SEBU8832-14 (en-us)
February 2018

Operation and Maintenance Manual

Product Link™ PLE601, PL641, PL631, PL542, PL240, PL240B, PL241, PL141, PL131, PL161, and G0100 Systems

PL6 1-UP (Machine Control & Guidance Products)
PL2 1-UP (Machine Control & Guidance Products)
PL1 1-UP (Machine Control & Guidance Products)
PL5 1-UP (Machine Control & Guidance Products)

Important Safety Information

Most accidents that involve product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards, including human factors that can affect safety. This person should also have the necessary training, skills and tools to perform these functions properly.

Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate or perform any lubrication, maintenance or repair on this product, until you verify that you are authorized to perform this work, and have read and understood the operation, lubrication, maintenance and repair information.

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

The hazards are identified by the “Safety Alert Symbol” and followed by a “Signal Word” such as “DANGER”, “WARNING” or “CAUTION”. The Safety Alert “WARNING” label is shown below.

⚠ WARNING

The meaning of this safety alert symbol is as follows:

Attention! Become Alert! Your Safety is Involved.

The message that appears under the warning explains the hazard and can be either written or pictorially presented.

A non-exhaustive list of operations that may cause product damage are identified by “NOTICE” labels on the product and in this publication.

Caterpillar cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are, therefore, not all inclusive. You must not use this product in any manner different from that considered by this manual without first satisfying yourself that you have considered all safety rules and precautions applicable to the operation of the product in the location of use, including site-specific rules and precautions applicable to the worksite. If a tool, procedure, work method or operating technique that is not specifically recommended by Caterpillar is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that you are authorized to perform this work, and that the product will not be damaged or become unsafe by the operation, lubrication, maintenance or repair procedures that you intend to use.

The information, specifications, and illustrations in this publication are on the basis of information that was available at the time that the publication was written. The specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service that is given to the product. Obtain the complete and most current information before you start any job. Cat dealers have the most current information available.

⚠ WARNING

When replacement parts are required for this product Caterpillar recommends using Cat replacement parts.

Failure to follow this warning may lead to premature failures, product damage, personal injury or death.

In the United States, the maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual of the owner's choosing.

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Foreword

Literature Information

This manual should be stored in the operator's compartment in the literature holder or seat back literature storage area.

This manual contains safety information, operation instructions, and maintenance recommendations.

Some photographs or illustrations in this publication show details or attachments that can be different from your product.

Continuing improvement and advancement of product design might have caused changes to your product which are not included in this publication. Read, study and keep this manual with the product.

Whenever a question arises regarding your product, or this publication, please consult your Cat dealer for the latest available information.

Safety

The safety section lists basic safety precautions. In addition, this section identifies the text and locations of warning signs and labels used on the machine.

Operation

The operation section is a reference for the new operator and a refresher for the experienced operator. This section includes a discussion of gauges, switches, product controls, attachment controls, and programming information.

Photographs and illustrations guide the operator through correct procedures of checking, starting, operating and stopping the product.

Operating techniques outlined in this publication are basic. Skill and techniques develop as the operator gains knowledge of the product and its capabilities.

Maintenance

The maintenance section is a guide to equipment care.

Safety Section

i07316392

Safety Signs and Labels

SMCS Code: 7606

⚠ WARNING

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in the Operation and Maintenance Manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact your Caterpillar dealer for replacement manuals. Proper care is your responsibility.

⚠ WARNING

Improper operation of an access platform could result in injury or death. Operators must carry out their duties properly and follow all instructions and guidelines given for the machine and access platform.

⚠ WARNING

Accidental engine starting can cause injury or death to personnel working on the equipment.

To avoid accidental engine starting, disconnect the battery cable from the negative (−) battery terminal. Completely tape all metal surfaces of the disconnected battery cable end in order to prevent contact with other metal surfaces which could activate the engine electrical system.

Turn the battery disconnect switch to the OFF position and lockout the battery disconnect switch with a safety lock.

Place a Special Instruction, SEHS7332, "Do Not Operate" tag at the start switch and battery disconnect location to inform personnel that the machine is being worked on.

Safety Messages

The warning film in Illustration 1 can be found in a location such as the dash or control panel. The warning film is clearly visible to the operator during the normal operation of the equipment.

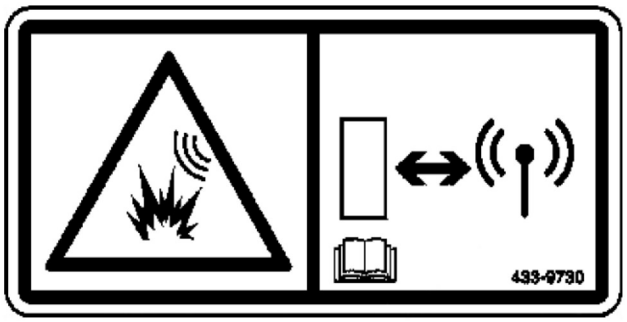

Illustration 1 g03356592
Film

⚠ WARNING

This equipment is equipped with a Cat® Product Link communication device. When electric detonators are being used for blasting operations, radio frequency devices can cause interference with electric detonators for blasting operations which can result in serious injury or death. The Product Link communication device should be deactivated within the distance mandated under all applicable national or local regulatory requirements. In the absence of any regulatory requirements Caterpillar recommends the end user perform their own risk assessment to determine safe operating distance.

The blast site is defined as the area that handles explosive material during loading. Included is the perimeter that is formed by the loaded blast holes.

If required, the following are suggested methods to disable the Caterpillar Product Link communication device:

- Turn the Product Link radio disable switch to the OFF position.
- Disconnect the Caterpillar Product Link communication device from the main power source. This action is performed by disconnecting the wiring harness at the Product Link radio.
- If equipped with a PL141 or PL131 turn off the Product Link device or remove its internal battery.
- If equipped with a PL161 remove the PL161 from the equipment.

- The PL542 contains an internal battery that cannot be turned OFF manually. If necessary remove the PL542 from the equipment.
- The PL240B contains an internal battery that cannot be turned OFF manually. If necessary remove the PL240B from the equipment.

Note: If no radio disable switch is installed and the equipment will be operating near a blast zone, a radio disable switch may be installed. The switch will allow the Caterpillar Product Link communication device to be shut off by the operator from the equipment control panel. Refer to Special Instruction, REHS7339, Special Instruction, REHS8850, Special Instruction, REHS9111, Special Instruction, SEHS0377, and Special Instruction, REHS9757 for more details and installation instructions.

Other Films

The film in Illustration 2 can be found in a location such as the dash or control panel. The warning film is clearly visible to the operator during the normal operation of the equipment.

Illustration 2 g03356733

The film in Illustration 2 is intended to inform the operator that the equipment is equipped with a wireless transmitting device. Accordingly, data concerning this equipment, the condition of the equipment, and the operation of the equipment is being transmitted by the Caterpillar Product Link communication device to Caterpillar and is communicated to customers and Caterpillar dealers by the user interface. The data is used to serve the customer better and to improve upon Caterpillar products and services. Transmission of information using a Caterpillar Product Link communication device is subject to legal requirements that may vary from location to location.

Refer to the Operation and Maintenance Manual, SEBU8832, “Operation” and the Operation and Maintenance Manual, SEBU8832, “Regulatory Compliance” section for additional information.

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General Hazard Information

SMCS Code: 7606

⚠ WARNING

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in the Operation and Maintenance Manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact your Caterpillar dealer for replacement manuals. Proper care is your responsibility.

Foreword

This document is a supplement to the Operation and Maintenance Manual for the equipment. Permanently attach this document to the Operation and Maintenance Manual for the equipment.

Introduction

This document provides information about the operation of the Caterpillar Product Link communication device .

Operation of the equipment and the maintenance of the equipment must not occur unless the instructions and warnings in the Operation and Maintenance Manual for the equipment have been read and the instructions and the warnings are understood. The contents of this document must be understood before the equipment that is equipped with the Caterpillar Product Link communication device is operated.

Product Information Section

Identification Information

i07307883

Manufacturing Information

SMCS Code: 7606

Product Information

Entity authorized to communicate on request as required by Customs Union Technical Regulations of the Eurasian Economic Union:
“Caterpillar Eurasia” Ltd.

Russia, Moscow, 115035 Sadovnicheskaya Emb 75

Phone: +7 (495) 2133340, Fax: +7 (495) 2133372, email: cat_moscow@cat.com

Manufacturer: Caterpillar Inc.

100 NE Adams Street Peoria, Illinois 61629 United States of America

Country of origin - USA

Date of Manufacture

Markings on the device and or package contain information about the date of manufacture, or a link to the source of this information. If required, the date of manufacture can be obtained by the serial number of the product, by contacting your authorized dealer.

Term and Conditions of Storage and Transportation

The product is packed in consumer packaging of manufacturer. The product should be stored in the factory packing and storage conditions for climatic factors of Group 4 in accordance with GOST 15150-69. When loading and transportation requirements on warning labels on the boxes must be followed, shocks and bumps that can affect the appearance and performance of the device should not be allowed.

Transportation can be done by all kinds of covered transport vehicles. When transporting by air, ensure that the Product Linkdevice is transported in a sealed heated compartment.

Actions In Case of Technical Failures

Before calling to the dealer for repair, the integrity of the electric wires, and cycle the battery power to the device. Cycling battery power can be accomplished by:

- Turn the machines master disconnect off and then back on.
- Unplug the Product Link harness from the machine connector and then plug the harness back in.
- Disconnect the negative cable from the negative battery terminal and then reconnect the cable.

If these solutions do not help, call for service.

i07307899

Regulatory Compliance

SMCS Code: 7606

NOTICE
The transmission of information using a Caterpillar Product Link communication device is subject to legal requirements. The legal requirements may vary from location to location, including, but not limited to, radio frequency use authorization. The use of a Caterpillar Product Link communication device must be limited to those locations where all legal requirements for the use of the Caterpillar Product Link communication device and communication network have been satisfied.

If equipment outfitted with the Caterpillar Product Link communication device is located in or relocated to a location where (i) legal requirements are not satisfied or (ii) transmitting or processing of such information across multiple locations would not be legal, Caterpillar disclaims any liability related to such failure to comply, and Caterpillar may discontinue the transmission of information from that equipment.

Consult your Cat dealer with any questions that concern the operation of the Product Link system in a specific country.

Importance Notice Regarding Open Source Software

NOTICE
This product uses open source software that is available under one of a variety of licenses. Some of these require the license text to be included in the distribution. Visit http://www.cat.com/opensource for a copy of each license and source code where required.

G0100 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

PL631 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL631 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

PL631 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 3 g06279687

PL641 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL641 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

PL641 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 4 g06279687

PL542 Radio Notices

FCC Notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with FCC Part 22, Part 24, and with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL542 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

Thailand

This telecommunication equipment conforms to NTC technical requirements.

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission.

PL542 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 5 g06279687

PL240 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL240 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

Indonesia Certificate

49587/SDPPI/2017

3130

Singapore Certificate

Complies with IMDA Standards DB105771

PL240 Certification Markings

COUNTRIES	Labeling Requirements
AUSTRALIA	E401
COSTA RICA	FCC mark
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC
HONG KONG	Certified for use in Hong Kong 經驗證可在香港使用 Certificate No. 證書號碼 ZZZZZYYXXXXX 通訊事務管理局 COMMUNICATIONS AUTHORITY
INDONESIA	49587/SDPPI/2017 3130
JAPAN	R 003-160123 T D160071003
NEW ZEALAND	E401
NIGERIA	"Connection and use of this Communications equipment is permitted by the Nigerian Communications Commission"
PHILIPPINES	NTC Type Approved No: ESD-CPE-1703322
QATAR	ictQATAR Type Approval reg. No: CRA/SA/2016/R-5433
SINGAPORE	Complies with IMDA Standards Dealer License: DB105771
THAILAND	"This telecommunication equipment conforms to NTC technical requirement"
UKRAINE	028
UNITED ARAB EMIRATES	TRA REGISTERED No: ER47254/16 DEALER No: DA0130583/14

Illustration 6 g06279690

PL241 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL241 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

PL241 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 7 g06279687

PL141 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL141 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

⚠ WARNING

Care must be taken in handling lithium batteries.

Lithium batteries are not a serviceable part.

Personal injury can result from battery exploding.

Caution must be used because there is risk of an explosion if the battery is replaced by an incorrect type.

Do not dispose of battery or batteries in a fire. The battery is capable of exploding and emitting caustic chemicals.

Dispose of used batteries according to federal and local laws.

PL141 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 8 g06279687

PL131 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

EU Notice to Users

The PL131 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

⚠ WARNING

Care must be taken in handling lithium batteries.

Lithium batteries are not a serviceable part.

Personal injury can result from battery exploding.

Caution must be used because there is risk of an explosion if the battery is replaced by an incorrect type.

Do not dispose of battery or batteries in a fire. The battery is capable of exploding and emitting caustic chemicals.

Dispose of used batteries according to federal and local laws.

PL161 Radio Notices

FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/tv technician for help

Changes or modifications to this device without the express approval of Caterpillar may void the users authority to use this device.

Industry Canada Notice to Users

This device complies with Industry Canadas license exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

⚠ WARNING

Care must be taken in handling lithium batteries.

Lithium batteries are not a serviceable part.

Personal injury can result from battery exploding.

Caution must be used because there is risk of an explosion if the battery is replaced by an incorrect type.

Do not dispose of battery or batteries in a fire. The battery is capable of exploding and emitting caustic chemicals.

Dispose of used batteries according to federal and local laws.

EU Notice to Users

The PL161 has been so constructed that it can be operated in Belgium without infringing applicable requirements on the use of their radio spectrum.

PL161 Certification Markings

COUNTRIES	Labeling Requirements
AUSTRALIA	E401
CHINA	CMIIT ID 2017DJ4992
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC
JAPAN	R 011- 345678
MEXICO	NOM NYCE
NEW ZEALAND	E401
QATAR	ictQATAR Type Approval reg. No: CRA/SA/2017R-6432
SINGAPORE	DA106210
SOUTH AFRICA	ICASA
THAILAND	"This telecommunication equipment conforms to NTC technical requirement"
UKRAINE	U.A.TR.028
UNITED ARAB EMIRATES	TRA REGISTERED No: ER57063/17 DEALER No: DA0130583/14

Illustration 9 g06278478

PLE601 Network Manager Notices

⚠ WARNING

Care must be taken in handling lithium batteries.

Lithium batteries are not a serviceable part.

Personal injury can result from battery exploding.

Caution must be used because there is risk of an explosion if the battery is replaced by an incorrect type.

Do not dispose of battery or batteries in a fire. The battery is capable of exploding and emitting caustic chemicals.

Dispose of used batteries according to federal and local laws.

PLE601 Certification Markings

COUNTRIES	Certification Marking Requirements
EAEU (RUSSIA, BELORUSSIA, KAZAKHSTAN, ARMENIA, KYRGYZSTAN)	EAC

Illustration 10 g06279687

i07158308

Declaration of Conformity

SMCS Code: 7606

European Union EU Declaration of Conformity PL161

Table 1

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

USA

hereby declares that the product, object of this description:

Product Link PL161 Telematics Device Model: PL161

Brand: Caterpillar Part Number: 503 - 2958

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

Directive 2014/30/EU

(continued)

(Table 1, contd)

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU: RED	LVD (Sec 3.1a):	EN60950-1:2006 + A12:2011 + A2:2013
	EMC (Sec 3.1b):	EN 301 489-1 V2.2.0
		EN 301 489-17 V3.2.0
	RF (Sec 3.2)	EN 300 328 V2.1.1
2011/65/EU: RoHS		EN 50581:2012
2014/30/EU EMC		EN 13309:2010

Signature: Michael Carruthers

Name: Michael Carruthers **Title:** Engineering Manager-3

Place: Mossville, IL **Date:** 29 June 2017

Illustration 11 g06220514

European Union EU Declaration of Conformity PL240

Table 2

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

(continued)

(Table 2, contd)

USA

hereby declares that the product, object of this description:

Product Link, PL240, Cellular Radio Telematics Device

Brand: Caterpillar Model: PL240

Part Number: 505 - 6727

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU:	LVD (Sec 3.1a):	EN60950-1:2006 + A11:2009+ A1:2010 + A12:2011 + A2:2013
		EN 62311:2008
	EMC (Sec 3.1b):	EN 301 489-1 V2.1.1
		EN 301 489-19 V2.1.0
		EN 301 489-52 V1.1.0
	RF (Sec 3.2)	EN 301 511 V12.1.10
		EN 301 908–1 V11.1.1
		EN 301 908–2 V11.1.1
		EN 303 413 V1.1.0
2011/65/EU:	RoHS	EN 50581:2012

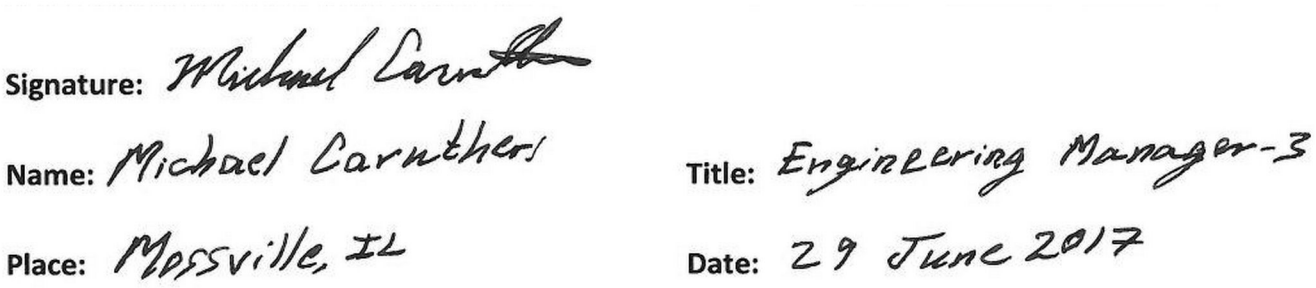

Illustration 12 g06220514

European Union EU Declaration of Conformity PL241

Table 3

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

USA

hereby declares that the product, object of this description:

Product Link, PL241, Cellular Radio Telematics Device,

Brand: Caterpillar Model: PL241

Part Number: 444-9619

Antenna Part Number: 443-8463,
443-8462, 443-8460

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

(continued)

(Table 3, contd)

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU:	LVD (Sec 3.1a):	EN60950-1:2006 + A11:2009+ A1:2010 + A12:2011 + A2:2013
		EN 62311:2008
	EMC (Sec 3.1b):	EN 301 489-1 V2.1.1
		EN 301 489-19 V2.1.0
		EN 301 489-52 V1.1.0
	RF (Sec 3.2)	EN 301 511 V12.5.1
		EN 301 908–1 V11.1.1
		EN 301 908–2 V11.1.1
		EN 300 440 V2.1.1
2011/65/EU:	RoHS	EN 50581:2012

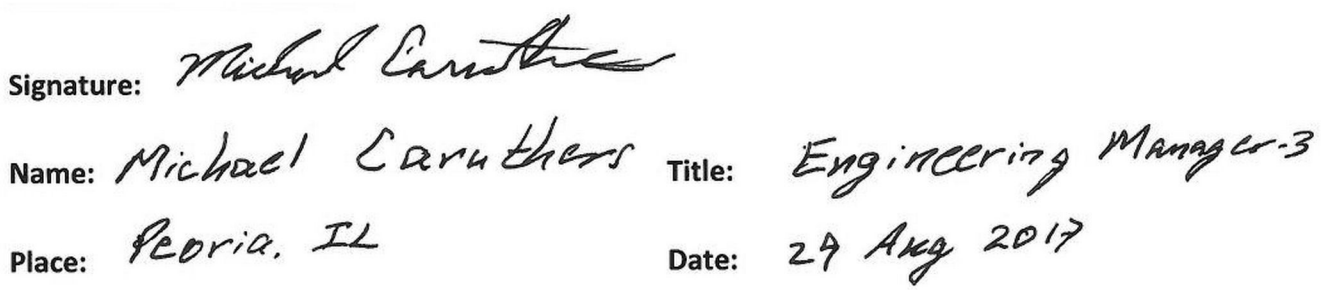

Illustration 13 g06238594

European Union EU Declaration of Conformity PL542

Table 4

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

USA

(continued)

(Table 4, contd)

hereby declares that the product, object of this description:

Product Link, PL542, Telematics Device

Brand: Caterpillar	Model: PL542
Antenna Part #: Internal	Part Number: 515 - 7080

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

Directive 2014/30/EU

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU:	LVD (Sec 3.1a):	EN60950-1:2006 (2nd Ed)+ Am12:2011 + Am: 2:2013
		EN62311:2008
	EMC (Sec 3.1b)	EN 301 489–1 V2.1.1
		EN 301 489–17 V3.2.0
		EN 301 489–52 V1.1.0
	RF (Sec 3.2)	EN 300 328 V2.1.1
		EN 300 440–2 V1.4.1
		EN 301 511 V9.0.2
		EN 301 908–1 V11.1.1
		EN 301 908–2 V11.1.1
2011/65/EU:	RoHS	EN 50581:2012
2014/30/EU	EMC	EN 13309:2010

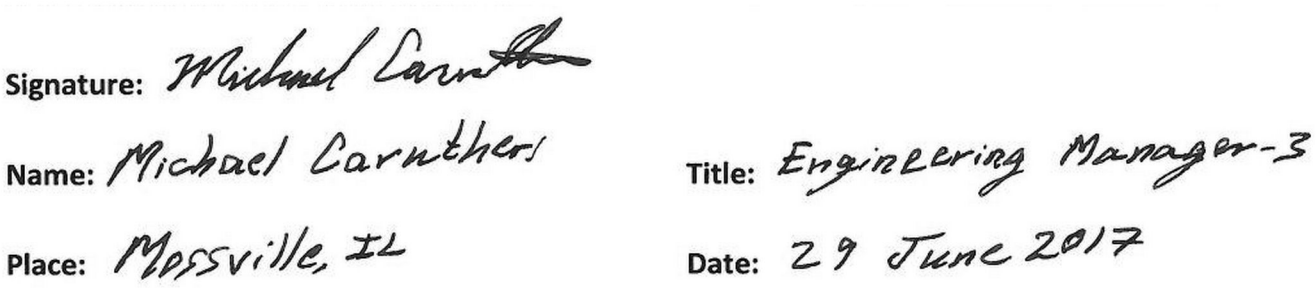

Illustration 14 g06220514

European Union EU Declaration of Conformity PL631

Table 5

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

USA

hereby declares that the product, object of this description:

Product Link, PL631, Cellular Radio Telematics Device

Brand: Caterpillar Model: PL631

Part Number: 442-7199

Antenna Part Number: 443-8463,
443-8462

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

(continued)

(Table 5, contd)

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU: RED	LVD (Sec 3.1a):	EN60950-1:2006 + A11:2009+ A1:2010 + A12:2011 + A2:2013
		EN 62311:2008
	EMC (Sec 3.1b):	EN 301 489-1 V2.1.1
		EN 301 489-19 V2.1.0
		EN 301 489-20 V2.1.0
	RF (Sec 3.2)	EN 301 441 V1.1.0
		EN 303 413 V1.1.0
2011/65/EU:	RoHS	EN 50581:2012

Signature: Michael Carruthers

Name: Michael Carruthers **Title:** Engineering Manager-3

Place: Peoria, IL **Date:** 24 Aug 2017

Illustration 15 g06238594

European Union EU Declaration of Conformity PL641

Table 6

CATERPILLAR ®
EU Declaration of Conformity

This Declaration of Conformity is issued under the sole responsibility of the manufacturer.

The undersigned, representing the manufacturer:

CATERPILLAR INC

100 N.E. Adams Street

Peoria, IL 61629

USA

(continued)

(Table 6, contd)

hereby declares that the product, object of this description:

Product Link, PL641, Cellular Radio Telematics Device

Brand: Caterpillar Model: PL641

Part Number: 440-2104, 440-2105

Antenna Part Number: 443-8463,
443-8462, and 443-8460

Is in conformity with the relevant Union harmonization legislation:

Directive 2014/53/EU

Directive 2011/65/EU

Conformity is shown by compliance with the applicable requirements of the following documents:

Conformity Assessment Procedure: ___X___ Annex II, _____ Annex III, _____Annex IV

2014/53/EU:	LVD (Sec 3.1a):	EN60950-1:2006 + A11:2009+ A1:2010 + A12:2011 + A2:2013
		EN 62311:2008
	EMC (Sec 3.1b):	EN 301 489-1 V2.1.1
		EN 301 489-19 V2.1.0
		EN 301 489-52 V1.1.0
	RF (Sec 3.2)	EN 301 511 V12.1.10
		EN 301 908–1 V11.1.1
		EN 301 908–2 V11.1.1
		EN 303 413 V1.1.0
2011/65/EU:	RoHs	EN 50581:2012

Signature: Michael Carruthers

Name: Michael Carruthers **Title:** Engineering Manager-3

Place: Peoria, IL **Date:** 24 Aug 2017

Illustration 16 g06238594

Operation Section

Operation

i07307994

System Overview

SMCS Code: 7606

Note: Your equipment may be equipped with a Caterpillar Product Link communication device.

The Caterpillar Product Link communication device utilizes cellular and/or satellite technology to communicate equipment information. This information is communicated to Caterpillar, Cat dealers, and Caterpillar customers. The Caterpillar Product Link communication device contains a Global Positioning System (GPS) satellite receiver.

Note: The Product Link PL161 does not contain a GPS receiver.

The capability of two-way communication between the equipment and a remote user is available with the Caterpillar Product Link communication device. The remote user can be a dealer or a customer.

Note: The Product Link PL161 does not support two-way communication.

Note: All Product Link devices must be located more than 200 mm (7.874 inch) from the machine operator to comply with FCC Regulations for RF human body safety.

Data Broadcasts

Data concerning this equipment, the condition of the equipment, and the operation of the equipment is being transmitted by the Caterpillar Product Link communication device to Caterpillar and is communicated to customers and Caterpillar dealers by the user interface. The data is used to serve the customer better and to improve upon Caterpillar products and services. The information transmitted may include: equipment serial number, equipment location, and operational data, including but not limited to: fault codes, emissions data, fuel usage, service meter hours, software, and hardware version numbers and installed attachments.

Caterpillar and/or Cat dealers may use this information for various purposes. Refer to the following list for possible uses:

- Providing services to the customer and/or the equipment
- Checking or maintaining Product Link system
- Monitoring the health or performance of the equipment
- Helping maintain the equipment and/or improve the efficiency of the equipment
- Evaluating or improving Caterpillar products and services
- Complying with legal requirements and valid court orders
- Performing market research
- Offering the customer new products and services

Caterpillar may share some or all the collected information with Caterpillar affiliated companies, dealers, and authorized representatives. Caterpillar will not sell or rent collected information to any other third party and will exercise reasonable efforts to keep the information secure. Caterpillar recognizes and respects customer privacy. For more information, please contact your local Cat dealer.

Operation in a Blast Site for Product Link Radios

⚠ WARNING

This equipment is equipped with a Cat® Product Link communication device. When electric detonators are being used for blasting operations, radio frequency devices can cause interference with electric detonators for blasting operations which can result in serious injury or death. The Product Link communication device should be deactivated within the distance mandated under all applicable national or local regulatory requirements. In the absence of any regulatory requirements Caterpillar recommends the end user perform their own risk assessment to determine safe operating distance.

Note: If using the previous version of Product Link radios (PL121SR, 522, 523, 420, or 421) refer to blast site requirements as stated in Operation and Maintenance Manual, SEBU8142, “Product Link - 121SR/321SR/420/421/522/523”.

If required, the following are suggested methods to disable the Caterpillar Product Link communication device:

- Turn theProduct Link radio disable switch to the OFF position.
- Disconnect the Caterpillar Product Link communication device from the main power source. This action is performed by disconnecting the wiring harness at the Product Link radio.

- To turn off the PL141 or PL131 push the power button or remove the internal battery.
- The PL161 cannot be turned off. If necessary, remove the PL161 from the equipment.
- The PL542 contains an internal battery that cannot be turned OFF manually. If necessary remove the PL542 from the equipment.
- The PL240B contains an internal battery that cannot be turned OFF manually. If necessary remove the PL240B from the equipment.

Note: If no radio disable switch is installed and the equipment will be operating near a blast zone, a Product Link radio disable switch may be installed on the equipment. The switch will allow the Caterpillar Product Link communication device to be shut off by the operator from the equipment control panel. Refer to Special Instruction, REHS7339, Special Instruction, REHS8850, Special Instruction, SEHS0377, and Special Instruction, REHS9111 for more details and installation instructions.

The following Caterpillar Product Link communication device specifications are provided to aid in conducting any related hazard assessment and to ensure compliance with all local regulations:

Table 7

Radio Transmitter Specifications		
Radio Model (Maximum)	**Transmitter Frequency Range**	**Transmitter Power**
PL640 (Product Link 640) G0100	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	
PL641 (Telematic radio equipment Cat ® brand, model PL641)	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	

(continued)

(Table 7, contd)

PL631 (Telematic radio equipment Cat ® brand, model PL631)	1616 MHz - 1626.5 MHz	5.1W max
PL542 (Telematic radio equipment for construction machinery based on cellular communication Product Link Cat ® brand, model PL542)	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	
PL240 (Telematic radio equipment based on cellular Product Link Cat ® brand, model PL240)	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	
PL241 (Telematic radio equipment based on cellular Product Link Cat ® brand, model PL241)	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	
PL141 (Cellular location sensors brand Caterpillar model PL141)	824 MHz - 849 MHz	0.5W typical, 2W max
	880 MHZ - 915 MHz	
	1710 MHz - 1755 MHz	
	1850 MHz - 1910 MHz	
	1920 MHz - 1980 MHz	
	2110 MHz - 2170 MHz	
PL131 (Satellite location sensors brand Caterpillar model PL131)	1616 MHz - 1626.5 MHz	1.2W Typical, 1.5W max
PL161 (Bluetooth transmitter Cat ® brand, model PL161)	2.4 GHz - 2.48 GHz	2.5 mW

Table 8

Radio Transmitter Specifications — Russia Specific		
Radio Model and Part Numbers	**Transmitter Frequency Range**	**Transmitter Power Average**
PL631 (Telematic radio equipment Cat ® brand, model PL631) 467-4162, 463-1177, 455-5564, 442-7199	1621.35 MHz - 1626.5 MHz	2.16 dBW

Note: The PL631 is the only system that operates at a different frequency range in Russia. All other systems operate as indicated in Table 7 .

Table 9

Product Link Operating Voltage and Current Draw		
Model	**Voltage Range**	**Maximum Current Draw Range**
PL640 (Product Link 640)	9–32V	500mA - 150mA
PL641 (Telematic radio equipment Cat ® brand, model PL641)	9–32V	750mA - 225mA
PL631 (Telematic radio equipment Cat ® brand, model PL631)	9–32V	1.3A - 2.0A
PL542 (Telematic radio equipment for construction machinery based on cellular communication Product Link Cat ® brand, model PL542)	9–32V	850mA - 225mA
PL240 (Telematic radio equipment based on cellular Product Link Cat ® brand, model PL240)	9–32V	250mA - 200mA
PL241 (Telematic radio equipment based on cellular Product Link Cat ® brand, model PL241)	9–32V	1.5A - 400mA
PL141 (Cellular location sensors brand Caterpillar model PL141)	3.6V (Internal Battery)	2A

(continued)

(Table 9, contd)

PL131 (Satellite location sensors brand Caterpillar model PL131)	3.6V (Internal Battery)	2A
PL161 (Bluetooth transmitter Cat ® brand, model PL161)	3.6V (Internal Battery)	32mA

Consult your Cat dealer if there are any questions.

Information for the initial installation of the Caterpillar Product Link communication device is available in Special Instruction, REHS7339, Special Instruction, REHS8850, Special Instruction, REHS9111, Special Instruction, SEHS0377, Special Instruction, REHS9757, and Special Instruction, M0077632.

Operation, configuration, and troubleshooting information for the Caterpillar Product Link communication device can be found in the Systems Operation, Troubleshooting, Testing and Adjusting, UENR3697, Systems Operation, Troubleshooting, Testing and Adjusting, UENR5823, Systems Operation, Troubleshooting, Testing and Adjusting, UENR5824, Systems Operation, Troubleshooting, Testing and Adjusting, M0070044, and Systems Operation, Troubleshooting, Testing and Adjusting, UENR6983.

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Product and Dealer Information

Note: For product identification plate locations, see the section “Product Identification Information” in the Operation and Maintenance Manual.

Delivery Date: _____

Product Information

Model: _____

Product Identification Number: _____

Engine Serial Number: _____

Transmission Serial Number: _____

Generator Serial Number: _____

Attachment Serial Numbers: _____

Attachment Information: _____

Customer Equipment Number: _____

Dealer Equipment Number: _____

Dealer Information

Name: _____ Branch: _____

Address: _____

_____

_____

	Dealer Contact	Phone Number	Hours
Sales:	_____	_____	_____
Parts:	_____	_____	_____
Service:	_____	_____	_____

SEBU8832
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