

John Deere Machine Communication Radio



OPERATOR'S MANUAL John Deere Machine Communication Radio OMPFP15135 ISSUE B5 (ENGLISH)

CALIFORNIA Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

John Deere Ag Management Solutions
PRINTED IN U.S.A.



Introduction

www.StellarSupport.com

NOTE: Product functionality may not be fully represented in this document due to product changes occurring after the time of printing. Read the latest Operator's Manual and Quick Reference Guide prior to operation. To obtain a copy, see your dealer or visit www.StellarSupport.com

OUO6050,0000FB1 -19-10AUG10-1/1

Read This Manual

Before operating display/software, familiarize yourself with components and procedures required for safe and proper operation.

IMPORTANT: The following GreenStar components are not weather-proof and should only be used on machines equipped with a cab. Improper use may void warranty.

- **Original GreenStar Display and Mobile Processor**
- **GreenStar Displays**
- **AutoTrac Universal Steering Kit**
- **John Deere Machine Communication Radio**

HC94949,00001DC -19-13DEC12-1/1

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Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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Safety

Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DX,ALERT -19-29SEP98-1/1

TS1389 —UN—28JUN13

Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

 **DANGER**

 **WARNING**

 **CAUTION**

DX,SIGNAL -19-03MAR93-1/1

TS187 —19—30SEP88

Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.



If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ -19-16JUN09-1/1

TS201 —UN—15APR13

Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



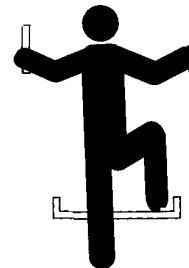
TS218 —UN—23AUG88

DX,SERV -19-17FEB99-1/1

Use Steps and Handholds Correctly

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.



T133468 —UN—15APR13

DX,WWW,MOUNT -19-12OCT11-1/1

Handle Electronic Components and Brackets Safely

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver mast used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.



DX,WW,RECEIVER -19-24AUG10-1/1

TSS249 —UN—23AUG88

Use Electronic Display Properly

Electronic Displays are secondary devices intended to aid the operator in performing field operations, increase comfort and provide entertainment. Displays can offer a wide range of functionality, are used in many different machine system applications and can be used with other secondary devices such as handheld electronic devices.

A secondary device is any device that is not required to operate your machine for its primary use. The operator is always responsible for safe operation and control of the machine.

To prevent injury while operating the machine:

- Position the display according to the installation instructions. Ensure the device is secured and does not obstruct the driver's view or interfere with the machine operating controls.
- Do not become distracted by the display. Stay alert. Pay attention to the machine and surrounding environment.

- Do not change settings or access any functions that require prolonged use of the display controls while machine is moving. Stop the machine in a safe location and place in park position before attempting such operations.
- Never set the volume so high that you cannot hear outside traffic and emergency vehicles.

To promote safe operation, certain functions of displays may be disabled unless the machine movement is restricted and/or has been placed in the park position. Overriding this safety feature may violate applicable law and can result in damage, serious injury or death.

Only use available display functionality when conditions permit you to do so safely and in accordance with instructions provided. Always observe safe driving rules, state or local laws and traffic regulations when using any secondary device.

RR94114,0001FFA -19-18DEC14-1/1

Prevent Electrical Shock and Fires

Battery-powered equipment or other electric power sources produce an electrical shock, sparks, or arcs if a short circuit occurs. Electrical short circuits can reach temperatures high enough to burn people, or ignite or melt common materials.

To prevent injury from electrical shock, burns, or potential fire hazards, always disconnect battery power or other electric power source on equipment before installing or servicing:

- Remove ground (negative terminal [-]) battery clamp.
- Detach and remove battery.
- Switch off main battery or other electric power source.
- Unplug electric power source from equipment.

Understand and follow all local codes and regulations when installing electrical equipment.



PC12631—UN—04JUN10

HC94949,0000487 -19-27JAN14-1/1

Avoid Exposure to High Radio Frequency Fields

Prevent injury from exposure to high radio frequency fields at the antenna. Do not touch antenna while the system is transmitting. Always disconnect power to the antenna before installing or servicing.

The antenna should always be separated from the operator or nearby persons by a minimum distance of 20 cm (8 in.).



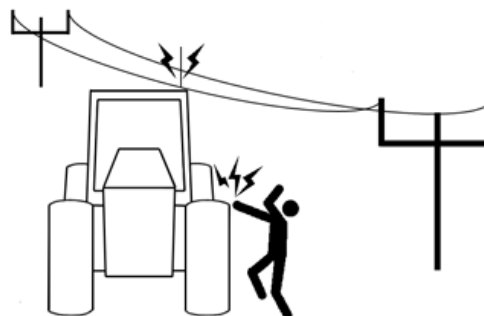
PC12632—UN—04JUN10

JS56696,0000C0E -19-11DEC12-1/1

Avoid Electrical Power Lines

Machine antenna may be high enough to come in contact with low-hanging electrical cables. Avoid severe electrical shock injury:

- Keep away from all low-hanging electrical cables while operating or transporting machine.



PC13658—UN—08NOV11

HC94949,0000488 -19-24JAN14-1/1

Regulatory Notifications to User

Information to User

This device must be operated as supplied by John Deere Ag Management Solutions. Any changes or modifications

made to these devices without the express written approval of John Deere Ag Management Solutions may void the user's authority to operate this device.

CZ76372,00003A2 -19-10DEC14-1/1

United States—Federal Communications Commission (FCC) Notifications to User

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

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio

frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Radio Frequency (RF) Exposure Guidance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (8 in.) between the radiator and persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

JS56696,0000C41 -19-10DEC14-1/1

Canada—Industry Canada Notifications to User

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitters (IC: 6545A-XR2) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with these devices.

PFP11422

Omnidirectional external antenna

5 dBi Gain

50 ohms impedance

RF Exposure Guidance

This equipment complies with FCC and Industry Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (8 in.) between the radiator and persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC and Industry Canada multi-transmitter product procedures.

PC20525—UN—10DEC14

Continued on next page

JS56696,0000C42 -19-10DEC14-1/2

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio (IC: 6545A-XR2) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

PFP11422

Antenne externe omnidirectionnelle

5 dBi Gain

Impédance de 50 ohms

Exposition aux radiofréquences orientation

Cet équipement est conforme aux normes FCC et les limites d'exposition aux rayonnements Industrie Canada énoncées pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm (8 in.) entre le radiateur et les personnes. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec une autre antenne ou un autre émetteur, sauf en conformité avec la FCC et Industrie Canada Procédures de produits multi-émetteurs.

JS56696,0000C42 -19-10DEC14-2/2

PC20526—UN—10DEC14

European Community

This equipment operates in the 2402 to 2472 MHz frequency range. Check with local authorities for the latest status of national regulations for the 2.4 GHz wireless

bands. National regulations may require that operations be limited to portions of the frequency ranges identified above.

HC94949,000015B -19-23OCT12-1/1

System Overview

Theory of Operation

Machine Communication Radio Theory of Operation

The Machine Communication Radio (MCR) is a 2.4 GHz wireless network radio that acts as a wireless router to enable direct data exchange between machines in a single network. A network is established by radios that have a direct line-of-sight to repeat data to other radios on the same frequency channel up to a 3 mile radius for the high power radio. The data transmitted between radios communicates speed, position, and heading of machines in the network. This information is sent to each display via Ethernet communication which the 2630, with Machine Sync activation, processes along with any additional Machine Sync-related information that is coming from the machine controllers. This network allows the sharing of logistics information and facilitates on-the-go unloading.

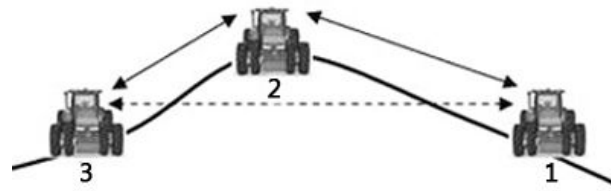
The filter kit included in the installation kit eliminates interference caused by other high power wireless devices, such as business band radios.

Line-of-Sight Notes

The MCR is a line-of-sight system. Any obstructions, such as trees, hills, or parts of the machine, that block antennas from having direct line-of-sight decrease the system's range. Visual line-of-sight between machines does not define the radio's line-of-sight. For example, although two machines may physically see each other, their antennas may not have clear line-of-sight due to rolling terrain, causing poor or no network connectivity.

Multiple MCRs create a mesh network where each radio serves as a repeater for other radios. Information transmits along a path from radio to radio until the

PC16375 —UN—11DEC12



MCR Mesh Network

destination is reached. When line-of-sight is unavailable between the two radios trying to communicate, additional radios that do have line-of-sight with the original radios trying to communicate can allow the information to be passed. The graphic illustrates this concept. Tractor 1 is trying to communicate with tractor 3, but a hill is obstructing line-of-sight. Tractor 2's antenna has line-of-sight with both tractors 1 and 3; therefore, tractor 2 acts as a repeater, and allows the information to be communicated between tractors 1 and 3.

As a result, the network reliability has the potential to be improved when more radios are in the network as there is often more than one path between the source and destination. This is helpful for populating and updating the logistics map.

RW00482,000015E -19-24APR13-1/1

Components

Radio

The MCR has an antenna connection, Ethernet connection, and an LED light for diagnostics.

A—Power/Data (Ethernet)
B—Antenna (Coax)

C—LED



PC14281 —UN—06DEC11

Continued on next page

RW00482,00000FE -19-23APR13-1/4

Antenna

The MCR antenna is typically mounted on the cab roof. It requires line-of-sight with another MCR antenna in the network. The MCR antenna has a yellow band to differentiate it from other similar antennas.

A—Antenna

B—Coax Connector



PC16324 —UN—04DEC12

RW00482,00000FE -19-23APR13-2/4

High Pass Filter

The High Pass Filter is used to reduce the possibility of radio interference from other wireless devices.

A—High Pass Filter
B—TNC Plug

C—TNC Jack

PC16659 —UN—05MAR13



RW00482,00000FE -19-23APR13-3/4

Y-Harness

The Y-harness connects to the Machine Communication Radio connector (A), ethernet connectors (B) and power connector (C).

A—Machine Communication
Radio Connector
B—Ethernet Connectors
C—Power Connector

D—Ethernet Port
E—Antenna Port



PC14500 —UN—25JAN12

RW00482,00000FE -19-23APR13-4/4

Configuring Radio

Create Network

1. Ensure that Power/Data cable is properly installed (A). When radio has power, the LED (C) on radio turns green. To install radio, refer to Machine Communication Radio Assembly Instructions.

NOTE: MCR LED blinks until it has been correctly configured. When LED is solid, the radio is correctly configured (network name and ID are set). Once the radio is configured, it is ready to join other radios in the network.

A—Power/Data (Ethernet)
B—Antenna (Coax)

C—LED



PC14281 —UN—05DEC11

RW00482,0000153 -19-19APR13-1/10

2. On GS3 display, press Menu button and select GS3 button.
3. Select Equipment softkey on the right side of main menu.

PC8663 —UN—08DEC14



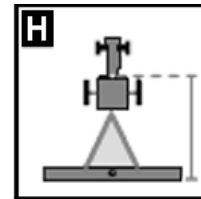
MENU button

PC12685 —UN—08DEC14



GREENSTAR 3 PRO button

PC8677 —UN—05AUG05



EQUIPMENT softkey

Continued on next page

RW00482,0000153 -19-19APR13-2/10

- From Equipment screen, select Network tab.

A—Network Tab

GreenStar - Equipment

Machine Implement 1 **Network** ← **A**

Machine Type
Tractor

Machine Model

Machine Name

Connection Type

Machine Turn Radius
22.0 (ft)

Turning Sensitivity
70

COM Port

Offsets

0.0 (in) 0.0 (in) 0.0 (in)

Change Offsets

Recording Source

Coverage Only

Memory Used

PC14286 — UN—08DEC11

RW00482,0000153 -19-19APR13-3/10

- Select View Networks.

A—View Networks

GreenStar - Equipment

Machine Implement 1 **Network**

My Name on Network:

Network Name: ----

Channel: ----

Wireless Status: Not Connected

Others in Network:

A → View Networks

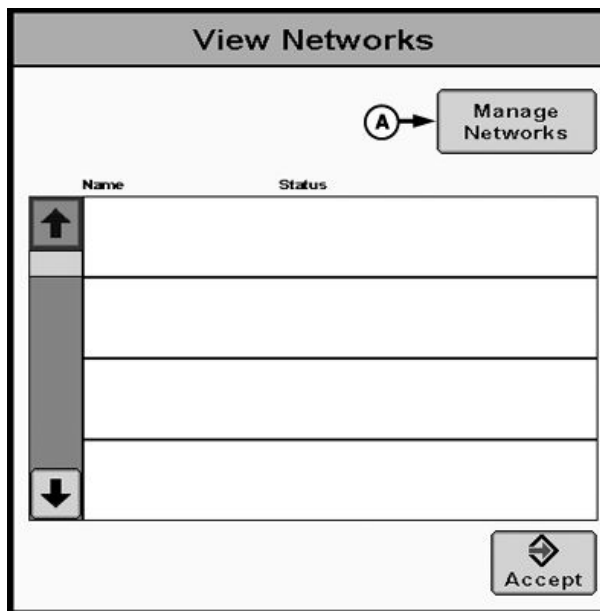
PC14287 — UN—08DEC11

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RW00482,0000153 -19-19APR13-4/10

6. Select Manage Networks button.

A—Manage Networks

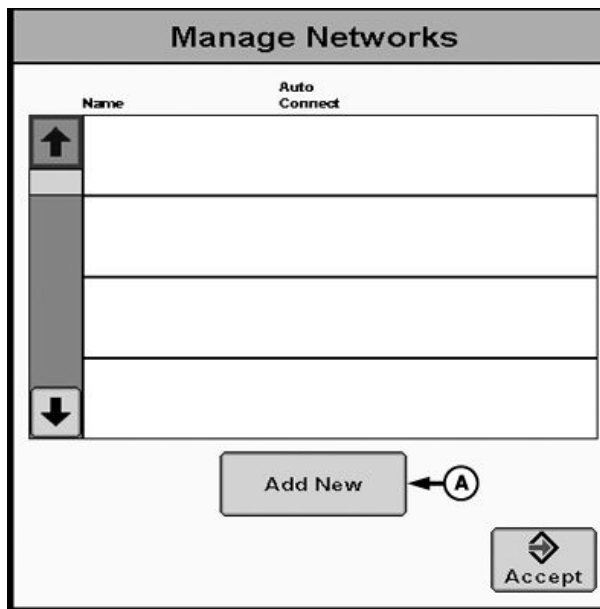


PC14288 —UN—06DEC11

RW00482,0000153 -19-19APR13-5/10

7. Select Add New on manage networks screen.

A—Add New



PC14288 —UN—06DEC11

Continued on next page

RW00482,0000153 -19-19APR13-6/10

8. Select Network Name box and use keyboard to type name of new network. Once network name is entered press Accept button.

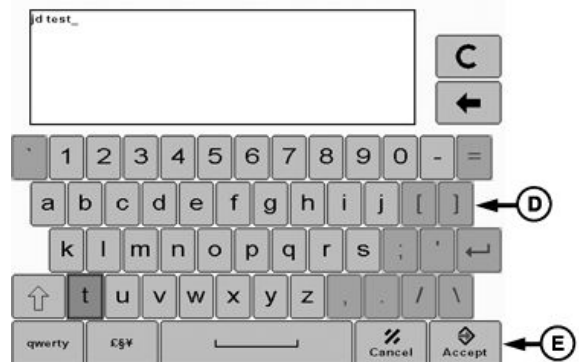
NOTE: Network Name must be 6-20 characters in length and can contain lower case letters (a-z), numbers (0-9), spaces, hyphens or dashes, and underscores.

9. Select a Channel on Edit Network Information screen

NOTE: For more details regarding channel selection, see the Radio Specifications section.

A—Network Name
B—Channel
C—Accept Button

D—Keyboard
E—Keyboard Accept Button



Continued on next page

RW00482,0000153 -19-19APR13-7/10

PC14290—UN—06DEC11

PC14291—UN—06DEC11

10. Select Accept button once Network Name and Channel are set. The new network now exists on Manage Networks screen.

A—Network Name
B—Channel

C—Accept

Edit Network Information

Network Name: ← A

Channel: ← B

Cancel C → Accept

PC14292 —UN—06DEC11

RW00482,0000153 -19-19APR13-8/10

11. Select Accept button on the Manage Networks screen. The new network now exists on View Networks screen.

A—Accept

Manage Networks

Name	Auto Connect	
jd test	Off	Edit Delete

Add New

A → Accept

PC14293 —UN—06DEC11

Continued on next page

RW00482,0000153 -19-19APR13-9/10

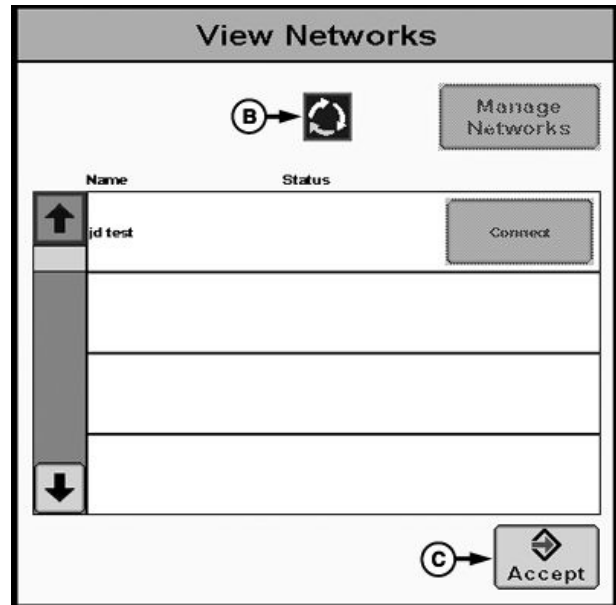
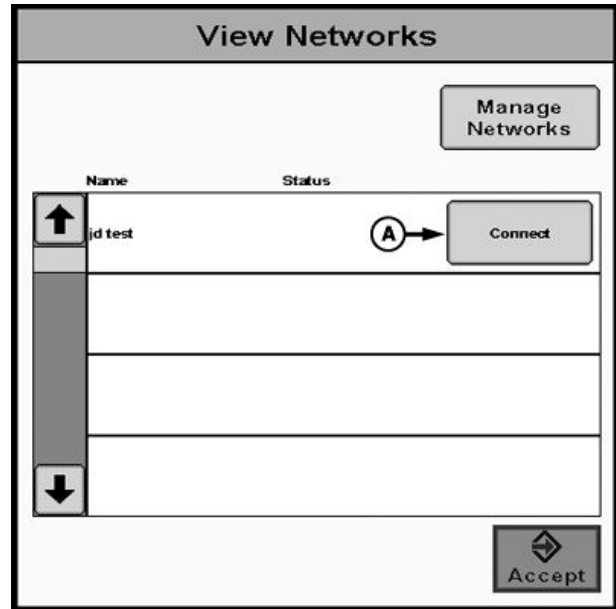
12. Next to the network name, select Connect button to join. A status symbol with three arrows in a circular formation appears. This step can take up to 90 seconds to complete. Press Accept button to return to Network tab during (or after) this time.

NOTE: While connecting, Data Transfer (Import/Export Data) feature is disabled.

NOTE: Each display must add each network to its network list. Repeat previous steps to add networks to each display. Every machine in network must connect to same network, even if there is no one else in network yet.

A—Connect
B—Status

C—Accept Button



PC14300 —UN—06DEC11

PC14295 —UN—06DEC11

RW00482,0000153 -19-19APR13-10/10

Set My Name on Network

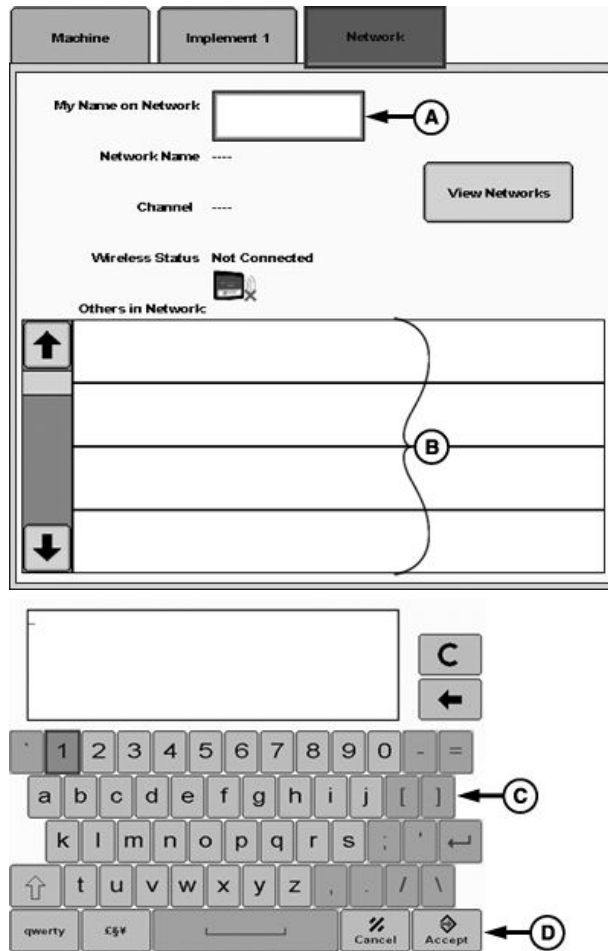
My Name on Network (A) is the name for this machine on other machines' displays. This name is shown on the Others in Network list (B) and in the on-screen maps.

NOTE: My Name on Network can be 0-8 characters in length, contain upper case letters (A-Z), lower case letters (a-z), and numbers (0-9).

1. Select My Name on Network, and use keyboard (C) to name machine.
2. Select Accept button (D).

A—My Name on Network
B—Others in Network List

C—Keyboard
D—Accept Button



PC20393 —UN—10DEC14

PC20394 —UN—10DEC14

SF04007,0000761 -19-10DEC14-1/1

Verify Network Functionality

To communicate, all machines in the network must:

- connect to the same Network, having identical Network Name and Channel
- be within communication range and have clear line-of-sight between machines
- have the same display software version
- have the same radio firmware version

All other machines in network are displayed in Others in Network list (A).

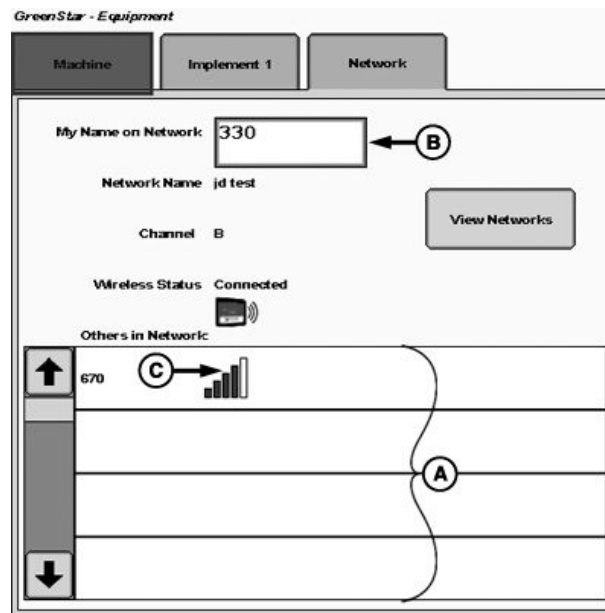
The name shown in this list is the name entered for My Name on Network (B) on other displays.

Other machines appear in the list as they come into range or join the network.

Five bars next to each machine in Others in Network list represents network signal strength (C). Bars are filled with color based on signal strength between your machine and machine in list.

A—Others in Network List
B—My Name on Network

C—Network Signal Strength



PC14303 —UN—12DEC11

SF04007,0000762 -19-10DEC14-1/1

Reprogram Radio

Update Radio Software

1. Plug radio into display with Ethernet cable and make sure radio is powered.
2. Insert USB drive with new radio software in to GS3 display. Power up display.
3. Select Main Menu button. Select Message Center. Select Reprogram softkey.

A—Controller List

B—Reprogram Device

PC8663 —UN—08DEC14



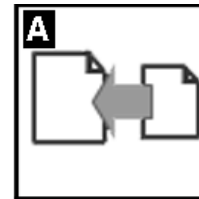
MENU button

PC12868 —UN—16SEP10



MESSAGE CENTER button (With Info Icon)

PC8665 —UN—05AUG05



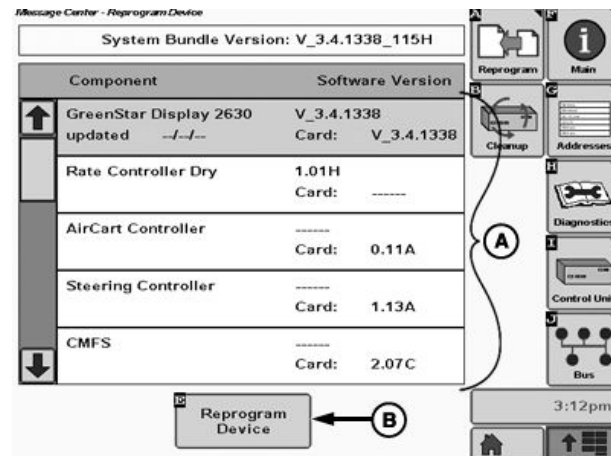
COMPONENTS AND SOFTWARE VERSIONS button

HC94949,00001AB -19-04DEC12-1/3

4. Highlight MCR in controller list (A) and select Reprogram Device (B).

A—Controller List

B—Reprogram Device Button



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HC94949,00001AB -19-04DEC12-2/3

PC13666 —UN—07DEC11

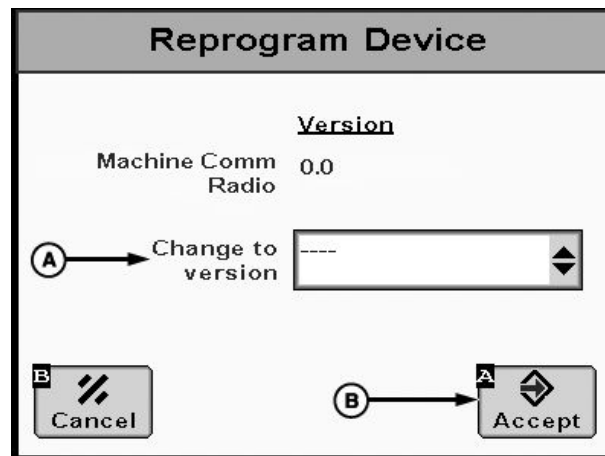
5. Select the new software version in Change To Version (A) drop down box.
6. Select Accept (B) button to start update.

NOTE: Do not backdate software.

Removing power during reprogramming may result in update failure.

A—Change to Version

B—Accept Button

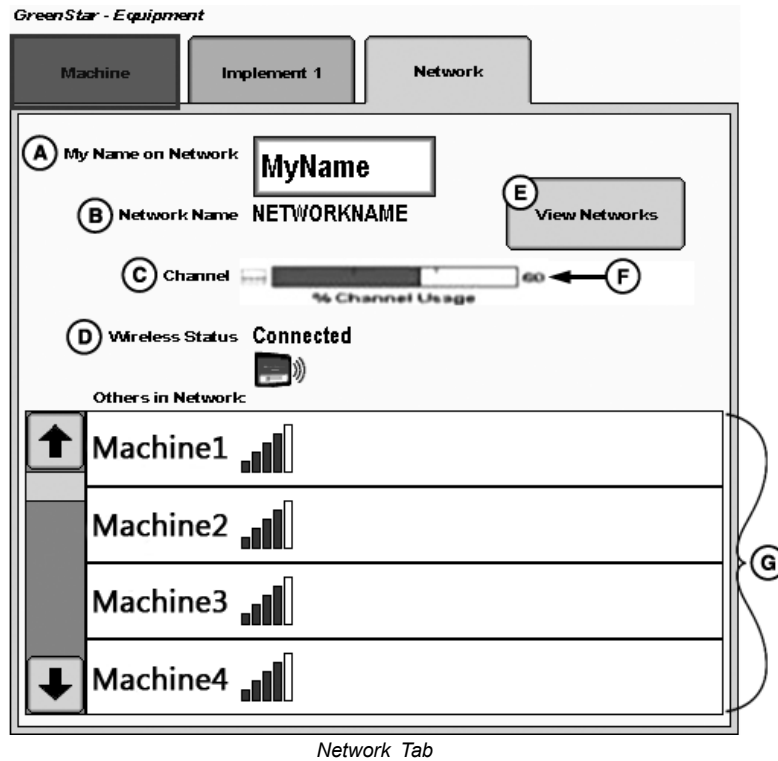


PC13667—UN—07DEC11

HC94949,00001AB -19-04DEC12-3/3

Network Information

Network Tab



My Name on Network

- The name shown on machines' Others in Network list. See Set My Name on Network for more information.

Network Name

- The name of the currently connected network. Shows "----" if not connected. See Create Network for more information.

Channel

- The communication channel of the currently connected network. Shows empty if not connected. See Radio Specifications for more information.

Wireless Status

- Shows Connected when your machine is communicating with at least one other machine. See Verify Network Functionality and Radio Troubleshooting for more information.

View Networks

- Select to connect to or disconnect from networks. Use to create, edit, or delete networks. See Create Network for more information.

Channel Quality Indicator

The Channel Quality Indicator bar is used to determine the best channel to use. If red appears, switch to another channel.

- Green—Good
- Yellow—Marginal
- Red—Poor

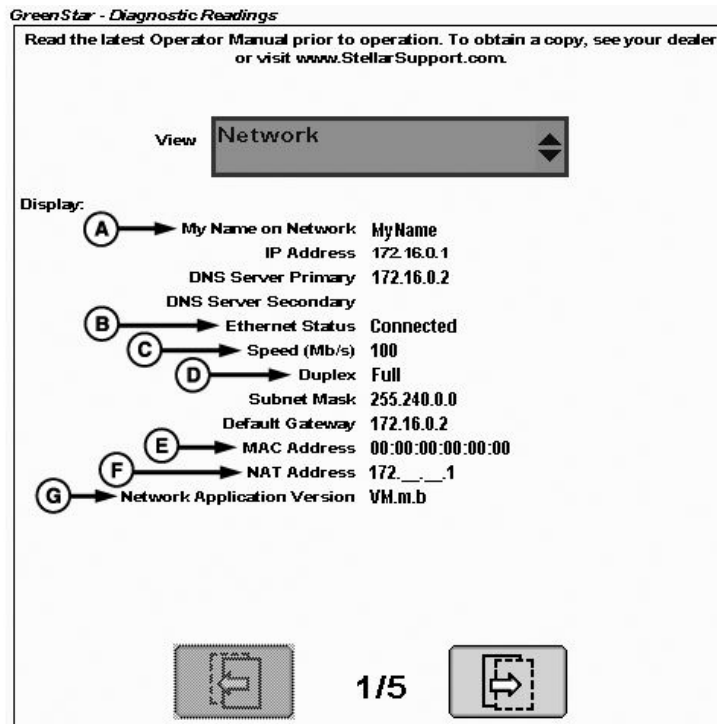
Others in Network list

- Each row in the list is one machine. Machine's name (My Name on Network entered on other display) appears first. Machine's signal strength appears second.

RW00482,0000155 -19-19APR13-1/1

PC16407 —UN—13DEC12

Network Diagnostics



GS3 Network Diagnostics Page 1

A—My Name on Network
B—Ethernet Status

C—Speed
D—Duplex
E—MAC Address

F—NAT Address
G—Network Application Version

My Name on Network

- The name shown on vehicles' "Others in Network" list. See Set My Name on Network for more details.

Ethernet Status

- Shows "Connected" if 2630 is connected to MCR, MTG, or other Ethernet enabled device.

Speed

- Shows speed of the Ethernet connection on the 2630. Speed should be "100" Mbps. If "10" is displayed, there may be fault in the Ethernet cable(s), the 2630 hardware, or the MCR hardware.

Duplex

- Normal operation will display "Full". If "Half" is displayed, there may be fault in the Ethernet cable(s), the 2630 hardware, or the MCR hardware.

MAC Address

- Unique identifier for 2630 on Network. All displays must have unique MAC Address.

NAT Address

- Unique identifier for 2630 on Network. All displays must have unique NAT Address.

Network Application Version

- Version number for communication sub-assembly. All displays and devices on Network must have same (or compatible) version number.

Continued on next page

HC94949,00001B2 -19-13DEC12-1/3

PC13679—UN—12DEC11

GreenStar - Diagnostic Readings

Read the latest Operator Manual prior to operation. To obtain a copy, see your dealer or visit www.StellarSupport.com.

View

MCR Information:

	IP Address	172.___.3
A	NAT Address	172.___.3
B	Uptime	dd hh:mm:ss
C	Firmware Version	1.04A
	Firmware Part Number	PFPXXXXXX
	Assembly Part Number	PFAXXXXXX
	Serial Number	SSSSSSSS

3/5

GS3 Network Diagnostics Page 3

A—NAT Address

B—Uptime

C—Firmware Version

NAT Address

- Unique identifier for MCR on the network. All MCRs must have a unique NAT address.

Uptime

- Amount of time MCR has been running. The MCR will reset each time the machine cycles keyed power. If run time does not reasonably match time since

machine keying, there may be a wiring harness fault or configuration failure.

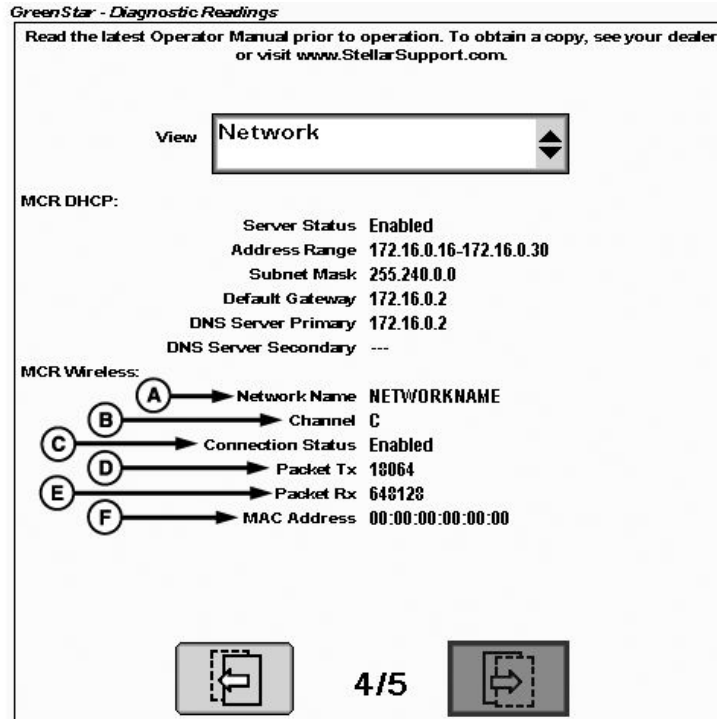
Firmware Version

- Software installed on MCR. All MCR's in the network must have the same firmware version. See Update Radio Software for MCR reprogramming instructions.

Continued on next page

HC94949,00001B2 -19-13DEC12-2/3

PC13680 —UN—12DEC11



GS3 Network Diagnostics Page 4

A—Network Name
B—Channel

C—Connection Status
D—Packet Tx

E—Packet Rx
F—MAC Address

Network Name

- The name of the currently connected network. Shows “---” if not connected. See Create Network for more information.

Channel

- The communication channel of the currently connected network. Shows empty if not connected. See Radio Specifications for more information.

Connection Status

- Shows “Enabled” when connected to a network, even if no machines are visible. Shows “Disabled” when disconnected from a network.

Packet Tx

- Number of messages transmitted from MCR.

Packet Rx

- Number of messages received from other MCR's.

MAC Address

- Unique identifier for MCR on Network. All MCR's must have unique MAC Address.

HC94949,00001B2 -19-13DEC12-3/3

PC13681—UN—12DEC11

Troubleshooting

Radio Troubleshooting

Symptom	Problem	Solution
The radio does not show up on the display	The radio does not have power	Check the power/Ethernet cables, ensure connections are tight. Radio only operates on switched power. LED will illuminate green when power is properly connected.
	Configuration	Check Connection Status on page 1 of diagnostics. Status should be Enabled when radio is powered and joined to a network. Ensure display software is updated.
The radio does not show up on OTHER displays	Network set up incorrectly	All radios must have an IDENTICAL Network Name and Channel in order to communicate with each other.
The radio exhibits decreased range	Faulty antenna path	Ensure that coax cable from the radio to antenna is in good shape, and that antenna is securely fastened. Ensure antenna is not broken.
	Low power availability	Ensure Ethernet cable is securely attached to the radio. Make sure the radio LED is green.
	Interference from outside sources	There may be an outside system interfering with the signal. Try switching to a different Channel (all machines in network must switch in order to keep communicating).
	Obstruction in path between machines	The MCR is a line-of-sight system. Any obstructions (trees, hills, parts of the machine, etc) obstructing the antennas from having a direct line-of-sight will decrease the range of the system.
Signal Strength shows zero bars	Indirect machines	The MCR is a line-of-sight system. The MCR also utilizes advanced networking features to communicate with machines that it cannot directly see, but can see by using other radios as repeaters in the network. In this case Zero Bars of Signal does not mean there is a problem.
	Faulty antenna path	Check antenna to ensure a solid connection.
User cannot disassociate from a network	Loss of communication with display	Check Ethernet cable to ensure solid connections.

Continued on next page

RW00482,0000156 -19-19APR13-1/2

Symptom	Problem	Solution
MCR LED is blinking	Radio is not connected to a network.	Led will blink until the radio is connected to a network. If the radio loses connection to a network, the LED will stay solid until power is cycled on the radio.
Decreased or no wireless connection	Interference caused by other wireless devices	Wireless devices such as business band radios, wireless cameras, and mobile hot spots may interfere with the wireless network created by the MCR, causing decreased network strength or lost connection. Try switching to a different channel (all machines in network must switch in order to keep communicating).

RW00482,0000156 -19-19APR13-2/2

Cap Antenna Connections

Contamination in antenna connections can contribute to poor radio performance. Ensure antenna connectors on radio and on roof are covered when antenna is not

connected. If you anticipate having to remove the antenna for transport or storage, John Deere recommends using the cap which came on the radio antenna connector to keep this in good working order.

CZ76372,00003AD -19-12DEC11-1/1

Specifications

Radio Specifications

NOTE: To achieve range of operation, use of provided antenna is required. Without antenna, radio connection range is 0.9 m (3 ft.).

High power radio range of operation: 4.8 km (3 mi) line-of-sight.

Low power radio range of operation: 2.4 km (1.5 mi) line-of-sight.

Channel Identification (ID)	A	B	C
Channel Number	1	5	9
Center Frequencies (MHz)	2412	2432	2452

JS56696,0000C39 -19-13NOV14-1/1

EC Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The undersigned hereby declares that

Product: John Deere Machine Communication Radio

fulfills all relevant provisions and essential requirements of the following directives:

Directive	Number	Certification Method
Radio and Telecommunications Terminal Equipment Directive (R&TTE)	1999/5/EC	Annex III

The product is in conformity with the following standards and/or other normative documents:

ETSI EN 300 328 V1.8.1
ETSI EN 301 489-3 V4.1.1
ETSI EN 301 489-1 V1.8.1
ETSI EN60950-1 Second Ed.
ISO 14982:2009
1999/519/EC

Name and address of the person in the European Community authorized to compile the technical construction file:

Brigitte Birk
John Deere GmbH & Co. KG
Mannheim Regional Center (Zentralfunktionen)
John Deere Strasse 70
Mannheim, Germany D-68163

Place of declaration: Urbandale, Iowa

Name: Ryan White

Date of declaration: 10 November 2014

Title: Development Manager Communication & Automation

Manufacturing Unit: John Deere Intelligent Solutions Group

DXCE01 —UN—28APR09



SF04007,0000760 -19-18DEC14-1/1

Identify Date Code

Use the date code (A) on the product label to identify the date of manufacture. "YY" (B) identifies the last two numbers of the year of manufacture; "WW" (C) identifies the week number of calendar year of manufacture.

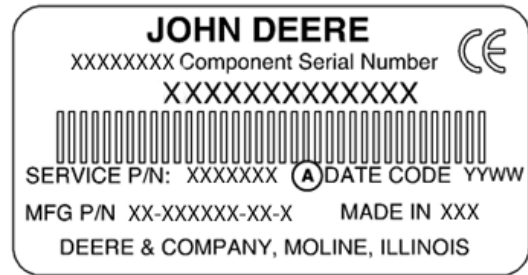
NOTE: The week number of manufacture ranges between 01-53.

Date Code		
YY	Last Two Numbers of Year of Manufacture	Example: 11 = 2011 12 = 2012 13 = 2013
WW	Week Number of Calendar Year of Manufacture	Example: 01, 02, 03...53

A—Date Code (Date of Manufacture)

B—Last Two Numbers of Year of Manufacture

C—Week Number of Calendar Year of Manufacture



Product Label Example

PC17574 —UN—16AUG13

DATE CODE **YY** **WW**

(B) (C)

Date Code Example

HC94949,0000342 -19-23AUG13-1/1

PC17568 —UN—16AUG13

Customs Union—EAC

Customs Unions—EAC

Information for products that bear conformity mark of the Customs Union member states

Manufacturer: Deere & Company
Moline, Illinois U.S.A.

Model: Machine Communication Radio
Made in USA

Name and address of the authorized representative in the Customs Union of Russia, Belarus, and Kazakhstan:
Limited Liability Company "John Deere Rus"

Address: 142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district,
vладение "Warehouse 104," Building 2.

For technical support, please contact your dealer.



PC20578 —UN—15DEC14

Таможенный союз—EAC

Информация об изделиях, которые имеют знак соответствия требованиям технических регламентов Таможенного союза

Производитель: Компания Deere & Company
г. Молин, Штат Иллинойс, США

модель: Радиомодуль John Deere для машин
Сделано в США.

Наименование и адрес уполномоченного представителя на территории Таможенного союза России, Белоруссии и Казахстана: Общество с ограниченной ответственностью "Джон Дир Русь"

Адрес: 142050, Россия, Московская область, Домодедовский район, г. Домодедово, микрорайон "Белые столбы", владение "Склады 104," стр. 2.

Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию.



PC20252 —UN—13NOV14

Continued on next page

RW00482,0000443 -19-15DEC14-1/2

Кеден одағы—Еуразия одағы

Кеден Одағы мүшелерінің ережелеріне сәйкестік белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company
Молин, Иллинойс, АҚШ

Үлгі: Машинаның байланыс радиосы
АҚШ-та жасалған

Ресей, Беларусь және Қазақстан кеден одағындағы авторластырылған өкілінің атауы және мекенжайы:
Жауапкершілігі Шектеулі Серіктестік "John Deere Rus"

Мекенжайы: 142050, Ресей, Мәскеу облысы, Домодедово қаласы, Белые столбы ықшам ауданы,
"Склады 104," қожалығы, 2 үй.

Техникалық қолдау алу үшін дилеріңізбен хабарласыңыз.



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John Deere Service Literature Available

Technical Information

Technical information can be purchased from John Deere. Some of this information is available in electronic media, such as CD-ROM disks, and in printed form. There are many ways to order. Contact your John Deere dealer. Call **1-800-522-7448** to order using a credit card. Search online from <http://www.JohnDeere.com>. Please have available the model number, serial number, and name of the product.

Available information includes:

- **PARTS CATALOGS** list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.
- **OPERATOR'S MANUALS** providing safety, operating, maintenance, and service information. These manuals and safety signs on your machine may also be available in other languages.
- **OPERATOR'S VIDEO TAPES** showing highlights of safety, operating, maintenance, and service information. These tapes may be available in multiple languages and formats.
- **TECHNICAL MANUALS** outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in separate component technical manuals
- **FUNDAMENTAL MANUALS** detailing basic information regardless of manufacturer:
 - Agricultural Primer series covers technology in farming and ranching, featuring subjects like computers, the Internet, and precision farming.
 - Farm Business Management series examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
 - Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
 - Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.



TS189 —UN—17JAN89



TS191 —UN—02DEC88



TS224 —UN—17JAN89



TS1663 —UN—10OCT97

DX.SERV.LIT -19-31JUL03-1/1

John Deere Service Keeps You On The Job

John Deere Is At Your Service

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts and service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.



TS201 —UN—15APR13

CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

- Machine model and product identification number
- Date of purchase
- Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance. Or contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at www.deere.com/en_US/ag/contactus/.

DX,IBC,2 -19-02APR02-1/1

