Form No. 3401-934 Rev A

LED Light and Wireless Hour Meter Harness Kit

2012 and After Greensmaster® 800, 1000, 1600, Flex™ 1800, or 2100 Series Mower

Model No. 04295

Installation Instructions

Contact your Authorized Toro Distributor for more information.

This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

⚠ WARNING

CALIFORNIA
Proposition 65 Warning

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare the machine.
2	No parts required	–	Remove the control-panel cover (1800 or 2100 series machines).
3	Flange head screw Voltage regulator Mounting bracket Wire harness	2 1 1 1	Assemble the voltage regulator.
4	Cable tie	2	Route the wire harness.
5	Rocker switch	1	Connect the wire harness.
6	No parts required	–	Finish the LED light and wireless hour meter harness kit installation.
7	No parts required	–	Install the wire harness to the LED light kit and/or wireless hour meter kit.

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CE

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3401-934 A

1

Preparing the Machine

No Parts Required

Preparing an 800, 1000, or 1600 Series Machine

1. Ensure the reel-drive lever is in the REEL-DRIVE OFF position; refer to the *Operator's Manual*.
2. Move the machine to a level surface and set the traction-drive lever to the TRACTION-DRIVE NEUTRAL position; refer to the *Operator's Manual*
3. Set the throttle control to the SLOW position and set the On-Off switch to the OFF position; refer to the *Operator's Manual*.
4. Set the parking brake; refer to the *Operator's Manual*.
5. Disconnect the spark-plug wire from the terminal of the spark plug (Figure 1).

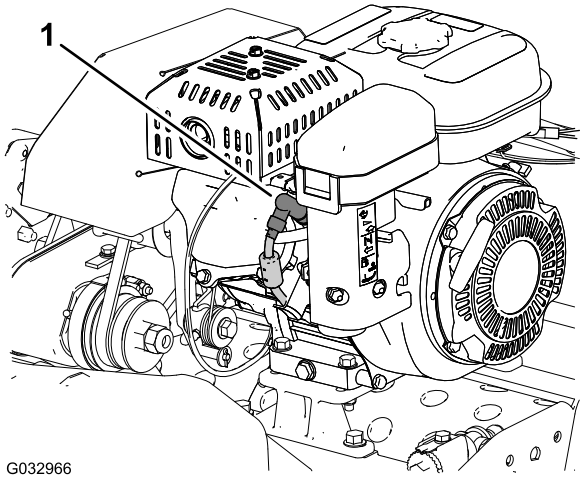


Figure 1

1. Spark-plug wire

Preparing an 1800 or 2100 Series Machine

1. Ensure the traction and reel drive engagement lever is in the REEL-DRIVE OFF position; refer to the *Operator's Manual*.
2. Move the machine to a level surface and set the traction and reel drive engagement lever to the TRACTION-DRIVE NEUTRAL position; refer to the *Operator's Manual*.
3. Set the throttle control to the SLOW position and set the On-Off switch to the OFF position; refer to the *Operator's Manual*.
4. Set the parking brake; refer to the *Operator's Manual*.
5. Disconnect the spark-plug wire from the terminal of the spark plug (Figure 2).

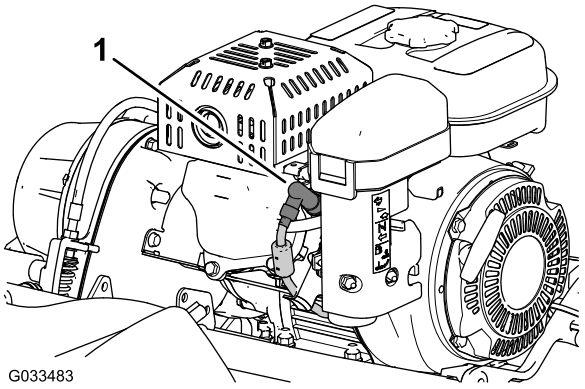


Figure 2

1. Spark-plug wire

2

Removing the Control-Panel Cover (1800 or 2100 Series Machines)

No Parts Required

Procedure

1. Remove the 4 flange-head screws (1/4 x 1/2 inch) that secure the control-panel cover to the support bracket of the handle bar (Figure 3).

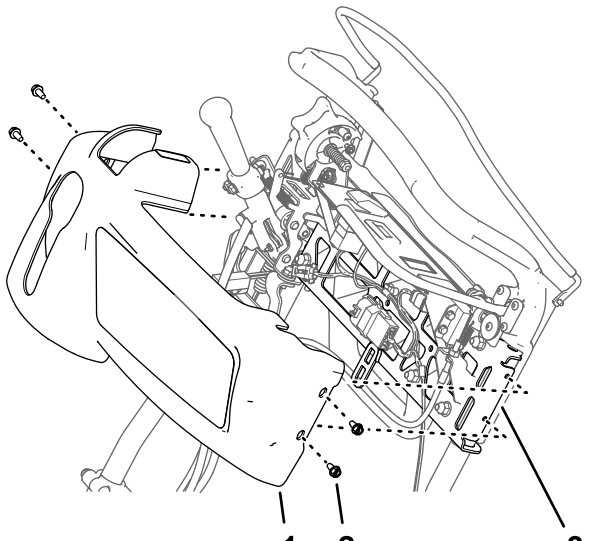


Figure 3

1. Control-panel cover
2. Flange-head screw (1/4 x 1/2 inch)
3. Support bracket (handle bar)

2. Move the control-panel cover up and forward from the control panel, and remove the cover from the machine (Figure 3).

   Note: Retain the flange-head screws and control-panel cover for assembly in 6 Finishing the LED Light and Wireless Hour Meter Harness Kit Installation (page 10).

3

Assembling the Voltage Regulator

Parts needed for this procedure:

2	Flange head screw
1	Voltage regulator
1	Mounting bracket
1	Wire harness

Assembling the Voltage Regulator, Mounting Bracket, and Wire Harness

1. Align the ground terminal and the slots in the voltage regulator to the holes in the mounting bracket (Figure 4).

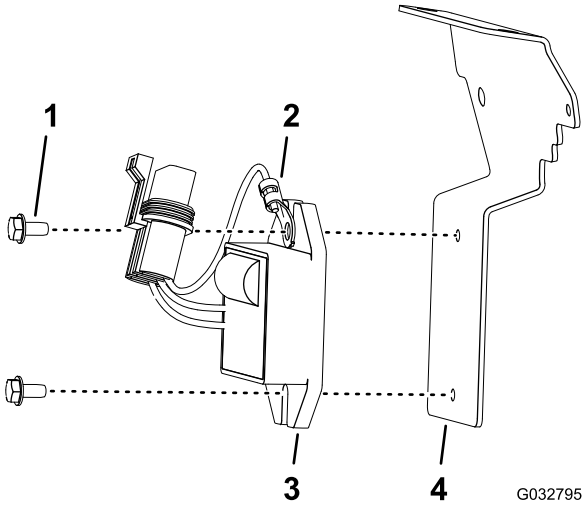


Figure 4

1. Flange head screw
2. Ground terminal
3. Voltage regulator
4. Mounting bracket

2. Assemble the terminal and regulator to the bracket with 2 flange head screws (Figure 4).
3. Torque the flange head screws to 283 to 395 N·cm (25 to 35 in-lb).
4. Connect the 3-pin connector of the wire harness with the 3-socket connector of the voltage regulator (Figure 5).

   Note: Ensure that the connectors are fully seated and the latch of the connectors snap together securely.

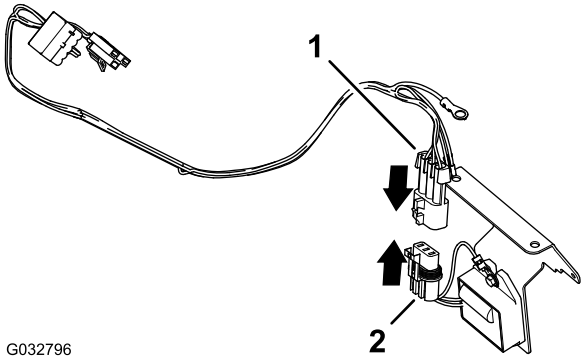


Figure 5

1. 3-pin connector (wire harness)
2. 3-socket connector (voltage regulator)

Assembling the Voltage Regulator and Mounting Bracket to the Machine

1. Prepare the machine for installation of the voltage regulator and mounting bracket by performing the following:
   - **800, 1000, or 1600 series machine**
     A. At the back of the engine, remove the cable tie that secures the wire harness for the interlock module to the wire-harness bracket (A of Figure 7).

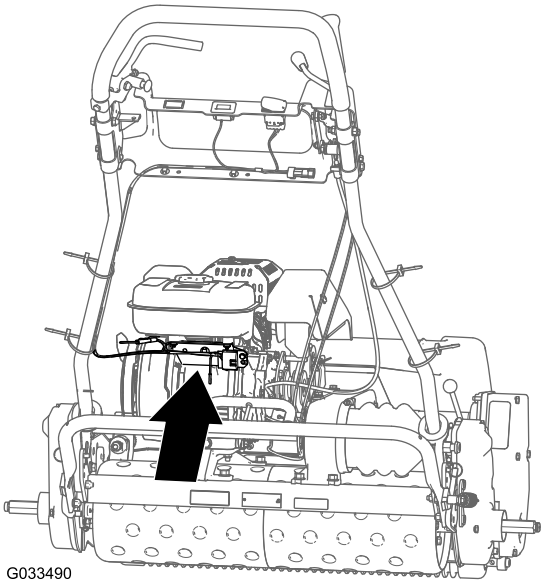


Figure 6

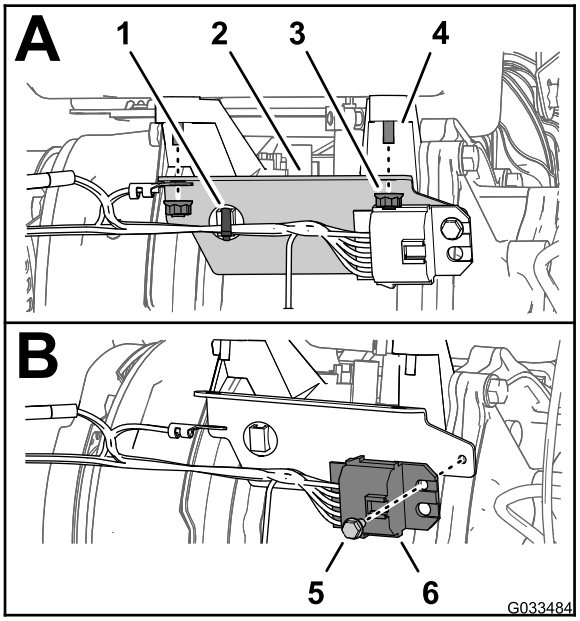


Figure 7

1. Cable tie (fir-tree anchor)
2. Wire-harness bracket
3. Nut
4. Stud (fuel tank)
5. Flange-head bolt (10-24 x 3/8 inch)
6. Interlock module

     B. Remove the 2 nuts that secure the wire-harness bracket to the engine (A of Figure 7)
     C. Remove the flange-head bolt 10-24 x 3/8 inch that secures the interlock module to the wire-harness bracket (Figure 7).

     Note: You no longer need the wire-harness bracket.

   - **1800 or 2100 series machine—**At the back of the engine, remove the 2 nuts that secure the tank to the engine (Figure 9).

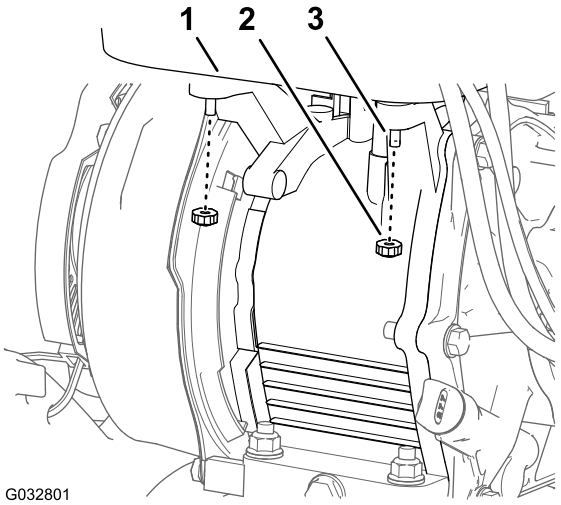


Figure 8

1. Fuel tank
2. Nut
3. Stud (fuel tank)

2. Align the ground terminal of the wire harness with the left hole short flange of the mounting bracket for the voltage regulator as shown in Figure 9.

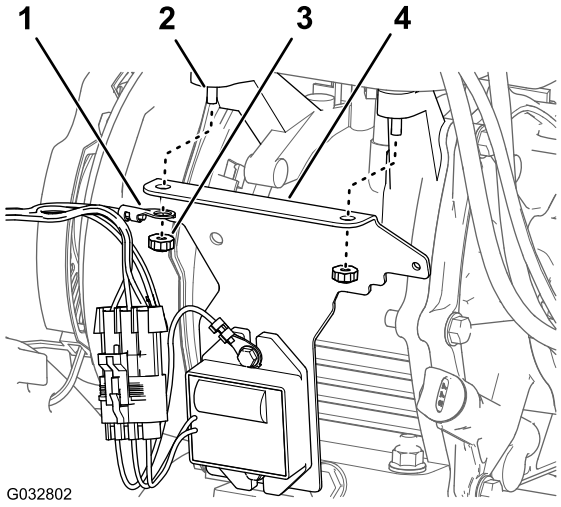


Figure 9

1. Ground terminal (wire harness)
2. Stud (fuel tank)
3. Nut
4. Mounting bracket (voltage regulator)

3. Align the holes in the short flange of the mounting bracket for the voltage regulator with the rear studs of the fuel tank (Figure 9).
4. Assemble the mounting bracket and ground terminal to the engine with the 2 nuts that you removed in step 1 (Figure 9).
5. Torque the nuts to 9.7 to 12.0 N·m (86 to 106 in-lb).

4

Routing the Wire Harness

Parts needed for this procedure:

2	Cable tie

Procedure

1. Route the wire harness from the mounting bracket to the left handlebar (Figure 10 and Figure 11).

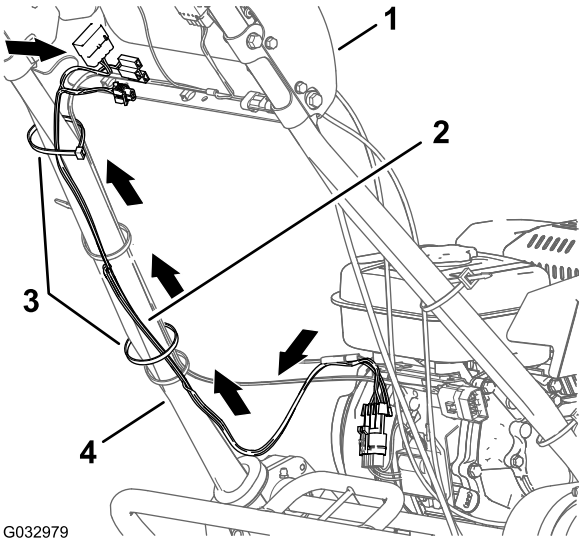


Figure 10

800, 1000, or 1600 Series Machine

1. Console
2. Wire harness
3. Cable ties
4. Left handlebar tube

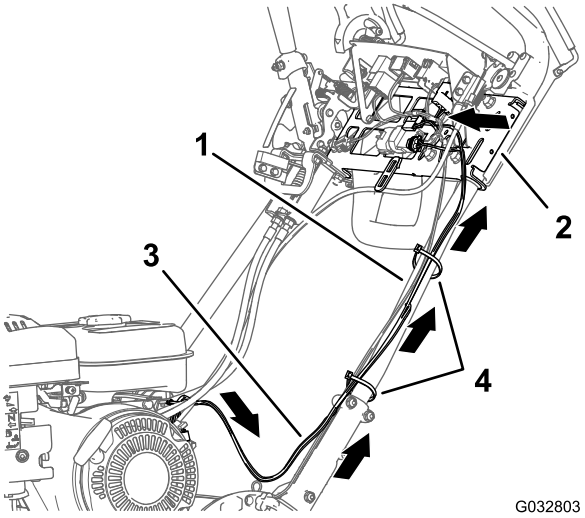


Figure 11

1800 or 2100 Series Machines

1. Left handlebar
2. Support bracket (handle bar)
3. Wire harness
4. Cable ties

2. Route the wire harness along the left handle bar and across the support bracket of the handle bars (Figure 11).
3. Secure the wire harness with 2 cable ties as shown in Figure 10 and Figure 11.

5

Connecting the Wire Harness

Parts needed for this procedure:

1	Rocker switch

Connecting the Wire Harness to the Engine

1. Locate the engine-alternator harness at the rear side of the engine case (Figure 12).

   Note: The engine-alternator harness has 2 wires with single socket connectors.

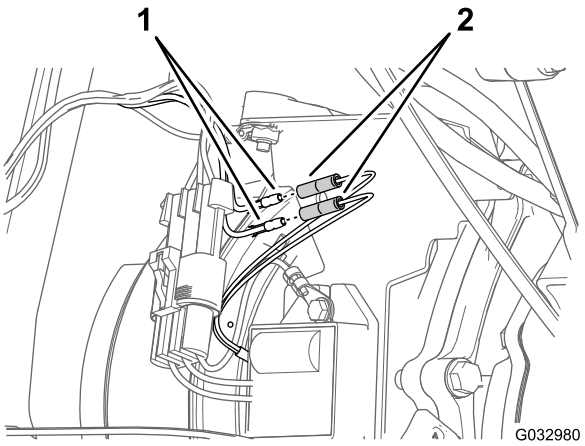


Figure 12

1. Bullet connectors (wire harness)
2. Socket connectors (engine-alternator harness)

2. Connect the 2 bullet connectors of the wire harness to the 2 socket connectors of the engine-alternator harness (Figure 12).

Identifying the Electrical Connectors

- Use the 3-socket connector when installing the optional **Wireless-Hour Meter Kit** (Figure 13 and Figure 14).
- Use the 2-socket connector light harness interconnect when installing the optional **LED Light Kit** (Figure 13 and Figure 14)

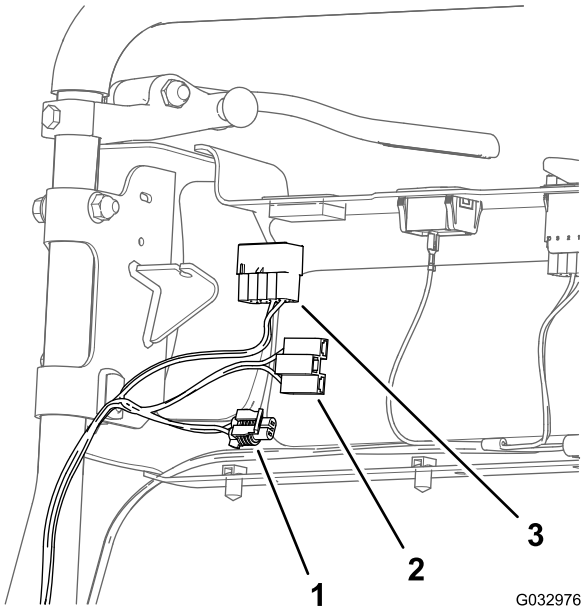


Figure 13

800, 1000, or 1600 Series Machine

1. 2-socket connector (LED-light harness interconnect—use with the optional LED Light Kit)
2. 3-socket connector (hour meter—use with the optional Wireless Hour Meter Kit)
3. 10-socket connector (light switch)

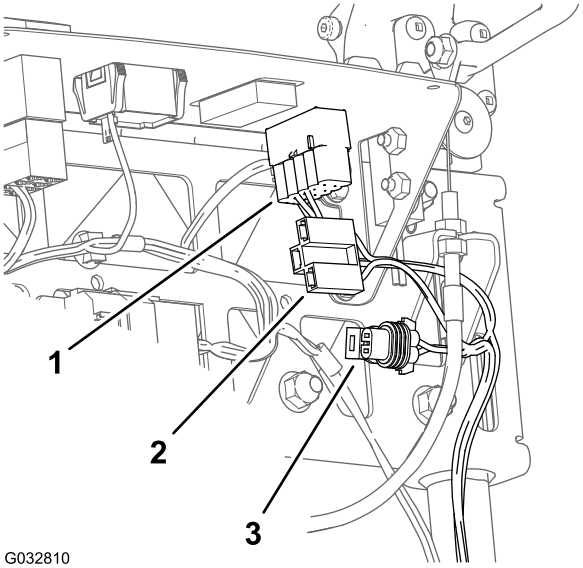


Figure 14

1800 or 2100 Series Machines

1. 10-socket connector (light switch)
2. 3-socket connector (hour meter—use with the optional Wireless Hour Meter Kit)
3. 2-socket connector (LED-light harness interconnect—use with the optional LED Light Kit)

Installing the Light Switch (800, 1000, 1600 Series Machines)

1. Remove the knock-out plug at the top left area for the console (A Figure 15).

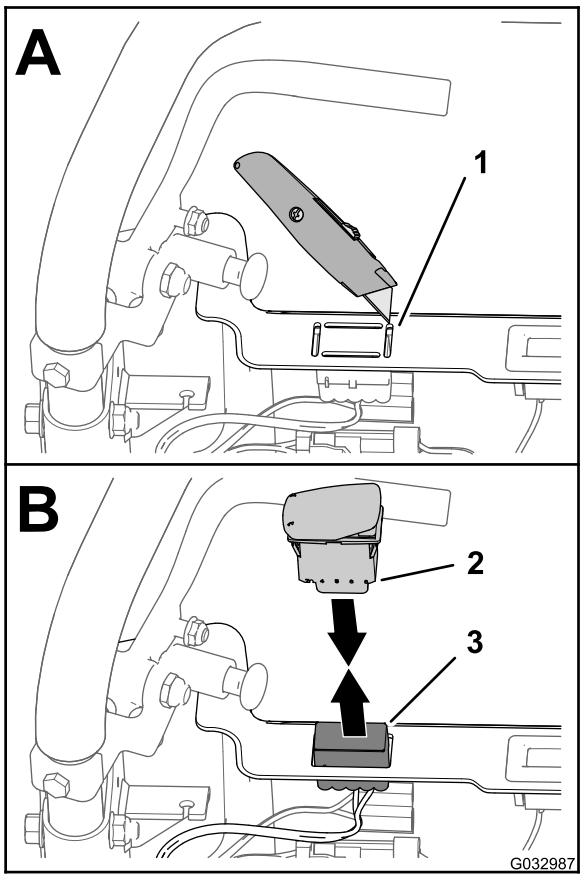


Figure 15

1. Knock-out plug (console)
2. 2-position rocker switch
3. 10-socket connector (wire harness—Light Kit and Hour Meter Wire Harness Kit)

2. Pull up the 10-socket connector of the wire harness from the light kit and hour meter wire harness kit through the opening in the control panel (Figure 15).
3. Connect the 10-pin connector of the 2-position rocker switch into the 10-socket connector of the light kit and hour meter kit (Figure 15).

   Note: Ensure that the connectors are fully seated and the latch of the connectors snap together securely.
4. Align the switch so that the notch in the body of the switch is toward the left side of the control panel (Figure 16).

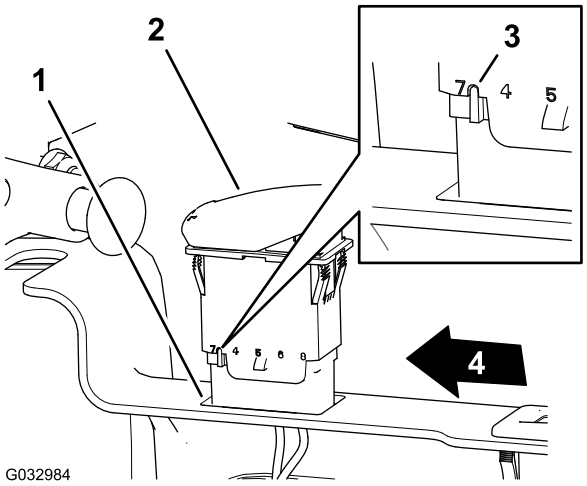


Figure 16

1. Opening (control panel)
2. 2-position rocker switch
3. Notch (body—rocker switch)
4. Left side of the control panel

5. Insert the switch into the opening in the control panel until the switch snaps securely into the panel (Figure 16).

Installing the Light Switch (1800 or 2100 Series Machines)

1. Remove the plug from the opening at the left face of the control panel (Figure 17).

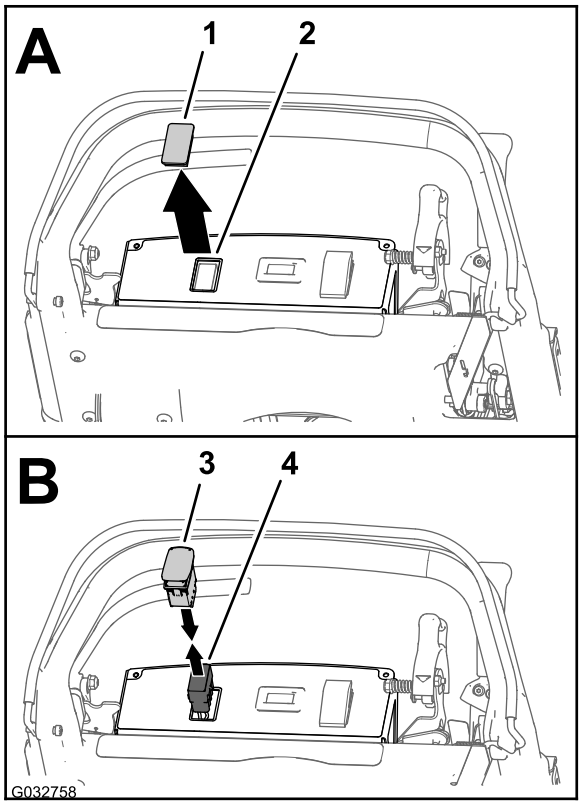


Figure 17

1. Plug
2. Opening (control panel)
3. 2-position rocker switch
4. 10-socket connector (wire harness—Light Kit and Hour Meter Wire Harness Kit)

2. Pull up the 10-socket connector of the wire harness from the light kit and hour meter wire harness kit through the opening in the control panel (Figure 17).
3. Connect the 10-pin connector of the 2-position rocker switch into the 10-socket connector of the light kit and hour meter kit (Figure 17).

   Note: Ensure that the connectors are fully seated and the latch of the connectors snap together securely.
4. Align the switch so that the notch in the body of the switch is toward the front of the control panel (Figure 18).

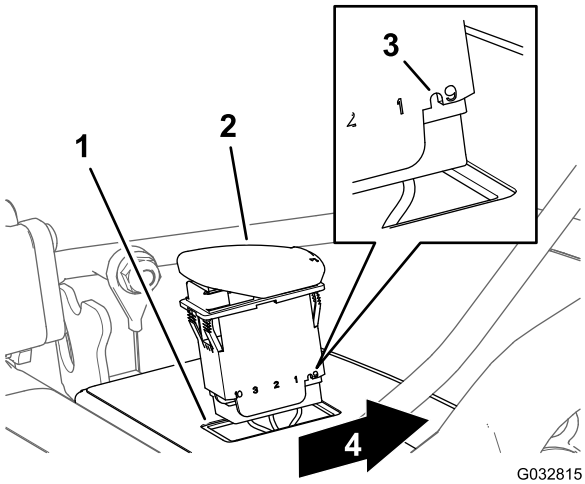


Figure 18

1. Opening (control panel)
2. 2-position rocker switch
3. Notch (body—rocker switch)
4. Front of the control panel

5. Insert the switch into the opening in the control panel until the switch snaps securely into the panel (Figure 18).

6

Finishing the LED Light and Wireless Hour Meter Harness Kit Installation

No Parts Required

Installing the Control-Panel Cover (1800 or 2100 Series Machines)

1. Align the key-hole slot in the control-panel cover over the traction and reel drive engagement lever (Figure 19).

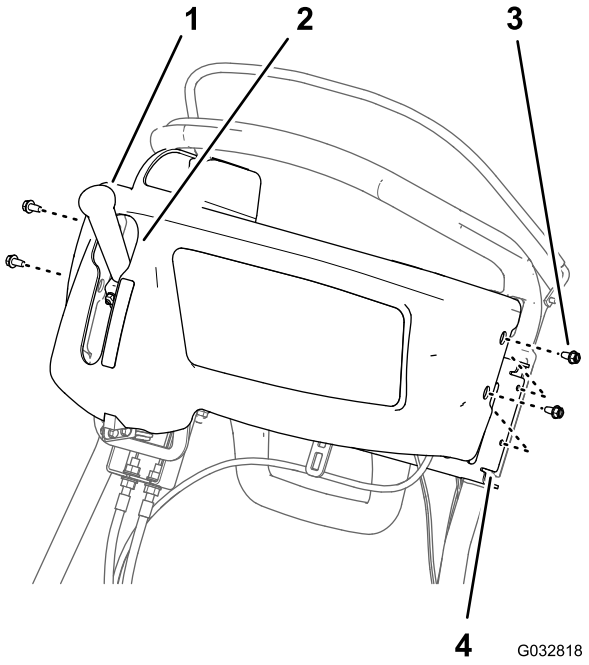


Figure 19

1. Traction and reel drive engagement lever
2. Key-hole slot (control-panel cover)
3. Flange-head screws (1/4 x 1/2 inch)
4. Support bracket (handle bar)

2. Align the holes in the side of the control-panel cover with the holes in the support bracket for the handle bars (Figure 19).
3. Install the control-panel cover to the support bracket with the 4 flange-head screws (1/4 x 1/2 inch) that you removed in step 1 of 2 Removing the Control-Panel Cover (1800 or 2100 Series Machines) (page 3).
4. Torque the flange-head screws to 5.2 to 6.8 N·m (46 to 60 in-lb).

Connecting the Spark-Plug Wire

Connect the spark-plug wire to the terminal of the spark plug as shown in Figure 2 of 1 Preparing the Machine (page 2).

7

Installing the Wire Harness to the LED Light Kit and/or Wireless Hour Meter Kit

No Parts Required

Procedure

- Refer to the installation instructions in your LED Light Kit to install the wire harness for the LED light to the wire harness of the LED Light and Wireless Hour Meter Harness Kit.
- Refer to the installation instructions in the myTurf™ Wireless Hourmeter System reference guide to install the hour meter to the wire harness.

Notes:



Count on it.