Operation

Software

OnCue™ Software

Models:

8.5/12RES equipped with the ADC-RES Controller
17/18RES equipped with the ADC-RES Controller
15/30RES equipped with the ADC 2100 Controller
15/30RYG equipped with the ADC 2100 Controller

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KOHLER®
POWER SYSTEMS

TP-6616 7/09a

Table of Contents

Notes

IMPORTANT SAFETY INSTRUCTIONS. Electromechanical equipment, including generator sets and accessories, can cause bodily harm and pose life-threatening danger when improperly installed, operated, or maintained. To prevent accidents be aware of potential dangers and act safely. Read and follow all safety precautions and instructions. SAVE THESE INSTRUCTIONS.

This manual has several types of safety precautions and instructions: Danger, Warning, Caution, and Notice.

⚠ DANGER

Danger indicates the presence of a hazard that ***will cause severe personal injury, death***, or ***substantial property damage***.

⚠ WARNING

Warning indicates the presence of a hazard that ***can cause severe personal injury, death,*** or ***substantial property damage***.

⚠ CAUTION

Caution indicates the presence of a hazard that ***will*** or ***can cause minor personal injury*** or ***property damage***.

NOTICE

Notice communicates installation, operation, or maintenance information that is safety related but not hazard related.

Safety decals affixed to the equipment in prominent places alert the operator or service technician to potential hazards and explain how to act safely. The decals are shown throughout this publication to improve operator recognition. Replace missing or damaged decals.

Accidental Starting

⚠ WARNING

Accidental starting.
Can cause severe injury or death.

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

Disabling the generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

Hazardous Voltage/ Moving Parts

⚠ DANGER

Hazardous voltage.
Will cause severe injury or death.

Disconnect all power sources before opening the enclosure.

Short circuits. Hazardous voltage/current can cause severe injury or death. Short circuits can cause bodily injury and/or equipment damage**.** Do not contact electrical connections with tools or jewelry while making adjustments or repairs. Remove all jewelry before servicing the equipment.

NOTICE

Electrostatic discharge damage. Electrostatic discharge (ESD) damages electronic circuit boards. Prevent electrostatic discharge damage by wearing an approved grounding wrist strap when handling electronic circuit boards or integrated circuits. An approved grounding wrist strap provides a high resistance (about 1 megohm), *not a direct short*, to ground.

Notes

This manual provides operation instructions for OnCue™ Software. OnCue software can be used with the following generator set models:

- 8.5RES with ADC-RES
- 12RES with ADC-RES
- 17RES with ADC-RES
- 18RES with ADC-RES
- 15RES with ADC 2100
- 30RES with ADC 2100
- 15RYG with ADC 2100
- 30RYG with ADC 2100

Note: OnCue™ software is designed for the generator set model and controller combinations shown above. OnCue™ software is not designed to work with other generator set models.

Information in this publication represents data available at the time of print. Kohler Co. reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

Read this manual and carefully follow all procedures and safety precautions to ensure proper equipment operation and to avoid bodily injury. Read and follow the Safety Precautions and Instructions section at the beginning of this manual. Keep this manual with the equipment for future reference.

List of Related Literature

Figure 1 lists related literature.

Literature Type	Part Number
OnCue Specification Sheet	G6-98
OnCue Network Bridge Installation Instructions	TT-1486

Figure 1 Related Literature

Service Assistance

For professional advice on generator set power requirements and conscientious service, please contact your nearest Kohler distributor or dealer.

- Consult the Yellow Pages under the heading Generators—Electric.
- Visit the Kohler Power Systems website at KohlerPower.com.
- Look at the labels and stickers on your Kohler product or review the appropriate literature or documents included with the product.
- Call toll free in the US and Canada 1-800-544-2444.
- Outside the US and Canada, call the nearest regional office.

Headquarters Europe, Middle East, Africa (EMEA)
Kohler Power Systems
3 rue de Brennus
93200 Saint Denis
France
Phone: (33) 1 49 178300
Fax: (33) 1 49 178301

Asia Pacific
Power Systems Asia Pacific Regional Office
Singapore, Republic of Singapore
Phone: (65) 6264-6422
Fax: (65) 6264-6455

China
North China Regional Office, Beijing
Phone: (86) 10 6518 7950
(86) 10 6518 7951
(86) 10 6518 7952
Fax: (86) 10 6518 7955

East China Regional Office, Shanghai
Phone: (86) 21 6288 0500
Fax: (86) 21 6288 0550

India, Bangladesh, Sri Lanka
India Regional Office
Bangalore, India
Phone: (91) 80 3366208
(91) 80 3366231
Fax: (91) 80 3315972

Japan, Korea
North Asia Regional Office
Tokyo, Japan
Phone: (813) 3440-4515
Fax: (813) 3440-2727

Latin America
Latin America Regional Office
Lakeland, Florida, USA
Phone: (863) 619-7568
Fax: (863) 701-7131

1.1 OnCue Software

A personal computer (PC) running Kohler® OnCue™ software can communicate with the generator set models listed in the Introduction to monitor the generator set from any location with Internet access. With the correct password, you can also use the PC to signal the generator set controller to start or stop the engine or reset a fault.

The PC can be set up to automatically send email or text messages to notify selected recipients of generator set faults.

The generator set must be equipped with the OnCue™ network bridge, which allows connection of the generator set to the Internet through an Ethernet router and cable or DSL modem. See TT-1486 for network bridge installation, connection, and setup instructions.

1.2 System Requirements

OnCue™ software is designed to run on a personal computer (PC) connected to the Internet through a cable or DSL modem and an Ethernet router. The following items are the minimum requirements and recommendations for the computer system and related hardware.

- Personal computer (PC) with Microsoft® Windows Vista or Windows XP
- 512 MB RAM
- Up to 500 MB of available hard disk space may be required
- “Always-on” Internet service via DSL or cable modem
- Network bridge for generator set connection to the Ethernet. The network bridge is included with OnCue™ software kit.
- Ethernet router with a firewall for connection of the network bridge and one or more PCs to the modem. See router requirements, listed separately.
- An uninterruptible power supply (UPS) for the PC is strongly recommended.
- Network cable for connection of the network bridge to the Ethernet router (not included with the OnCue kit)

Microsoft®, Windows Vista®, and Windows XP® are registered trademarks of Microsoft Corporation.

Ethernet router requirements:

- Network Address Translation (NAT) is required to prevent Internet traffic from accessing the network bridge except as configured for OnCue.
- A wireless router (if used) should be encrypted to prevent untrusted devices from accessing your network bridge.

Requirements for remote access from a PC communicating over the Internet:

- The router must have port forwarding capability.
- One of two methods to identify the router is required:
  - The router should have dynamic DNS (domain name system) capability (check the router documentation), or
  - A static IP address for the Ethernet router may be obtained from the ISP (Internet service provider).
- When using OnCue from a remote location behind a firewall, it may be necessary to configure the firewall to open port 502. Contact your network administrator for assistance, if necessary.

1.3 Network Bridge

The network bridge is included in the OnCue™ software kit. See TT-1486, Installation Instructions, for instructions to install, connect, and configure the network bridge and other hardware. TT-1486 is included with the OnCue™ software kit.

1.4 Internet Configuration and Security

OnCue is designed to operate on a secure home network. Your network should have a router with a firewall that prevents unsolicited network traffic from accessing your network. If you have a wireless network, it should be encrypted to prevent unwanted access.

The network bridge does not secure the network connection used to configure its network address. The bridge does secure the network connection used to start, stop, and reset the generator and to change the bridge password. The bridge only encrypts the password (generator commands and status are not encrypted).

Internet router configuration

Your internet router must be configured to forward TCP port 502 to the network bridge attached to the genset. See TT-1486 and consult the documentation for your internet router for instructions to configure port forwarding.

PC configuration

If a firewall is running on your PC, the firewall may prompt you to allow OnCue to use port 502. You should allow the connection.

1.5 Software Installation

1.5.1 Microsoft .NET Framework

The OnCue software requires Microsoft® .NET framework 3.5. The .NET framework files are included on the OnCue CD-ROM. If the PC does not have the required version of .NET Framework, the OnCue install program will install it and then prompt you to restart the PC.

1.5.2 Device Installer

Device Installer software is included on the OnCue CD-ROM. Device Installer is required for configuration of the J1939/Ethernet converter. See TT-1486.

1.5.3 Kohler OnCue

Note: You must have the Kohler J1939–Ethernet bridge configured with a valid IP address using Device Installer. See TT-1486 for instructions.

1. Insert the software CD-ROM into your PC's disk drive and allow it to start. The opening screen will appear. See Figure 1-1.

2. Click on OnCue™ Software.

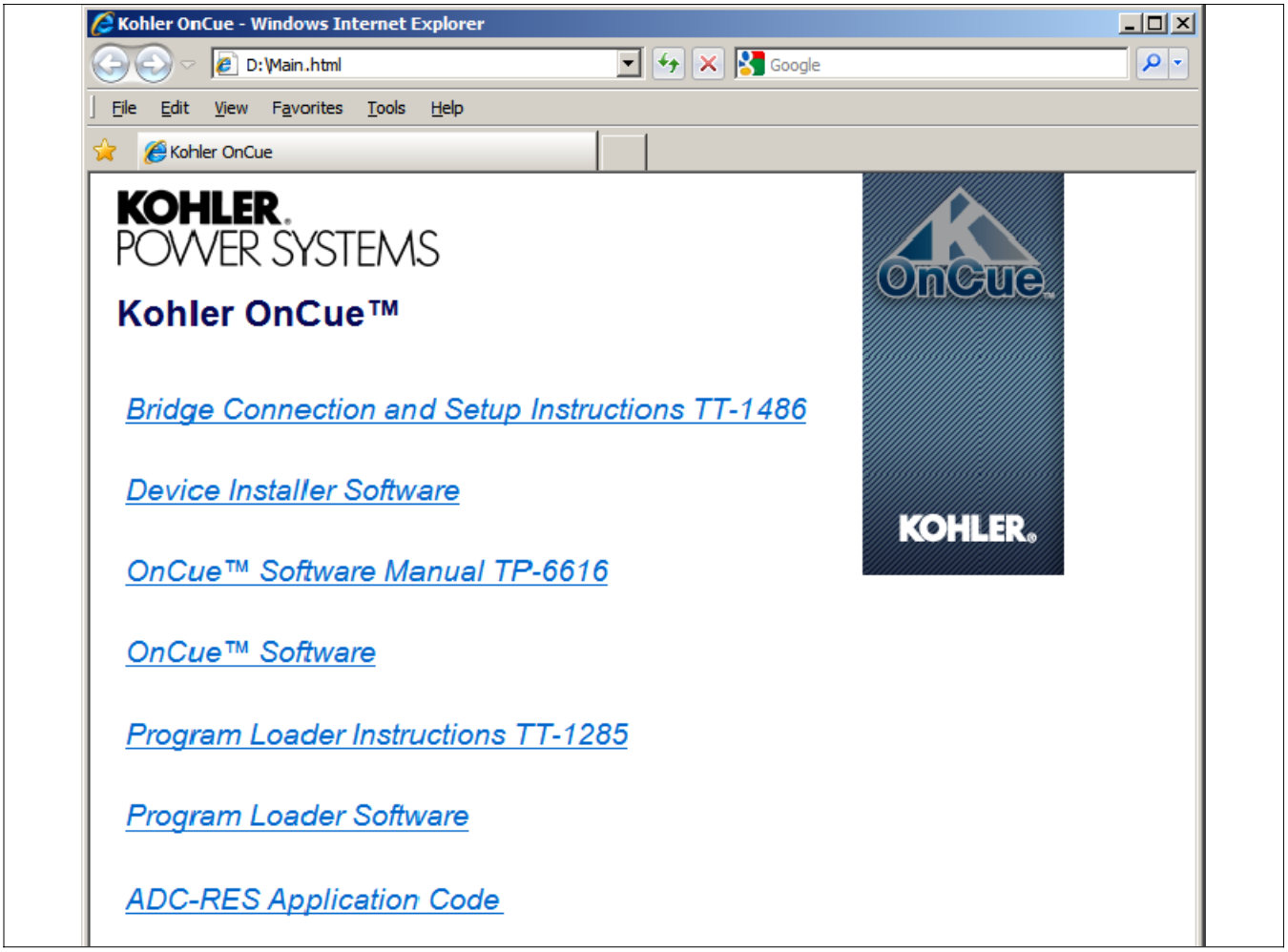
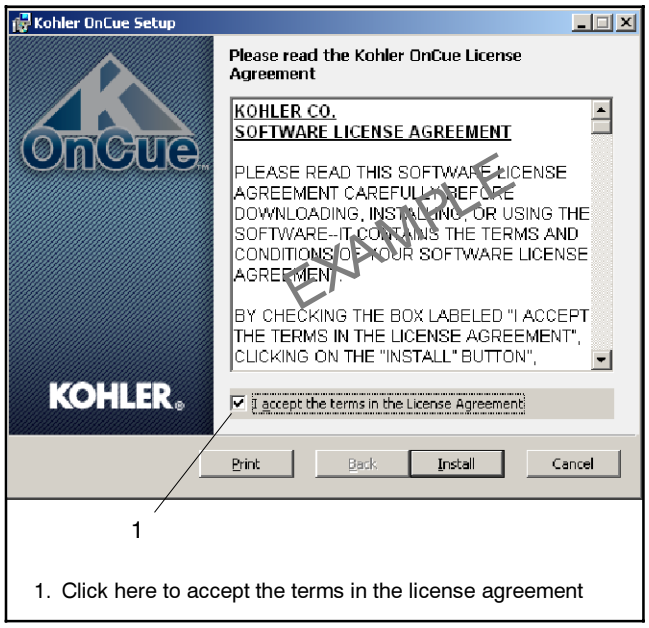


Figure 1-1 CD Opening Screen

3. If the PC does not have the required version of .NET Framework, the OnCue install program will install it and then prompt you to restart the PC.

4. Read the license agreement, click the box to accept the terms in the license agreement, and click on the Install button. See Figure 1-2.

   Note: See Section 2.4.1, Privacy Statement.



1. Click here to accept the terms in the license agreement

Figure 1-2 Kohler OnCue Installation Screen with License Agreement

5. Wait for the program to install. A status screen shows the progress of the installation.

6. A new screen will appear when installation is complete. Click Finish.

Note: If a firewall is running on your PC, the firewall may prompt you to allow OnCue to use port 502. You should allow the connection.

Notes

2.1 Introduction

This section contains instructions for configuration of communication settings on the PC and configuration of email and text messaging for fault notification.

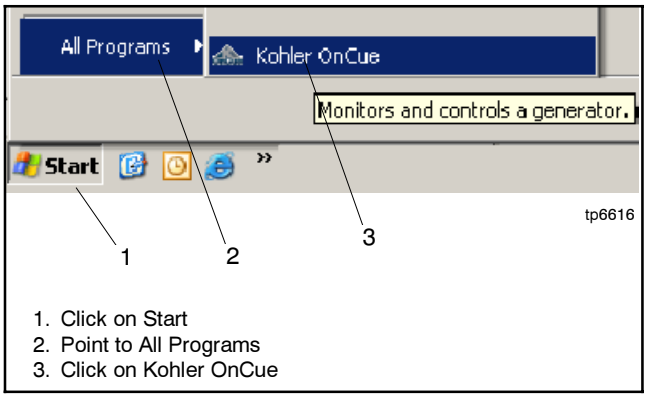
Note: Before starting the OnCue™ software, use the Device Installer software provided with the OnCue kit to configure the network bridge. For instructions, refer to TT-1486, also provided with the kit.

2.2 Start OnCue

1. Start OnCue by clicking on Start > All Programs > Kohler OnCue. A new icon will appear in the lower right corner of the screen. See Figure 2-2.

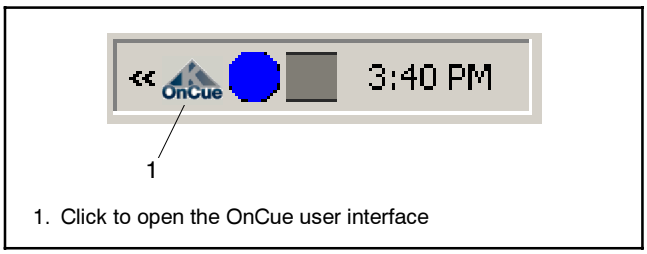
2. Open OnCue by double-clicking on the OnCue icon in the lower right-hand corner of the screen.

   The OnCue User Interface Window opens. See Figure 2-3.



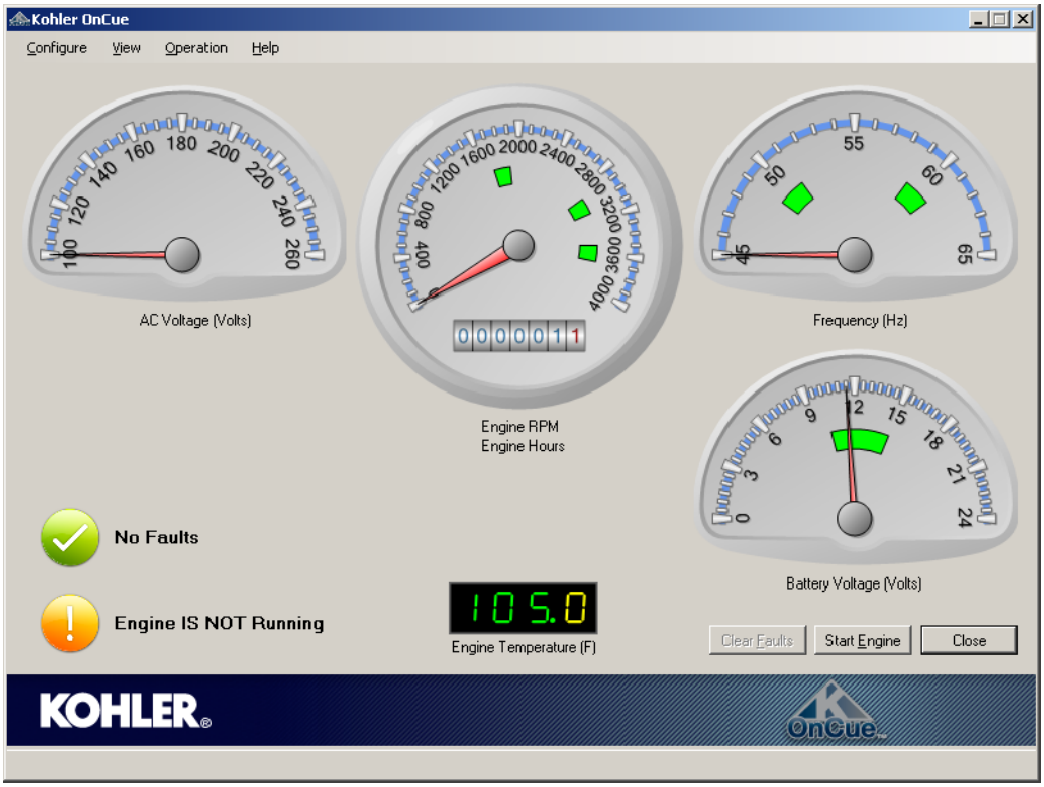
1. Click on Start
2. Point to All Programs
3. Click on Kohler OnCue

Figure 2-1 Starting OnCue™

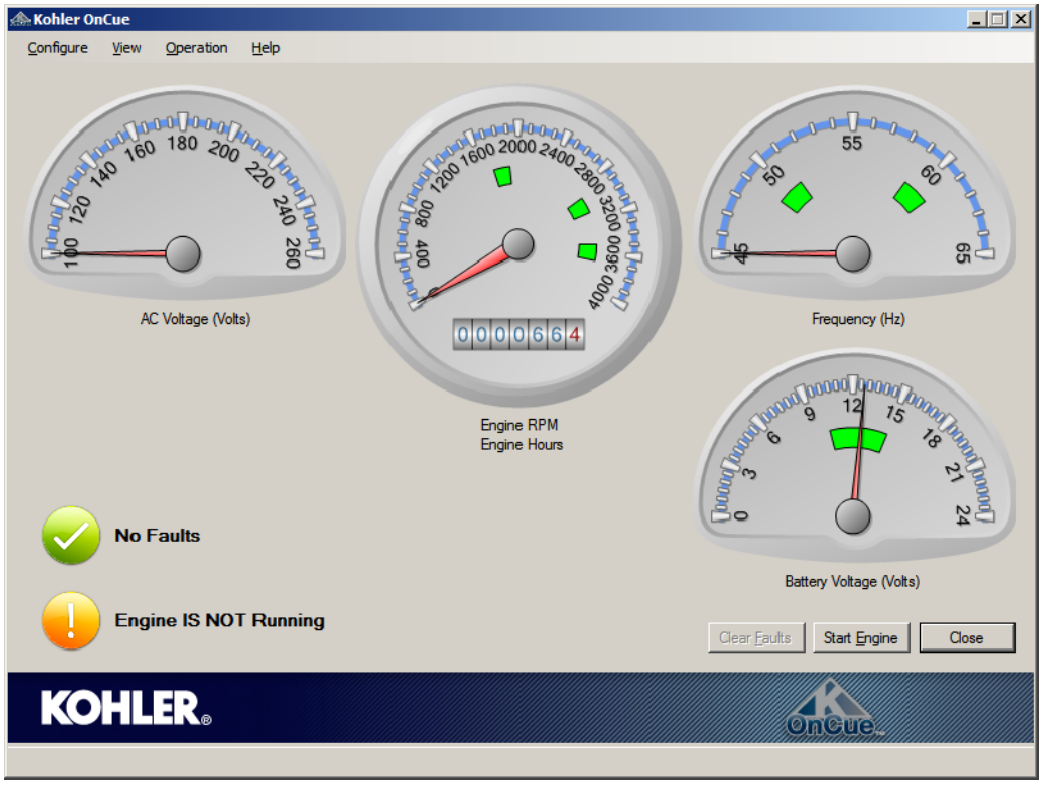


1. Click to open the OnCue user interface

Figure 2-2 OnCue™ Icon



ADC 2100 User Interface



ADC-RES User Interface

tp6616

Figure 2-3 OnCue™ User Interface Window

2.3 Network Bridge Address or Domain Name and Password

OnCue™ may be installed on local and remote PCs. See Figure 2-5.

- A local PC is connected to the same Ethernet router as the network bridge. It communicates with the network bridge through the Ethernet router.
- A remote PC communicates with the network bridge and Ethernet router over the Internet. The remote PC must know the external IP address or domain name for the Ethernet router in order to establish a connection for communication.

2.3.1 Network Bridge Address or Domain Name

OnCue needs to know the IP address or domain name of the network bridge (for a local PC) or ethernet router (for a remote PC).

Note: Use Device Installer software to assign an IP address to the network bridge before running OnCue™. See instruction sheet TT-1486 provided with the OnCue™ kit.

1. Click on the top toolbar, Configure > Network Bridge Address and Password to open the Network Bridge and Password Setup window shown in Figure 2-4.

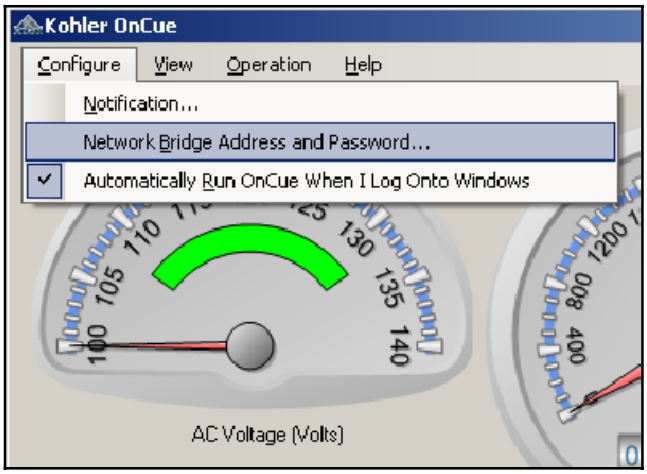


Figure 2-4 Configure Menu

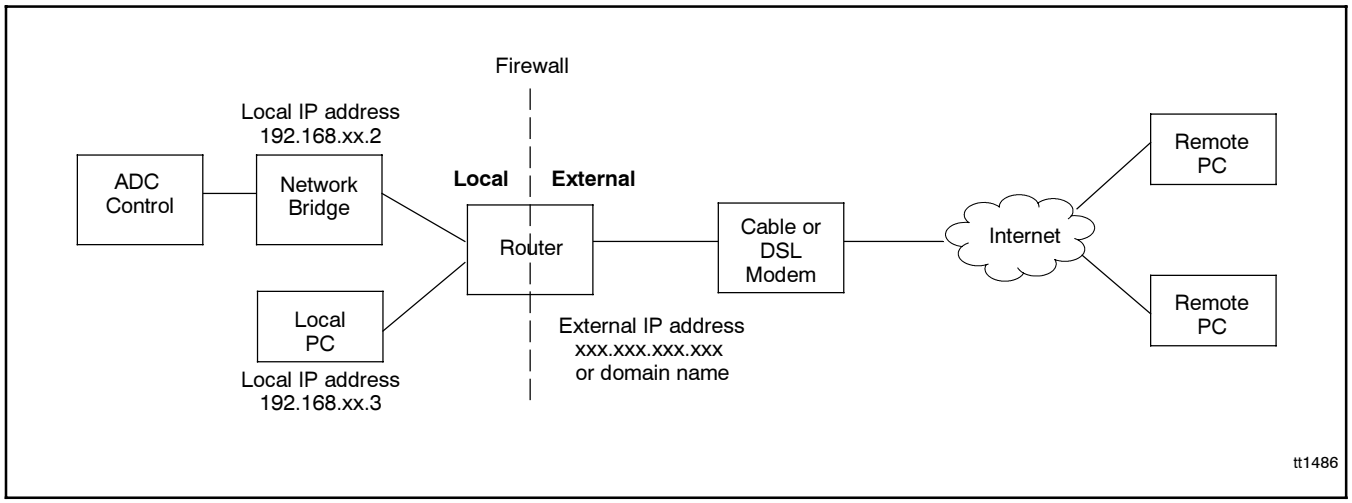


Figure 2-5 Local and Remote PCs

2. Enter the IP address or domain name as shown in Figure 2-6.

   a. If the PC and the network bridge are connected to the same Ethernet router, enter the IP address that was assigned to the network bridge using Device Installer software. See Figure 2-5 and TT-1486.

   b. If the PC is a remote computer accessing the network bridge over the Internet, enter the external IP address or domain name of the ethernet router. See Figure 2-5 and TT-1486.

   Note: For access by a remote PC, a static IP address OR a domain name with dynamic DNS is required for the Ethernet router. See TT-1486 and the router documentation for more information.

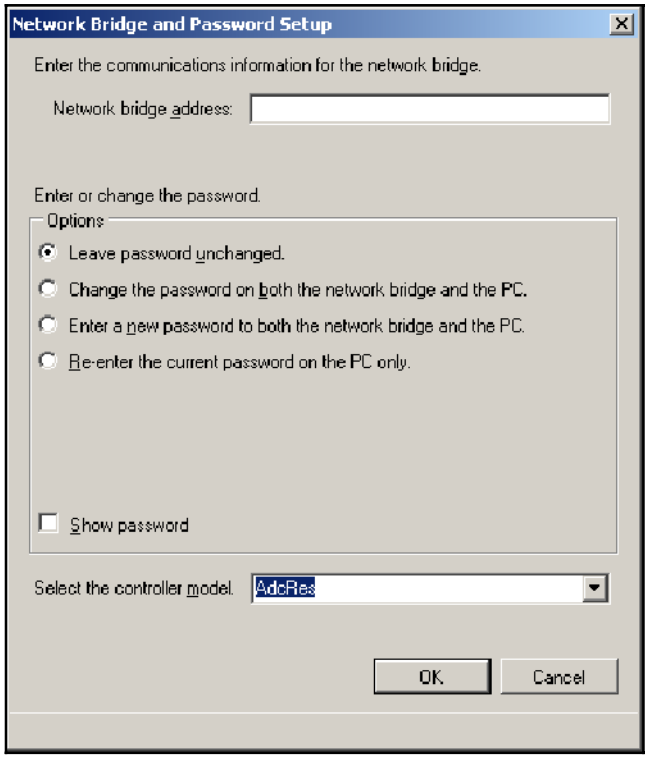


Figure 2-6 Network Bridge and Password Setup

3. Select one of the the password options. See Section 2.3.2 for more information.

   Note: The default password does not allow remote control (start, stop, clear faults).

   Selecting one of the options to change the password will reveal text boxes for the new password. See Figure 2-7.

   Type the new password into the first box, then type it again in the second box for confirmation. Click on the Show Password box to see the password as you type, if desired.

   Note: Passwords are case-sensitive. Check the Caps Lock key on your keyboard and be sure to note upper- and lower-case letters in your password.

   Store your password in a secure location. OnCue™ cannot tell you the password.

4. Select the controller model: ADC 2100 or ADC-RES.

5. Click OK.

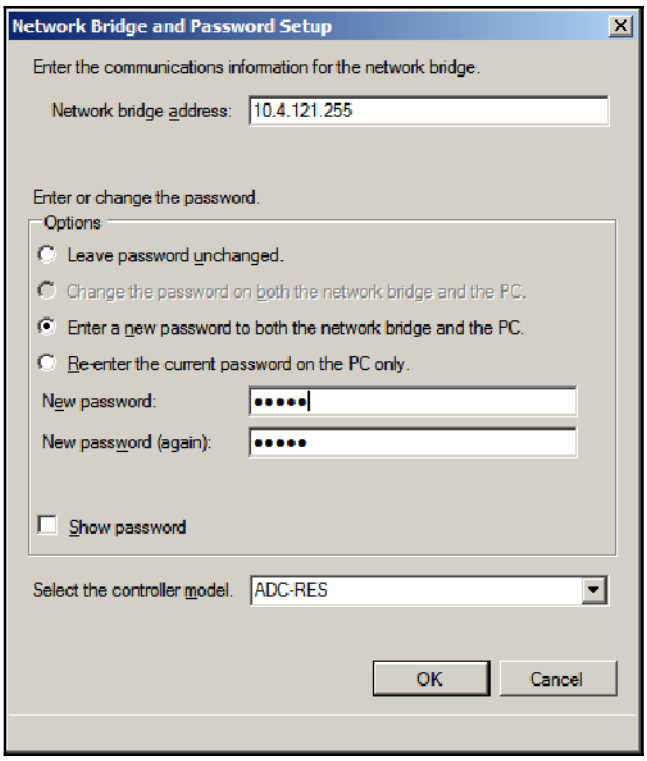


Figure 2-7 New Password Configuration

2.3.2 Network Bridge Passwords

A password is required for remote control of the generator set using OnCue. The password allows the PC to perform the following functions:

- Engine start
- Engine stop
- Clear faults (ADC 2100 controller only)

The password protects against the possibility of other computers equipped with OnCue software starting or stopping your generator set's engine or clearing faults from your generator set's controller.

Note: The factory default password will not allow remote control.

The network bridge is shipped from the factory with the factory default password. The PC operator must change the password on the network bridge and the PC to enable remote control of the generator set.

To change the password, click on Configure in the OnCue™ menu bar and select Network Bridge and Password Setup. Select from one of four options shown on the screen. See Figure 2-9.

Record the password and store it in a secure location.

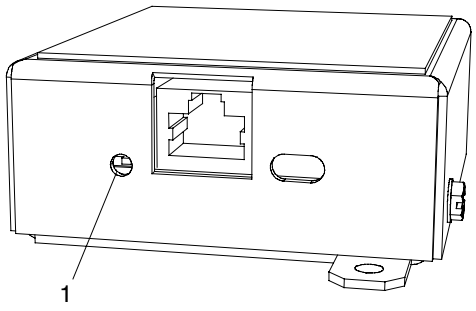
Once the password has been set through the configuration screen, it does not need to be entered again unless it needs to be changed.

2.3.3 Password Reset

Use the password reset button on the network bridge if the password is lost or forgotten. See Figure 2-8 for the location of the password reset button.

To reset the network bridge password, use a bent paperclip or similar small tool to press and hold the password reset button for at least 10 seconds. The OnCue display will show Not Connected when the password resets. The password will be reset to the factory default password.

After resetting the password, follow the instructions in Section 2.3.1 to enter a new password to both the network bridge and the PC.



1. Password reset button

Figure 2-8 Network Bridge Password Reset Button

Password Selection	Description
Leave the password unchanged.	Select this option to connect to the network bridge without changing the password. **Note:** The factory default password will not allow remote control (start, stop, or clear faults from the PC).
Enter a new password for both the network bridge and PC.	Select this option to enter the password for the first time or after the password has been reset at the network bridge.
Change the password on both the network bridge and the PC.	Select this option to change an old password to something new. It is a good practice to periodically change your passwords for security purposes. This option is disabled if the password has not been changed from the default password.
Re-enter the current password on the PC only.	Changes the password on the PC but not on the network bridge. Select this option if you are connecting a new computer or a second computer, or if the password has somehow been deleted from the PC.

Figure 2-9 Password Choices

2.4 Notification

The OnCue™ program can be configured to send email or text messages alerting the recipient of generator set faults. Any local PC (connected to the router) or remote PC (connected over the Internet) running the OnCue program can be configured to send messages.

Email and text messages include:

- Date
- Time
- Location (user-defined)
- Engine runtime hours
- Description of the event (see below)

The following events will generate a message to all addresses in the recipients list:

- Auxiliary fault
- Battery voltage fault (high or low)
- High engine temperature fault
- Coolant fault (low coolant and loss of coolant, liquid-cooled engines only)
- Low oil pressure fault
- Overcrank fault
- Frequency fault (over or under)
- Overspeed fault
- Voltage fault (over or under)
- Communications fault
- Generator engine start
- Generator engine stop
- Fault cleared

There are two notification options:

- Email
- SMS Text Messaging

2.4.1 Privacy Statement

The OnCue™ system provides emails or electronic communications updating you on the status of your Kohler® generator and allowing you to monitor the unit remotely. These emails and text messages are routed through a Kohler-hosted server. In order to provide better service, Kohler may retain copies of these emails or electronic communications. These saved communications may include the sender's name, the sender's and recipients' email addresses, and generator information. Kohler Co. takes customer privacy very seriously and will take reasonable measures to keep the information secure.

Except in the limited circumstances described in this paragraph, Kohler Co. will not sell or share the collected information with unaffiliated third parties. We may disclose information if and when we believe it is necessary to comply with any law, rule, court order, or subpoena, or to enforce our legal rights, or to protect our business, property and operations.

Kohler Co. may update this policy at any time. The updated privacy policy will be posted on the Kohler Power Systems website, www.KohlerPower.com. If you have questions or concerns about this policy, please contact Kohler Co. by email at generatorfeedback@kohler.com, or call 1-800-544-2444.

By accepting the software licensing agreement, you are acknowledging your awareness of this privacy policy and granting Kohler Co. permission to save the information identified above.

2.4.2 Email Configuration

1. Configure notification options by opening the Notification Setup window:
   Configure>Notification… See Figure 2-10.
2. Click on the Enable Notificaton checkbox to allow notification setup and to enable OnCue to send notifications to the addresses on the recipient list. A check mark appears in the box when enabled. No notifications will be sent if the checkbox is not checked.
3. Enter the information shown in Figure 2-11.
4. Enter the email address for new recipient to the Add field, and then click on the Add button.
5. To delete an Email address in the list, highlight the address to remove and click the Delete button.

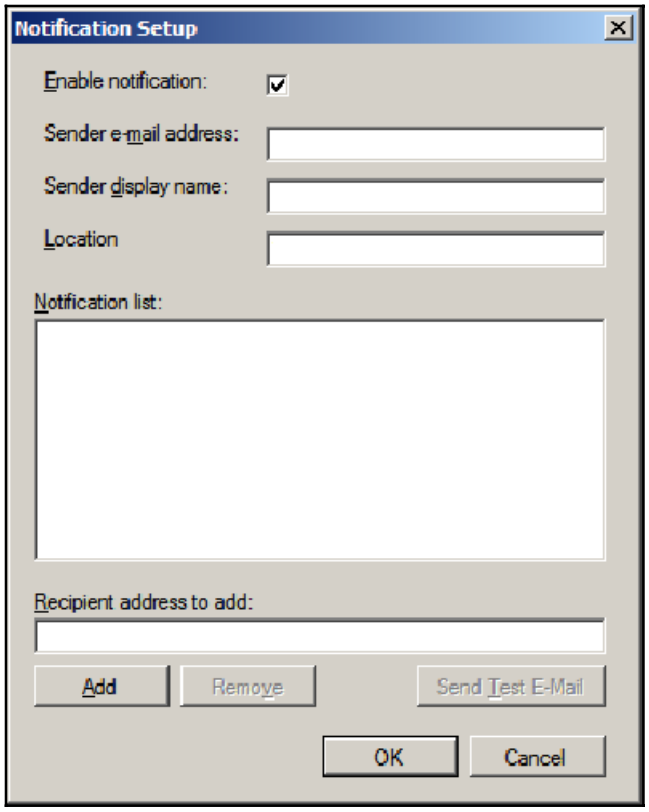


Figure 2-10 Notification Setup Window

6. After all recipients' email addresses have been added, send a test email to ensure that the notification settings have been configured properly.

   a. Click on Send Test E-mail to send a test message to all recipients on the list.

   b. Verify that all recipients received the test message from "OnCue Notification." See Figure 2-12 for a typical test message.

   c. If the test message was not received, check the email address entered into OnCue. Also instruct the recipient to check their spam email box or junk email box. It may be necessary for recipients to add the following email address to their email address book or "safe senders" list:

      doNotReplyOnCueNotificationSystem@kohler.com

Email Configuration Item	Description
Enable Notification	Check this box. Notification cannot be set up and notifications will not be sent if this box is not checked.
Sender Email Address	Enter the sender's email address (customer's email address). If a recipient replies to an OnCue notification message, the reply will be sent to this email address.
Sender Display Name	Enter a suitable display name (e.g. Kohler OnCue).
Location	Enter a name or address to identify the generator set location.
Recipient Address to Add	Enter recipient email addresses into the Email Address to Add field and click the Add button. Repeat this step for each email address to add. (This also applies for cell phone SMS text messaging. See additional information about SMS text messaging, below.)
Add button	Click Add after typing the recipient's address into the box to add it to the notification list.
Remove button	Select a name in the notification list and click Remove to delete it from the list.
Notification List	All recipients' addresses will appear here after they have been added using the Add button.

Figure 2-11 Email Configuration Information

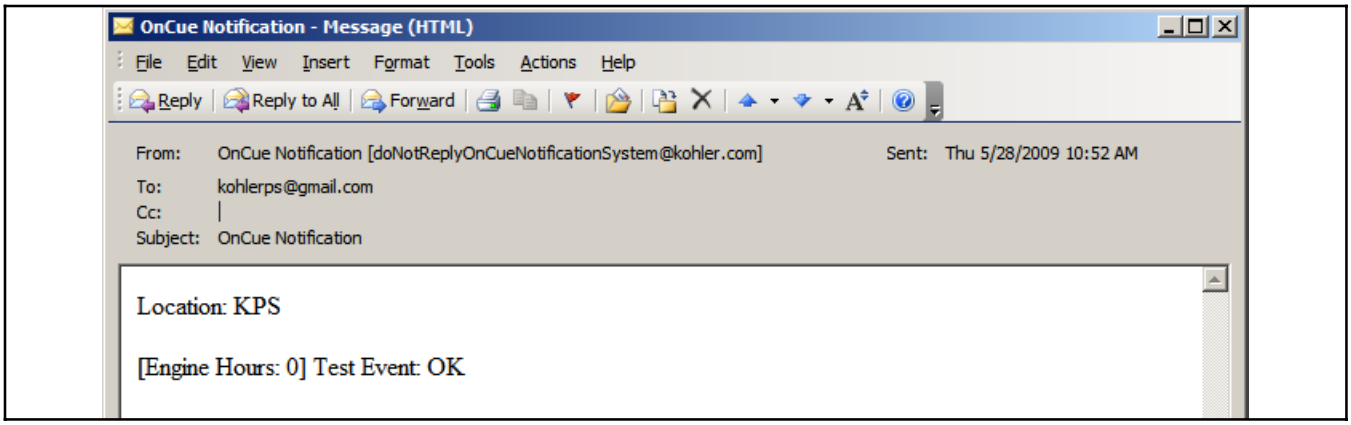


Figure 2-12 Typical Test Message

2.4.3 Disable Notification

To stop sending messages, open the Notification Setup window and click on the Enable notification box so that the check mark disappears. Addresses in the notification list will appear greyed out but are not lost when notification is disabled.

2.4.4 Cellular Telephone SMS Text Message Configuration

SMS text messaging to a cellular telephone or other device is accomplished by sending an email to the cellular provider's email-to-SMS system. For example, if the customer is a subscriber of Verizon Wireless with the cellular telephone number 920-555-1212, a text message can be sent to their cell phone by sending an email to 9205551212@vtext.com.

Determine the customer's cellular telephone service provider and verify that their cell phone is equipped to receive SMS messages. Make sure that the customer is aware of any text messaging charges the cellular telephone provider may charge for received text messages.

The email address configuration for text messaging for several cellular telephone providers is shown in Figure 2-13. If the customer's provider is not shown below, please consult the provider or the provider's website for additional details.

As an example, the address for a text message to an Alltel cell phone with the number 212-555-1212 would be:

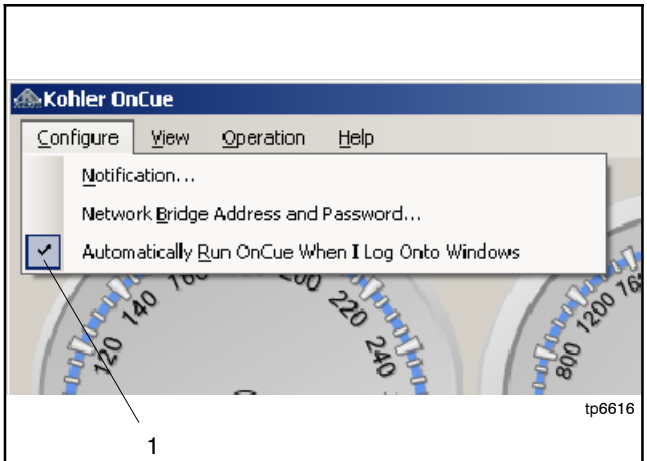
2125551212@message.alltel.com

Provider	Email Address Configuration for Text Messaging
Alltel	[10-digit phone number]@message.alltel.com
AT&T Wireless	[10-digit phone number]@mmode.com
Boost Mobile	[10-digit phone number]@myboostmobile.com
Cingular (now part of AT&T)	[10-digit phone number]@mobile.mycingular.com OR: [10-digit number]@cingularme.com
Nextel (now part of Sprint Nextel)	[10-digit phone number]@messaging.nextel.com
Sprint PCS (now Sprint Nextel)	[10-digit phone number]@messaging.sprintpcs.com
T-Mobile	[10-digit phone number]@tmomail.net
U.S. Cellular (http://www.uscellular.com)	[10-digit phone number]@email.uscc.net
Verizon (http://www.verizonwireless.com)	[10-digit phone number]@vtext.com
Virgin Mobile USA	[10-digit phone number]@vmobl.com

Figure 2-13 Email Address Configurations for Text Messaging

2.5 Automatically Run OnCue

Verify that the box next to Automatically Run OnCue When I Log Onto Windows is checked. This is the default setting. See Figure 2-14. When this feature is enabled, the OnCue™ icon will appear in your system tray whenever you are logged on to the PC, and balloon tip messages will appear on the screen if a fault condition is detected. Balloon tip fault messages appear only when the user interface screen is not displayed.



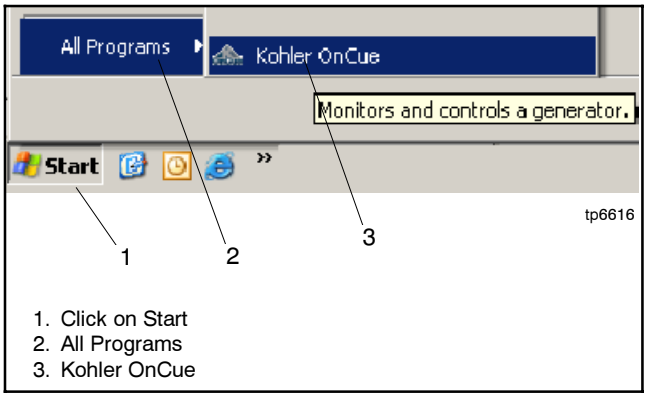
1. Check here to start OnCue UI automatically at login

Figure 2-14 Automatically Run OnCue

If the Automatically Run feature is not selected, the user interface (UI) program will not start at login.

Note: The OnCue service runs, monitoring the generator set and sending notifications, even if the user interface program is not started.

If the user interface program does not run automatically at login, click Start>All Programs>Kohler OnCue to start the UI after logging onto the PC. See Figure 2-15.



1. Click on Start
2. All Programs
3. Kohler OnCue

Figure 2-15 Starting the UI from the Start menu

Notes

3.1 Introduction

The OnCue™ program automatically starts and runs immediately after installation on a personal computer (PC). The program monitors the generator set and generates messages even when the user interface is not displayed. After the program has been configured to send email and/or text messages, it will continue to send messages as long as the PC is turned on and connected to the Internet, even when you are not logged in.

Generator set engine start, engine stop, and fault messages are displayed on the user interface screen. If the user interface screen is closed or minimized, a balloon tip message will appear in the event of a generator set start, stop, or fault condition.

If the PC is turned off and then back on, the OnCue program starts automatically. However, if the Automatically Run OnCue feature in the Configure menu is not selected, the user interface portion of the program will not start automatically and balloon-tip notification at the PC will not be activated. See Section 2.5.

3.2 Program Description

The OnCue™ Generator Monitoring program is made up of two parts: the Windows service module and the user interface.

3.2.1 OnCue Windows Service Module

The OnCue Windows Service Module starts automatically when the program is installed and runs in the background. If the PC is turned off, the OnCue Windows Service Module starts automatically when the PC is turned back on. The Windows Service Module monitors the generator set operation and sends messages to the PC, email messages (if configured to send email messages), and text messages (if configured for text messaging) in the event of a generator set start, stop, or fault condition.

The windows service module continues to run as long as the computer is turned on, monitoring the generator set and sending email and text messages in the event of a generator set fault condition. Logging off does not stop the program. However, the PC must be on and connected to the Internet in order for the program to continue to monitor the generator set and send messages.

An uninterruptible power supply (UPS) for the PC, router, and modem is recommended to keep the PC running and the program monitoring the generator set in the event of a power outage. When the utility power is lost, there may be a moment with no power before the generator set starts and provides emergency power. The PC could shut down during this time if not connected to a UPS.

3.2.2 OnCue User Interface

The OnCue User Interface (UI) is active only when the customer chooses to use it. The user interface allows the customer to view the generator set operation data, start or stop the engine, and clear faults. The user interface screen can be closed while the service module portion of the program continues to monitor the generator set status and send fault messages. In the event of a fault, a balloon tip message will be displayed on the PC even if the OnCue user interface screen is closed.

If the Automatically Run feature described in Section 2.5 is enabled, the user interface portion of the program starts at each login and displays an OnCue icon in the system tray. If the Automatically Run feature is not selected, the user interface program will not start at login. In that case, click Start>All Programs>Kohler OnCue to start the user interface program.

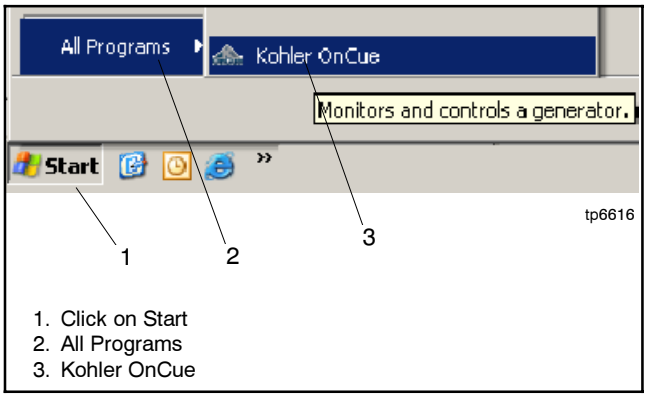


Figure 3-1 Starting the UI from the Start menu

3.3 User Interface Screen

The OnCue Windows Service Module runs in the background as long as the computer is running.

If the Automatically Run feature is enabled, the user interface portion of the program starts at each login and displays an OnCue icon in the system tray. If the OnCue user interface screen shown in Figure 3-2 is not displayed, open it by double-clicking on the OnCue icon in the system tray at the lower right-hand corner of the screen.

Note: If automatic operation is turned off, the icon will not appear in the system tray after login. See Section 3.2.2.

In addition to the operation data display and operation buttons on the user interface screen, the menu bar at the top of the screen provides additional functions. See Sections 3.6.1 and 3.7.

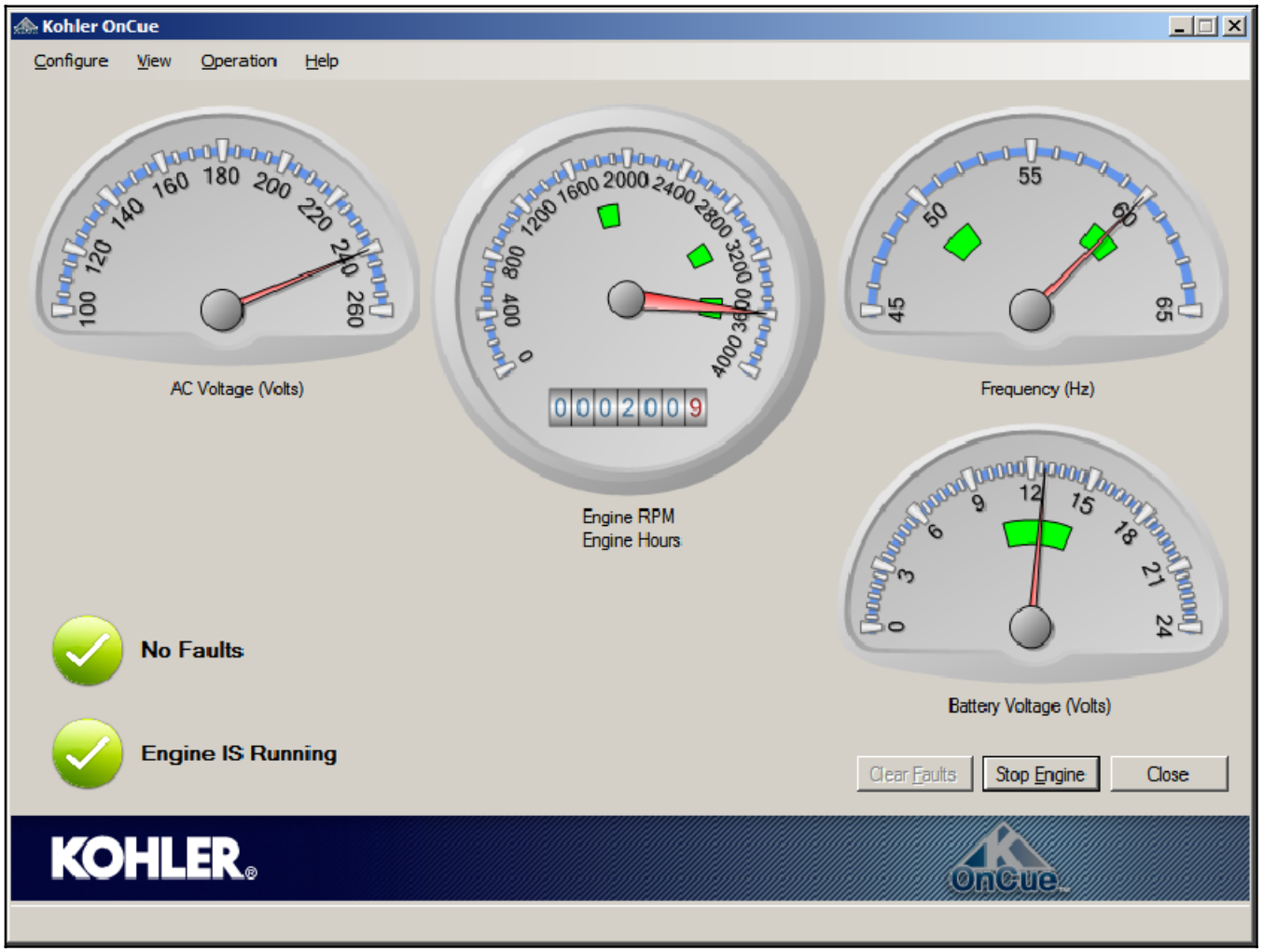


Figure 3-2 OnCue™ User Interface Screen (ADC-RES interface shown with generator set running)

3.4 Operation Data

The user interface screen displays the generator set operation data on easy-to-read simulated gauges. See Figure 3-2. On all gauge displays, the green area marks the acceptable range of values when the generator set is running.

The following data are displayed. The generator set master switch must be in the AUTO or RUN position to communicate with OnCue so that data can be displayed.

- AC Voltage, in volts, is the output voltage of the generator set.
- Engine speed, in RPM, is indicated on the tachometer-style gauge.
- Engine hours, which is the total generator set run time, is displayed on the engine RPM gauge in the numerical display that resembles an automobile's odometer.
- Frequency, in Hz, is the frequency of the generator set output. The frequency will be 50 or 60 Hz when the generator set is running.
- Engine temperature is indicated on a display near the center of the user interface screen.

  Note: Engine temperature data is displayed only for the ADC 2100 controller (ADC 2100 must be selected in the network bridge setup screen).

- Battery voltage, in volts DC, is the voltage of the engine starting battery.
- Fault active. A checkmark in a green circle near the lower left corner of the screen indicates no faults. A red circle indicates a fault shutdown. See Section 3.5 for fault descriptions.
- Engine is running/not running. A green symbol and Engine IS Running message indicate that the generator set is running. A yellow symbol and Engine IS NOT Running message indicate that the generator set is not running.
- Off. A red symbol and "Generator is Off" message indicate that the generator set has been turned off (the generator set master switch is in the OFF/RESET position). The gauges will all drop to zero when the master switch is off.
- Not connected. A red symbol and "Not Connected" message indicate that the PC is not successfully communicating with the network bridge. Check network connections and battery power to the bridge (generator set engine starting battery).

3.5 Fault Notification

3.5.1 Notification on the UI

The user interface (UI) displays active faults. A checkmark in a green circle near the lower left corner of the screen indicates no faults. An X in a red circle indicates a fault shutdown. See Figure 3-3.

The type of fault is indicated using the descriptions below.

- Auxiliary Fault
- Battery Voltage Fault (high or low voltage)
- High Engine Temperature Fault
- Coolant Fault (low coolant level or loss of coolant)*
- Low Oil Pressure Fault
- Over Crank Fault
- Frequency Fault (over or under frequency)
- Over Speed Fault
- Voltage Fault (over or under voltage)
- Communications Fault

* Coolant Fault is not applicable to models with air-cooled engines, including the 8.5RES, 12RES, 17RES, and 18RES.

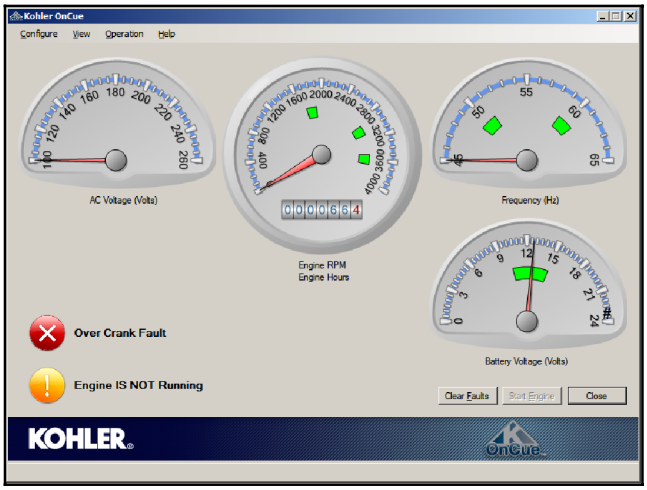


Figure 3-3 UI with Fault Message

3.5.2 Balloon Tip Messages

When the user interface (UI) is closed, OnCue™ continues to monitor the generator set. If a fault condition occurs when the UI is closed, a balloon tip message will describe the fault. See Figure 3-4.

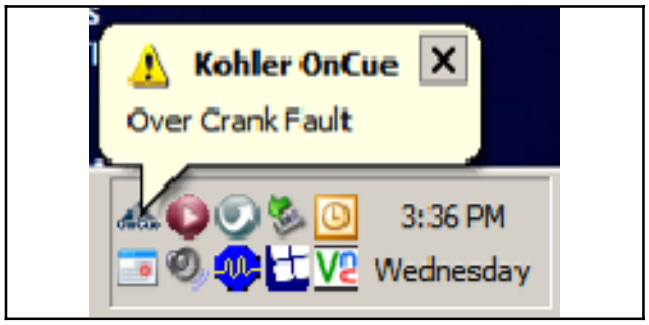


Figure 3-4 Fault Message

3.6 Remote Generator Set Control

The Start Engine/Stop Engine button and Clear Faults button allow generator set control from a local or remote PC. The generator set master switch must be in AUTO position to allow remote control.

3.6.1 Start/Stop Engine

The Start Engine or Stop Engine button will appear depending on whether the generator set engine is running or not. See Figure 3-2. A message on the UI screen indicates *Engine IS Running* or *Engine IS NOT Running*. Press the Start Engine button to start the generator set engine. Press the Stop Engine button to stop the generator set engine.

The start engine and stop engine commands are also accessible from the Operation menu at the top of the screen. See Figure 3-5. If the engine is not running, the Start Engine command is shown. When the engine is running, the Stop Engine command appears.

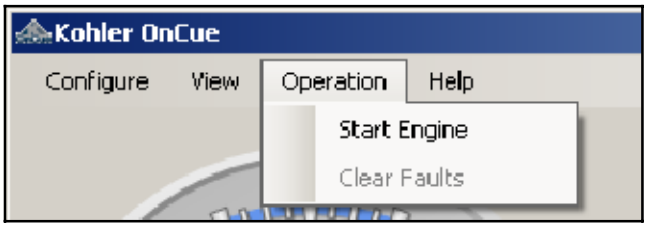


Figure 3-5 Operation Menu

3.6.2 Clear Faults

Click on the Clear Faults button to clear controller faults before attempting to restart the engine. The clear faults button is active only when a fault condition is detected.

The clear faults command is also accessible from the Operation menu at the top of the screen. See Figure 3-5.

Always identify and correct the cause of a fault shutdown before resetting the controller. See the generator set Operation Manual for more information about generator set faults and troubleshooting. Contact your local distributor/dealer for service.

3.7 View History

From the menu bar at the top of the user interface screen, click on View>History to see a list of time- and date-stamped events.

Click on View>Add History Comment to add notes to the history file, if desired.

To save the list to a file, click the Save button. The list will be saved to a text (.txt) file. A dialog box appears showing the filename and location where it will be saved. Change the file location and/or filename, if desired.

3.8 Open/Close User Interface

The user interface screen can be closed, if desired. Click on the Close button in the lower right corner of the user interface screen. The OnCue™ program continues to run in the background when the user interface screen is closed. The OnCue icon appears in the system tray as long as the program continues to run and monitor the generator set. Balloon tip messages will appear and messages will be sent if notification events occur when the user interface screen is closed.

To reopen the user interface screen, double-click on the OnCue icon in the system tray. See Figure 2-2. Another method is to right-click on the OnCue icon and then click on Open OnCue.

If it is necessary to stop the user interface program, rather than just closing the user interface screen, right-click on the OnCue icon in the system tray and click Exit. To restart the program after exiting this way, click Start>Programs>Kohler OnCue in the lower left corner of the screen.

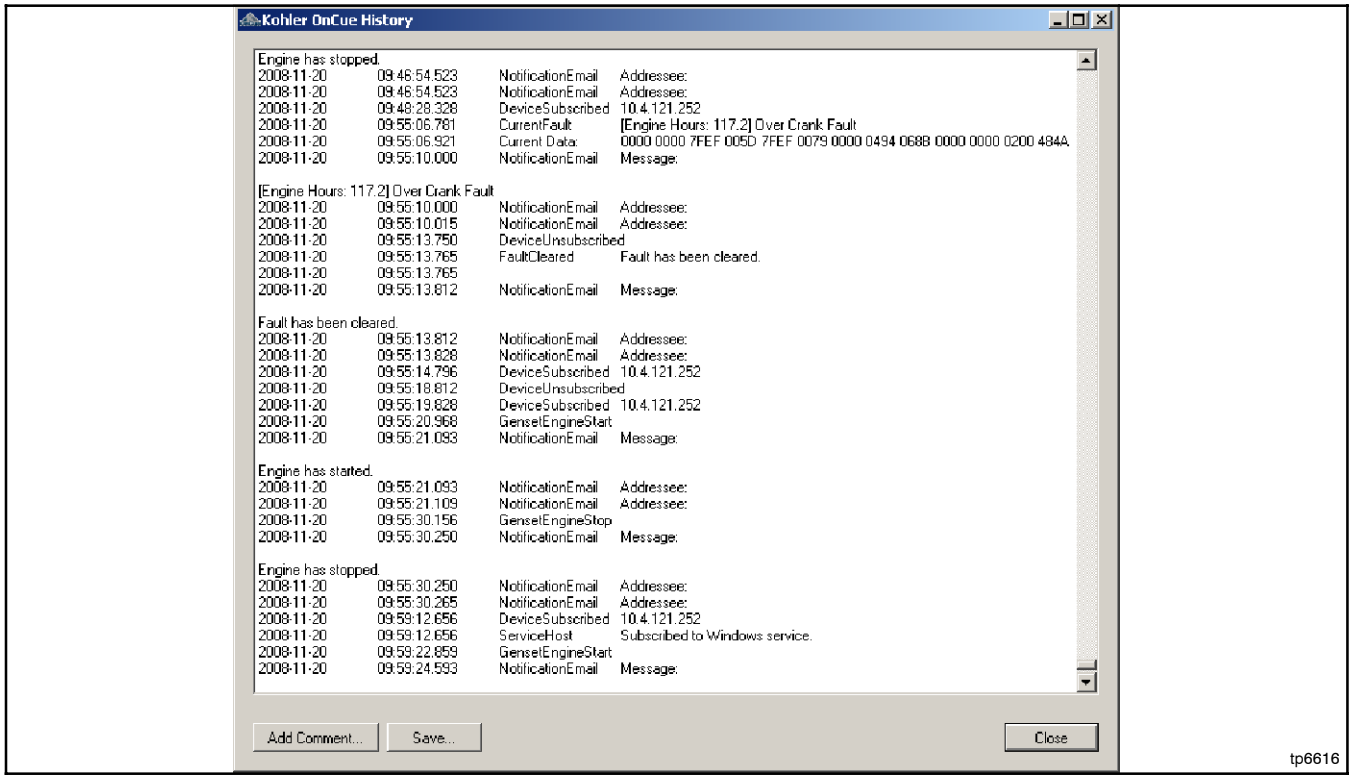


Figure 3-6 Sample History

Notes

Appendix A Abbreviations

The following list contains abbreviations that may appear in this publication.

A, amp	ampere
ABDC	after bottom dead center
AC	alternating current
A/D	analog to digital
ADC	advanced digital control; analog to digital converter
adj.	adjust, adjustment
ADV	advertising dimensional drawing
Ah	amp-hour
AHWT	anticipatory high water temperature
AISI	American Iron and Steel Institute
ALOP	anticipatory low oil pressure
alt.	alternator
Al	aluminum
ANSI	American National Standards Institute (formerly American Standards Association, ASA)
AO	anticipatory only
APDC	Air Pollution Control District
API	American Petroleum Institute
approx.	approximate, approximately
APU	Auxiliary Power Unit
AQMD	Air Quality Management District
AR	as required, as requested
AS	as supplied, as stated, as suggested
ASE	American Society of Engineers
ASME	American Society of Mechanical Engineers
assy.	assembly
ASTM	American Society for Testing Materials
ATDC	after top dead center
ATS	automatic transfer switch
auto.	automatic
aux.	auxiliary
avg.	average
AVR	automatic voltage regulator
AWG	American Wire Gauge
AWM	appliance wiring material
bat.	battery
BBDC	before bottom dead center
BC	battery charger, battery charging
BCA	battery charging alternator
BCI	Battery Council International
BDC	before dead center
BHP	brake horsepower
blk.	black (paint color), block (engine)
blk. htr.	block heater
BMEP	brake mean effective pressure
bps	bits per second
br.	brass
BTDC	before top dead center
Btu	British thermal unit
Btu/min.	British thermal units per minute
C	Celsius, centigrade
cal.	calorie
CAN	controller area network
CARB	California Air Resources Board
CAT5	Category 5 (network cable)
CB	circuit breaker
CC	crank cycle
cc	cubic centimeter
CCA	cold cranking amps
ccw.	counterclockwise
CEC	Canadian Electrical Code
cert.	certificate, certification, certified
cfh	cubic feet per hour
cfm	cubic feet per minute
CG	center of gravity
CID	cubic inch displacement
CL	centerline
cm	centimeter
CMOS	complementary metal oxide substrate (semiconductor)
com	communications (port)
coml	commercial
Coml/Rec	Commercial/Recreational
conn.	connection
cont.	continued
CPVC	chlorinated polyvinyl chloride
crit.	critical
CSA	Canadian Standards Association
CT	current transformer
Cu	copper
cUL	Canadian Underwriter's Laboratories
CUL	Canadian Underwriter's Laboratories
cu. in.	cubic inch
cw.	clockwise
CWC	city water-cooled
cyl.	cylinder
D/A	digital to analog
DAC	digital to analog converter
dB	decibel
dB(A)	decibel (A weighted)
DC	direct current
DCR	direct current resistance
deg., °	degree
dept.	department
dia.	diameter
DI/EO	dual inlet/end outlet
DIN	Deutsches Institut fur Normung e. V. (also Deutsche Industrie Normenausschuss)
DIP	dual inline package
DPDT	double-pole, double-throw
DPST	double-pole, single-throw
DS	disconnect switch
DVR	digital voltage regulator
E^2PROM, EEPROM	electrically-erasable programmable read-only memory
E, emer.	emergency (power source)
ECM	electronic control module, engine control module
EDI	electronic data interchange
EFR	emergency frequency relay
e.g.	for example *(exempli gratia)*
EG	electronic governor
EGSA	Electrical Generating Systems Association
EIA	Electronic Industries Association
EI/EO	end inlet/end outlet
EMI	electromagnetic interference
emiss.	emission
eng.	engine
EPA	Environmental Protection Agency
EPS	emergency power system
ER	emergency relay
ES	engineering special, engineered special
ESD	electrostatic discharge
est.	estimated
E-Stop	emergency stop
etc.	et cetera (and so forth)
exh.	exhaust
ext.	external
F	Fahrenheit, female
FHM	flat head machine (screw)
fl. oz.	fluid ounce
flex.	flexible
freq.	frequency
FS	full scale
ft.	foot, feet
ft. lb.	foot pounds (torque)
ft./min.	feet per minute
ftp	file transfer protocol
g	gram
ga.	gauge (meters, wire size)
gal.	gallon
gen.	generator
genset	generator set
GFI	ground fault interrupter
GND, ⏚	ground
gov.	governor
gph	gallons per hour
gpm	gallons per minute
gr.	grade, gross
GRD	equipment ground
gr. wt.	gross weight
H x W x D	height by width by depth
HC	hex cap
HCHT	high cylinder head temperature
HD	heavy duty
HET	high exhaust temp., high engine temp.
hex	hexagon
Hg	mercury (element)
HH	hex head
HHC	hex head cap
HP	horsepower
hr.	hour
HS	heat shrink
hsg.	housing
HVAC	heating, ventilation, and air conditioning
HWT	high water temperature
Hz	hertz (cycles per second)
IBC	International Building Code
IC	integrated circuit
ID	inside diameter, identification
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IMS	improved motor starting
in.	inch
in. H_2O	inches of water
in. Hg	inches of mercury
in. lb.	inch pounds
Inc.	incorporated
ind.	industrial
int.	internal
int./ext.	internal/external
I/O	input/output
IP	internet protocol
ISO	International Organization for Standardization
J	joule
JIS	Japanese Industry Standard
k	kilo (1000)
K	kelvin
kA	kiloampere
KB	kilobyte (2^{10} bytes)
KBus	Kohler communication protocol
kg	kilogram

kg/cm^2	kilograms per square centimeter
kgm	kilogram-meter
kg/m^3	kilograms per cubic meter
kHz	kilohertz
kJ	kilojoule
km	kilometer
kOhm, kΩ	kilo-ohm
kPa	kilopascal
kph	kilometers per hour
kV	kilovolt
kVA	kilovolt ampere
kVAR	kilovolt ampere reactive
kW	kilowatt
kWh	kilowatt-hour
kWm	kilowatt mechanical
kWth	kilowatt-thermal
L	liter
LAN	local area network
L x W x H	length by width by height
lb.	pound, pounds
lbm/ft^3	pounds mass per cubic feet
LCB	line circuit breaker
LCD	liquid crystal display
LED	light emitting diode
Lph	liters per hour
Lpm	liters per minute
LOP	low oil pressure
LP	liquefied petroleum
LPG	liquefied petroleum gas
LS	left side
L_{wa}	sound power level, A weighted
LWL	low water level
LWT	low water temperature
m	meter, milli (1/1000)
M	mega (10^6 when used with SI units), male
m^3	cubic meter
$m^3/hr.$	cubic meters per hour
$m^3/min.$	cubic meters per minute
mA	milliampere
man.	manual
max.	maximum
MB	megabyte (2^{20} bytes)
MCCB	molded-case circuit breaker
MCM	one thousand circular mils
meggar	megohmmeter
MHz	megahertz
mi.	mile
mil	one one-thousandth of an inch
min.	minimum, minute
misc.	miscellaneous
MJ	megajoule
mJ	millijoule
mm	millimeter
mOhm, mΩ	milliohm
MOhm, MΩ	megohm
MOV	metal oxide varistor
MPa	megapascal
mpg	miles per gallon
mph	miles per hour
MS	military standard
ms	millisecond
m/sec.	meters per second
mtg.	mounting
MTU	Motoren-und Turbinen-Union
MW	megawatt
mW	milliwatt
μF	microfarad
N, norm.	normal (power source)
NA	not available, not applicable
nat. gas	natural gas
NBS	National Bureau of Standards
NC	normally closed
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
Nm	newton meter
NO	normally open
no., nos.	number, numbers
NPS	National Pipe, Straight
NPSC	National Pipe, Straight-coupling
NPT	National Standard taper pipe thread per general use
NPTF	National Pipe, Taper-Fine
NR	not required, normal relay
ns	nanosecond
OC	overcrank
OD	outside diameter
OEM	original equipment manufacturer
OF	overfrequency
opt.	option, optional
OS	oversize, overspeed
OSHA	Occupational Safety and Health Administration
OV	overvoltage
oz.	ounce
p., pp.	page, pages
PC	personal computer
PCB	printed circuit board
pF	picofarad
PF	power factor
ph., ∅	phase
PHC	Phillips® head Crimptite® (screw)
PHH	Phillips® hex head (screw)
PHM	pan head machine (screw)
PLC	programmable logic control
PMG	permanent magnet generator
pot	potentiometer, potential
ppm	parts per million
PROM	programmable read-only memory
psi	pounds per square inch
psig	pounds per square inch gauge
pt.	pint
PTC	positive temperature coefficient
PTO	power takeoff
PVC	polyvinyl chloride
qt.	quart, quarts
qty.	quantity
R	replacement (emergency) power source
rad.	radiator, radius
RAM	random access memory
RDO	relay driver output
ref.	reference
rem.	remote
Res/Coml	Residential/Commercial
RFI	radio frequency interference
RH	round head
RHM	round head machine (screw)
rly.	relay
rms	root mean square
rnd.	round
RO	read only
ROM	read only memory
rot.	rotate, rotating
rpm	revolutions per minute
RS	right side
RTDs	Resistance Temperature Detectors
RTU	remote terminal unit
RTV	room temperature vulcanization
RW	read/write
SAE	Society of Automotive Engineers
scfm	standard cubic feet per minute
SCR	silicon controlled rectifier
s, sec.	second
SI	*Systeme international d'unites,* International System of Units
SI/EO	side in/end out
sil.	silencer
SMTP	simple mail transfer protocol
SN	serial number
SNMP	simple network management protocol
SPDT	single-pole, double-throw
SPST	single-pole, single-throw
spec	specification
specs	specification(s)
sq.	square
sq. cm	square centimeter
sq. in.	square inch
SMS	short message service
SS	stainless steel
std.	standard
stl.	steel
tach.	tachometer
TB	terminal block
TCP	transmission control protocol
TD	time delay
TDC	top dead center
TDEC	time delay engine cooldown
TDEN	time delay emergency to normal
TDES	time delay engine start
TDNE	time delay normal to emergency
TDOE	time delay off to emergency
TDON	time delay off to normal
temp.	temperature
term.	terminal
THD	total harmonic distortion
TIF	telephone influence factor
tol.	tolerance
turbo.	turbocharger
typ.	typical (same in multiple locations)
UF	underfrequency
UHF	ultrahigh frequency
UIF	user interface
UL	Underwriter's Laboratories, Inc.
UNC	unified coarse thread (was NC)
UNF	unified fine thread (was NF)
univ.	universal
URL	uniform resource locator (web address)
US	undersize, underspeed
UV	ultraviolet, undervoltage
V	volt
VAC	volts alternating current
VAR	voltampere reactive
VDC	volts direct current
VFD	vacuum fluorescent display
VGA	video graphics adapter
VHF	very high frequency
W	watt
WCR	withstand and closing rating
w/	with
WO	write only
w/o	without
wt.	weight
xfmr	transformer

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