



GeoLink® CL-55 Modem Kit

Multi Pro® 1750 or 5800 Turf Sprayer

Model No. 41638

Model No. 41639

Form No. 3439-786 Rev B

Installation Instructions

Introduction

The CL-55 modem kit updates the GeoLink® spray system. The GeoLink spray system is an attachment for a turf spray application vehicle and is intended to be used by professional, hired operators in commercial applications. It is designed primarily for spraying on well-maintained lawns in parks, golf courses, sports fields, and on commercial grounds.

Visit www.Toro.com for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

Contents

Introduction	1
Setup	2
1 Getting a Current Copy of the Software Guide and Quick Start Guide	4
2 Preparing the Machine	4
3 Exporting Sprayer Display Inventory Item Data	4
4 Removing the X30 Sprayer Display	5
5 Installing the X25 Monitor Kit (sold separately)	6
6 Verifying the U-Boot Firmware Version	9
7 Updating the GeoLink Software	10
8 Disconnecting the Battery	12
9 Removing the Seat and the Engine-Access Panel	14
10 Removing the Right Front Fender	16
11 Installing the Modem-Antenna Bracket	17
12 Installing the Modem Antenna to the Machine	20
13 Assembling the Modem Data Harness to the Machine	22
14 Assembling the Modem Power Harness to the Machine	26
15 Installing the CL-55 Modem	30
16 Connecting the Battery	33
17 Securing the Data Harness	36
18 Installing the Right Front Fender	36
19 Installing the Engine-Access Panel and the Seat	38
20 Completing the Installation of the CL-55 Modem Kit	39
21 Powering the GeoLink Components	40

22 Configuring the GPS Correction Source	41
23 Creating a Spray Job	42
24 Verifying the Cellular Status	43
25 Performing a Compass Calibration	44
26 Clearing NVRAM	44
27 Performing a Compass Calibration	46



Installation

Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
1	No parts required	–	Get a current copy of the software guide and quick start guide.
2	No parts required	–	Prepare the machine.
3	No parts required	–	Export the sprayer display inventory item data.
4	No parts required	–	Remove the X30 sprayer display (if equipped).
5	X25 monitor kit (sold separately—Toro part No. 41637)	1	Install the X25 monitor kit.
6	No parts required	–	Verify the U-boot version.
7	USB Drive (GeoLink X25 software version 4.04.40 or higher—CL-55 CDMA Modem Kit)	1	Update the GeoLink software.
8	No parts required	–	Disconnect the battery.
9	No parts required	–	Remove the seat and the engine access panel.
10	No parts required	–	Removing the right, front fender.
11	Modem antenna bracket.	1	Installing the modem-antenna bracket.
12	Modem antenna Cable ties	1 7	Install the modem antenna to the machine.
13	Modem data harness—300 cm (118 inches) Cable ties	1 8	Route the modem data harness.
14	Modem power harness—1850 mm (72-7/8 inches) Cable ties	1 5	Install the modem power harness.
15	CL-55 modem Modem bracket—Multi Pro 1750 (sold separately—Toro part No. 140-1394) Modem Mount—Multi Pro 5800 (sold separately—Toro part No. 140-7381) Capscrew (#10-24 x 1-1/2 inches) Spacer (1/4 x 3/4 inch) Locknut (#10-24)	1 1 1 2	Install the CL-55 modem.
16	Battery-clamp bolt (Multi Pro 5800 only; sold separately—Toro part No. 122-9921)	2	Connecting the battery.

Procedure	Description	Qty.	Use
17	No parts required	–	Secure the data harness.
18	No parts required	–	Install the right, front fender.
19	No parts required	–	Install the engine-access panel and the seat.
20	No parts required	–	Complete the installation of the CL-55 modem kit.
21	No parts required	–	Power the GeoLink components.
22	No parts required	–	Configure the GPS corrections source.
23	No parts required	–	Create a generic spray job.
24	No parts required	–	Verify the cellular status.
25	No parts required	–	Perform a compass calibration.
26	No parts required	–	Easing the nonvolatile RAM.
27	No parts required	–	Perform a compass calibration.

1

Getting a Current Copy of the Software Guide and Quick Start Guide

No Parts Required

Procedure

Purchase through your distributor or download a current copy of the Software Guide and Quick Start Guide from Toro.com.

- GeoLink GSM systems use Toro Part No. 41634
- Geolink CDMA systems use Toro Part No. 41633

Important: After the CL-55 Modem Kit is installed, you must use the Software Guide for software version 4.04 and Up and Quick Start Guide for software version 4.04 (or later).

2

Preparing the Machine

No Parts Required

Procedure

1. Ensure that you completed all active spray jobs.
2. Park the machine on a level surface.
3. Engage the parking brake; refer to the *Operator's Manual*.
4. Extend the left and right boom sections to the horizontal position.
5. Shut off the engine; refer to the *Operator's Manual*.
6. Remove the key and wait for all moving parts to stop.

3

Exporting Sprayer Display Inventory Item Data

No Parts Required

Changing User Access Level

1. On the home screen, press the SETUP icon.
2. On the setup screen, press the USER icon and the ACCESS LEVEL icon (Figure 1).

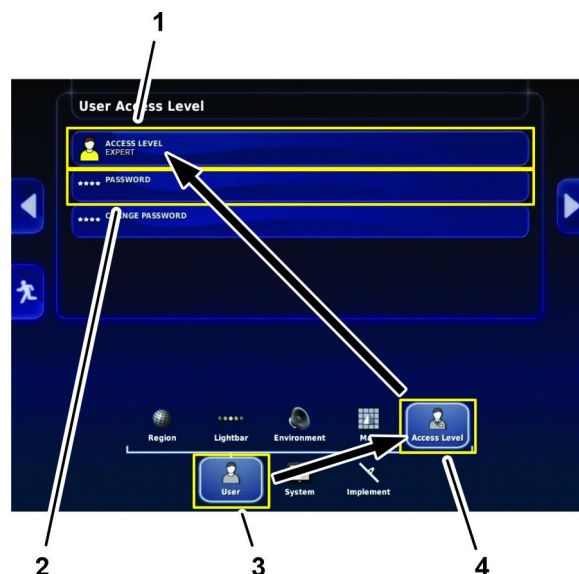


Figure 1

1. ACCESS LEVEL icon (user access level dialog box)
 2. ACCESS LEVEL icon (setup screen)
 3. USER icon (setup screen)
 4. PASSWORD icon (user access level dialog box)
3. In the user access level dialog box, press the ACCESS LEVEL icon, and in the drop-down menu, press the EXPERT icon (Figure 1).
 4. Press the PASSWORD icon, and type TORO1 in the text box.

Recording N-Trip Settings

Note: Do not use the USB drive from the CL-55 modem kit for saving sprayer display data. Use the USB storage device that you use to backup GeoLink.

1. Remove the cap from the USB port of the sprayer-display (Figure 2).

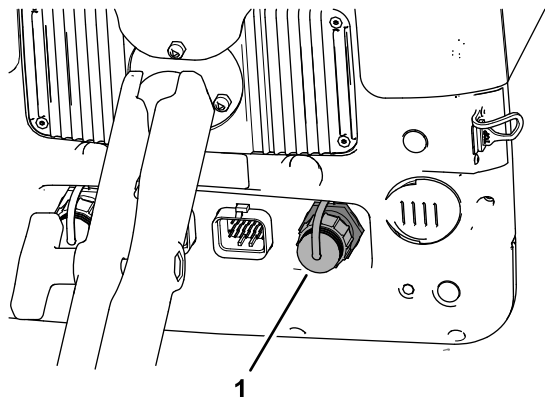


Figure 2

g323252

1. Cap (USB port)
2. Plug the USB storage device that you use to backup GeoLink into the USB port.
3. On the home screen, press the SETTINGS icon (Figure 3).



Figure 3

g351664

1. SETTINGS icon
4. On the System Setup screen, press the SYSTEM icon (Figure 4).

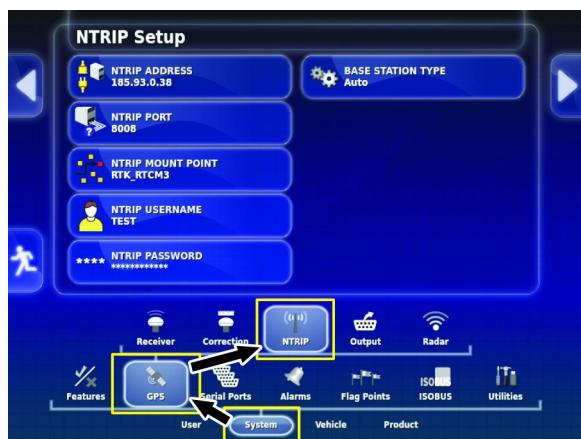


Figure 4

g351663

5. Press the GPS icon (Figure 4).
6. Press the NTRIP icon (Figure 4).
7. Press the SCREENSHOT icon to record the current screen image onto the USB storage device.

Exporting Data

1. Press the INVENTORY MANAGER icon (Figure 5).

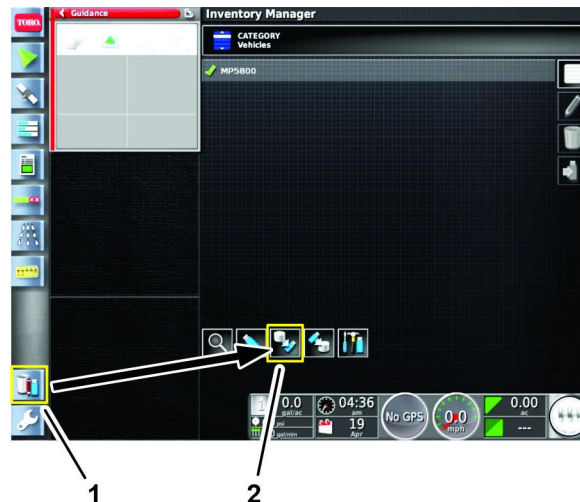


Figure 5

g323309

1. INVENTORY MANAGER icon
2. EXPORT DATA icon
2. At the bottom of the screen, press the EXPORT DATA icon (Figure 5).
3. In the Export to USB dialog box, press the ALL INVENTORY ITEMS icon (Figure 6).



Figure 6

g323308

1. ALL INVENTORY ITEMS icon
4. When the sprayer-display completes the exporting press the return to home page icon, swipe up from the bottom of the screen, and press the EJECT icon at the bottom of the screen.
5. Remove the USB storage device from the USB port.

4

Removing the X30 Sprayer Display

Machines with Sprayer Display
Model No. AGA4477

No Parts Required

Procedure

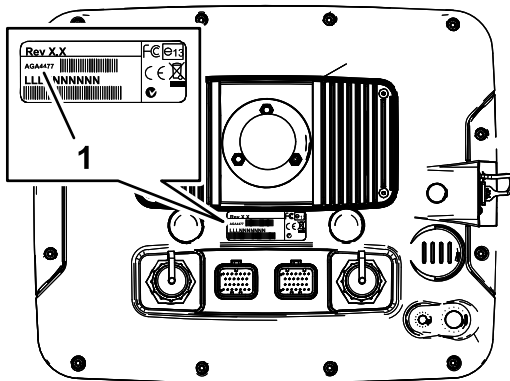


Figure 7

g351658

1. Model AGA4477 (X30 display)

1. Remove the 26-socket connector of the data harness from the 26-pin connector of the sprayer display (Figure 8).

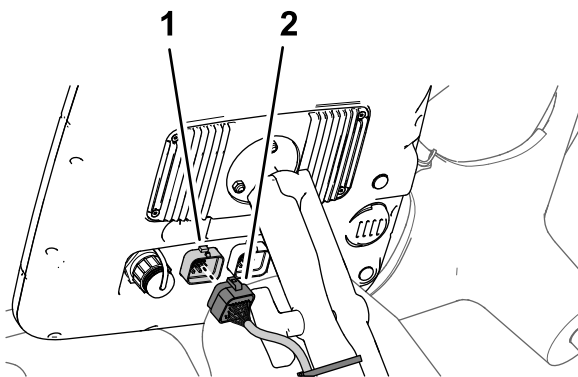


Figure 8

g323248

1. 26-pin connector (sprayer display)
2. 26-socket connector—data harness (sprayer monitor)

2. Loosen the knob of the display arm (Figure 9).

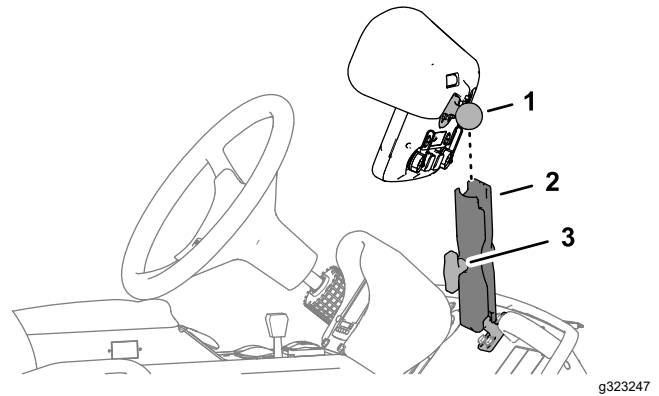


Figure 9

g323247

1. Ball pivot
2. Monitor arm
3. Knob

3. Remove the X30 sprayer display from the monitor arm (Figure 9).

5

Installing the X25 Monitor Kit (sold separately)

Multi Pro 5800 Machines without the X25 Sprayer Display

Parts needed for this procedure:

1	X25 monitor kit (sold separately—Toro part No. 41637)
---	---

Applying the Adhesive Strips to the Sprayer Monitor

1. Clean the top surface of the X25 sprayer display with rubbing alcohol and a clean rag.
2. Remove the backing from the 2 adhesive strips.
3. At the top of the sprayer monitor, align the strips to the sprayer monitor as shown in Figure 10.

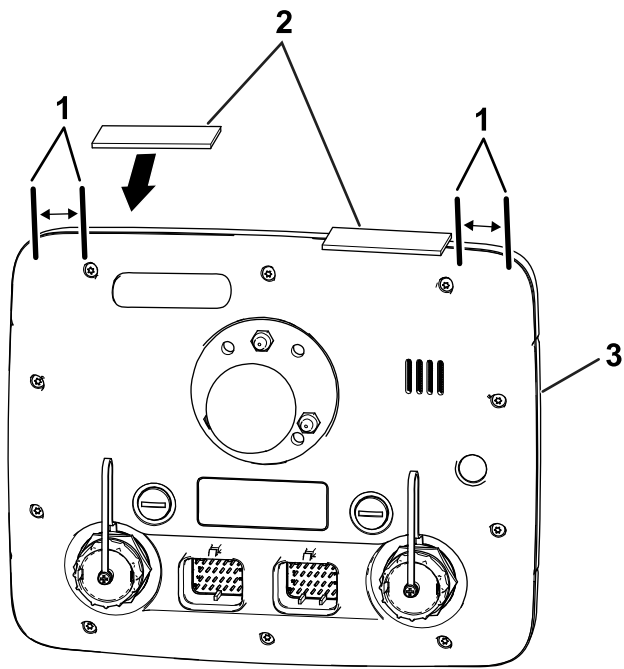


Figure 10

g351685

1. 51 mm (2 inches)
2. Adhesive strips
3. Sprayer monitor (back side)
4. Firmly press the adhesive strips to the top of the monitor.

Assembling the Display Hood to the Sprayer Monitor

1. At the back of the sprayer monitor and with the 2 connectors (26 pin) aligned down, remove the top locknut (5 mm) from the stud for the ball-pivot fitting (A of Figure 11).

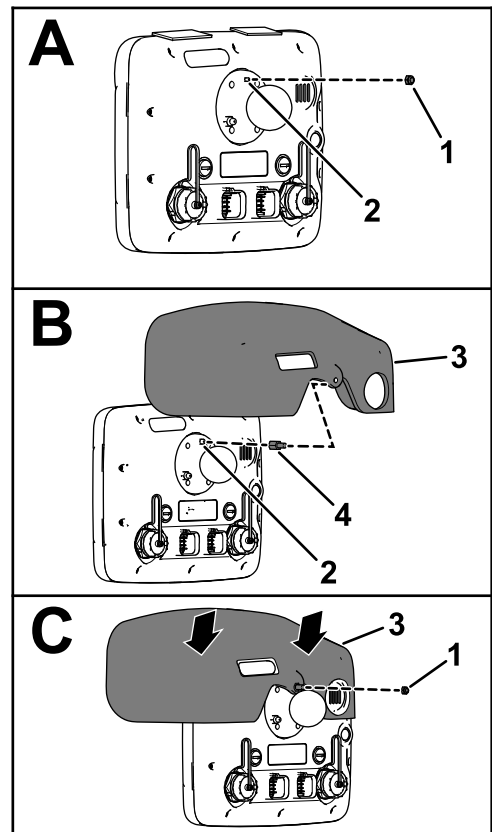


Figure 11

g198738

1. Locknut (5 mm)
2. Stud—5 mm (sprayer monitor at the ball-pivot fitting)
3. Display hood
4. Threaded standoff

2. Apply a coat of thread-locking compound (wicking—medium-high strength) to the threads

for the nut part of the threaded standoff ([Figure 12](#)).

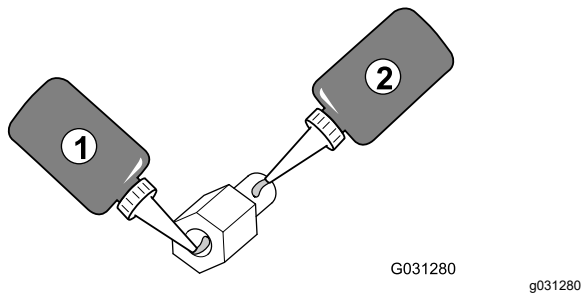


Figure 12

1. Thread-locking compound (wicking—medium-high strength)—nut threads of the threaded standoff
2. Thread-locking compound (wicking—medium-high strength)—stud threads

3. Thread the standoff into the stud for the ball-pivot fitting (B of [Figure 11](#)) and torque the standoff to 250 N·cm (22 in-lb).
4. Apply a coat of thread-locking compound (wicking—medium-high strength) to the threads for the stud portion of the threaded standoff ([Figure 12](#)).
5. Remove the backing from the 2 adhesive strips that you applied in [Applying the Adhesive Strips to the Sprayer Monitor](#) (page 6).
6. Align the hole in the display hood with the stud portion of the threaded standoff (B of [Figure 11](#)).
7. Assemble the hood to the monitor (C of [Figure 11](#)) with the locknut (5 mm) that you removed in step 1.

Note: Press down on the areas of the top of the hood with the adhesive strips underneath.

8. Torque the nut to 250 N·cm (22 in-lb).

Mounting the Sprayer Monitor to the Dash

1. Loosen the knob of the monitor arm until you can slip both the ball pivot for the ball pivot at the back of the sprayer monitor into the socket monitor arm ([Figure 13](#)).

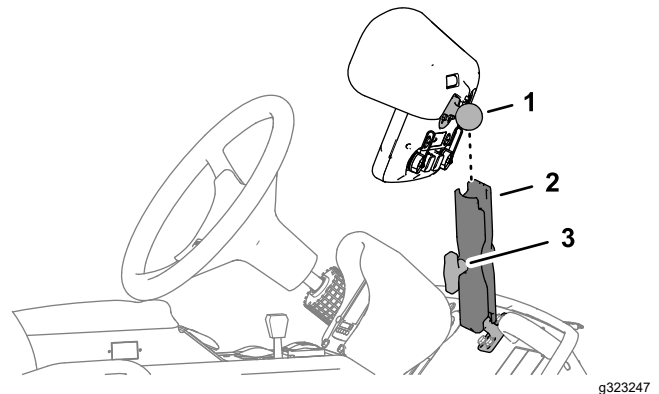


Figure 13

1. Ball pivot
2. Monitor arm
3. Knob

2. From the driver's seat (left seat), adjust to position of the sprayer monitor so that you can easily view the display screen ([Figure 13](#)).
3. Tighten the knob for the monitor arm by hand ([Figure 13](#)).
4. Align the 26-socket connector of the data harness branch with the 26-pin connector of the sprayer monitor and press the socket connector into the pin connector until the connector latches securely ([Figure 14](#)).

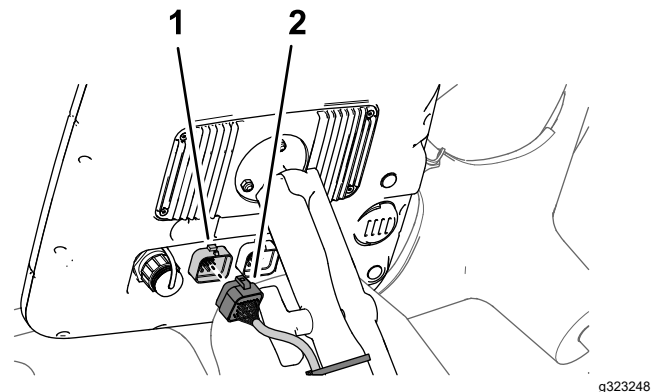


Figure 14

1. 26-pin connector (sprayer display)
2. 26-socket connector—data harness (sprayer monitor)

Changing User Access Level

1. Rotate the ignition key to the RUN (gasoline) or PREHEAT/RUN (diesel) position.
2. On the home screen, press the SETUP icon.
3. On the setup screen, press the USER icon and the ACCESS LEVEL icon (Figure 15).

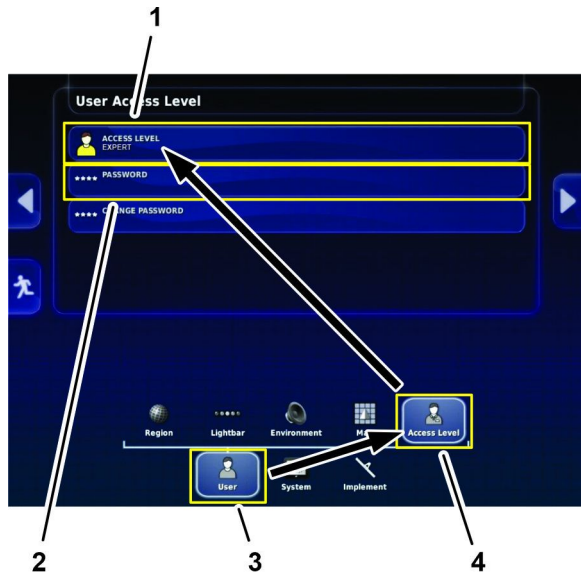


Figure 15

1. ACCESS LEVEL icon (user access level dialog box)
 2. ACCESS LEVEL icon (setup screen)
 3. USER icon (setup screen)
 4. PASSWORD icon (user access level dialog box)
4. In the user access level dialog box, press the ACCESS LEVEL icon, and in the drop-down menu, press the EXPERT icon (Figure 15).
 5. Press the PASSWORD icon, and type TORO1 in the text box.

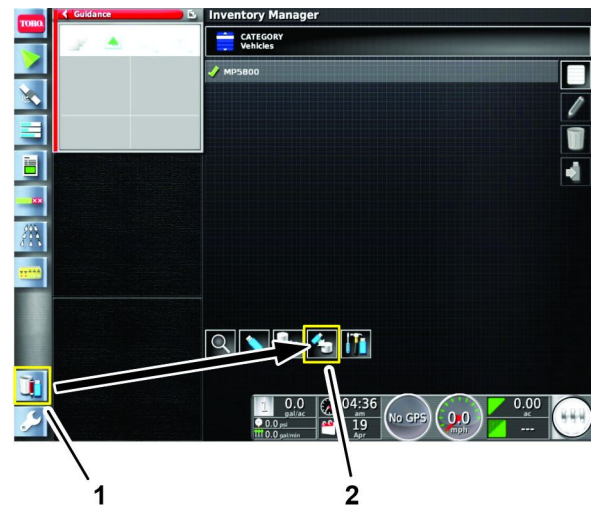


Figure 16

1. INVENTORY MANAGER icon
2. IMPORT DATA icon

3. At the bottom of the screen, press the IMPORT DATA icon (Figure 16).
4. In the import from USB dialog box, press the ALL INVENTORY ITEMS icon (Figure 17).



Figure 17

1. ALL INVENTORY ITEMS icon

Importing Inventory Data

1. Plug the USB storage device that you used in [3 Exporting Sprayer Display Inventory Item Data \(page 4\)](#) data into the USB port.
2. Press the INVENTORY MANAGER icon (Figure 16).

5. When the sprayer-display completes the exporting, swipe up from the bottom of the screen and press the EJECT icon at the bottom of the screen.
6. Remove the USB storage device from the USB port.
7. Rotate the key switch of the machine to the OFF position, and remove the key.
8. Skip to [8 Disconnecting the Battery \(page 12\)](#).

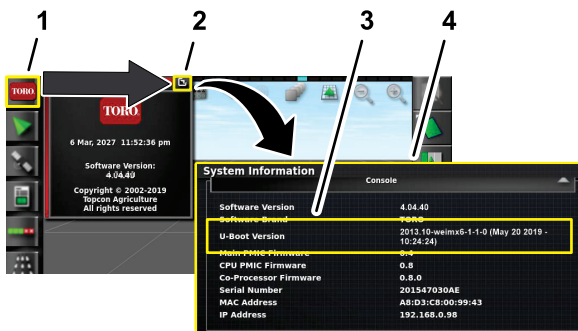
6

Verifying the U-Boot Firmware Version

No Parts Required

Procedure

1. Rotate the ignition key to the RUN (gasoline) or PREHEAT/RUN (diesel) position.
2. Press the System Information (Toro) icon at the top, left corner of the screen (Figure 18).



g323482

Figure 18

1. System Information (Toro) icon
 2. Full-screen icon
 3. U-BOOT VERSION information
 4. System information window
3. In the system information mini-view window, press the full-screen icon (Figure 18).
 4. In the system information window, look at the U-BOOT VERSION information (Figure 18).

Important: The sprayer monitor must display 1 of the following U-boot versions:

- 2013.10-weimx6-1.0.1
- 2013.10-weimx6-1.1.0

If the U-boot firmware version is not 2013.10-weimx6-1.0.1 or 2013.10-weimx6-1.1.0, contact the Toro Technical Assistance Center for instructions on updating the firmware.

7

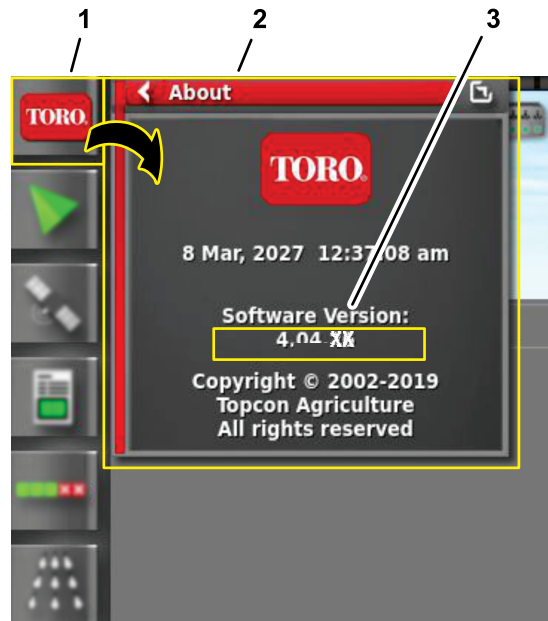
Updating the GeoLink Software

Parts needed for this procedure:

1	USB Drive (GeoLink X25 software version 4.04.40 or higher—CL-55 CDMA Modem Kit)
---	---

Verifying the Software Version

1. Rotate the ignition key to the RUN (gasoline) or PREHEAT/RUN (diesel) position.
2. Press the ABOUT (Toro) icon at the upper left corner of the control console (Figure 19).



g302935

Figure 19

1. ABOUT (Toro) icon
2. ABOUT fly-out-window
3. Software version number

3. If the software version is 4.04.40 or higher rotate the key switch of the machine to the OFF position, remove the key, and skip to [8 Disconnecting the Battery \(page 12\)](#).

Updating the Sprayer Display Software

1. Ensure that the sprayer display shows the home screen.
2. Plug the USB drive from the CL-55 modem kit into the USB port.

Note: Do not use the USB storage device that you used to export the inventory item data.

- On the home screen, press the SETUP icon.
- On the setup screen, press the SYSTEM icon and the UTILITIES icon (Figure 20).

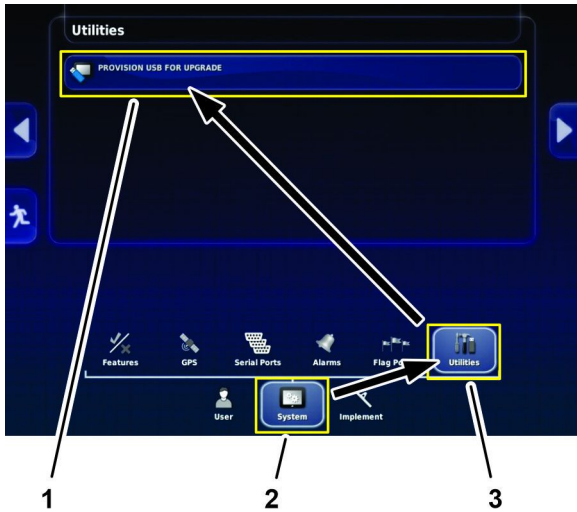


Figure 20

- PROVISION USB FOR UPGRADE icon (utilities dialog box)
- SYSTEM icon (setup screen)
- UTILITIES icon (setup screen)

- In the utilities dialog box, press the PROVISION USB FOR UPGRADE icon (Figure 20).
- In the confirm dialog box, press the YES icon (Figure 21).

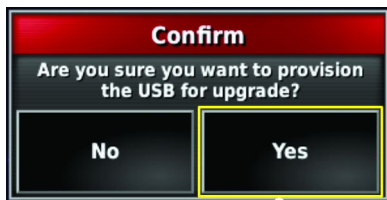


Figure 21

- YES icon (confirm dialog box)

- When the RESTORE USER DATA message displays, press the YES icon.

Note: The sprayer display retains all previous user data.

Note: On the home screen, a message displays about upgrading the AGI firmware (Figure 22).



Figure 22

- Swipe up from the bottom of the screen and press the EJECT icon at the bottom of the screen.
- Remove the USB drive and install the USB port cap.

Updating the AGI Firmware

- On the setup screen, press the SYSTEM icon and the GPS icon, and the RECEIVER icon (Figure 23).

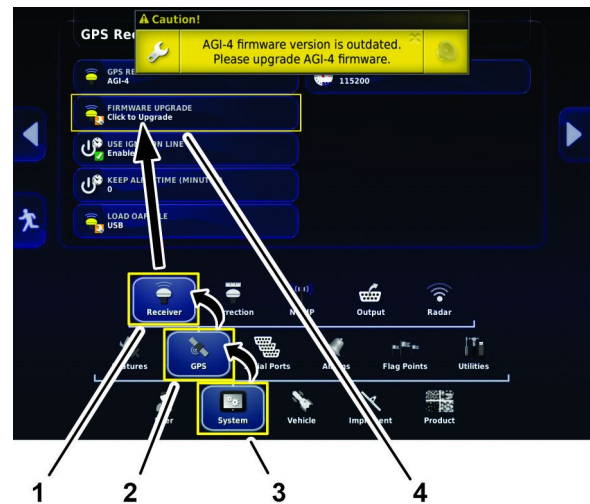


Figure 23

- RECEIVER icon (setup screen)
- GPS icon (setup screen)
- SYSTEM icon (setup screen)
- FIRMWARE UPGRADE icon (GPS receiver dialog box)

- In the GPS receiver dialog box, press the FIRMWARE UPGRADE icon (Figure 23).
- In the firmware upgrade dialog box, press the confirm icon (Figure 24).



Figure 24

1. Confirm icon

4. In the warning dialog box, press the confirm icon (Figure 25).

Important: Do not turn off machine power while the sprayer display applies the firmware upgrade.

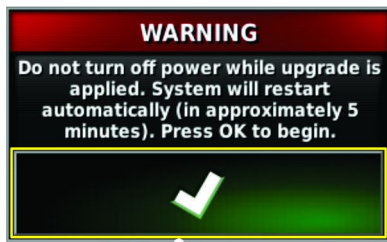


Figure 25

1. Confirm icon

Note: On the home screen, a message displays about upgrading the ASC firmware (Figure 26).

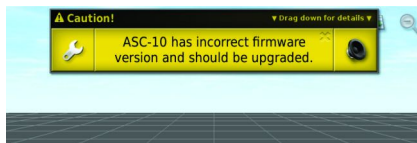


Figure 26

Updating the ASC Firmware

1. Press the wrench icon in the ASC firmware message to navigate directly to the ECU settings screen in setup (Figure 27).

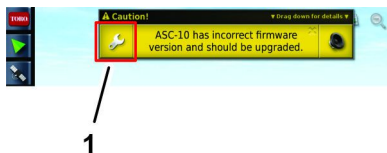


Figure 27

1. Wrench icon

2. In the Firmware Version column for ECU 1, press the current version (X.XX.XX) icon (Figure 28).

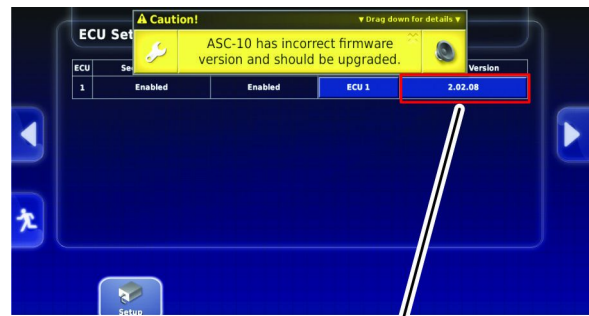


Figure 28

1. Current version (X.XX.XX) icon (ECU setup dialog box)

3. In the ASC setting dialog box, press the UPGRADE ASC FIRMWARE TO VERSION 2.02.18 icon, and press the confirm icon (Figure 29).

Note: The options for an ASC firmware upgrade level higher than version 2.02.18 may display.

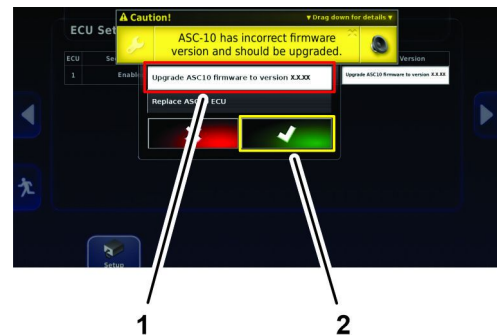


Figure 29

1. UPGRADE ASC FIRMWARE TO VERSION 2.02.18 icon
2. Confirm icon

4. Rotate the key switch of the machine to the OFF position, and remove the key.

8

Disconnecting the Battery

No Parts Required

Disconnecting the Battery Cables Multi Pro 1750 Machines

1. Unlatch the seat by pushing the seat-latch handle rearward (Figure 30).

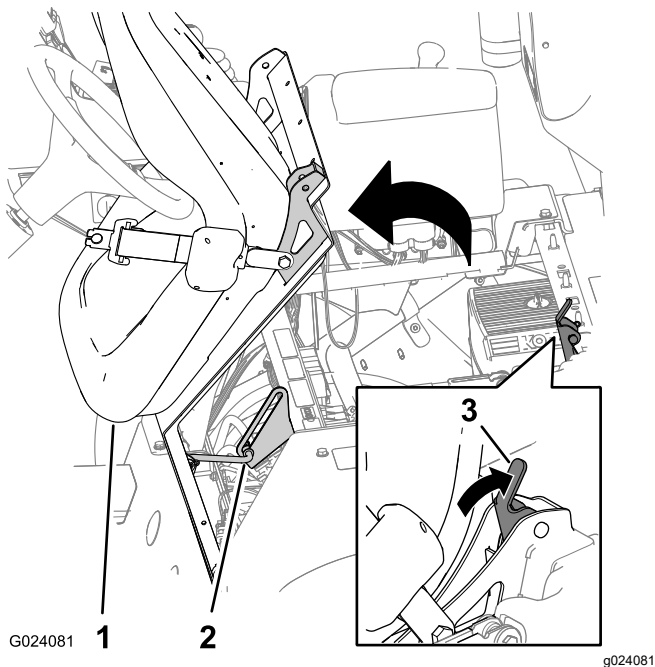


Figure 30

- | | |
|-------------|----------------------|
| 1. Seat | 3. Seat-latch handle |
| 2. Prop rod | |

2. Rotate the seat and seat plate forward until the end of the prop rod, at the prop-rod bracket, is at the bottom of the slot in the bracket (Figure 30).
3. Allow the engine to cool completely.
4. Remove the bolt and nut that secures the terminal of the negative-battery cable to the negative post of the battery.

⚠ WARNING

Incorrect battery cable routing could damage the machine and cables, causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.

- **Always *disconnect* the negative (black) battery cable before disconnecting the positive (red) cable.**
- **Always *connect* the positive (red) battery cable before connecting the negative (black) cable.**

⚠ WARNING

Battery terminals or metal tools could short against metal components, causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.

- **When removing or installing the battery, do not allow the battery terminals to touch any metal parts of the machine.**
- **Do not allow metal tools to short between the battery terminals and metal parts of the machine.**

5. Slide back the insulator cover and remove the bolt and nut that secures the terminal of the positive-battery cable to the positive post of the battery. (Figure 31).

Note: Ensure that the terminals of the battery cables do not touch the battery posts.

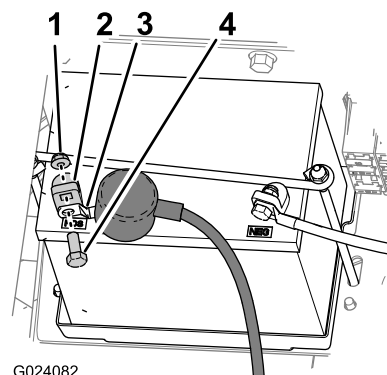


Figure 31

- | | |
|-----------------|--------------------------------------|
| 1. Nut | 3. Terminal (positive-battery cable) |
| 2. Battery post | 4. Bolt |

Disconnecting the Battery

Multi Pro 5800 Machines

⚠ WARNING

Electrical sparks can cause the battery gasses to explode, resulting in personal injury.

Incorrect battery cable routing could damage the sprayer and cables, causing sparks.

- Always disconnect the negative (black) battery cable before disconnecting the positive (red) cable.
- Always connect the positive (red) battery cable before connecting the negative (black) cable.

Battery terminals or metal tools could short against metal sprayer components, causing sparks.

- When removing or installing the battery, do not allow the battery terminals to touch any metal parts of the sprayer.
- Do not allow metal tools to short between the battery terminals and metal parts of the sprayer.
- Always keep the battery strap in place to protect and secure the battery.

1. Remove the battery cover (Figure 32).

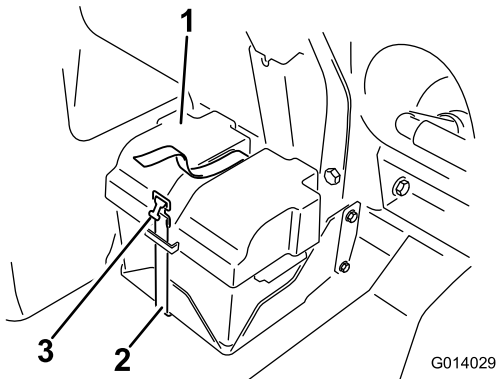


Figure 32

1. Battery cover
2. Strap
3. Buckle

2. Disconnect the negative (black—ground) cable from the battery post (Figure 33).

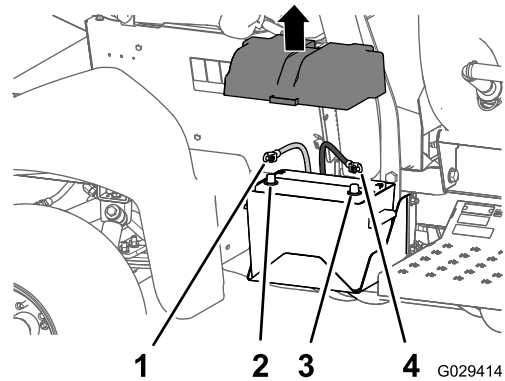


Figure 33

1. Positive battery cable
2. Positive battery post
3. Negative battery post
4. Negative battery cable

3. Disconnect the positive (red) cable from the battery post (Figure 33).
4. Tilt both seats forward and secure them by moving the prop rods into the detents at the end of the slots at the center-console base.
5. Allow the engine to cool completely.

9

Removing the Seat and the Engine-Access Panel

Multi Pro 1750 Machines

No Parts Required

Removing the Seat

1. Remove the 2-socket connector of the machine wire harness that connects to the seat-switch connector (Figure 34).

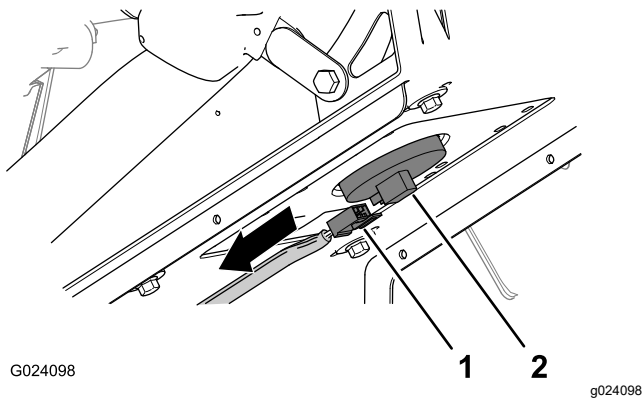


Figure 34

1. 2-socket connector
2. Seat-switch connector (machine wire harness)

2. Remove the hairpin that secures the prop rod to the bracket at the bottom of the seat plate (Figure 35).

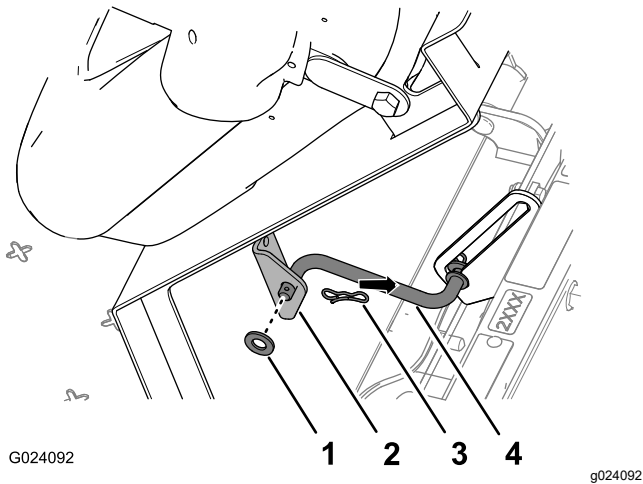


Figure 35

1. Washer
2. Bracket (seat)
3. Hairpin
4. Prop rod

3. Remove the 2 hairpins that secure the pivot fitting of the seat plate to the chassis brackets (Figure 36).

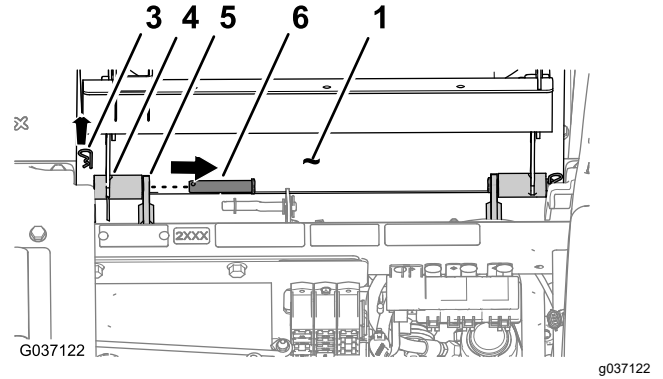
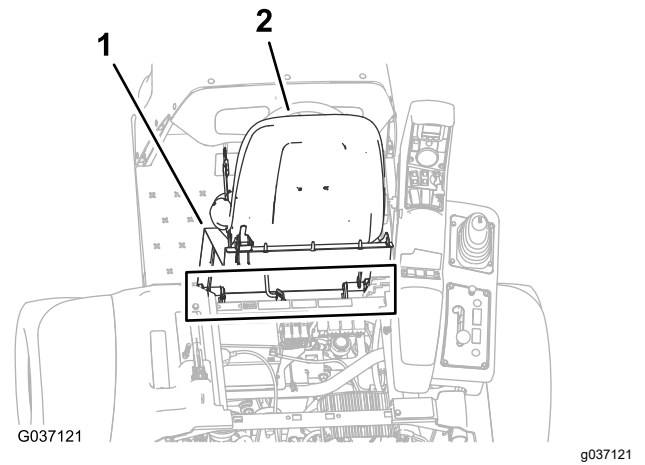


Figure 36

1. Seat plate
2. Seat
3. Hairpin
4. Pivot fitting (seat pan)
5. Chassis bracket
6. Pivot pin

4. Remove the 2 pivot pins that secure the seat and seat plate to the chassis (Figure 36).
5. Lift the seat and seat plate up and out of the machine (Figure 37).

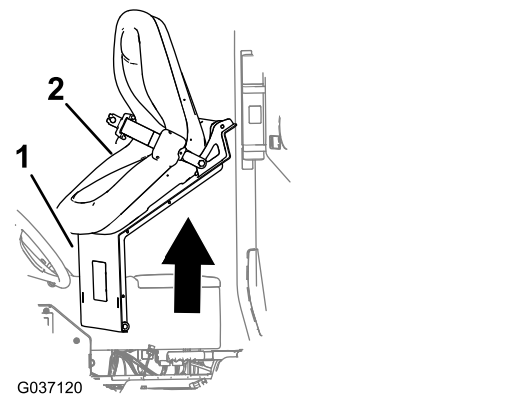


Figure 37

1. Seat plate
2. Seat

Removing the Engine-Access Panel

Machines without the Tank Rinse Kit

1. Rotate up the handles for the latches of the engine-access panel (Figure 38).

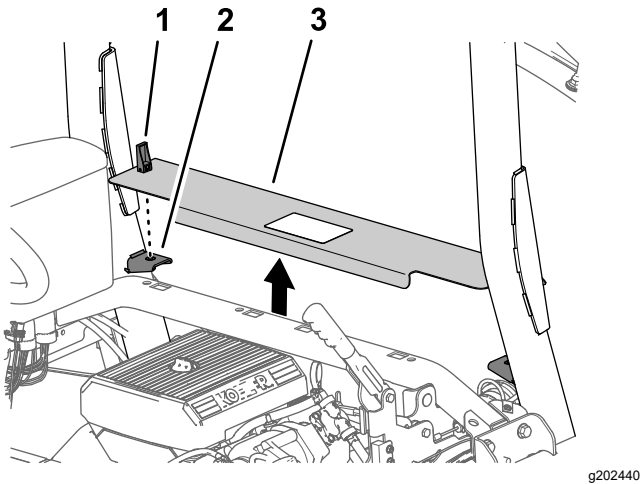


Figure 38

1. Latch
2. Panel-support bracket
3. Engine access panel

2. Lift the engine-access panel and remove it from the machine (Figure 38).

10

Removing the Right Front Fender

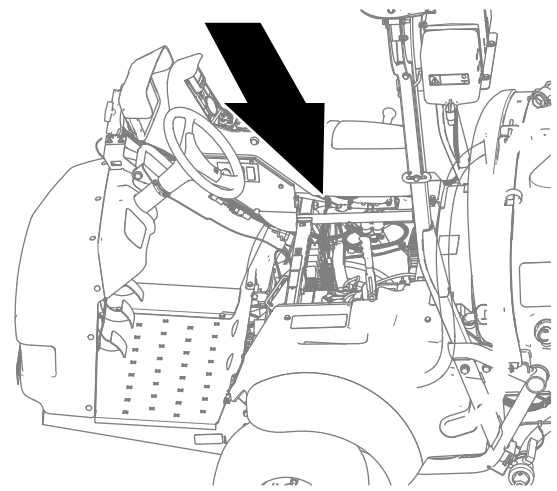
Multi Pro 1750 Machines

No Parts Required

Procedure

Note: If you damage the push-in fasteners removing them, replace the fasteners with Toro Part No. 117-2382.

1. Remove the 2 capscrews (5/16 x 1 inch) and 2 washers (5/16 inch) that secure the bottom console cover and end console cover to the machine, and remove the covers (Figure 39).



g323170

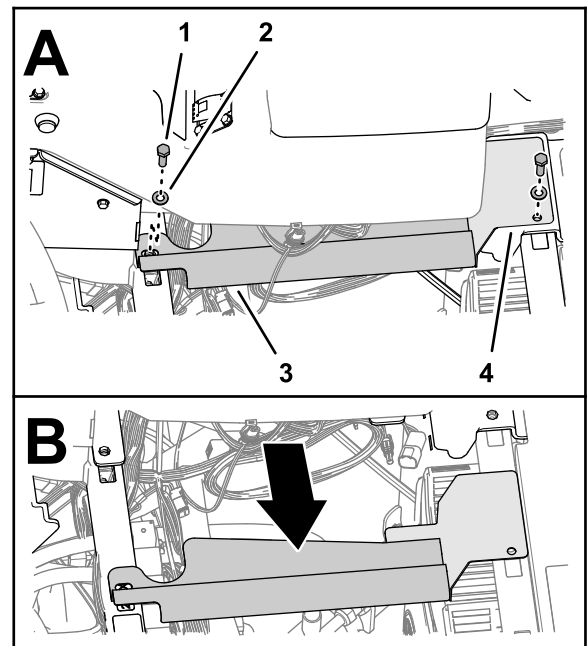


Figure 39

g323167

1. Capscrew (5/16 x 1 inch)
2. Washer (5/16 inch)
3. Console cover (bottom)
4. Console cover (end)

2. Remove the capscrew (5/16 x 1 inch) and washer (5/16 inch) that secures the right, front fender to the platform floor (Figure 40).

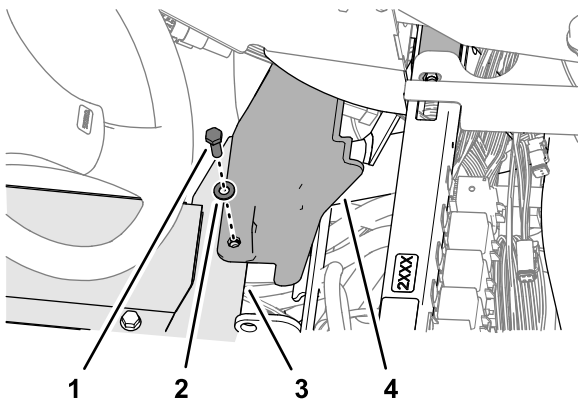
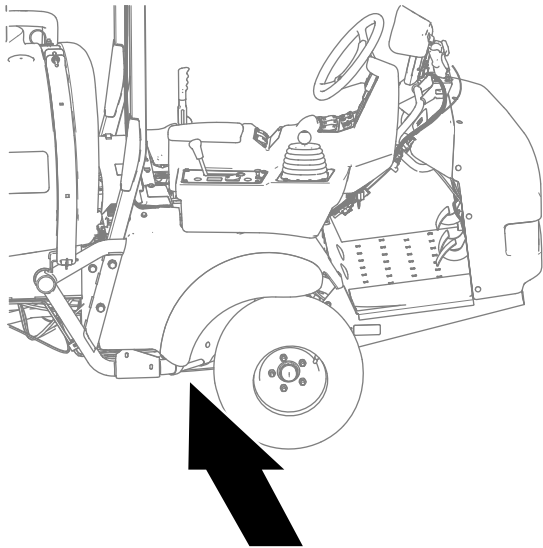


Figure 40

- | | |
|-----------------------------|------------------------|
| 1. Capscrew (5/16 x 1 inch) | 3. Platform floor |
| 2. Washer (5/16 inch) | 4. Right, front fender |

g323165

3. Carefully remove the 2 push-in fasteners that secure the right, front fender to the roll bar mounting channel ([Figure 41](#)).



g323169

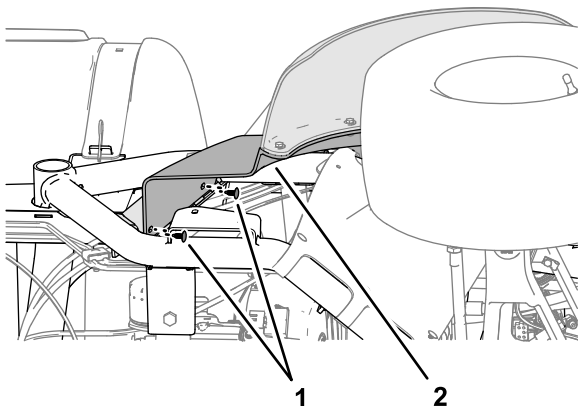


Figure 41

- | | |
|---------------------|------------------------|
| 1. Push-in fastener | 2. Right, front fender |
|---------------------|------------------------|

g323166

4. Remove the capscrew (5/16 x 1 inch) and washer (5/16 inch) that secures the right, front fender to the cross-member support ([Figure 42](#)).

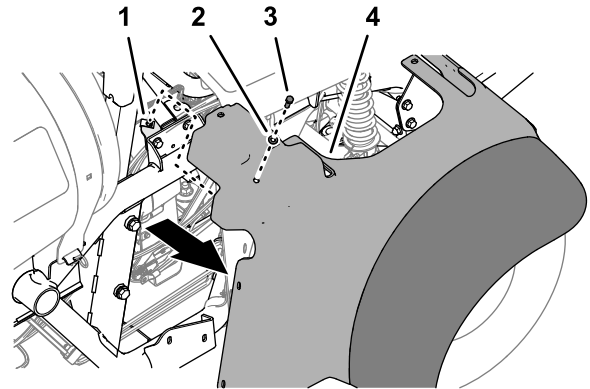


Figure 42

g323168

- | | |
|------------------------------------|-----------------------------|
| 1. Clip nut (cross-member support) | 3. Capscrew (5/16 x 1 inch) |
| 2. Washer (5/16 inch) | 4. Right, front fender |

5. Remove the right, front fender from the machine.
6. Remove the 6 push-in fasteners and 5 washers (9/16 x 1/2 inch) that secure the inner-fender shroud to the right, upper and right, lower-frame tubes ([Figure 43](#)).

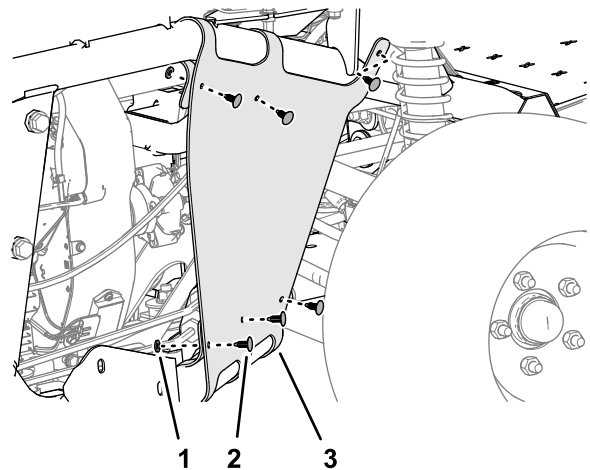


Figure 43

g323162

- | | |
|-----------------------------|------------------------|
| 1. Washer (9/16 x 1/2 inch) | 3. Inner-fender shroud |
| 2. Push-in fastener | |

7. Remove the inner-fender shroud from the machine ([Figure 43](#)).

Note: Retain the right, front fender, inner-fender shroud, capscrews, washers, and undamaged push-in fasteners for installation in [18 Installing the Right Front Fender \(page 36\)](#).

Replace damaged push-in fasteners with Toro Part No. 117-2382.

11

Installing the Modem-Antenna Bracket

Parts needed for this procedure:

1	Modem antenna bracket.
---	------------------------

Removing the RTK Bracket

1. Remove the antenna cable between the coaxial connector of the navigation receiver and the RTK-antenna ([Figure 44](#)).

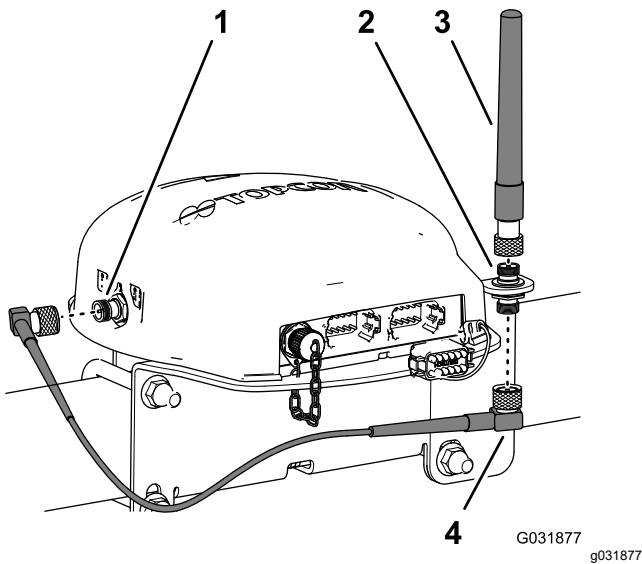


Figure 44

1. Coaxial connector (navigation receiver)
2. Coaxial connector
3. RTK-antenna
4. Antenna cable

2. Remove the RTK-antenna from the coaxial coupler ([Figure 44](#)).
3. Remove the coaxial coupler, lock washer, and jam nut from the bracket ([Figure 45](#) or [Figure 46](#)).

Note: Discard the antenna cable, RTK-antenna, coaxial coupler, lock washer, and jam nut.

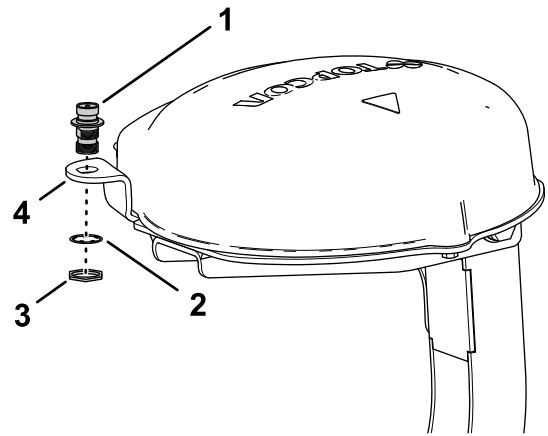


Figure 45

Multi Pro 1750 Machines

1. Coaxial coupler
2. Lock washer
3. Jam nut
4. Bracket

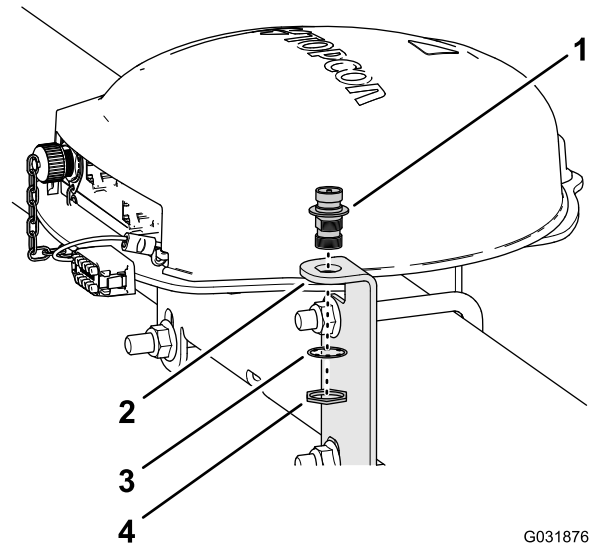


Figure 46

Multi Pro 5800 Machines

1. Coaxial coupler
2. Bracket
3. Lock washer
4. Jam nut

Removing the RTK-Antenna Bracket

Multi Pro 5800 Machines

1. Remove the 2 nuts that secure the RTK-antenna bracket to the receiver mount, and remove the antenna bracket (Figure 47).

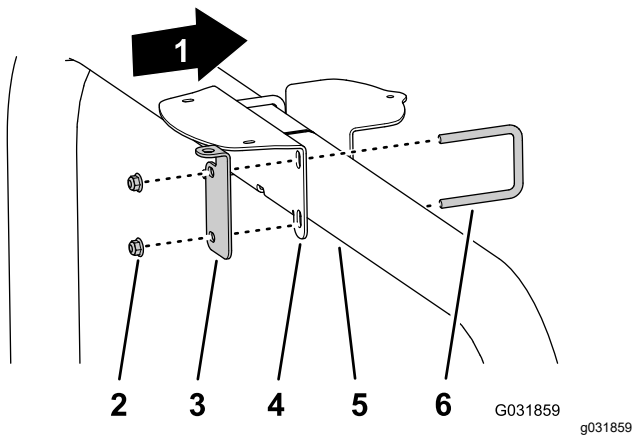


Figure 47

- | | |
|-------------------------------|-------------------|
| 1. Front of the machine | 4. Receiver mount |
| 2. Flange locknuts (3/8 inch) | 5. ROPS tube |
| 3. RTK-antenna bracket | 6. U-bolt |

2. Assemble receiver mount to the ROPS tube with (Figure 48) the U-bolt and 2 flange locknuts (3/8 inch).

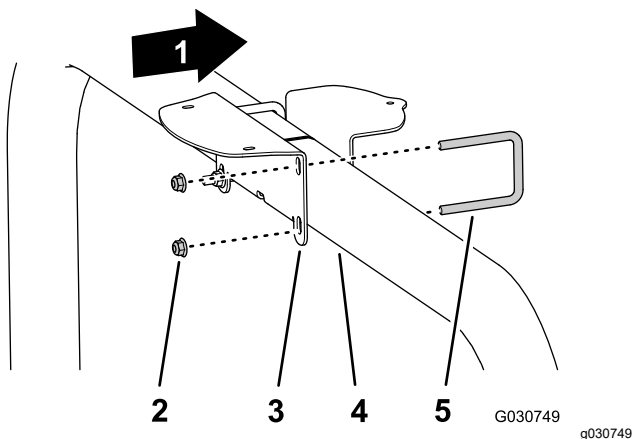


Figure 48

- | | |
|-------------------------------|--------------|
| 1. Front of the machine | 4. ROPS tube |
| 2. Flange locknuts (3/8 inch) | 5. U-bolt |
| 3. Receiver mount | |

3. Torque the nuts to 37 to 45 N·m (27 to 33 ft-lb).

Assembling the Modem-Antenna Bracket to the Receiver Mount

1. Remove the 3 capscrews (5 x 16 mm) and 3 washers (5 mm) that secure the navigation receiver to the receiver mount (Figure 49 or Figure 50).

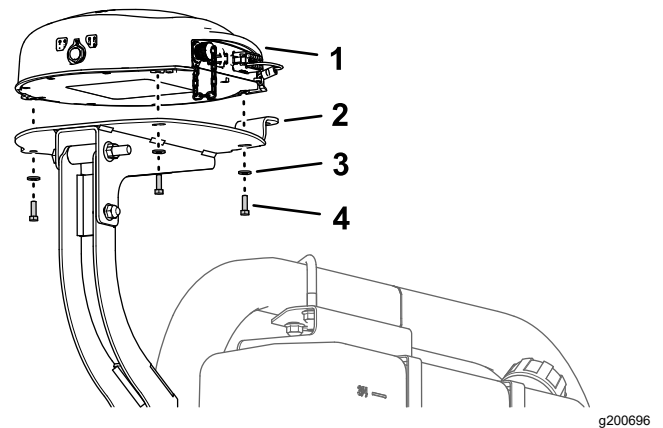


Figure 49

Multi Pro 1750 Machines

- | | |
|------------------------|-------------------------|
| 1. Navigation receiver | 3. Washer 5 mm |
| 2. Receiver mount | 4. Capscrew (5 x 16 mm) |

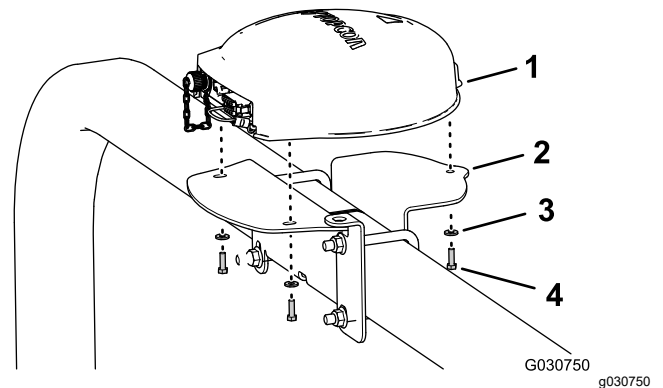


Figure 50

Multi Pro 5800 Machines

- | | |
|------------------------|-------------------------|
| 1. Navigation receiver | 3. Washer 5 mm |
| 2. Receiver mount | 4. Capscrew (5 x 16 mm) |

2. Align the hole and slot in the modem-antenna bracket with the holes in the receiver mount (Figure 51 or Figure 52).

12

Installing the Modem Antenna to the Machine

Parts needed for this procedure:

1	Modem antenna
7	Cable ties

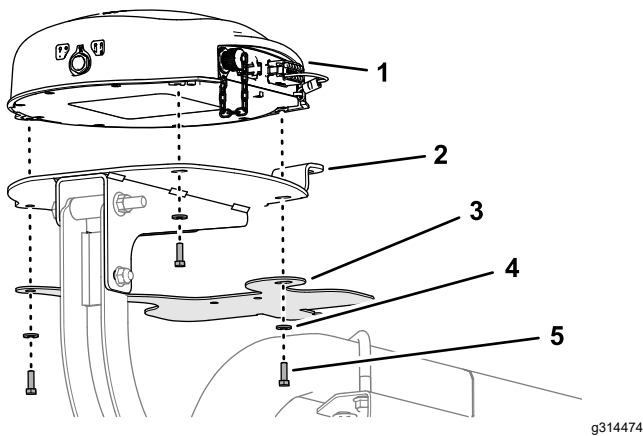


Figure 51

Multi Pro 1750 Machines

1. Navigation receiver
2. Receiver mount
3. Modem-antenna bracket
4. Washer 5 mm
5. Capscrew (5 x 16 mm)

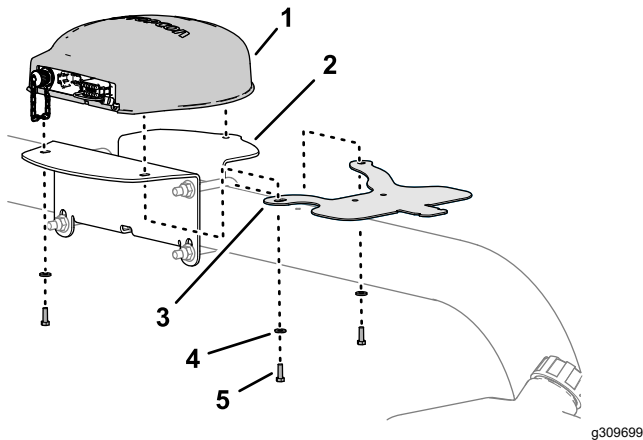


Figure 52

Multi Pro 5800 Machines

1. Navigation receiver
2. Receiver mount
3. Modem-antenna bracket
4. Washer 5 mm
5. Capscrew (5 x 16 mm)

3. Align the 3 threaded in the base of the navigation receiver to the 3 holes in the receiver mount ([Figure 51](#) or [Figure 52](#)).
4. Assemble the navigation receiver and antenna bracket to the mount ([Figure 51](#) or [Figure 52](#)) with the 3 capscrews (5 x 16 mm) and 3 washers (5 mm).
5. Torque the 3 bolts to 576 to 712 N·cm (51 to 63 in-lb).

Installing the Modem Antenna to the Navigation Receiver Mount

1. Clean any grease or oil from the surface of the modem-antenna bracket.
2. Remove the backing from the double sided adhesive liner at the bottom of the modem antenna ([Figure 53](#)).

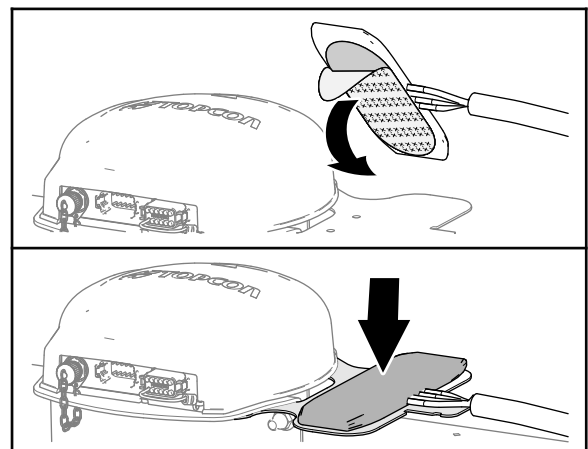


Figure 53

3. Adhere the modem antenna to the top of the modem-antenna bracket as shown in [Figure 53](#).
4. Secure the antenna bracket with 3 cable ties as shown in [Figure 54](#).

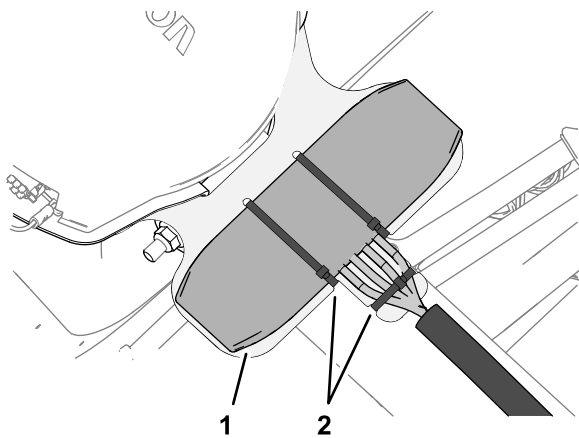


Figure 54

g309766

1. Modem antenna
2. Cable ties

5. Secure the wire harness of the modem antenna to the bracket as shown in [Figure 54](#).

Routing the Modem-Antenna Harness

Multi Pro 1750 Machines

1. Route the modem-antenna harness along the roll bar as shown in [Figure 55](#).

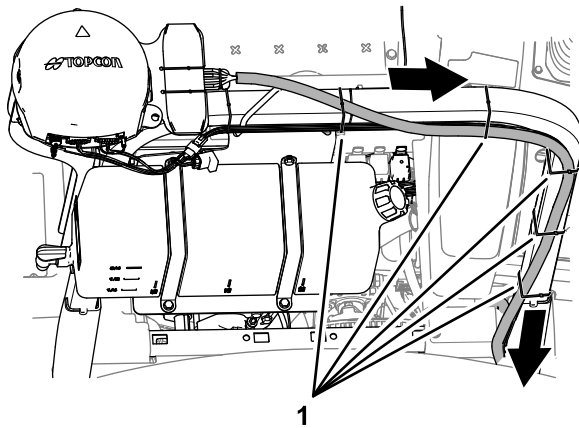


Figure 55

g323030

1. Cable ties
2. Route the modem-antenna harness under the arm rest as shown in [Figure 56](#).

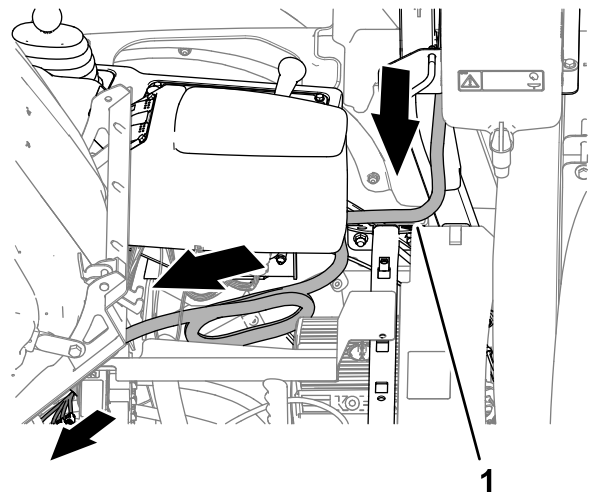


Figure 56

g351708

1. Modem-antenna harness
3. Secure the modem-antenna harness to the roll bar with 5 cable ties as shown in [Figure 55](#).

Routing the Modem-Antenna Harness

Multi Pro 5800 Machines

1. Route the modem-antenna harness along the roll bar as shown in [Figure 57](#).

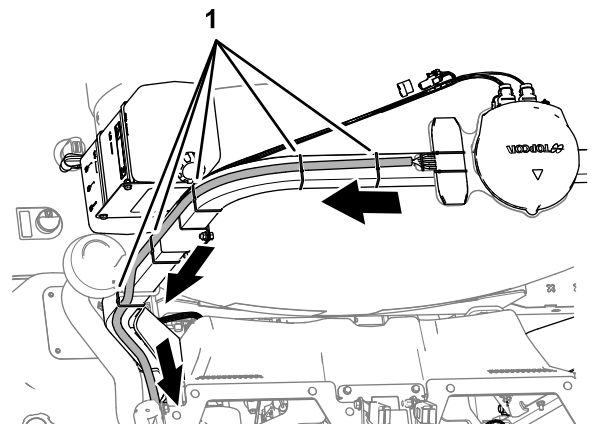


Figure 57

g323031

1. Cable ties
2. Route the modem-antenna harness to the side of the seat base as shown in [Figure 58](#).

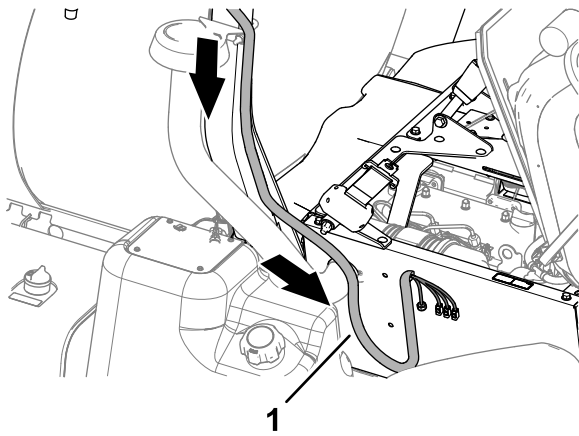


Figure 58

g351709

1. Modem-antenna harness

3. Secure the modem-antenna harness to the roll bar with 5 cable ties as shown in [Figure 57](#).

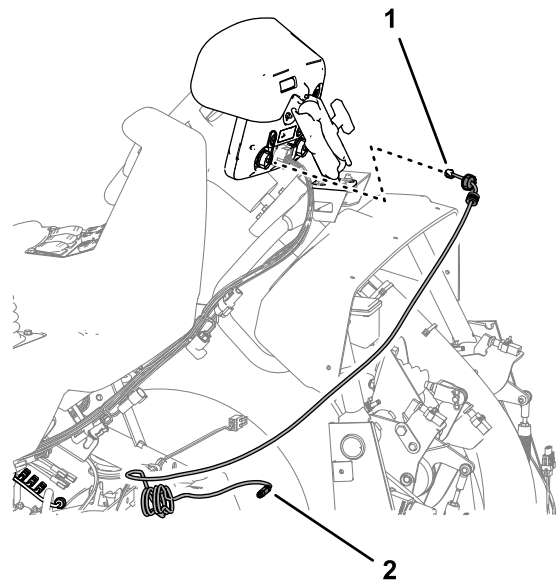


Figure 59

Multi Pro 1750 Machines

g315237

1. RJ45 connector (labeled X-CONSOLE—modem data harness)
2. 4-pin connector (labeled ETHERNET CL-55—modem data harness)

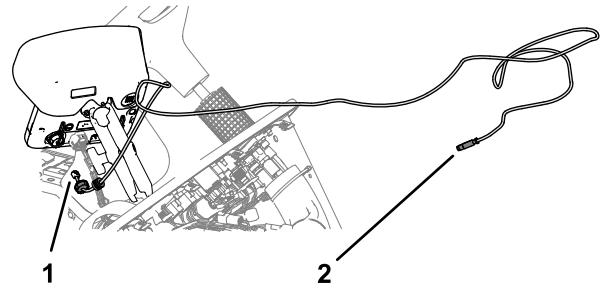


Figure 60

Multi Pro 5800 Machines

g310205

1. RJ45 connector (labeled X-CONSOLE—modem data harness)
2. 4-pin connector (labeled ETHERNET CL-55—modem data harness)

2. At the front of the sprayer display, remove the cap from the RJ45 port ([Figure 61](#)).

13

Assembling the Modem Data Harness to the Machine

Parts needed for this procedure:

1	Modem data harness—300 cm (118 inches)
8	Cable ties

Connecting the Modem Data Harness to the Sprayer Display

1. Align the modem data harness with the RS-232 connector labeled X-CONSOLE toward the sprayer monitor ([Figure 59](#) or [Figure 60](#)).

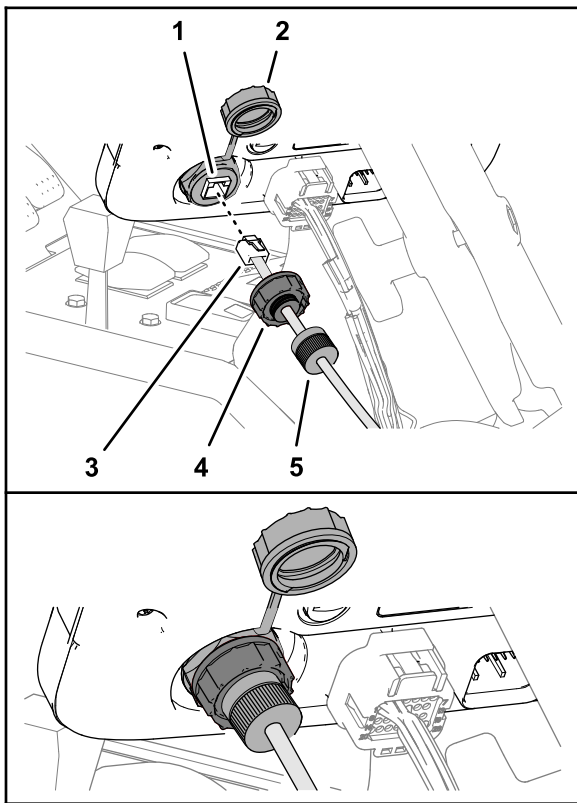


Figure 61

g310206

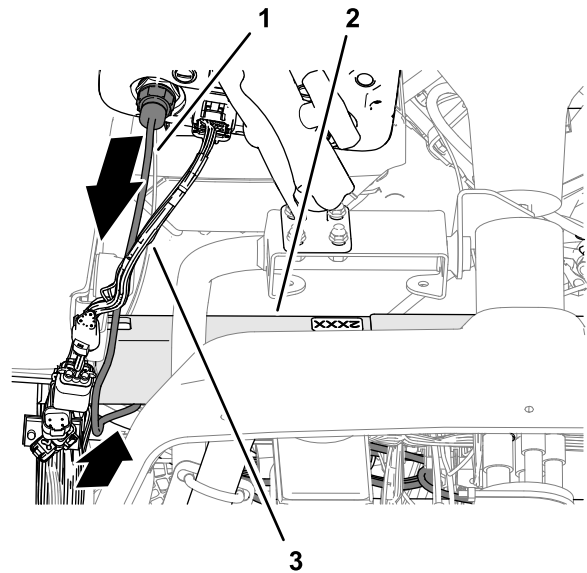
1. RJ45 port (sprayer display)
2. Cap
3. RJ45 connector (labeled X-CONSOLE—modem data harness)
4. Port seal nut
5. Compression nut

3. Plug the RJ45 connector of the modem data cable labeled X-CONSOLE into the RJ45 port of the sprayer display ([Figure 61](#)).
4. Assemble the port seal nut over the RJ45 port of the sprayer display, and tighten the seal nut ([Figure 61](#)).
5. Assemble compression nut over port seal nut, and tighten the compression nut ([Figure 61](#)).

Routing the Modem Data Harness

Multi Pro 1750 Machines

1. Route the modem data harness along the data harness for the control console ([Figure 62](#)).

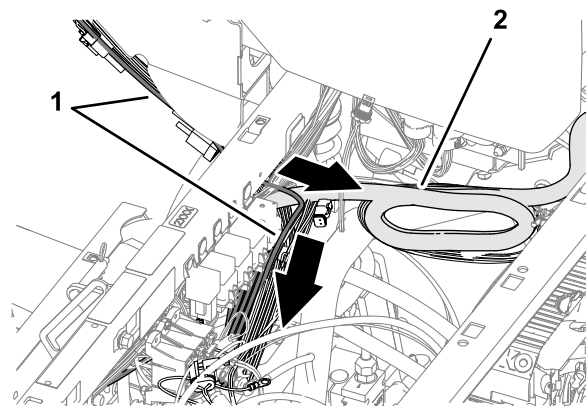


g315306

Figure 62

1. Modem data harness
2. Shock-support tube
3. Data harness (control console)

2. Route the modem data harness under the shock-support tube of the machine ([Figure 62](#)).
3. Route the modem data harness across the back of the relays and down ([Figure 63](#)).



g315307

Figure 63

1. Data harness (control console)
2. Modem data harness

4. Align the 4-pin connector labeled ETHERNET CL-55 of the modem data harness near the 4 connectors for the modem-antenna harness as shown in [Figure 64](#).

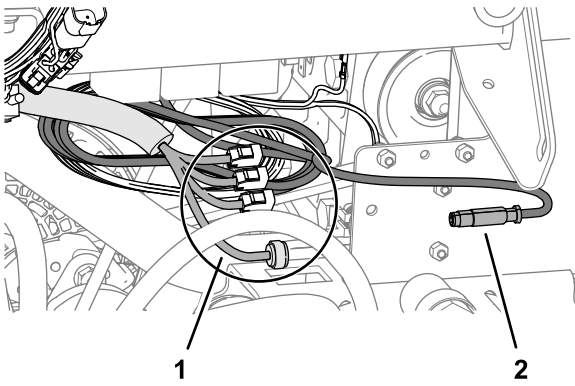


Figure 64

1. Connectors (modem-antenna harness)
2. 4-pin connector (labeled ETHERNET CL-55—modem data harness)

Routing the Modem Data Harness

Multi Pro 5800 Machines

1. Route the modem data cable through the storage compartment (Figure 65).

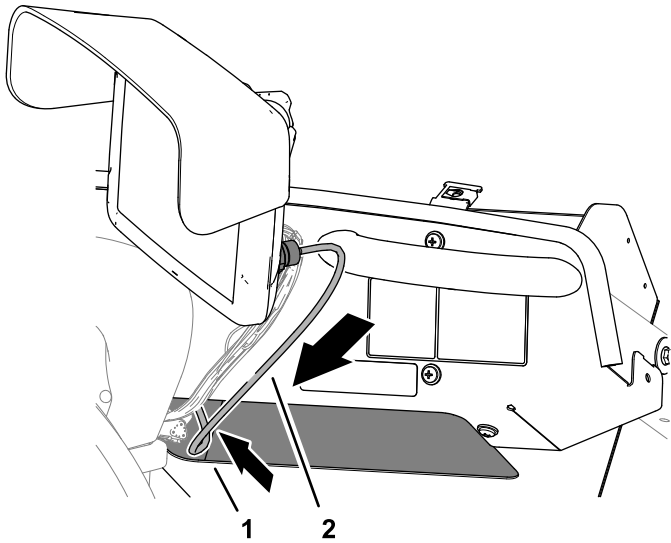


Figure 65

1. Storage compartment
2. Modem data cable

2. Route the modem data cable along the wire harness of the machine, and through the grommet in the floor plate (Figure 66).

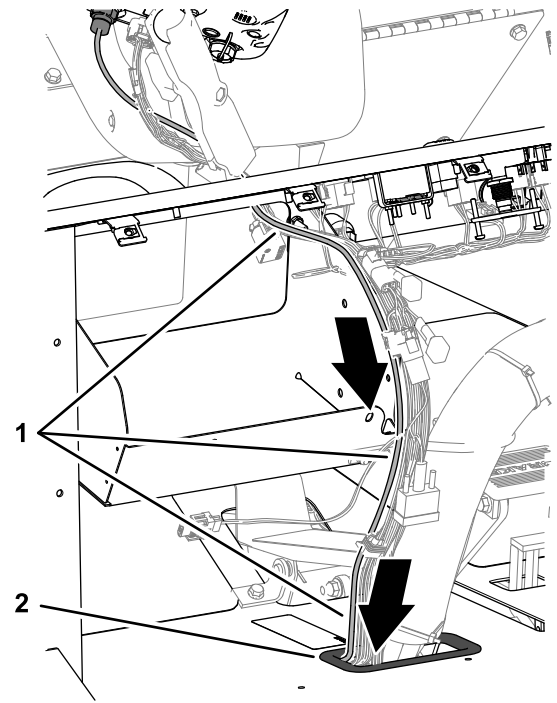


Figure 66

1. Modem data cable
2. Grommet (floor plate)

3. Secure the modem data cable to the machine wire harnesses with 4 cable ties.
4. At the bottom of the machine, route the modem data cable rearward, along the wire harness of the machine (Figure 67).

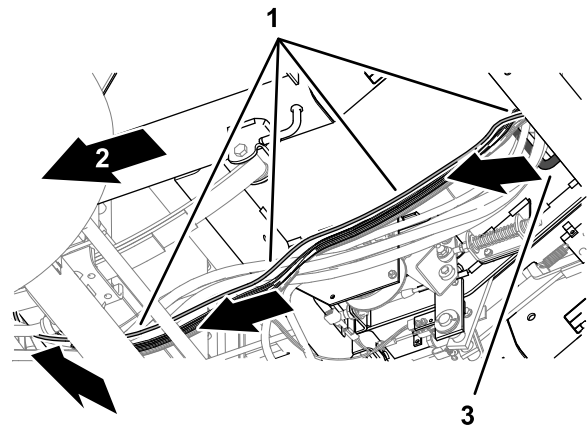


Figure 67

1. Modem data cable
2. Back of the machine
3. Grommet (floor plate)

5. At the rear side of the radiator, route the modem data cable upward (Figure 68).

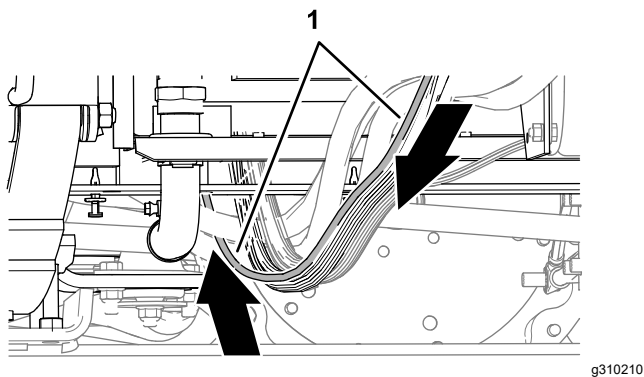


Figure 68

1. Modem data cable

6. Secure the modem data cable to the machine wire harnesses with 4 cable ties.
7. Route the modem data cable along the modem power harness (Figure 69), out the right side of the machine, and between the fuel tank bracket and the right, front fender.

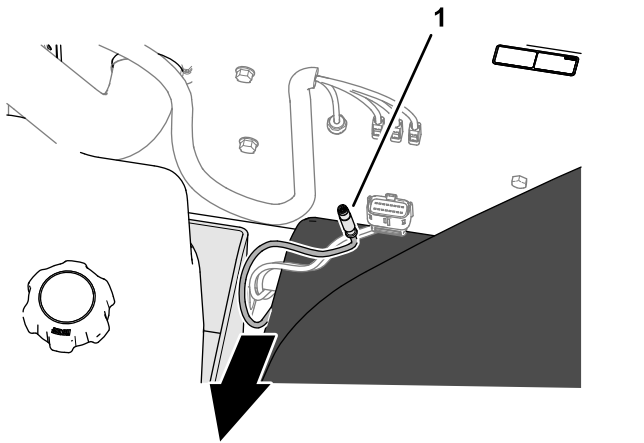
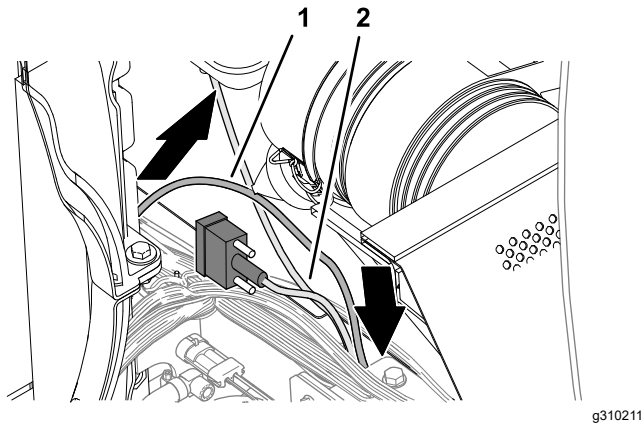


Figure 69

1. Modem data cable 2. Modem power harness

Securing the Navigation-Data and Electrical Harness, Modem-Antenna Harness, and Modem Data Harness

Multi Pro 1750 Machines

1. At the right, upper tube frame, bundle the navigation-data and electrical harness, and the CAN 2 ASC 10 BUS wire harness branch to the kit sprayer harness with 2 cable ties (Figure 70).

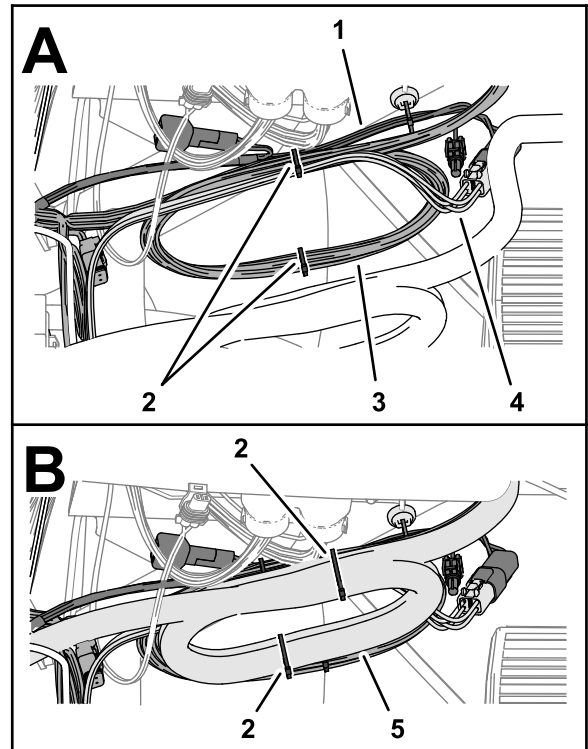


Figure 70

- | | |
|---|---|
| 1. Kit sprayer harness | 4. CAN 2 ASC 10 BUS wire harness branch |
| 2. Cable ties | 5. Modem-antenna harness |
| 3. Navigation-data and electrical harness | |

2. Bundle the modem-antenna harness and secure it to the kit sprayer harness bundle with 2 cable ties (Figure 70).
3. Secure the modem-data harness and the navigation-data and electrical harness to the monitor tube with a cable tie (Figure 71).

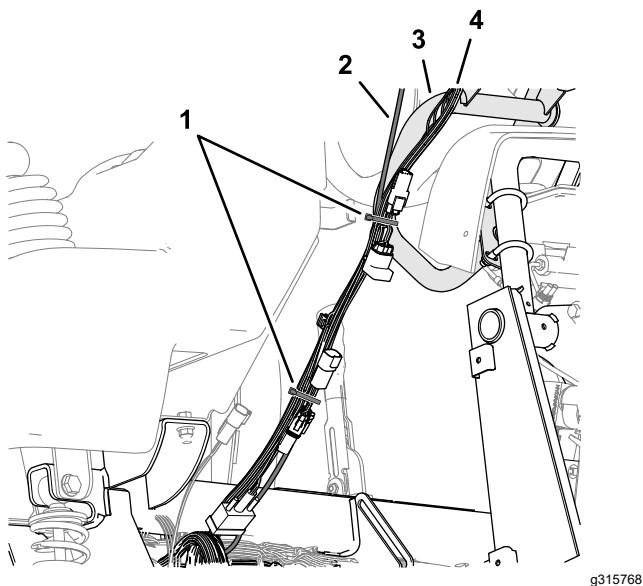


Figure 71

1. Cable tie
2. Modem-data harness
3. Monitor tube
4. Navigation-data and electrical harness

4. Secure the modem-data harness to the navigation-data and electrical harness with a cable tie as shown in [Figure 71](#).

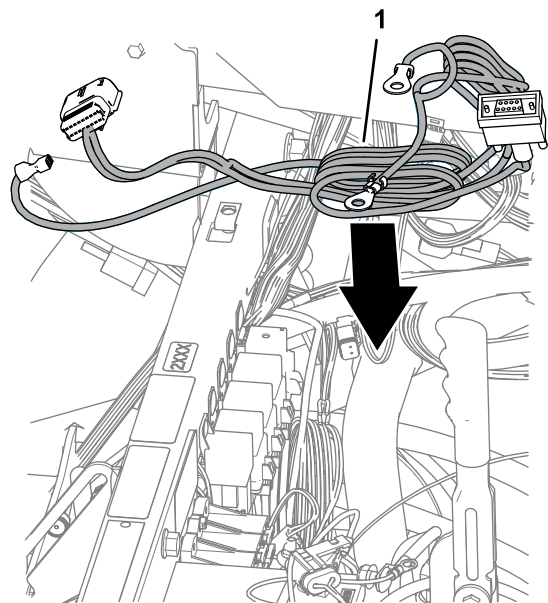


Figure 72

1. Modem power harness

2. Route the ring terminals of the modem power harness labeled BATTERY and GROUND toward the battery ([Figure 73](#)).

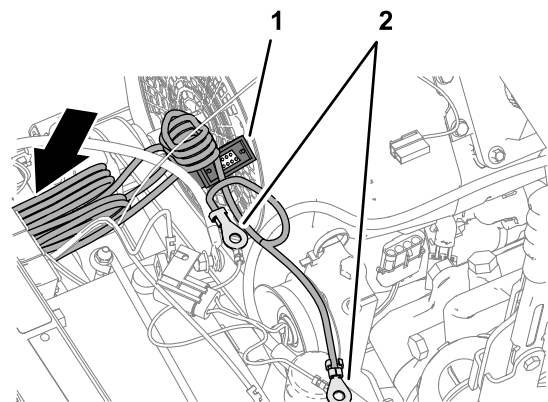


Figure 73

1. 9-pin connector (labeled RS232—modem power harness; not used)
2. Ring terminals (labeled BATTERY and GROUND—modem power harness)

Parts needed for this procedure:

1	Modem power harness—1850 mm (72-7/8 inches)
5	Cable ties

Routing the Modem Power Harness

Multi Pro 1750 Machines

1. Align the modem power harness to the machine as shown in [Figure 72](#).

3. Route the 4-pin connector labeled ETHERNET CL-55 and the 18-socket connector labeled CL55 of the modem power harness under the fuse block of the machine.

Note: The connector labeled RS232 is not used.

4. At the front of the machine, route the 4-pin connector labeled ETHERNET CL-55 and the 18-socket connector labeled CL55 of the modem power harness to the machine as shown in [Figure 74](#).

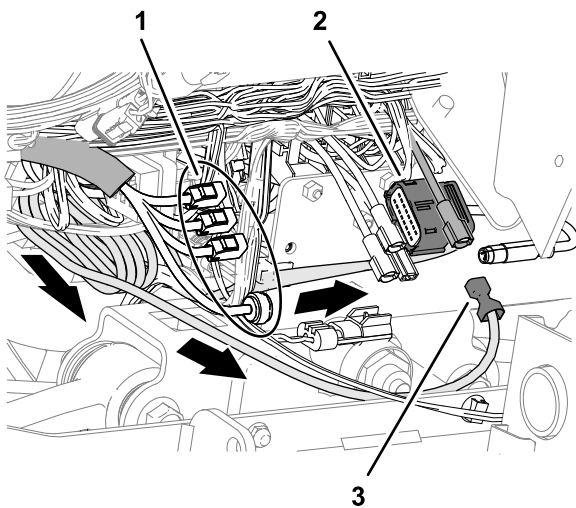


Figure 74

1. 4-pin connector (labeled ETHERNET CL-55—modem data harness)
2. 18-socket connector (labeled CL55—modem power harness)
3. Socket connector (options power—fuse block)

Routing the Modem Power Harness

Multi Pro 5800 Machines

1. Between the fuel tank bracket and the right, front fender, route the tab terminal (labeled SWITCHED) and 2 ring terminals (labeled BATTERY and GROUND) of the modem power harness under the frame of the machine (Figure 75).

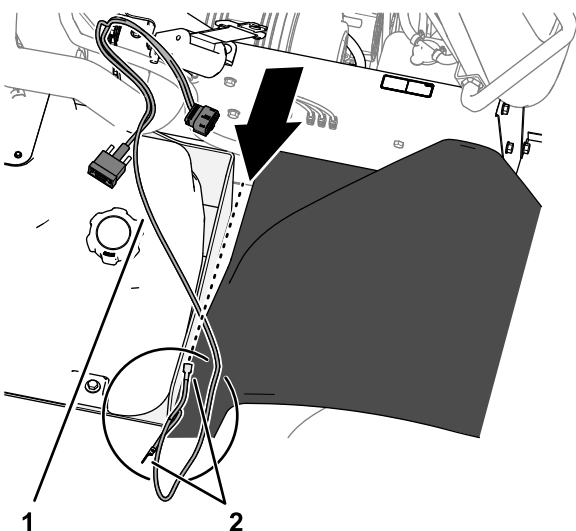


Figure 75

1. Modem power harness
2. Wire terminals

2. At the inboard side of the right seat box, route the modem power harness forward and power

harness connector labeled RS232 along the machine wire harness (Figure 76).

Note: The connector labeled RS232 is not used.

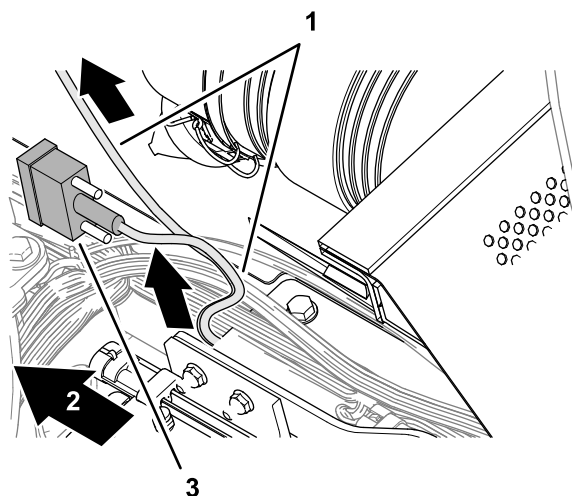
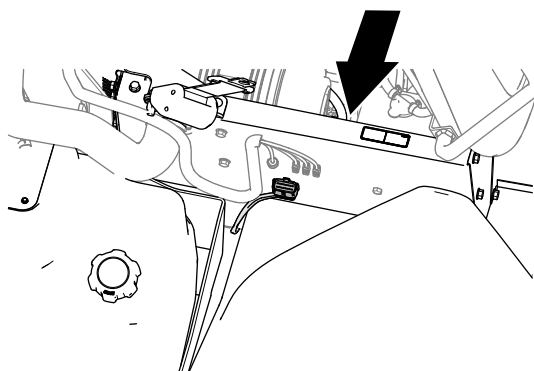
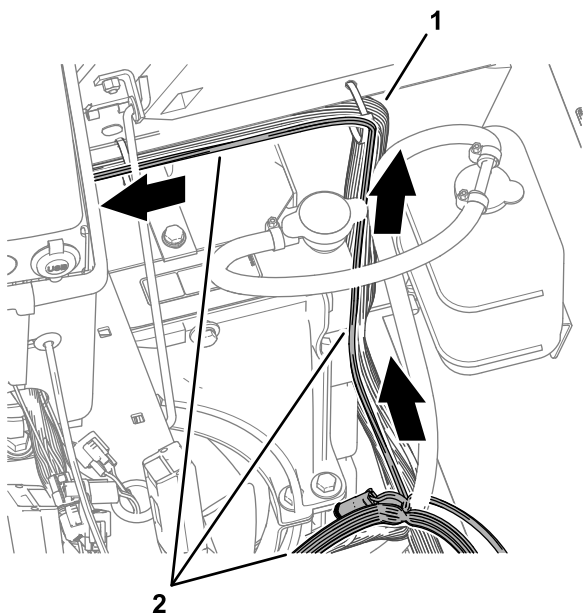
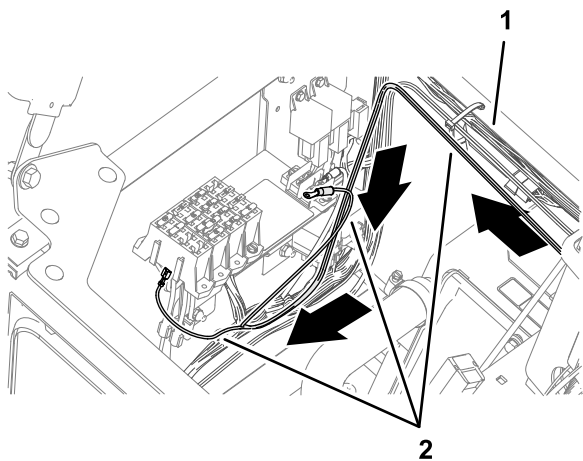


Figure 76

1. Modem power harness
 2. Front of the machine
 3. 9-pin connector (labeled RS232—not used)
3. Route the modem power harness across the top of the radiator, along the machine wire harness (Figure 77).



g301675



g301795

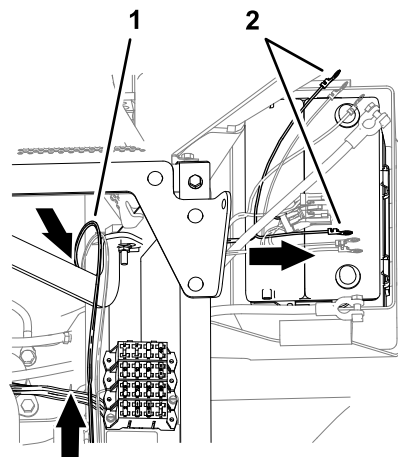
Figure 77

1. Machine wire harness 2. Modem power harness

Routing the Harness to the Battery

Multi Pro 5800 Machines

1. Route the ring terminals of the harness labeled BATTERY and GROUND rearward, and over the seat support ([Figure 78](#)).



g315080

Figure 78

1. Modem power harness 2. Ring terminals (labeled BATTERY and GROUND—modem power harness)

2. Route the ring terminals under the left frame tube and across the top of the battery ([Figure 78](#)).

Note: You will assemble the ring terminals to the battery cables in [Assembling the Rear GeoLink Harness, Navigation-Data and Electrical Harness, and Modem Power Harness to the Battery Cables](#) (page 35).

Connecting the Wire Harness to the Fuse Block

Multi Pro 1750 Machines

1. At the front of the machine, plug the terminal of the modem power harness labeled SWITCHED into the socket connector for options power of the fuse block ([Figure 79](#)).

Note: If the fuse block of your machine does not have an available options-power circuit,

install an additional options-fuse block; refer to your authorized Toro distributor.

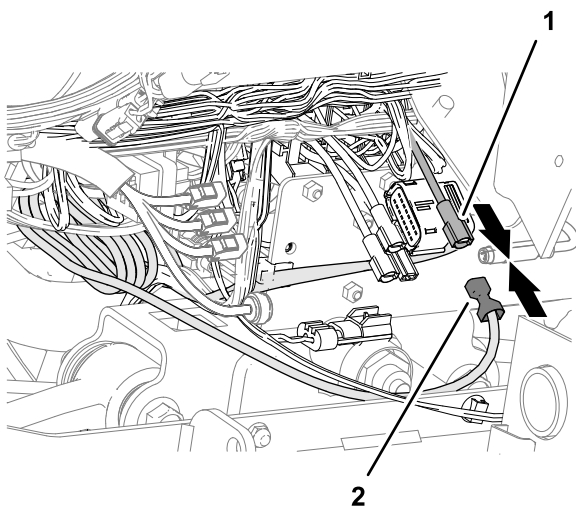


Figure 79

g323032

1. Socket connector (options power—fuse block)
2. Terminal (labeled SWITCHED—modem power harness)

2. Near the fuse block bundle the modem power-harness at the 9-pin connector labeled RS232 and secure the harness with 2 cable ties as shown in [Figure 80](#).

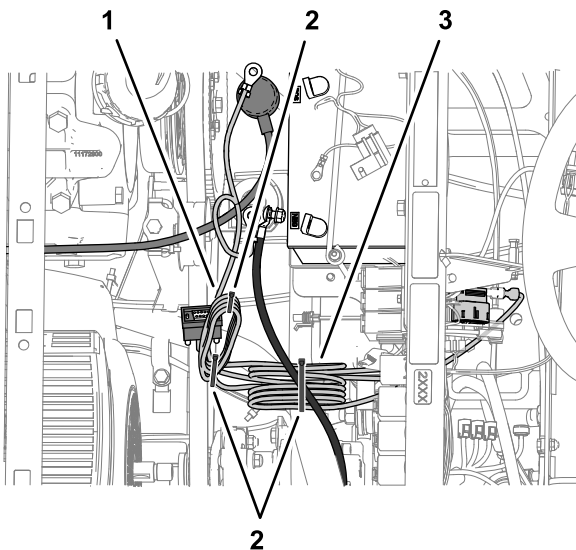


Figure 80

g315843

1. Modem power-harness bundle (at 9-pin connector labeled RS232)
 2. Cable ties
 3. Modem power-harness bundle (at negative battery cable)
3. Bundle the modem power-harness at the negative battery cable, and secure the bundle to the battery cable with a cable tie as shown in [Figure 80](#).

4. Insert the fuse (10 A) into the fuse-block socket ([Figure 81](#)) for the options power circuit that you used in step 1.

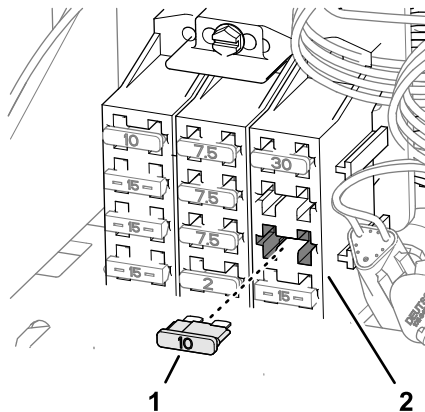


Figure 81

g323085

1. Fuse block
2. Fuse (10 A)

Connecting the Wire Harness to the Fuse Block

Multi Pro 5800 Machines

1. Plug the terminal of the modem power harness labeled SWITCHED into the socket connector for options power of the fuse block ([Figure 82](#)).

Note: If the fuse block of your machine does not have an available options-power circuit, install an additional options-fuse block; refer to your authorized Toro distributor.

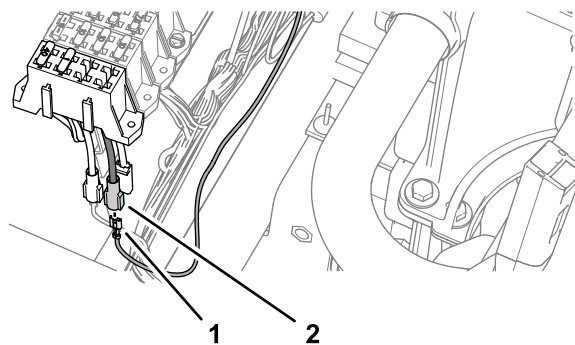


Figure 82

g301670

1. Terminal (labeled BATTERY—modem power harness)
2. Socket connector (options power—fuse block)

2. Insert the fuse (10 A) into the fuse-block socket ([Figure 83](#)) for the options power circuit that you used in step 1.

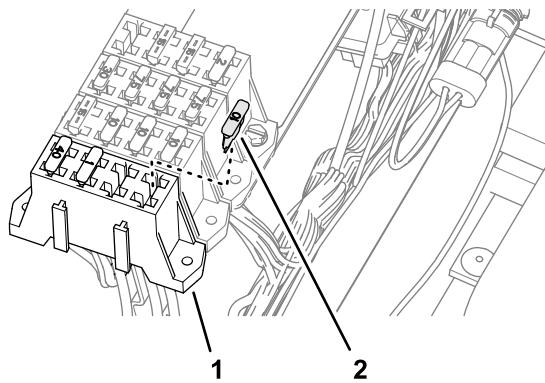


Figure 83

g301672

1. Fuse block
2. Fuse (10 A)

3. Secure the switched power and ground branch of the kit wire harness to the machine wire harness with 5 cable ties.

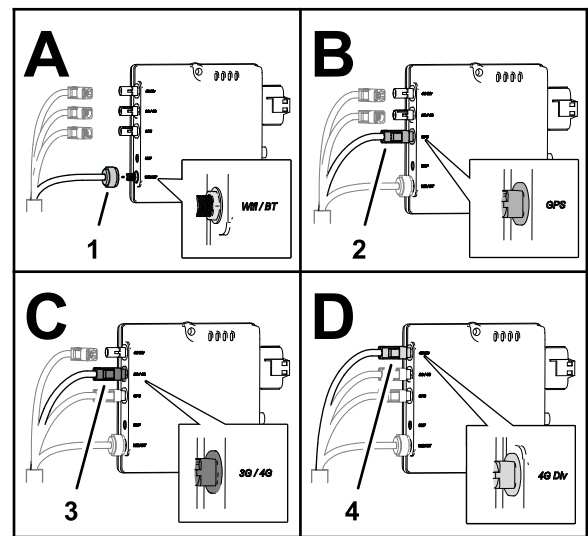


Figure 84

g310538

1. Coaxial connector (labeled WiFi—modem-antenna harness)
2. Blue coaxial push-in connector (labeled GNSS—modem-antenna harness)
3. Violet coaxial push-in connector (labeled LTE-1—modem-antenna harness)
4. **CDMA Modems Only:** Red coaxial push-in connector (labeled LTE-2—modem-antenna harness)

2. Plug the blue coaxial push-in connector of the modem-antenna harness labeled GNSS into the connector of the CL-55 modem marked GPS, until the connectors latch securely ([Figure 84](#)).
3. Plug the violet coaxial push-in connector of the modem-antenna harness labeled LTE-1 into the connector of the CL-55 modem marked 3G / 4G, until the connectors latch securely ([Figure 84](#)).
4. **CDMA Modems Only:** Plug the red coaxial push-in connector of the modem-antenna harness labeled LTE-2 into the connector of the CL-55 modem marked 4G Div, until the connectors latch securely ([Figure 84](#)).

Note: The GSM modem does not have an LTE-2 connector.

Connecting the Modem Data and Power Harnesses to the Modem

1. Plug the 4-pin connector of the modem data harness labeled ETHERNET CL55 into the 4-socket connector (unmarked) of the CL-55 modem, and tighten the knurled nut of the 4-pin connector ([Figure 85](#)).

15

Installing the CL-55 Modem

Parts needed for this procedure:

1	CL-55 modem
1	Modem bracket—Multi Pro 1750 (sold separately—Toro part No. 140-1394)
1	Modem Mount—Multi Pro 5800 (sold separately—Toro part No. 140-7381)
	Capscrew (#10-24 x 1-1/2 inches)
	Spacer (1/4 x 3/4 inch)
2	Locknut (#10-24)

Connecting the Antenna Harness to the Modem

Note: You must know if you are installing a CDMA modem or a GSM modem for this procedure.

1. Plug the coaxial connector of the modem-antenna harness labeled WiFi into the coaxial port of the CL-55 modem marked WiFi/BT, and tighten the coaxial connector ([Figure 84](#)).

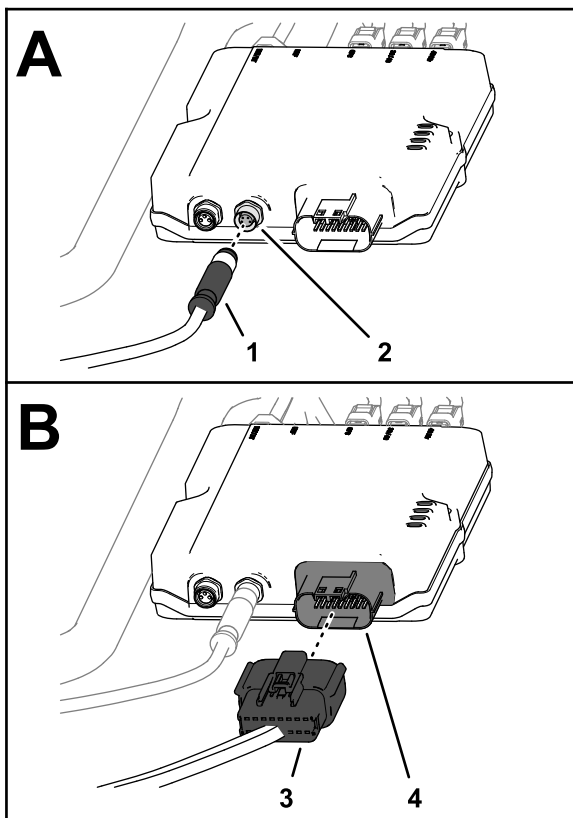


Figure 85

g310539

1. 4-pin connector (labeled ETHERNET CL55—modem data harness)
2. 4-pin connector (unmarked—CL-55 modem)
3. 18-pin connector (labeled CL55—modem power harness)
4. 18-pin connector (CL-55 modem)

2. Plug the 18-pin connector of the modem power harness labeled CL55 into the 18-pin connector of the CL-55 modem (Figure 85).

Installing the Modem to the Machine

Multi Pro 1750 Machines

1. Remove the push-in fastener that secures the wire harness of the machine to the prop-rod bracket (Figure 86).

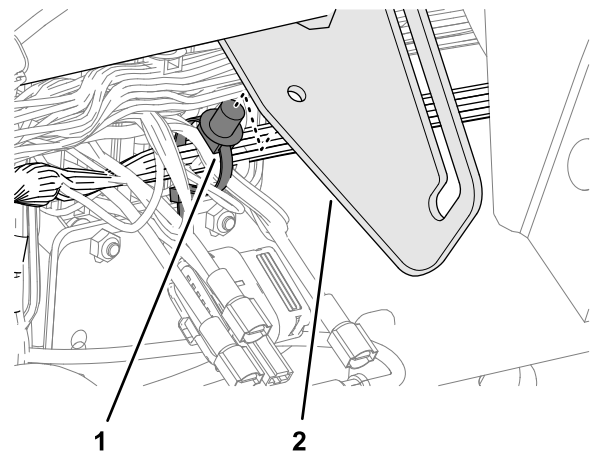


Figure 86

g315555

1. Push-in fastener (machine wire harness)
2. Prop-rod bracket

2. Remove the capscrew (1/4 x 3/4 inch) and flange locknut (1/4 inch) from the flange of the machine frame as shown in Figure 87.

Note: Retain the capscrew and locknut for installing the modem bracket.

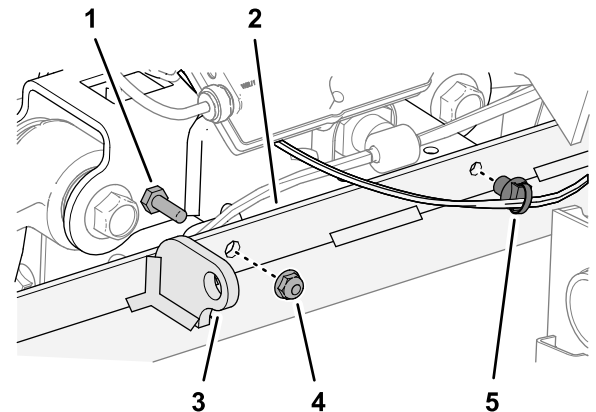


Figure 87

g315461

1. Capscrew (1/4 x 3/4 inch)
2. Flange (machine frame)
3. Right seat-pivot bracket
4. Flange locknut (1/4 inch)
5. Push-in fastener (machine wire harness)

3. Remove the push-in fastener that secures the wire harness of the flange of the machine frame (Figure 87).
4. Assemble the modem bracket to the CL-55 modem with 2 slotted machine screws (#10-24 x 1-1/2 inches), 2 spacers (1/4 x 3/4 inch), and 2 locknuts (#10-24) as shown in Figure 88.

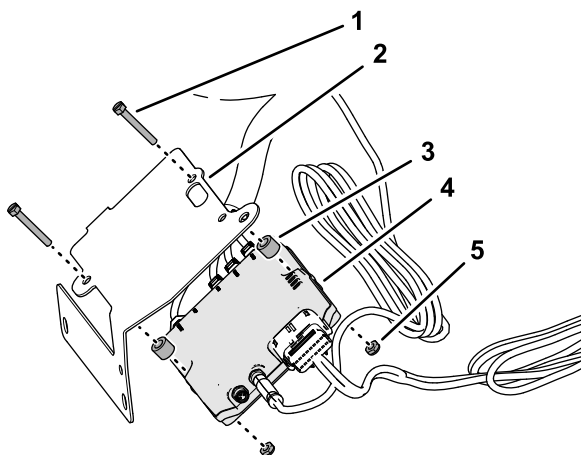


Figure 88

g315553

1. Slotted machine screw (#10-24 x 1-1/2 inches)
2. Modem bracket (Part No. 140-1394)
3. Spacer (1/4 x 3/4 inch)
4. CL-55 modem
5. Locknut (#10-24)

5. Align the modem bracket (Part No. 140-1394) under the prop-rod bracket and behind the flange of the machine frame as shown in [Figure 89](#).

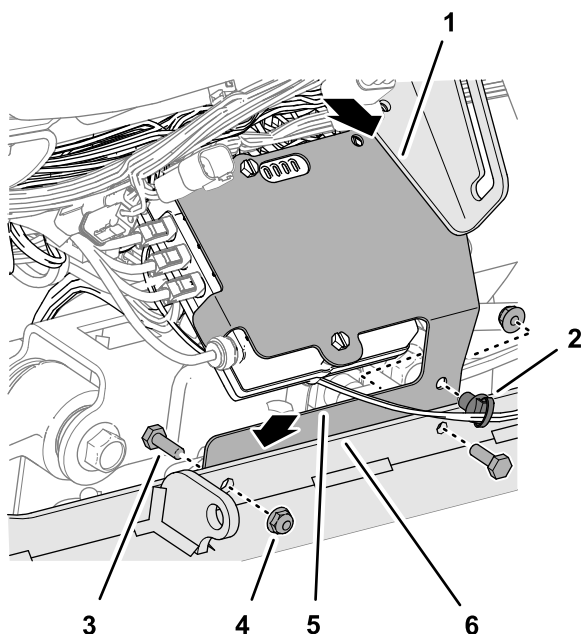


Figure 89

g315552

1. Prop-rod bracket
2. Push-in fastener (machine wire harness)
3. Capscrew (1/4 x 3/4 inch)
4. Flange locknut (1/4 inch)
5. Modem bracket (Part No. 140-1394)
6. Flange (machine frame)

6. Insert the lower push-in fastener of the wire harness into the hole in the modem bracket as shown in [Figure 89](#).

7. Insert the upper push-in fastener of the wire harness into the holes in the modem bracket and prop-rod bracket ([Figure 90](#)).

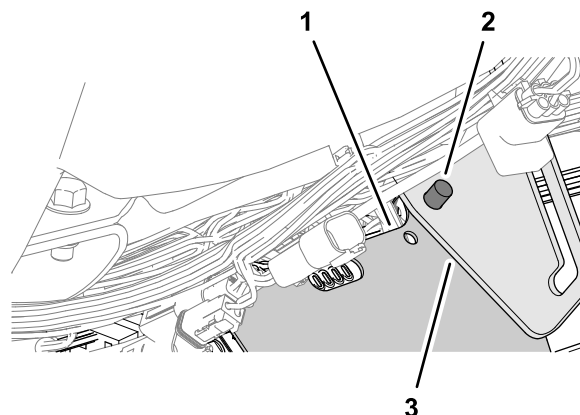


Figure 90

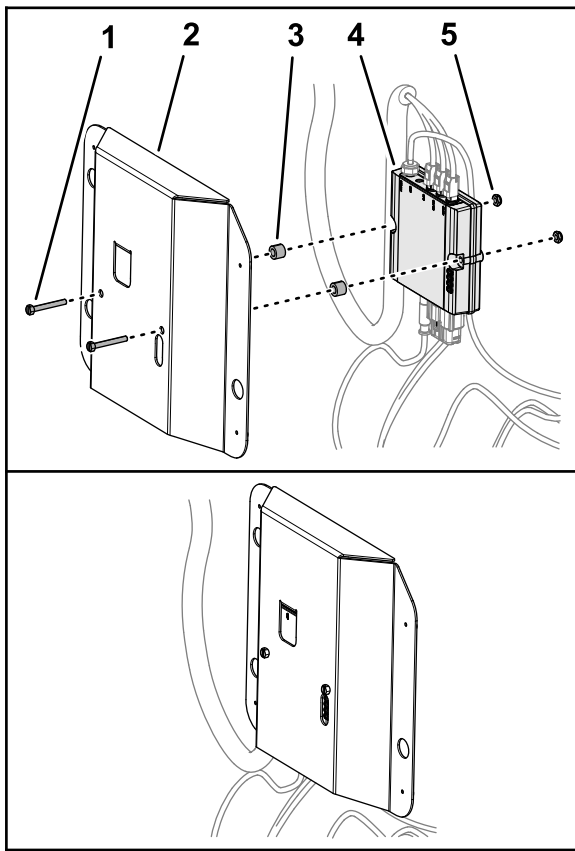
g315554

1. Modem bracket
2. Push-in fastener (machine wire harness)
3. Prop-rod bracket

Installing the Modem to the Machine

Multi Pro 5800 Machines

1. Assemble the modem mount (Part No. 140-7381) to the CL-55 modem with 2 capscrews (#10-24 x 1-1/2 inches), 2 spacers (1/4 x 3/4 inch), and 2 locknuts (#10-24) as shown in [Figure 91](#).

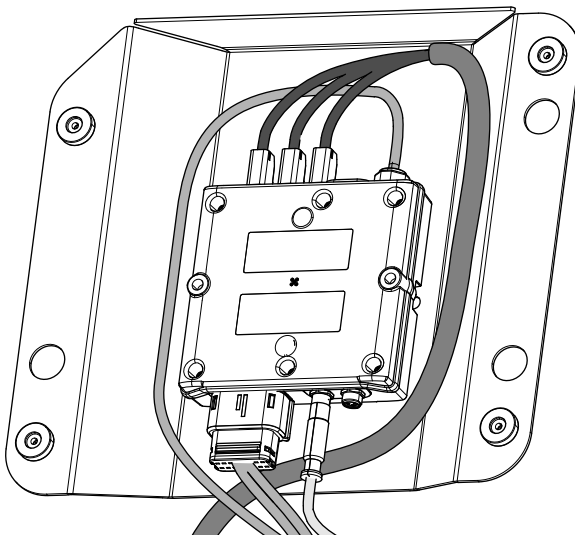


g351784

Figure 91

1. Capscrew (#10-24 x 1-1/2 inches)
2. Modem mount (Part No. 140-7381)
3. Spacers (1/4 x 3/4 inch)
4. CL-55 modem
5. Locknut (#10-24)

2. Ensure that the wire harnesses are routed within the modem bracket as shown in [Figure 92](#).

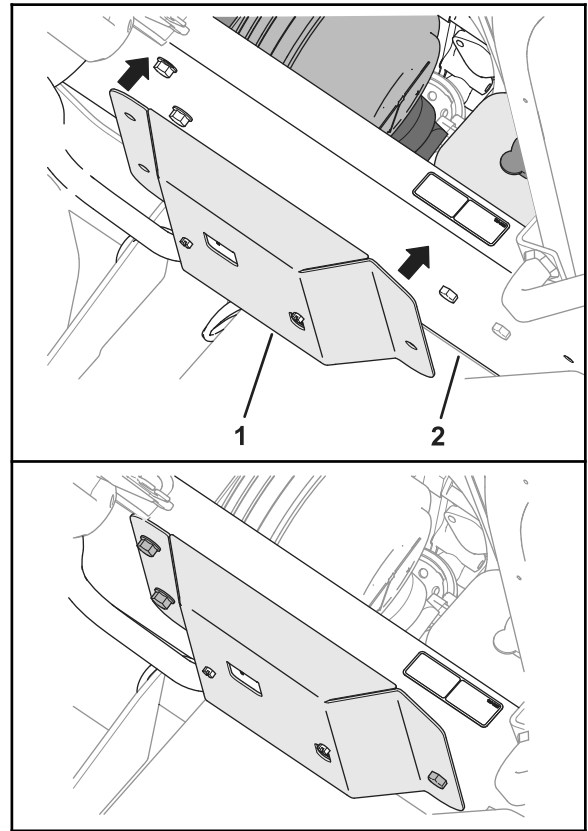


g351782

Figure 92

3. Align the modem bracket to the right seat-box panel ([Figure 93](#)).

Align the modem bracket to the right seat-box panel over the bolt heads and secure it with the magnets ([Figure 93](#)).



g338608

Figure 93

1. Modem bracket (Part No. 140-7381)
2. Right seat-box panel

16

Connecting the Battery

Parts needed for this procedure:

2

Battery-clamp bolt (Multi Pro 5800 only; sold separately—Toro part No. 122-9921)

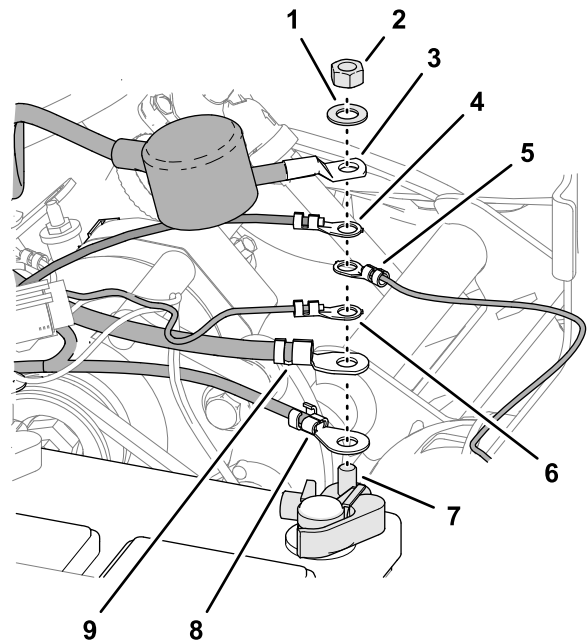
Assembling the Rear GeoLink Harness, Navigation-Data and Electrical Harness, and Modem Power Harness to the Battery Cables

Multi Pro 1750 Machines

1. Assemble the following wire and cable terminals onto the threaded post of the positive battery terminal (Figure 94) in the following order:

Important: Ensure that the battery-cable terminal (positive) to the engine starter is positioned at the top of the stack of terminals on the threaded post.

- A. Ring terminal—165 cm (65 inch) modem power harness branch (labeled BATTERY)
- B. Battery-cable terminal (positive)—to the alternator (50 A)
- C. Ring terminal—258 cm (101-1/2 inch) navigation-data and electrical harness branch (labeled BATTERY (+))
- D. Ring terminal—21.6 cm (8-1/2 inch) machine harness branch (labeled TO BATTERY POSITIVE)
- E. Ring terminal—24 cm (9-1/2 inch) kit sprayer-harness branch (unlabeled)
- F. Battery-cable terminal (positive)—to the engine starter



g315993

Figure 94

1. Washer 1/4 inch (quick-connect clamp)
 2. Hex nut 1/4 inch (quick-connect clamp)
 3. Battery-cable terminal (positive)—to the engine starter
 4. Ring terminal—24 cm (9-1/2 inch) kit sprayer-harness branch (unlabeled)
 5. Ring terminal—21.6 cm (8-1/2 inch) machine harness branch (labeled TO BATTERY POSITIVE)
 6. Ring terminal—258 cm (101-1/2 inch) navigation-data and electrical harness branch (not labeled—red wire insulation)
 7. Threaded post—quick-connect clamp (positive battery post)
 8. Battery-cable terminal (positive)—to the alternator (50 A)
 9. Ring terminal—165 cm (65 inch) modem power harness branch (labeled BATTERY)
2. Assemble the hex nut (1/4 inch) and washer (1/4 inch) onto the threaded post, and torque the nut to 1017 to 1234 N·cm (90 to 110 in-lb).
 3. Align the insulator cover of the positive battery cable to the starter over the threaded post (Figure 94).
 4. Assemble the following wire and cable terminals onto the threaded post of the negative battery terminal (Figure 95) in the following order:

Important: Ensure that the battery-cable terminal (negative) to the engine and chassis ground is positioned at the top of the stack of terminals on the threaded post.

- A. Ring terminal—258 cm (101-1/2 inch) navigation-data and electrical harness branch (not labeled—black wire insulation)
- B. Ring terminal—165 cm (65 inch) modem power harness branch (labeled GROUND)
- C. Battery-cable terminal (negative)—to the engine and chassis ground

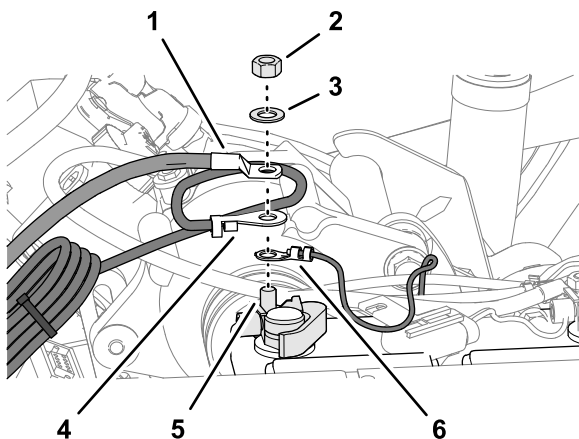


Figure 95

g315992

- | | |
|---|--|
| 1. Battery-cable terminal (negative)—to the engine and chassis ground | 4. Ring terminal—165 cm (65 inch) modem power harness branch (labeled GROUND) |
| 2. Hex nut (1/4 inch—quick-connect clamp) | 5. Threaded post—quick-connect clamp (negative battery post) |
| 3. Washer (1/4 inch—quick-connect clamp) | 6. Ring terminal—258 cm (101-1/2 inch) navigation-data and electrical harness branch (not labeled—black wire insulation) |

Assembling the Rear GeoLink Harness, Navigation-Data and Electrical Harness, and Modem Power Harness to the Battery Cables

Multi Pro 5800 Machines

Note: If you need additional terminal holding capacity for the battery clamp, order and install optional battery-clamp bolt Toro Part No. 122-9921.

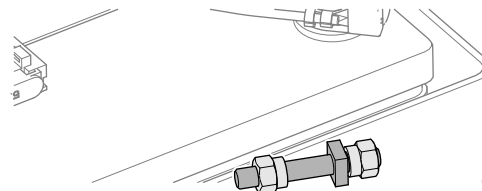


Figure 96

Optional battery-clamp bolt

g351789

1. Route the positive terminal (red wire), negative terminal (black wire), and fuses block (50 A) of the rear wire harness up between the battery box and the chassis of the machine (Figure 97).

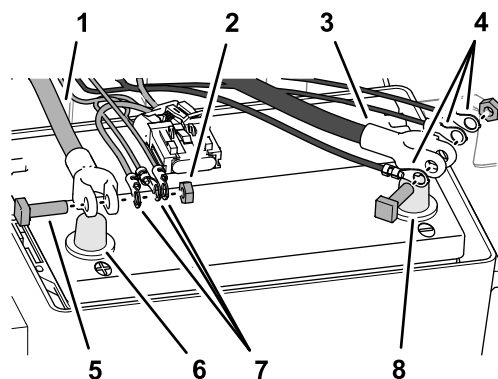


Figure 97

g315081

- | | |
|--|--|
| 1. Positive battery cable | 5. T-bolt |
| 2. Hex nut | 6. Battery post (positive) |
| 3. Negative battery cable | 7. Positive-ring terminals (black wire)—rear GeoLink wire harness, navigation-data and electrical harness, and modem power harness |
| 4. Negative-ring terminals (black wire)—rear GeoLink wire harness, navigation-data and electrical harness, and modem power harness | 8. Battery post (negative) |

2. Route the positive terminal (red wire), negative terminal (black wire), and 10 A fuse block of the

navigation-electrical harness up between the battery box and the chassis of the machine.

3. Route the ring terminals labeled BATTERY and GROUND of the modem power harness up between the battery box and the chassis of the machine.
4. Remove the T-bolts and hex nuts from the terminals of the positive and negative battery cables ([Figure 97](#)).
5. Assemble a T-bolt through the positive terminal (red wire) of the rear wire harness, the positive terminal of the navigation-electrical harness, modem power harness, and terminal of the positive battery cable ([Figure 97](#)).
6. Loosely secure the terminals and the T-bolt with a hex nut ([Figure 97](#)).
7. Assemble a T-bolt through the negative terminal (black wire) of the rear wire harness, the negative terminal of the navigation-electrical harness, modem power harness, and terminal of the negative battery cable ([Figure 97](#)).
8. Loosely secure the terminals and the T-bolt with a hex nut ([Figure 97](#)).

Connecting the Battery

Multi Pro 5800 Machines

1. Connect the positive (red) cable to the positive (+) battery post, and tighten the nut; refer to [Figure 97](#) in [Assembling the Rear GeoLink Harness, Navigation-Data and Electrical Harness, and Modem Power Harness to the Battery Cables](#) (page 35).
2. Connect the negative (black) cable to the negative (-) battery post, and tighten the nut; refer to [Figure 97](#) in [Assembling the Rear GeoLink Harness, Navigation-Data and Electrical Harness, and Modem Power Harness to the Battery Cables](#) (page 35).
3. Slide the insulator boots over both battery posts.
4. Install the battery cover and secure it with the strap; refer to [Figure 32](#) in [Disconnecting the Battery](#) (page 14).

17

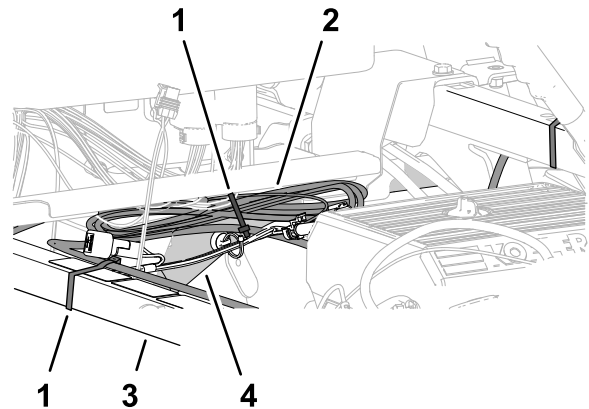
Securing the Data Harness

Multi Pro 1750 Machines

No Parts Required

Procedure

1. Gather the excess length of the data harness against the right, upper-frame tube ([Figure 98](#)).



g202768

Figure 98

- | | |
|------------------------|----------------------------|
| 1. Cable tie | 3. Shock-support tube |
| 2. Data-harness bundle | 4. Right, upper-frame tube |
-
2. Align the data harness to the shock-support tube, and secure the harness to the tube with a cable tie ([Figure 98](#)).
 3. Align the data-harness bundle to the right, upper-frame tube, and secure the harness bundle to the frame tube with a cable tie ([Figure 98](#)).
 4. Ensure that there is clearance between the pulleys and belts and the data harness, battery harness, kit wire harness, and battery cables.

Secure the wire harness and cables with cable ties as needed to provide clearance away from the belts and pulleys.

18

Installing the Right Front Fender

Multi Pro 1750 Machines

No Parts Required

Procedure

Note: Replace damaged the push-in fasteners with Toro Part No. 117-2382.

1. Align the inner-fender shroud to the right, upper and right, lower-frame tubes (Figure 99).

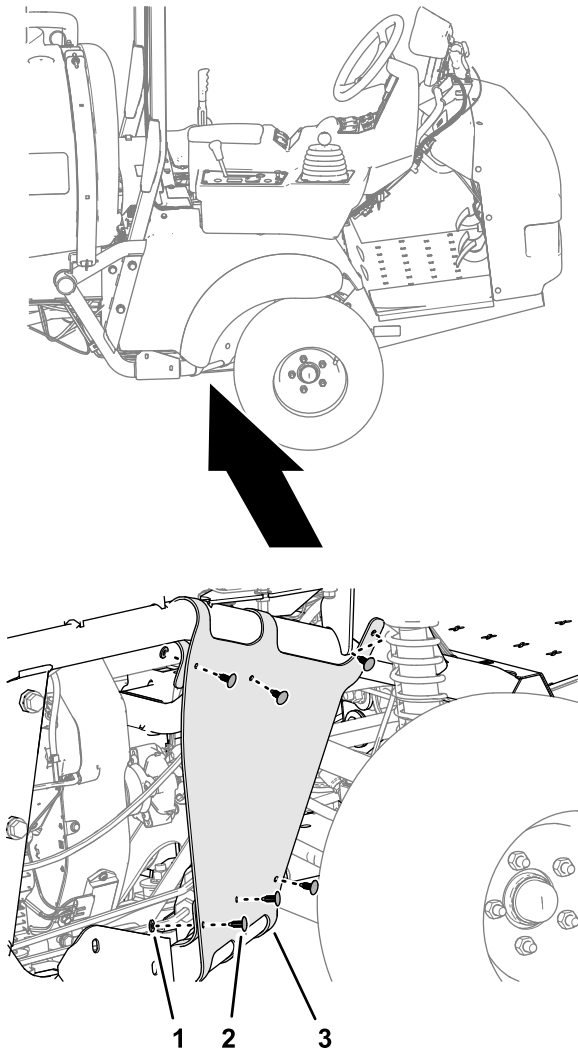


Figure 99

1. Washer (9/16 x 1/2 inch)
2. Push-in fastener
3. Inner-fender shroud

2. Secure the inner-fender shroud to the frame tubes (Figure 99) with the 6 push-in fasteners and 5 washers (9/16 x 1/2 inch).
3. Align the right, front fender to the machine as shown Figure 100, and align the holes in the fender with the holes in the frame.

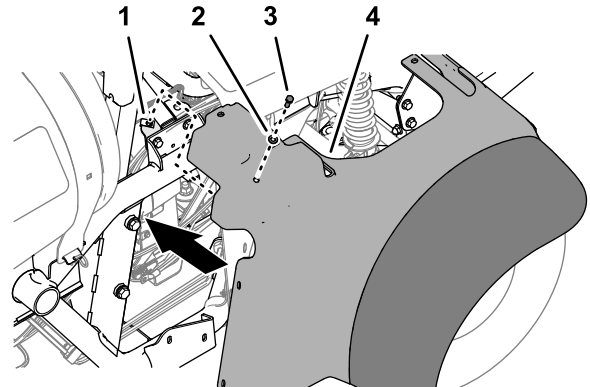


Figure 100

1. Clip nut (cross-member support)
2. Washer (5/16 inch)
3. Capscrew (5/16 x 1 inch)
4. Right, front fender

4. Secure right, front fender to the clip nut of the cross-member support (Figure 100) with the cap screw (5/16 x 1 inch) and washer (5/16 inch).
5. Secure the right, front fender to the roll bar mounting channel with 2 push-in fasteners (Figure 101).

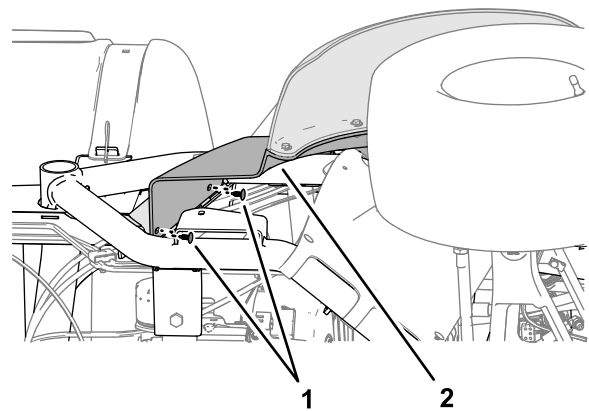


Figure 101

1. Push-in fastener
2. Right, front fender

6. Align the hole in the right, front fender with the hole in the platform floor (Figure 102), and secure the fender to the floor with a cap screw (5/16 x 1 inch) and washer (5/16 inch).

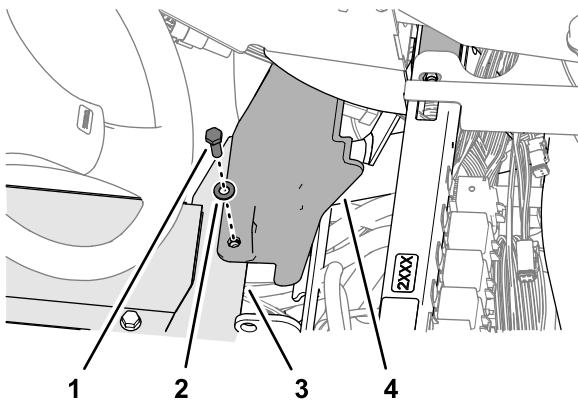


Figure 102

g323165

1. Capscrew (5/16 x 1 inch)
2. Washer (5/16 inch)
3. Platform floor
4. Right, front fender

7. Align the hole in the bottom console cover to the hole in the shock-support tube and the hole in the end console cover to the hole in the cross-member tube ([Figure 103](#)).

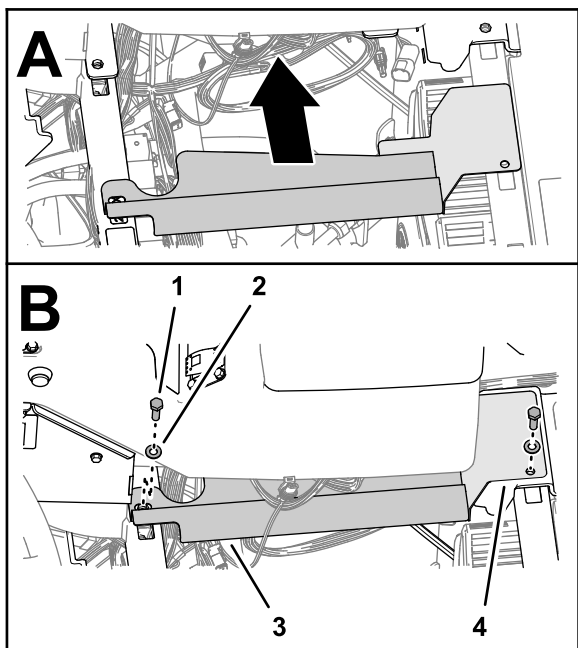


Figure 103

g323163

1. Capscrew (5/16 x 1 inch)
2. Washer (5/16 inch)
3. Console cover (bottom)
4. Console cover (end)

8. Secure the covers to the tubes ([Figure 103](#)) with 2 capscrews (5/16 x 1 inch) and 2 washers (5/16 inch).

19

Installing the Engine-Access Panel and the Seat

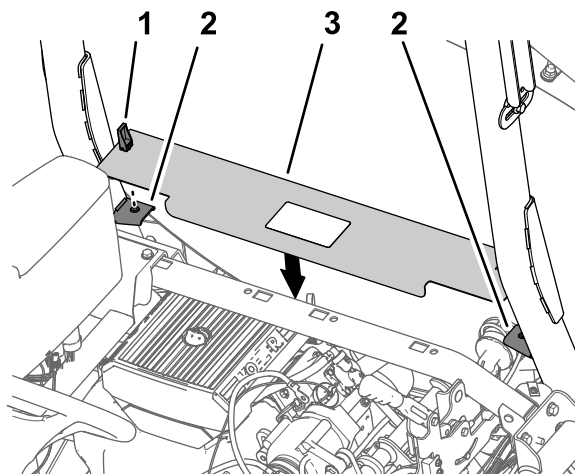
Multi Pro 1750 Machines

No Parts Required

Installing the Engine-Access Panel

Machines without the Tank Rinse Kit

1. Align the latches of the engine access panel with the bushings in the panel-support brackets on the roll bar ([Figure 104](#)).



g202414

Figure 104

1. Latch
2. Panel-support bracket
3. Engine access panel

2. Assemble the panel onto the brackets ([Figure 104](#)).

3. Rotate the handles latches down to secure the panel to the brackets ([Figure 104](#)).

Installing the Seat

1. Align the seat and seat plate to the chassis of the machine ([Figure 105](#)).

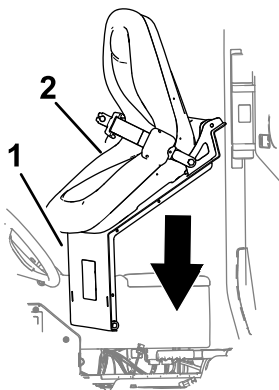
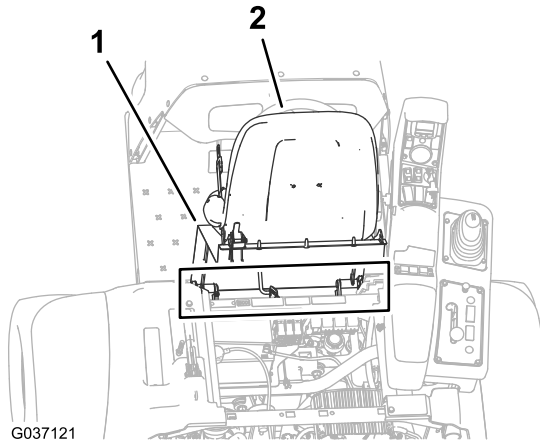


Figure 105

g202000

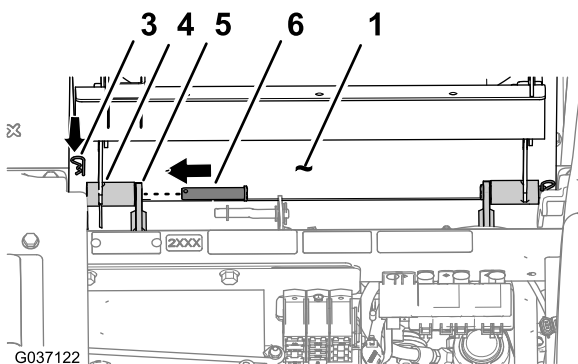
1. Seat plate
2. Seat

2. Align the holes in the pivot fittings of the seat pan with the holes in the chassis bracket ([Figure 106](#)).



G037121

g037121



G037122

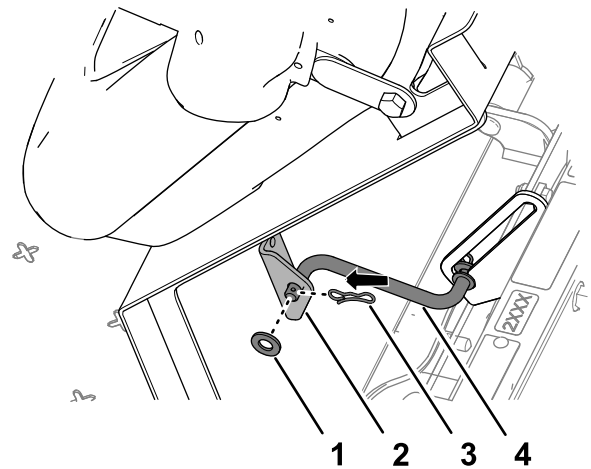
g202002

Figure 106

1. Seat plate
2. Seat
3. Hairpin
4. Pivot fitting (seat pan)
5. Chassis bracket
6. Pivot pin

3. Assemble the seat pan to the chassis brackets with the 2 pivot pins ([Figure 106](#)).
4. Secure the pivot pins to the machine with the 2 hairpins ([Figure 106](#)).

5. Assemble the prop rod to the bracket of the seat with the washer and hairpin ([Figure 107](#)).

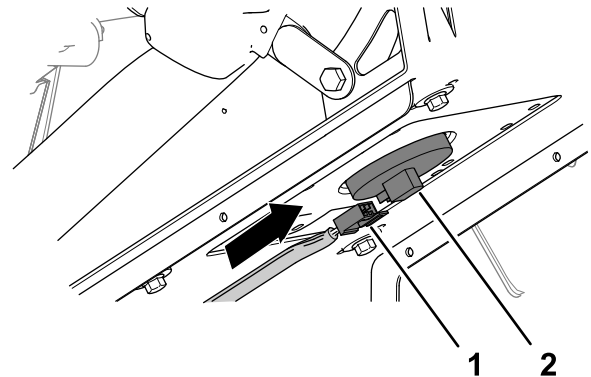


g202001

Figure 107

1. Washer
2. Bracket (seat)
3. Hairpin
4. Prop rod

6. Plug the 2-socket connector of the machine wire harness into the connector for the seat switch until the connectors latch securely ([Figure 108](#)).



g202003

Figure 108

1. 2-socket connector (machine wire harness)
2. Seat-switch connector

7. Rotate the seat forward slightly, remove the prop rod from the detent, rotate the seat down until the seat latches securely.

20

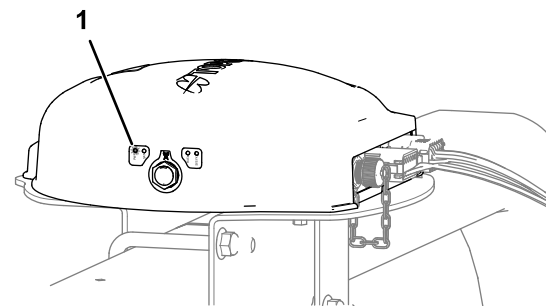
Completing the Installation of the CL-55 Modem Kit

No Parts Required

Closing the Seats

Multi Pro 5800 Machines

Move the prop rods for the seats into the slots and tilt the seats down.

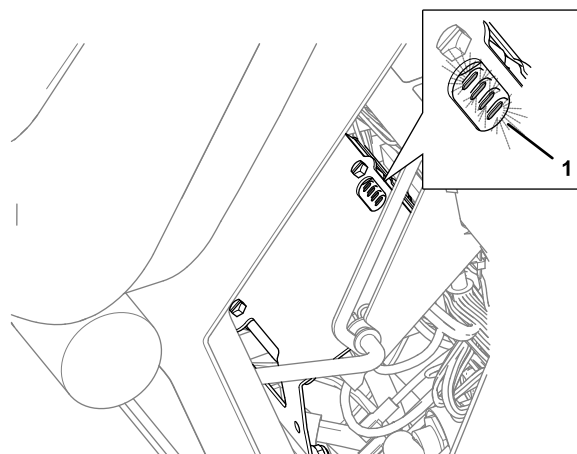


g302922

Figure 110

1. PWR indicator (satellite receiver)

- Modem—the LED indicators illuminate ([Figure 111](#) or [Figure 112](#)).

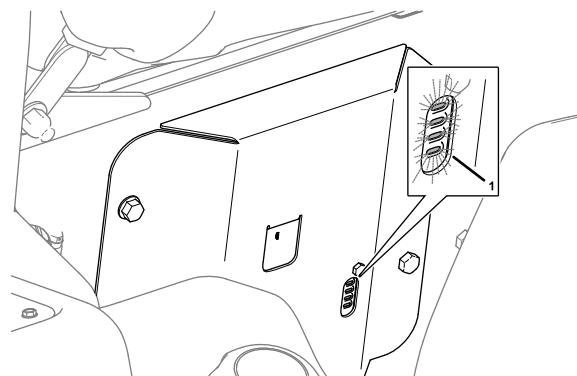


g316148

Figure 111

Multi Pro 1750 Machines

1. LED Indicators (inside the passenger seat base)



g306264

Figure 112

Multi Pro 5800 Machines

1. LED Indicators (outside passenger seat base)

- Automatic section controller—the STATUS indicator illuminates ([Figure 113](#)).

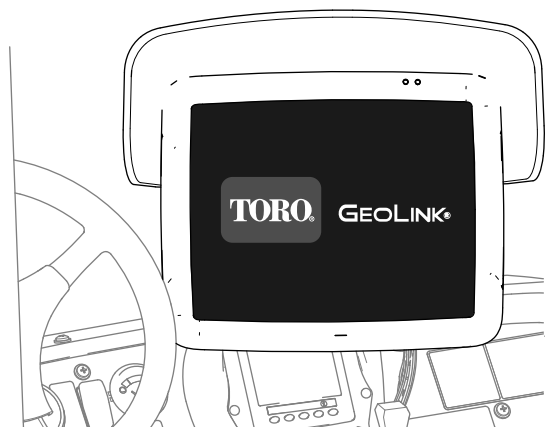
21

Powering the GeoLink Components

No Parts Required

Procedure

1. Turn the ignition key to the RUN (gasoline) or PREHEAT/RUN (diesel) position.
2. Verify that the following components indicate that each receives power:
 - Control console—displays graphics and text ([Figure 109](#)).



g310669

Figure 109

- Satellite receiver—the PWR indicator illuminates ([Figure 110](#)).

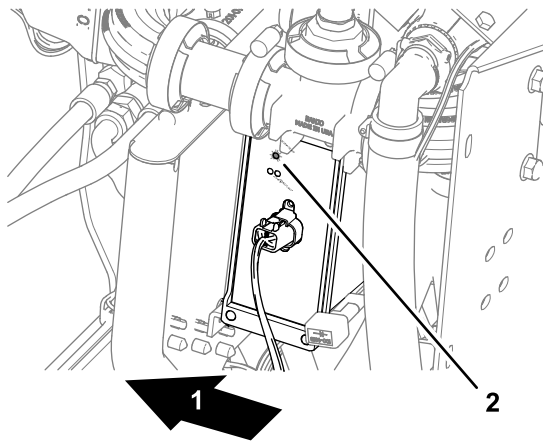


Figure 113

g302923

1. Back of the machine
2. STATUS indicator (automatic section controller)

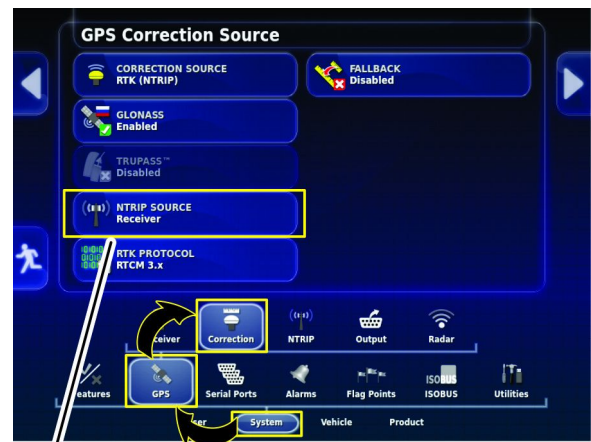


Figure 114

g324474

1. GPS icon
4. On the GPS Correction Source screen, press the NTRIP SOURCE icon (Figure 114).
5. When the Correction Source Setup wizard displays, press the next icon (Figure 115).

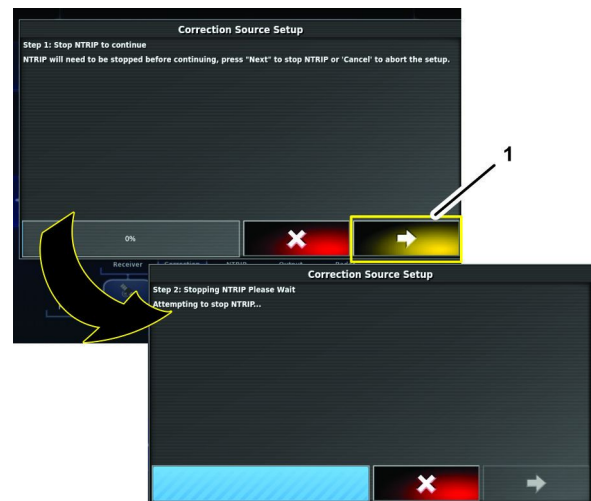


Figure 115

g324473

1. Next icon
6. In the NTrip Source dialog box, press the CONSOLE icon then press the confirm icon (Figure 116).

22

Configuring the GPS Correction Source

No Parts Required

Changing the N-Trip Source

1. Turn the ignition key to the ON position.
2. On the home screen, press the SETUP icon.
3. On the setup screen, press the SYSTEM icon, the GPS icon, and the CORRECTION icon (Figure 114).

23

Creating a Spray Job

No Parts Required

Procedure

1. Press the Job Menu and press the CREATE NEW JOB icon (Figure 118).

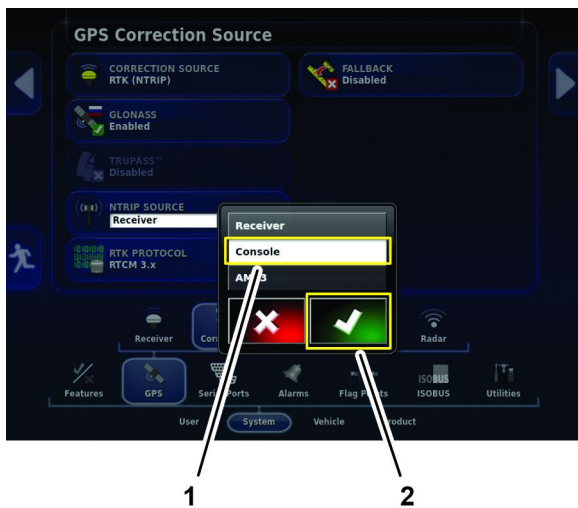


Figure 116

1. CONSOLE icon
2. Confirm icon

Note: The NTRIP SOURCE icon displays the console source (Figure 117).

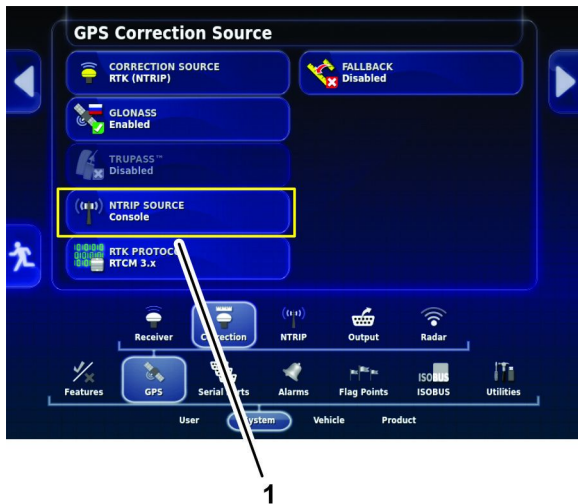


Figure 117

1. NTRIP SOURCE icon

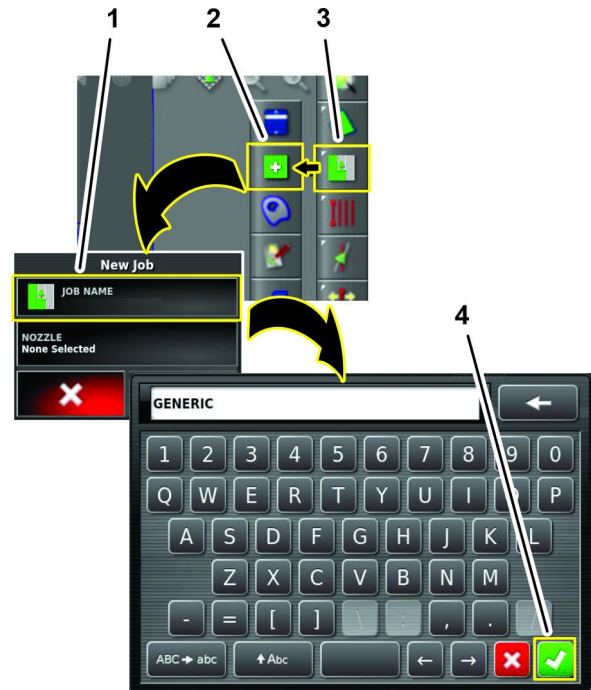


Figure 118

1. JOB NAME icon
 2. CREATE NEW JOB icon
 3. JOB MENU icon
 4. Confirm icon
2. Use on-screen keyboard to type a name for the generic job, and press the confirm icon (Figure 118).
 3. In the new job dialog box, press the NOZZLE icon (Figure 119).

24

Verifying the Cellular Status

No Parts Required

Procedure

1. Press the SYSTEM INFORMATION icon, and then swipe the FULL SCREEN icon in the upper right corner of the system information window (Figure 121).



Figure 119

1. NOZZLE icon
 2. Nozzle selection list icons
 3. Confirm icon
-
4. In the nozzle selection list, press any nozzle icon, and press the confirm icon (Figure 119).
 5. In the new job dialog box, press the confirm icon (Figure 120).



Figure 120

1. Confirm icon

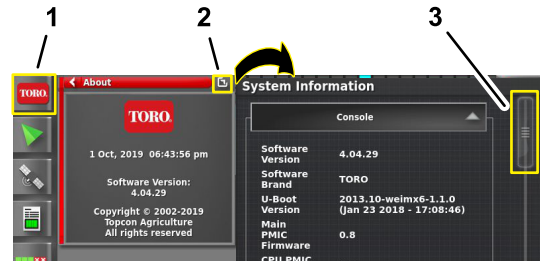


Figure 121

1. SYSTEM INFORMATION
2. FULL SCREEN icon
3. Scroll bar

2. In the system information screen, use the scroll bar to navigate to the CL55 icon (Figure 122).

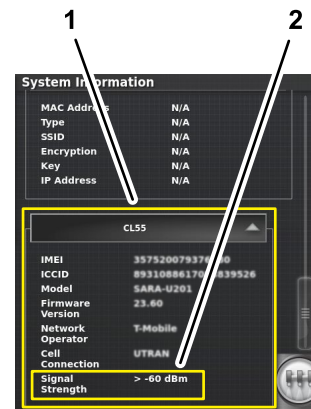


Figure 122

1. CL55 icon
2. Signal strength information

3. Press the CL55 icon to display the signal strength information.(Figure 122), and verify that the modem signal strength is between -60 dBm and -99 dBm.

Note: If the modem signal is equal to or less than -100 dBm, contact your authorized Toro distributor, Toro NSN at 1-844-GEOLINK (1-844-436-5465), or NSNTech@toro.com for customer service.

4. Swipe the FULL SCREEN icon to minimize the system information screen.

25

Performing a Compass Calibration

At the Distributor's Location

No Parts Required

Procedure

Perform a compass calibration at the distributor's location; refer to Calibrating the Compass in the *Operator's Manual* or *Software Guide* for your GeoLink system.

26

Clearing NVRAM

At the Customer Location

No Parts Required

Changing the Setup Screen for Dealer Access

Important: You must erase the nonvolatile RAM at the customer location.

1. Contact Toro NSN at 1-844-GEOLINK (1-844-436-5465) or NSNTech@toro.com for customer service to request the dealer access level password.
2. Rotate the ignition key to the ON position.
3. Press the SETUP icon on the main screen (Figure 123).

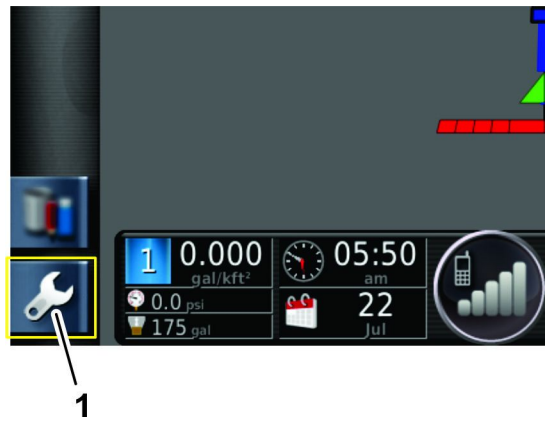


Figure 123

g204035

1. SETUP icon

4. In the setup screen, press the USER icon and the ACCESS LEVEL icon (Figure 124).

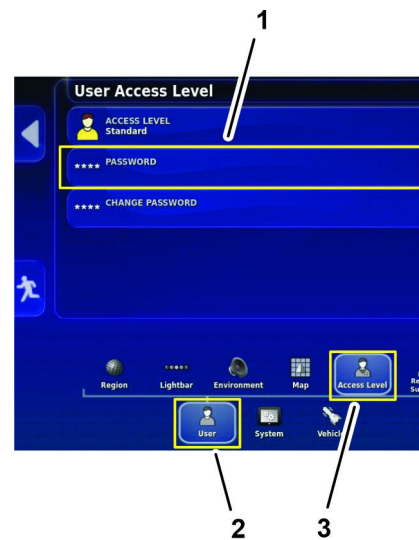


Figure 124

g309146

1. PASSWORD icon
2. USER icon
3. ACCESS LEVEL icon

5. Press the PASSWORD icon (Figure 124).
6. Use the on-screen keyboard to enter the password that you received in step 1, and press the confirm icon (Figure 125).

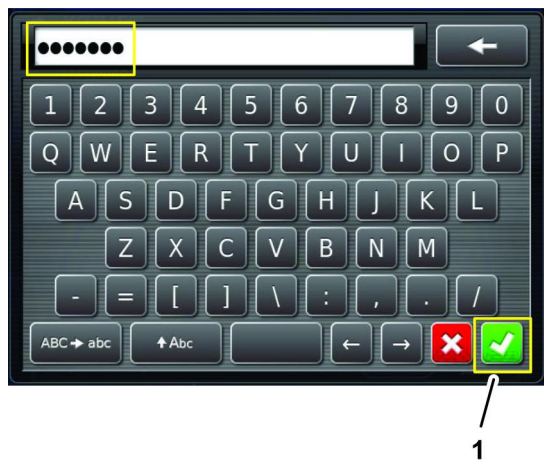


Figure 125

1. Confirm icon

Note: The user access level screen displays the DEALER icon (Figure 126).

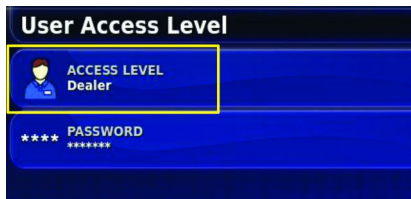


Figure 126

Erasing the Nonvolatile RAM

1. In the setup screen, press the SYSTEM icon, GPS icon, and ADVANCED CONFIGURATION icon (Figure 127).

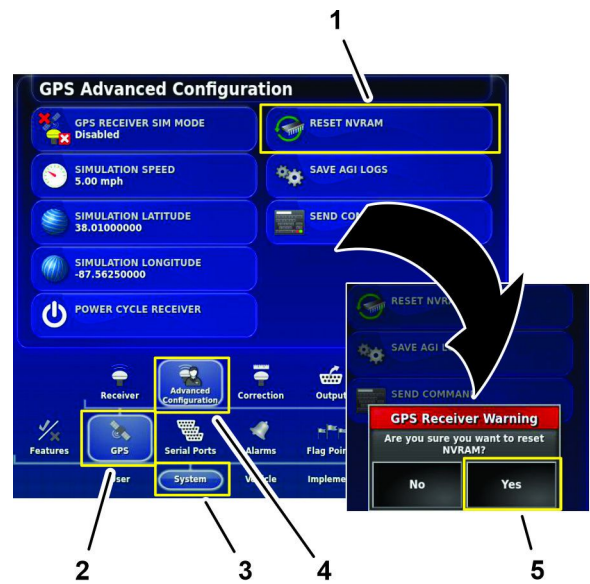


Figure 127

1. RESET NVRAM icon
2. GPS icon
3. SYSTEM icon
4. ADVANCED CONFIGURATION icon
5. YES icon

2. In the GPS Advanced Configuration screen, press the RESET NVRAM icon (Figure 127).
3. In the GPS receive warning dialog box, press the YES icon (Figure 127).

Note: The receiver disconnected warning (Figure 128) displays briefly.

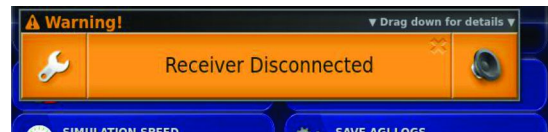


Figure 128

4. Wait 2 minutes for the satellite receiver and modem startup.
5. Press the EXIT SETUP icon (Figure 129).

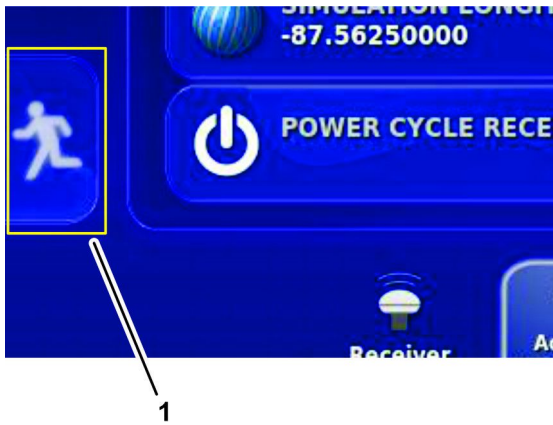


Figure 129

g309148

1. EXIT SETUP icon

Changing the User Access Level to Standard Mode

1. On the setup screen, press the USER icon, press the ACCESS LEVEL icon (Figure 130).

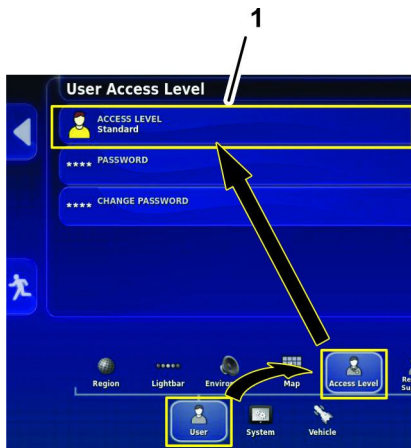


Figure 130

g324521

1. ACCESS LEVEL icon
2. In the user access level dialog box, change the access level to STANDARD.
3. Rotate the ignition switch to the OFF position and remove the key.

27

Performing a Compass Calibration

At the Customer Location

No Parts Required

Procedure

Perform a compass calibration at the customer's location; refer to Calibrating the Compass in the *Operator's Manual* or *Software Guide* for your GeoLink system.

Notes:



Count on it.