to delete. Use Revise to reactivate deleted information.

5=Display

Specify Display to view information. You can specify 5 and a value in the key fields or you can specify 5 next to a line.

6=Print

Specify Print to print information on the audit trail. You can specify 6 and a value in the key fields or you can specify 6 next to a line.

8=Position To

Specify Position To to move a line to the top of the list. You can specify 8 and a value in the key fields or you can specify 8 next to a line. The system repositions the list to begin with the requested line or, if the line does not exist, to the line that is next in sequence.

After you use the Position To feature, you can page down or you can use the Position To action with a different value, but you cannot page up. You can return to the top of the list if you specify Position To but do not specify a value in the key fields on the prompt line.On a prompt screen, display details matching the information you specified.

10=Search

On the top line of a prompt screen, use 10 and known field data to locate specific information.

Additional line actions

If a program contains additional line actions, see the line actions help text in that specific program for descriptions of those line actions.

Generic help text for screen actions

Many screen actions, also called F keys, perform the same function for every program or screen in Infor LX. Definitions for these screen actions follow.

Enter

Proceed to the next screen of a maintenance program. On the final screen, press Enter to update the file and return to the first screen of the program for additional maintenance activity.

Enter

Validate data in a screen. This function of Enter generally occurs in transaction programs that have an F6=Accept screen action, which saves the data on the screen.

Enter

Send the output from a report or listing program to an output queue for processing.

F1=Help

Display help text. This screen action applies to the character-based user interface only.

F3=Exit

Exit a program and do not record, update, or print the information you specified on the program screens.

F4=Prompt

Display a pop-up screen that lists existing values for the field. A plus (+) character denotes a prompt-capable field in the character-based user interface. In the Webtop user interface, the prompt -capable field has a small arrow that points to the right .

F5=Refresh

On a list screen, redisplay the screen to check the status of an executed function.

On a maintenance screen, redisplay the original values on the screen.

F6=Accept

Accept your changes and exit the program.

F7=Backward

Display previous lines, that is, those alphanumerically closer to A or those with earlier dates.

F8=Forward

Display additional lines, that is, those alphanumerically closer to Z or 9, or those with later dates.

F11=Fold

Display a folded view of the screen that contains additional information. Use F11 again to return the screen to its previous format.

F12=Cancel

Return to the previous screen and do not save values you specified on this screen. If you use F12 to return to a selection screen in a maintenance program, you cancel changes you made to any screens in the program.

F23=More Actions

Display additional line actions. If a screen has many screen actions, you may need to press F24 to see that there is an F23 action, which indicates that additional line actions are available.

F24=More Keys

Display additional function keys.

Generic help text for standard screens

Several categories of screens have identical functionality, though the content differs. These types of screens are explained in the following sections.

Generic help text for list screens

Many Infor LX programs contain screens with lists of information to specify for maintenance or inquiry. You have two options to specify the information to process on a list screen:

- Use the Act field and the key fields that appear at the top of the list.
- Specify a line action in the Act field of the line with the information you want to process.

After you make your entries, press Enter to perform the line action.

Generic help text for filter screens

Some Infor LX programs feature a filter screen, which you can access with F13. The filter screen enables you to filter the data to display. For example, if you use F13 in Warehouse Master Maintenance, INV110, you can display all records by warehouse or active records by warehouse or active records by description. Some filter screens provide sort or sequence options.

Generic help text for the run time parameter

Run Time Parameter (1,0):

Specify interactive to process the data in real time or batch to process the data in the job queue. If you specify interactive processing, your session is unavailable for other tasks until the job finishes.

Infor LX menus

This section describes the menus in Infor LX.

ERPLX main menu

The ERPLX Main Menu is the first of five master menus. You can access the four major Infor LX application groups from this menu:

- Configurable Enterprise Financials, CEF
- Multi-Mode Manufacturing, MMM
- Supply Chain Management, SCM
- Cross-Product Applications, XPA

Specify the abbreviated application group fast path code to access the master menu for the desired application group.

Configurable enterprise financials menu

Use the Configurable Enterprise Financials menu, CEF, to access Infor LX financial applications. Specify the application fast path code to access the desired application menu.

Multi-mode manufacturing master menu

Use the Multi-Mode Manufacturing master menu, MMM, to access Infor LX manufacturing applications. Specify the application fast path code to access the desired Infor LX application menu.

Supply chain management master menu

Use the Supply Chain Management master menu, SCM, to access Infor LX supply chain management applications. Specify the application fast path code to access the desired Infor LX application menu.

Cross-product application menu

Use the Cross Product Application menu, XPA, to access, analyze, and transmit information within Infor LX. Specify the application fast path code to access the desired Infor LX application menu.

Commonly used terms in Infor LX

Reference only

Reference only indicates that the system uses the information for the given field only for reference and does not use it for processing.

Extreme values by default

Some fields display extreme values by default. The system uses an alphanumeric or numeric extreme in these fields if you do not override the value. Use these default values, which are usually specified as ranges, to include all information in the range. The defaults values or any other values specified to designate a range do not have to be valid values in a database file.

(Y/blank)

If the screen displays (Y/blank) for a field, specify Y or Yes for a particular action to take place. Otherwise, leave the field blank. The screen displays (Y/N) if the field requires a Y or an N.

Ranges

Ranges refer to fields you can use to limit an inquiry or report or to display specific data. If there are multiple range fields in a program, you can tailor your inquiry or report to produce only the data you need.

Infor LX sorts the information alphanumerically. Therefore, the value in the From field must be a lower alphanumeric value than the value in the To field.

Infor LX usually inserts extreme values as defaults in the lower and upper fields. See the description for Extreme values by default. The entries you make in range fields do not have to be valid values in a database file.

Review the following suggestions to limit the information:

Specify the first value to include on the inquiry or report in the From field. Leave the To field blank to include all information to the end of the file. For example, you can print a report that starts with the customer number you specify in the From field and stops at the end of the Customer Master file.

Specify the last value to include on the inquiry or report in the To field. Leave the From field blank to start at the beginning of the file. For example, you can perform an inquiry that starts with the beginning of the Customer Master file and ends with the customer number you specify in the *To* field.

Specify the same value in both the *From* and *To* fields. For example, you can limit a display to one customer.

To include a group of items, specify a value in the *From* field and another value in the *To* field. For example, you can perform an inquiry that starts with the first of the month and ends with the last day of the month.

Alphanumeric

Alphanumeric refers to text that contains letters, letters and numbers together, and numbers arranged uniformly with special characters, such as dates in MM/DD/YY format. Infor LX sorts reports and inquiries in ascending alphanumeric order, unless indicated otherwise. Ascending order arranges items from the lowest value to the highest value. Alphanumeric text is sorted in ascending order according to the following rules:

- Special characters, such as $, %, - (hyphen), comma, and period, come before all others
- Lowercase letters come before uppercase letters
- Uppercase letters come before numbers
- Numbers, that is, 0 through 9, come last

A/R, A/P

The documentation uses the abbreviations A/R and A/P to denote the terms accounts receivable and accounts payable, respectively. The abbreviations distinguish the terms from the corresponding program indicators of ACR, and ACP, which precede program numbers, for example, ACR500 and ACP150.

Chapter 2
LMP Overview

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General instructions

This document is divided into the following sections:

- Application overview: This section provides a general description of the functions and highlights of the application.
- LMP menus: This section describes all the menus associated with the application. The program numbers are in parentheses to the right of the program name.
- Related programs: This section lists several other batch programs used by Infor LX for lean manufacturing.
- Run instructions: The actual operating instructions for the application.

Application overview

Lean enterprise processing enables your business to improve productivity through a more efficient use of its people and capacity. An enterprise can take a lean approach to cut its costs and benefit from improved use of labor, shrinking inventory, reduced throughput time, and increased capacity without additional capital expenditure.

A lean enterprise philosophy is more than software; it is a philosophy that empowers people. At its most basic, a lean enterprise eliminates waste by a process of continuous improvement. A lean enterprise eliminates activities that do not add value, such as storage, transportation, and inspection.

To implement lean software but not adopt a lean enterprise culture nor recognize the changes required to a company's operating procedures can create huge problems for the organization. However, as companies in very competitive markets strive for a competitive advantage, those companies either go lean or they do not survive.

In conjunction with the software described below, Infor has a team of experienced business consultants able to assist any company with the challenge to become a lean enterprise.

Lean enterprises require software that can execute depending on customer demand and can reduce the amount of transaction input. The software minimizes the number of manual interventions in the lean

process and helps to eliminate waste. The LMP application simplifies processing and reduces transaction input with the following capabilities:

- LMP introduces the concept of a production cell, which is a unit within a factory totally responsible for the quality, quantity and output of a family of finished products.
- The Cell Workbench program manages the load on the cell in terms of its finite capacity.

The Lean Manufacturing Process application also enhances customer order entry through the following features:

- LMP returns a capable-to-promise, CTP, date in Order Entry, ORD700. A CTP date for delivery is based on availability of capacity, even if no plans for production exist. This date is different from available-to-promise, ATP, which is based on stock and firm planned production minus existing customer commitments. The system compares the load to the capacity of the item's cell to determine the CTP date.
- The application uses Infor LX standard processing to generate shop orders, which automatically and transparently links a shop order to the customer order. With the LMP application, if you delete or change a customer order line, you automatically change the shop order.
- The application automatically creates a line on a contract purchase order from the customer order line for lean purchased items.
- LMP provides a multilevel backflush of materials and labor from production reported against a customer order number or shop order number.
- LMP can automatically allocate a quantity against a customer order line after it reports production or a purchase order receipt.
- LMP lets you automatically link pick confirmation to the invoicing process.
- With LMP you can automatically add a line to a contract purchase order when the system records the use of a kanban item.

Lean manufacturing allows you to schedule the following dates and times on make-to-order customer orders:

- Customer requested dock date: the date on which the item on the order line is to arrive at the customer's site.
- Customer requested dock time: the time of day, in 24 hour clock format, on the customer requested dock date, when the item on the order line is to arrive at the customer's site.
- Customer requested ship date: the date on which the customer requests shipment of the order line. This date is initially the same as the order line request date, LRDTE, unless you specify a date in the Customer-requested Dock Date field. In this case, Infor LX back schedules the date from the Customer-requested Dock Date by the shipping lead time days and hours on the Address Master record.
- Customer requested ship time: the time of day on the customer-requested ship date on which the customer requests the item on the order line to ship. The time is expressed in 24 hour clock format. The time is backward-scheduled along with the customer-requested ship date. Infor LX offsets the time backward from the customer-requested dock date and time by the shipping lead time days and hours on the Address Master record, RCM.

- Capable-to-promise, CTP, ship date: the date scheduled for shipment of the order line by the capable to promise calculation. For a manufactured item, this calculation looks at available cell capacity to determine when to manufacture the order line. Infor LX offsets this date from the manufacturing, shop order, completion date by the dispatch lead time, and adjusts the date to the next ship date and time on the OLM dock scheduling file, if this is used.
- CTP ship time: the calculated time of day in 24 hour clock format, on the CTP ship date, when the order line is scheduled to ship. With the CTP ship date, the time is offset from the manufacturing, shop order, completion date and time by the dispatch lead time, and adjusted to the next ship date and time on the OLM dock scheduling file, if used.
- CTP dock date: the date calculated for when the order line is expected to arrive at the customers site, by forward scheduling the address masters shipping lead time days and hours from the CTP ship date.
- CTP dock time: the time in 24 hour clock format, calculated on the CTP dock date for when the order line is expected to arrive at the customer's site.
- Original request date: the customers initial request date for the order line to ship. The date can differ from the request date and the customer requested ship date, because these dates can change after you enter the order.
- Original request time: the time of day in 24 hour clock format, on the original request date, for the order to ship. The time can differ from the customer requested ship time, which can change after you enter the order.

LMP menus

This section lists the programs on the Infor LX LMP menu.

Lean Processing

- Order Entry - ORD700D1
- Cell Workbench Detail - LMP500D1
- Multi-Level Backflush - LMP600D
- Scheduled Production Schedule Print - PUR540D
- Purchase Order Receipt - PUR550D1
- Pick Confirm - ORD570D1
- Customer Order Pick/Ship Confirm - ORD573D1
- Kanban Procurement Processor - LMP620D

Maintenance

- Cell Maintenance - CAP100D1
- Shop Calendar Maintenance - SFC140D1
- Lean Daily Capacity Maintenance - LMP510D

Inquiries

- Order Inquiry - ORD300D1
- Purchasing Inquiry - PUR300D1
- Material Status Inquiry - INV300D
- Shop Order Inquiry - SFC300D1

Other Options

- Shop Floor Control - SFC
- Order Management - ORD

Related programs

Related batch programs for lean manufacturing processing

- Shop Calendar Calculator - LMP005B
- Capacity Scheduler - LMP010B
- Attribute Utility (Mixed mode) - LMP501B
- Shop Order Rebuild - LMP700B
- Batch Labor Ticket Create - LMP720B
- Access CIC File - SYS954B
- Cell Workbench Batch - LMP500B
- Lean Procurement Processor - LMP620B

Chapter 3
Programs

3

Cell workbench detail, LMP500D

Use the Cell Workbench Detail program, LMP500D, to manage work for a cell. A production cell, in lean terms, is a mini factory dedicated to produce a range of products, usually with similar characteristics. The definition of a cell differs from a work center in that a cell represents not only a group of dissimilar machines arranged together, but also a team of people who are empowered to manage their mini factory. In Infor LX scheduling terms, the system uses a cell as a finite resource, with a daily production rate.

The Cell Workbench program enables a cell scheduler to see the available capacity in the cell and the jobs to work on in the cell, and provides tools to enable the scheduler to manage the throughput of production.

Access: Option 3 from the LMP menu

Add or select a cell

Use Cell Workbench Selection, LMP500D1-01, to select the cell to work with, and to establish the start date for the display of orders on the next screen.

Field descriptions - LMP500D1-01

Fields	Description
Schedule Start Date (8,A):	Specify the start date to use to display orders on the next screen.
Act (2,0):	Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value.
Cell (6,A):	On the prompt line, specify the cell to work with, display, or position the cursor to.

Infor LX displays the cell numbers of all valid cells.

Cell Description (30,A): Infor LX displays the description of the cell.

Screen actions - LMP500D1-01

Commands	Description
Standard screen actions	All screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

View or work with orders

Use the Cell Workbench Detail program, LMP500D2-01, to display all customer orders that are in production or that need production to begin, sequenced by due date.

Field descriptions - LMP500D2-01

Fields	Description
Line actions:	Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value. The following actions are available: **9=Unrelease** Undo a selection for release. The unrelease action changes the status of an order line to -S from either S or +P. This action is available if you did not accept the entire schedule with F6, Accept. **11=Release** Release the order to production. Release to production changes the status of the order line to +P, and changes the status of the associated shop order to 05. If you use F6 to accept the entire schedule, Infor LX allocates and prints the shop order, if your system is set up to do so. You do not have to select an order for release because Infor LX can report production against an unreleased order.

12=Split

Open a new window in which you can split the order. If you split an order, Infor LX creates a new shop order for the split quantity. the new order is linked to the original customer order line. The program reduces the original shop order by the quantity that you split off. The customer order line quantity does not change, but if the due date of the split order is later than the original shop order due date, the background program Capacity Planning Scheduler, LMP010B, schedules a new capable-to-promise, CTP, ship date and time, and a new CTP dock date and time for the customer order line.

Cell (6,0): Infor LX displays the cell you selected in the previous screen.

Cell Description (30,A): Infor LX displays the description of the selected cell.

Total Forward Orders (8,0): Infor LX displays the remaining quantity to manufacture on any selected open orders with dates in the future.

Act (2,A): Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value.

Request Date (8,0): Infor LX displays the customer's original requested ship date from the customer order.

Due Date (8,0): Infor LX displays the warehouse due date from the shop order.

Item Number (35,A): Infor LX displays the item number from the selected order line.

Open Quantity (11,3): Infor LX displays the quantity open on the order line.

Customer (8,0): Infor LX displays the name of the customer for each order line shown, if you specified a customer.

Customer Order Number (9,0)/Line (4,0): Infor LX displays the customer order and line numbers for each order in production or that needs production for the selected cell.

Status (2,A): Infor LX displays the status of the shop order. The following status codes are valid:

Blank

You have not scheduled the order yet, and the order is not due to schedule.

+S

Schedule the order because its due date is on or earlier than the schedule start date.

S

The order is scheduled. The due date is on or earlier than the schedule start date and you accepted the order with screen action F6, Accept.

-S

The order is in the unscheduling process because you used line action 9, Unrelease. The order's status becomes blank or +S after you accept the order with screen action F6, Accept.

+P

Infor LX adds the order to production because you selected the order for release with line action 11, Release. After you accept the order with screen action F6, Accept, the order status becomes P.

P

The order is in production.

Graph:

On the iSeries character-based screen, the bottom half of the window displays a bar graph of daily load vs. capacity from the schedule start date.

The graph displays the following information:

- Daily capacity, calculated as capacity on the shop calendar in hours times the production rate per hour on the cell work center.
- Load, in blue. This is the quantity on the orders due for completion on that day.
- Available capacity, in green. This is the daily capacity minus the load.
- Overload, in red, where the load exceeds the daily capacity.
- Past due load.

You can page forwards and backwards. The display shows three weeks at a time.

Screen actions - LMP500D2-01

Commands	Description
F6=Accept	Saves any changes made on this screen and return to the Cell Workbench Selection screen, LMP500D1-01. A background batch program, LMP500B, processes all requested changes to shop orders and creates new shop orders where you have split order lines. Then LMP500B releases all selected shop orders to production.
F12=Previous	Return to the previous screen.

F14=Mass Release	Release many orders at the same time. For all order lines with a status of either S or +S, the system changes the status to +P.
F17=Item/Facility Quality	Starts the Item/Facility Quality Selection program, SFC121D1. You must have group authority to use this screen action.
F18=Accept (Batch)	Update in batch mode and return to the Cell Workbench screen. A background batch program, LMP500B, processes all requested changes to shop orders and creates new shop orders where you have split order lines. Then LMP500B releases all selected shop orders to production.
F19=Left	Scroll left in the graph to display earlier dates.
F20=Right	Scroll right in the graph to display later dates.
	All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Lean daily capacity maintenance, LMP510D

Use the Lean Daily Capacity Maintenance program to create, revise, or delete information from the Lean Daily Capacity file, LMPSC. Use this program to manually fix information that did not process correctly. For example, if a power or equipment failure aborts the process before all normal file updates are complete during order entry, the information may be incorrect. You can also use this program to manually correct capacity information errors, for example, if one of the other batch programs used to create the information terminates abnormally.

Access: LMP menu

Add or select a cell

Use Lean Daily Capacity Maintenance, LMP510D-01, to create a new cell or to select a cell to maintain.

Field descriptions - LMP510D-01

Fields	Description
Line actions:	All line actions on this screen perform standard Infor LX functions. See *Generic help text for line actions (p. 13)* in the overview information in this document.
Act (2,A):	Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value.
Cell (6,0):	Specify the cell for which to create or maintain lean daily capacity information.
Scheduled Date (6,0):	Specify the scheduled date for the lean daily capacity information to create or maintain.
Shop Order (9,0):	Specify the shop order number for the lean daily capacity information to create or maintain.
Customer Order (9,0):	Specify the customer order number of the lean daily capacity information to create or maintain.
Customer Order Line (4,0):	Specify the customer order line number of the lean daily capacity information to create or maintain.
Remain Qty (11,3):	Infor LX displays the remaining quantity from the Lean Daily Capacity, LMPSC, file. You can change this value on the Lean Daily Capacity Maintenance detail screen, LMP510D-2.
Remain Hrs (8,3):	Infor LX displays the remaining hours from the Lean Daily Capacity file, LMPSC. You can change this value on the Lean Daily Capacity Maintenance detail screen, LMP510D-2.

Screen actions - LMP510D-01

Commands	Description
Standard screen actions	All screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Create or update lean daily capacity information

Use the Lean Daily Capacity Maintenance detail screen, LMP510D-02 to create Lean Daily Capacity file information, or to update the quantity and hours for existing information.

Field descriptions - LMP510D-02

Fields	Description
Cell (6,0):	Infor LX displays the cell for which to create or maintain lean daily capacity information.
Date (6,0):	Infor LX displays the scheduled date of the lean daily capacity information to create or maintain.
Shop Order (9,0):	Infor LX displays the shop order number for the lean daily capacity information to create or maintain.
Customer Order (9,0):	Infor LX displays the customer order number of the lean daily capacity information to create or maintain.
Customer Order Line (4,0):	Infor LX displays the customer order line number of the lean daily capacity information to create or maintain.
Customer Number (8,0):	Infor LX displays the customer number associated with the shop order.
Customer Name (50,A):	Infor LX displays the name of the customer from the Customer Master file.
Item Number (35,A):	Infor LX displays the item number associated with the shop order.
Description (50,A/30,A):	Infor LX displays the description of the item from the Item Master file and the description of the cell from the Workcenter Master file.

Remain Qty (11,3):	Infor LX displays the remaining quantity from the Lean Daily Capacity, LMPSC, file. Specify a value to revise, or create new information.
Remain Hrs (8,3):	Infor LX displays the remaining hours from the Lean Daily Capacity file, LMPSC. Specify a value to revise, or create new information.

Screen actions - LMP510D-02

Commands	Description
Standard screen actions	All screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Multi level backflush, LMP600D

Use the Multi-Level Backflush program to report production, and to backflush materials and labor through multiple levels.

Use one of the following initial selection criteria to choose a shop order to report and backflush:

- Customer order number and line
- Customer order number and item number
- Shop order number
- Item number and warehouse

The program requires that you have a shop order to report production; if no shop order exists, the system can create a shop order. If you select by item and warehouse, the system can find an existing shop order or create a shop order.

This program can backflush single or multilevel bills-of-material (BOMs). For a single level backflush, the program includes all lower, phantom BOM levels until it reaches a level that is not phantom. A multilevel backflush handles all levels. A multilevel backflush requires that subassemblies have their Shop Order Generate flag set to Yes in the Facility Planning Information file, CIC. You do not need to define subassemblies as phantom item types.

This program produces an audit trail, SFC280B, of the multi-level shop order as the shop order is created from this release process. The LMP600B report is printed if any warnings or errors occur as a result of Product Lifecycle Control Restrictions for creating shop orders or assigning items as components to a shop order.

Note that a Not Allowed error for either restriction results in deletion of all shop orders that appeared on the previous audit report, SFC280B, and it stops the process. The starting shop order is not affected by this deletion unless it was created through this process. This occurs if the Use Existing Shop Order field is set to No during processing by the Item/Warehouse option.

The program first creates a subassembly order and books its production receipt, PR, transaction. Then the program reissues the subassembly on a component issue, CI, transaction to its parent order. The program performs this process to prevent negative stock balances, which trigger cycle counts.

The multilevel backflush creates all component CI transactions and subassembly PR transactions at standard quantity per bill-of-material, including scrap factors. The backflush also generates labor backflush transactions at all bill-of-material levels with standard routing hours and work center cost rates.

Because the multilevel backflush uses standard existing Infor LX routines, the process backflushes only the materials consumed and standard labor content at operations designated as non-data-collecting. For a full multilevel backflush, we recommend that you set all but the last operation in each routing to non-data-collecting. The multilevel backflush program runs the Shop Floor Posting program, SFC650D1, for items that are not designated for JIT manufacturing. Items that are not designated for JIT manufacturing have JIT code N in the Item Master file, IIM.

As in Production Reporting, JIT600, and Shop Floor Posting, SFC650, you can override the value in the To Location field and you can override a lot number value. You can record the quantity good and quantity rejected amounts, with reason codes.

You can use this program to reverse incorrectly reported production. To reverse production, specify a negative value in the Quantity Good field. The To Location field and the lot number must match any previously entered values. You cannot report a reversal of a greater quantity than is originally reported.

Production reporting through this program, if run by customer order, allocates the item produced to its customer order line if the auto-allocate customer orders flag is set to 1 for the item in the Facility Planning Information file, CIC.

Access: LMP menu

Specify the shop order

Use Multi-Level Backflush, LMP600D1-01, to specify the shop orders to backflush. To backflush existing shop orders, specify either the shop order number, a customer order and line number, or a customer order and item number. If you specify an item number and warehouse, Infor LX automatically creates the shop order, if needed, and backflushes the order.

Field descriptions - LMP600D-01

Fields	Description
Customer Order Number (9,0):	You must specify either a customer order number and line or line item, or a shop order number, or an item and warehouse. If you specify a customer order number, do not specify values in the Shop Order or Item fields. These fields are mutually exclusive.
Customer Order Line (4,0):	If you specify a customer order number as your selection criterion, you must specify a value either in this field or in the Line Item field. If you specify an order line, the line must be a valid customer order line that has at least one

shop order for a lean item linked to it. If you did not specify customer order number as your selection criterion, leave this field blank.

Customer Order Line Item (35,A): If you specify a customer order number as your selection criterion, you must specify a value either in this field or in the Line field. The line item value you specify here must be a lean item as set up in IDF Enterprise Item. If you did not specify customer order number as your selection criterion, leave this field blank.

Shop Order (9,0): You must specify a shop order number, or a customer order number and line or line item, or an item and warehouse. If you specify a customer order number or an item number as your selection criterion, leave this field blank.

Item Number (35,A): If you specify a shop order number as your selection criterion, Infor LX displays the item number of that shop order in this field.

Warehouse (3,A): If you specify a shop order number as your selection criterion, Infor LX displays the warehouse number of that shop order in this field.

Item Number (35,A): If you specify a customer order number or a shop order number as your selection criterion, leave this field blank.

If you specify item number as your selection criterion, you must specify either a warehouse value or specify Yes in the Use Existing Shop Order field. The warehouse you specify must be a valid non-managed warehouse.

Warehouse (3,A): If you specify item number as your selection criterion you must specify either a warehouse value or specify Yes in the Use Existing Shop Order field.

Alternatively, you can specify a warehouse and also specify Yes in the Use Existing Shop Order field.

The warehouse you specify must be a valid non-managed warehouse. If you did not use item number as your selection criterion, leave this field blank.

Use Existing Shop Order (1,0): Specify Yes to have Infor LX find an existing shop order. Specify No to have Infor LX report production if no shop order exists; the program creates a shop order for the quantity booked.

If you did not specify a warehouse along with the item number, you must specify Yes in this field.

If you did not use item number as your selection criterion, you cannot use this field.

To Location (10,A): The value you specify in the To Location field must be valid in the warehouse included by the selection criterion. If you leave this field blank, the default

value is the To Location field on the last collectable operation of the routing or, if that is blank, the To Location on the Work Center of the last collectable operation of the routing. To force the blank location, use the special value *BLANK. If the warehouse is unknown, the system validates the To Location field on the Multi-level Backflush - Multiple Shop Orders screen, LMP600D-02. However, if you specify an item and a warehouse and specify No in the Use Existing Shop Order field, the system validates the location on the Multi-Level Backflush screen, LMP600D-01.

To Container (10,0): Specify the container number to which to move the item. This field applies only to container-controlled items.

To Lot Number (25,A): The To Lot Number field is only valid for lot-controlled items. Standard Infor LX logic applies for lot validation and generation.

Container Type (10,A): Specify the type of container for this item.

Quantity Good: You must specify either a quantity good or quantity rejected value. If you performed a backflush for at least that quantity, the quantity can be negative. In this case, the To Location and lot values must match those of the previous backflush transaction retrieved from previous JIT production receipt transactions on the Item History file, ITH.

Quantity Good Reason Code: If you specify a quantity good value, specify a quantity good reason code for the quantity you specify. If you do not specify a reason code the system uses the lowest alphanumeric reason code associated with the production receipt transaction type.

Quantity Rejected: You must specify either a quantity good or quantity rejected value. If you performed a backflush for at least that quantity, the quantity can be negative. In this case, the to location and lot values must match those of the previous backflush transaction retrieved from a previous rejected transaction on the Item History file, ITH.

Quantity Rejected Reason Code: If you specify a quantity rejected value, specify a quantity good reason code for the quantity you specify. If you do not specify a reason code the system uses the lowest alphanumeric reason code associated with the rejected transaction type.

Posting Date: This field uses the current date as the default. You can change this to any valid date. If you are using the regional clock, the default appears as the current date for your region code. The system saves the date in this field as is. It interprets the date as the shop order warehouse's regional date.

Multi-Level Flag (1,0): You must set the Multi-Level Flag to single level or multiple levels. The value in this field must match the setting of the previous backflush if you specified a negative quantity.

Pre-Assign a Lot Number to Shop Orders (1,0):	Specify an option to pre-assign lot numbers on shop orders for reporting production. Valid options are: 0 Do not use a pre-assigned lot number, even if it exists on the shop order, for reporting production. 1 Use the pre-assigned lot number on shop orders, if the lot number exists, for reporting production. If the lot numbers do not exist, then automatically create them, and pre-assign the lot numbers to shop orders for lot-controlled items. 2 Use the parent shop order pre-assigned lot number for all lot-controlled items within the multi-level shop order creation process. Multiple items per lot must be supported in system parameters, API820D.
Run Time Parameter (1,0):	Specify Interactive to process the data in real time or Batch to process the data in the job queue. If you specify interactive processing, your session is unavailable for other tasks until the job finishes.

Screen actions - LMP600D-01

Commands	Description
F6=Accept	Submit the job. If the item is serial number controlled, and if you are processing the job interactively, the Serial number assignment/confirmation screen, SFC599D, is displayed. Use this screen to pre-assign serial numbers to the serial number-controlled items on the shop order.
F18=Accept & Continue	Submit the job and return to the main Multi-Level Backflush screen, LMP600D-01. If you are using an existing shop order, you can specify a shop order in LMP600D-02 before returning to LMP600D-01. All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Select a shop order

Use Multi-level Backflush - Multiple Shop Orders, LMP600D-02, to choose a shop order if more than one shop order meets the criteria specified on the first screen, Multi-level Backflush, LMP600D-01.

The due date is interpreted being in the time zone of the shop order warehouse.

Field descriptions - LMP600D-02

Fields	Description
Item:	Infor LX displays the item number from the first screen, Multi-level Backflush, LMP600D-01.
Item Description:	Infor LX displays the description of the item from the first screen, Multi-level Backflush, LMP600D-01.
Quantity Good:	Infor LX displays the quantity good value, which is the number of manufactured or purchased items of acceptable quality, from the first screen, Multi-level Backflush, LMP600D-01.
Quantity Rejected:	Infor LX displays the quantity rejected value, which is the number of manufactured or purchased items of unacceptable quality, from the first screen, Multi-level Backflush, LMP600D-01.
Customer Order Number (of the SO):	Infor LX displays the customer order number for each shop order selected from the criteria specified on the first screen, Multi-level Backflush, LMP600D-01.
Customer Order Line:	Infor LX displays the customer order line number for each selected record that has an associated customer order.
Shop Order Number:	Infor LX displays the shop order number for each shop order selected on the first screen, Multi-level Backflush, LMP600D-01.
Shop Order Due Date:	Infor LX displays the shop order warehouse due date.
Shop Order Warehouse:	Infor LX displays the warehouse of the shop order.
Shop Order Status:	Infor LX displays the status of the shop order.
Quantity Remaining:	Infor LX displays the remaining quantity to make for each shop order.
Quantity Good:	Infor LX allocates the quantity good, if any, that you specified on the first screen, Multi-level Backflush, LMP600D-01, to the listed shop orders, beginning with the closest due date. You can change the apportionment of those quantities here, but the total quantity good must match what you specified on the first screen.
Quantity Rejected:	Infor LX allocates the quantity rejected, if any, that you specified on the first screen, Multi-level Backflush, LMP600D-01, to the listed shop orders, beginning with the closest due date. You can change the apportionment of those

quantities here, but the total quantity rejected must match what you specified on the first screen.

Screen actions - LMP600D-02

Commands	Description
F6=Accept	Save any changes made on this screen and return to the previous screen.
F17=Item/Facility Quality	Access the Item/Facility Quality Selection program, SFC121D1. You must have group authority to use this screen action.
F18=Accept & Continue	Submit the job and return to the main Multi-Level Backflush screen, LMP600D-01. If you are using an existing shop order, you can specify a shop order in LMP600D-02 before returning to LMP600D-01. All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Create a parent container ID

Infor LX displays this screen for a container-controlled item. Use Parent Container Entry, LMP600D-03, to create container IDs for container-controlled, produced items. You designate items as container-controlled in IDF Enterprise Item.

You can use this screen two ways.

- The first way is automatic. Specify the Quantity per Container and the Container Type and press Enter. Infor LX creates enough container IDs to hold the quantity. For example, if the quantity good is 100, from the D2 or D4 screen, and the Quantity per Container is 20, Infor LX creates 5 container IDs, which each hold 20 pieces of the item.
- The second way is manual. Leave the Quantity per Container and Container Type fields blank. Choose the Create line action to create new information. Specify the detail, such as container type, quantity good or bad, and reason code. Press Enter to return to the Multi-level Backflush screen, LMP600D-01.

After you perform all necessary actions, use F6 to accept the information on the Multi-level Backflush screen, LMP600D-01

Field descriptions - LMP600D-03

Fields	Description
Quantity per Container (11,3):	Specify the amount of the item per container. The default value for this item is in the Item Master file, IIM.
Container Type (10,A):	Specify the type of container for this item.
Action (2,0):	Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value.
Container ID (10,0):	Specify the number of the container to work with.
Container Type (10,A)	Specify the type of container for this item.

Screen actions - LMP600D-03

Commands	Description
F6=Accept	Saves any changes made on this screen and return to the previous screen.
F18=Accept & Continue	Submit the job and return to the main Multi-Level Backflush screen, LMP600D-01. If you are using an existing shop order, you can specify a shop order in LMP600D-02 before returning to LMP600D-01. All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

View or modify parent container details

Use the Parent Container Entry Detail screen, LMP600D-04, to specify information for each container. Specify the information on the screen and press Enter. Return to the Parent Container Entry screen, LMP600DD-03 to view your changes.

The system displays this screen in the create, revise, delete, and display modes. You can enter the same fields in the create mode and the revise mode. To delete, press Enter to confirm the deletion.

Choose an action from the Parent Container Entry screen, LMP600D-03, to access this screen.

The top part of this screen displays general information. Specify the specific container information on the lower part of the screen.

Field descriptions - LMP600D-04

Fields	Description
Quantity Good:	This is the number of pieces that were good. You specified this quantity on the Multi-Level Backflush screen, LMP600D-02.
Quantity Good Reason Code:	If you specified a quantity good value, you can specify a corresponding valid quantity good reason code for the quantity you specified; otherwise, the system uses the lowest alphanumeric reason code associated with the production receipt transaction type.
Quantity Rejected:	This is the amount of pieces that were not good. You specified this quantity on the Multi-Level Backflush screen, LMP600D-02.
Quantity Rejected Reason Code:	If you specified a quantity rejected value, you can specify a corresponding valid quantity rejected reason code for the quantity you specified; otherwise, the system uses the lowest alphanumeric reason code associated with the rejected transaction type.

Screen actions - LMP600D-04

Commands	Description
Standard screen actions	All screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Kanban procurement processor, LMP620D

Use the Kanban Procurement Processor program, LMP620D, to create a contract purchase order line for purchased kanban items. This program takes the values you specify and locates a matching supplier contract with a purchase order, and appends a line to the purchase order. The program uses either the quantity you specify for the item or the default purchase kanban quantity from the Facility Planning Information file, CIC.

The program's logic is similar to that of Batch PO Consolidation/Release, PUR650B, except that its input is from the Lean Procurement Processor screen, LMP620D-01, rather than from the Planned Order file, KFP. The background program Batch PO Consolidation/Release, PUR650B, appends shipping instructions to the purchase order lines for the items designated as kanban items

After you convert a purchase order requisition into an actual purchase order on the PUR650-01 screen, the system accesses Batch PO Consolidation/Release, PUR650B. PUR650B processes planned order

records, with the KFP program, but ignores purchased kanban items and does not convert these to schedule purchase orders. To define items as purchased kanban items, set the indicator ICKBAN- to 1 on their facility planning records in the CIC file.

Access: Option 9 from the LMP Menu

Append a line to a purchase order

To add a line to a contract purchase order with the Kanban Procurement Processor program, LMP620D-01, you can specify only the warehouse and the item number. The warehouse must be a valid, non-managed warehouse to which you are authorized. The item must be a valid kanban item. You can also specify the quantity required. If you do not specify a quantity, Infor LX uses the purchase kanban quantity from the Facility Planning Information file, CIC.

If more than one purchase contract exists for the item, standard Infor LX purchasing split rules apply. However, purchase order splitting is strongly discouraged in a lean environment.

When the background batch program PUR650B processes planned orders from the Planned Order file, KFP, the program ignores purchased kanban items. The program does not convert orders for purchased kanban items to scheduled purchase orders. You define a purchased kanban item on the ICKBAN record in the Facility Planning information file, CIC; that is, CIC/ICKBAN-=1.

Field descriptions - LMP620D-01

Fields	Description
Warehouse (3,A):	Specify the warehouse code to associate with the purchase order line that the program creates. The warehouse must be a regular, valid warehouse, neither managed nor sequenced, to which you are authorized. You must specify either a warehouse or a cell.
Item (35,A):	Specify the number of the item for which to create a purchase order line on an existing contract. The item must be a purchased kanban item in the Facility Planning Information file, CIC.
Cell (6,0):	Specify the cell number to associate with the purchase order line that the program creates. You must specify either a warehouse or a cell.
Location (10,A):	Specify an inbound location in the warehouse or cell you specified above.

Quantity (11,3):	Specify the quantity of the item you want on the purchase order line that the program creates. If you do not specify a quantity here, Infor LX retrieves the purchased kanban quantity from the CIC file.
Run Time Parameter (1,0):	Specify Interactive to process the data in real time or Batch to process the data in the job queue. If you specify interactive processing, your session is unavailable for other tasks until the job finishes. After an interactive run finishes, the program displays a message that a line is appended to a purchase order and gives the PO number.

Screen actions - LMP620D-01

Commands	Description
F6=Accept	Save any changes made on this screen and return to the previous screen.
F14=Purchasing Inquiry	Access the Purchase Order Inquiry program, PUR300D1.
F15=Material Status Inquiry	Access the Material Status Inquiry program, INV300D. All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

Specify a vendor

Infor LX displays the Vendor Selection screen, LMP620D-02, only if contracts exist from more than one vendor for the item specified. Use this screen to specify a vendor.

To determine whether more than one supplier exists for the part specified on the initial screen, Kanban Procurement Processor, LMP6210-D1, the program searches the Contract Detail file, HCD, with the item number and warehouse specified. In the Vendor Selection screen, the program displays all matches for which the system date falls within the effective dates in the Contract Detail file, HCD. The program retrieves pricing information from the Vendor Quote file, HQT. The display includes all vendors found and shows the vendor number, name, lead time, and price. Use this screen to specify the vendor to whom to send the purchase order.

Field descriptions - LMP620D-02

Fields	Description
Item:	Infor LX displays the item number from the Kanban Procurement Processor screen, LMP620D-01.
Item Description:	Infor LX displays the item's description from the Item Master file, IIM.
Line actions:	The following line actions are available on this screen: **1=Select** Select this vendor. Infor LX places an asterisk in the Sel field to indicate a selected line. **5=Display Contract Details** Display details of the contract for the vendor selected. **10=Display Vendor Quote** Display the vendor quote for the selected vendor. **13=Deselect** Remove the selection indicator from the Sel field.
Act (2,0):	Specify the number for the line action to perform and press Enter. To use the first line, specify the line action and at least one key field value.
Vendor Number:	Infor LX displays the vendor number associated with the contract from the Contact Detail file, HCD.
Vendor Name:	Infor LX displays the name of the vendor from the Vendor Master file, AVM.
Purchase Order Number:	Infor LX displays the PO number associated with this information.
Lead Time:	Infor LX displays the lead time in days from the Vendor Quote file, HQT, for the contract number associated with this record. If that field is blank, the value in this field is zero.
Price:	Infor LX displays the cost, the price from the Vendor Quote file HQT, and considers effective date range, quantity break levels, and the price break associated with these.

	If more than one quote exists for the contract, Infor LX uses the one with the latest beginning effective date. If the system does not find a quote, the system retrieves the cost from the Cost Master file, CMF. If the system still finds no records, the value in this field is zero.
Quantity	Infor LX displays the quantity from the initial Kanban Procurement Processor screen. You can change this value here.
Sel:	Infor LX displays an asterisk in this field if you select this record.
Contract:	Infor LX displays the contract number associated with this record.

Screen actions - LMP620D-02

Commands	Description
F6=Accept	Save any changes made on this screen and return to the previous screen.
F14=Purchasing Inquiry	Access Purchase Order Inquiry, PUR300D1.
F15=Material Status Inquiry	Access Material Status Inquiry, INV300D. All other screen actions on this screen perform standard Infor LX functions. See *Generic help text for screen actions (p. 14)* in the overview information in this document.

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