

# **JDLink™ Universal MTG Install Kit**

**BPF10159**



**JOHN DEERE**

## **INSTALLATION INSTRUCTIONS JDLink Universal MTG Install Kit PFP10491 08OCT10 (ENGLISH)**

**John Deere Ag Management Solutions  
PFP10491 (08OCT10)**

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PFP10491-19-08OCT10



### 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.



TS1389 —19—07DEC88

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

### 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.



TS187 —19—30SEP88

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

### Live With Safety

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



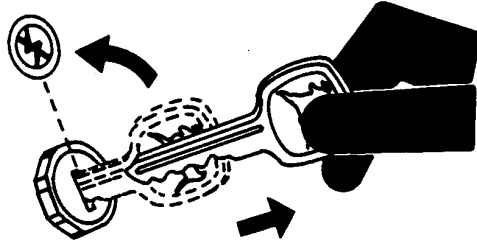
TS231 —19—07OCT88

DX.LIVE -19-25SEP92-1/1

## Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



T5230 —UN—24MAY89

DX,PARK -19-04JUN90-1/1

## 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.



Falling Hazard

PC12728 —UN—16AUG10

CZ76372.000008D -19-16AUG10-1/1

## Average Setup Time

Approximate time required for quick install is 1.5 hours.  
Approximate time required for embedded install is 3.5 hours.

CZ76372.000011B -19-11AUG10-1/1

## JDLink Compatibility

JDLink Ultimate and Service ADVISOR™ Remote require communication with the vehicle to operate. This is not

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available with the JDLink Universal Install Kit. These functions will not be accessible after this install.

CZ76372.000010C -19-06AUG10-1/1

## Parts List

*NOTE: Not all supplied hardware is used in installation due to different vehicle make and models.*

Quantity	Description
1	Controller, Modular Telematics Gateway (MTG)
1	Antenna, MTG Cellular/GPS
1	Bracket, Antenna
1	Harness, Universal Wiring
1	Harness, Cab Wiring
1	Harness, BAT +VE 7.5 Amp Fuse
1	Harness, BAT RETURN 7.5 Amp Fuse
1	Harness, IGN 3 Amp Fuse
1	Grommet
1	DELPHI-ELEC Connector Terminal (large eyelet for power wire)
3	DELPHI-ELEC Connector Terminal (small eyelets to terminate wires)
4	Flanged Screw, M8 x 35
4	Flanged Screw, M8 x 45
4	Flanged Screw, M8 x 55
4	Flanged Screw, M8 x 65
10	Nut, M8
10	Washer, M8
10	Anchor Panel Fir Tree
10	Band

CZ76372,0000101 -19-24AUG10-1/1

## MTG Mounting Guidelines

**⚠ CAUTION:** Read and understand the “Handle Antennas and Harnesses Safely” section before accessing cab roof.

Never drill into Falling Object Protection Structure (FOPS) or Rollover Protection System (ROPS) or modify these structural components to install antenna or MTG. Such activity compromises the integrity of these safety systems.

Using existing holes and brackets on FOPS or ROPS is acceptable practice, as well as drilling into objects already attached to FOPS or ROPS by manufacturer, such as a plastic or sheet metal canopy.

For gasoline engines, if possible, do not install the MTG in engine compartment. If no other options for installation exist and unit must be installed in engine compartment, then ensure that the MTG and cable assembly are at least 460 mm (18 in.) away from ignition system (for example spark plug wires, distributor, battery). Install the MTG and associated cables as far away from these factors as possible. If minimum length requirement of 460 mm (18 in.) cannot be obtained, install a custom shield fixture.

**IMPORTANT:** DO NOT install or attach any component or cable to any removable parts, such as panels or plates.

Obtain permission from equipment owner or OEM before installing on an electrically

isolated location. Ensure that equipment owner understands that this area is no longer electrically isolated and that is acceptable to the customer. If mounting location is electrically isolated, an additional ground strap must be installed to ground the terminal to chassis ground.

*NOTE: The following are guidelines for selection of the MTG mounting location:*

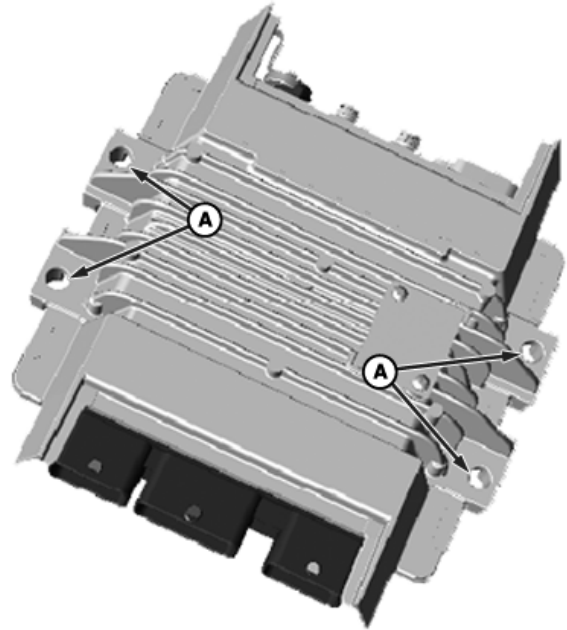
- Start engine to verify that machine is in good operating condition.
- If possible, hide the MTG from sight by installing it in a safe, fully enclosed compartment of vehicle. A stealthy, hidden location is ideal and safest recommended location for the MTG.
- Choose a location where the MTG does not contact corrosive liquids or solvents.
- Choose a location where chains, moving parts, or other tools are not stowed on top of or interfere with the MTG or cables.
- Do not install the MTG near items that fall on it or bump cable connections.
- Choose a structurally rigid mounting location. Surface must support full weight of the MTG under all circumstances.
- Install the MTG so cable connections are protected from accidental damage and potential tampering. Be sure to provide enough room for cable bends or removal of cables for servicing. 10—15 cm (4—6 in.) is required.
- Install the MTG so that equipment maintenance can be performed.

JS56696,00008D6 -19-05AUG10-1/1

## MTG Installation

**NOTE:** Before marking and drilling, consider which direction cable connectors are facing when the MTG is finally mounted. Adjust, if necessary, to ensure that cable connectors are in best position.

1. Using the MTG as a template (A), mark holes for drilling.
2. Drill holes with 9/32 in. drill bit.
3. Remove rough edges from around holes.
4. Install the MTG to mounting location using supplied cap screws, washers, and nuts. Tighten cap screws to 35 N·m (25.8 ft·lbs).



PC12717 -UN-04AUG10

JS56696,00008D7 -19-15SEP10-1/1

## Antenna Mounting Guidelines

**CAUTION:** Avoid installing antenna in a place where it could be a trip hazard or used as a foot hold or pull-up. **DO NOT** use antenna as either a foot hold or pull-up.

Avoid installing or attaching any components or cable to any removable parts, such as panels or plates.

**IMPORTANT:** **DO NOT** paint the antenna. This voids warranties. Paint degrades performance of the JDLINK system.

**Failure to comply with view-of-sky requirements could degrade performance of the JDLINK system.**

- Antenna has a clear, unobstructed line-of-sight view of sky for optimum antenna operation.
- Normally, signals can pass through a single layer of glass, fiberglass, or plastic with minimal signal loss.
- Obstructions, such as metallic paint, degrade performance or completely block signals.
- Other commonly encountered obstructions on vehicles include:
  - Metal canopies
  - Metal cages

CZ76372,00000F8 -19-04AUG10-1/1

## Adhesive Mounted Antenna Installation

*NOTE: If installing Bracket Mounted Antenna, skip this section.*

*NOTE: To obtain a good performance with the adhesive tapes, it is important to ensure that the mounting surfaces are clean and dry.*

### • Suggested Adhesive Application Temperature Ranges:

- The ideal tape application temperature range is between 21—38° C (70—100° F).
  - The minimum suggested application temperature is between 0—16° C (32—60° F).
  - Application is not recommended below 0° C (32° F).
1. Ensure that the designated mounting surface is flat for best possible antenna installation.
  2. Clean the designated mounting surface using alcohol wipes to ensure it is free of wax and debris.
  3. Turn the antenna over.
  4. Remove the protection paper from the adhesive pad on the antenna, orient the antenna into position on the cab roof and attach it.



PC10857TV—UN—15MAR10

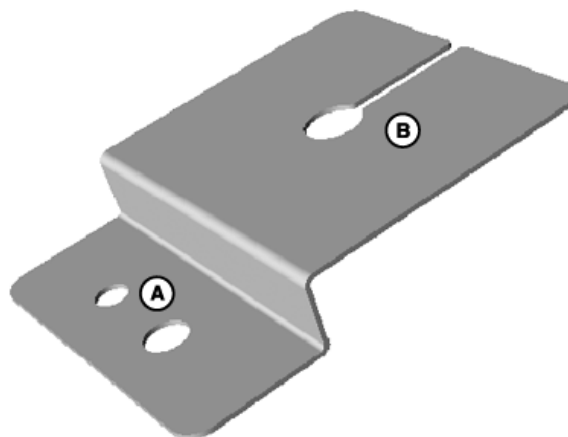
5. Refer to “Antenna Cable Routing and Connection” in instructions for information on routing the cable and connecting it to the MTG.

JS56696.00008D4 -19-13AUG10-1/1

## Bracket Mounted Antenna Installation

*NOTE: If installing Adhesive Mounted Antenna, skip this section.*

1. Using the bracket as a template (A), mark a hole for drilling.
2. Drill hole with 9/32 in. drill bit.
3. Remove rough edges from around hole.
4. Slide antenna cables and antenna nut under bracket (B). Attach antenna to bracket by tightening nut on underside of bracket to 3.16 N·m (28 in·lbs).
5. Install the bracket to mounting location using supplied cap screw, washer, and nut.
6. Refer to “Antenna Cable Routing and Connection” in instructions for information on routing the cable and connecting it to the MTG.



PC12714—UN—03AUG10

CZ76372.0000102 -19-15SEP10-1/1

## Antenna Cable Routing and Connection

*NOTE: Attach cable and harness securely using the provided tie bands, wire clamps, and anchor clamps.*

1. Route antenna cables to the MTG.

2. Connect appropriate connectors (cellular and GPS) from antenna to the connections on the MTG. Ensure that connectors are fully connected.

CZ76372.0000103 -19-05AUG10-1/1

## Universal Wiring Harness Guidelines

**⚠ CAUTION:** When making electrical connections, ensure that circuit being fused is the MTG system circuit not a circuit of the vehicles. Fuse is always on the MTG system side of splice connector.

When the MTG is wired to hot side of disconnect switch, John Deere recommends removing the MTG fuses and battery negative terminal before performing welding operations. It protects the MTG and existing electronics, such as, electronic control modules (ECMs), from possibility of damaging electrical currents.

**IMPORTANT:** Trim wiring harness length to fit a specific vehicle. DO NOT trim wiring harness until you know where all components are mounted and lengths are determined.

Vibration can cause nicked wires to fail. Use care in stripping and crimping wires. Using wire cutters, crimpers, knives, or other tools can damage the conductor wire.

*NOTE: Attach cable and harness securely using the provided tie bands, wire clamps, and anchor clamps.*

- When making electrical connections, ensure that circuit being fused is the MTG system circuit and not a circuit of the vehicles.
- Fuses must be attached after power and signal wires have been trimmed and before final connection.
- Ensure that correct fuse is attached to correct wire on the MTG power and signal cable:
  - 7.5 amp fuse attaches to red BAT +VE wire.

- 3 amp fuse attaches to the red IGN wire.
- 7.5 amp fuse attaches to black BAT RETURN wire.
- No fuse for black CHASSIS GND wire.

• **Avoid Routing Cables in Following Locations (When Possible):**

- Near exhaust pipes and other sources of heat.
- Over sharp edges.
- Over moving parts.
- Near foot traffic areas.

• **Wiring Harness Routing Guidelines:**

**IMPORTANT:** If necessary, protect all wires with protective sheathing, such as convoluted tubing or wire loom. If lengths of exposed wires are known, you can save time by installing protective sheathing on wires before you route them.

- Use protective sheathing when routing outside of vehicle, around sharp edges, and near sources of heat, always (such as convoluted tubing or wire loom) to protect cables.
  - If drilling penetrates into an enclosed area, seal all holes to keep out moisture.
  - Whenever possible, route cables with any existing vehicle cables.
  - When reinstalling floor mats or kick plates, be careful that screws do not penetrate cables.
  - Use rubber grommets when cables are routed through holes with sharp edges.
- **Storing Excess Wire:**
- Any excess wiring is stored in a safe and secure location.
  - Secure any excess wiring with tie bands.

JS56696,00008D0 -19-24AUG10-1/1

## Universal Wiring Harness Installation

- Determine if vehicle is equipped with positive battery disconnect switch, negative disconnect switch, no disconnect switch or power relay.
- The following instructions indicate several locations to consider when determining where to route cabling and make power, ground, and ignition connections.

1. Plug Molex™ connector on the Cab harness in to the MTG.
2. Connect 10 pin cab harness connector to corresponding connector on Universal wiring harness.
3. Route wiring connections on Universal wiring harness to appropriate location on vehicle.

### BAT +VE (Red) Wire Connection

**NOTE:** The BAT +VE (red) wire is for the unswitched (main) +12 VDC or +24 VDC connection. This wire provides constant power to the MTG.

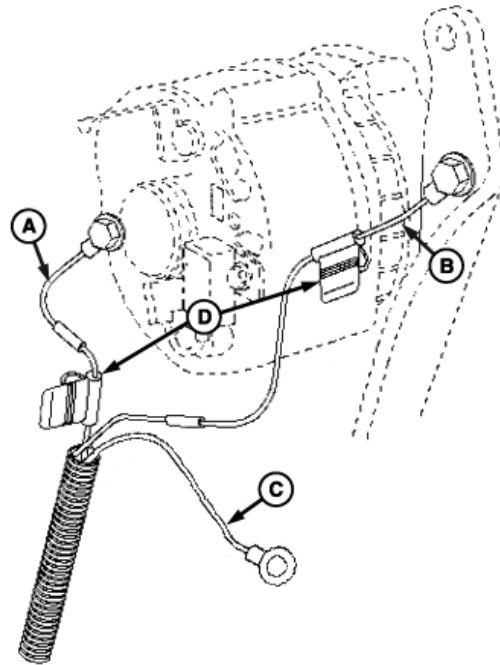
- The following indicates several locations to consider when determining where to route cabling and make BAT +VE (Red) wire connection.
  - Alternator (Constant 12 VDC or 24 VDC)
  - High side of vehicle main wiring bus.
  - Battery side of the fuse box (not the load side).
  - Battery side of the ignition switch.
- Attach a supplied 7.5 amp fuse before making the final connection.
- Connect the BAT +VE (red) wire to an unswitched +12 VDC or +24 VDC power source, such as the hot side of the vehicle main wiring bus, the battery side of the ignition switch, or the battery side of the fuse block (not the load side).

### BAT RETURN (Black) Wire Connection

- The following indicates several locations to consider when determining where to route cabling and BAT RETURN (Black) wire connection.
  - Battery side of the cutout switch. (Must obtain permission from customer to connector here).
  - Chassis side of the cutout switch. (MTG does not operate if the disconnect switch is open).
  - Good ground. (When establishing a good chassis ground, avoid areas that are potentially isolated from ground by a hinge or some welds).
- Attach a supplied 7.5 amp fuse before making final connection.

**NOTE:** Sometimes thermal couplers are mistaken for chassis ground. Avoid thermal couplers and ensure a good, proper chassis ground connection.

- Connect the BAT RETURN (Black) wire to a good ground (BAT-).



A—BAT +VE (Red)  
B—BAT RETURN (Black)

C—CHASSIS GND (Black)  
D—Fuses

### CHASSIS GND (Black) Wire Connection

The CHASSIS GND (Black) must be connected to the vehicle frame. This ground provides a voltage reference for the system. If the BAT RETURN (Black) is connected to the vehicle frame, the two wires can be attached at the same location.

**NOTE:** Again, sometimes thermal couplers are mistaken for chassis ground. Avoid thermal couplers and ensure a good, proper chassis ground connection.

- Connect the CHASSIS GND (Black) wire to the vehicle frame.

### IGN (Red) Wire Connection

**NOTE:** The IGN (Red) wire can go to the ignition or a switched power source.

**NOTE:** The IGN (Red) wire is for sensing engine hours.

- The following indicates several locations to consider when determining where to route cabling and make IGN (red) wire connection.
  - Ignition switch.
  - Oil pressure switch.
  - Hour meter.
  - Switched Power Source

Continued on next page

JS56696,00008D1 -19-15SEP10-1/2

PC12737—UN—24AUG10

- Attached the supplied 3 amp fuse to the IGN (Red) wire.
- Connect the IGN (Red) wire to the ignition switch, oil pressure switch, or another switched power source.
- Verify that **no voltage is present**, during non-running conditions, at the location where you connect the IGN (Red) wire.

JS56696,00008D1 -19-15SEP10-2/2

## Activate JDLink

There is a free 28 day dealer installation activation of the JDLink Terminal. It can be used by the dealer at any time after the installation.

### 28 Day Demo Period:

*NOTE: Demo period ends once terminal is transferred to a customer account.*

*NOTE: If terminal is not transferred within 28 days, terminal is inactive.*

1. Log on to <http://stellarsupport.deere.com/>.
2. Select JDLink under Activations & Subscriptions.
3. Select the JDLink Terminal S/N.
4. Select option to activate

5. Verify the selected service level, and then press submit.

### Purchase Subscription:

1. Log on to <http://stellarsupport.deere.com/>.
2. Select JDLink under Activations & Subscriptions.
3. Select the JDLink Terminal S/N.
4. Select option to purchase or renew a subscription.
5. Select JDLink subscription length.
6. Select Dealership.
7. Review order, enter payment information and then press submit.

CZ76372,00000FC -19-26AUG10-1/1

## Web Registration

There are two ways that a terminal can be registered to its vehicle.

### Web Registration:

1. Log on to <http://www.jdlink.com/>.
2. Go to the Admin/Settings tab
3. Select the Terminal Setup button.
4. Select the terminal that will be assigned by clicking on the name.
5. Select the Assign Terminal to Equipment button, and the Assign Terminal to Equipment popup will appear.
6. If the machine already exists in the system, but is inactive, select it from the list in the popup.

7. If the machine does not exist, click on the Add Equipment button (plus sign).
8. Enter in the Equipment information.

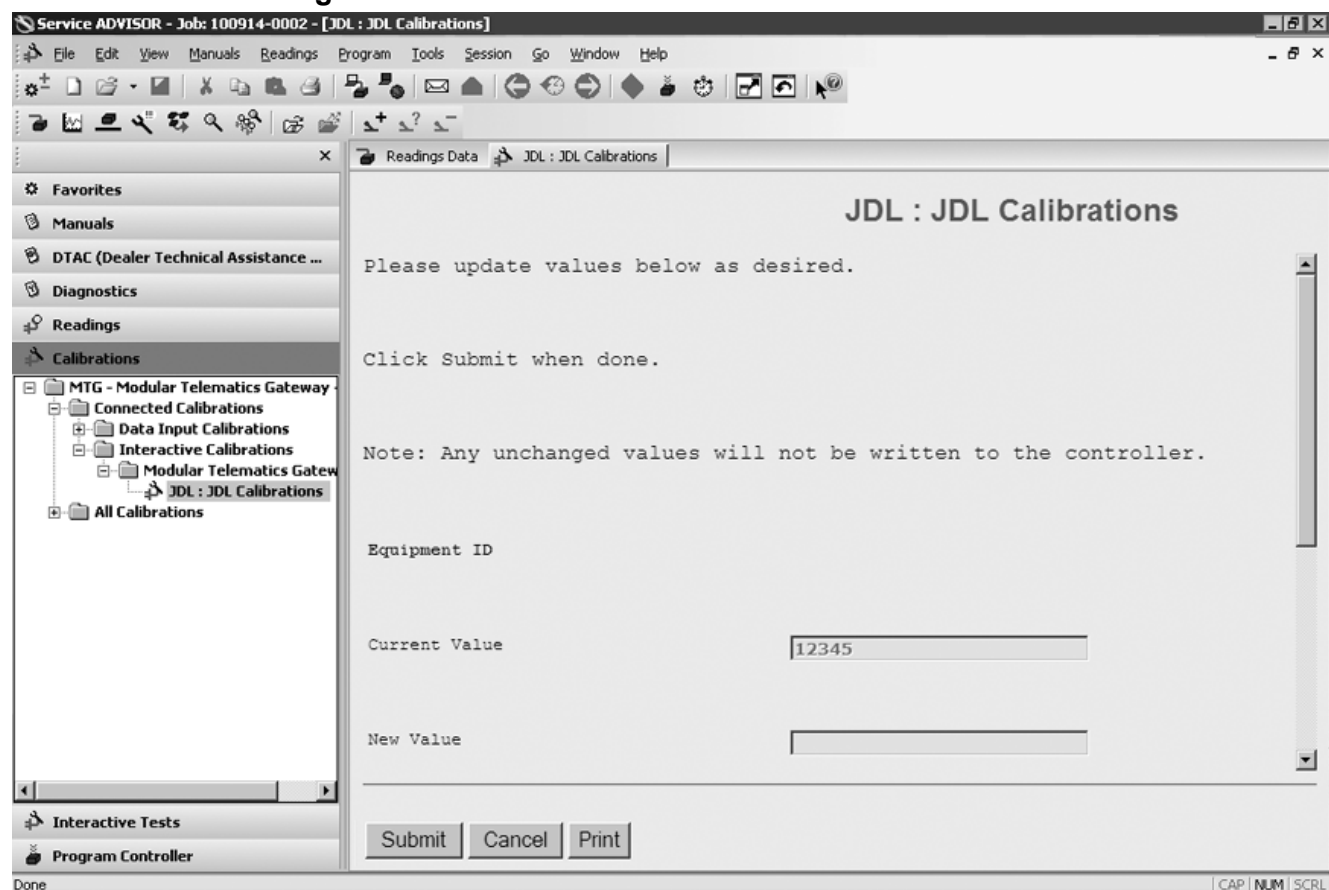
*NOTE: It is important to use a unique Machine Name, so that different vehicles are not mistaken. The vehicle PIN can be used for this unique identifier.*

*NOTE: If the vehicle PIN is recognized by the system, Machine Make, Type and Model will populate automatically. If not, enter the information manually.*

9. When all the information has been entered press the Save & Close button.

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## Service ADVISOR Registration



Service ADVISOR MTG Registration

### Service ADVISOR Registration:

1. Connect Service ADVISOR to MTG harness and establish connection to MTG.
2. Open the Calibrations tab in Service ADVISOR.
3. Expand folders MTG - Modular Telematics Gateway >>> Connected Calibrations >>> Interactive Calibrations >>> Modular Telematics Gateway and select JDL Calibrations.
4. Enter relevant information in New Value fields.

*NOTE: It is important to use a unique Machine Name, so that different vehicles are not mistaken. The vehicle PIN can be used for this unique identifier.*

- Equipment ID — Unique machine name so that machine can be differentiated from others.

- Engine hours — Number of hours machine has been in use.
  - PIN — Unique number for machine identification. In most cases this number will be the machine VIN
  - ESN — Engine Serial Number can be used for machines that do not have a standard VIN.
5. Once finished, press the Submit button.
  6. Move machine to an area where antenna has a clear view of the sky or horizon.
  7. Set parking brake, and let engine run for 10 minutes. This will allow time for the MTG to call in and register the new settings.

CZ76372,0000188 -19-08OCT10-1/1

**Transfer Terminal**

Once registered, the terminal will need to be transferred from the dealer account to the customer account.

1. Log on to <http://www.jdlink.com/>.
2. Go to the Admin/Settings tab.
3. Select the Terminal Setup button.
4. Select the terminal to transfer by clicking on the name.
5. Select the Move This Terminal to Customer button and the Move Terminal to Customer popup will appear.
6. Select the customer check box to search for customers.
7. Search for the customer that the terminal will be transferred to.
8. Select the correct customer profile.
9. To retain previous machine data, place a check in the Transfer Machine Data box.
10. Then press Save & Close to transfer the unit to the customer.

CZ76372,000014C -19-26AUG10-1/1





