Form No. 3378-781 Rev B

Front Differential Interrupter Kit

Four-Wheel Drive Workman® HDX/HDX-D Utility Vehicle

Model No. 121-6337

Installation Instructions

⚠ 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.

Preparing to Install the Kit

1. Move the machine to a level surface.
2. Shut off the engine, set the parking brake, and remove the key.

Removing the Hood

1. While grasping the hood in the headlight openings, lift up on the hood to release the lower mounting tabs from the slots in the bumper (Figure 1).

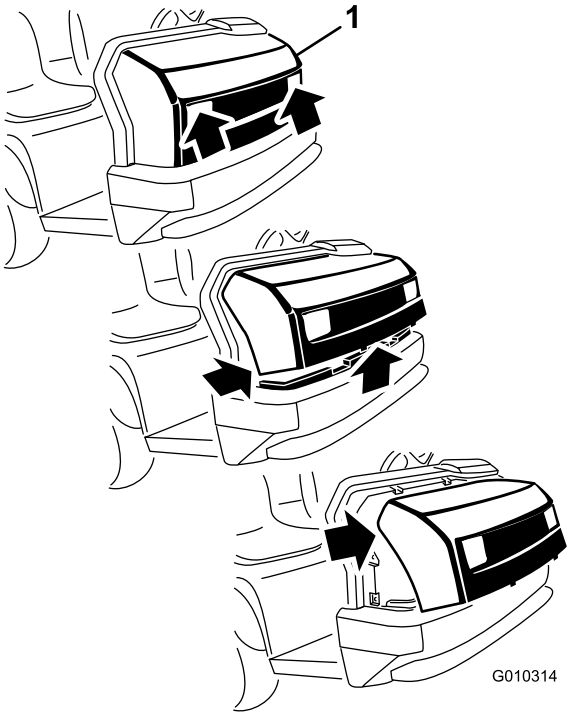

Figure 1

1. Hood

2. Pivot the bottom of the hood upward until the top mounting tabs can be pulled from the frame slots (Figure 1).
3. Pivot the top of hood forward and unplug the wire connectors from the head lights (Figure 1).
4. Remove the hood.

Installing the Clutch Switch

Drilling the Clutch Bracket

1. Align the drilling template to the top edge, face, bottom edge, and right side of the support bracket for the clutch pedal (Figure 2).

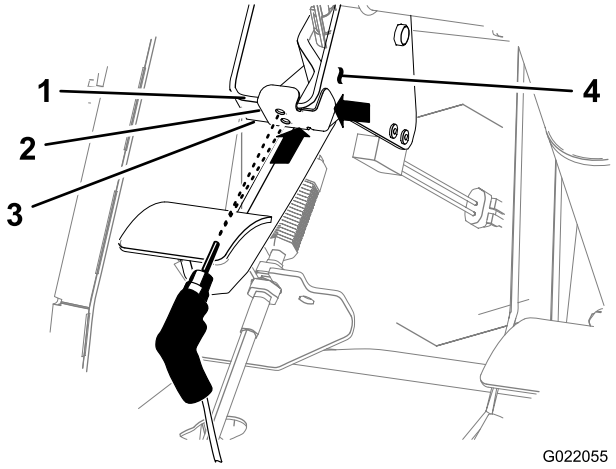

Figure 2

1. Support bracket (top edge)
2. Drilling template
3. Support bracket (bottom edge)
4. Support bracket (right side)

2. Using the template as a drilling guide, drill 2 holes (5/16 inch) through the face of the support bracket (Figure 2).

   Note: Press in the clutch pedal as necessary when drilling the support bracket.

3. Remove the drilling template and discard it.

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CE

Original Instructions (EN)
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Installing the Clutch Switch

1. Align the switch bracket to the 2-pin switch with the contact pins of the switch up, and the short flange of the bracket over the body of the switch (Figure 3).

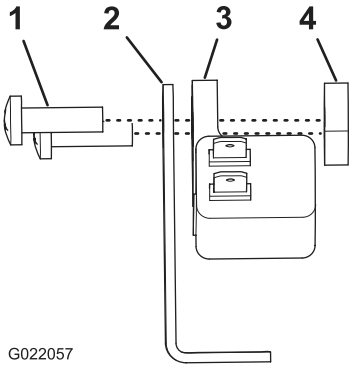

Figure 3

1. Screw
2. Bracket
3. 2-pin switch
4. Threaded plate

2. Align the bracket to the switch through the holes in the long flange of the bracket and the holes in the flange of the switch (Figure 3).
3. Secure the switch to the bracket with the 2 screws and a threaded plate (Figure 3).
4. Align the switch bracket and switch to the forward side of the support bracket for the clutch pedal (Figure 4).

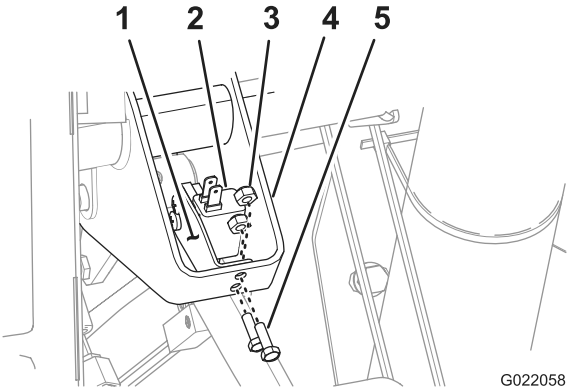

Figure 4

1. Switch bracket
2. 2-pin switch
3. Nut
4. Support bracket (clutch pedal)
5. Bolt

5. Align the holes in the switch bracket with the holes that you drilled in the support bracket (Figure 4).
6. Secure the switch bracket to the support bracket for the clutch pedal with the 2 bolts and 2 locknuts (Figure 4).

Replacing the Brake Switch

Removing the 2-Pin Brake Switch

1. Remove the socket connector of the machine harness from the 2-pin brake switch (Figure 5).

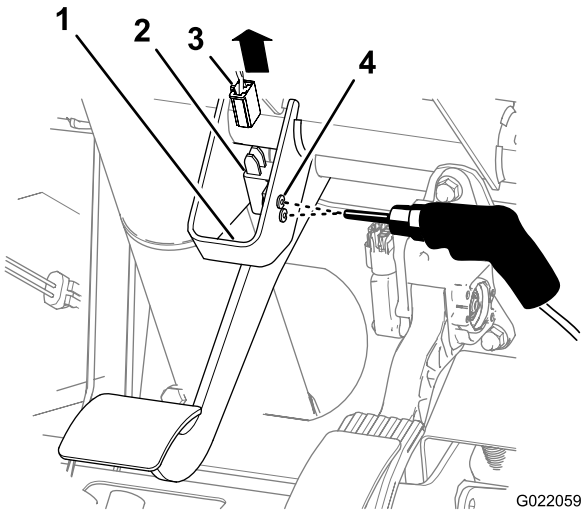

Figure 5

1. Support bracket (brake pedal)
2. 2-pin brake switch
3. Socket connector
4. Pop rivet

2. Using a 3/16-inch drill bit, drill the 2 pop rivets that secure the 2-pin brake switch to the support bracket for the brake pedal (Figure 5).
3. Remove the 2-pin brake switch and washers from the support bracket (Figure 5).

Installing the 4-Pin Brake Switch

1. Align the new **4-pin brake switch** to the **support bracket for the brake pedal** with the pins of the switch facing up toward the steering wheel (Figure 6).

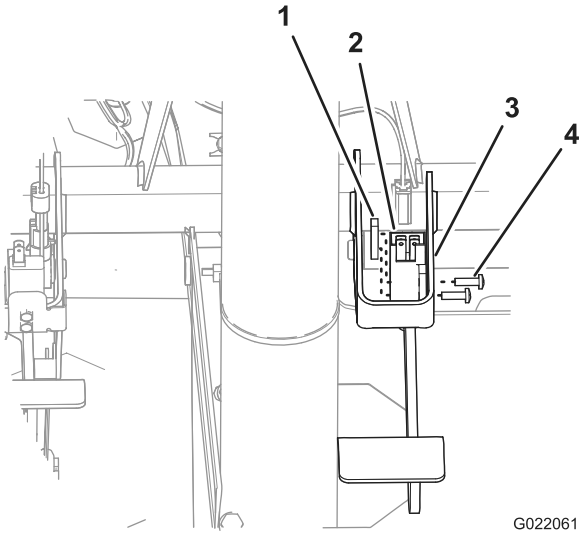

Figure 6

1. Threaded plate
2. 4-pin brake switch
3. Support bracket (brake pedal)
4. Screw

2. Align the holes of the 4-pin brake switch to the holes in the support bracket (Figure 6).
3. Secure the switch to the bracket with the 2 screws and the other threaded plate (Figure 6).

Installing the Interrupter Wiring Harness

Routing the Wiring Harness

1. Align the interrupter wiring harness to the chassis of the machine as shown in Figure 7.

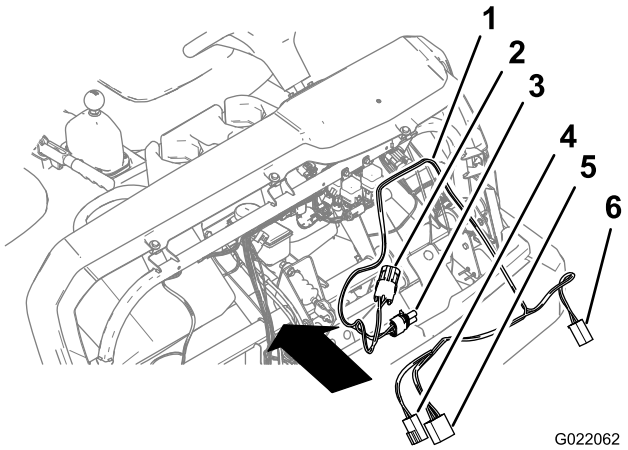

Figure 7

1. Interrupter wiring harness
2. 2-socket connector (delay timer)
3. 2-pin connector (delay timer)
4. 2-pin connector (brake switch)
5. 4-socket connector (brake switch)
6. 2-socket connector (clutch switch)

2. Route the delay timer branch of the interrupter harness as follows:
   A. Route the branch of the harness with the 2-socket connector and the 2-pin connector for the timer delay along the outboard side of the outboard steering-column bracket and then behind the steering-column bracket at the chassis tube (Figure 8).

      Note: The bodies of the delay timer connectors are oval shaped.

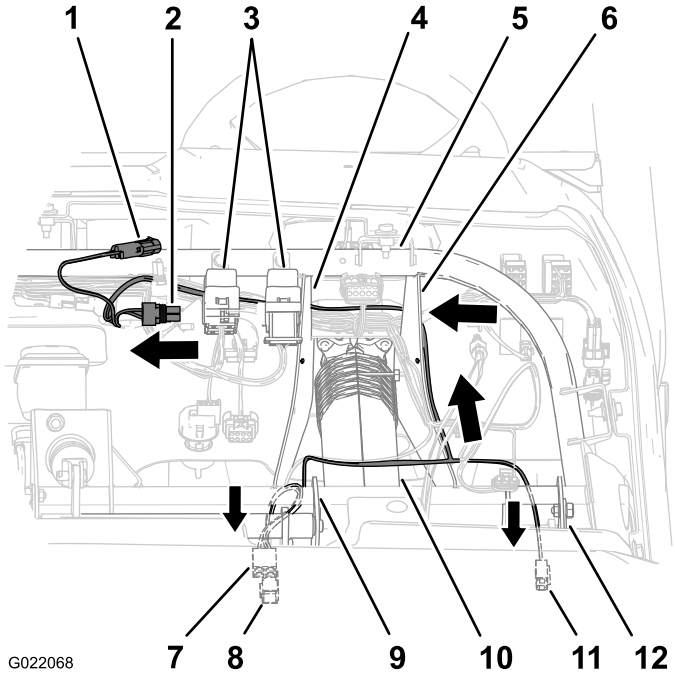

Figure 8

1.	2-socket connector (delay timer)	5.	Chassis tube	9.	Support bracket (brake pedal)
2.	2-pin connector (delay timer)	6.	Steering-column bracket (outboard)	10.	Steering column
3.	Relay	7.	4-socket connector (brake switch)	11.	2-socket connector (clutch switch)
4.	Steering-column bracket (inboard)	8.	2-pin connector (brake switch)	12.	Support bracket (clutch pedal)

B. Continue routing the branch of the harness inboard along the wiring harness for the machine that routes in front of the instrument panel.

C. Continue routing the branch of the harness behind the inboard steering-column bracket and behind the 2 relays that are mounted on the chassis tube.

3. Route the branch of the harness with the 2-socket connector for the clutch switch along the support bracket for the clutch pedal (Figure 9).

Note: The body of the clutch switch connector is rectangular shaped.

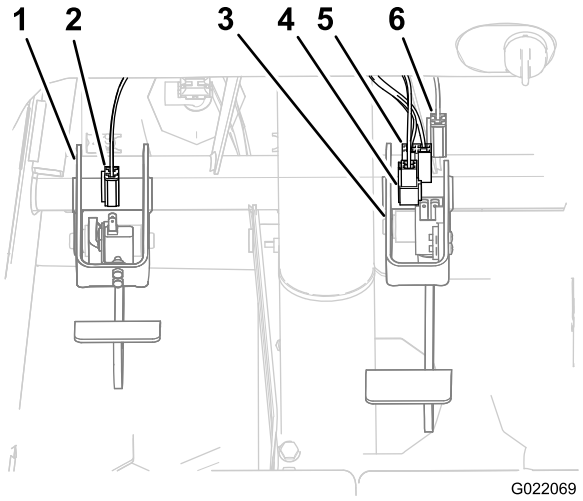

Figure 9

1.	Support bracket (clutch pedal)	4.	2-pin connector (brake switch)
2.	2-socket connector (clutch switch)	5.	4-socket connector (brake switch)
3.	Support bracket (brake pedal)	6.	2-socket connector (machine harness)

4. Route the branch of the interrupter harness with the 4-socket connector and the 2-pin connector for the brake switch along the inboard side of the steering column and over the back of the horizontal support tube

Note: The body of the brake connectors are rectangular shaped.

Connecting the Harness

1. Disconnect the battery as follows:
   A. Squeeze the battery cover to release the tabs from battery base (Figure 10).

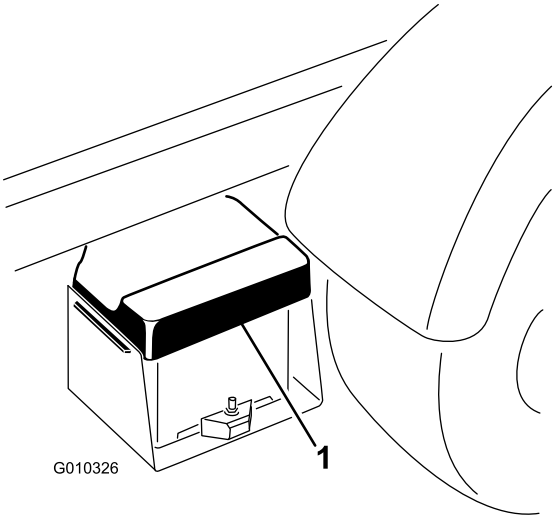

Figure 10

1. Battery cover

   B. Remove the battery cover from the battery base (Figure 10).
   C. Remove the terminal of the positive battery cable from the battery post (Figure 11).

   Note: Ensure that the terminal positive battery cable does not touch the battery post.

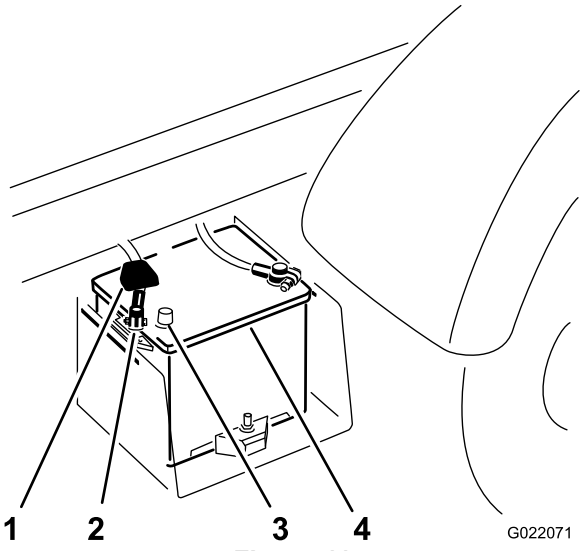

Figure 11

1. Terminal cover
2. Positive terminal
3. Battery post
4. Battery

2. Connect the 2-socket connector to the clutch switch (Figure 12).

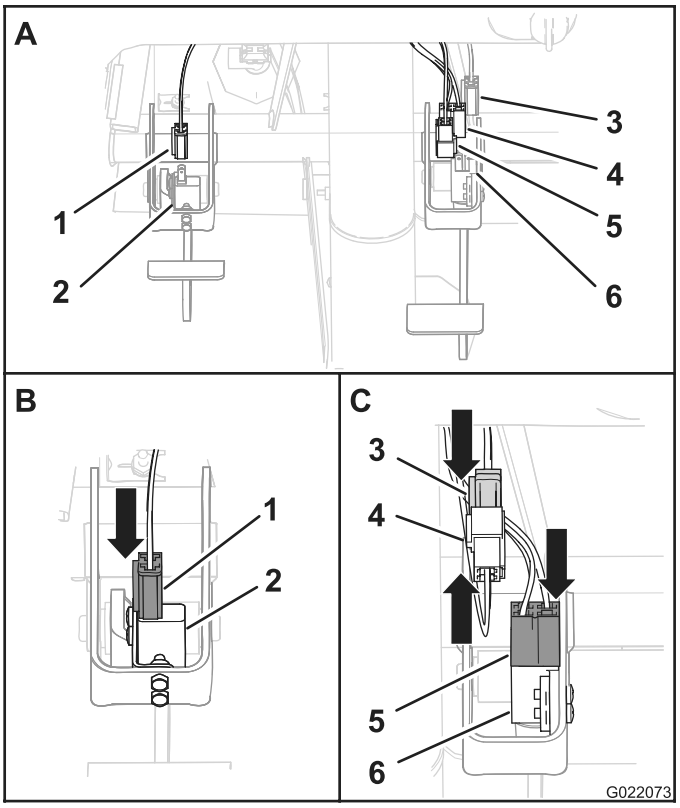

Figure 12

1. 2-socket connector (clutch switch)
2. Clutch switch
3. 2-socket connector (machine harness)
4. 2-pin connector (brake switch)
5. 4-socket connector (brake switch)
6. Brake switch

3. Connect the brake system electrical components as follows:
   A. Connect the 4-socket connector to the brake switch (Figure 12).
   B. Connect the 2-pin connector of the interrupter wiring harness to the 2-socket connector of the machine harness (Figure 12).
4. Connect the delay timer electrical components as follows:
   A. Remove the cable tie that secures the delay timer to the chassis tube.
   B. Remove the 2-pin connector of the machine harness from the connector of the delay timer (Figure 13).

   Note: Remove the delay timer from the machine.

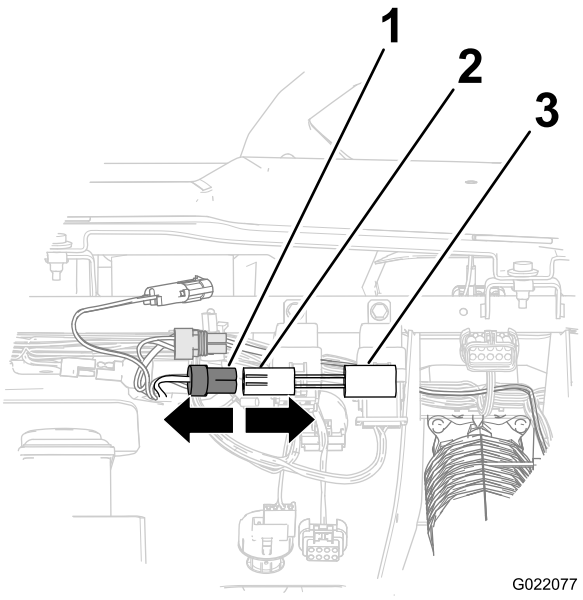

Figure 13

1. 2-pin connector (machine harness)
2. Connector (delay timer)
3. Delay timer

C. Connect the 2-pin connector of the interrupter wiring harness to the shunt connector (Figure 14).

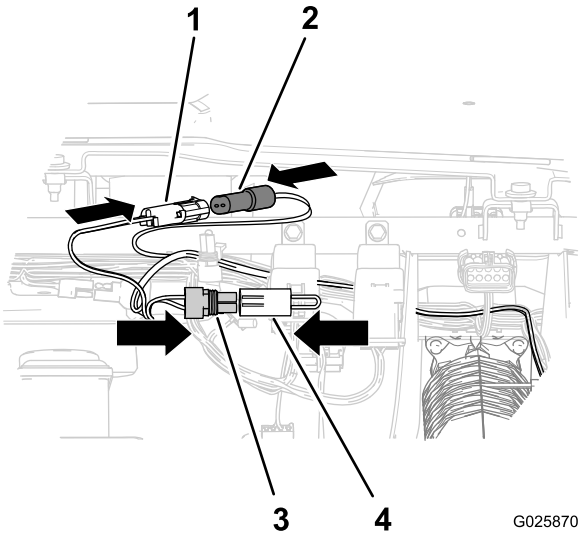

Figure 14

1. 2-pin connector (machine harness)
2. 2-socket connector (interrupter wiring harness)
3. 2-pin connector (interrupter wiring harness)
4. Shunt connector

D. Connect the 2-socket connector of the interrupter wiring harness for the shunt branch to the 2-pin connector of the machine harness that you removed from the delay timer in step B (Figure 14).

5. Secure the harness as follows:

   A. Secure the harness of the delay timer with a cable tie to the chassis tube in the area between the relays (Figure 15).

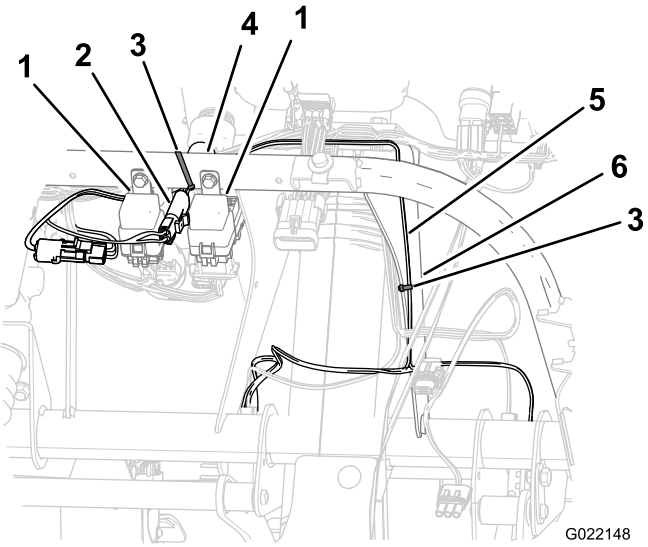

Figure 15

1. Relay
2. Delay timer harness
3. Cable tie
4. Chassis tube
5. Interrupter wiring harness
6. Steering-column bracket (outboard)

   B. Secure the interrupter wiring harness to the outboard steering-column bracket (Figure 15).

   Note: Align the cable tie through the hole in the bracket.

6. Connect the battery as follows:

   A. Connect the positive battery cable to the battery (Figure 11).

   B. Squeeze the battery cover, align the tabs to battery base, and release battery cover (Figure 10).

Testing the Differential Interrupt Kit

Preparing the Machine

1. Rotate the steering wheel of the machine full left.
2. Use a jack to raise the front-right corner of the machine.

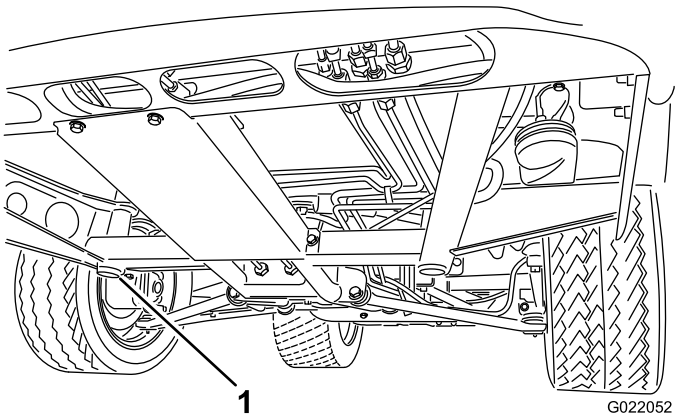

Figure 16

1. Front jacking point

3. Support the machine using jack stands.

Testing the Wiring Harness and Switches

Note: This procedure requires 2 people to test the harness and switches.

1. Prepare to test the differential circuit as follows:
   A. Remove the 2-socket connector of the machine harness from the 2-pin connector of the differential harness (Figure 17).

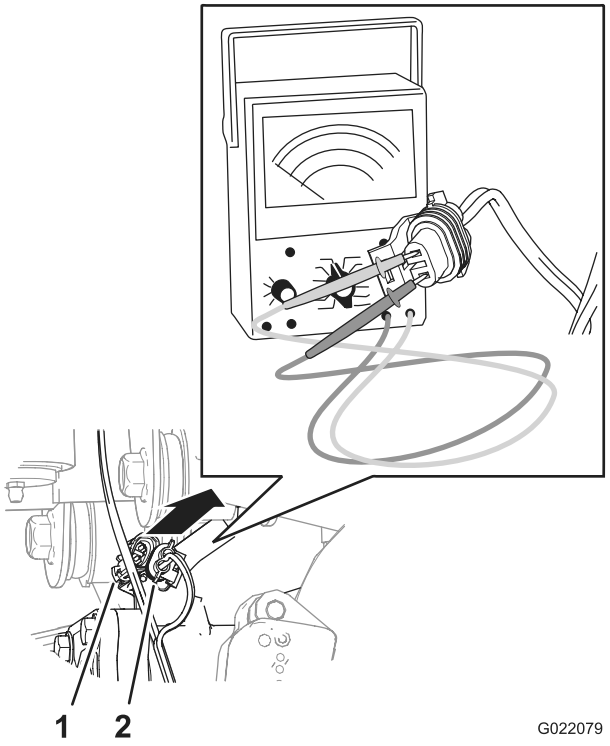

Figure 17

1. 2-pin connector (differential harness)
2. 2-socket connector (machine harness)

   B. Insert the key into the key switch and rotate the key switch to the On position.

   Important: Do not start the engine.

   C. Set the volt/ohm meter to DC volt and a range including 12 volts.
   D. Insert the leads of the volt/ohm meter into the 2-socket connector for the machine (Figure 17).

   Note: The volt/ohm meter should indicate 11.5 to 14 volts.

2. Test the clutch circuit as follows:
   A. Press in the clutch pedal (Figure 18).

   Note: The volt/ohm meter should indicate 0 volts.

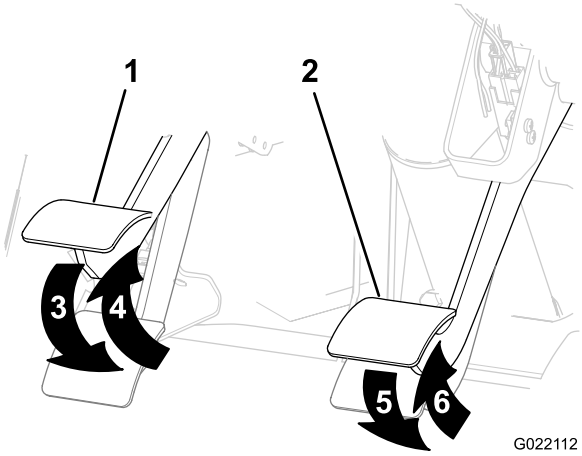

Figure 18

1. Clutch pedal
2. Brake pedal
3. Clutch pressed (0 volts)
4. Clutch released (11.5 to 14 volts)
5. Brake pressed (0 volts)
6. Brake released (11.5 to 14 volts)

B. Release the clutch pedal (Figure 18).

Note: The volt/ohm meter should indicate 11.5 to 14 volts.

3. Test the brake circuit as follows:

A. Press in the brake pedal (Figure 18).

Note: The volt/ohm meter should indicate 0 volts.

B. Release the brake pedal (Figure 18).

Note: The volt/ohm meter should indicate 11.5 to 14 volts.

4. Rotate the key switch to the Off position and remove the key.
5. Install the 2-socket connector of the machine harness to the 2-pin connector of the differential harness (Figure 17).
6. Raise the front-right corner of the machine, remove the jack stand, and lower the machine to the ground.

Installing the Hood

1. Align the bottom of the hood to the top of the bumper (Figure 1).
2. Connect the lights.
3. Insert the top mounting tabs into the frame slots (Figure 1).
4. Insert the lower mounting tabs into the pockets in the bumper (Figure 1).
5. Ensure that the hood is fully engaged in the top, sides and bottom grooves (Figure 1).