JD Edwards EnterpriseOne Applications

Condition-Based Maintenance Implementation Guide

9.2

9.2

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Preface

Welcome to the JD Edwards EnterpriseOne documentation.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://
www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info Or Visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Information

For additional information about JD Edwards EnterpriseOne applications, features, content, and training, visit the JD Edwards EnterpriseOne pages on the JD Edwards Resource Library located at:

http://learnjde.com

Conventions

The following text conventions are used in this document:

Convention	Meaning
Bold	Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.
Italics	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
Monospace	Monospace type indicates commands within a paragraph, URLs, code examples, text that appears on a screen, or text that you enter.
> Oracle by Example	Indicates a link to an Oracle by Example (OBE). OBEs provide hands-on, step- by-step instructions, including screen captures that guide you through a process using your own environment. Access to OBEs requires a valid Oracle account.





1 Introduction to JD Edwards EnterpriseOne Condition-Based Maintenance

JD Edwards EnterpriseOne Condition-Based Maintenance Overview

Unplanned downtime can create a huge dent in a company's productivity and profitability. That is why it is so important to keep equipment in top working condition. Traditional maintenance programs are no longer sufficient; companies must be able to find and fix problems before they cause equipment breakdowns.

JD Edwards EnterpriseOne Condition-Based Maintenance (CBM) from Oracle enables you to make maintenance decisions based on actual condition, rather than time or usage interval. You can identify equipment problems early, when they are less costly to correct, and perform maintenance only when needed, thereby increasing asset utilization, extending equipment life, and reducing maintenance costs. JD Edwards EnterpriseOne CBM enables you to quickly respond to and resolve equipment issues instead of waiting for the equipment to fail. JD Edwards EnterpriseOne CBM:

- Uses alerts generated from real-time equipment monitoring devices that assess equipment conditions against predefined, normal operation parameters.
- Provides real-time alerts (using pager, email, or other messaging systems) when equipment is operating outside of normal bounds so appropriate maintenance action can be taken.
- Automatically initiates appropriate maintenance action, including investigation, creation of a work order, and maintenance schedule updates.

JD Edwards EnterpriseOne Condition-Based Maintenance Integrations

The JD Edwards EnterpriseOne CBM system integrates with the JD Edwards EnterpriseOne Capital Asset Management (CAM) system from Oracle using these modules:

- JD Edwards EnterpriseOne Work Order module.
- JD Edwards EnterpriseOne Preventive Maintenance module.

The JD Edwards EnterpriseOne CBM system works with other JD Edwards EnterpriseOne systems to ensure that all information is fully integrated. We discuss integration considerations in the implementation chapters in this implementation guide. Supplemental information about third-party application integrations is located on the My Oracle Web site at https://support.oracle.com/.

JD Edwards EnterpriseOne CAM

The JD Edwards EnterpriseOne CAM system enables you to maintain and service equipment using the right mix of reactive, preventive, and predictive maintenance. This enables you to provide the required equipment reliability at the lowest possible cost.



JD Edwards EnterpriseOne Condition-Based Maintenance Implementation

This section provides an overview of the steps that are required to implement JD Edwards EnterpriseOne CBM.

In the planning phase of the implementation, take advantage of all JD Edwards EnterpriseOne sources of information, including the installation guides and troubleshooting information.

When determining which electronic software updates (ESUs) for JD Edwards EnterpriseOne CBM, use the EnterpriseOne and World Change Assistant. EnterpriseOne and World Change Assistant, a Java-based tool, reduces the time required to search and download ESUs by 75 percent or more and enables you to install multiple ESUs at one time.

See JD Edwards EnterpriseOne Tools Software Updates Guide .

Global Implementation Steps

The suggested global implementation steps for JD Edwards EnterpriseOne CBM are:

1. Set up companies, fiscal date patterns, and business units.

See "Setting Up Organizations" in the JD Edwards EnterpriseOne Applications Financial Management Fundamentals Implementation Guide

2. Set up accounts, and the chart of accounts.

See "Creating the Chart of Accounts" in the JD Edwards EnterpriseOne Applications Financial Management Fundamentals Implementation Guide

3. Enter address book records.

See "Entering Address Book Records" in the JD Edwards EnterpriseOne Applications Address Book Implementation Guide .

Condition-Based Maintenance Implementation Steps

The suggested application-specific implementation steps for JD Edwards EnterpriseOne CBM are:

1. Set up equipment master records.

See "Setting Up Equipment" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .

2. Set up preventive maintenance schedules.

See "Setting Up Preventive Maintenance" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide

3. Set up work orders.

See "Setting Up Work Orders" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .



4. Set up sequences for notification and investigation messages.

See Setting Up Sequences for Notification and Investigation Messages.

5. Set up rules for notification and investigation messages.

See Setting Up Rules for Notification and Investigation Messages.

6. Set up sequences for alert action rules.

See Setting Up Sequences for Alert Action Rules.

7. Set up alert action rules.

See Setting Up Rules for Alert Actions.

Business Interface Integration Objects

A business interface is a set of components that implementation teams can use to create an integration between JD Edwards EnterpriseOne and an external system. Business interfaces can include one or more of these business interface components:

- Business Services
- Real-Time Events
- Batch Import and Export Programs

For additional information about business interfaces, and the business objects available for this product area, see these topics in the JD Edwards EnterpriseOne Applications Business Interface Reference Guide :

- Business Interfaces Overview
- Capital Asset Management Condition Based Alert





2 Setting Up Condition-Based Maintenance

Understanding Condition-Based Maintenance Setup

Before you can use the features of JD Edwards EnterpriseOne CBM, you need to define the information that is critical for system processes.

In addition to the setup topics that are included in this guide, refer to topics in these guides for additional setup and update options:

Note:

- "Setting Up Work Orders" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .
- "Setting Up Preventive Maintenance" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .
- "Working with Preventive Maintenance Schedules" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .
- "Processing Interoperability for Condition-Based Maintenance" in the JD Edwards EnterpriseOne Applications Interoperability Fundamentals Implementation Guide .
- JD Edwards EnterpriseOne Tools Workflow Tools Guide

Setting Up Sequences for Notification and Investigation Messages

This section provides an overview of sequencing for notification and investigation messages and discusses how to:

- Set processing options for the Condition-Based Maintenance Message Sequences program (P1315).
- Set up message sequences.



Understanding Sequencing for Notification and Investigation Messages

Use the Condition-Based Maintenance Message Sequences program to define the search sequences that the system uses to select the message rule that determines the alert message recipients. The hierarchy determines the order in which the system searches for message recipients.

You can use a processing option to specify whether to enter message sequences for a notification process or for an investigation process. Notification messages warn or alert managers (such as production, shipping, and plant supervisors) of a problem. Investigation messages request that a plant technician investigate the problem and report findings back to the message originator.

Observe these guidelines:

- Set up the hierarchy from specific to general.
- For performance reasons, set up only the necessary message sequences.
- The workflow process CBMNOTIFY supports sending a notification message to an individual recipient or a distribution list.
- The workflow process CBMINVEST supports sending an investigation message to an individual recipient or a distribution list.

Note:

- Delivered Workflow for JD Edwards EnterpriseOne Condition-Based Maintenance.
- JD Edwards EnterpriseOne Tools Workflow Tools Guide .

Form Used to Set Up Sequences for Notification and Investigation Messages

Form Name	FormID	Navigation	Usage
Condition-Based Maintenance Message Sequences	W1315A	Condition-Based Maintenance Setup (G13CBM41), Notification Message Sequences Condition-Based Maintenance Setup (G13CBM41), Investigation Message Sequences	Set up message sequences.



Setting Processing Options for the Condition-Based Maintenance Message Sequences Program (P1315)

Processing options enable you to specify the default processing for programs and reports.

Defaults

1. Message Rules Type

Specify the message rules type. Values are listed in user-defined code (UDC) 13/TY (Message Rules Type).

Setting Up Message Sequences

Access the Condition-Based Maintenance Message Sequences form.

Sequence Number

Enter a number to specify the order of a group of records on the form.

Customer

Enter **Y** or **N** to indicate whether the customer value is used as part of the criteria to search for a message recipient.

Site

Enter **Y** or **N** to indicate whether the site value is used as part of the criteria to search for a message recipient.

Business Unit

Enter **Y** or **N** to indicate whether the business unit value is used as part of the criteria to search for a message recipient.

Location

Enter **Y** or **N** to indicate whether the location value is used as part of the criteria to search for a message recipient.

Product Family

Enter **Y** or **N** to indicate whether the product family is used as part of the criteria to search for a message recipient.

Product Model

Enter **Y** or **N** to indicate whether the product model value is used as part of the criteria to search for a message recipient.

Equipment Number

Enter **Y** or **N** indicate whether the equipment number value is used as part of the criteria to search for a message recipient.

Note: This field heading changes according to which number is primary in the Equipment Constants program (that is, Equipment Number, Unit Number, or Serial Number).

Inventory Number

Enter **Y** or **N** to indicate whether the inventory number value is used as part of the criteria to search for a message recipient.



Setting Up Rules for Notification and Investigation Messages

This section provides an overview of rules for notification and investigation messages and discusses how to:

- Set processing options for the Condition-Based Maintenance Message Rules program (P1316).
- Set up message rules.

Understanding Rules for Notification and Investigation Messages

Use the Condition-Based Maintenance Message Rules program (P1316) to define the search criteria and related message recipients for notification and investigation of alerts. The system uses information from the asset master and the alert to search through the rules and identify the message recipients.

Forms Used to Set Up Rules for Notification and Investigation Messages

Form Name	FormID	Navigation	Usage
Condition-Based Maintenance Message Rules Revisions	W1316B	Condition-Based Maintenance Setup (G13CBM41), Condition- Based Maintenance Message Rules	Set up message rules.
		Click Add on the Work With Condition-Based Maintenance Message Rules form.	
		Select a sequence option on the Condition-Based Maintenance Sequences Search and Select form.	
Condition-Based Maintenance Sequences Search and Select	W1315B	Click Add on the Work With Condition-Based Maintenance Message Rules form.	Select a sequence option for which you want to create a message rule.



Setting Processing Options for the Condition-Based Maintenance Message Rules Program (P1316)

Processing options enable you to specify the default processing for programs and reports.

Versions

1. Equipment Search/Select (P17012S) Version

Specify the version of the Equipment Search/Select program (P17012S) that the system uses. If you leave this processing option blank, the system uses ZJDE0001.

Setting Up Message Rules

Access the Condition-Based Maintenance Message Rules Revisions form.

Message Rules Type

Enter a code to indicate the message rules type. Values are listed in UDC 13/TY (Message Rules Type). The system displays either the notification or investigation fields based on the message rule type.

Customer Number

Enter a number to identify an entry in the JD Edwards EnterpriseOne Address Book system, such as employee, applicant, participant, customer, supplier, tenant, or location.

Site Number

Enter an address book number for the lessor, renter, or lending institution.

Business Unit

Enter an alphanumeric code to identify a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, branch, or plant.

You can assign a business unit to a document, entity, or person for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business unit to track equipment by responsible department.

Business unit security might prevent you from viewing information about business units for which you have no authority.

Location

Enter the current physical location of an asset. The location must have a valid business unit or job number in the Business Unit Master table (F0006).

Product Model and Product Family

Enter a code to classify an inventory item into a model or group for customer service.

Examples include Laser Printer, InkJet, or Fax.

Equipment Number

Enter a numeric value up to eight digits that uniquely identifies an asset.

Inventory Number



Enter an inventory item number. The system provides three separate item numbers plus an extensive cross-reference capability to other item numbers to accommodate substitute item numbers, replacements, bar codes, customer numbers, supplier numbers, and so forth. The item numbers are:

Item Number (short): An eight-digit, computer-assigned item number.

2nd Item Number: A 25-digit, free-form, user-defined alphanumeric item number.

3rd Item Number: A 25-digit, free-form, user-defined alphanumeric item number.

Note: The system displays fields based on the message rule type and enables fields based on the sequence rule that is selected.

Setting Up Sequences for Alert Action Rules

This section provides an overview of sequencing for alert action rules and discusses how to set up sequences for alert action rules.

Understanding Sequencing for Alert Action Rules

Use the Condition-Based Maintenance Alert Action Sequences program (P1317) to define the search sequences that the system uses to determine the action to take to respond to the alert message. The hierarchy determines the order in which the system searches for alert actions.

Observe these guidelines:

- Set up the hierarchy from specific to general.
- For performance reasons, set up only the necessary alert actions.

Form Used to Set Up Sequences for Alert Action Rules

Form Name	FormID	Navigation	Usage
Condition-Based Maintenance Alert Action Sequences	W1317A	Condition-Based Maintenance Setup (G13CBM41), Alert Action Rule Sequences	Set up sequences for Alert Action Rules.

Setting Up Sequences for Alert Action Rules

Access the Condition-Based Maintenance Alert Action Sequences form.

Sequence Number



Enter a number to specify the order of a group of records on the form.

Customer

Enter **Y** or **N** to indicate whether the customer value is used as part of the criteria to search for alert actions.

Site

Enter **Y** or **N** to indicate whether the site value is used as part of the criteria to search for alert actions.

Business Unit

Enter **Y** or **N** to indicate whether the business unit value is used as part of the criteria to search for alert actions.

Location

Enter **Y** or **N** to indicate whether the location value is used as part of the criteria to search for alert actions.

Product Family

Enter **Y** or **N** to indicate whether the product family is used as part of the criteria to search for alert actions.

Product Model

Enter **Y** or **N** to indicate whether the product model value is used as part of the criteria to search for alert actions.

Equipment Number

Enter **Y** or **N** to indicate whether the equipment number value is used as part of the criteria to search for alert actions.

Note: This field heading changes according to which number is primary in the Equipment Constants program (that is, Equipment Number, Unit Number, or Serial Number).

Inventory Number

Enter **Y** or **N** to indicate whether the inventory number value is used as part of the criteria to search for alert actions.

Setting Up Rules for Alert Actions

This section provides an overview of alert action rules and discusses how to:

- Set processing options for the Condition-Based Maintenance Alert Action Rules program (P1318).
- Set up alert action rules.

Understanding Alert Action Rules

Use the Condition-Based Maintenance Alert Action Rules program (P1318) to define the search criteria and related actions for alerts. Alert action rules enable you to set up rules based on equipment coding to define what action is required when the alert is created. Options include sending a notification email, sending an investigation email, creating a work order, and updating the alert level on a PM schedule. The system performs the action when you run the Condition-Based Alerts Processor program (R1312).

Forms Used to Set Up Rules for Alert Actions

Form Name	FormID	Navigation	Usage
Condition-Based Maintenance Alert Action Rules Revisions	W1318B	Condition-Based Maintenance Setup (G13CBM41), Alert Action Rules Click Add on the Work With Condition-Based Maintenance Alert Action Rules form. Select a sequence and click Select on the Condition-Based Maintenance Sequences Search and Select form.	Set up alert action rules.

Setting Processing Options for the Condition-Based Maintenance Alert Action Rules Program (P1318)

Processing options enable you to specify the default processing for programs and reports.

Versions

Equipment Search/Select (P17012S) Version

Specify the version of the Equipment Search/Select program (P17012S) that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.

Setting Up Alert Action Rules

Access the Condition-Based Maintenance Alert Action Rules Revisions form.

Condition-Based Maintenance Alert Action Rules Revisions				
✓ X ⊕ <u>T</u> ools				
Customer Number				
Site Number				
Business Unit				
Location				
Product Model				
Product Family				
Equipment Number				
Inventory Number				
Measurement Location	-			
Alert Level				
Send Notification Message				
Automated Response Type *	Select One			
Model Work Order				
Model Work Order				
Service Type				
Condition-Based Maintenance				
Service Type				

The fields that are available for entry are determined by the Alert Action Rule Sequence that is selected.

Customer Number

Enter a number to identify an entry in the JD Edwards EnterpriseOne Address Book system, such as employee, applicant, participant, customer, supplier, tenant, or location.

Site Number

Enter an address book number for the lessor, renter, or lending institution.

Business Unit



Enter an alphanumeric code to identify a separate entity within a business for which you want to track costs. For example, a business unit might be a warehouse location, job, project, work center, branch, or plant.

You can assign a business unit to a document, entity, or person for purposes of responsibility reporting. For example, the system provides reports of open accounts payable and accounts receivable by business unit to track equipment by responsible department.

Business unit security might prevent you from viewing information about business units for which you have no authority.

Location

Enter the current physical location of an asset. The location must have a valid business unit or job number in the Business Unit Master table (F0006).

Product Model and Product Family

Enter a code to classify an inventory item into a model or group for customer service.

Examples include Laser Printer, InkJet, and Fax.

Equipment Number

Enter a numeric value up to eight digits that uniquely identifies an asset.

Inventory Number

Enter an inventory item number. The system provides three separate item numbers plus an extensive cross-reference capability to other item numbers to accommodate substitute item numbers, replacements, bar codes, customer numbers, supplier numbers, and so forth. The item numbers are:

Item Number (short): An eight-digit, computer-assigned item number.

2nd Item Number: A 25-digit, free-form, user-defined alphanumeric item number.

3rd Item Number: A 25-digit, free-form, user-defined alphanumeric item number.

Measurement Location

Enter a value from UDC 13/LC (Measurement Location) that indicates a measurement location on a piece of equipment. This field enables you to further define the alert action rule to determine whether alert notifications are sent, and what response to use for the incoming alert. If you have not defined an alert action rule that is specific to a particular measurement location, leave this field blank to define an alert action rule that you can use for any measurement location.

Alert Level

Enter a value from UDC 13/LC (Alert Level) that indicates the functional status of a piece of equipment, as assessed by a condition-based maintenance system. This field enables you to further define the alert action rule to determine whether alert notifications are sent, and what response to use for the incoming alert. If you have not defined an alert action rule that is specific to an alert level, leave this field blank to define an alert action rule that you can use for any alert level.

Send Notification Message

Select this option to specify whether a notification message is sent when a condition-based alert is entered into the system.

Automated Response Type

Enter a value that indicates the type of automatic response that is required when a condition-based alert is entered in the Condition-Based Alerts table (F1310). Values are listed in UDC table 13/AR (Automatic Response Type). Values include:

1 No Automatic Response: This option allows the user to review the alert and manually trigger a response from the Condition-Based Alerts Workbench program (P1310).



2 Create Investigation Message: This option automatically creates an investigation message using information from the condition-based alert record.

3 Create WO from Model: This option automatically creates a work order using the model work order information from the condition-based alert record.

4 Update PM Schedule: This option automatically updates the Maintenance Schedule File table (F1207) using the asset number and service type information from the condition-based alert record.

Note: To perform the automated response-type processing, you must run the Condition-Based Alerts Processor program (R1312).

Model Work Order

Model Work Order

Enter a number that identifies an original document. The system uses the information from the model work order to create the work order for the condition-based maintenance alert.





3 Working with Condition-Based Alerts

Understanding Condition-Based Alerts

In contrast to frequency-based preventive maintenance, condition-based maintenance uses upper and lower limits, tolerances, and other conditions that might cause an equipment or system warning or alarm to provide a system response to these conditions based on user, vendor, or manufacturer criteria.

The JD Edwards EnterpriseOne Condition-Based Maintenance (CBM) programs provide both real-time and batch connections to respond to alerts from equipment monitoring devices. For example, a wholesale food distributor monitors refrigeration equipment within cold storage and freezer rooms. If the temperature rises above a maximum level, the system provides an alert that can generate an investigation message, create a work order to service the equipment, or update a preventive maintenance schedule.

Dynamic systems (electrical, hydraulic, mechanical, or thermal) possess normal signatures when operating correctly. A subtle signature change might mean the onset of a failure mode. The small differences between normal and abnormal signatures are often hidden by noise in the system. However, modern transducers and associated signal-analysis techniques can now discriminate between truly random variations and significant trends. With equipment sensors that provide operating information, increasingly available technology supports real-time, on-board monitoring of equipment.

JD Edwards EnterpriseOne CBM enables you to:

- Identify changes in the condition of a machine that will indicate a potential failure.
- Identify physical characteristics that collectively indicate the current condition of a machine.
- Measure, analyze, and report data to recognize trends.

Normally, an alarm condition generates a maintenance action, such as the creation of a work order to inspect, repair, or replace the cause of the alarm. Other alarms might send a pager alert, email message, or other electronic alert to the proper technician, supervisor, or individual who needs instant notification of critical equipment status.

JD Edwards EnterpriseOne CBM is also useful for budgeting considerations, such as planning for costly engine maintenance only when certain conditions occur.

Note: JD Edwards EnterpriseOne CBM supports receiving alerts and responding to them, but does not support receiving readings and analyzing them to determine whether an alert condition exists.

Process Flow for Condition-Based Maintenance

These steps provide an example of the typical flow of events and processes within JD Edwards EnterpriseOne CBM:

- 1. An external system determines whether an equipment reading is at an alert status.
- 2. The external system sends alert details to the JD Edwards EnterpriseOne CBM system.
- 3. The JD Edwards EnterpriseOne CBM system imports the alert details to the condition-based alerts table.
- 4. The JD Edwards EnterpriseOne CBM system sends a notification message to the maintenance coordinator.
- **5.** The maintenance coordinator reviews the message about the equipment in alert.



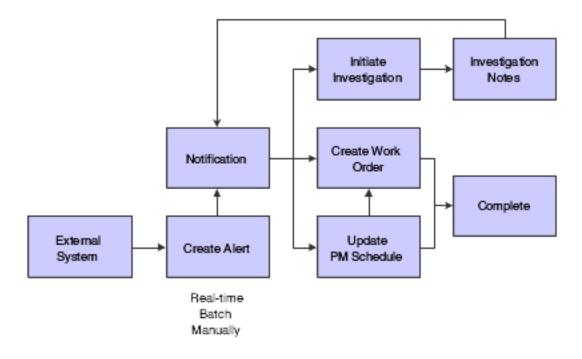
6. The maintenance coordinator sends an investigation message to the responsible technician

Alternatively, the equipment alert causes the system to automatically send an investigation message to the responsible technician

- 7. The technician reports back to the maintenance coordinator with the results of the investigation.
- 8. The maintenance coordinator uses the investigation results to determine whether to create a work order.
- **9.** If necessary, the maintenance coordinator creates a work order or updates the preventive maintenance schedule to create a work order.

Alternatively, the equipment alert causes the system to automatically create a work order to respond to the alert condition.

This flowchart illustrates the JD Edwards EnterpriseOne CBM process:



Entering Condition-Based Alerts

This section provides an overview of condition-based alert entry and discusses how to:

- Set processing options for the Condition-Based Alerts Workbench program (P1310).
- Set processing options for the Condition-Based Alerts Revisions program (P1311).
- Enter condition-based alerts manually.

Understanding Condition-Based Alert Entry

Several methods are available to enter condition-based alerts into the system. An external system can send conditionbased alerts into the JD Edwards EnterpriseOne system, or you can manually enter alerts from within JD Edwards EnterpriseOne.



You can use these methods to enter alerts:

• Electronically enter alerts in real time, using the business service CapitalAssetManager (JP130000).

The system receives the alert information using the notification event. The system sends information about the successful or unsuccessful alert creation using the response event. You can manage these electronic alerts from the Condition-Based Alerts Workbench program (P1310).

• Electronically download alerts in batch.

The system imports information from the interoperability table to the application tables and performs the same validation and business processes that occur as if you enter alerts manually. You can manage these electronic alerts from the Condition-Based Alerts Workbench program.

• Enter alerts manually using the Condition-Based Alerts Workbench program.

The Condition-Based Alerts Workbench program also enables you to perform various alert tasks, such as:

• Adding important alert information, including media objects that contain time stamps.

You can enter text that describes the issue and actions being taken, and the system enters a time stamp (date, time, and user information) for each entry.

- Sending a notification alert message manually or automatically to those who need instant notification of critical equipment status, such as technicians, supervisors, or a distribution list.
- Responding to the alerts.

Alert responses are discussed separately.

Mobile Applications for Reviewing Condition-Based Alert Messages

The following mobile applications are available, and can be used to review condition-based alert messages, and to manually enter or update alerts on a mobile device:

Condition-Based Maintenance (Smartphone and Tablet)

These applications require system administrator configuration before they are available to individual users. Contact your system administrator to determine whether these applications are available for use.

Additionally, see the following topic in the JD Edwards EnterpriseOne Applications Mobile Enterprise Applications Implementation Guide

Condition-Based Maintenance Mobile Applications.

Form Used to Enter Condition-Based Alerts Manually

Form Name	FormID	Navigation	Usage
Condition-Based Alerts Revisions	W1311B	Daily Condition-Based Maintenance Processing	Enter condition-based alerts manually.



Form Name	FormID	Navigation	Usage
		(G13CBM10), Condition- Based Alerts Workbench	
		Click Add on Work With Condition-Based Alerts.	

Setting Processing Options for the Condition-Based Alerts Workbench Program (P1310)

Processing options enable you to specify the default processing for programs and reports.

Defaults

1. Business Unit,2. Location,3. Customer Number,4. Site Number,5. Manager,6. Technician,7. Alert Status,8. Alert Level,10. Measurement Location,13. Equipment Status, 14. Company,15. Product Family,and16. Product Model

Specify the business unit or job, location, customer number, site number, manager number, technician number, alert status, alter level, measurement status, equipment status, company, product family, or product model that the system uses to search for condition-based alerts.

9. Automated Response Type

Specify the automated response type that the system uses to search for condition-based alerts. Values are listed in user-defined code (UDC) 13/AR (Automated Response Type).

11. Event Date From and 12. Event Date Thru

Specify the beginning event date or the ending event date in a range of event dates. The system uses this date when searching for condition-based alerts.

17. Notification Workflow Process and 18. Investigation Workflow Process

Specify the condition-based alerts workflow process that the system uses for notification or investigation. The system uses these values when displaying the notification message information or the investigation message information from workflow. If you leave this processing option blank, the system uses the CBMNOTIFY workflow process.

Note: If you leave the Investigation Workflow processing option blank, the system uses the CBMINVEST workflow process.

Categories

1. Major Accounting Class

Specify the category code that classifies assets into accounting classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C1 (Major Accounting Class).

2. Major Equipment Class

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C2 (Major Equipment Class).

3. Manufacturer

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C3 (Manufacturer).



4. Model Year

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C4 (Model Year).

5. Usage Miles or Hours

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C5 (Usage Miles or Hours).

6. Category Code - F/A 6

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C6 (Equipment Code).

7. Category Code - F/A 7

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C7 (Category Code 7).

8. Category Code - F/A 8

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C8 (Division).

9. Category Code - F/A 9

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/C9 (Category Code 9).

10. Category Code - F/A 10 (Rate Group)

Specify the category code that groups similar items for billing. The system uses this code when searching for conditionbased alerts. Enter a value from UDC 12/CO (Rate Group).

11. Category Code - F/A 11

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F1 (Category Code 11).

12. Category Code - F/A 12

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F2 (Category Code 12).

13. Category Code - F/A 13

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F3 (Category Code 13).

14. Category Code - F/A 14

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F4 (Category Code 14).

15. Category Code - F/A 15

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F5 (Category Code 15).

16. Category Code - F/A 16

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F6 (Category Code 16).

17. Category Code - F/A 17

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F7 (Category Code 17).

18. Category Code - F/A 18



Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F8 (Category Code 18).

19. Category Code - F/A 19

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/F9 (Category Code 19).

20. Category Code - F/A 20

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/FO (Category Code 20).

21. Category Code - F/A 21

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/21 (Category Code 21).

22. Category Code - F/A 22

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/22 (Category Code 22).

23. Category Code - F/A 23

Specify the category code that classifies assets into groups or classes. The system uses this code when searching for condition-based alerts. Enter a value from UDC 12/23 (Category Code 23).

Versions

1. Condition-Based Alerts Revisions (P1311) Version

Specify the version of the Condition-Based Alerts Revisions program (P1311). If you leave this processing option blank, the system uses ZJDE0001.

2. Work with Failure Analysis (P17766) Version

Specify the version of the Work with Failure Analysis program (P17766). If you leave this processing option blank, the system uses ZJDE0001.

3. Work Order Revisions (P17714) Version

Specify the version of the Work Order Revisions program (P17714). If you leave this processing option blank, the system uses ZJDE0003.

4. PM Backlog (P12071) Version

Specify the version of the Preventive Maintenance Backlog program (P12071). If you leave this processing option blank, the system uses ZJDE0001.

5. Equipment Search/Select (P17012S) Version

Specify the version of the Equipment Search/Select program (P17012S). If you leave this processing option blank, the system uses ZJDE0001.

Setting Processing Options for the Condition-Based Alerts Revisions Program (P1311)

Processing options enable you to specify the default processing for programs and reports.

Defaults

1. Send Notification Message



Specify a default value for the Send Notification Message field when adding a condition-based alert record. Values are:

Blank: Use the alert action rules to determine the value.

0: Do not send notification messages.

1: Send notification messages.

2. Automated Response Type

Enter a value from UDC 13/AR (Automated Response Type) that specifies the default value for the Automated Response Type field when you add a condition-based alert record. If you leave this processing option blank, the system will attempt to retrieve the value from the alert action rules.

3. Notification Workflow Process and 4. Investigation Workflow Process

Specify the condition-based alerts workflow process that the system uses for notification or investigation. The system uses these values when displaying the notification message information or the investigation message information from workflow. If you leave this processing option blank, the system uses the CBMNOTIFY workflow process.

Note: If you leave the Investigation Workflow processing option blank, the system uses the CBMINVEST workflow process.

Process

1. Condition-Based Alerts Processor (R1312) Version

Specify the version of the Condition-Based Alerts Processor program (R1312) that the system uses when processing the manual responses of condition-based alerts. If you leave this processing option blank, the system uses XJDE0001.

Versions

1. Condition-Based Alerts Processor (R1312) Version

Specify the version of the Condition-Based Alerts Processor program (R1312) that the system uses when processing the automated responses of condition-based alerts. If you leave this processing option blank, the system does not process the automated responses of condition-based alerts.

Note: If you leave this processing option blank, you must run a version of the Condition-Based Alerts Processor program (R1312) to be able to complete the automated response-type processing.

2. Work with Failure Analysis (P17766) Version

Specify the version that the system uses for the Work with Failure Analysis program (P17766). If you leave this processing option blank, the system uses ZJDE0001.

3. Work Order Revisions (P17714) Version

Specify the version that the system uses for the Work Order Revisions program (P17714). If you leave this processing option blank, the system uses ZJDE0003.

4. PM Backlog (P12071) Version

Specify the version of the Preventive Maintenance Backlog program (P12071) that the system uses. If you leave this processing option blank, the system uses ZJDE0001.

5. Equipment Search/Select (P17012S) Version

Specify the version of the Equipment Search/Select program (P17012S). If you leave this processing option blank, the system uses ZJDE0001.



Entering Condition-Based Alerts Manually

Access the Condition-Based Alerts Revisions form.

Equipment Number

Enter an identification code to represent an asset. You enter the identification code in one of these formats:

1: Asset number (a computer-assigned, eight-digit, numeric control number).

2: Unit number (a 12-character alphanumeric field).

3: Serial number (a 25-character alphanumeric field).

Every asset has an asset number. You can use unit number and serial number to further identify assets. If this is a data entry field, the first character that you enter indicates whether you are entering the primary (default) format that is defined for the system, or one of the other two formats. A special character (such as / or *) in the first position of this field indicates which asset number format you are using. You assign special characters to asset number formats on the fixed assets system constants form.

Measurement Location

Enter a value from UDC 13/LC (Measurement Location) that indicates a measurement location on a piece of equipment. You can use this code to indicate where a measurement is taken or where an alert originates on a piece of equipment.

Event Date / Time

Enter the date on which an event occurred, such as the date of a test reading or the date of a condition-based alarm.

Send Notification Message

Enter a code to specify whether a notification message is sent when a condition-based alert is entered into the system. Values are:

1 or Y: Send.

0 or N: Do not send.

This field can be populated from the processing options or from the information setup in the alert action rules.

The system will use the notification message rules to determine who receives the message, unless you enter an address book number in the Notification Recipient field.

Responding to Condition-Based Alerts

This section provides an overview of responses to condition-based alerts and discusses how to:

- Enter responses to condition-based alerts.
- Initiate an investigation message.
- Create a work order.
- Update the preventive maintenance schedule.
- Process condition-based alerts.
- Set processing options for the Condition-Based Alerts Processor program (R1312).



Review condition-based alerts.

Understanding Responses to Condition-Based Alerts

When the system receives an equipment alert, you can send an investigation message to one person (such as a plant technician or supervisor) or to a distribution list to begin the investigation process. Then, you can generate a work order or update the preventive maintenance schedule, based on the setup parameters for condition-based maintenance. You can respond to alerts manually by using the Condition-Based Alerts Workbench program (P1310), automatically by setting up alert action rules, or by running the Condition-Based Alerts Processor program (R1312).

These responses are available for condition-based alerts:

- Initiate an investigation request.
 The system sends a boilerplate message through workflow. The investigation message appears in the employee Work Center or in an email, requires a response for completing the investigation, and notifies the originator for follow-up action.
- Create a work order to inspect, repair, or replace the cause of the alert.
 The system uses information from the model work order, maintenance rules, alert action rules, and processing options of the Condition-Based Alerts Processor (R1312) to create the new work order.
- Update the preventive maintenance schedule.
 The system updates the alert level from the condition-based alert to a PM schedule that is set up as condition-based. You then use the preventive maintenance system to inspect, repair, or replace the cause of the alert.

To process condition-based alerts according to their automated response type values and the alert action rules, you must run the Condition-Based Alerts Processor program (R1312). For example, if the automated response type on an alert contains a value of **3** (Create W.O. from Model), R1312 creates a work order. You can set up multiple alert action rules to determine how the system responds to an alert.

The R1312 program enables you to:

- Create an investigation message.
- Create a work order from a model.
- Update the Maintenance Schedule File table (F1207).
- Run the Update PM Schedule Status program (R12807).

The report includes the equipment number, description, alert level, automated response type, and results (such as to whom an investigation message was sent or the work order number that was created).

Note: Program R1312 does not affect condition-based alerts that have an automated response type value of **1** (No Automated Response).

Use the Condition-Based Alerts Workbench program (P1310) to review condition-based alert messages. From the workbench, you can access the Process Audit Trail (P98860, Process Task Monitor), which displays the recipients of notification or investigation messages and the detail and status of workflow activities.

Note:

- Processing Condition-Based Alerts.
- JD Edwards EnterpriseOne Tools Foundation Guide .

Forms Used to Respond to Condition-Based Maintenance Alerts

Form Name	FormID	Navigation	Usage
Condition-Based Alerts Revisions	W1311B	Daily Condition-Based Maintenance Processing (G13CBM10), Condition-Based Alerts Workbench Locate the applicable alert on the Work With Condition-Based Alerts form. Select Alert Revisions from the Row menu.	Enter responses to condition-based alerts.
Create Investigation Message	W1311A	Select Manual Responses from the Condition-Based Alert Revisions Form menu, and then select Investigation Msg.	Initiate an investigation message.
Create W.O. from Model	W1311E	Select Manual Responses from the Condition-Based Alert Revisions Form menu, and then select Create W.O.	Create a work order.
Update P.M. Schedule	W1311F	Select Manual Responses from the Condition-Based Alert Revisions Form menu, and then select Update P.M.	Update the preventive maintenance schedule.
Process Task Monitor	W98860A	Locate and select the applicable alert message on the Work With Condition-Based Alerts form. Select Message Review from the Row menu, and then select Notification or Investigation.	Review condition- based alerts.

Entering Responses to Condition-Based Alerts

Access the Condition-Based Alerts Revisions form.

You can determine the action that needs to be taken to resolve the alert. If you use alert action rules, you can review the system generation responses.

Initiating an Investigation Message

Access the Create Investigation Message form.

Create Investigation Message			
✓ X ⊕ <u>T</u> ools			
Investigation Recipient	7116364	Steffens, Mike	
Investigation Structure Type	99 1099 Structure		
Notification Recipient	7116364	Steffens, Mike	
Notification Structure Type	99 1099 Structure		

Note: When the system creates an investigation message, a notification recipient is required. This is the address book number that will receive the email response from the investigator once completed. If a notification email is not sent, the system will use the notification rules.

Note: If you set up the alert action rules to create an investigation message, this information will be supplied when the alert is created.

Creating a Work Order

Access the Create W.O. from Model form.

Note: If you set up the alert action rules to create a work order, this information will be supplied when the alert is created.

Model Work Order

Enter a number to indicate the model work order. This document can be a voucher, a sales order, an invoice, unapplied cash, a journal entry, and so on.

Service Type

Enter a code to indicate the condition-based maintenance service to be performed. Values are in UDC 12/ST (Service Types). Examples of codes include TIRES for replace tires and ENGINE for engine overhaul.

The system uses this code, in conjunction with the equipment number, to obtain the default rules from the Maintenance Schedule File (F1207) table when creating a work order.

Planned Start Date

Enter the date when the item or line of work is to start.



Updating the Preventive Maintenance Schedule

Access the Update P.M. Schedule form.

Note: If you set up the alert action rules to update the PM schedule, this information will be supplied when the alert is created.

Service Type

Enter a code to indicate the condition-based maintenance service to be performed.

You can then use the PM Update Status program (R12807) to create a work order for the service type.

Processing Condition-Based Alerts

Select Daily Condition-Based Maintenance Processing (G13CBM10), Condition-Based Alerts Processor.

Setting Processing Options for the Condition-Based Alerts Processor Program (R1312)

Processing options enable you to specify the default processing for programs and reports.

Process

1. Work Center Or Report

Specify where the system writes errors. Values are:

Blank: Write errors to the Work Center.

1: Write errors on the report.

2. Job Status Message Recipient

Specify the address book number of the recipient of job status messages that result from the Condition-Based Alerts Processor program (R1312). If you leave this processing option blank, the system uses the address book number of the current user.

3. Update PM Schedule (R12807) Version

Specify which version of the Update PM Schedule Status program (R12807) the system uses to process PM schedules that have been updated as a result of a condition-based alert. If you leave this processing option blank, the system does not process PM schedules.

4. Work Order Cross Reference

Specify the value for the work order cross-reference. Values are:

Blank: Immediate parent of the equipment.

1: Equipment's top-level parent.



2: Value from the model work order.

5. Create Individual Resource Assignments

Specify whether the system automatically creates individual resource assignments that are based on the Assigned To (ANP) address book number on the new work order. The system verifies that the address book number appears in the Resource Master table (F48310). This processing option applies only when the condition-based alerts process creates a work order. Values are:

Blank: Do not create.

1: Create.

6. Work Order Parts Detail (P17730) Version

Specify the version that the system uses for the Work Order Parts Detail program (P17730). If you leave this processing option blank, the system uses ZJDE0002. This processing applies when parts detail is attached to the new work order.

7. Work Order Labor Detail (P17732) Version

Specify the version that the system uses for the Work Order Labor Detail program (P17732). If you leave this processing option blank, the system uses ZJDE0002. This processing option applies when labor detail is attached to the new work order.

Versions

1. Condition-Based Alerts Revisions (P1311) Version

Specify the version that the system uses for the link to the Condition-Based Alerts Revisions program (P1311) that is provided in the investigation message. If you leave this processing option blank, the system uses ZJDE0001.

Reviewing Condition-Based Alerts

Access the Process Task Monitor form.

Completing Condition-Based Alerts

This section provides an overview of condition-based alerts completion and lists the forms that are used to complete condition-based alerts.

Understanding Condition-Based Alerts Completion

After you have responded to a condition-based alert, you can change the alert status to a *complete* or *closed* status when the work is completed. You can complete the alerts using:

• Work order activity rules.

If you are using work orders, you can use the work order activity rules to complete or close the condition-based alert according to the work order status.

• PM Backlog.

To complete alerts through the PM backlog, you must set the processing options for completion or cancellation and update the PM status.



Condition-Based Alerts Workbench.

You can complete alerts manually by changing the Alert Status to a complete or closed status.

Note:

- "Setting Up Work Orders" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .
- "Working with Preventive Maintenance Schedules", "Changing the Status of PMs to Complete" in the JD Edwards EnterpriseOne Applications Capital Asset Management Implementation Guide .

Forms Used to Complete Condition-Based Alerts

Form Name	FormID	Navigation	Usage
Work Order Revisions	W17714A	Work Order (G1316), Work Order Entry Locate and select a work order, and then click Selection the Work With Work Orders form. Change the work order status on the Planning tab of the Work Order Revisions form.	Complete a work order, which then completes the condition-based alert through work order activity rules.
PM Backlog	W12071A	Daily Condition-Based Maintenance Processing (G13CBM10), PM Backlog	Complete a condition-based alert and change status of PM to Complete.
Work With Condition- Based Alerts	W1310A	Daily Condition-Based Maintenance Processing (G13CBM10), Condition-Based Alerts Workbench Enter a closed status in the Alert Status field on the Alerts tab.	Complete a condition-based alert.

4 Appendix A - Delivered Workflow for JD Edwards EnterpriseOne Condition-Based Maintenance

Delivered Workflow for JD Edwards EnterpriseOne Condition-Based Maintenance

This appendix discusses the delivered workflow for JD Edwards EnterpriseOne Condition-Based Maintenance (CBM).

Note:

• JD Edwards EnterpriseOne Tools Workflow Tools Guide .

Delivered Workflow for Condition-Based Maintenance

This section discusses the JD Edwards EnterpriseOne CBM workflow processes.

Condition-Based Maintenance Notification Process

This section discusses the JD Edwards EnterpriseOne CBM notification process workflow.

Description

Workflow Description

The system sends a workflow notification message to a responsible person or persons within the maintenance team when the system receives a condition-based alert.

Workflow Trigger

The system receives a CBM Alert that is flagged to create a notification message.

Workflow Action

The responsible person or persons within the maintenance team receive a notification message indicating that a condition-based alert has been received by the system.

Workflow Objects System 13 Workflow Object Name CBMNOTIFY

Object ID N1301040

Event Descriptions / Function Name



CallCBMNotificationWorkflow

Sequence / Line Numbers

11, 11

Condition-Based Maintenance Investigation Process

This section discusses the JD Edwards EnterpriseOne CBM investigation process workflow.

Description

Workflow Description

The system can send a workflow investigation request message to a responsible person or persons within the maintenance team to investigate the condition-based alert that the system receives. When the investigation is complete, the system sends an investigation completed message to the original notification recipient.

Workflow Trigger

The system receives a CBM Alert that is flagged with an automated response type of **2** to create an investigation request message. You can also manually trigger an investigation request message from the Condition-Based Alerts Workbench (P1310).

Workflow Action

The responsible person or persons within the maintenance team receive an investigation message requesting they investigate the condition-based alert that was received in the system. The message provides a link to the Condition-Based Alerts Investigation Revisions form. On this form, the recipient can record investigation notes and indicate whether or not the investigation is complete. When the investigation is complete, the system sends another message to the original notification recipient.

Workflow Objects System 13 Workflow Object Name CBMINVEST Object ID N1301070 Event Descriptions / Function Name CallCBMInvestigationWorkflow

Sequence / Line Number

11



5 Appendix B - Delivered User Defined Objects for Condition-Based Maintenance (Release 9.2 Update)

Delivered User Defined Objects for Condition-Based Maintenance (Release 9.2 Update)

This appendix discusses delivered user defined objects (UDOs) that you can use with the Condition-Based Maintenance system.

Condition-Based Maintenance Notifications

JD Edwards EnterpriseOne notifications enable you to improve your business efficiency through the use of proactive notifications that are actionable. Proactive notifications enable the system to notify users of business events as they happen without the need for the user to be online.

This section discusses delivered notifications that you can use with the Condition-Based Maintenance system. For a complete listing of available notifications, along with additional information about them, see the Notifications Cross Reference in Oracle Support (Document 2365066.1 - JD Edwards EnterpriseOne Delivered Notifications), which can be found at:

https://support.oracle.com/epmos/faces/DocumentDisplay?id=2365066.1

For additional information about using and subscribing to notifications, see these topics:

- Creating a Notification in the JD Edwards EnterpriseOne Tools Notifications Guide .
- Testing Notifications in the JD Edwards EnterpriseOne Tools Notifications Guide .
- Subscribing to Notifications (Release 9.2.2) in the JD Edwards EnterpriseOne Tools Foundation Guide .

This table describes the notification that you can use with the Condition-Based Maintenance system:

Notification	Description
JDE_NOTIFY_13_Open_Severe_Alerts	Notifies subscribers of open, severe Condition-Based Maintenance alerts for the subscription's specific business unit. This notification runs on weekdays every hour between 7:00 am and 5:00 pm.





6 Glossary

Alert Level

Enter a code to indicate the functional status of a piece of equipment, as assessed by a condition-based maintenance system. For maintenance schedules that are condition-based, the preventive maintenance system uses this code to determine whether maintenance is due. Enter a value from user-defined code (UDC) table 13/AL (Alert Level).

This field enables you to further define the message rule to determine who gets notification or investigation messages for each alert level.

Alert Status

Enter a value from UDC 13/AS (Alert Status) that indicates the status of a condition-based alert.

Investigation Recipient

Enter an address book number to identify the recipient of an alert investigation request. This number can be a single person or a distribution list. The system verifies this number against the JD Edwards EnterpriseOne Address Book system.

Investigation Structure Type

Enter a code to identify a type of organizational structure that has its own hierarchy in the JD Edwards EnterpriseOne Address Book system (for example, email). Values are defined in UDC 01/TS (Parent/Child Structure Type).

Notification Recipient

Enter an address book number to identify the recipient of an alert notification message. This number can be a single person or a distribution list. The system verifies this number against the JD Edwards EnterpriseOne Address Book system.



Notification Structure Type

Enter a code to identify a type of organizational structure that has its own hierarchy in the JD Edwards EnterpriseOne Address Book system (for example, email). Values are defined in UDC 01/TS (Parent/Child Structure Type).

Service Type

Enter a value from UDC 12/ST (Service Types) that indicates the condition-based maintenance service or preventive maintenance service to be performed. Examples of codes include TIRES for replace tires, ENGINE for engine overhaul, CLUTCH for adjust clutch and REBUILD for rebuild equipment.

The system uses this code, in conjunction with the equipment number, to obtain the default rules from the Maintenance Rules table (F1393) when creating a work order and to update the Maintenance Schedule (F1207) table with the alert level from the condition based alert.



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