

LOGISTIC SUPPORT ANALYSIS

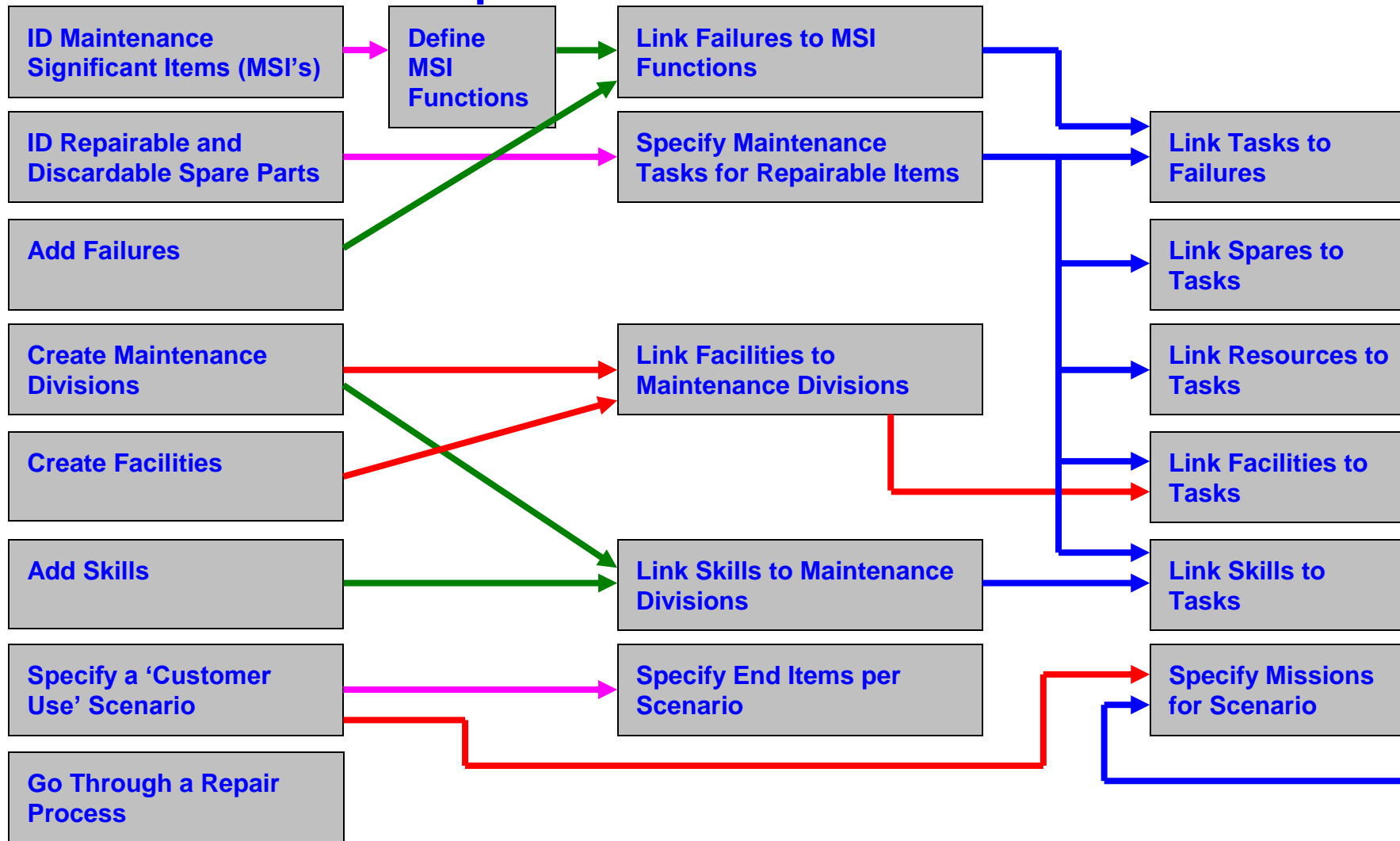
Course Assignment

Revision 12

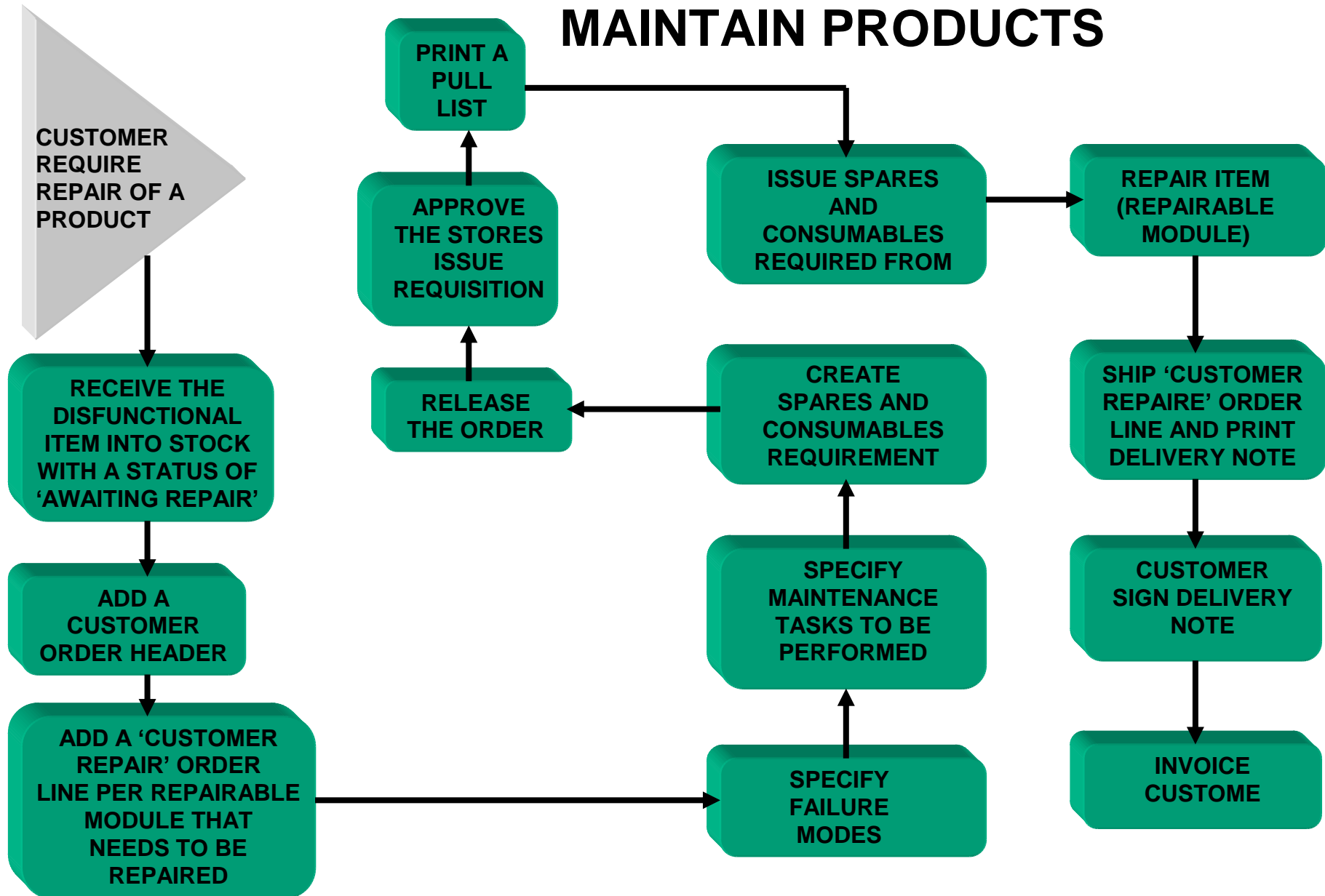
COPYRIGHT © 1997 BY QMUZIK

All rights reserved. The contents, nor any part thereof, nor the format, the configuration or any other aspect thereof may be copied, transformed, reworked, reverse engineered, stored or transmitted, irrespective of the mode or method thereof, or in any other way be dealt with other than only with the express prior written permission of QMuzik.

LOGISTIC SUPPORT ANALYSIS (LSA)



MAINTAIN PRODUCTS



INTRODUCTION

Logistic Support Analysis (LSA) is a method or technique that addresses logistic support and is used to identify logistic support resources required maintaining and repairing products. The LSA process is performed with four goals in mind. They are:

1. To influence design.
2. To identify support problems and cost drivers early.
3. To identify and develop resource requirements for system life.
4. To develop a single logistic support database.

The results of the Logistic Support Analysis (LSA) process are recorded in the System integrated product and process knowledge database. It is comprised of Logistic Support Analysis Records (LSAR) which are stored in System tables such as the Part Master, Product Structure, Part Operation, MSI Missions, Failure, Mission Failure, Task Resource Requirements, etc.

The purpose of the LSAR is to provide a standardised method of compiling and storing logistics and logistics-related engineering data. It fulfils the purpose of maintaining a single database of logistics data considered being important for a manufacturer and supplier of products.

OBJECTIVE : You will learn how to:

- EXERCISE 1** : ID Maintenance Significant Items (MSI's)
- EXERCISE 2** : ID Repairable and Discardable Spare Parts
- EXERCISE 3** : Define MSI Missions/Functions
- EXERCISE 4** : Add Failures
- EXERCISE 5** : Link Failures to Missions/Functions
- EXERCISE 6** : Create Maintenance Divisions/Echelons
- EXERCISE 7** : Create Facilities
- EXERCISE 8** : Link Facilities to the Maintenance Divisions/Echelons
- EXERCISE 9** : Specify Maintenance Tasks for Repairable Items
- EXERCISE 10** : Link Tasks to Failures
- EXERCISE 11** : Link Spares to Tasks
- EXERCISE 12** : Link Resources to Tasks
- EXERCISE 13** : Link Facilities to Tasks
- EXERCISE 14** : Add Skills
- EXERCISE 15** : Link Skills to Maintenance Divisions
- EXERCISE 16** : Link Skills to Tasks
- EXERCISE 17** : Specify a Customer Use Scenario

APPENDIX A : Guidelines for Setting up a Logistic Support Analysis in Q-Muzik

APPENDIX B : Execute a Customer Repair Order

IMPORTANT TO KNOW

The following functions should be part of security profiles to be able to work through this course.

CUSTOMER REPAIR
DIVISION
END ITEMS PER SCENARIO
FACILITIES
FACILITIES PER DIVISION
FAILURE
FAILURE LEVEL
FAILURE STATUS MAINTENANCE
FAILURES PER MSI MISSION
MSI MAINTENANCE KITS
MSI MISSION
MSI MISSIONS PER SCENARIO
PART MASTER
PART OPERATIONS
PRODUCT STRUCTURE
SCENARIO
SKILLS
SKILLS PER DIVISION

INTEGRATED LOGISTIC SUPPORT



FOR WANT OF A NAIL, THE SHOE WAS LOST;

FOR WANT OF A SHOE, THE HORSE WAS LOST;



FOR WANT OF A HORSE, THE RIDER
WAS LOST;

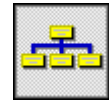


FOR WANT OF A RIDER, THE
MESSAGE WAS LOST;



FOR WANT OF A
MESSAGE, THE
BATTLE
WAS LOST.

EXERCISE 1 ID MAINTENANCE SIGNIFICANT ITEMS (MSI's)



Use the **Part Master** function to identify MSI's for your product.

A maintenance significant item (MSI) is a system, sub-system, or functional group that requires non-trivial logistic support and resources for its preventative and corrective maintenance. The failure of an MSI, or a part thereof, usually causes the loss of one or more of the major functions of an end item with safety, operational and/or major economical consequences.

NOTE:

- Study the Online Help.
- Follow the steps in Figure 1.1 to identify MSI's.

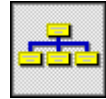
FIGURE 1.1 : ID MSI (MAINTENANCE SIGNIFICANT ITEM)

The screenshot shows the 'Part Master' software interface. The main window title is 'Part Master'. The interface is divided into several sections:

- Part Information:** Part No. (CME00001), Description (PLUG FINAL ASSEMBLY), Commodity (COMMERCIAL), Product (RACING BICYCLE), Source (MANUFACTURED), UOM (EACH), Life Cycle (PRODUCTION MODEL).
- Navigation:** Engineering, L.S.A., Planning 1, Planning 2, Price, Long Description, Revisions, Stock, Attributes.
- Equipment Base Option:** Equipment Base Option.
- Maintenance Significant Item (MSI):** Maintenance Significant Item (MSI). MSI Maintenance Option: [1].
- Denomination Of Life:** Action, Distance, Time, N/A.
- Repair Type:** Repairable, Discardable, Logistical Consideration, None.
- Position Annotation:** No Annotation Allowed, Annotation Allowed Position Quantities Mandatory, Annotation Allowed Position Quantities Optional.
- Special Regulations:** Control Defence Item Candidate (Permit Type), Dangerous Goods Regulation Item. Classification Option: NOT APPLICABLE, Hazard Classification, UN ID Number, Compatibility Class. Passenger Aircraft Allowed, Cargo Aircraft Allowed.

At the bottom, there is a 'Jump To' field, a 'Go' button, and 'Add', 'Change', and 'Delete' buttons.

EXERCISE 2 ID REPAIRABLE AND DISCARDABLE SPARE PARTS



Use the **Part Master** function to identify “Repairable” and “Discardable” spare parts. All replaceable items for the product have to be classified as repairable or discardable. Repairable line replaceable units (LRU’s) are repaired by replacing shop replaceable units (SRU’s) and piece parts (PP’s). In turn SRU’s and PP’s also have to be classified as repairable or discardable. Replacing piece parts (PP’s) repairs Repairable SRU’s and PP’s which can also be classified as repairable or discardable.

TABLE 2.1

OPERATIONAL MAINTENANCE LEVEL (0-LEVEL) →	INTERMEDIATE MAINTENANCE LEVEL (I-LEVEL)	→ BASE/DEPOT MAINTENANCE LEVEL (D-LEVEL)
<p>Repair MSI’s by replacing LRUs (Line Replaceable Unit)</p> <p>Send repairable LRUs to I-level</p> <p>Discard non-repairable LRUs</p>	<p>Repair LRUs by replacing SRUs (Shop Replaceable Unit)</p> <p>Send some repairable SRUs to D-level</p> <p>Repair some SRUs by replacing PP’s (Piece Parts)</p> <p>Discard non-repairable SRUs</p>	<p>Repair SRUs by replacing PP’s</p> <p>Repair PP’s by replacing PP’s</p> <p>Discard non-repairable PP’s</p>



The **Repairable Indicator (MSI Part)** on the **Part Master** is set to identify a part as repairable or discardable.

NOTES:

- Study the Online Help.
- Follow the steps in Figure 2.1 to identify a part.

FIGURE 2.1 : ID SPARES

Part No. CME00002 **1** Source PURCHASED

Description COVER SM WHITE UOM EACH

Commodity COMMERCIAL Product RACING BICYCLE Life Cycle PRODUCTION MODEL

Engineering L.S.A. Planning 1 Planning 2 Price Long Description Revisions Stock Attributes

Equipment Base Option

Maintenance Significant Item (MSI)

MSI Maintenance Option

Denomination Of Life

Action Distance

Time N/A

Repair Type

Repairable Logistical Consideration

Discardable **2** None

Position Annotation

No Annotation Allowed

Annotation Allowed Position Quantities Mandatory

Annotation Allowed Position Quantities Optional

Special Regulations

Control Defence Item Candidate Permit Type

Dangerous Goods Regulation Item

Classification Option NOT APPLICABLE

Hazard Classification

UN ID Number

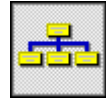
Compatibility Class

Passenger Aircraft Allowed Cargo Aircraft Allowed

3

Jump To Go Add Change Delete

EXERCISE 3 DEFINE MSI MISSIONS/FUNCTIONS



Use the **MSI Mission** function to add a mission for your MSI.

At least one mission has to be defined for an MSI. A mission describes the functioning of an MSI according to certain specifications and tolerances under certain conditions. The size or length of a mission is expressed in the number of “Denomination of Life” (DOL) units (e.g. rounds fired, kilometres travelled, etc.).

NOTES:

- Study the Online Help.
- Follow the steps in Figure 3.1 to add a mission.

FIGURE 3.1 : ADD MISSION

MSI / MSI Parent: CME00001 1

Available MSI Missions

Select	Level	MSI Part Number	Description	DOL Code	Mission	DOL Units	Description
<input checked="" type="checkbox"/>	0	CME00001	PLUG FINAL ASSEMBLY	HRS	m3.1	1000	USE IN EXTREME

2
 3
 4
 5
 6

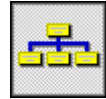
7
 Link Selected MSI Mission(s)

Linked MSI Missions

Select	MSI Part Number	Description	DOL Units	DOL Code	Mission	Description

Apply

EXERCISE 4 ADD FAILURES

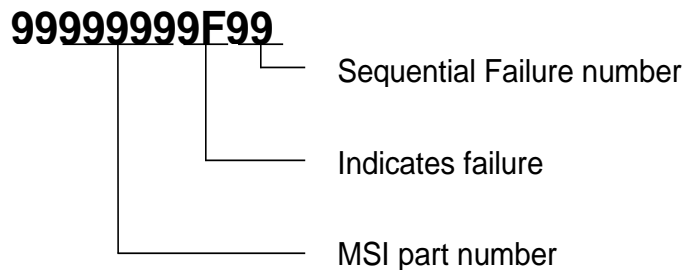


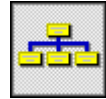
Use the **Failure** function to add failures for your MSI (Maintenance Significant Item).

Conditions caused by failures can, for example, be:

- Premature operation
- Failure to operate at prescribed time
- Intermittent operation
- Failure to cease operation at prescribed time
- Loss of output or failure during operation
- Degraded output or operational capability

The following numbering structure is recommended for failures:





NOTE:

- Study the Online Help.
- Follow the steps in Figure 4.1 to add failures.

FIGURE 4.1 : ADD FAILURES

Failure

Code SWP00151F01 1

Description CONTROL VALVE NOT FUNCTIONING 2

Classification

Preventative Maintenance

Operational 3

Technical

Status

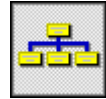
Evaluate

Active

Inactive

4 Add Change Delete

EXERCISE 5 LINK FAILURES TO MISSIONS/FUNCTIONS



Use the **Failures Per MSI Mission** function to link failures.

A failure may be linked to many MSI missions for the same MSI, or it can even be linked to the MSI missions of other MSIs, as long as the failure conditions of such failures are the same for the various missions.

FMECA data that relate directly to the type and size of the mission are:

- Predicted failure rate
- A description of what caused the failure
- The effect that the failure has on the capability of the MSI to perform its mission
- The identification of any safety, or other hazard that the failure will cause
- Description of detection methods
- Etc.

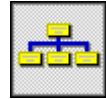
NOTE:

- Study the Online Help.
- Follow the steps in Figure 5.1 to link failures.

FIGURE 5.1 : SELECT MSI MISSION

Mission	DOL Units	Part DOL	Description
M3.1	1000	TIME	USE IN EXTREMELY HUMID COND

FIGURE 5.2 : MSI FAILURE DETAIL



Failures Per Msi Mission

MSI Part: SWP00105 Description: ELECTRICAL MOTOR BOSCH 1.5 KW

Mission Key: Failure Detail | Description | MSI Linked Failure Causes

Available Failure Populate: [] Mission: M1

Available Failures

Select	Number	Type	Status	More	Description
<input checked="" type="checkbox"/>	SWP00109F09	OPERATIONAL	EVALUATE	...	SEAL PLATE DAMAGED DAMAGED

1

Linked Failures

2

Select	Number	Description	Type	Status
		ADDS ALL THE AVAILABLE FAILURES		

Apply

FIGURE 5.3 : ENTER DESCRIPTIVE DATA

Failures Per Msi Mission

MSI Part: SWP00105 Description: ELECTRICAL MOTOR BOSCH 1.5 KW

Mission Key: Failure Detail | Description | MSI Linked Failure Causes

Available Failure Populate: [] Mission: M1

Available Failures

Select	Number	Type	Status	More	Description
<input checked="" type="checkbox"/>	SWP00109F09	OPERATIONAL	EVALUATE	...	

1

Linked Failures

Select	Number	Type	Status	More	Failure Occurrence	Probability Level	S.
<input checked="" type="checkbox"/>	SWP00109F09	OPERATIONAL	EVALUATE	...	1.00000	EXTREMELY UNLIKELY	M

1

Apply

Failures Per Msi Mission

MSI Part: SWP00105 Description: ELECTRICAL MOTOR BOSCH 1.5 KW

Mission Key | Failure Detail | Description | MSI Linked Failure Causes

Apply To All Available Failures — 1 — Apply To All Selected Failures

Detection Method: visual — 2

Cause Of Failure: pressure related — 3

Damage Effect (End Item): none — 4

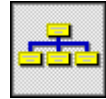
Damage Effect (Local Item): none — 5

Damage Effect (Next Higher Item): none — 6

7

Apply

EXERCISE 6 CREATE MAINTENANCE DIVISIONS/ECHELONS



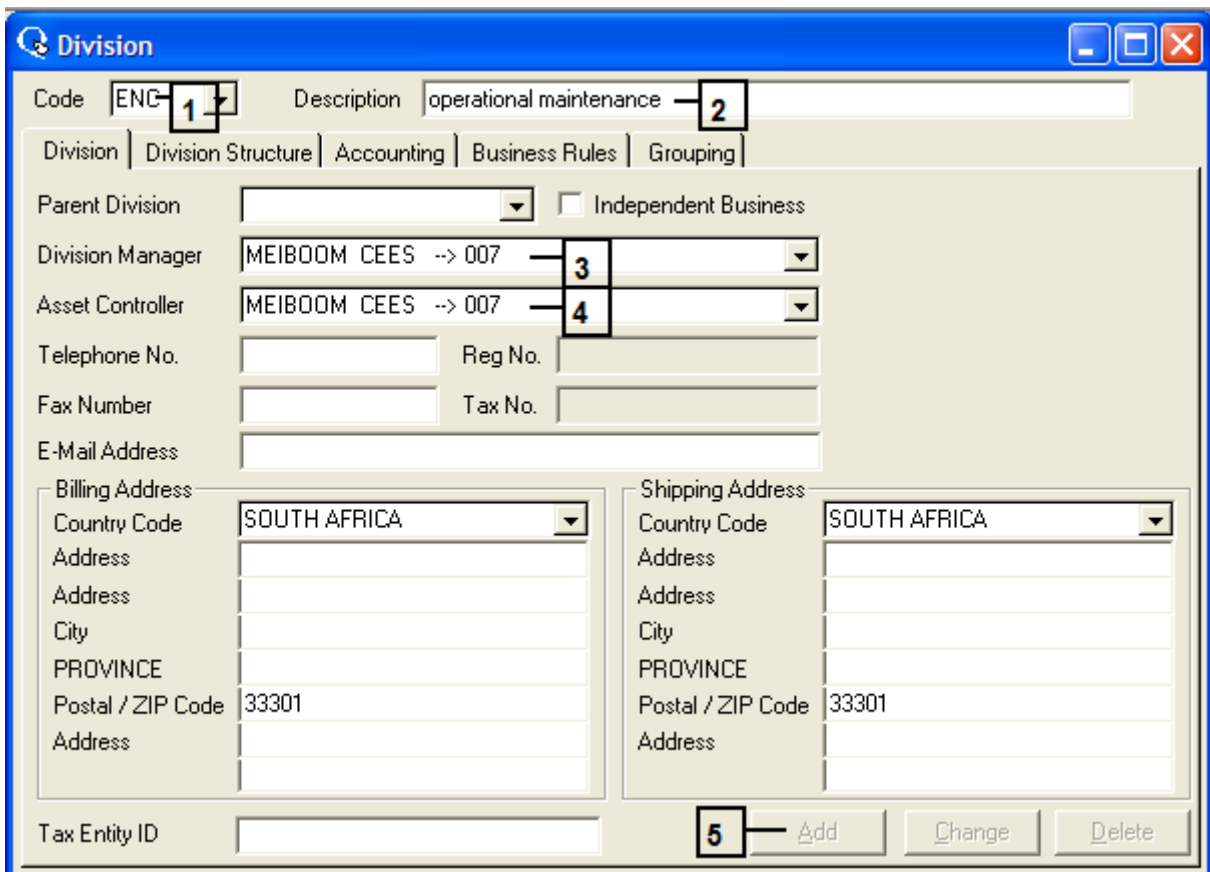
Use the **Division** function to specify maintenance levels. There are usually three basic maintenance levels in the support line of a product, namely:

- Operational (1st Line)
- Intermediate (2nd Line)
- Base/Depot (5th Line)

NOTE:

- Study the Online Help.
- Follow the steps in Figure 6.1 to add maintenance divisions.

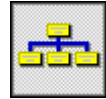
FIGURE 6.1 ADDING MAINTENANCE DIVISIONS



The screenshot shows the 'Division' window with the following fields and values:

- Code: ENG (highlighted with box 1)
- Description: operational maintenance (highlighted with box 2)
- Parent Division: (empty dropdown)
- Division Manager: MEIBOOM CEES --> 007 (highlighted with box 3)
- Asset Controller: MEIBOOM CEES --> 007 (highlighted with box 4)
- Telephone No., Fax Number, E-Mail Address: (empty fields)
- Reg No., Tax No.: (empty fields)
- Billing Address: Country Code SOUTH AFRICA, Address, City, PROVINCE, Postal / ZIP Code 33301, Address
- Shipping Address: Country Code SOUTH AFRICA, Address, City, PROVINCE, Postal / ZIP Code 33301, Address
- Tax Entity ID: (empty field)
- Buttons: Add (highlighted with box 5), Change, Delete

EXERCISE 7 CREATE FACILITIES



Use the **Facility** function to create facilities to be used for maintenance.

NOTES:

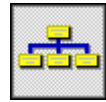
- Study the Online Help.
- Follow the steps in Figure 7.1 to add a facility.

FIGURE 7.1 : ADD FACILITY

The screenshot shows a software window titled "Facilities" with a blue header bar. The window contains the following fields and controls:

- Facility:** A dropdown menu containing the text "FC1001". A callout box with the number "1" points to this field.
- Facility Part Number:** An empty dropdown menu.
- Facility Commodity Code:** A dropdown menu containing the text "CM10". A callout box with the number "2" points to this field.
- Facility Description:** A text area containing the text "OPERATIONAL MAINTENANCE FACILITY". A callout box with the number "3" points to this text.
- Buttons:** At the bottom of the window, there are three buttons: "Add", "Change", and "Delete". A callout box with the number "4" points to the "Add" button.

EXERCISE 8 LINK FACILITIES TO THE MAINTENANCE DIVISIONS/ECHELONS



Use the **Facilities Per Division** function to link facilities to the Maintenance Divisions (i.e. specify what facilities are available for the Maintenance Division).

NOTES:

- Study the Online Help.
- Follow the steps in Figure 8.1 to link facilities to maintenance divisions.

FIGURE 8.1 : LINK FACILITIES TO MAINTENANCE DIVISION

Division Code: ENC 1

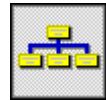
Available Facilities

Facility	Facility Spec Par...	Commodity	Facility Description
FC1002		CM08	MOBILE WORKSHOP
FC2001		CM10	MOBILE WORKSHOP
FC301		CM10	PAINT DRYING OVEN
FC5001		CM10	FACTORY WORKSHOP

Linked Facilities

Facility	Facility Spec Par...	Commodity	Facility Description
FC1001		CM10	OPERATIONAL MAINTENANCE FACILITY

EXERCISE 9 SPECIFY MAINTENANCE TASKS FOR REPAIRABLE ITEMS



Use the **Part Operations** function to create a maintenance library for repairable items in your product. These tasks will be linked to the failures to form maintenance procedures (see Exercise 10).

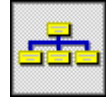
NOTES:

- Study the Online Help.
- Follow the steps in Figures 9.1 and 9.2 respectively to specify maintenance tasks for repairable items.

FIGURE 9.1 : SELECT REPAIRABLE PART

Seq No.	Operation No.	Operation Description	Type	Setup Hours
1	M10	ASSEMBLE LINE PINS	... PRODUCTION	0.00000
2	M15	ASSEMBLE EARTH PINS	... PRODUCTION	0.00000
3	M20	INSERT PINS IN BASE	... PRODUCTION	0.00000
4	M25	INSERT CORD GRIPS IN BASE	... PRODUCTION	0.00000
5	M30	INSTALL COVER	... PRODUCTION	0.00000

FIGURE 9.2 : ADD MAINTENANCE TASKS



Part Operations

Project: []
Part Number: CME00001 | PLUG FINAL ASSEMBLY

View Selection | Operation Maintenance | Operation Copy | Operation Attributes | External Operation Cost

Operation: M30 — 1
Description: INSTALL COVER — 2
Type Of Operation: BOTH MAINT + PROD — 3
Status: Active Inactive
Work Centre: WC_1 — 4
Designer: MEIBOOM CEES --> 007 — 5
Effectivity Date: 07/06/2005 Sequence: 5 — 6
Setup Hours: 0 : 0 : 0.0 Run Hours: 0 : 3 : 0.0
Batch Size: 1 — 7 Scrap %: 0.00 — 8
Assembly Illustration: []
Notes: []

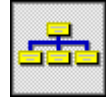
Run Hours: Elapsed — 9 Time Per Piece
Batch Calculation Method: Batch Quantity — 10 Order Quantity

Operation Attributes: Costed — 11 Scheduled Capacity Load
Scheduling: Process Batch: 1 — 12
Start On: SCHEDULED DATE — 13
Cost Ratio: 1.00000 — 14
 Ignore Calendar Complete Before Next

Material Handling: Method: NO BACKFLUSHING
Division: []
Store: [] — 15

Long Desc | Add | Change | Delete

EXERCISE 10 LINK TASK TO FAILURES



Use the **Maintenance Procedure** function to link tasks from the task library of repairable parts to specific failures to form a step-by-step procedure to repair the failure.

NOTES:

- Study the Online Help.
- Follow the steps in Figures 10.1 and 10.2 respectively to link a task to failures.
- Enter the part number of the Repairable Part (i.e. the one to which the task library is linked).

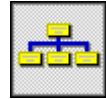
FIGURE 10.1 : SELECT MSI MISSION AND FAILURE

The screenshot shows the 'Maintenance Procedures' window with two tabs: 'Failures Per MSI Mission' (selected) and 'Maintenance Tasks per Failure'. The 'MSI/MSI Parent Part' dropdown is set to 'SWP00109' with a '1' in a box next to it. Below, the 'Available MSI Mission(s)' table lists two missions. The second mission, with part number 'SWP00109' and a '2' in a box, is highlighted. The 'Linked Failures' table below shows two failures: 'SWP001' (PUMP COVER BROKE) and 'SWP00150F07' (WEIR BASKET DAMAGED).

Part Number	Mission	Part Description	Mission Description
SWP00105	M1	ELECTRICAL MOTOR BOSC...	JKKJHKJHKH
SWP00109	M1	PUMP ASSEMBLY	PUMP WATER 1

Failure Number	Failure Description
SWP001	PUMP COVER BROKE
SWP00150F07	WEIR BASKET DAMAGED

FIGURE 10.2 : LINK TASK TO FAILURE



Maintenance Procedures

Failures Per MSI Mission | Maintenance Tasks per Failure

Record Maintained: MSI (SWP00109) MISSION (M1) FAILURE (SWP001).

Show Tasks For Part: SWP00109

Available Maintenance Task(s)

Select	Operation Number	Sequence	Interval Code	Interval	Measurement Base	Task D
<input checked="" type="checkbox"/>	T1		SCHEDULED	9.00	MONTHS	REPLAC
<input type="checkbox"/>	T10					TROUB
<input type="checkbox"/>	T11					DIS-AS

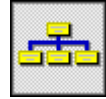
5 [v] [^] [⏏]

Apply

Linked Maintenance Task(s)

Delete	Operation Number	Operation Type	Sequence	Interval Code	Interval	Me

EXERCISE 11 LINK SPARES TO TASKS



Use the **Product Structure** function to link spares required by a maintenance task.

NOTES:

- Study the Online Help.
- Follow the steps in Figures 11.1 to 11.3 respectively to link spares to a task.
- Enter number of Spare's Parent.
- Select SPARE from list.

FIGURE 11.1 : SELECT SPARE IN PRODUCT STRUCTURE

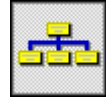
The screenshot shows the 'Product Structure' window with the following details:

- Structure Maintenance** tabs: Engineering & Manufacturing Data | Positioning | L.S.A. Data | Std Substitutes | Project Substitutes | Project WBS Nodes
- View Parts:** Show Active, Show All
- Project Specific Bill Of Material:** Add New Bom, View/Maintain Bom
- Component To Be Linked:** CME00002 (with a '2' in a box next to the dropdown arrow)
- Maintained Parent:** CME00001 (with a '1' in a box next to the dropdown arrow)
- Available Part Table:**

Part Number	Description	Life Cyc
CME00002	COVER SM WHITE	PM

A '3' in a box is next to the dropdown arrow for the Available Part table.
- Linked Components Table:**

Part Number	Description	Quantity
CME000010	EARTH PIN ASSEMBLY	
CME000011	LINE PIN ASSEMBLY	
CME000003	BASE SM WHITE	
CME000004	CORD GRIP	
CME000008	BASE SCREW	
- Copy:** LSA Data, Manufacturing Data, Positioning Data, Part Substitutes
- Effective Project Serial Nrs:** From SN: 0, To SN: 0
- Base UOM Qty:** 1.00000 (with a '4' in a box next to the input field)
- Alter. UOM Qty:** 0.00000
- Base UOM:** EA
- Alter. UOM:** [Dropdown]
- Effective Date:** 08/11/2005
- Buttons:** Del To Op, Logical..., Apply, Navigate



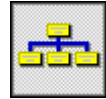
NOTES:

- Enter Repairable Part number (i.e. the one to which the task library is linked).
- The Change Interface screen will appear when you click on the Change button.

FIGURE 11.2 : SELECT TASK FROM TASK LIBRARY

The screenshot shows the 'Product Structure' application window. The 'L.S.A. Data' tab is active. The 'Task Part' field contains 'CME00001' and the 'Description' field contains 'PLUG FINAL ASSEMBLY'. Below this, the 'Operation' section shows 'Number' as 'M30' and 'Description' as 'INSTALL COVER'. The 'Type' is set to 'BOTH MAINT + PROD'. In the 'Type of Link' section, 'Standard Replacement' is selected. The 'Allocation % Of Failure' is set to '1.00'. At the bottom, the 'Maintained Parent Part Number' is 'CME00001' and the 'Linked Component Part Number' is 'CME00008'. The 'Apply' button is highlighted with a box labeled '6'.

FIGURE 11.3 : ENTER CHANGE PROPOSAL NUMBER



Structure Maintenance | Engineering & Manufacturing Data | Positioning | L.S.A. Data

Task Part: PLG0001

Operation: **Change Interface**

Number: PLEASE NOTE : This table is protected and any additions, deletes or changes require an approved Change Proposal.

Type: Change Number: MM885 9

Description: PART OPERATION MAINTENANCE

Type of L:
 Stand
 As Needed Replacement
 Consumed

Required %: 100

Allocation % of Failure: 1.00

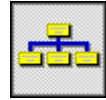
Repair Scrap %: 0.00

10 — [OK] [Cancel]

Maintained Parent Part Number: PLG0002 Description: Plug Base Assembly
Linked Component Part Number: PLG0007 Description: Plug Pin Screw
Qty Per: 3

[Apply]

EXERCISE 12 LINK RESOURCES TO TASKS



Use the **Task/Operation Resource Requirements** function to specify resources such as standard tools, special tools, consumables, documents and sundry spares for a maintenance task.

NOTES:

- Study the Online Help.
- Follow the steps in Figures 12.1 and 12.2 respectively to link resources to a task.
- Enter the number of the Repairable Part (i.e. the one to which the task library is linked).

FIGURE 12.1 : SELECT THE TASK

Task Operation Resource Requirements

Part Number: CME00001 Description: PLUG FINAL ASSEMBLY

Task / Op.: M30 Type: BOTH MAINT + PR Description: INSTALL COVER

Tasks / Operations | Resource | Resource Application

View Task / Operation Types

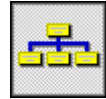
- Production
- Maintenance
- Operator Tasks/Ops.

View Resource Types

- Standard Tools
- Special Tools
- Sundry Consumables
- Sundry Spares
- Documents

Number	Type	Description
M10	BOTH MAINT + PROD	ASSEMBLE LINE PINS
M15	BOTH MAINT + PROD	ASSEMBLE EARTH PINS
M20	BOTH MAINT + PROD	INSERT PINS IN BASE
M30	BOTH MAINT + PROD	INSTALL COVER

FIGURE 12.2 : LINK RESOURCE



Task Operation Resource Requirements

Part Number: CME00001 Description: PLUG FINAL ASSEMBLY
 Task / Op.: M30 Type: BOTH MAINT + PR Description: INSTALL COVER

Tasks / Operations | Resource | Resource Application

Resource Part Number: 0417838-1214 **1**

Machine Setup Data:
 Gauge Length: 0.000 Offset Diameter: 0.000
 Diameter: 0.000 Flute Length: 0.000
 Protusion: 0.000 Offset Height: 0.000

Resource Type:
 Standard Tools
 Special Tools
 Sundry Consumables **2**
 Sundry Spares
 Documents From Part Master
 Documents From Doc Master

Consumed:
 Yes **3**
 No

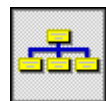
Required Qty.: 1 **4**

Linked Resources

Resource Part/Document	Description/Doc Title	Required Quantity	Resource Type

5 Add Change Delete

FIGURE 12.3 : LINK RESOURCE



Task Operation Resource Requirements

Part Number: CME00001 Description: PLUG FINAL ASSEMBLY
 Task / Op.: M30 Type: BOTH MAINT + PR Description: INSTALL COVER

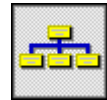
Tasks / Operations | Resource | Resource Application

Resource Part Or Document:
 Resource Document Number **1** Resource Part Number

Resource Part Number: CON002 **2** GLOVES LEATHER

Part Number	Part Description	Operation	Operation Description
SWP00109	PUMP ASSEMBLY	T1	REPLACE GASKET LEAF TRAP
SWP00151	PUMP ELEMENTS	M06	REPLACE CENTRIFUGAL PUMP

EXERCISE 13 LINK FACILITIES TO TASKS



Use the **Task Facility Requirements** function to link facilities required by a maintenance task.

NOTES:

- Study the Online Help.
- Follow the steps in Figure 13.1 to link facilities to a task.
- Enter the number of the Repairable Part.

FIGURE 13.1 : LINK FACILITY

Task Facility Requirements

Part Number: CME00001 (1) | Task: PLUG FINAL ASSEMBLY

Linked Facilities: Facility Application (4)

View Task Types:

- Production
- Maintenance
- Operator

View Avail. Facilities:

- All Divisions
- Facilities In Division:

Number	Type	Description
M10 (2)	BOTH MAINT + PROD	ASSEMBLE LINE PINS
M10	PRODUCTION	ASSEMBLE LINE PINS

Select	Facility	Facility Description	Specification	Specification Desc
<input checked="" type="checkbox"/>	FC1001	OPERATIONAL MAINTENANCE FACILITY		
<input type="checkbox"/>	FC1002	MOBILE WORKSHOP		
<input type="checkbox"/>	FC2001	MOBILE WORKSHOP		

Linked Facilities (3)

Select	Facility	Facility Description	Specification	Specification Description

LINKS A FACILITY TO THE SELECTED TASK

Apply

FIGURE 13.1 : CROSS REFERENCE

Task Facility Requirements

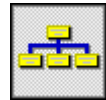
Part Number: CME00001 | PLUG FINAL ASSEMBLY

Linked Facilities | Facility Application

Facility: FC1001 | 1 | OPERATIONAL MAINTENANCE FACILITY

Part Number	Part Description	Operation	Operation Description
CME00001	PLUG FINAL ASSEMBLY	M10	ASSEMBLE LINE PINS
CME00001	PLUG FINAL ASSEMBLY	M10	ASSEMBLE LINE PINS
MAINTENANCE 1	200 HRS MAINTENANCE APU ENGI...	OP001	DRAIN & REPLACE ENGINE OIL
MAINTENANCE 1	200 HRS MAINTENANCE APU ENGI...	OP004	REMOVE AND CLEAN ALTERNATOR
MAINTENANCE 1	200 HRS MAINTENANCE APU ENGI...	OP006	REMOVE AND REPLACE ALTERNA...
SWP00100	FILTRATION SYSTEM	T03	FASTEN LEAF TRAP LID CLAMPS
SWP00109	PUMP ASSEMBLY	T12	REPLACE PUMP FILTER ASSEMBLY
SWP00109	PUMP ASSEMBLY	T12	REPLACE PUMP FILTER ASSEMBLY
SWP00109	PUMP ASSEMBLY	T12	REPLACE PUMP FILTER ASSEMBLY
SWP00150	FILTER ELEMENTS	T01	LOOSEN LEAF TRAP LID CLAMPS

EXERCISE 14 ADD SKILLS



Use the **Skill** function to add the skills that may be required by maintenance tasks.

NOTES:

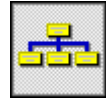
- Study the Online Help.
- Follow the steps in Figure 14.1 to add skills.

FIGURE 14.1 : ADD SKILLS

The screenshot shows the 'Skills' application window with the following fields and callouts:

- 1**: Skill Codes dropdown menu (value: 01)
- 2**: Description text box (value: MAINTENANCE TECHNICIAN)
- 3**: Physical requirement dropdown menu (value: STRONG)
- 4**: Psychological requirement dropdown menu (value: NOT MAD)
- 5**: Experience requirement dropdown menu (value: 5 YRS)
- 6**: Qualifications requirement dropdown menu (value: MATRIC)
- 7**: Skill Level radio button group (selected: Basic)
- 8**: Skill Type radio button group (selected: Maintenance)
- 9**: Add button

EXERCISE 15 LINK SKILLS TO MAINTENANCE DIVISIONS

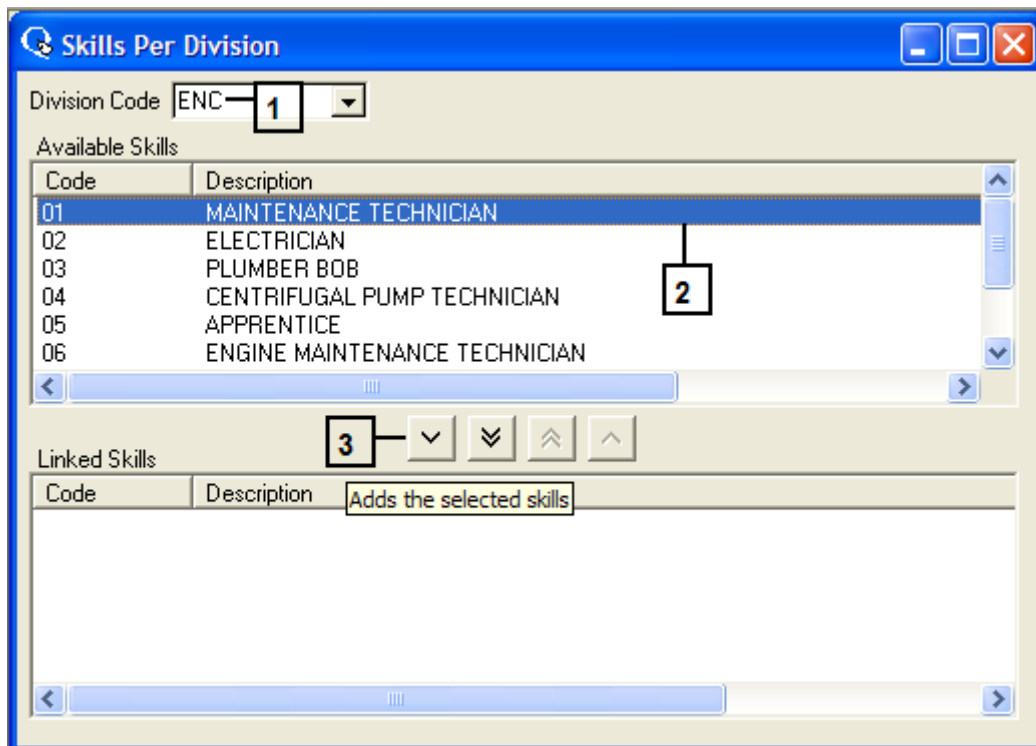


Use the **Skills Per Division** function to specify skills available at a maintenance division.

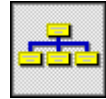
NOTES:

- Study the Online Help.
- Follow the steps in Figure 15.1 to link skills to a maintenance division.

FIGURE 15.1 : LINK SKILLS TO A MAINTENANCE DIVISION



EXERCISE 16 LINK SKILLS TO TASKS



Use the **Task/Operation Skill Requirements** function to specify skills required by maintenance tasks.

NOTES:

- Study the Online Help.
- Follow the steps in Figure 16.1 to link skills to a task.
- Enter the number of the Repairable Part.

FIGURE 16.1 : SPECIFY SKILLS FOR A TASK

The screenshot shows the 'Task Skill Requirements' window with the following details:

- Part Number:** CME00001
- Task/Operation:** PLUG FINAL ASSEMBLY
- View Task Types:** Production (checked), Maintenance (checked), Operator (unchecked)
- View Available Skills:** All Skills (selected)
- Tasks/Operations Table:**

Number	Type	Description
M25	PRODUCTION	INSERT CORD GRIPS IN BASE
M30	BOTH MAINT + ...	INSTALL COVER
- Available Skills Table:**

Select	Skill Code	Skill Type	Hours Required	Skill Description
<input checked="" type="checkbox"/>	01	MAINTENANCE	0.050	MAINTENANCE TECHNICIAN
<input type="checkbox"/>	02	MAINTENANCE	0.000	ELECTRICIAN
<input type="checkbox"/>	03	MAINTENANCE	0.000	PLUMBER BOB
- Linked Skills Table:**

Select	Skill Code	Skill Type	Hours	Links Available Skill(s) To Part Operation

FIGURE 16.2 : SPECIFY SKILLS FOR A TASK

Task Skill Requirements

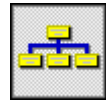
Part Number: CME00001 | PLUG FINAL ASSEMBLY

Linked Skills: Skill Application | 1

Skill: 01 | 2 | MAINTENANCE TECHNICIAN

Part Number	Part Description	Operation	Operation Description
CME00001	PLUG FINAL ASSEMBLY	M30	INSTALL COVER
CME00001	PLUG FINAL ASSEMBLY	M30	INSTALL COVER
SWP00100	FILTRATION SYSTEM	T03	FASTEN LEAF TRAP LID CLAMPS
SWP00109	PUMP ASSEMBLY	T1	REPLACE GASKET LEAF TRAP
SWP00109	PUMP ASSEMBLY	T1	REPLACE GASKET LEAF TRAP
SWP00109	PUMP ASSEMBLY	T1	REPLACE GASKET LEAF TRAP
SWP00109	PUMP ASSEMBLY	T10	TROUBLE SHOOTING / TESTING
SWP00109	PUMP ASSEMBLY	T10	TROUBLE SHOOTING / TESTING
SWP00109	PUMP ASSEMBLY	T10	TROUBLE SHOOTING / TESTING
SWP00109	PUMP ASSEMBLY	T9	REPLACE ELECTRICAL MOTOR
SWP00109	PUMP ASSEMBLY	T9	REPLACE ELECTRICAL MOTOR
SWP00109	PUMP ASSEMBLY	T9	REPLACE ELECTRICAL MOTOR
SWP00150	FILTER ELEMENTS	T08	REPLACE SAND FILTER DRUM S
SWP00150	FILTER ELEMENTS	T09	REPLACE SAND FILTER SAND

EXERCISE 17 SPECIFY A “CUSTOMER USE SCENARIO”



Use the following functions to create a **Use Scenario** for one of your products:

- Scenario
- End Item Per Scenario
- MSI Missions per Scenario

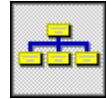
NOTES:

- Study the Online Help.
- Follow the steps in Figure 17.1 to add a scenario header.

FIGURE 17.1 : CREATE SCENARIO HEADER

The screenshot shows a dialog box titled "Scenario" with the following fields and callouts:

- Code:** A text box containing "TEST SCENARIO" with callout 1 pointing to the text.
- Creator:** A dropdown menu showing "SMITH TOM --> PRODMGR" with callout 2 pointing to the dropdown arrow.
- Description:** A text area containing "TEST SCENARIO" with callout 3 pointing to the text and callout 4 pointing to the text area's border.
- Status:** A group box containing three radio buttons: "Dormant", "Planned" (which is selected), and "Executed".
- Buttons:** Three buttons at the bottom: "Add" (with callout 5), "Change", and "Delete".



NOTES:

- Study the Online Help.
- Follow the steps in Figure 17.2 for specifying end items for a scenario.
- Enter part of End Item's number.

FIGURE 17.2 : SPECIFY END ITEMS FOR SCENARIO

End Items Per Scenario

Scenario Code: TEST SCENARIO — 1

Available End Items: 40 — 2

Available Customer End Items

Select	Part Number	Part Description	Serialised	Serial	Quantity
<input type="checkbox"/>	400006025000	SPLIT PIN	N		
<input type="checkbox"/>	400099325000 09	FILTER FUEL	N		
<input checked="" type="checkbox"/>	400916495000 01	STARTER AND ALTERNATOR	N		1
<input type="checkbox"/>	400916505000 01	FUEL SYSTEM	N		
<input type="checkbox"/>	400916555000 10	CRANKCASE ACCV	N		

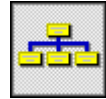
3

5

Linked Customer End Items

Select	Part Number	Part Description	Serial Number	Quantity
--------	-------------	------------------	---------------	----------

Apply



NOTES:

- Study the Online Help.
- Follow the steps in Figure 17.3 for specifying missions for a scenario.
- Enter Number Of Times mission is to be repeated.
- Enter MSI Summarised Qty Per with regard to end item.

FIGURE 17.3 : SPECIFY MISSIONS FOR SCENARIO

Msi Missions Per Scenario

Scenario: TURBINE OPERATION (1)

Customer End Item	Qty	Serial Number	Description
400916505000 01	1		PER UNIT
IMPELLER (2)	1	4356IMP	PER PUMP

Available MSI Missions

Select	Level	MSI	Repetitions	SUM Qty Per	Start Date	End Date
<input checked="" type="checkbox"/>	1	BLADE1 (3)	0	0	23/08/2005	23/08/2005

4

Linked MSI Missions

Select	MSI	Repetitions	Msi DOL Units	Scenario DOL Units	Start Date	End Date	Qty Per
<input checked="" type="checkbox"/>	BLADE2 (5)	100	100	10000	23/08/2005 (6)	25/08/2005 (7)	1 (8)

9 Apply

APPENDIX A

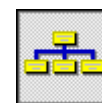
GUIDELINES FOR SETTING UP A LOGISTIC SUPPORT ANALYSIS RECORD (LSAR) IN *Q Muzik*

1. Preferably, a functional hardware breakdown (FHB) for the product under analysis should exist.
2. The LSAR must be built around the maintenance significant items (MSI's).
3. The MSI's must relate directly to specific primary and secondary functions of the product.
4. Each MSI must have at least one mission, which describes the most likely use and functioning of the MSI under certain conditions.
5. The failure (FMECA) data must relate to a specific mission of an MSI.
6. Failures of each MSI must be linked to specific maintenance tasks, which are defined in part "task libraries". A maintenance task can be linked to many different failures for different MSI's.
7. All MSI's are regarded as repairable, but lower level "repairable parts" also have to be identified.
8. All "repairable parts" that are NOT MSI's must have a repair routing, which defines exactly how to repair the part.
9. Any part can have a task library consisting of various maintenance tasks that relate to the specific part.
10. Maintenance tasks must reference spares directly in the functional hardware breakdown (FHB) of the product (i.e. bill of material).
11. Tools and consumables must be linked to the maintenance tasks. (Consumables include consumable spares such as fasteners, gaskets, o-rings, etc.).
12. Apart from being used for product support, the functional hardware breakdown (FHB) of the product must also be used for the manufacturing and development processes.

APPENDIX B

EXECUTE A CUSTOMER REPAIR ORDER

EXECUTE A CUSTOMER REPAIR ORDER



“Customer Repair” orders are used to facilitate the repair and maintenance of products and repairable items within products. Executing a “Customer Repair” order entails the following:

A	Add a Customer Order Header.	Figure 18.1
B	Add a “Customer Repair” order line with a “Firm” status.	Figures 18.2a & 18.2b
C	If Failure Mode Effect and Criticality Analysis (FMECA) data exist, select the failure and specify the tasks to be performed to remedy the failure from the FMECA data.	Figures 18.3 & 18.4
D	If the FMECA data do not exist or if a specific failure is not yet specified, specify / add the failure and the tasks required to remedy the failure for the “Customer Repair” order.	Figures 18.5 to 18.13
E	Create spares requirements for the “Customer Repair” order lines.	Figures 18.14 to 18.17
F	Change the status of the “Customer Repair” order line to “Released”.	Figure 18.18

A. ADD A CUSTOMER ORDER HEADER

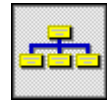
The first step in executing a “Customer Repair” order is to specify the generic data by adding a Customer Order Header.

NOTES:

- The “Order Number” is equal to the Job Card Number.
- The “Sales Person” is the technician or person who first took cognisance of the failure or request to repair / quote for repair.
- “Order Receipt Date” is the date on which the failure was logged or the request to repair or quote for repair was received.
- “Origin of Order” is the site where the failure occurred or the request to repair / quote for repair was received from.
- Enter the customer’s contact person’s name and telephone / fax number in the “Notes” field.

- If the “Ship to Address” is different from that of the “Invoiceable Organisation” (i.e. customer) enter an address.
- Follow the steps in Figure 18.1.

FIGURE 18.1 : ADD THE CUSTOMER ORDER HEADER



B. ADD A CUSTOMER REPAIR ORDER LINE

A “Customer Repair” order can have many lines depending on the number of repairable items to be repaired and you need to add a line for each repairable item (i.e. items identified as such on the part master). The line in itself represents a job card for the specific item to be repaired.

NOTES:

- “Part Number” is the repairable item number and it must be identified as “Repairable” on its part master.
- The “Contractual Ship Date” is the original promised date.
- A Node number is required whether the job card is invoiceable or not.
- Create a Milestone Node for each job card if invoicing is done per job card else create a milestone per “Invoicing Period” for repair / maintenance work (as per contract with the customer).



- If invoicing is done per job card, add a “Non Stock” line plus a “Customer Repair” line for the “Customer Repair” order and specify the Milestone Node for both. Enter the unit price (i.e. sales price) for the “Non Stock” line and a zero unit price for the “Customer Repair” line. On completion of the job card, ship both lines simultaneously.
- If invoicing is done for example monthly (i.e. invoicing period), add a “Non Stock” line with a “Completion Date” of e.g. month end and specify the milestone node as well as a “Unit Price” (i.e. sales price). Create a separate Non Milestone Node for each job card as required and link it to the Milestone Node. Add a “Customer Repair” line and specify the Non Milestone Node (NOTE: This will enable you to transfer jobs not completed in a specific period (e.g. month) to the next period’s Milestone Node and to ship the current period’s milestone).
- Make sure that you specify Failure Reporting and Cause Analysis (FRACAS) identifier for each line of the “Customer Repair” order.
- Follow the steps in Figures 18.2A and 18.2B to add a Customer Repair Order line.

FIGURE 18.2A : ADD THE MANDATORY LINE DATA FOR THE REPAIR ORDER

Customer Orders

Sales Order No. F779/200 Line No. 1 Ship Date 19/03/2001 Currency Conversion.

Header Line Line Additional Conversion Repair Requirements Requirements Operations Overview Criteria Overview Results

Line No. 1 Line Ship Date 19/03/2001 Contract Ship Date 23/03/2001

Contract Line 1 Suggest Ship Date All Divisions

Line Type CUST REPAIR Lead Time (Days) 0 Quantity On Hand 0

Part Number PLG0001 Line Start Date 19/03/2001 Avail To Promise 0

Explode Requirements Order Planner STEENKAMP ETIENNE --> 1146831

Product 021 Customer Part No.

Quantity Ordered 1 UOM EA Crated 0 Sales Price From Part Master From Catalogue Manual Entry Landed Cost Source

Rejected 0 Complete 0 Outstanding 0

Sales Price Detail

Catalogue Authorisation 5 Decimals

Sales Price R 12.00000 Trade Disc % 0.00 Disc. Price R 12.00000 Lock GPM %

Freight Terms C&F Tax Code 01 % 13.05 Landed Cost R0.0000 100.00

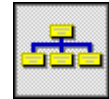
Account 6252543 L Status Quotation Planned

Node AF118 Firm Released

Resource STORES ISSUES Closed

Description PLUG ASSY Certainty % 90 Add Change Delete

FIGURE 18.2B :SPECIFY THE FRACAS IDENTIFIER FOR THE REPAIR ORDER



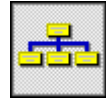
C. SELECT THE FAILURE AND SPECIFY THE TASKS TO REMEDY THE FAILURE

The steps shown in Figures 18.3 and 18.4 can only be performed if FMECA data exist.

NOTES:

- Use the “MSI Part Number” option.
- Follow the steps in Figures 18.3 and 18.4.

FIGURE 18.3 : SELECT FAILURE FROM FMECA DATA



Order Operations [8]

Selection Criteria | MSI Criteria | Cost Overview | Detail

Mode

- Add Operation [1]
- Change Operation
- Delete Operation
- Split Operation
- Report Back On Actuals
- Change Actuals
- Inquire

Show...

- Costed Ops Only
- Scheduled Ops Only
- Outstanding Ops Only

Add Operation Options

- Add Order Operations From MSI Part Number [4]
- Copy Part Operations From Part Number
- Exclude Non-Scheduled Ops.
- Exclude Non-Costed Ops.

By:

Order Type: CUSTOMER ORDERS [2]

Line Type: CUST REPAIR [3]

Order Number: F779/200 [5]

Order Line Number: 1 [6]

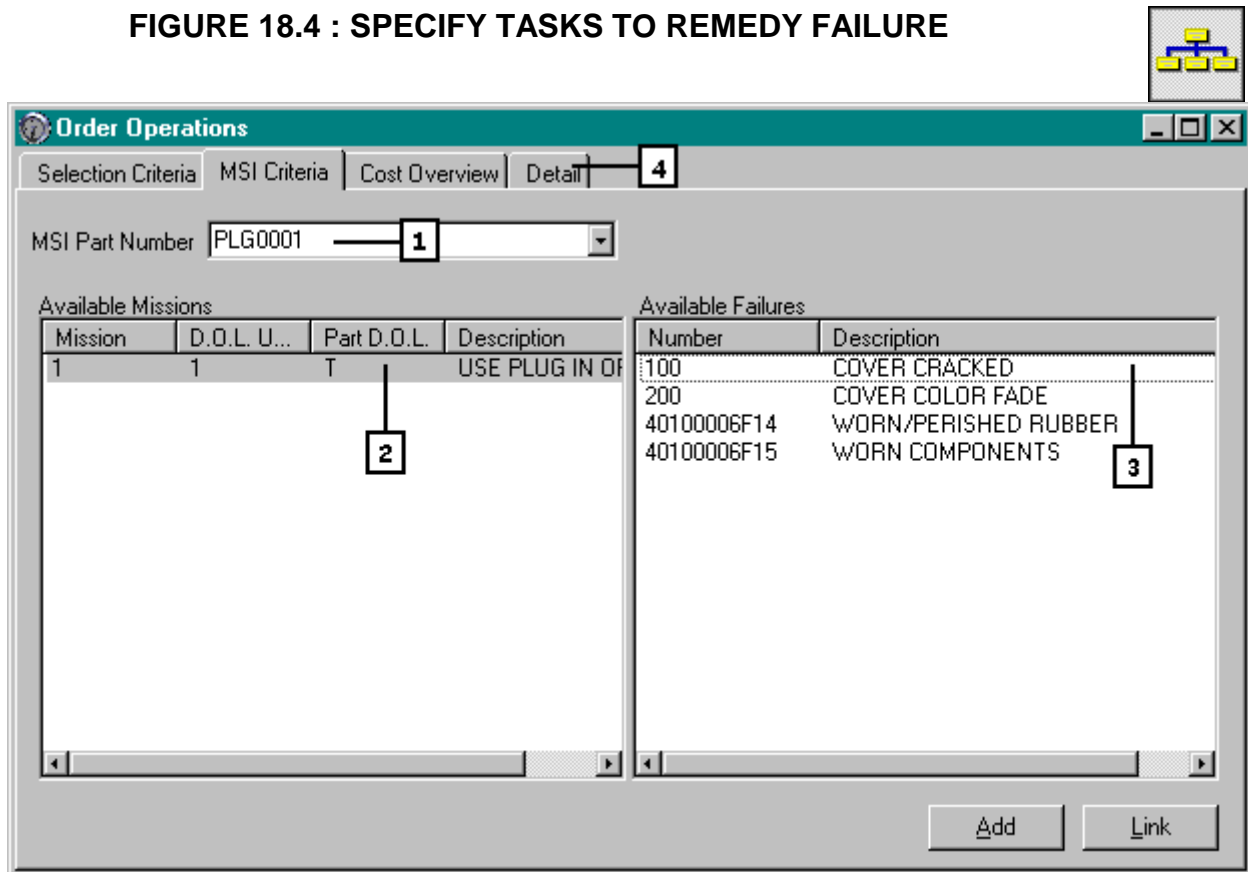
Completion Date: 19/03/2001 [7]

Routing Part Number: []

Operation: []

Work Centre: []

FIGURE 18.4 : SPECIFY TASKS TO REMEDY FAILURE



D. IF FMECA DATA DOES NOT EXIST OR FAILURE IS NOT YET SPECIFIED, ADD THE FAILURE AND TASKS REQUIRED TO REMEDY THE FAILURE

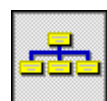
This process will ensure that you capture FMECA data for your product as the failures occur.

The purpose of this step is to capture / identify the failures and related operations per job card. If at least one MSI is identified for a product and a mission is specified for the MSI, you can build failure databases through job cards as they occur.

NOTES:

- If FMECA data exist, identify the operations by selecting the failure for the MSI involved.
- If FMECA data does exist, but the specific failure does not exist, add a failure and link it to the MSI mission and then specify the operations.
- If no FMECA data exist, add at least one order operation for the job card.
- Follow the steps in Figures 18.5 to 18.12.

FIGURE 18.5 : CREATE A NEW FAILURE



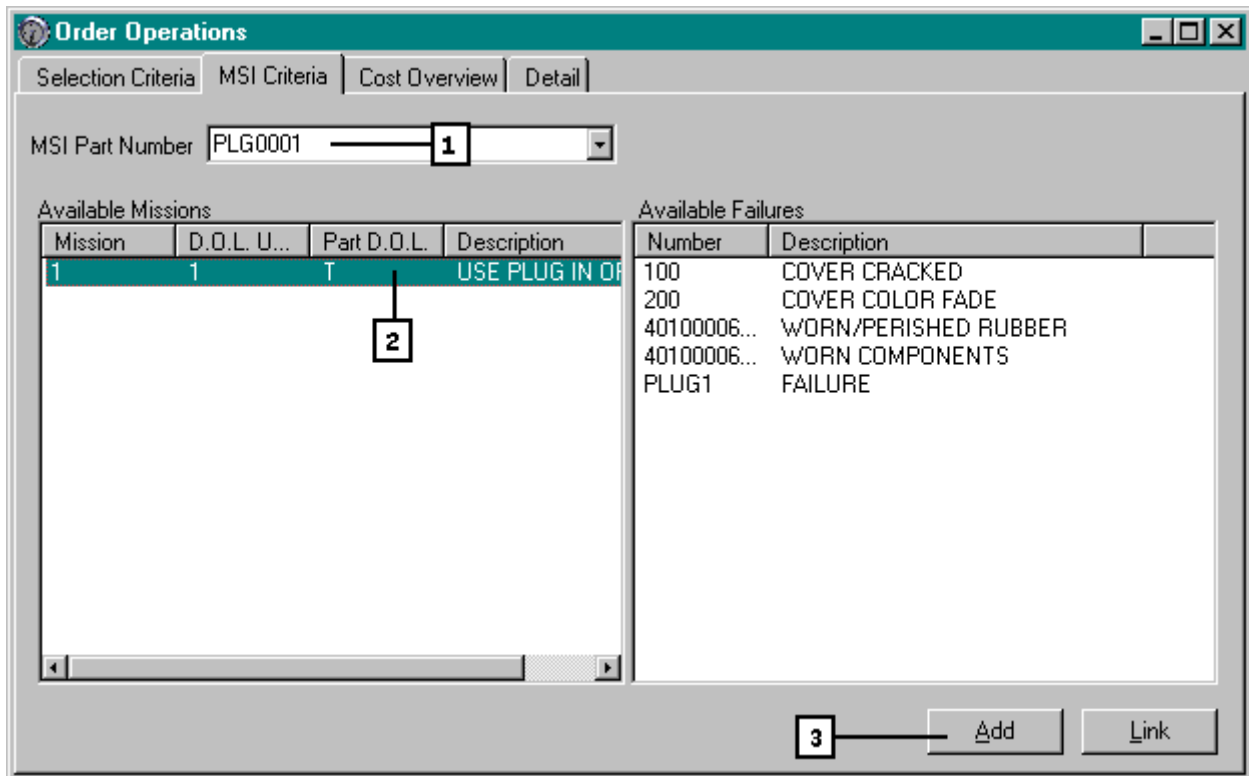


FIGURE 18.6 : CREATE A NEW FAILURE

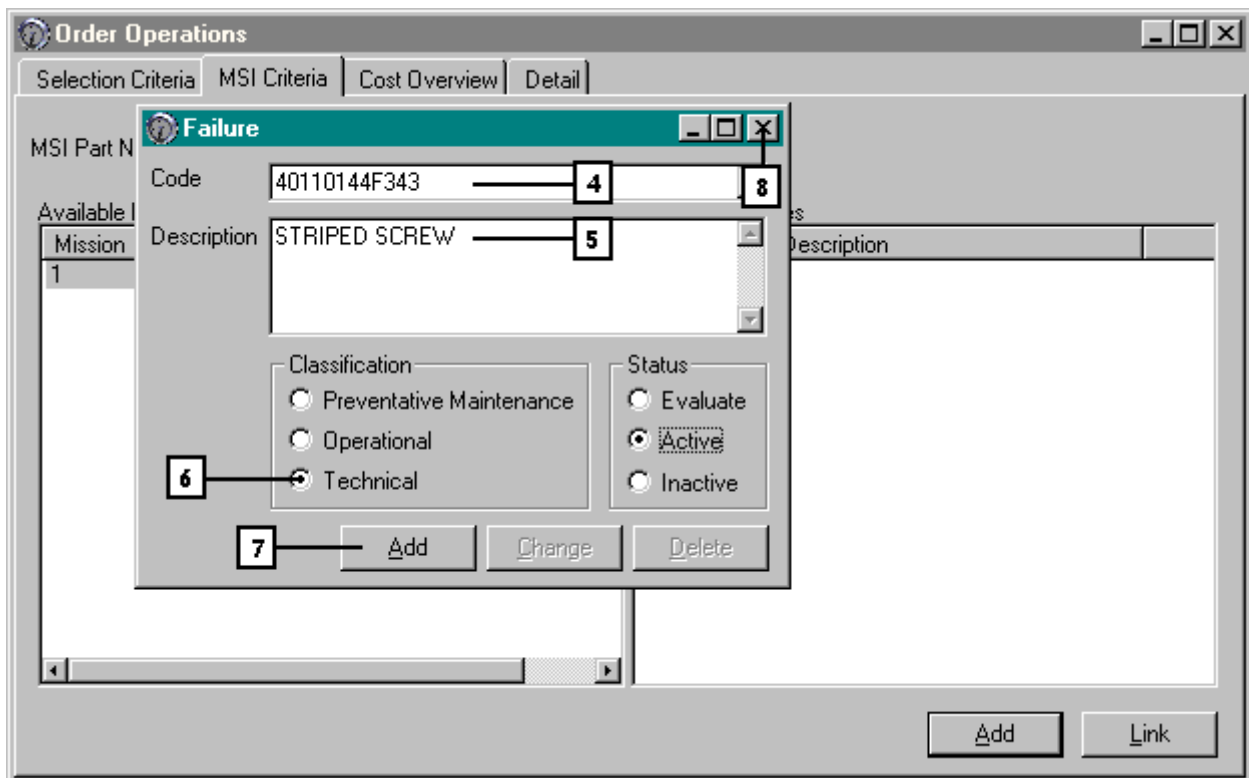


FIGURE 18.7 : LINK FAILURE TO MSI MISSION (FMECA DATA)

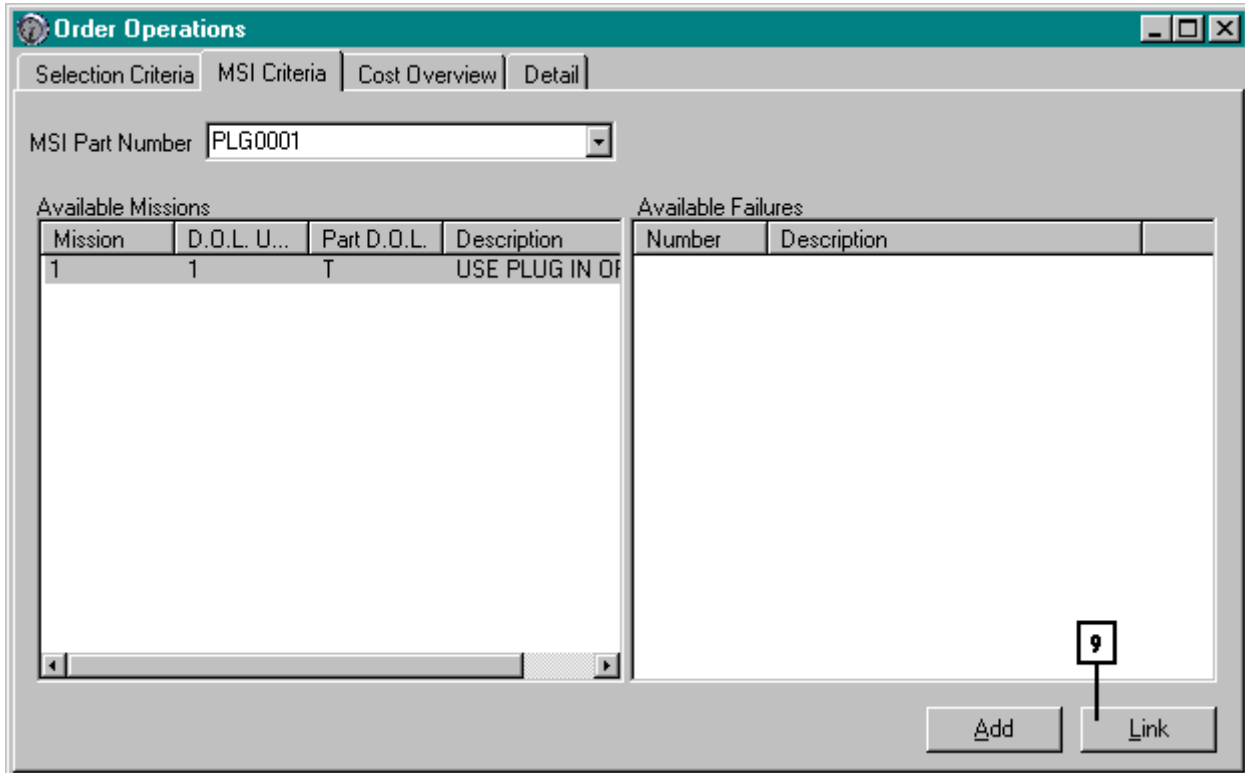
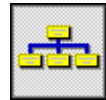


FIGURE 18.8 : LINK FAILURE TO MSI MISSION (FMECA DATA)

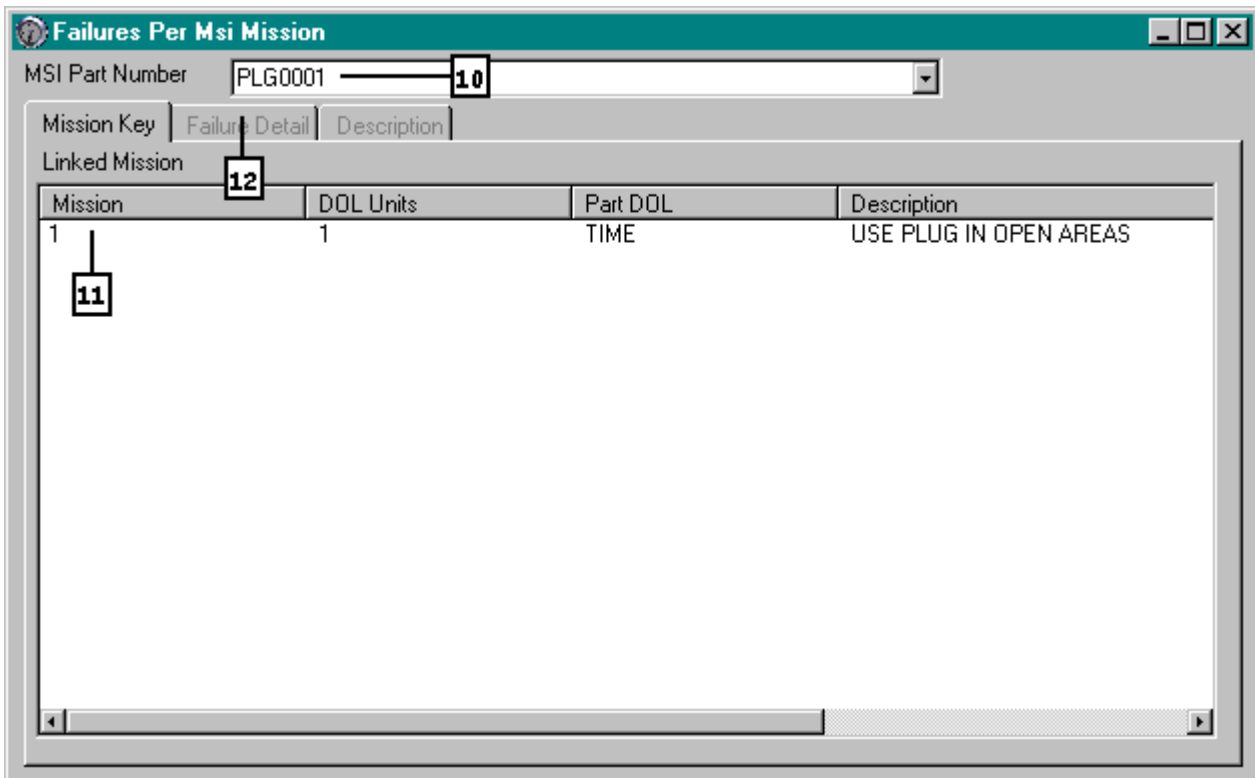
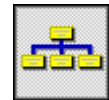


FIGURE 18.9 : LINK FAILURE TO MSI MISSION (FMECA DATA)



Failures Per Msi Mission

MSI Part Number:

Mission Key: **13** Mission:

Available Failures

Select	Number	Type	Status	More	Description
<input type="checkbox"/>	40100013F3	TECHNICAL	ACTIVE	...	LOST OR DAMAGED CAPS OR PLUGS
<input checked="" type="checkbox"/>	40100033F1	TECHNICAL	ACTIVE	...	DAMAGED INSULATION MATERIAL.
<input type="checkbox"/>	40100104F1	TECHNICAL	ACTIVE	...	BROKEN/MISALIGNED LENSES/GRATIC

14

Linked Failures **23**

Select	Number	Type	Status	More	Failure Occurance	Probability Level
<input type="checkbox"/>	100	PREVENTATIVE MA	EVALUATE	...	1.00000	EXTREMELY UNLIKELY
<input type="checkbox"/>	200	PREVENTATIVE MA	EVALUATE	...	1.00000	EXTREMELY UNLIKELY
<input type="checkbox"/>	40100006F14	OPERATIONAL	ACTIVE	...	1.00000	EXTREMELY UNLIKELY

Apply

FIGURE 18.10 : LINK FAILURE TO MSI MISSION (FMECA DATA)

Failures Per Msi Mission

MSI Part Number:

Mission Key: **13** Mission:

Apply To All Available Failures **16** Apply To All Selected Failures

Detection Method: **17**

Cause Of Failure: **18**

Damage Effect (End Item): **19**

Damage Effect (Local Item): **20**

Damage Effect (Next Higher Item): **21**

22 **Apply**

FIGURE 18.11 : SPECIFY / ADD TASK FOR NEW FAILURE

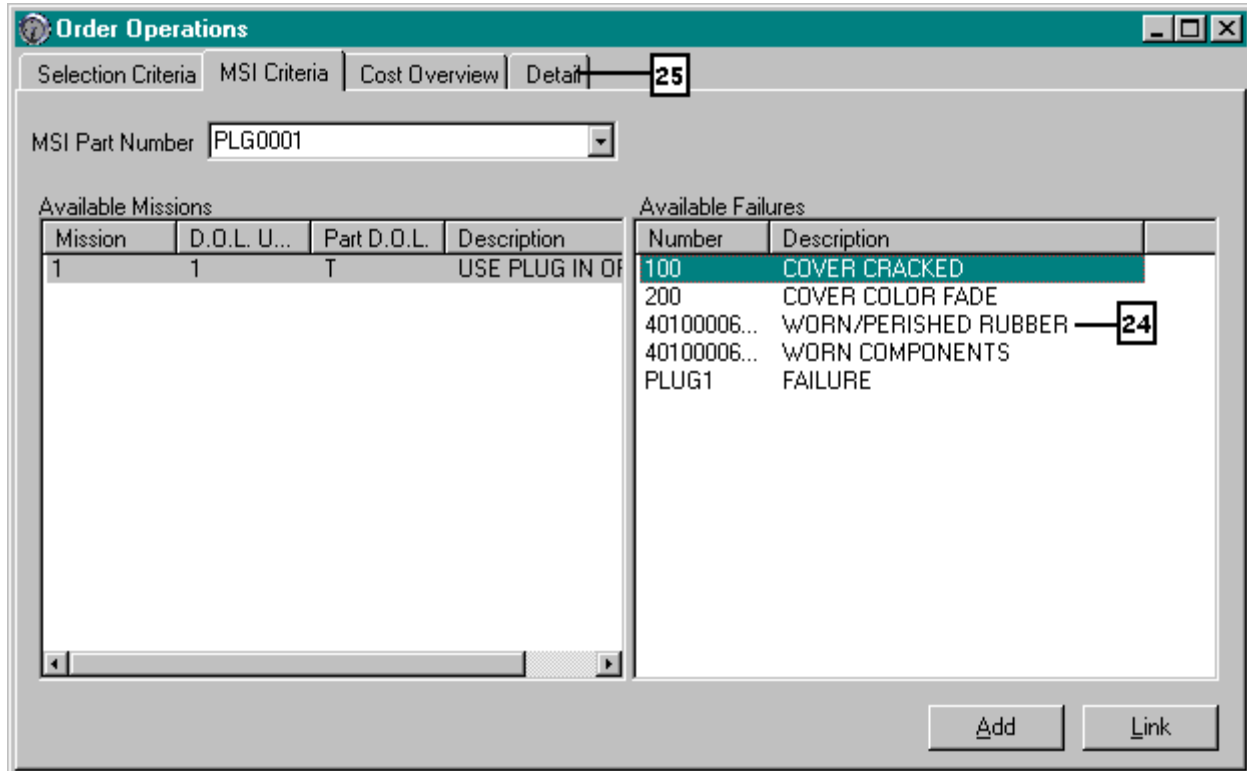
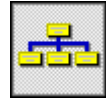
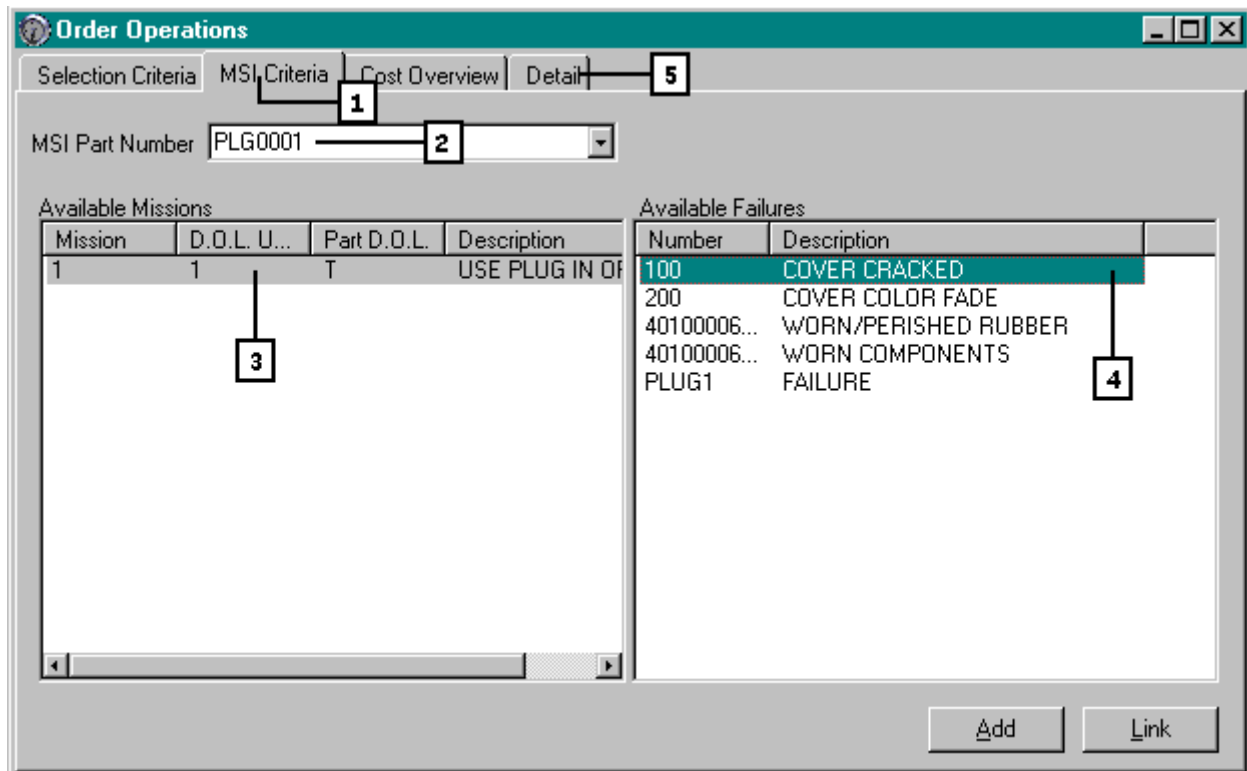
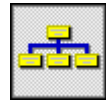


FIGURE 18.12 : SPECIFY / ADD TASK FOR NEW FAILURE



E. CREATE SPARES REQUIREMENTS FOR THE “CUSTOMER REPAIR” ORDER LINES



You can create requirements by:

- a. Exploding the product structure for the “repairable” item specified for the repair line, and finding all “MRP” planned items in the structure (Parent Part Number Method).
- b. Finding the spares in the product structure for a specific repair operation (i.e. repair deliver to operation (Order Operations Method). NOTE: The operation must exist for the repair order line.
- c. Exploding the product structure for the “repairable item” specified for the repair line, and finding all items in the structure with a type of link of “standard replacement” or “as needed replacement” (Standard Repair Logic Method).

NOTES:

- Use one or a combination of the methods to create requirements for the “Customer Repair” order line.
- Follow the steps in Figures 18.13 to 18.17.

FIGURE 18.13 : CREATE REQUIREMENTS (PARENT PART NUMBER, EXPLODE METHOD)

Customer Orders

Sales Order No. F779/200 Line No. 1 Ship Date 19/03/2001 Currency Conversion.

Header | Line | Line Additional | Conversion | Repair Requirements | Requirements | Operations | Overview Criteria | Overview Results

Create Requirements From

Parent Part Number (Original) Order Operations Apply Floor Stock Standard Repair Logic

Parent Part

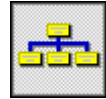
Parent Part Number PLG0001

Explode to ... First Level MRP Planned

Select	Part Number	Description	QTY Required	Unit Of Measure	Required Date	Repair Del. To Op.	Ap
<input type="checkbox"/>	PLG0002	PLUG BASE ASSEMBLY	1	EA	19/03/2001	6	
<input type="checkbox"/>	PLG0003	PLUG COVER ASSEMBLY	1	EA	19/03/2001	5	
<input checked="" type="checkbox"/>	PLG0004	PLUG SCREW	1	EA	19/03/2001	02	

Add

FIGURE 18.14 : CREATE REQUIREMENTS (ORDER OPERATIONS METHOD)

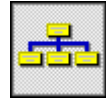


Not in use with this release.

FIGURE 18.15 : CREATE REQUIREMENTS (STANDARD REPAIR LOGIC METHOD)

The screenshot shows the 'Customer Orders' application window. At the top, there are fields for 'Sales Order No.' (F779/200), 'Line No.' (1), and 'Ship Date' (19/03/2001). Below these are several tabs: 'Header', 'Line', 'Line Additional', 'Conversion', 'Repair Requirements', 'Requirements', 'Operations', 'Overview Criteria', and 'Overview Results'. The 'Repair Requirements' tab is active. In this tab, there is a section titled 'Create Requirements From' with three radio button options: 'Parent Part Number (Original)', 'Order Operations', and 'Standard Repair Logic'. The 'Standard Repair Logic' option is selected. A callout box with the number '1' points to this selected option. Below the radio buttons, there is a 'Create Repair Requirements' button. A callout box with the number '2' points to this button.

FIGURE 18.16 : VIEW REQUIREMENTS



Requirements

Customer Order: F779/200 Order Type: CUSTOMER ORDERS
 Line Number: 1 Delivery Date: 19/03/2001

View Requirements:
 All **1** All Excl. Floor Stock Fixed Account
 Issued Floor Stock Only Non Fixed Account
 Outstanding

Include Stock Status:
 New Waiting Repair
 Used Repair

Stock:
 Quarantine
 All Divisions

Apply Stock Status: [] Part Number: []
 Deliver to Operation: [] Apply Stock Of Ext. Org.: []
 Required Date: 19/03/2001 Required Quantity: 1 Allocated Quantity: 0
 Stock on Hand: 0 Issued Quantity: 0 Scrapped Quantity: 0
 Stock on Order: 0 Apply Floor Stock

Del To Op.	Part Number	Part Description (CFI)	Required Date	Requir...	Allocat...	Issued ...	Sc
	PLG0001	PLUG ASSY	19/03/2001	1.00000	0.00000	0.00000	0
5	PLG0003	PLUG COVE...	19/03/2001	1.00000	0.00000	0.00000	0
02	PLG0004	PLUG SCREW	19/03/2001	2.00000	0.00000	0.00000	0
6	PLG0006	PLUG PIN	19/03/2001	3.00000	0.00000	0.00000	0
04	PLG0007	PLUG PIN S...	19/03/2001	3.00000	0.00000	0.00000	0

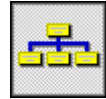
F. CHANGE THE STATUS OF THE “CUSTOMER REPAIR” ORDER LINE TO “RELEASED”

- a. When the status is changed to “Released

NOTE:

- Follow the steps in Figure 18.17 to release the “Customer Repair” order line.

18.17 : CHANGE STATUS TO RELEASED



Customer Orders

Sales Order No. Line No. Ship Date Currency Conversion.

Header | **Line** | Line Additional | Conversion | Repair Requirements | Requirements | Operations | Overview Criteria | Overview Results

Line No. **1** --> 19/03/2001 Line Ship Date 19/03/2001 Contract Ship Date 23/03/2001

Contract Line Suggest Ship Date Stock All Divisions

Line Type Lead Time (Days) Quantity On Hand

Part Number Line Start Date 19/03/2001 Avail To Promise

Explode Requirements Order Planner

Product Customer Part No.

Quantity Ordered UOM Crated Sales Price From Part Master From Catalogue Manual Entry Landed Cost Source

Rejected Complete Outstanding

Sales Price Detail

Catalogue Authorisation Decimals

Sales Price Trade Disc % Disc. Price Lock GPM %

Freight Terms Tax Code % Landed Cost

Account Status Quotation Planned Firm Released Closed Closed Description

Node Certainty %

Resource

LESSON SUMMARY

On completion of the Logistic Support and Analysis course, students will be able to record and use logistic support analysis records (LSAR).

TO:	DO THIS:
Identify Maintenance Significant Items	Use the PART MASTER function. Use the LSA tab.
Identify Repairable and Discardable Parts	Use the PART MASTER function. Use the LSA tab.
Define MSI Missions	Use the MSI/MISSION function.
Add Failures	Use the FAILURE function.
Link Failures to MSI Missions	Use the FAILURES PER MSI MISSION function. Use the MISSION KEY tab. Use the FAILURE DETAIL tab. Use the DESCRIPTIONS tab.
Create Maintenance Divisions	Use the DIVISION function.
Create Facilities	Use the FACILITIES function.
Link Facilities to Maintenance Divisions	Use the FACILITIES PER DIVISION function.
Specify Maintenance Tasks for Repairable Items	Use the PART OPERATIONS function. Use the VIEW SELECTION tab. Use the OPERATION MAINTENANCE tab.
Link Tasks to Failures	Use the MAINTENANCE PROCEDURE function. Use the FAILURES PER MSI MISSION tab. Use the MAINTENANCE TASKS PER FAILURE tab.
Link Spares to Tasks	Use the PRODUCT STRUCTURE function. Use the STRUCTURE MAINTENANCE tab. Use the LSA DATA tab.
Link Resources to Tasks	Use the TASK OPERATION RESOURCE REQUIREMENTS function. Use the TASKS / OPERATIONS tab. Use the RESOURCES tab.
Link Facilities to Tasks	Use the TASK LIBRARY REQUIREMENTS function.
Add Skills	Use the SKILLS function.
Link Skills to Maintenance Divisions	Use the SKILLS PER DIVISION function.
Specify Skills for a Task	Use the TASK/OPERATION SKILL REQUIREMENTS function.
Specify a "Customer Use" Scenario	Use the SCENARIO function.
Specify End Items for Scenario	Use the END ITEMS PER SCENARIO function.
Specify Missions for Scenario	Use the MSI MISSIONS PER SCENARIO function.

Add a Repair Order	Use the CUSTOMER ORDER function.
--------------------	----------------------------------

	Use the HEADER tab. Use the LINE MANDATORY tab. Use the LINE OPTIONAL tab. Use the ORDER OPERATIONS function. Use the SELECTION CRITERIA tab. Use the OPERATIONS tab.
Create Spares Requirements for the Customer Repair Order Lines	Use the CUSTOMER ORDER function. Use the CUST REP REQS tab.