Seat Belt Alarm Kit

Groundsmaster® 4000, 4100, or 5900 Series Traction Unit with ROPS

Model No. 50241

Installation Instructions

This kit is compatible with traction unit models 30636, 30609, 30608, 30644, 30605, 30635, 31698, and 31699.

Preparing the Machine

⚠ CAUTION ⚠

If you leave the key in the ignition switch, someone could accidently start the engine and seriously injure you or bystanders.

Remove the key from the ignition switch before you do any maintenance.

1. Park the machine on a level surface, disengage the PTO, lower the cutting units, and engage the parking brake.
2. Shut off the engine, remove the key, wait for all moving parts to stop, and allow the engine to cool.

© 2026—The Toro® Company
8111 Lyndale Ave So
Bloomington, MN 55044

Register at
www.Toro.com

Original Instructions (EN)
Printed in the USA
All rights reserved

Disconnecting the Battery

Groundsmaster 4000 Series

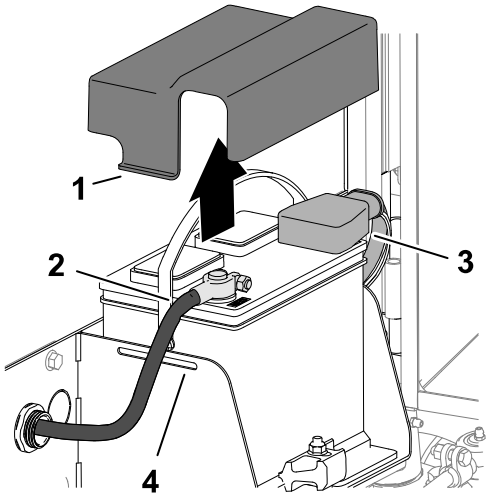
⚠ DANGER ⚠

Battery electrolyte contains sulfuric acid, which is fatal if consumed and causes severe burns.

- ***Do not drink electrolyte and avoid contact with skin, eyes, or clothing.***
- ***Wear safety glasses and rubber gloves.***
- ***Fill the battery where clean water is always available for flushing the skin.***

---

1. Depending on the machine model, open either the screen or the hood to access the battery.
2. Remove the cover (1) from the battery tray (4) by pressing the sides of the battery cover.
3. Disconnect the negative battery cable (2).
4. Slide the insulator cover (3) off the positive battery-cable clamp, and disconnect the positive battery cable.
5. Close and latch the screen/hood.

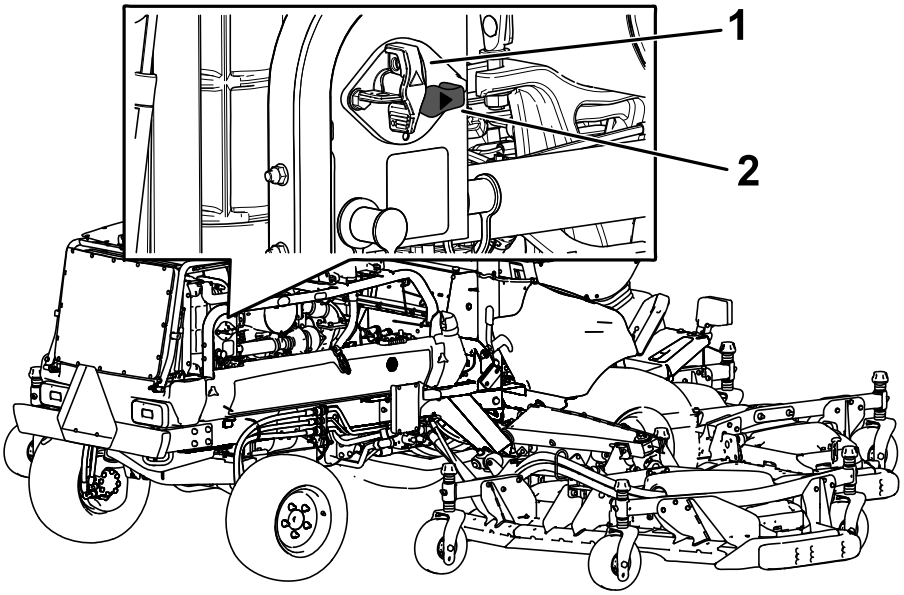


G416225

Using the Battery-Disconnect Switch

Groundsmaster 5900

1. Open the hood to access the battery-disconnect switch.
2. To de-energize the machine electrically, rotate the battery-disconnect switch counterclockwise to the OFF position.



G608379

(1) Battery-disconnect switch (OFF position)

(2) Battery-disconnect switch (ON position)

Installing the Inertial Measurement Unit (IMU)

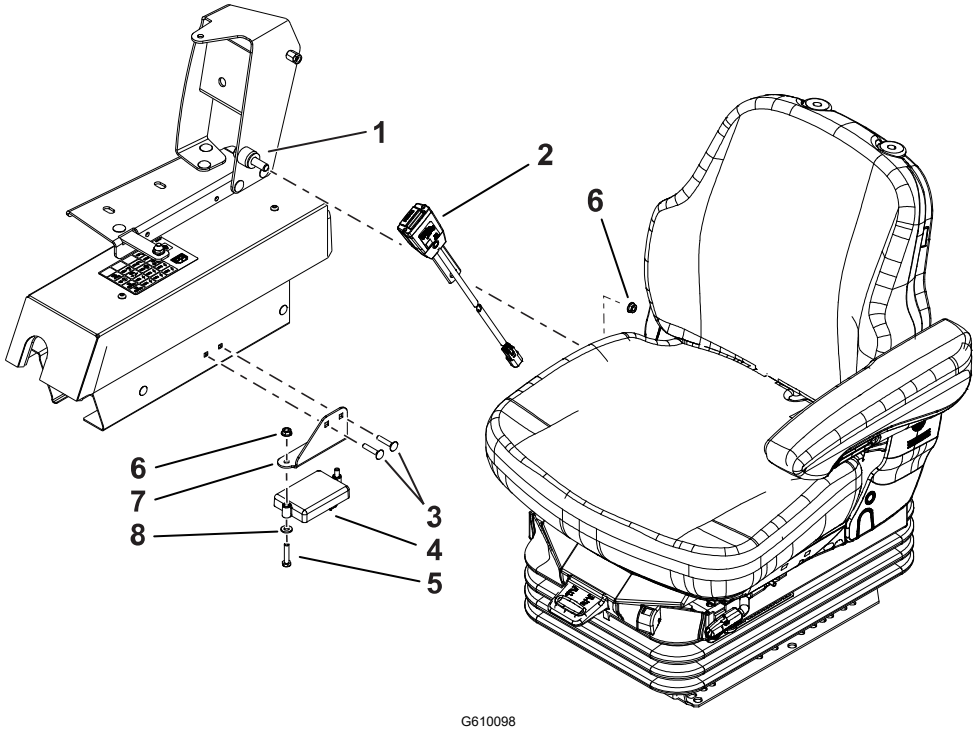
Groundsmaster 4000 Series

Parts Required

1	IMU
1	IMU bracket
1	Bolt (1/4 x 1-1/4 inches)
2	Washer
2	Serrated locknut (1/4 inch)
1	Seat belt buckle

1. Install the IMU to the IMU bracket as shown.
2. Move the seat all the way forward.
3. Remove the existing seat belt buckle from the platform. Retain the hardware.
4. Install the new seat belt buckle to the platform with the previously removed hardware and a new serrated locknut.

5. Torque the bolt to **55 N·m (41 ft-lb)**.
6. Remove the existing carriage bolts from the side of the platform.
7. Install the IMU assembly to the platform side with the previously removed carriage bolts as shown.



G610098

1. Existing hardware for the seat belt
2. Seat belt buckle
3. Existing carriage bolts
4. IMU

5 Bolt (1/4 x 1-1/4 inches)

6 Serrated locknut (1/4 inch)

7 IMU bracket

8 Washer

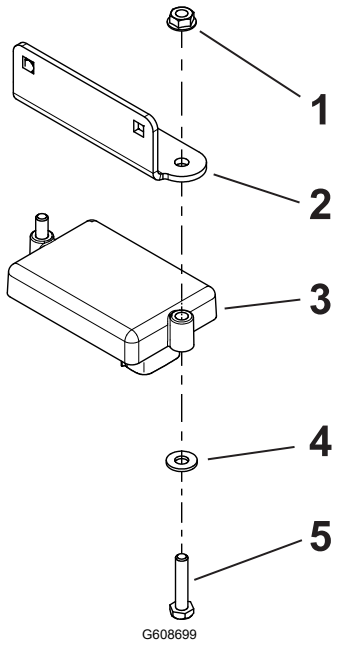
Installing the Inertial Measurement Unit (IMU)

Groundsmaster 5900

Parts Required

1	IMU
1	IMU bracket
1	Bolt (1/4 x 1-1/4 inches)
2	Washer
4	Serrated locknut (1/4 inch)

1. Install the IMU to the IMU bracket as shown.



1 Serrated locknut (1/4 inch)

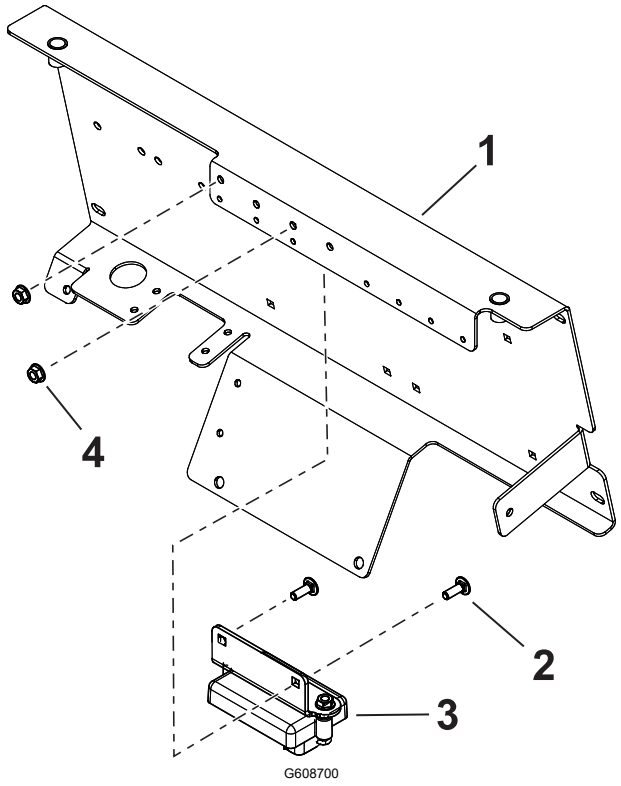
2 IMU bracket

3 IMU

4 Washer

5 Bolt (1/4 x 1-1/4 inches)

2. Move the seat all the way forward.
3. Install the IMU assembly to the platform bracket behind the seat as shown.



1. Platform bracket
2. Carriage bolt (1/4 x 3/4 inch)
3. IMU assembly
4. Serrated locknut (1/4 inch)

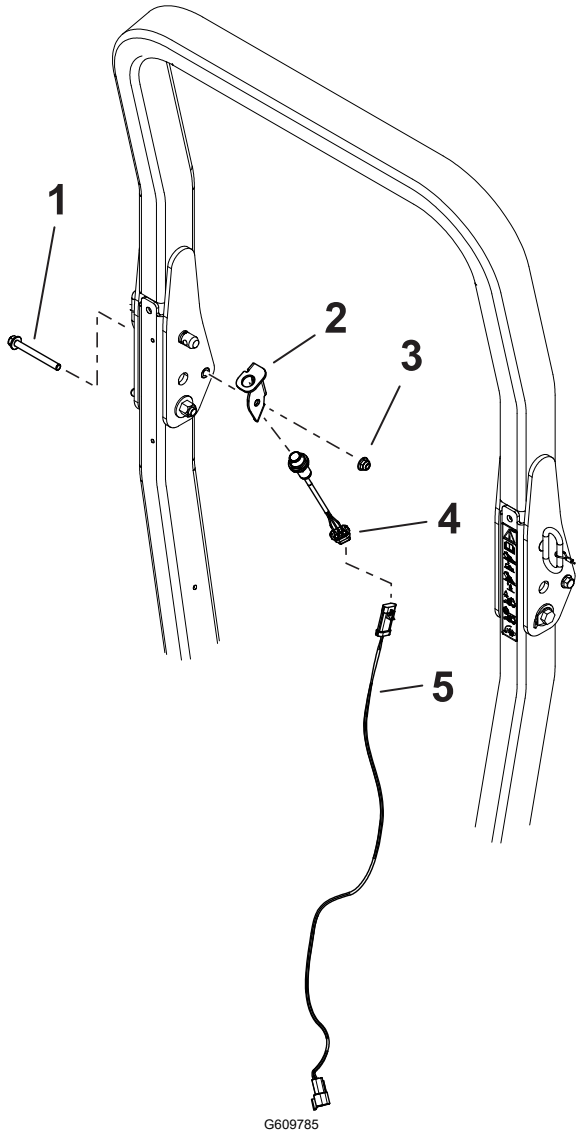
Installing the Proximity Sensor

Groundsmaster 4000 Series

Parts Required

1	Bolt (3/8 x 3-1/2 inches)
1	Sensor bracket
2	Locknut (3/8 inch)
1	Sensor
1	Rollbar harness

1. Install the sensor to the sensor bracket.
2. Install the sensor and bracket to the rollbar with a bolt and locknut.
3. Install the rollbar harness to the connector on the sensor.



1. Bolt (3/8 x 3-1/2 inches)
2. Sensor bracket
3. Locknut (3/8 inch)
4. Sensor
5. Rollbar harness

4. Adjust the sensor so that it is 5 mm or less from the ROPS pin.

Installing the Inertial Measurement Unit (IMU)

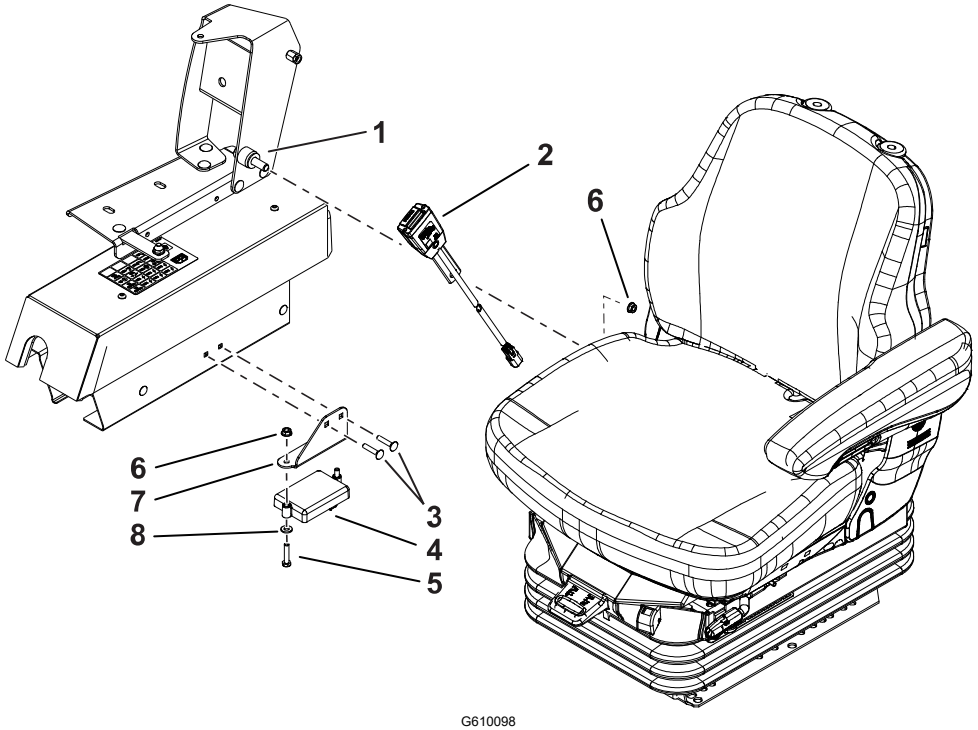
Groundsmaster 4000 Series

Parts Required

1	IMU
1	IMU bracket
1	Bolt (1/4 x 1-1/4 inches)
2	Washer
2	Locknut (1/4 inch)
1	Seat belt buckle

1. Install the IMU to the IMU bracket as shown.
2. Move the seat all the way forward.
3. Remove the existing seat belt buckle from the platform. Retain the hardware.
4. Install the new seat belt buckle to the platform with the previously removed hardware and a new locknut.

5. Torque the bolt to **55 N·m (41 ft-lb)**.
6. Remove the existing carriage bolts from the side of the platform.
7. Install the IMU assembly to the platform side with the previously removed carriage bolts as shown.



G610098

1. Existing hardware for the seat belt
2. Seat belt buckle
3. Existing carriage bolts
4. IMU

5 Bolt (1/4 x 1-1/4 inches)

6 Locknut (1/4 inch)

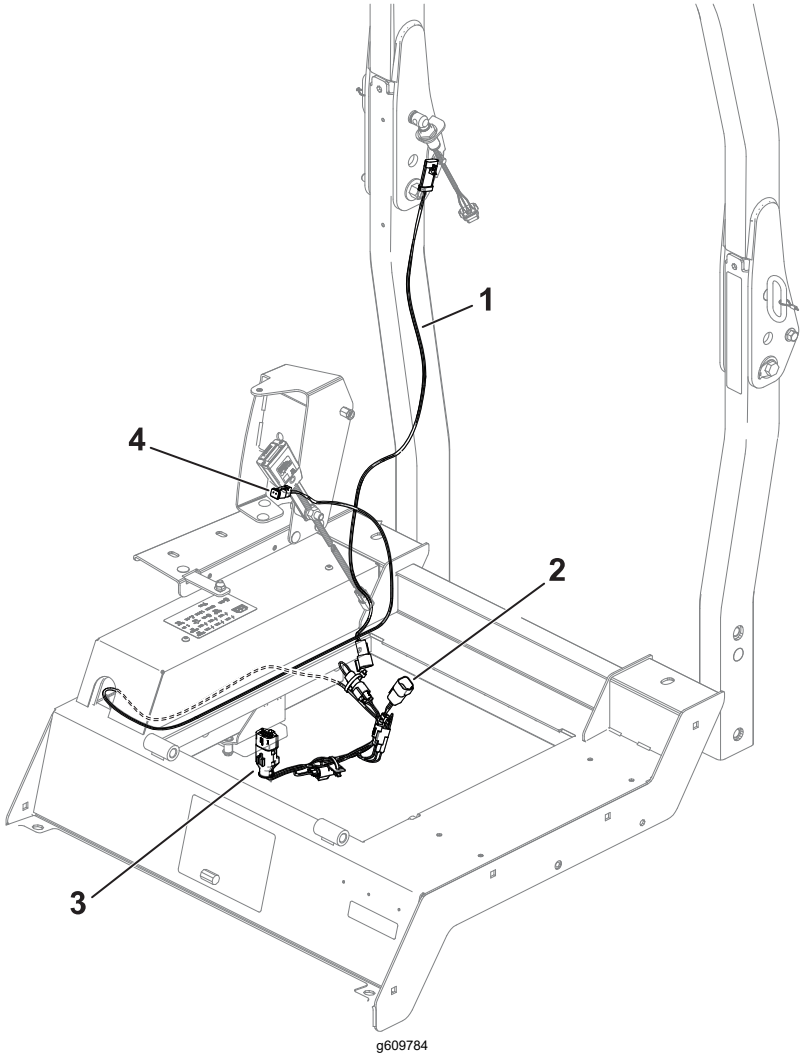
7 IMU bracket

8 Washer

Routing the Wire Harness

Groundsmaster 4000 Series

1. Connect the 12-pin connector on the kit wire harness to the IMU.
2. Route the wire harness along the back of the seat as shown.
3. Install the 6-pin connector on the kit harness into the expansion port on the main wire harness.
4. Route the seat belt connector under the control arm.



(1) Rollbar harness

(2) 6-pin connector on kit wire harness; plug into expansion port on main wire harness

(3) 12-pin connector on kit wire harness; plug into the IMU

(4) Route the seat belt connector under the control arm

5. Plug the seat belt connector into the seat belt buckle. Plug the alarm connector into the alarm.
6. Secure the kit wire harness to the machine wire harness using cable ties.

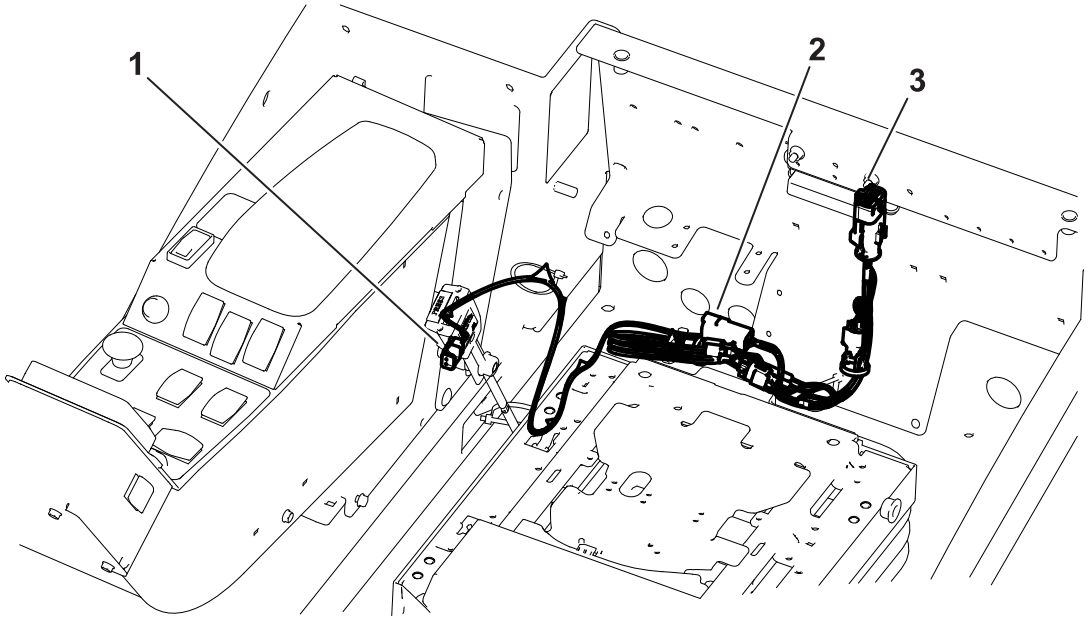
Routing the Wire Harness

Groundsmaster 5900

Parts Required

1	Wire harness
6	Cable tie

1. Connect the 12-pin connector on the kit wire harness to the IMU.
2. Route the wire harness along the back of the seat as shown.
3. Install the 6-pin connector on the kit harness into the expansion port on the main wire harness.
4. Secure the kit wire harness to the machine wire harness using cable ties.



(1) Seat belt connector

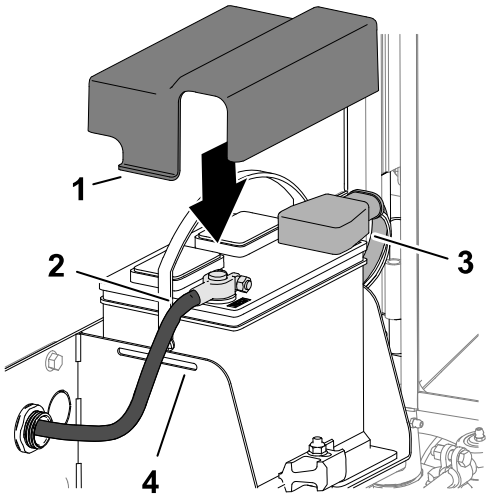
(2) 6-pin connector on kit wire harness; plug into expansion port on main wire harness

(3) 12-pin connector on kit wire harness; plug into the IMU

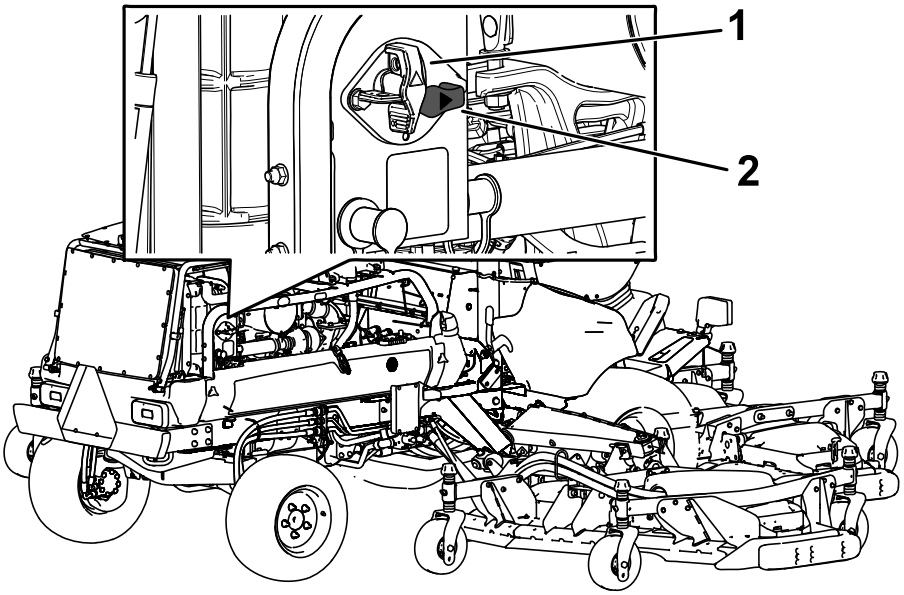
5. Plug the seat belt connector into the seat belt buckle. Plug the alarm connector into the alarm.
6. Secure the kit wire harness to the machine wire harness using cable ties.

Installing the Battery or Engaging the Battery Switch

1. For the Groundsmaster 4000 series machines, install the positive battery cable (red) [3] to the positive (+) battery post.
2. Install the negative battery cable (black) [2] to the negative (-) battery post.
3. Apply a coat of Grafo 112X (skin-over) grease, Toro Part No. 505-47 to the battery posts and battery-cable clamps.
4. Slide the rubber boot over the positive battery-cable clamp.
5. Assemble the cover over the battery, inserting the tabs [1] of the cover into the slots [4] in the battery tray.
6. For the Groundsmaster 5900 machine, rotate the battery-disconnect switch to the ON position.



G416226



G608379

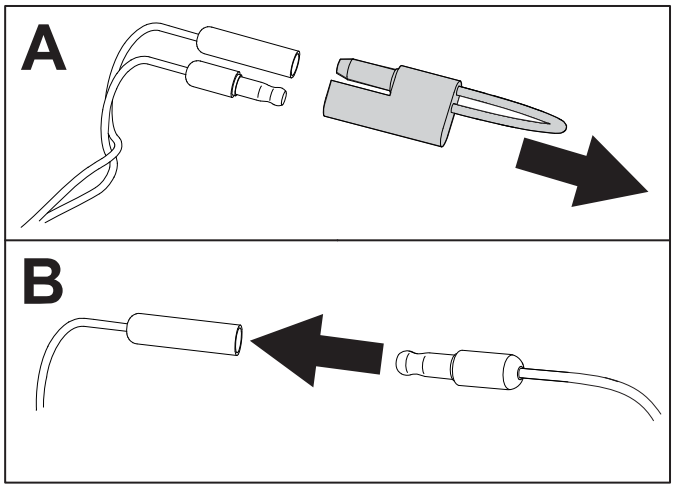
[1] Battery-disconnect switch (OFF position)

[2] Battery-disconnect switch (ON position)

7. Close and latch the screen/hood.

Calibrating the Kit

1. Move the machine to level ground and ensure that the vehicle is not moved during calibration.
2. Locate the calibration jumper on the alarm harness located near the IMU.
3. Remove the calibration jumper from the 2 bullet terminals and connect the 2 terminals together.



G610386

4. Turn on the machine and allow at least 30 seconds for automatic calibration. Once complete, the InfoCenter will display a calibration confirmation.

   Note: Ensure that the vehicle is not moved during calibration.
5. Turn off the machine, disconnect the terminals, and install the calibration jumper onto the 2 bullet terminals.

Testing the Alarm Function

1. Unlatch the seat belt.
2. Briefly drive the machine in an open area.
3. Verify that the audible alarm is active.
4. Verify that the visual alarm icon appears on the InfoCenter.

Notes:


TORO®