Form No. 3451-837 Rev A

TORO®

Count on it.

Operator's Manual

Polar Trac® Cab

Groundsmaster® 7200 Series Mower

Model No. 30474—Serial No. 407000000 and Up
Model No. 30675—Serial No. 403380001 and Up

Register at www.Toro.com.
Original Instructions (EN)

3451-837

⚠ WARNING

CALIFORNIA
Proposition 65 Warning

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Introduction

This kit transforms a summer ride-on, rotary-blade lawn mower into a snow-removal machine that is intended for use by professional, hired operators in commercial applications.

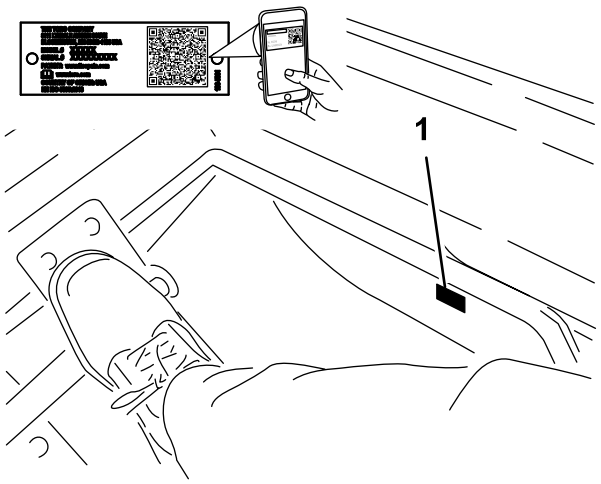
This kit was designed to be used with cab Model 30474. However, you can use the kit with cab Model 30371 with minor modifications. Please see your authorized Toro distributor for details.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

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

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

Important: **With your mobile device, you can scan the QR code (if equipped) on the serial number plate to access warranty, parts, and other product information.**



g271386

Figure 1

1. Model and serial number location

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 2), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.

g000502

Figure 2

1. Safety alert symbol

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

8111 Lyndale Avenue South
Bloomington, MN 55420

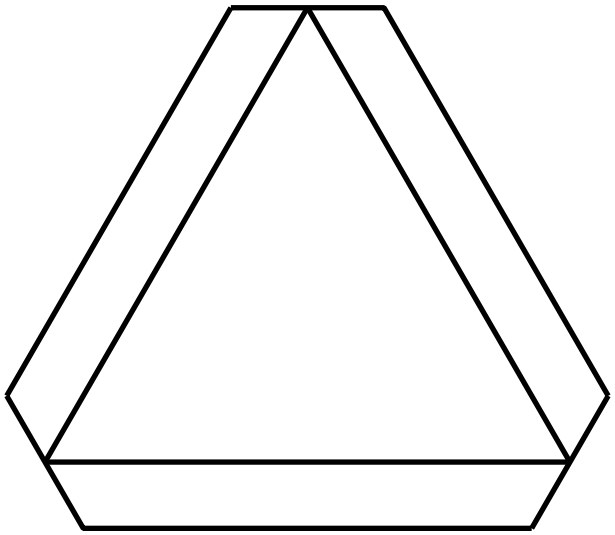
Contact us at www.Toro.com.
Printed in the USA

Contents

Safety

Safety and Instructional Decals

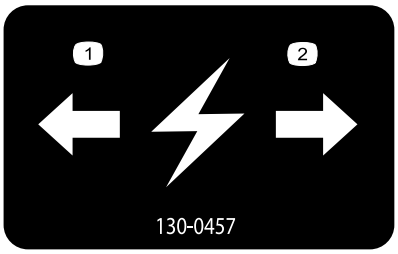
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



decal120-0250

120–0250

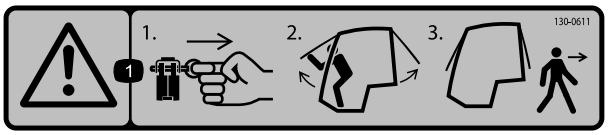
1. Slow-moving vehicle



decal130-0457

130-0457

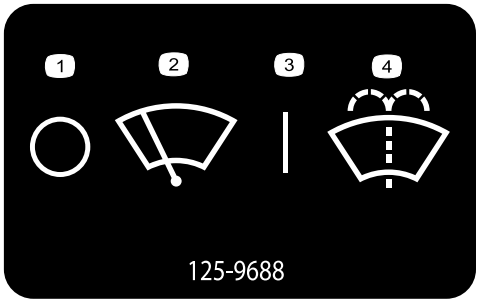
1. Left
2. Right



decal130-0611

130-0611

1. Warning—remove the pin, raise the doors, and exit the cab.



decal125-9688

125-9688

1. Windshield wipers—off
2. Windshield wipers
3. Windshield wipers—on
4. Spray windshield washer fluid

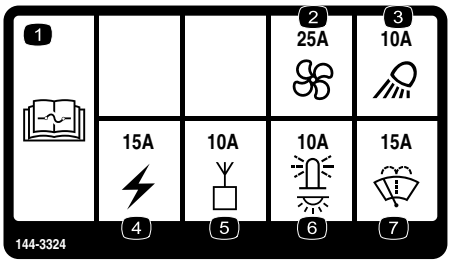
decal130-5361

130-5361

1. Warning—read the *Operator's Manual*; only operate from the driver's seat; wear a seatbelt; wear hearing protection.

decal133-8061

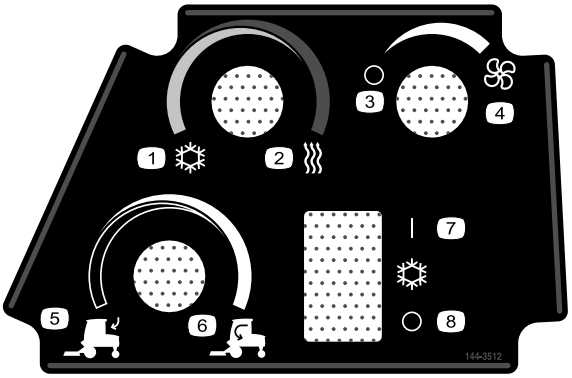
133-8061



decal144-3324

144-3324

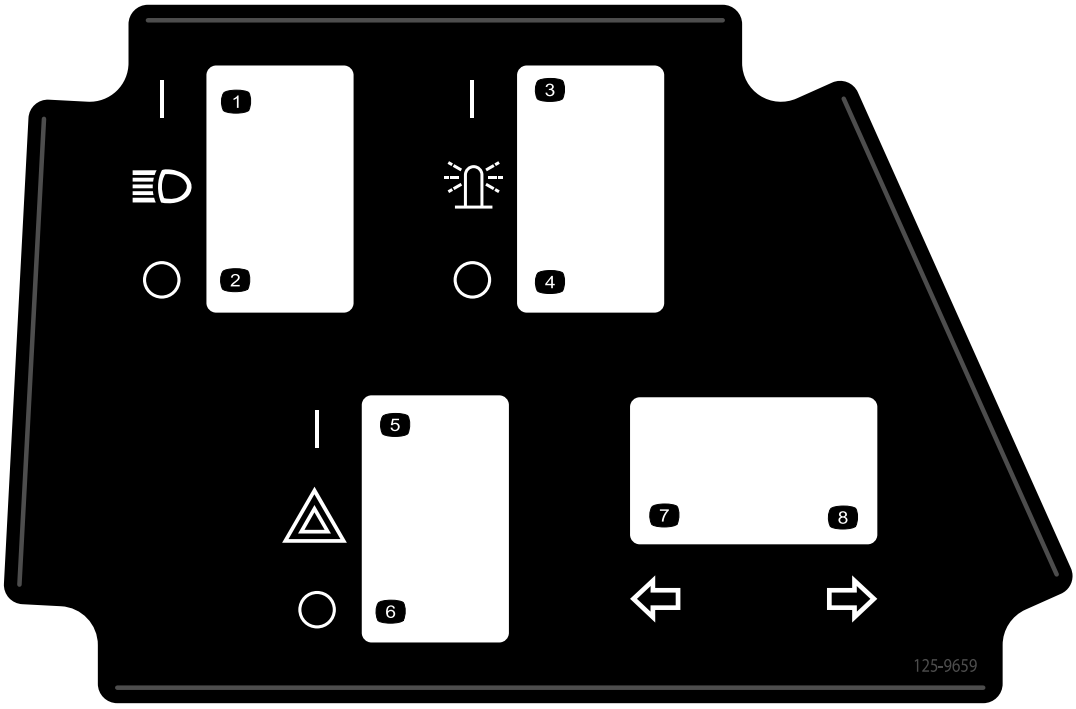
1. Read the *Operator's Manual* for information on fuses.
2. Fan—25 A
3. Work lights—10 A
4. Power—15 A
5. Radio power—10 A
6. Beacon/Interior light—10 A
7. Windshield washer—15 A



decal144-3512

144-3512

1. Cold air
2. Hot air
3. Fan—off
4. Fan—maximum
5. External air
6. Internal air
7. Air conditioner—on
8. Air conditioner—off



decal125-9659

125-9659

1. Head light–on
2. Head light–off
3. Cab light–on
4. Cab light–off
5. Hazard light–on
6. Hazard light–off
7. Left-turn signal
8. Right-turn signal

Setup

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 for installing the kit.
2	Rear-panel shield Under-seat shield	1 1	Install the heat shields.
3	Straight fitting (3/8 NPT x 0.625 barb) Hose clamp (1/2 to 1-1/4 inches) Hose clamp (3/4 to 1-1/2 inches) Tee fitting Female-dust fitting Male-dust fitting	1 4 1 1 1 1	Assemble the heater hoses.
4	Grommet Bulkhead bracket Bolts (5/16 x 5/8 inch) R-clamp Carriage bolt (1/4 x 3/4 inch) Flange nut (1/4 inch)	1 1 2 2 2 2	Install the bulkhead bracket.
5	Hose clamp (1/2 to 1-1/4 inches) Straight fitting (3/8 npt x 0.625 barb) Temperature sensor (Yanmar engine only) Adapter (Yanmar engine only)	1 1 1 1	Route the heater hose.
6	No parts required	–	Install the temperature sensor.
7	Washer bottle Bracket R-clamp Carriage bolt (5/16 x 1 inch) Bolt (5/16 x 3/4 inch) Flange nut (5/16 inch) Carriage bolt (1/4 x 3/4 inch) Nut (1/4 inch)	1 1 1 3 2 5 1 1	Install the washer bottle.
8	Wire harness Relay Fuse (60 A) Fuse (10 A) Cable tie Wire harness fuse block—Toro Part No. 92-2641 (purchased separately) Key start harness—Toro Part No. 107-0672 (purchased separately)	1 1 1 2 3 1 1	Install the wire harness.
9	Skid plate Bolt (3/8 x 1-1/4 inches) Bolt (3/8 x 1 inch) Flange nut (3/8 inch)	1 2 2 4	Install the skid plate.

Procedure	Description	Qty.	Use
10	No parts required	–	Remove the roll bar.
11	Roller assembly Left bracket Right bracket Bolt (3/8 x 2-1/4 inches) Bolt (3/8 x 5/8 inch) Flange nut (3/8 inch) Clevis pin Self-tapping screw (1/4 inch) Hose plugs	2 1 1 2 2 4 2 2 2	Remove the summer frame.
12	Cab Bulb seal Rear foam seal Right, rear- foam seal Left, rear foam seal Right, middle foam seal Left, middle foam seal Right, tank foam seal Side, front foam seal Front foam seal Left, side foam seal Right, side foam seal Rubber isolator Bolt (1/2 x 3-1/4 inches) Washer (1/2 inch) Large washer Nut (1/2 inch) Bolt (3/4 x 3-1/2 inches) Locknut (3/4 inch)	1 2 1 1 1 1 1 1 2 1 1 1 4 4 4 4 4 2 2	Install the cab.
13	Winter frame Coupler link Bolt (3/4 x 4 inches) Washer (3/4 inch) Supply-hose cover Return-hose cover	1 2 2 2 1 1	Install the winter frame.
14	No parts required	–	Complete the installation.

1

Preparing the Machine

No Parts Required

Procedure

1. Park the machine on a level surface, lower the cutting unit to the lowest height-of-cut setting, shut off the engine, and remove the key.
2. Disconnect the battery cable connected to the negative (-) battery terminal.
3. Allow the engine coolant to cool and then drain the coolant from the machine; refer to the machine *Service Manual*.
4. Remove the hood from the machine and set it aside; refer to the machine *Service Manual*.

2

Installing the Heat Shields

Parts needed for this procedure:

1	Rear-panel shield
1	Under-seat shield

Installing the Rear-Panel Shield

1. Move the seat forward to allow you to have access to the rear panel.
2. Toggle the 3 swell latches and remove the rear panel (Figure 3).

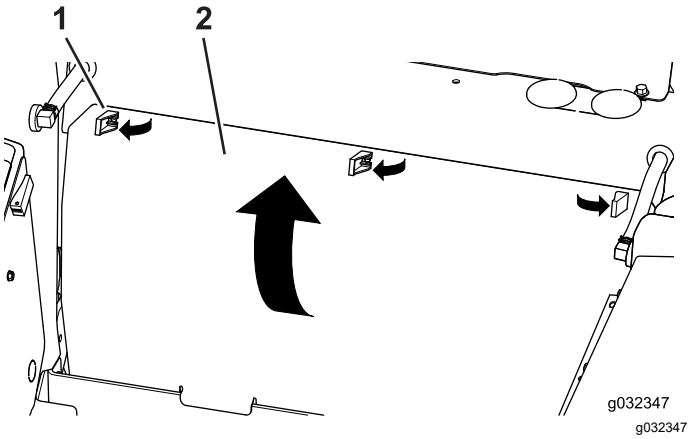


Figure 3

1. Swell latch
2. Back panel

3. Clean back of the plate to ensure proper adhesion when you apply the heat shield.
4. Remove the backing and apply the rear-panel shield to the engine side of the rear panel (Figure 4).

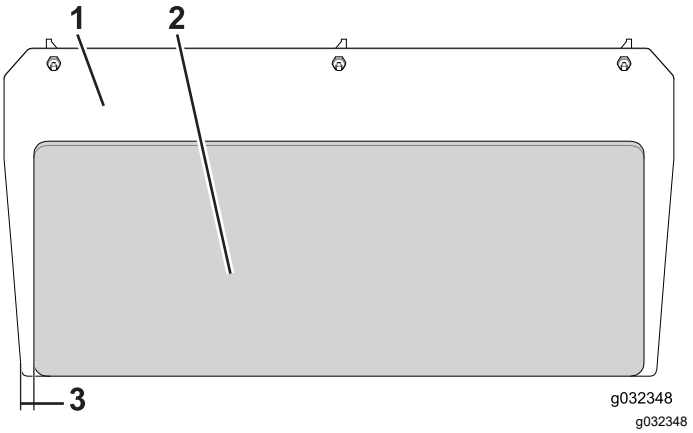


Figure 4

1. Rear panel
2. Rear-panel shield
3. 29 mm (1-1/8 inches)

Note: Center the rear-panel shield along the width of the plate leaving 29 mm (1-1/8 inches) from each edge (Figure 4).

5. Set the panel aside.

Installing the Operator-Deck Shield

1. Release the seat latch and tilt the seat forward.
2. Disconnect the seat-switch on the bottom of the seat deck from the wire harness (Figure 5).

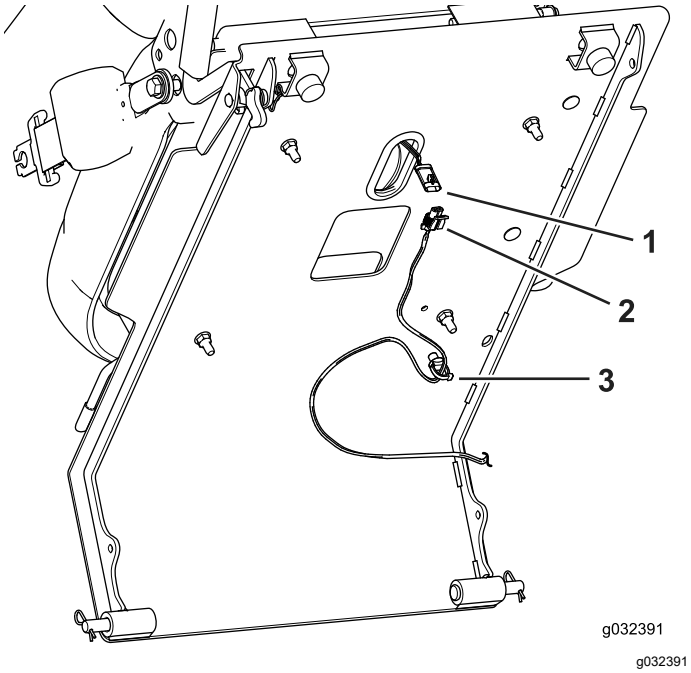


Figure 5

1. Seat connector
2. Wire harness
3. Wire clip

3. Remove the wire clip from the bottom of the seat deck Figure 5.
4. Clean the bottom of the seat deck to ensure proper adhesion of the under-seat shield.
5. Remove the backing and apply the under-seat shield to the bottom of the seat deck (Figure 6).

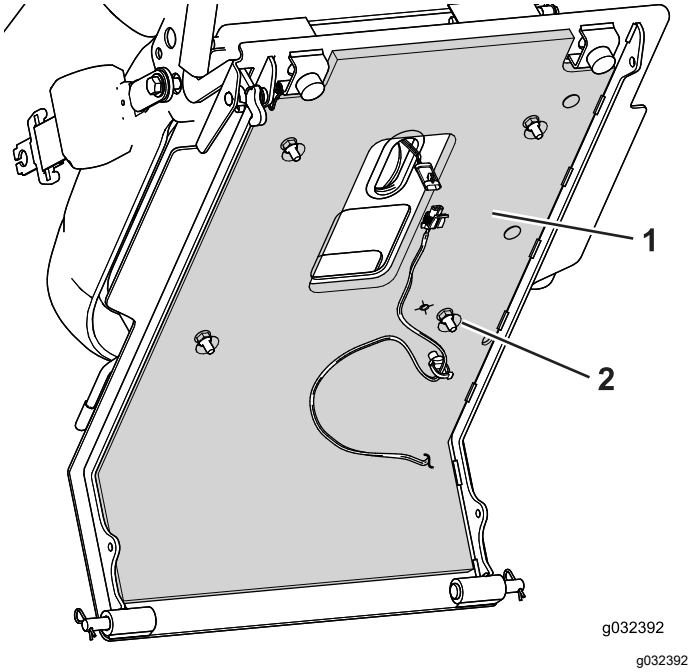


Figure 6

1. Heat shield
2. Cutout

Note: Use the cutouts for the bolts to align the under-seat shield to the plate.

6. Install the wire clip to the bottom of the seat plate (Figure 7).

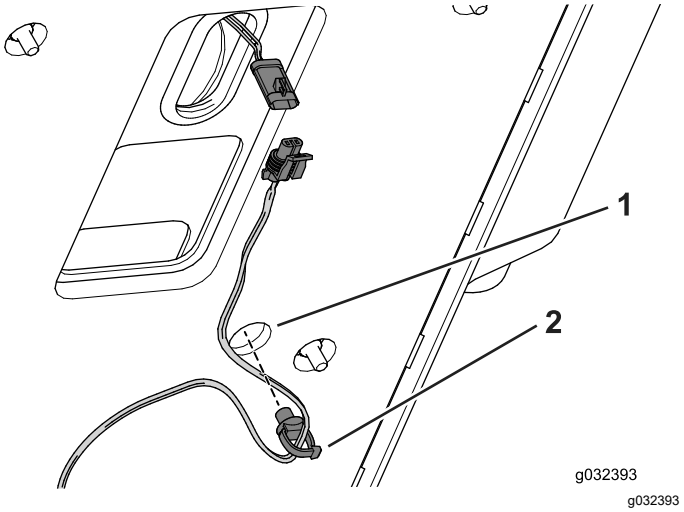


Figure 7

1. Hole for wire clip
2. Wire clip

7. Connect the seat-switch to the wire harness (Figure 7).

3

Assembling the Heater Hoses

Parts needed for this procedure:

1	Straight fitting (3/8 NPT x 0.625 barb)
4	Hose clamp (1/2 to 1-1/4 inches)
1	Hose clamp (3/4 to 1-1/2 inches)
1	Tee fitting
1	Female-dust fitting
1	Male-dust fitting

Assembling the Supply Hose

Note: Use the 86.3 cm (34 inches) hose for a machine equipped with the Yanmar engine and use the 57.1 cm (22.5 inches) hose for a machine equipped with the Kubota engine.

1. Apply sealant to the straight fitting (3/8 NPT x 0.625 barb); skipping the first thread.

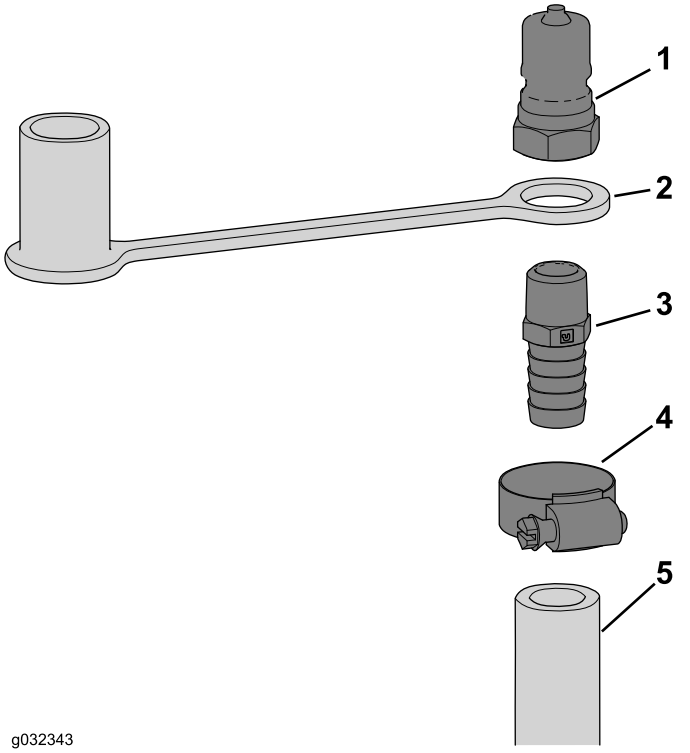


Figure 8

1. Male coupler
2. Male dust plug
3. Straight fitting (3/8 NPT x 0.625 barb)
4. Hose clamp (1/2 to 1-1/4 inches)
5. Supply hose

2. Slide the dust plug over the threaded end of the straight fitting (Figure 8).
3. Thread the straight fitting (3/8 NPT x 0.625 barb) to the male coupler (Figure 8).
4. Tighten the straight fitting (3/8 NPT x 0.625 barb) into the male couple 2 to 3 turns from finger-tight.
5. Slide a hose clamp (1/2 to 1-1/4 inches) over the hose.
6. Insert the barbed end of the assembly into the hose and secure it with the hose clamp (1/2 to 1-1/4 inches).

Assembling the Return Hose

Note: Use the 86.3 cm (34 inches) hose for a machine equipped with the Yanmar engine and use the 132 cm (54 inches) hose for a machine equipped with the Kubota engine.

1. Apply sealant to the straight fitting (3/8 NPT x 0.625 barb); skipping the first thread.

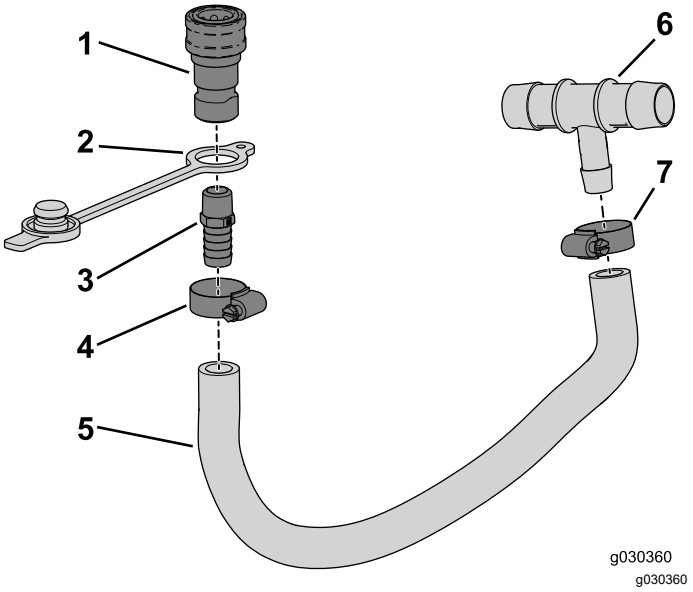


Figure 9

1. Female coupler
2. Female dust plug
3. Straight fitting (3/8 NPT x 0.625 barb)
4. Hose clamp (1/2 to 1-1/4 inches)
5. Return hose
6. Tee fitting
7. Hose clamp (1/2 to 1-1/4 inches)

2. Slide the dust plug over the threaded end of the straight fitting (Figure 9).
3. Thread the straight fitting (3/8 NPT x 0.625 barb) to the female coupler (Figure 9).
4. Tighten the straight fitting (3/8 NPT x 0.625 barb) into the female couple 2 to 3 turns from finger-tight.
5. Slide 2 of the hose clamps over the hose.
6. Insert the barbed end of the assembly into the hose and secure it with the hose clamp (1/2 to 1-1/4 inches) as shown in Figure 9.
7. Insert the barbed end of the tee fitting into the hose and secure it with the hose clamp (1/2 to 1-1/4 inches) as shown in Figure 9.

Connecting to the Radiator Hose

Yanmar Engine Only

1. Locate the radiator hose (Figure 10).

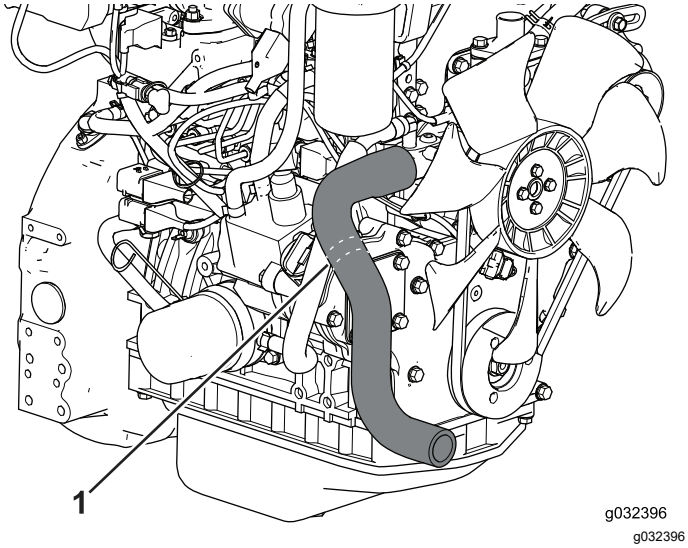


Figure 10

1. Cut lines

2. Use a cutting tool to cut the radiator hose at the cut lines (Figure 10).
3. Slide the cut ends over the tee fitting and secure it using the hose clamp (3/4 to 1-1/2 inches) as shown in Figure 11.

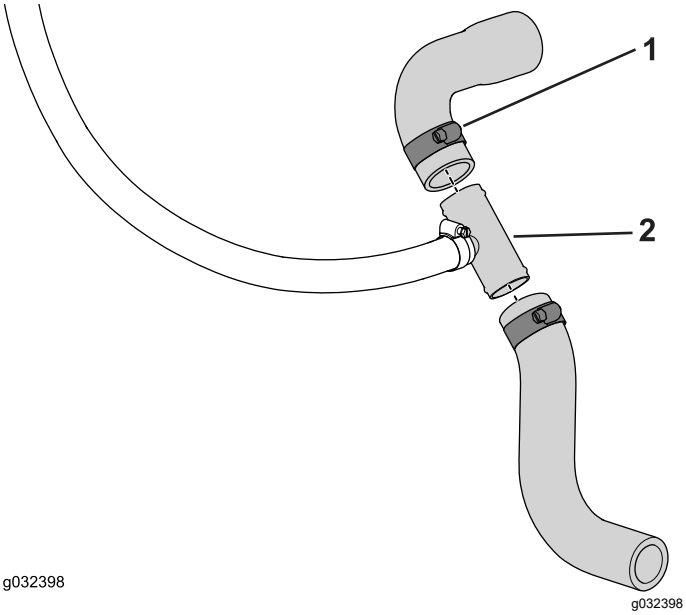


Figure 11

1. Hose clamp (3/4 to 1-1/2 inches)
2. Tee fitting

Connecting to the Radiator Hose

Kubota Engine Only

1. Locate and remove the radiator hose (Figure 12).

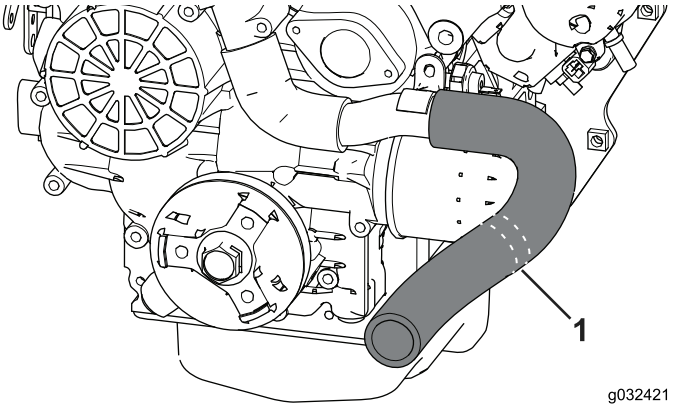


Figure 12

1. Cut lines

2. Use a cutting tool to cut the radiator hose at the cut lines (Figure 12).
3. Slide the cut ends over the tee fitting and secure it using the hose clamp (3/4 to 1-1/2 inches) as shown in Figure 13.

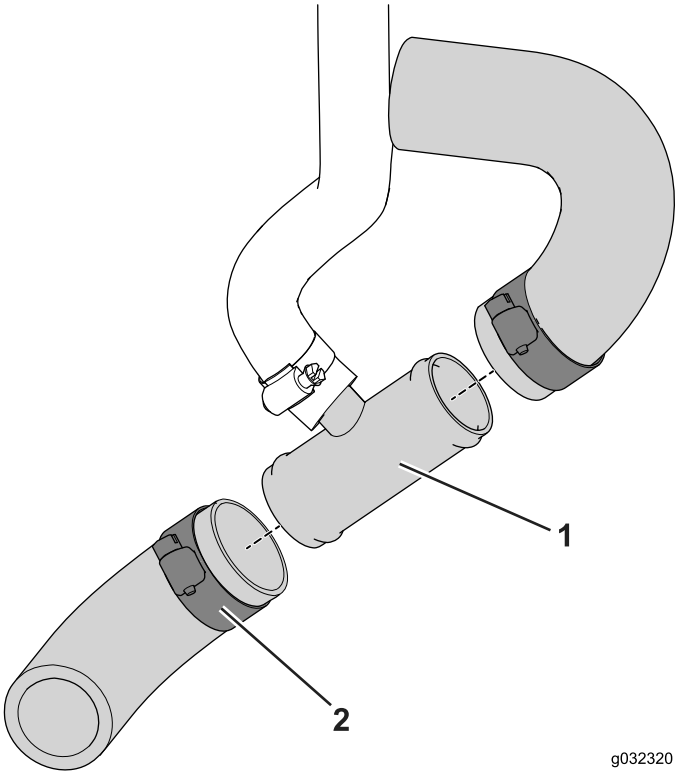


Figure 13

1. Tee fitting
2. Hose clamp (3/4 to 1-1/2 inches)

4

Installing the Bulkhead Bracket

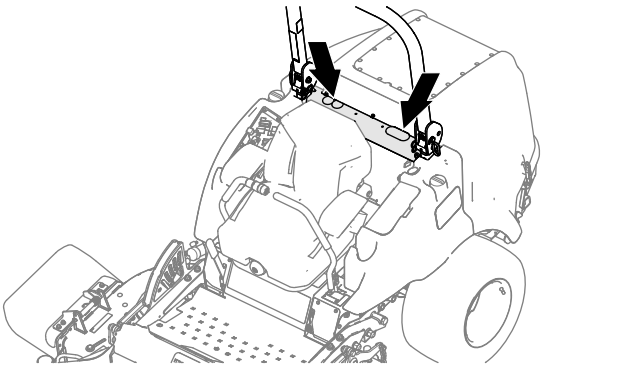
Parts needed for this procedure:

1	Grommet
1	Bulkhead bracket
2	Bolts (5/16 x 5/8 inch)
2	R-clamp
2	Carriage bolt (1/4 x 3/4 inch)
2	Flange nut (1/4 inch)

Installing the Grommet

Note: If the grommets are not installed, perform this procedure.

1. Remove the caps covering the holes in the support tube (Figure 9).



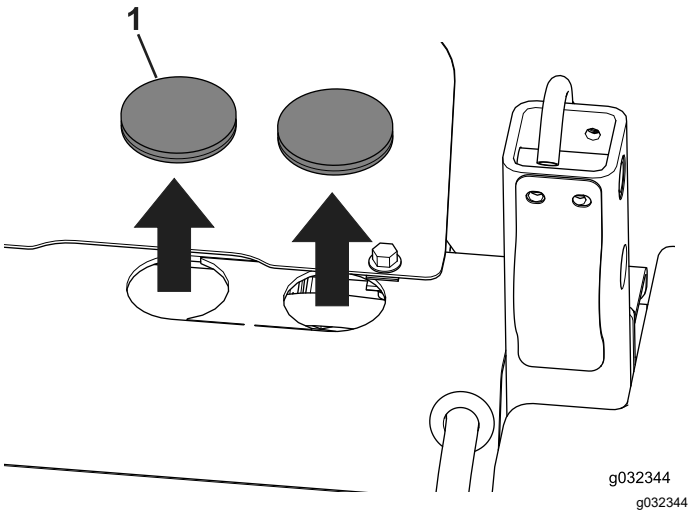


Figure 14

1. Cap

2. If it is present, remove the punch-out located between the 2 holes (Figure 15).

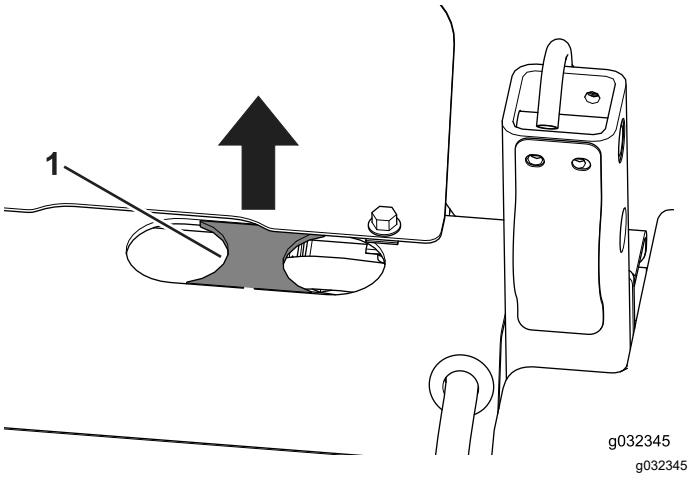


Figure 15

1. Punch-out

Note: If necessary, use a metal-cutting tool to remove the material between the 2 holes in the support tube.

3. Install the grommet into the opening (Figure 16).

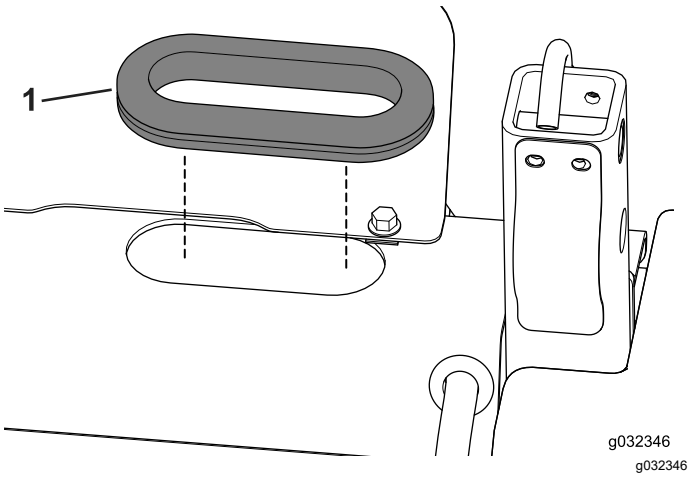


Figure 16

1. Grommet

Installing the Hose Bracket

1. Use the 2 bolts (5/16 x 5/8 inch) to install the bracket to the frame (Figure 17).

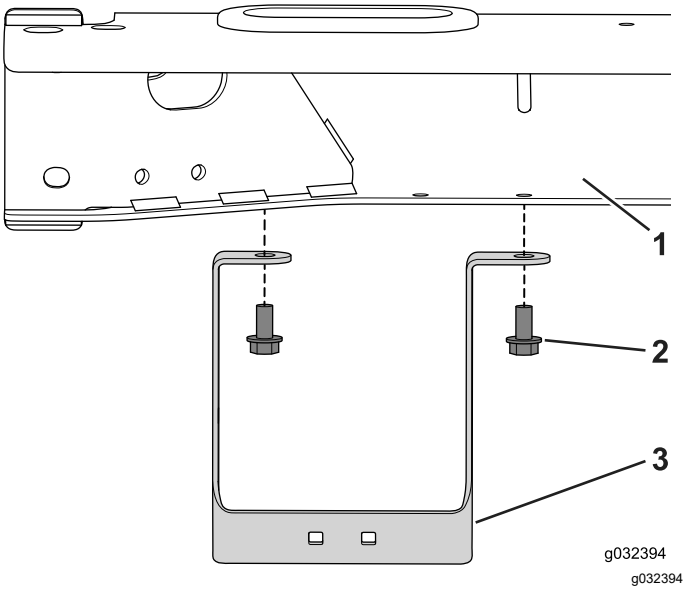


Figure 17

1. Frame
2. Bolts (5/16 x 5/8 inch)
3. Hose bracket

2. Torque the bolts to 1978 to 2542 N·cm (175 to 225 in-lb).
3. Position an R-clamp over each hose (Figure 18).

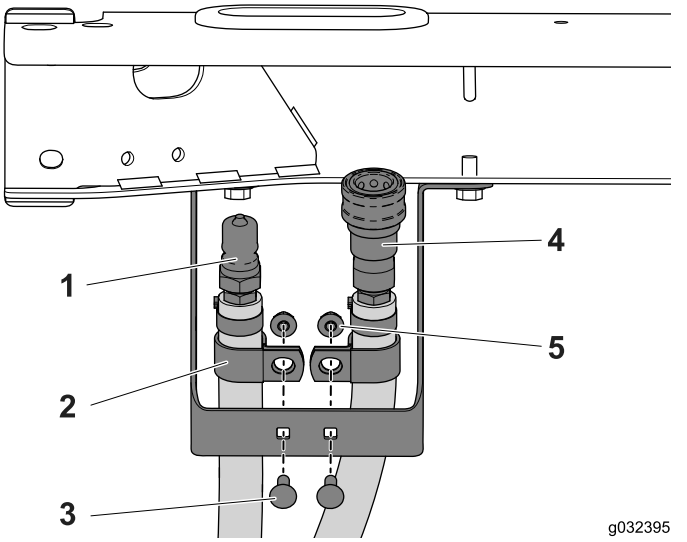


Figure 18

1. Supply hose
2. R-clamp
3. Carriage bolt (1/4 x 3/4 inch)
4. Return hose
5. Flange nut (1/4 inch)

4. Use the 2 carriage bolts (1/4 x 3/4 inch) and flange nuts to install the R-clamp and hose assembly to the bracket mount (Figure 18).
5. Torque the bolt to 1017 to 1243 N·cm (90 to 110 in-lb).

5

Routing the Heater Hoses

Parts needed for this procedure:

1	Hose clamp (1/2 to 1-1/4 inches)
1	Straight fitting (3/8 npt x 0.625 barb)
1	Temperature sensor (Yanmar engine only)
1	Adapter (Yanmar engine only)

Routing the Supply Hose

Kubota Engine Only

1. Route the supply hose as shown in Figure 19.

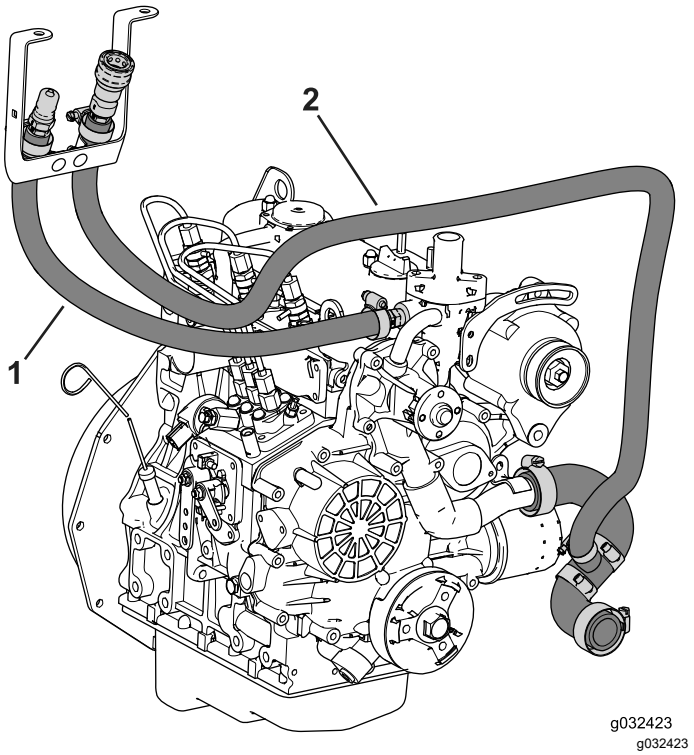


Figure 19

1. Supply hose
2. Return hose

2. Locate, disconnect, and remove the temperature sensor (Figure 20).

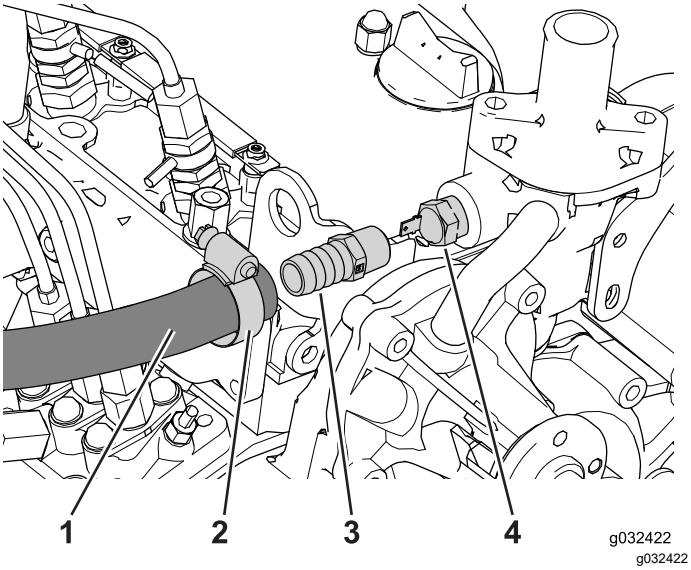


Figure 20

1. Supply hose
2. Hose clamp (1/2 to 1-1/4 inches)
3. Straight fitting (3/8 NPT x 0.625 barb)
4. Temperature sensor

3. Apply sealant to the straight fitting (3/8 NPT x 0.625 barb); skipping the first thread.
4. Finger-tighten the straight fitting into the port.
5. Tighten the straight fitting 2 to 3 additional turns.
6. Slide the hose clamp over the hose end (Figure 20).
7. Insert the hose over straight fitting and secure it with the hose clamp (1/2 to 1-1/4 inches) as shown in Figure 20.

Routing the Return Hose

Kubota Engine Only

Route the return hose as shown in Figure 21.

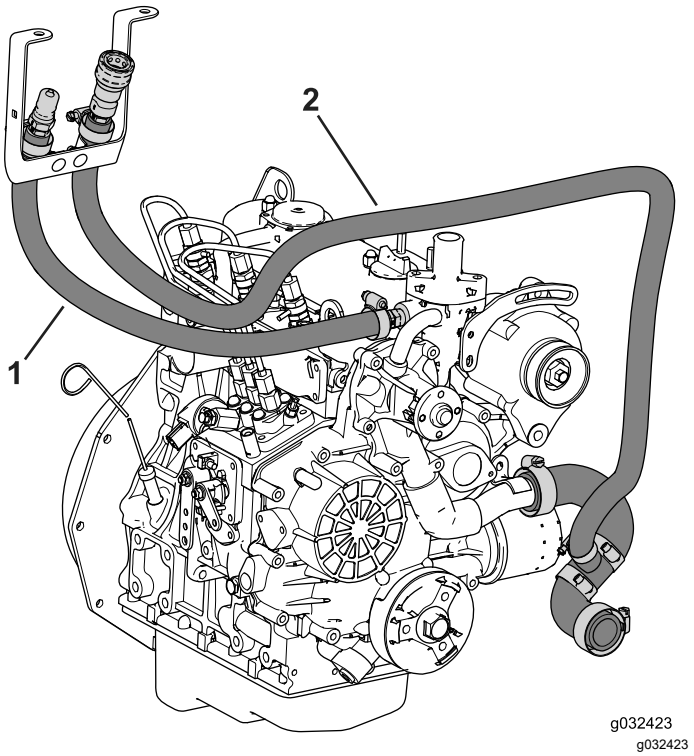


Figure 21

1. Supply hose
2. Return hose

Moving the Temperature Sensor

Yanmar Engine Only

1. Remove the socket terminal from the coolant temperature sensor (Figure 22).

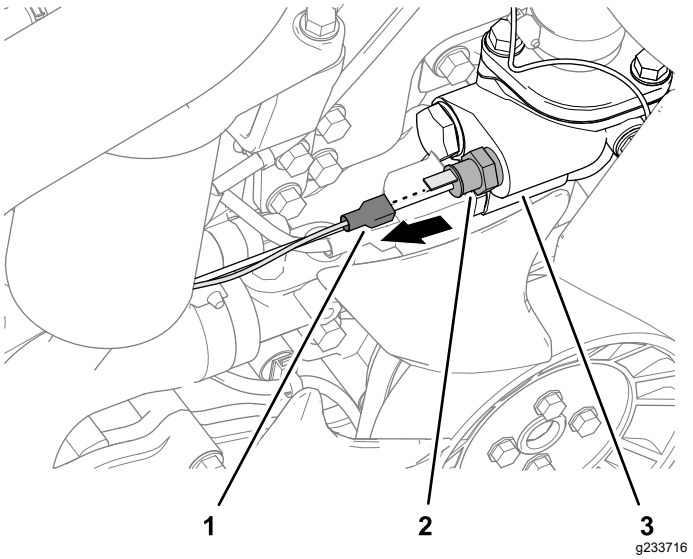


Figure 22

1. Socket terminal (coolant-temperature sensor)
2. Temperature sensor
3. Water-pump housing

2. Remove the temperature sensor and gasket from the rear port of the water pump (Figure 23).

   Note: Retain the temperature sensor for installation in step 5.

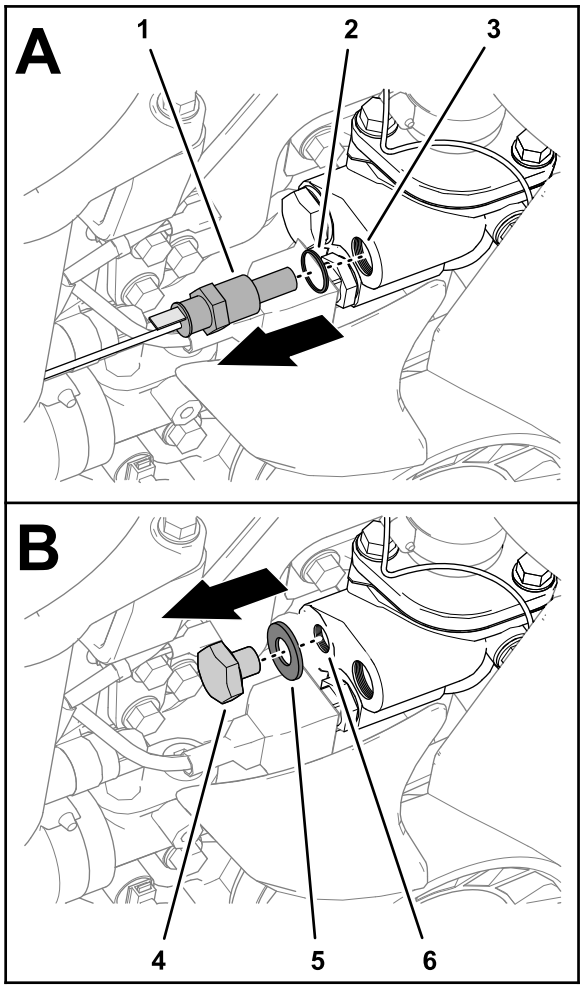


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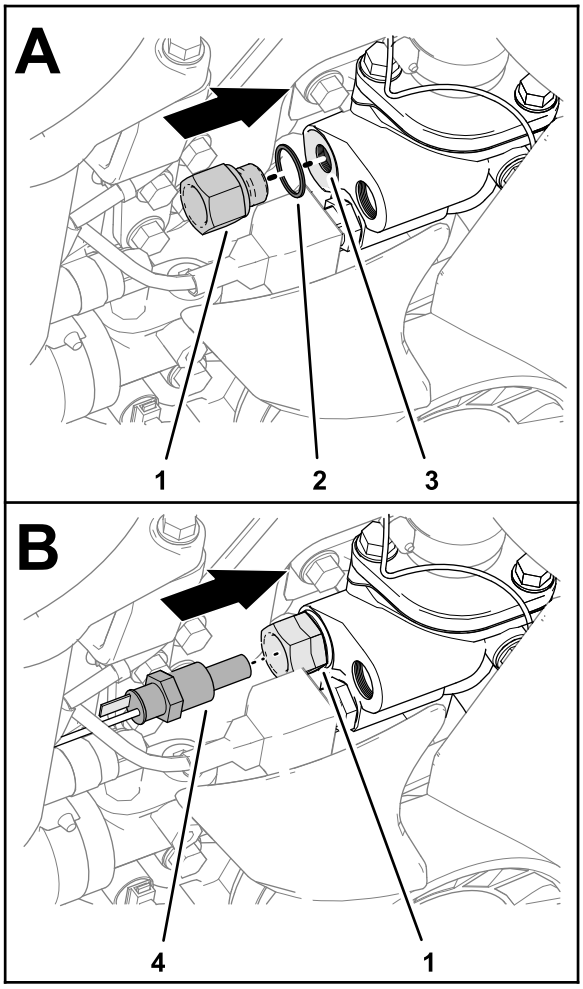
Figure 23

1. Temperature sensor (old)
2. Gasket (temperature sensor)
3. Rear port (water-pump housing)
4. Forward port (water-pump housing)
5. Gasket (plug)
6. Plug

3. Remove the plug and gasket from the forward port of the water pump (Figure 23).

   Note: You no longer need the plug and gasket.

4. Install the reducer and the gasket (plug) into the forward port of the water pump (Figure 24).

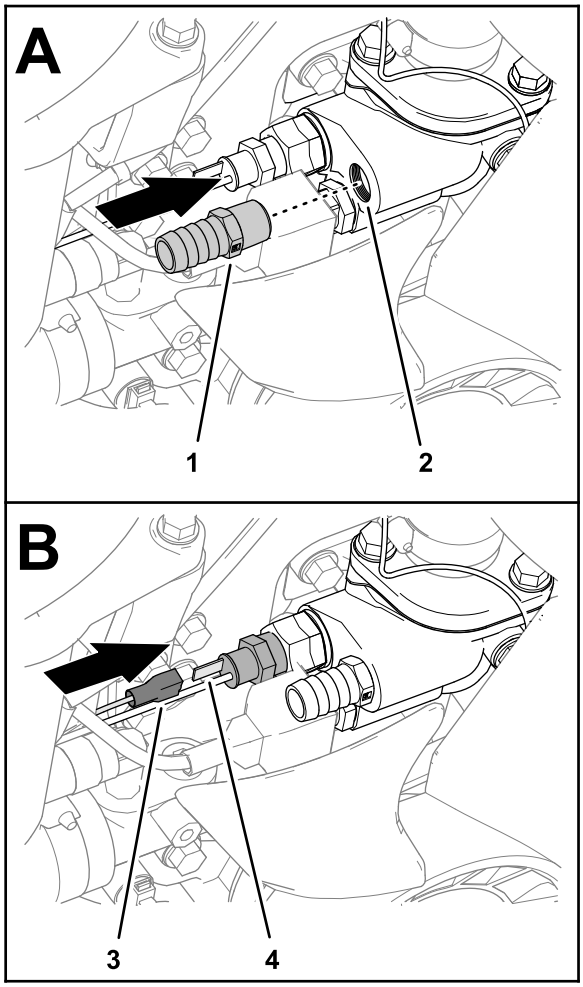


g233712

Figure 24

1. Reducer
2. O-ring
3. Forward port (water-pump housing)
4. Temperature sensor

5. Apply PTFE thread sealant to the threads of the temperature sensor that you removed in step 2 and to the threads of the straight barbed fitting.
6. Install the new temperature sensor into the reducer (Figure 24).
7. Install the barbed fitting into the rear port of the water-pump housing (Figure 25) and tighten the fitting 2 to 3 turns beyond finger tight.



g233713

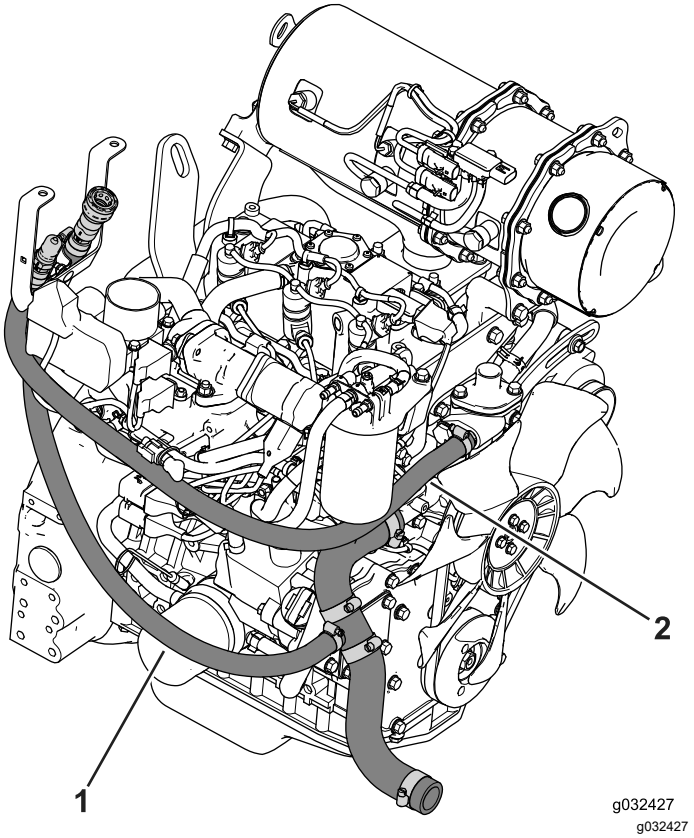
Figure 25

1. Straight fitting (3/8 npt x 0.625 barb)
2. Rear port (water-pump housing)
3. Socket terminal (coolant-temperature sensor)
4. Blade terminal (temperature sensor)

Routing the Supply Hose

Yanmar Engine Only

1. Route the supply hose as shown in Figure 26.



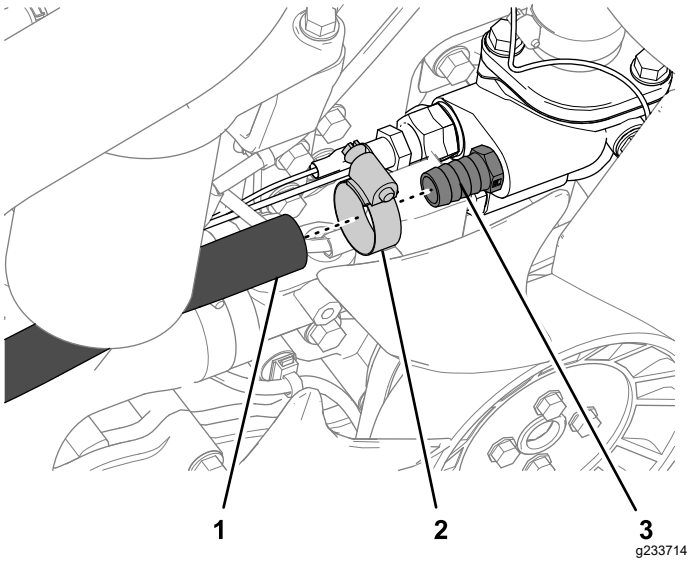
g032427

g032427

Figure 26

1. Return hose
2. Supply hose

2. Slide the hose clamp over the hose end (Figure 27).



g233714

Figure 27

1. Supply hose
2. Hose clamp
3. Barbed fitting

3. Insert the hose over straight fitting and secure it with the hose clamp (1/2 to 1-1/4 inches) as shown in Figure 27.

Routing the Return Hose

Yanmar Engine Only

Route the supply hose as shown in Figure 28.

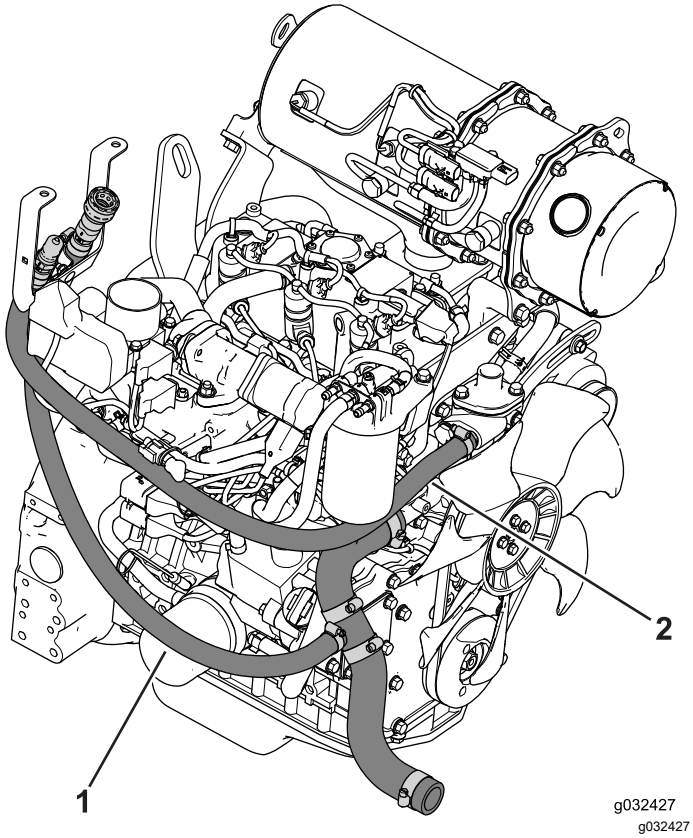


Figure 28

1. Return hose
2. Supply hose

6

Installing the Temperature Sensor

Kubota Engine Only

No Parts Required

Procedure

1. Locate the thermostat hosing on the engine block and remove the engine-port plug (Figure 29).

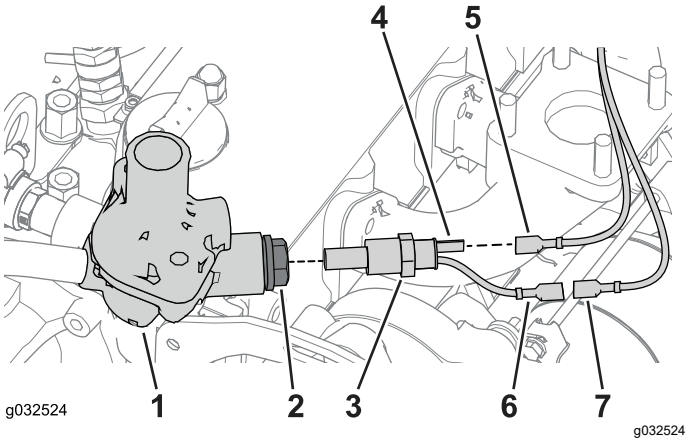


Figure 29

1. Thermostat housing
2. Engine-port plug
3. Dual-temperature sensor
4. Engine-hot connector
5. Yellow wire
6. Engine-warm connector
7. Orange wire

2. Apply sealant to the temperature sensor; skipping the first thread.
3. Finger-tighten the temperature sensor into the port.
4. Tighten the temperature sensor 2 to 3 additional turns.
5. Locate the yellow wire that you disconnected in step 2 in Routing the Supply Hose (page 14) and connect it to the engine-hot connector of the temperature sensor (Figure 29).
6. Locate the orange wire that is cable tied to the yellow wire, remove the cable tie, and connect the wire to the engine-warm connector of the temperature sensor (Figure 29).
7. Use cable ties to secure the wires.

   Note: Do not secure the wire harness to hot or moving parts.

7

Installing the Washer Bottle

Parts needed for this procedure:

1	Washer bottle
1	Bracket
1	R-clamp
3	Carriage bolt (5/16 x 1 inch)
2	Bolt (5/16 x 3/4 inch)
5	Flange nut (5/16 inch)
1	Carriage bolt (1/4 x 3/4 inch)
1	Nut (1/4 inch)

Installing the Washer Bottle

Kubota Engine Only

1. Use the 3 carriage bolts (5/16 x 1 inch), (5/16 x 1 inch), and 3 flange nuts to secure the bracket to the frame (Figure 30).

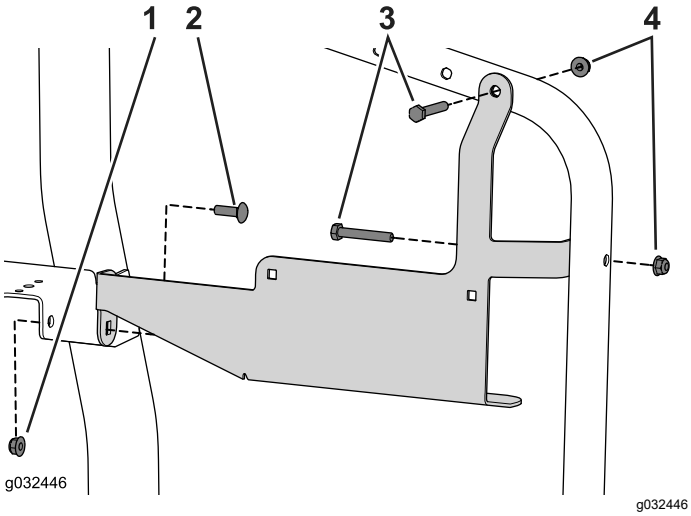


Figure 30

1. Flange nut (5/16 inch)
2. Carriage bolt (5/16 x 1 inch)
3. Bolt (5/16 x 3/4 inch)
4. Flange nut (5/16 inch)

2. Torque the bolts to 1978 to 2542 N·cm (175 to 225 in-lb).
3. Use the 2 carriage bolts (5/16 x 3/4 inch) and flange nuts to secure the washer bottle to the bracket (Figure 31).

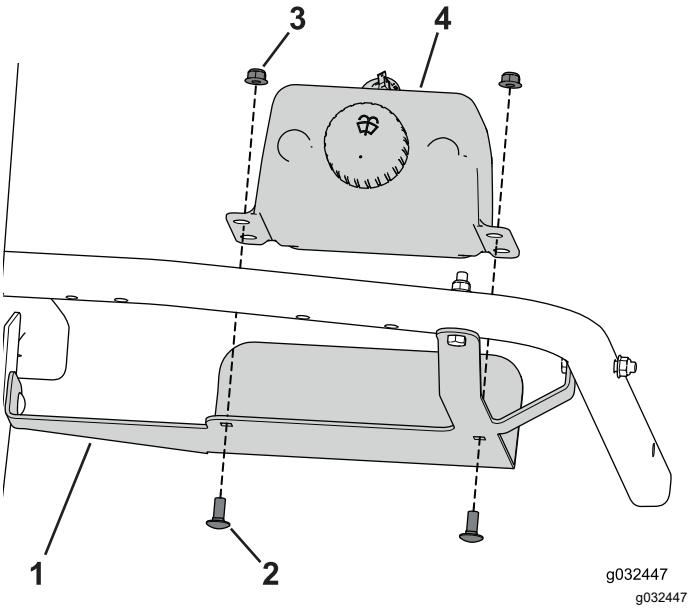


Figure 31

1. Bracket
2. Carriage bolt (5/16 x 3/4 inch)
3. Flange nut (5/16 inch)
4. Washer bottle

4. Torque the bolts to 1978 to 2542 N·cm (175 to 225 in-lb).
5. Connect the washer tube to the washer bottle and secure it to the frame with cable ties (Figure 32).

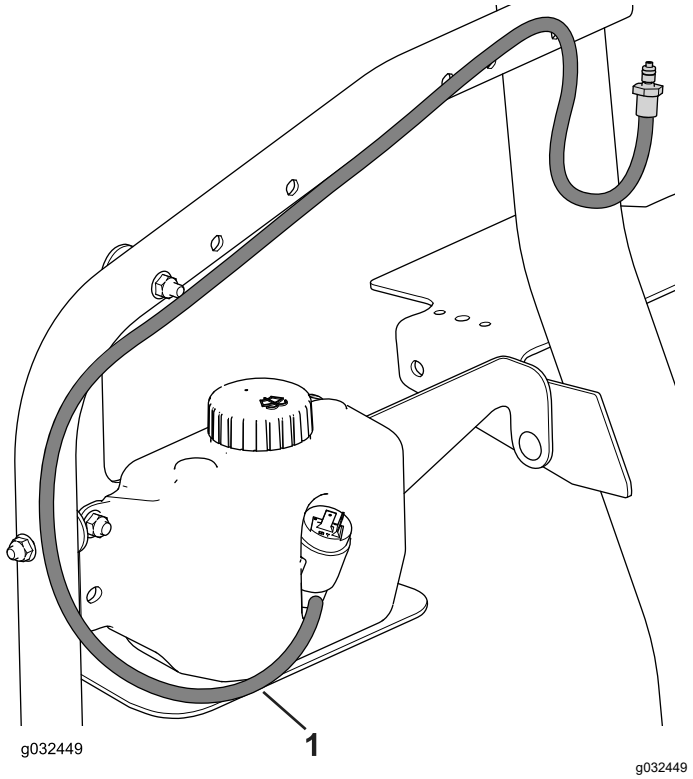


Figure 32

1. Washer tube

Note: Do not secure the hoses to hot or moving parts.

Installing the Washer Bottle

Yanmar Engine Only

1. Use the 3 carriage bolts (5/16 x 2 inch), (5/16 x 1 inch), and 3 flange nuts to secure the bracket to the frame (Figure 33).

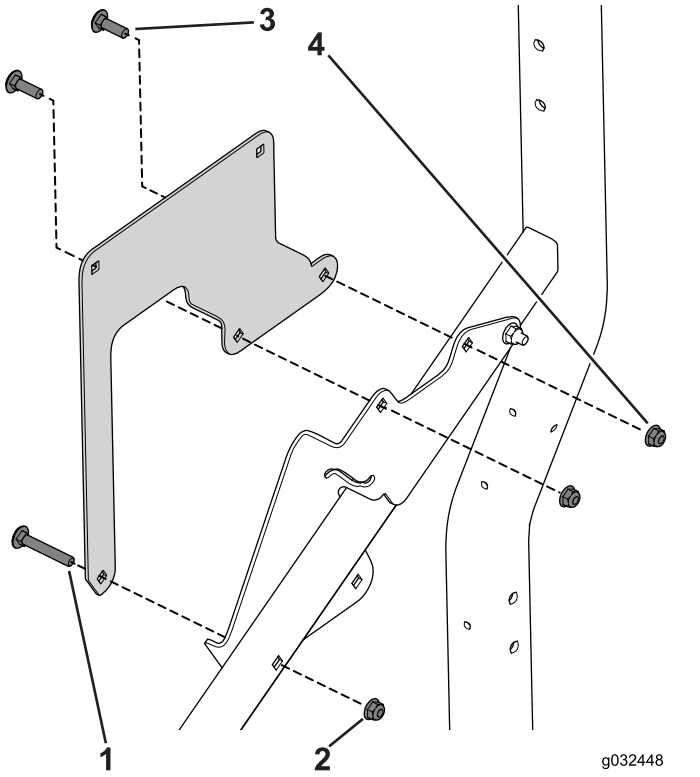


Figure 33

1. Bolt (5/16 x 2 inch)
2. Flange nut (5/16 inch)
3. Bolts (5/16 x 1 inch)
4. Flange nut (5/16 inch)

2. Torque the bolts to 1978 to 2542 N·cm (175 to 225 in-lb).
3. Use the 2 carriage bolts (5/16 x 3/4 inch) and flange nuts to secure the washer bottle to the bracket (Figure 34).

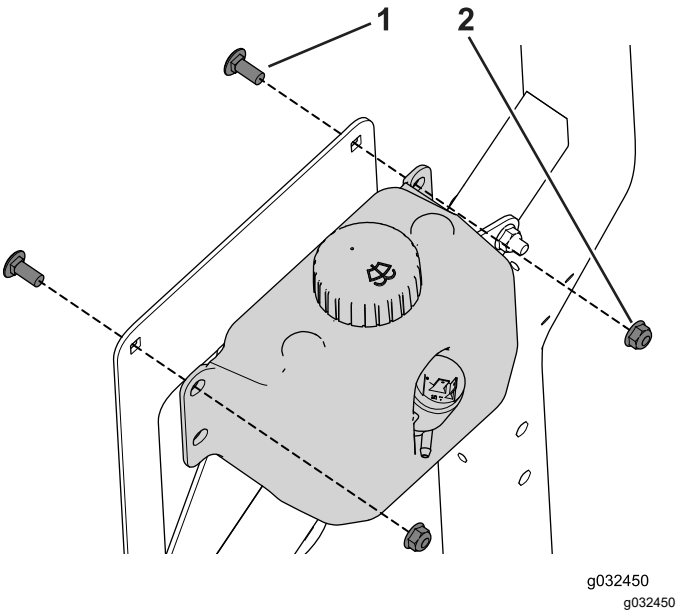


Figure 34

1. Carriage bolt (5/16 x 3/4 inch)
2. Flange nut (5/16 inch)

4. Torque the bolts to 1978 to 2542 N·cm (175 to 225 in-lb).
5. Connect the washer tube to the washer bottle and secure it to the frame with cable ties (Figure 35).

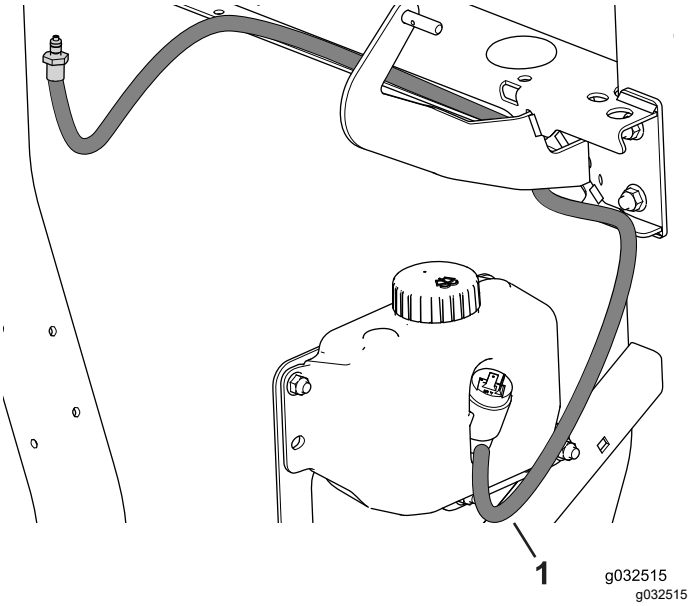


Figure 35

1. Washer tube

Note: Do not secure the hoses to hot or moving parts.

Securing the Washer Hose

1. Arrange the R-clamp around hose connector (Figure 36).

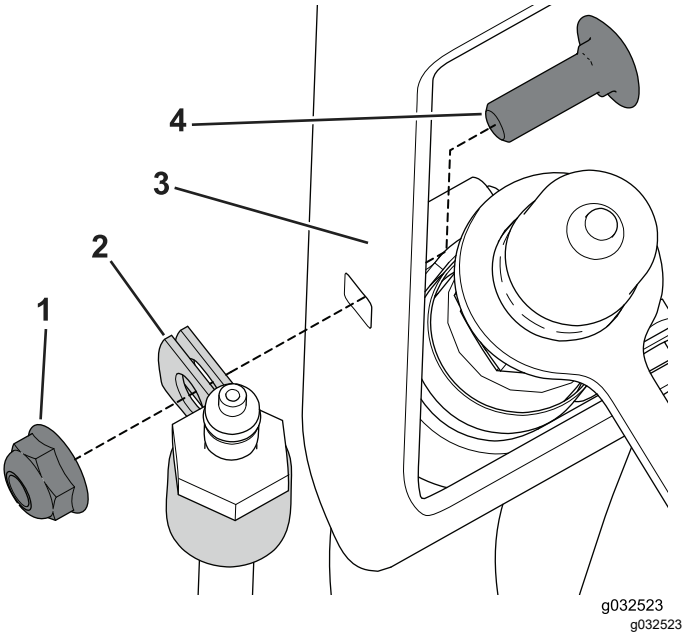


Figure 36

1. Nut (1/4 inch)
2. R-clamp
3. Hose bracket
4. Carriage bolt (1/4 x 3/4 inch)

2. Use the carriage bolt (1/4 x 3/4 inch) and nut to secure R-clamp to the hose bracket (Figure 36).
3. Torque the bolt to 1017 to 1243 N·cm (90 to 110 in-lb).

8

Installing the Wire Harness

Parts needed for this procedure:

1	Wire harness
1	Relay
1	Fuse (60 A)
2	Fuse (10 A)
3	Cable tie
1	Wire harness fuse block—Toro Part No. 92-2641 (purchased separately)
1	Key start harness—Toro Part No. 107-0672 (purchased separately)

Assembling the Wire Harness

1. Assemble the following components to the wire harness (Figure 37).

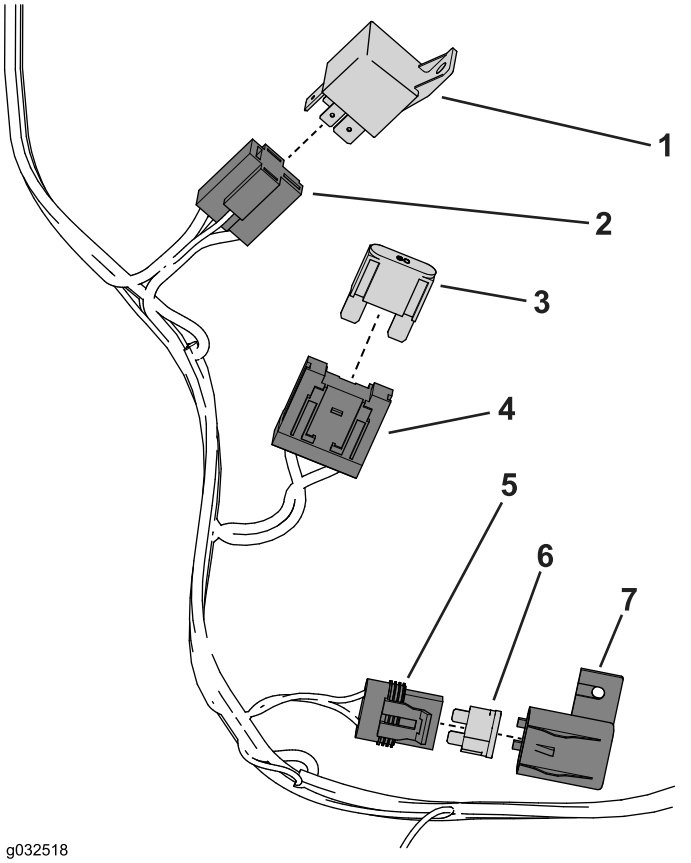


Figure 37

1. Relay
2. Relay connector
3. Fuse (60 A)
4. Fuse holder
5. Fuse assembly
6. Fuse (10 A)
7. Fuse-assembly cap

2. Install the relay to the relay connector (Figure 37).
3. Install the fuse (60 A) to the fuse holder (Figure 37).
4. Install the fuse (10 A) to the fuse assembly and secure it with the fuse-assembly cap (Figure 37).

Routing the Wire Harness

Kubota Engine Only

1. Route the 3 cab connectors through the grommet (Figure 38).

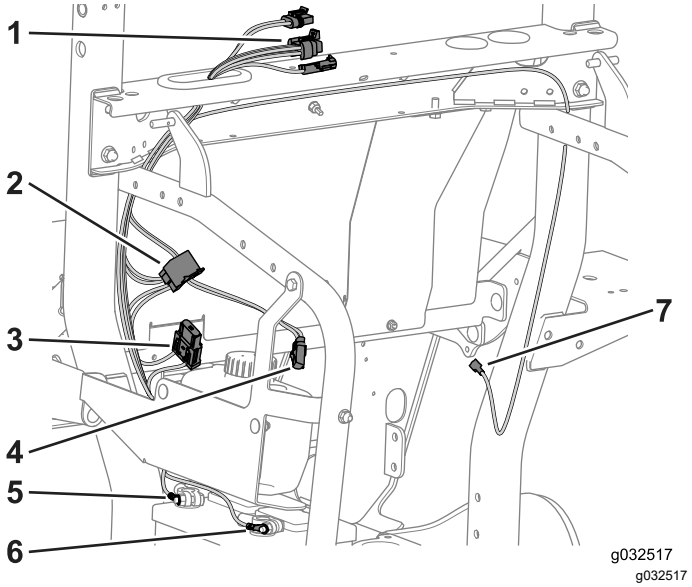


Figure 38

1. Cab connectors
2. Relay assembly
3. Fuse assembly (60 A)
4. Washer-bottle connector
5. Positive connector (red)
6. Negative connector (black)
7. Auxiliary-power wire

2. Route the auxiliary-power wire across the frame support, down along the ROPS tube, and toward the operator controls (Figure 38).
3. Use the cable ties to secure the wire harness to the frame.

   Note: Do not secure the wire harness to hot or moving parts.

Routing the Wire Harness

Yanmar Only

1. Route the 3 cab connectors through the grommet (Figure 39).

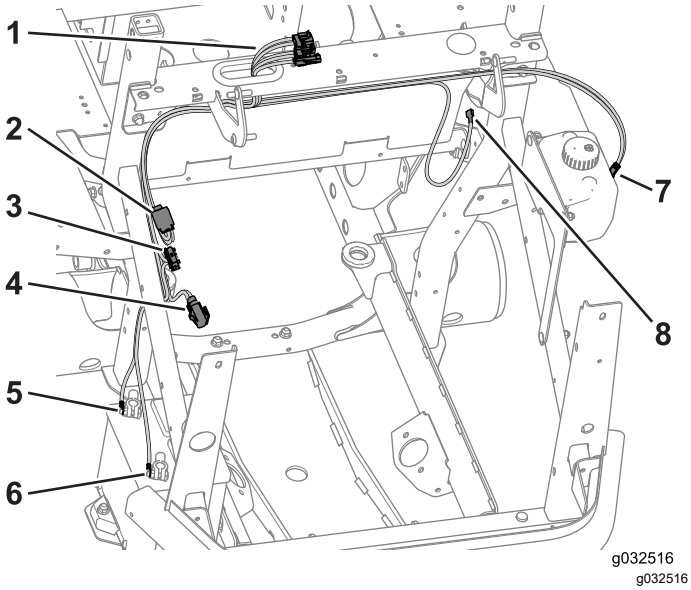


Figure 39

1. Cab connectors
2. Relay assembly
3. Fuse assembly (60 A)
4. Fuse holder
5. Positive connector (red)
6. Negative connector (black)
7. Washer-bottle connector
8. Auxiliary-power wire

2. Route the auxiliary-power wire across the frame support, down along the ROPS tube, and toward the operator controls (Figure 39).
3. Route the washer wire across the frame support, down along the ROPS tube, and toward the washer bottle (Figure 39).
4. Use the cable ties to secure the wire harness to the frame.

   Note: Do not secure the wire harness to hot or moving parts.

Connecting the Auxiliary-Power Wire—Fuse Block of the Machine

Note: If you do not have an open slot in the fuse block for the machine, skip to Connecting the Auxiliary-Power Wire—Additional Wire Harness Fuse Block (page 24).

1. Toggle the swell latches and open the operator-controls compartment (Figure 40).

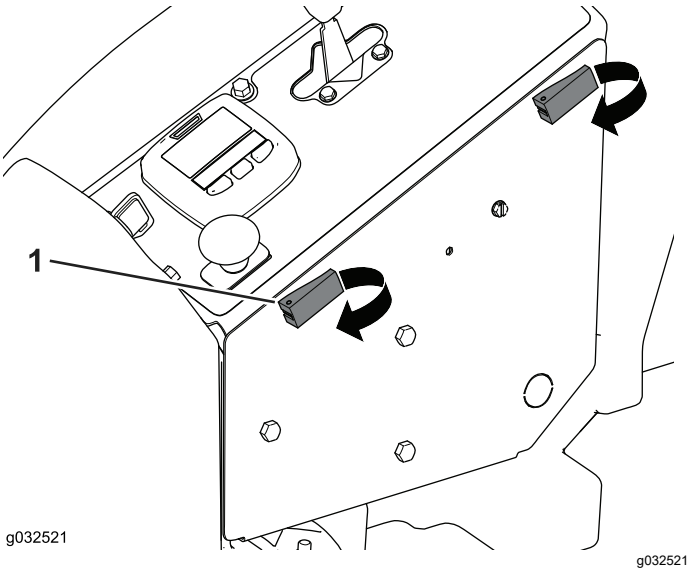


Figure 40

1. Swell latch

2. Route the auxiliary-power wire (green color insulation) of the wire harness (kit) into the operator-controls compartment (Figure 41).

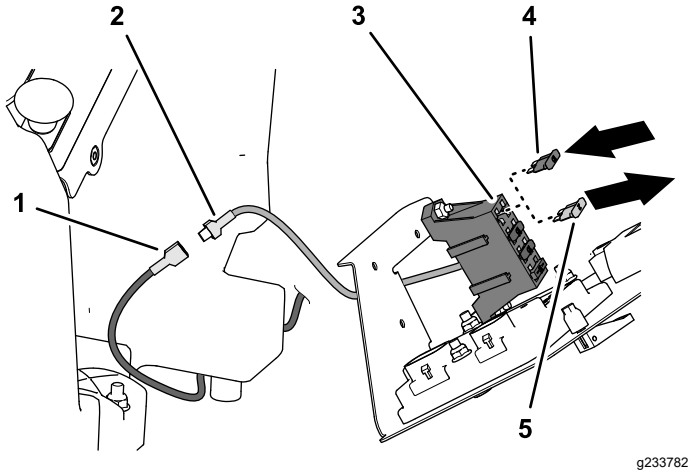


Figure 41

1. Insulated blade connector (auxiliary-power wire—green)
2. Insulated socket connector (fuse-block wire—pink)
3. Fuse block
4. Fuse (10 A)
5. Fuse (2 A)—if installed

3. At the fuse block (Figure 41), connect the following wire pairs:

Component	Wire color	Connector type
Kit wire harness—auxiliary power wire	Green	Insulated blade connector
Fuse block—machine wire harness (options relay)	Pink	Insulated socket connector

Note:
If the auxiliary-power wire is used in another circuit, install an additional wire harness fuse block and key start harness; refer to steps 1 through 3.

4. Install the fuse (10 A) into the fuse-block slot (Figure 41).
5. Use the cable ties to secure the wire.

Note: Do not secure the wire harness to hot or moving parts.

Connecting the Auxiliary-Power Wire—Additional Wire Harness Fuse Block

Note: Use this procedure if you do not have an open slot in the fuse block for the machine.

1. Assemble the additional wire harness fuse block (Part No. 92-2641) onto the fuse block of the machine (Figure 42).

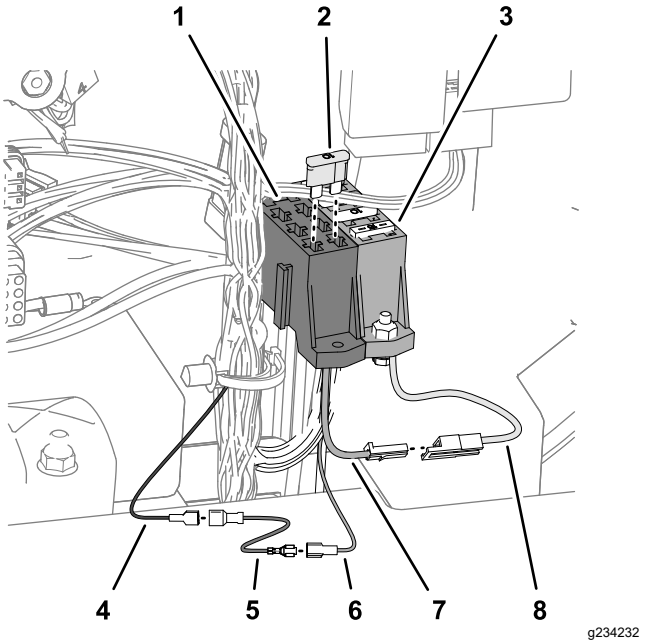


Figure 42

1. Wire harness fuse block (Part No. 92-2641)
2. Fuse (10 A)
3. Fuse block of the machine
4. Green wire—18 gauge (Polar Trac kit harness)
5. Blue wire—18 gauge (key start harness—Part No. 107-0672)
6. Red wire—12 gauge (wire harness fuse block—Part No. 92-2641)
7. Red wire—10 gauge (wire harness fuse block—Part No. 92-2641)
8. Pink wire (fuse block of the machine)

2. Connect the wire harness fuse block (Part No. 92–2641) to the fuse block (Figure 42) of the machine as follows:

Component	Wire color	Connector type
Wire harness fuse block (Part No. 92-2641)	Red (10 gauge)	Blade connector
Fuse block—machine wire harness	Red (10 gauge—optional fuse block)	Socket connector

3. Connect the key start harness (Part No. 107-0672) to the harness fuse block (Part No. 92–2641) wire (Figure 42) as follows:

Component	Wire color	Connector type
Key start harness (Part No. 107-0672)	Blue (18 gauge)	Uninsulated socket connector
Wire harness fuse block (Part No. 92-2641)	Red (12 gauge)	Insulated blade connector

4. Connect the key start harness (Part No. 107-0672) to the auxiliary-power wire of the Polar Trac kit harness (Figure 42) as follows:

Component	Wire color	Connector type
Key start harness (Part No. 107-0672)	Blue (18 gauge)	Insulated socket connector
Polar Trac kit harness	Green (18 gauge—cab enable power)	Uninsulated blade connector

5. Install the fuse (10 A) into the fuse-block slot (Figure 42).
6. Use the cable ties to secure the wire.

   Note: Do not secure the wire harness to hot or moving parts.

Connecting the Washer Bottle

1. Connect the plug into the washer bottle (Figure 43).

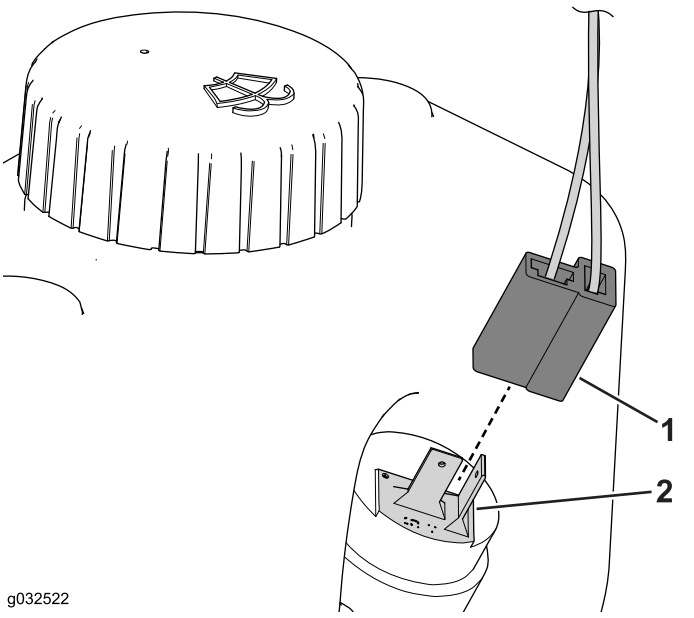


Figure 43

1. Washer connector
2. Washer-bottle connection

2. Use the cable ties to secure the wire harness to the frame.

   Note: Do not secure the wire harness to hot or moving parts.

Connecting the Battery

1. Route the 10-gauge red and black wires along the ROPS tube on the left side of the frame and toward the battery (Figure 38).
2. Loosen and remove the negative-post clamp and then the positive-post clamp from the battery (Figure 44).

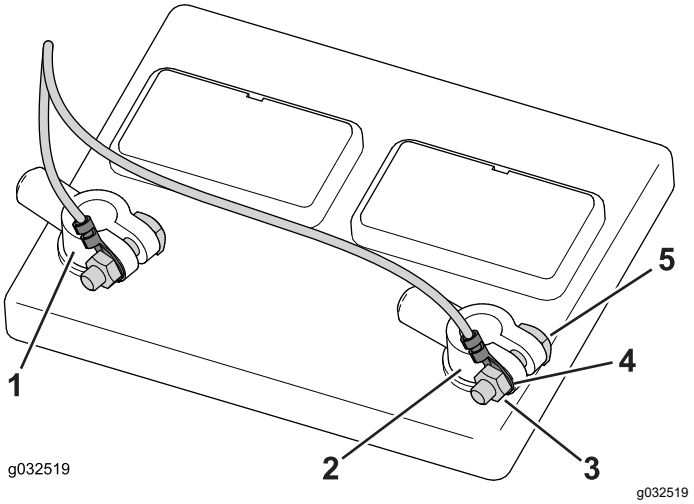


Figure 44

1. Positive-post clamp
2. Negative-post clamp
3. Nut
4. Ring connector
5. Bolt

3. Remove the nuts from the post bolts (Figure 44).
4. Install the negative-terminal connector (black wire) over the negative-post bolt and loosely install the nut (Figure 44).
5. Install the positive-terminal connector (red wire) over the positive-post bolt and loosely install the nut (Figure 44).
6. Install the positive-post clamp to the positive-battery post and then the negative-post clamp to the negative-battery post (Figure 44).
7. Use the cable ties to secure the wire harness to the frame.

   Note: Do not secure the wire harness to hot or moving parts.

9

Installing the Skid Plate

Kubota Engine Only

Parts needed for this procedure:

1	Skid plate
2	Bolt (3/8 x 1-1/4 inches)
2	Bolt (3/8 x 1 inch)
4	Flange nut (3/8 inch)

Procedure

Use the bolt (3/8 x 1-1/4 inches), (3/8 x 1 inch), and nuts to secure the skid plate to the frame (Figure 45).

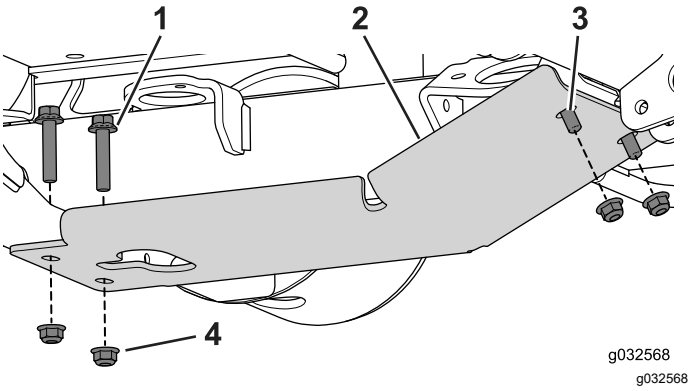


Figure 45

1. Bolt (3/8 x 1-1/4 inches)
2. Skid plate
3. Bolt (3/8 x 1 inch)
4. Flange nut (3/8 inch)

10

Removing the Roll Bar

No Parts Required

Procedure

Note: Have another person help you remove the roll bar from the machine.

1. Have another person support the roll bar.
2. Remove the hairpins and the pivot-lock pins from the roll bar and set the hairpins aside (Figure 46).

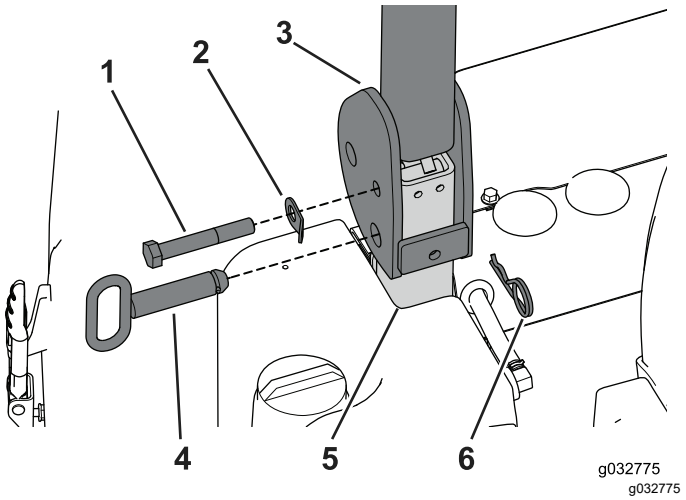


Figure 46

1. Pivot bolt
2. Lanyard washer
3. Roll bar
4. Pivot-lock pin
5. Lower-ROPS pin
6. Hairpin

3. Remove the pivot bolt and lanyard washer.
4. Remove the roll bar from the machine.
5. Store the roll bar.

Note: Retain or loosely install the hardware that you removed during this procedure so that it is available for seasonal changeover.

11

Removing the Summer Frame

Parts needed for this procedure:

2	Roller assembly
1	Left bracket
1	Right bracket
2	Bolt (3/8 x 2-1/4 inches)
2	Bolt (3/8 x 5/8 inch)
4	Flange nut (3/8 inch)
2	Clevis pin
2	Self-tapping screw (1/4 inch)
2	Hose plugs

Installing the Conversion Rollers

1. Use a floor jack to lift the rear wheels off the ground and support them with a jack stand.
2. On machines that have a serial number less than 312999999, install the vertical tube support assembly to each rear corner of the deck frame with a clevis pin and a self-tapping screw (1/4 inch) (Figure 47).

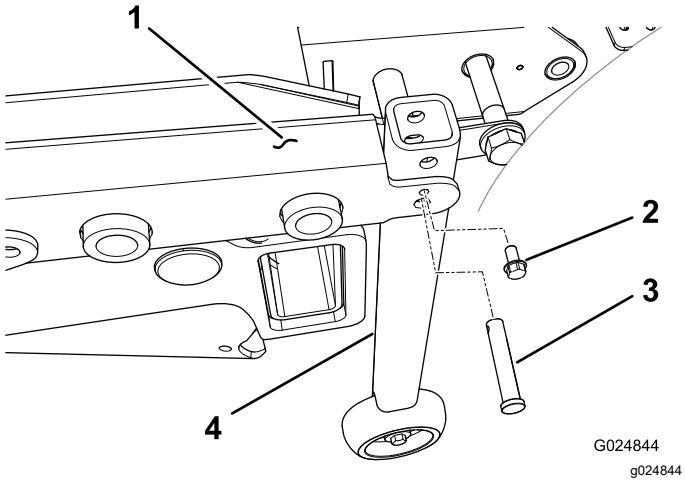


Figure 47

1. Deck frame
2. Self-tapping screw (1/4 inch)
3. Clevis pin
4. Roller assembly

3. On traction units that have a serial number greater than 313000001, install a conversion bracket (right or left hand) to the under-side of the appropriate rear corner of the deck frame with a self-tapping screw (3/8 x 5/8 inch) (Figure 48).

   Note: Point the bracket toward the end of the rear frame.

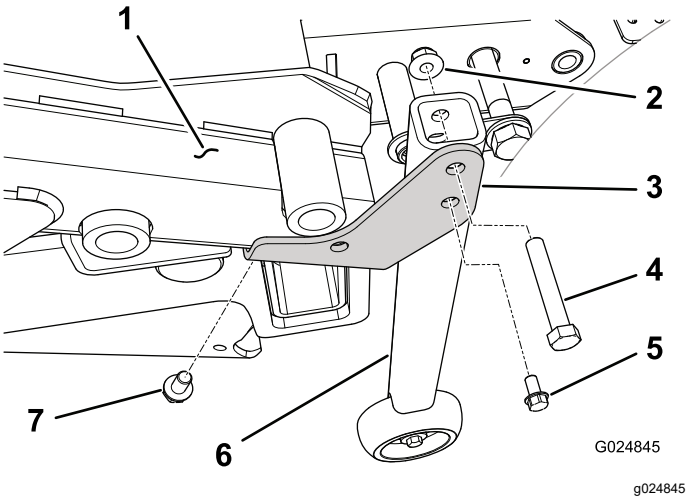


Figure 48

1. Deck frame
2. Flange nut
3. Conversion bracket
4. Screw
5. Self-tapping screw
6. Roller assembly
7. Self-tapping screw

4. Install the roller assembly to each conversion bracket with a bolt (3/8 x 2-1/4 inches) and flange nut (Figure 48).

Removing the Operator Platform

1. Tilt the operator platform into its latched position (Figure 49).

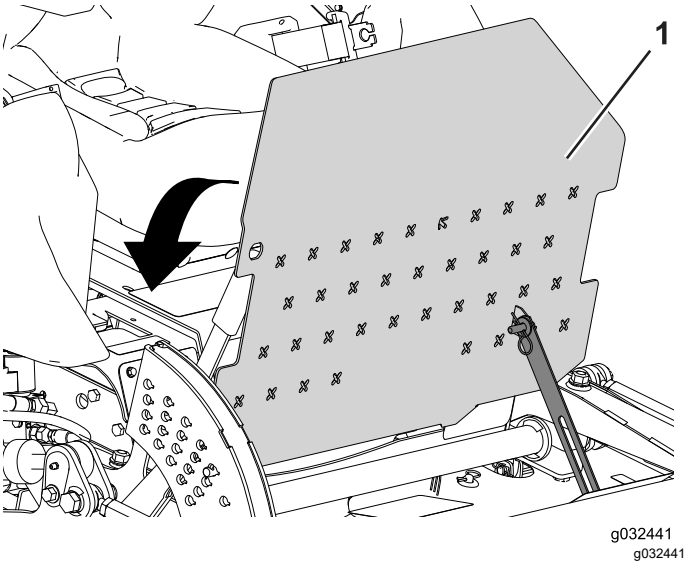


Figure 49

1. Operator platform

2. Disconnect the pivot arm and pivot bracket by removing the hairpin securing the pivot pin and washer (Figure 50).

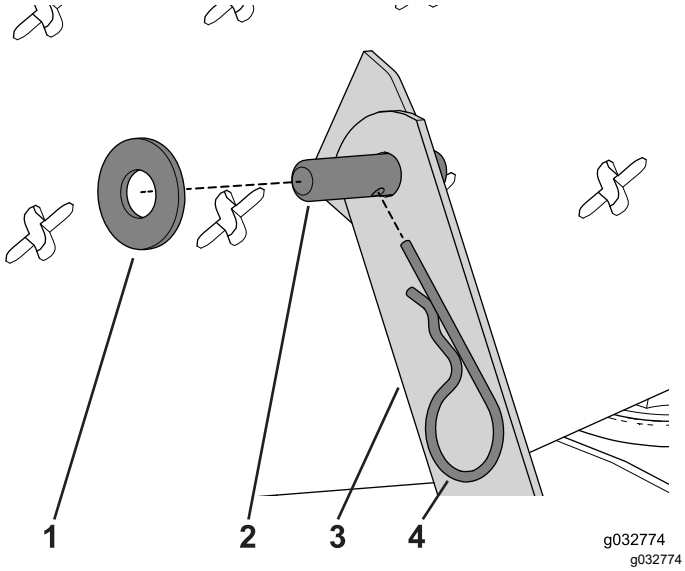


Figure 50

1. Washer
2. Pivot pin
3. Lift arm
4. Hairpin

Note: Retain or loosely install the hardware that you removed during this procedure so that it is available for seasonal changeover.

3. Remove the 2 hairpin from the pivot pins that connect the operator platform to the pivot bracket (Figure 51).

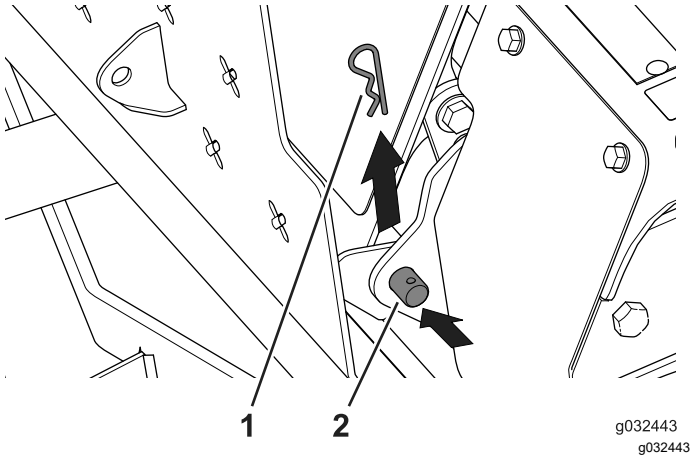


Figure 51

1. Hairpin
2. Pivot pin

4. Have an assistant help you remove the pivot pins and the operator platform (Figure 51).

Note: Set the deck aside for seasonal conversion.

5. Install each of the pivot pins you removed earlier through the seat platform and pivot bracket, and secure it with the hairpins.

Disconnecting the PTO

1. Loosen the PTO drive-shaft bolts and nuts.
2. Remove the roll pin and pull the drive shaft off the gearbox shaft (Figure 52).

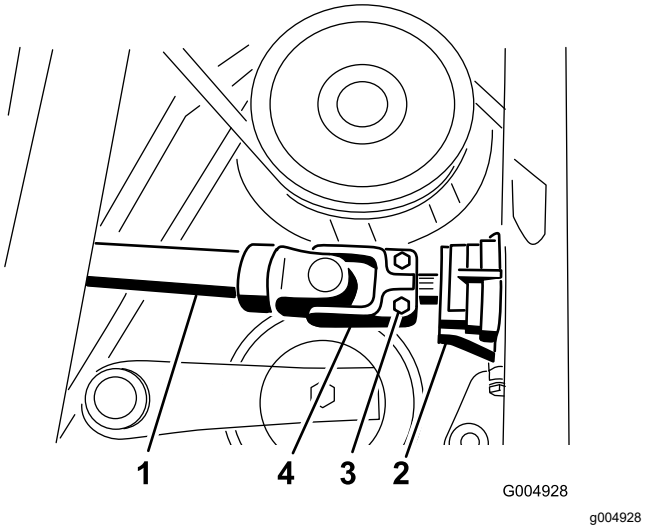


Figure 52

1. Drive shaft
2. Gearbox
3. Bolts
4. End yolk

Note: Retain or loosely install the hardware that you removed during this procedure so that it is available for seasonal changeover.

Disconnecting the Summer Frame

1. Remove the bolts and 2 cover plates to access the nuts and bolts that secure the summer frame to the machine (Figure 53).

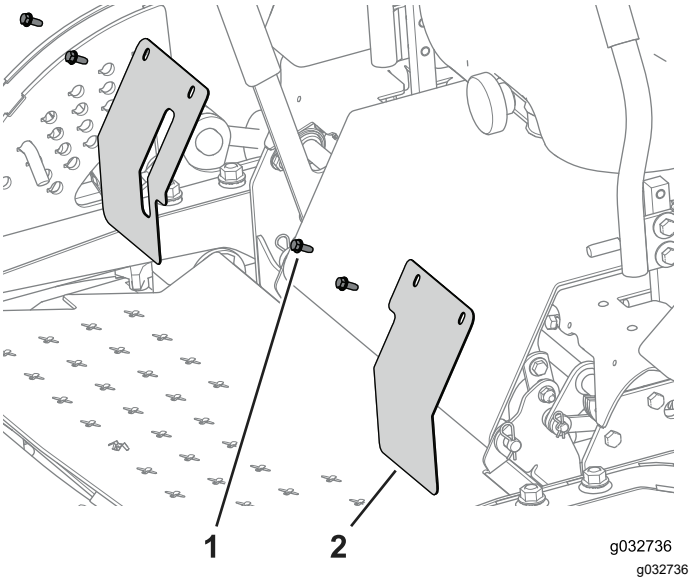


Figure 53

1. Bolts
2. Cover plate

2. Use 2 jack stand underneath the frame to support the back of the machine (Figure 54).

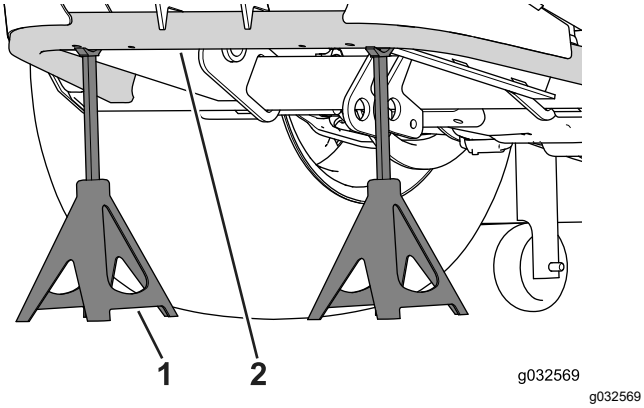


Figure 54

Kubota frame shown

1. Jack stand
2. Frame

3. Place a suitable drain pan underneath the valve and disconnect the hydraulic hoses from the control valve (Figure 55).

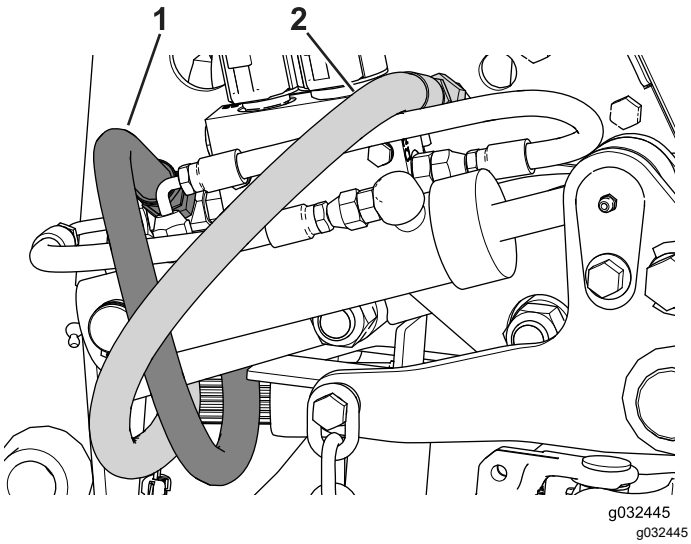


Figure 55

1. Hydraulic-return hose
2. Hydraulic-supply hose

4. Disconnect the 2 connectors plugged into the control valve and coil them up, and store them inside the control box until the next changeover.
5. Install the caps from the winter valve kit into the control valve fitting and plug the hoses with the plugs supplied.

   Note: Clean-up any hydraulic fluid that spilled.
6. Remove the retaining ring, remove the bolt securing the pivot pin, and remove the pivot pin to allow you move the cylinder out of the way.

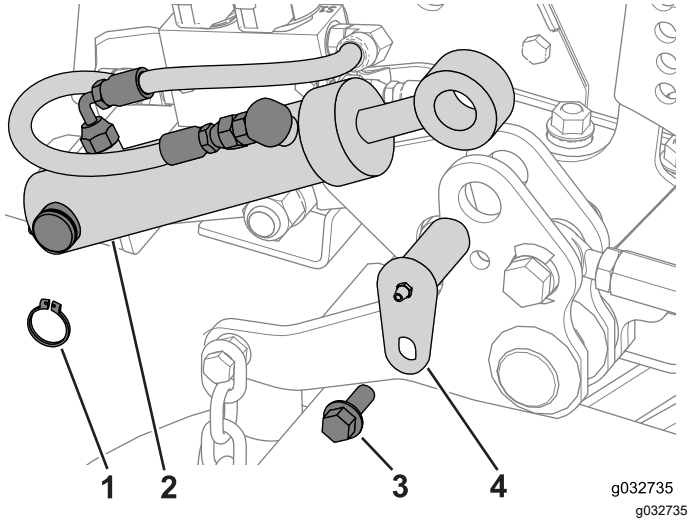


Figure 56

1. Retaining ring
2. Lift cylinder
3. Bolt
4. Pivot pin

7. Remove the locknuts and bolts securing the summer frame to the machine frame (Figure 57 and Figure 58).

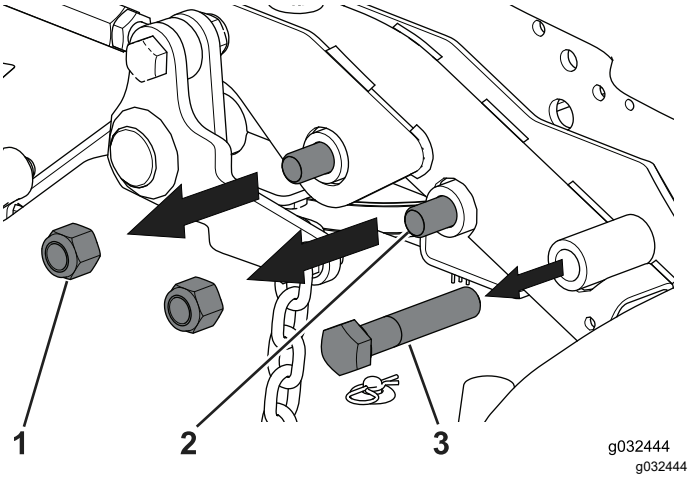


Figure 57

1. Locknut
2. Bolt
3. Bolt

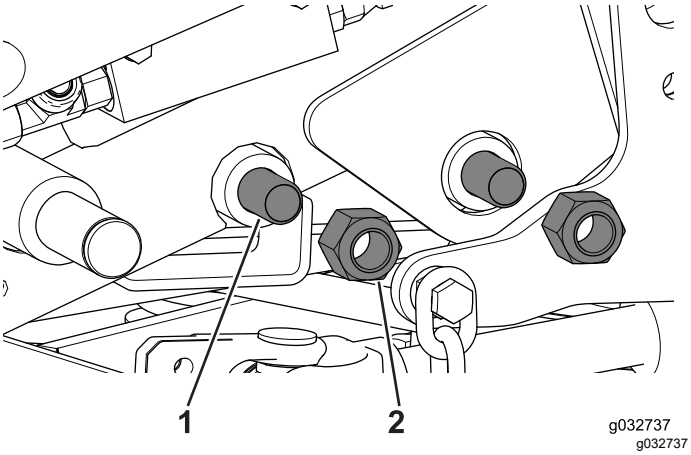


Figure 58

1. Bolt
2. Locknut

8. Roll the summer frame forward and store it for seasonal changeover (Figure 59).

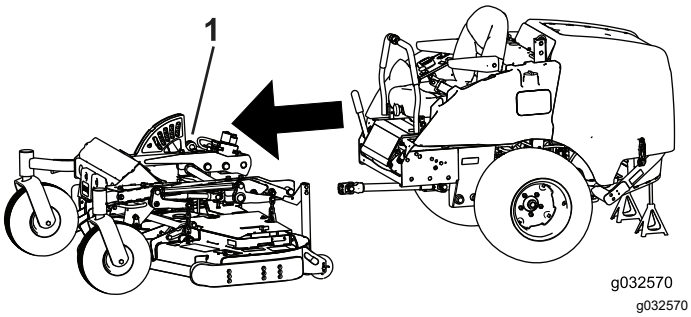


Figure 59

1. Summer frame

Note: Retain or loosely install the hardware that you removed during this procedure so that it is available for seasonal changeover.

12

Installing the Cab

Parts needed for this procedure:

1	Cab
2	Bulb seal
1	Rear foam seal
1	Right, rear- foam seal
1	Left, rear foam seal
1	Right, middle foam seal
1	Left, middle foam seal
1	Right, tank foam seal
2	Side, front foam seal
1	Front foam seal
1	Left, side foam seal
1	Right, side foam seal
4	Rubber isolator
4	Bolt (1/2 x 3-1/4 inches)
4	Washer (1/2 inch)
4	Large washer
4	Nut (1/2 inch)
2	Bolt (3/4 x 3-1/2 inches)
2	Locknut (3/4 inch)

Applying the Safety Decal

Follow this procedure only if required by your local road regulations.

Apply the safety decal to the rear window as shown in Figure 60.

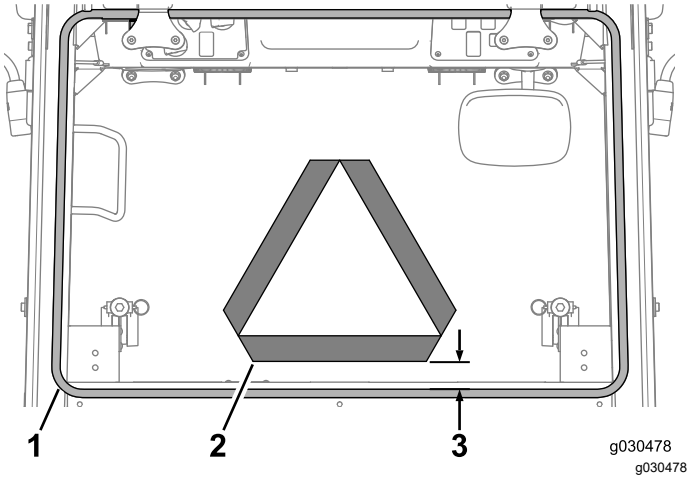


Figure 60

1. Window seal
2. Safety decal
3. 25 mm (1 inch)

Installing the Cab Seals

Note: Ensure that the application area is clean before you apply the foam seals.

1. Apply the rear foam onto the angled tab at the rear of the cab as shown in Figure 61.

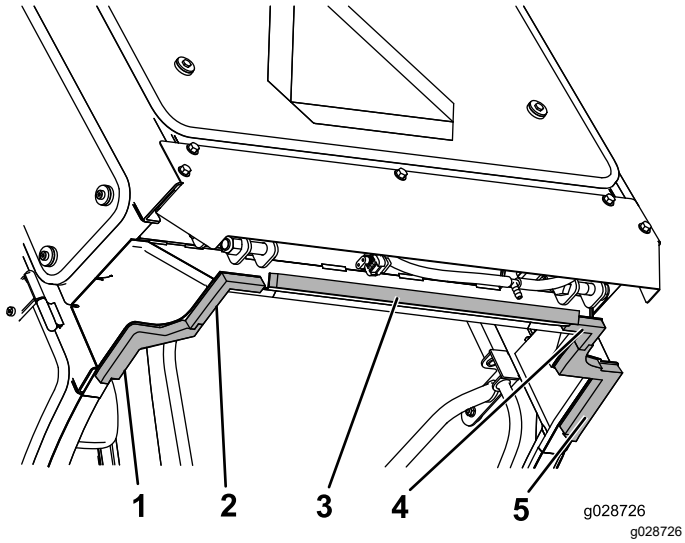


Figure 61

1. Left, middle-foam seal
2. Left, rear-foam seal
3. Rear-foam seal
4. Right, rear-foam seal
5. Right, middle-foam seal

2. Install the left rear and right, rear foam seal to the inner corners of the rear, lower edge of the cab frame as shown in (Figure 61).

   Note: The inner edge of the forward legs of the foam pieces should be approximately 3 mm (1/8 inch) away from the inner edge of the side seal panels of the cab frame.

3. Align the innermost edges of the left middle and right middle foam seals with the left, rear and right, rear foam seal and interlock the tabs (Figure 61).

   Note: The inner edge of the forward legs of the foam seals should be approximately 3 mm (1/8 inch) away from the inner edge of the side seal panels of the cab frame.

4. Align the innermost edges of the left tank and right tank foam seals with the left and right middle foam seal and interlock the tabs (Figure 62).

   Note: The inner edge of the forward legs of the foam seals should be approximately 3 mm (1/8 inch) away from the inner edge of the side seal panels of the cab frame.

5. Press the forward edge of the left, side and right, side foam seal against the channel and interlock the angled rear edge of the foam seal with the tank foam seal (Figure 62).

   Note: There may be a small gap between the tank-foam seals and the angled edge of the side foam seals.

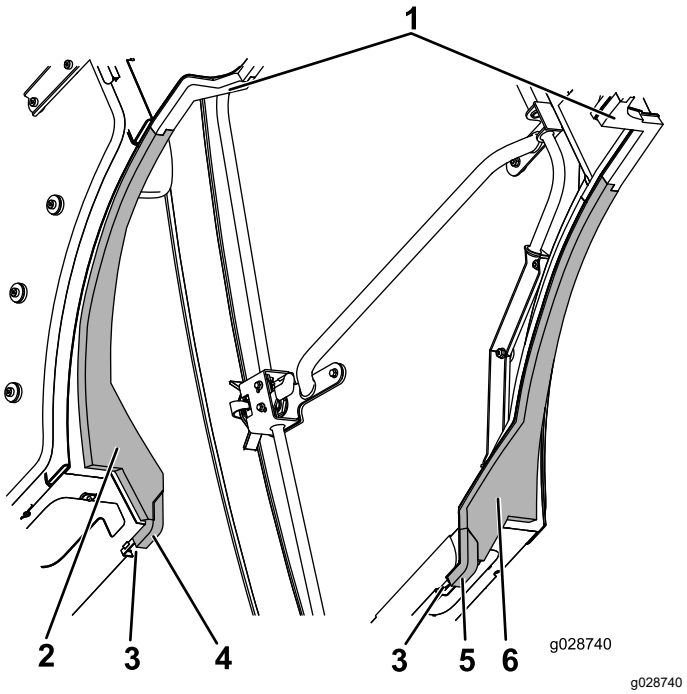


Figure 62

1. Middle-foam seal
2. Left, tank foam seal
3. Channel
4. Left, side foam seal
5. Right, side foam seal
6. Right, tank foam seal

6. Center the front-foam seal on to front panel (Figure 63).

   Note: Ensure that the back edge of the front foam seal is aligned to the rear-most edge of the front panel of the cab frame.

7. Press the forward edge of the side front foam seal into the front foam seal and align the inner edges of the foam seal with the inner edges of the seal panels of the cab frame (Figure 63).

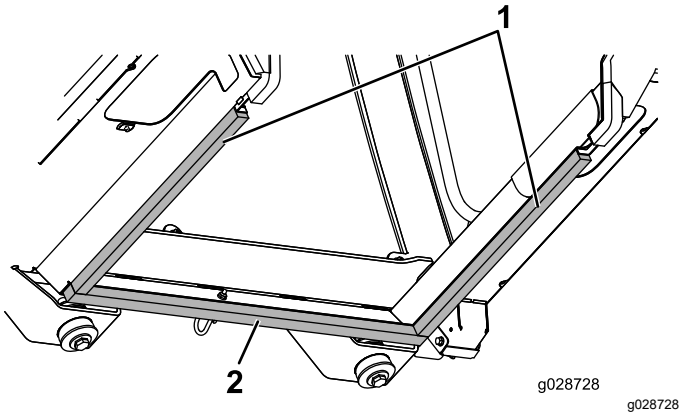


Figure 63

1. Side, front foam seal
2. Front foam seal

Mounting the Cab to the Winter Frame

1. Use the 4 lift points to support the cab above the machine (Figure 64).

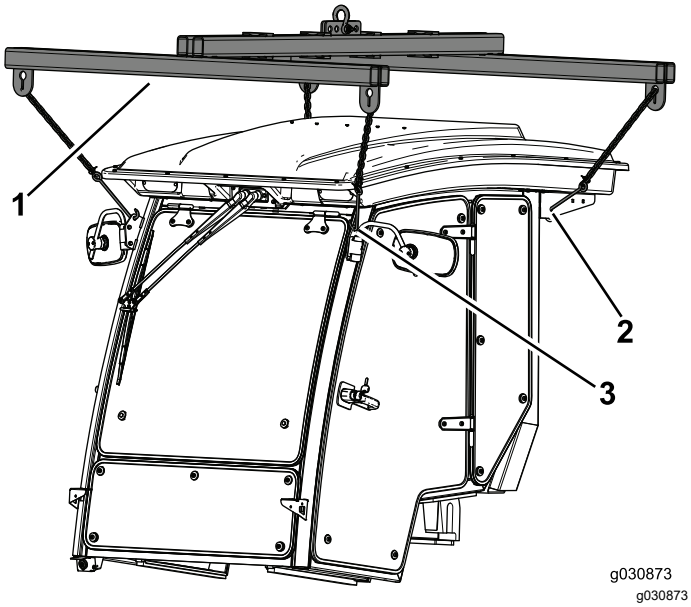


Figure 64

1. Hoist bar
2. Front-lift point
3. Rear-lift point

Note: Ensure that the lifting tool does not contact the cab roof or headliner when supporting the cab.

2. Lower the cab to the machine aligning the 2 bolt holes on the front mounts (Figure 65).

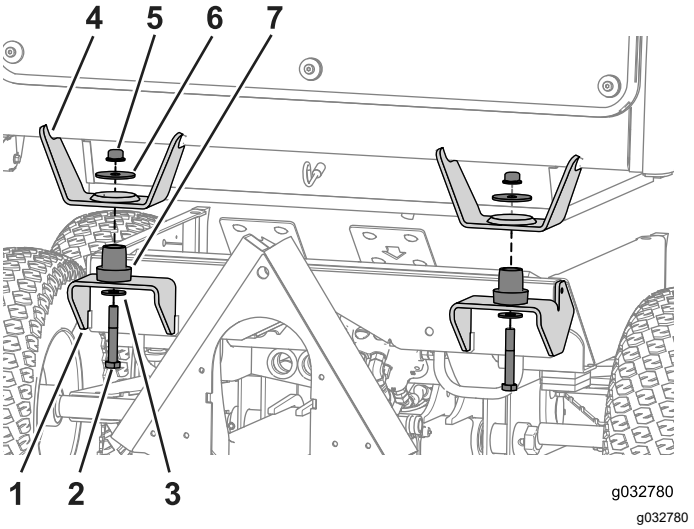


Figure 65

1. Lower mount
2. Bolt (1/2 x 3-1/4 inches)
3. Washer (1/2 inch)
4. Upper mount
5. Flange nut (1/2 inch)
6. Large washer
7. Rubber isolator

3. Insert a rubber isolator at each of the mounting locations (Figure 65).
4. Use the bolt (1/2 x 3-1/4 inches), large washer and flange nut to mount cab to the machine (Figure 65).
5. Tighten the bolt (1/2 x 3-1/4 inches) until you compress the rubber to a thickness of 22 mm (0.875 inch).

13

Installing the Winter Frame

Parts needed for this procedure:

1	Winter frame
2	Coupler link
2	Bolt (3/4 x 4 inches)
2	Washer (3/4 inch)
1	Supply-hose cover
1	Return-hose cover

Pivoting the Cab

1. Remove the 2 bolts securing the access cover on each side of the machine and set them aside (Figure 66).

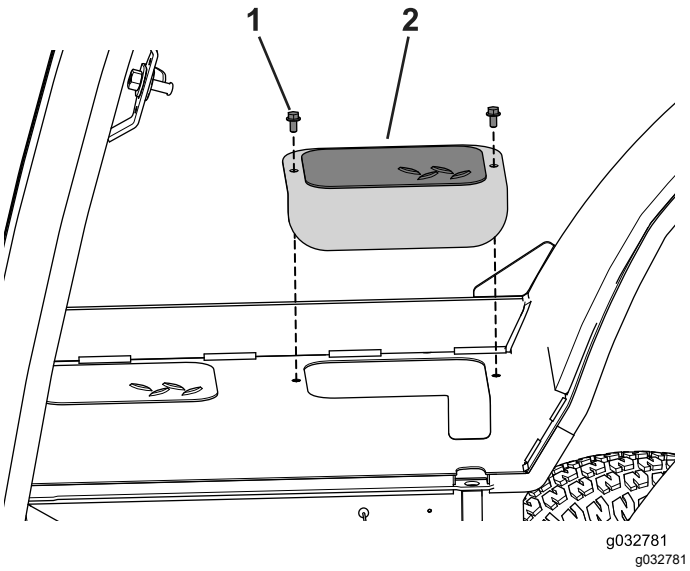


Figure 66

1. Bolt
2. Access cover

2. Position the lift-bar assembly across the cab frame (Figure 67).

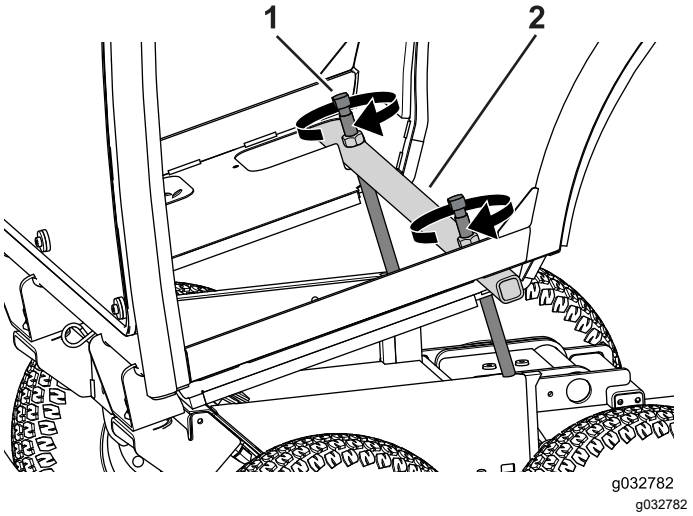


Figure 67

1. Lift screw
2. Lift-bar assembly

3. Alternate between turning the lift screws, a few turns at a time until the cab pivots forward (Figure 67).
4. Rotate the lift screws a few turns, then alternate to the other, to pivot the cab forward.

Connecting the Winter Frame to the Machine

1. Align the winter frame into the machine frame and roll it back (Figure 68).

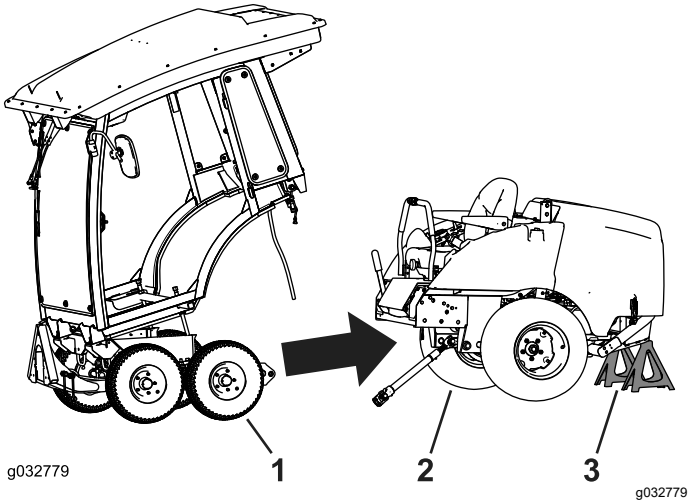


Figure 68

1. Winter frame
2. Machine frame
3. Jack stands

2. Use a floor jack to pivot the machine up and down when aligning the bolt holes of machine and winter frame.
3. Use jack stands to support the machine (Figure 68).

4. Use the coupler link, bolt (3/4 x 4 inches), and washer to secure the winter frame to the machine frame (Figure 69).

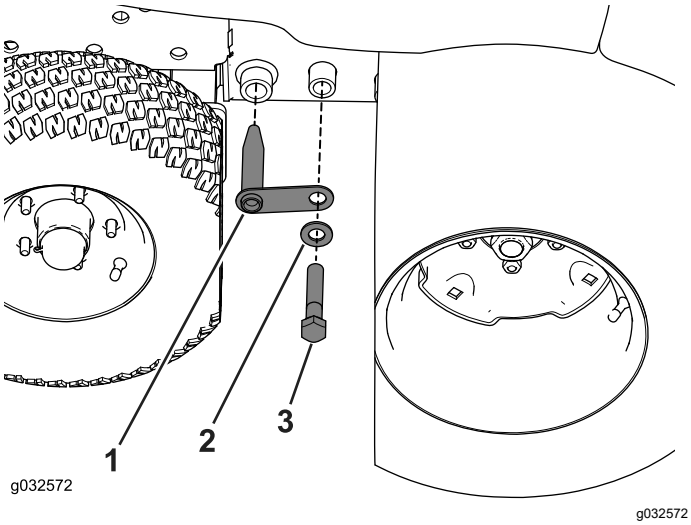


Figure 69

1. Coupler link
2. Washer (3/4 inch)
3. Bolt (3/4 x 4 inches)

5. Torque the bolt to 359 N·m (265 ft-lb).

Securing the Cab to the Machine

1. Alternate between turning the lift screws, a few turns at a time to lower the back of the cab to the machine (Figure 70).

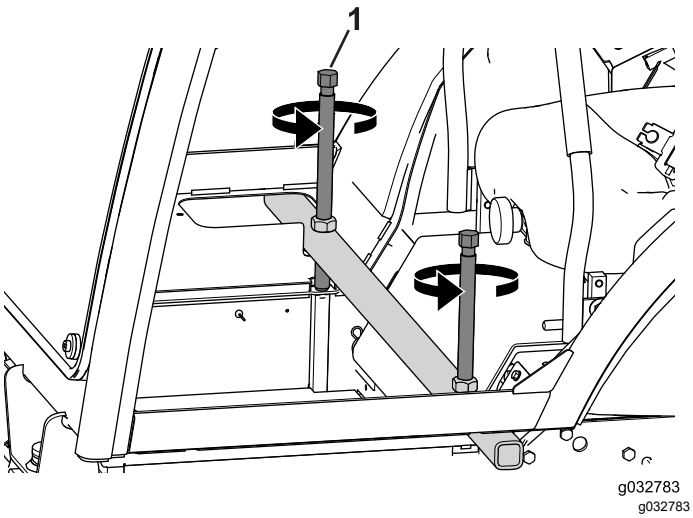


Figure 70

1. Lift screw

2. Use the bolt (1/2 x 3-1/4 inches) and (3/4 x 3-1/2 inches) to loosely install the cab-mount bracket to each side of the ROPS tube (Figure 71).

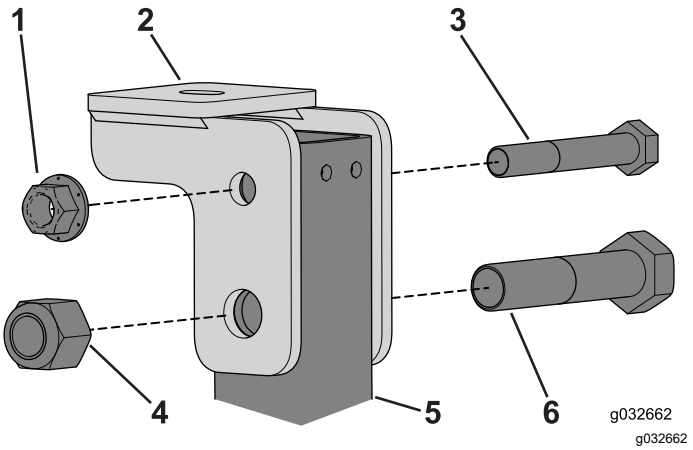


Figure 71

1. Flange nut (1/2 inch)
2. Cab-bracket mount
3. Bolt (1/2 x 3-1/4 inches)
4. Locknut (3/4 inch)
5. ROPS tube
6. Bolt (3/4 x 3-1/2 inches)

Note: Point the cab-bracket mount toward the front of the machine.

3. Insert a rubber isolator at each of the mounting locations on the cab frame (Figure 72).

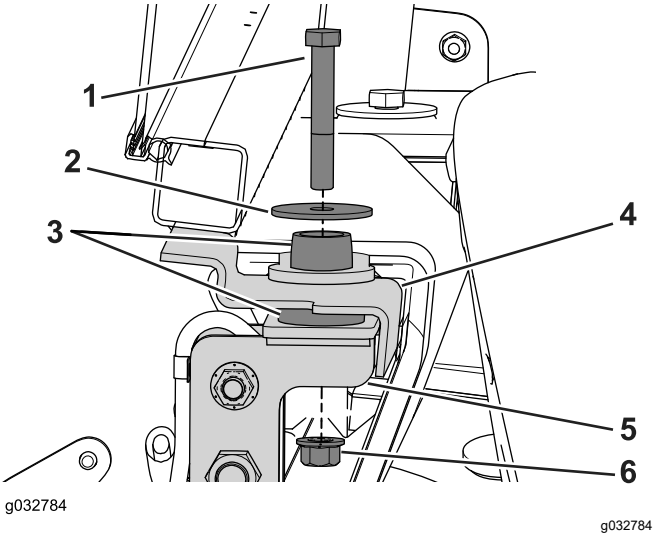


Figure 72

1. Bolt (1/2 x 3-1/4 inches)
2. Large washer
3. Rubber isolator
4. Cab frame
5. Cab-mount bracket
6. Flange nut (1/2 inch)

4. Use the bolt (1/2 x 3-1/4 inches), large washer and flange nut to mount cab to the machine (Figure 72).
5. Tighten the bolt (1/2 x 3-1/4 inches) until the rubber isolator is compressed to a thickness of 22 mm (0.875 inch).
6. Tighten the bolts and nuts securing the cab-mount supports to the ROPS posts (Figure 71).

- Torque the bolts (1/2 x 3-1/4 inches) to 91 to 113 N·m (67 to 83 ft-lb).
- Torque the bolts (3/4 x 3-1/2 inches) to 322 to 396 N·m (238 to 292 ft-lb).

7. Remove the lift-bar assembly and install the access cover you set aside earlier (Figure 66).

Routing and Connecting the Hoses

1. Route the washer tube, heater-supply hose, and heater-return hoses through the grommet (Figure 73).

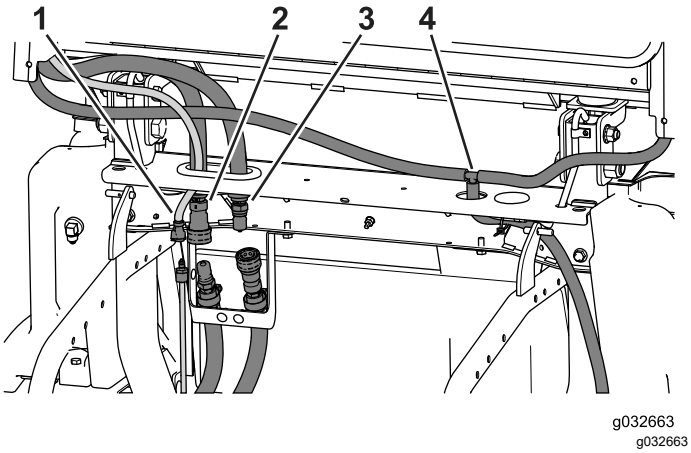


Figure 73

1. Washer tube
2. Heater-supply hose
3. Heater-return hose
4. Drain tube

2. Connect the washer tube, heater-supply hose, and heater-return hose to its counterpart.
3. Route the drain hose through the grommet and down the lower ROPS tube (Figure 73).
4. Use cable ties to secure the drain hose to the ROPS tube.

Connecting the Wire Harness

1. Route the wire harness from the cab toward the wire harness from the machine (Figure 74).

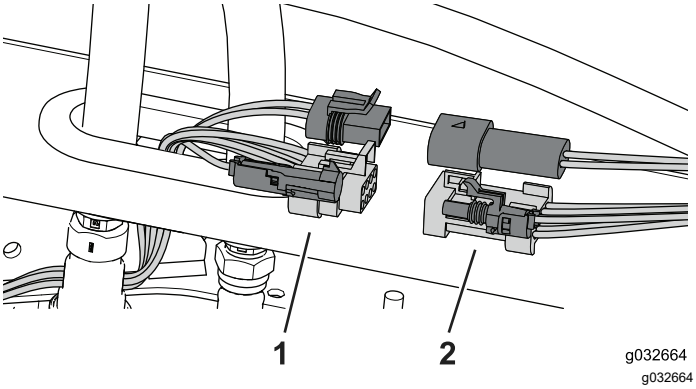


Figure 74

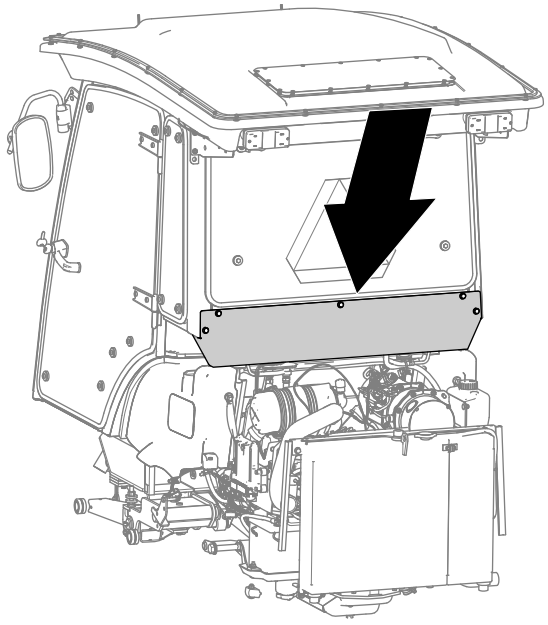
1. Machine wire harness
2. Cab wire harness

2. Connect the cab wire harness connectors to the mating connector on the machine wire harness.
3. Use cable ties to secure the wires.

   Note: Do not secure the wire harness to hot or moving parts.

Installing the Rear Cover

1. Use the 5 bolts (3/8 x 3/4 inch) to secure the rear cover to the machine (Figure 75).



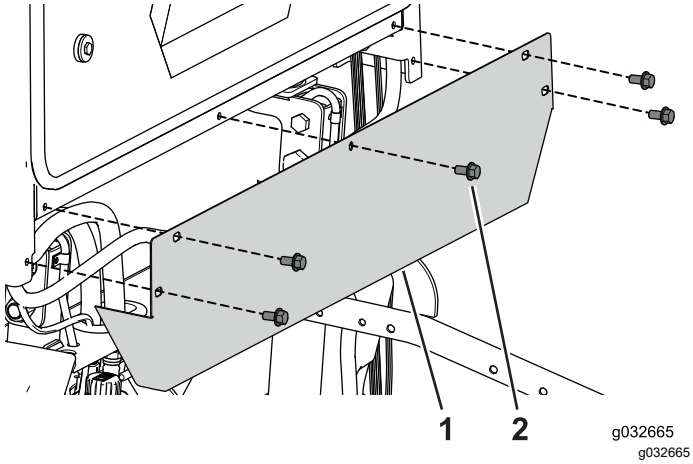


Figure 75

1. Rear cover
2. Bolt (3/8 x 3/4 inch)

Note: Install the center bolt first, then install the remaining bolts.

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

Removing the Rear Wheels

1. Loosen the lug nuts on the rear wheels.
2. Use a floor jack to raise the rear wheels off the ground and then support the frame with jack stands (Figure 76).

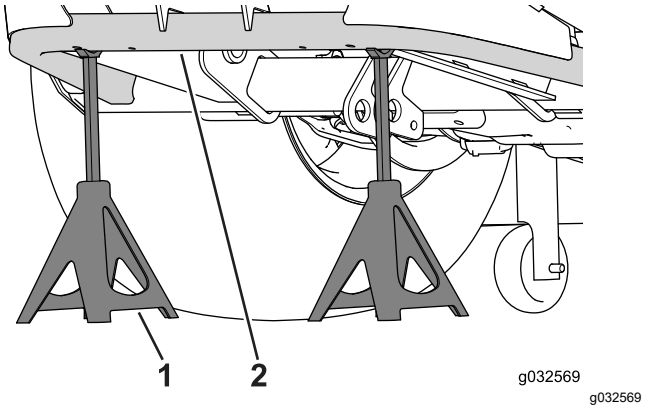


Figure 76

1. Jack stand
2. Machine frame

3. Remove the rear wheels from the machine.
4. Install the bolt (3/4 x 4 inches) as shown in Figure 77.

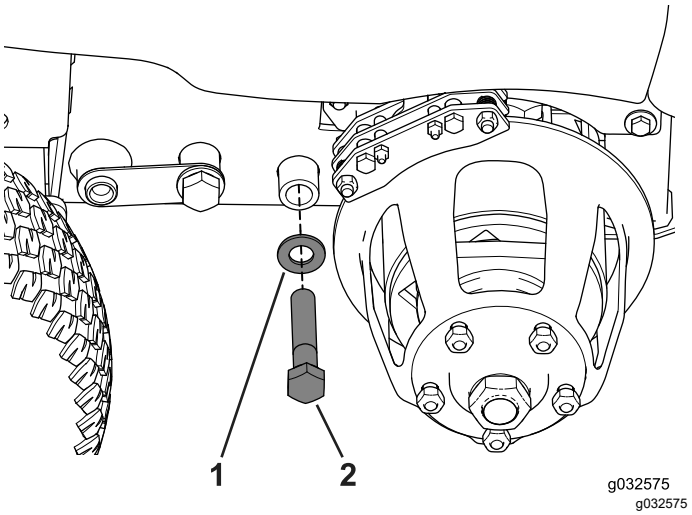


Figure 77

1. Washer
2. Bolt (3/4 x 4 inches)

5. Torque the bolt to 359 N·m (265 ft-lb).

Connecting the PTO Drive

1. Remove the 2 bolts that secure the operator deck to the machine to access the PTO connection (Figure 78).

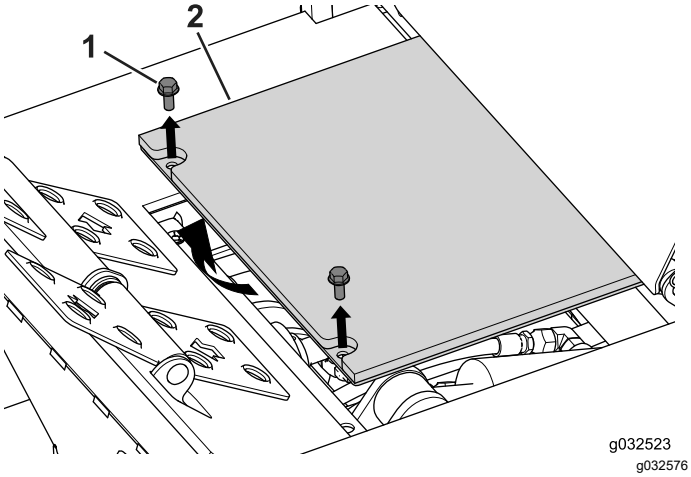


Figure 78

1. Bolt
2. Operator deck

2. Align the roll pin holes and slide the PTO yolk over the PTO shaft on the winter frame (Figure 79).

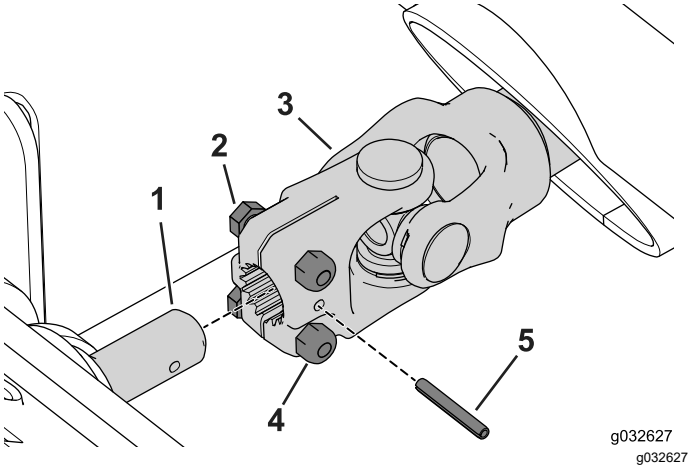


Figure 79

1. PTO shaft
2. Bolt
3. PTO yolk
4. Locknut
5. Roll pin

3. Install the roll pin (Figure 79).
4. Tighten the bolts to secure the yolk to the shaft.
5. Use the 2 bolts (5/16 x 3/4 inch) you removed earlier to secure the operator deck to the winter frame (Figure 78).

Connecting the Hydraulic Hoses

1. At the gear pump, loosen the supply-hose fitting and rotate it toward the front of the machine (Figure 80).

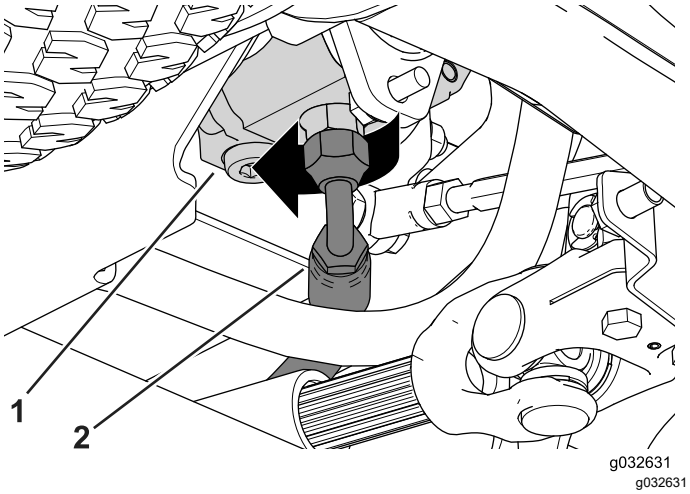


Figure 80

1. Gear pump
2. Supply hose

2. Locate the 2 hoses that you removed from the deck-lift cylinder and install the appropriate hose cover to each hose.
3. Use a cable tie to secure each end of the hose cover to the hose.
4. Route the hoses toward the front of the machine (Figure 81).

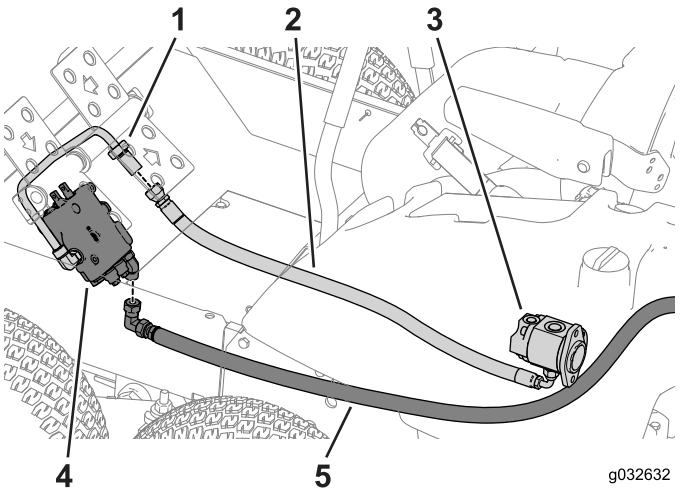


Figure 81

1. Tube connector
2. Supply hose
3. Gear pump
4. Control valve
5. Return hose

5. Route the supply hose through the grommet and connect it to the tube connector (Figure 82).

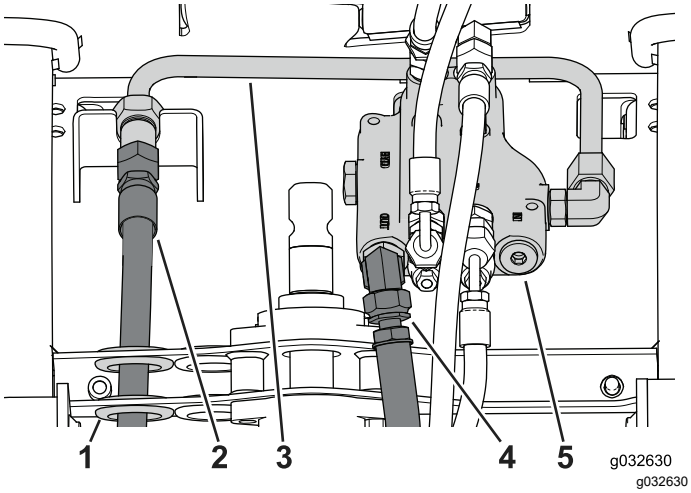


Figure 82

1. Through hole
2. Supply hose
3. Tube
4. Return hose
5. Control valve

6. Connect the return hose to the control valve (Figure 82).
7. Tighten all hose fittings.

Note: Do not secure the hoses to hot or moving parts.

Installing the Wheels

1. Install the wheel onto the hub (Figure 83).

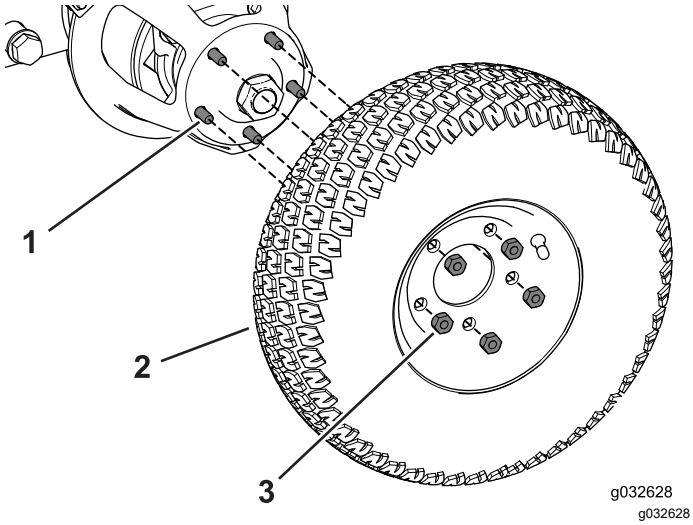


Figure 83

1. Hub
2. Wheel
3. Lug nut

2. Use the lug nuts to secure the wheels to the frame (Figure 83).
3. Torque the lug nuts to the 88 to 115 N·m (65 to 85 ft-lb) in the following order (Figure 84).

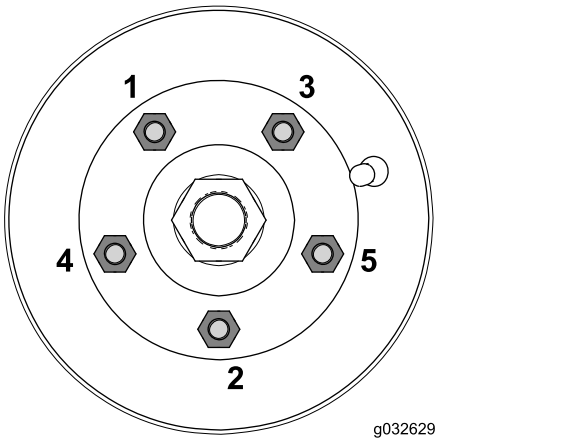


Figure 84

Installing the Tracks

⚠ CAUTION

The track guides have many pinch points. Coming into contact with one of these pinch points could cause severe personal injury.

Carefully grasp the rubber track on the outer edges outboard of the steel guides when moving the track.

1. Place 2 jack stands underneath the rear of frame to support the machine when you lift the front of the machine (Figure 85).

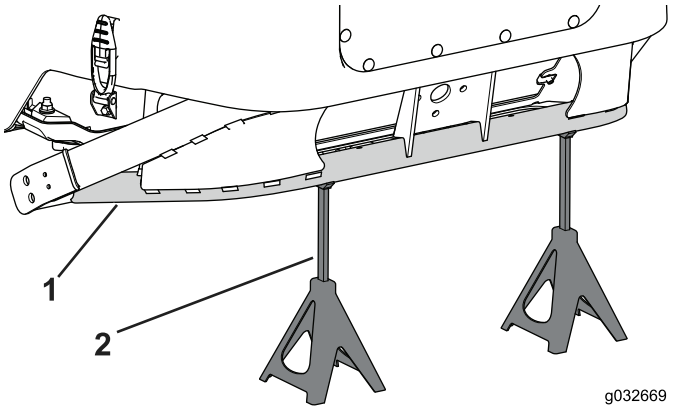


Figure 85

1. Machine frame
2. Jack stand (2)

2. Remove the locknut and washer from the threaded stud on the bogie-stop assembly and set them aside (Figure 86).

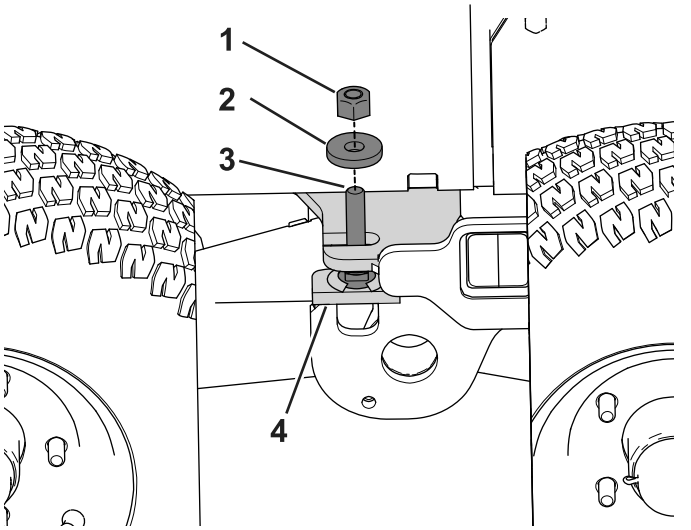


Figure 86

1. Locknut
2. Washer
3. Threaded stud
4. Bogie-stop assembly

3. Locate the pivot point for the attachment arm on the winter frame (Figure 87).

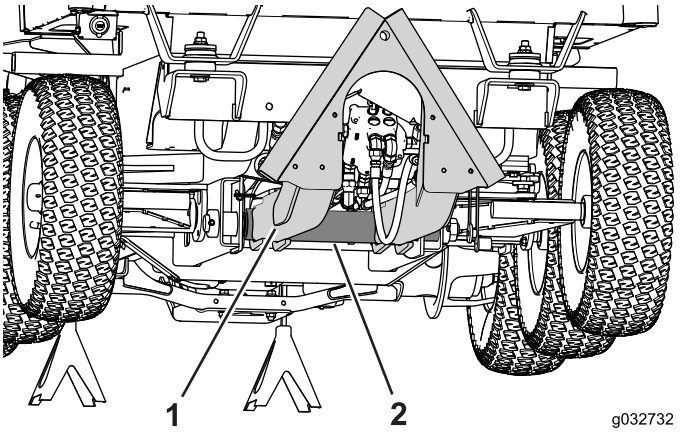


Figure 87

1. Attachment-lift arm
2. Pivot point

4. Use a floor jack to lift the winter frame (Figure 88).

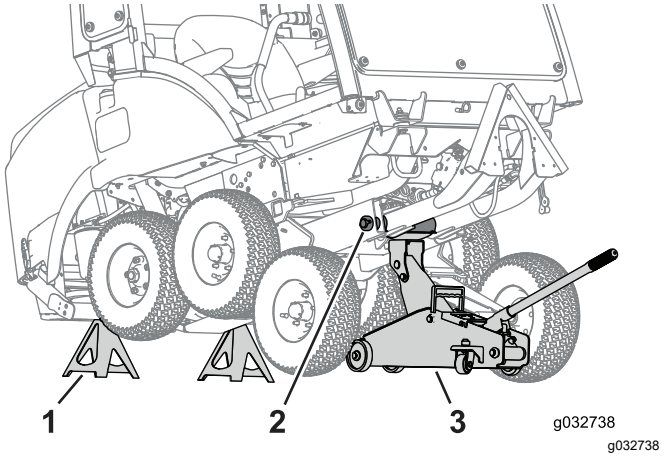


Figure 88

1. Jack stand (2)
2. Pivot point
3. Floor jack

5. Use jack stands to support the winter frame (Figure 89).

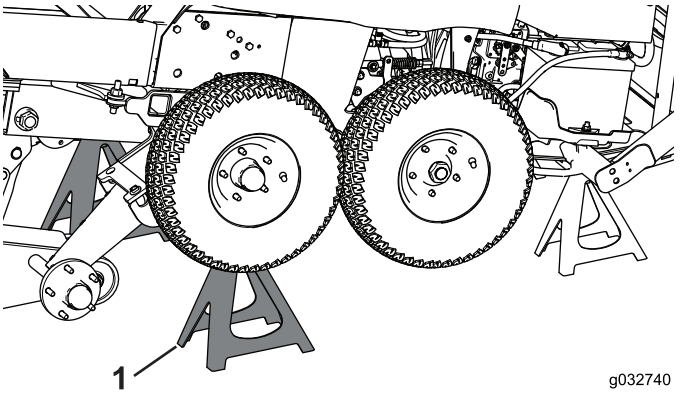


Figure 89

1. Jack stand

6. Remove the front wheels (Figure 89).
7. Arrange the tracks around center and rear wheels (Figure 90).

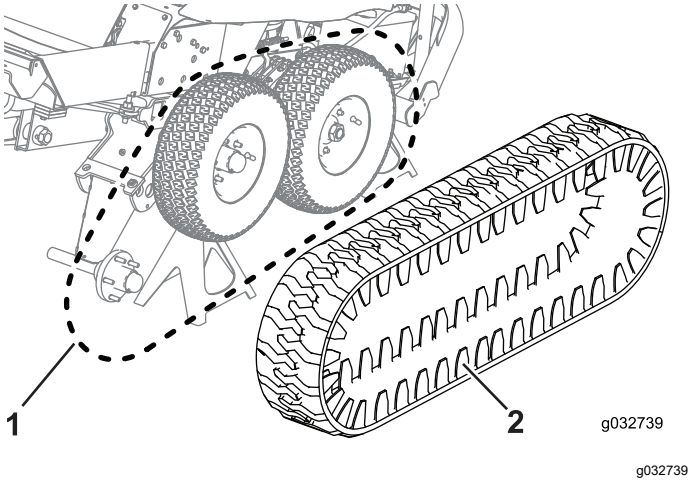


Figure 90

1. Track path
2. Track

8. Install the front wheels to the winter frame; refer to Installing the Wheels (page 38).
9. Use a floor jack to remove the jack stands and lower the machine to the ground.
10. Install the locknut and washer to the threaded stud on the bogie-stop assembly (Figure 91).

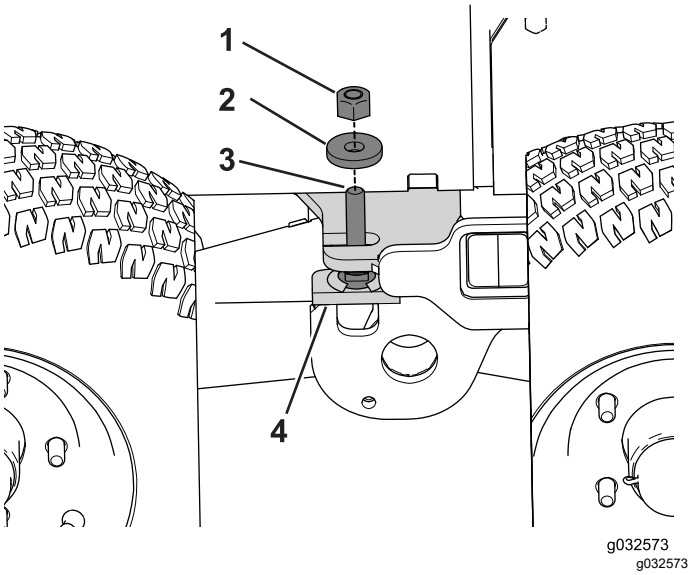


Figure 91

1. Locknut
2. Washer
3. Threaded stud
4. Bogie-stop assembly

11. Torque the nut to 91 to 113 N·m (67 to 83 ft-lb).

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Completing the Installation

No Parts Required

Procedure

1. Install the hood on to the machine.
2. Fill the washer fluid tank.
3. Fill the radiator; refer to the machine *Operator's Manual* for fluid specifications.
4. Check the hydraulic-fluid level and replenish as needed; refer to the machine *Operator's Manual* for the hydraulic fluid specification.
5. Connect the negative (-) battery cable to the battery.
6. Start the machine, raise and lower the lift arm, and check for hydraulic leaks.
7. Check the hydraulic fluid and coolant levels again and add hydraulic fluid and coolant as needed.
8. Store the summer frame, components, and hardware until the next seasonal changeover.

Product Overview

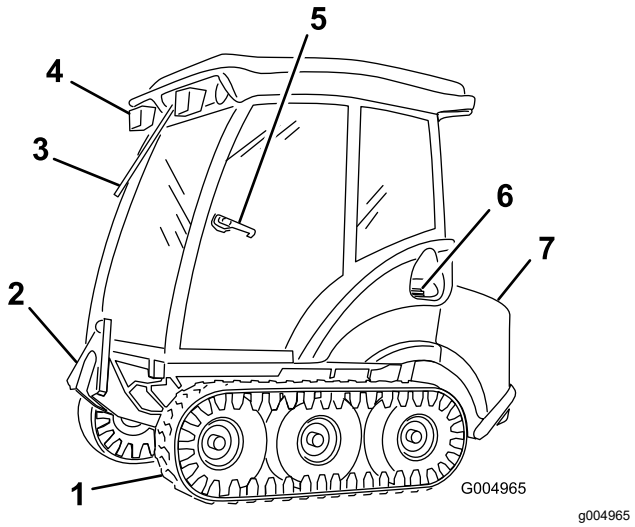


Figure 92

1. Track
2. Attachment-lift arm
3. Windshield wiper
4. Work lights
5. Door latch
6. Fuel-tank cap
7. Hood

Controls

Cab Controls

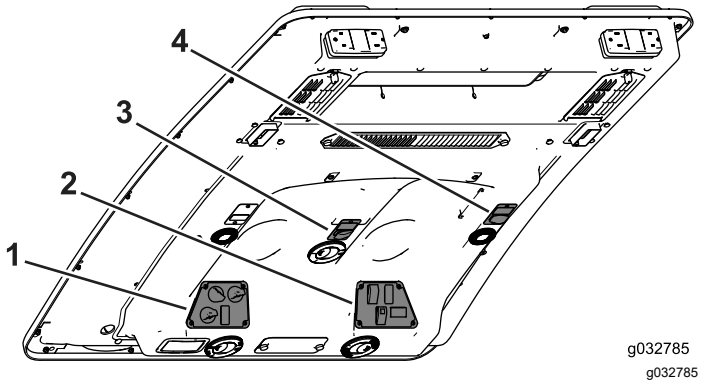


Figure 93

1. Climate-controls panel
2. Light-controls panel
3. Wiper control switch
4. Power-point selector

Climate-Controls Panel

Use the climate-control panel to adjust the cab temperature (Figure 94).

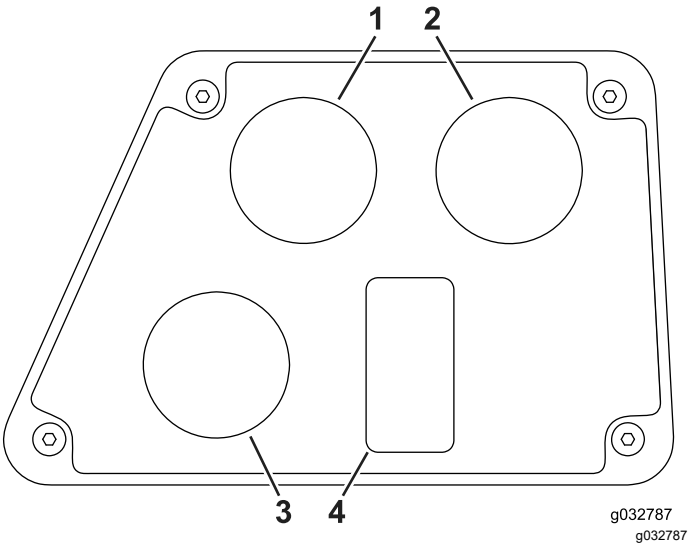


Figure 94

1. Fan-control position
2. Temperature-control position
3. Recirculation-control position
4. Air-condition-switch position

Temperature Control

Rotate the temperature control knob to regulate the air temperature in the cab (Figure 94).

Fan Control

Rotate the fan control knob to regulate the speed of the fan (Figure 94).

Air Recirculation Control

Sets the cab to either recirculate the air in the cabin or to draw air into the cabin from outside (Figure 94).

Light-Controls Panel

Use the light-controls panel to operate the lights on machine (Figure 95).

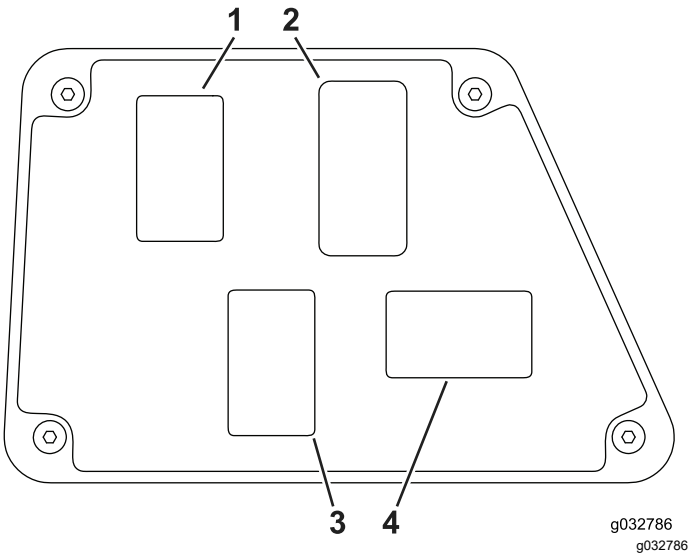


Figure 95

1. Headlight switch
2. Cab-light switch
3. Hazard-light switch
4. Turn-signal switch

Headlight Switch

Use this switch to turn the headlights on or off (Figure 95).

Cab-Light Switch

Use this switch to turn the cab light on or off (Figure 95).

Hazard-Light Switch

Use this switch to turn the hazard lights on or off (Figure 95).

Turn-Signal Switch

Use this switch to activate the left or right turn signal (Figure 95).

Windshield-Wiper Switch

Use this switch to turn the windshield wipers on or off (Figure 93).

Power-Point Selector

Use this selector to determine which power point is activate (Figure 93).

Rear-Window Latch

Rear-Window Latch

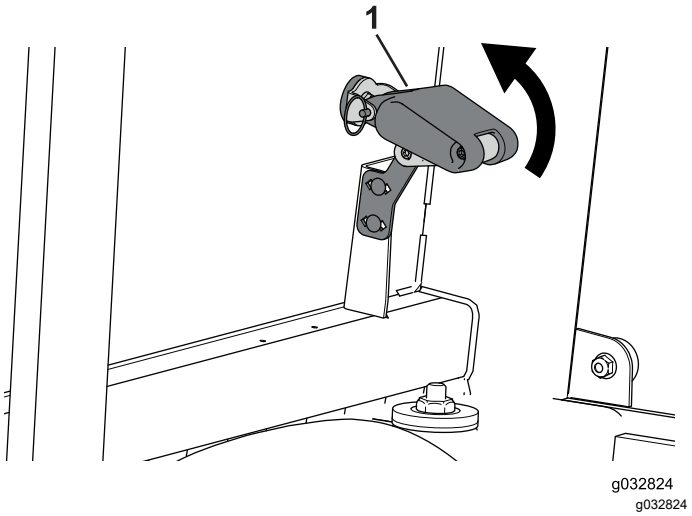


Figure 96

1. Window latch

Lift up the window latches to open the window (Figure 96). Press the latch to lock window into the open position. Pull out and down on the latch to close and secure the window.

Important: **Close the rear window before you open the hood to prevent any damage.**

Foot Pedal Operation

Use the foot pedal to operate the attachment arm (Figure 97).

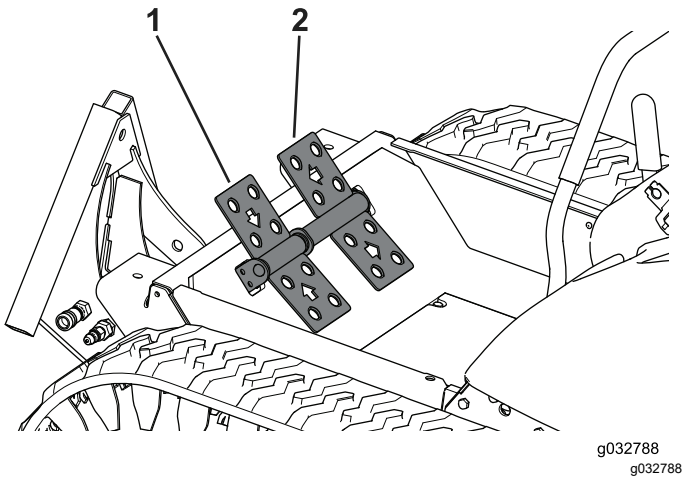


Figure 97

1. Left-foot pedal
2. Right-foot pedal

Left-foot pedal

Use the left-foot pedal to raise and lower the attachment (Figure 97).

Right-foot pedal

Use the right-foot pedal to operate the attachment (Figure 97).

Operation

Note: Determine the left and right sides of the machine from the normal operating position.

Putting Safety First

Please read all safety instructions and symbols in the safety section. Knowing this information could help you or bystanders avoid injury.

⚠ DANGER

Operating on wet grass, ice or slippery slopes can cause sliding and loss of control.

The tracks dropping over edges can cause a rollover, which may result in serious injury or death.

Read and follow the rollover protection instructions and warnings.

To avoid loss of control and possibility of rollover:

- **Do not operate near drop-offs or near water.**
- **Reduce speed and use extreme caution on slopes.**
- **Avoid sudden turns or rapid speed changes. Always use seat belts**

⚠ CAUTION

This machine produces sound levels in excess of 85 dBA at the operators ear and can cause hearing loss through extended periods of exposure.

Wear hearing protection when operating this machine.

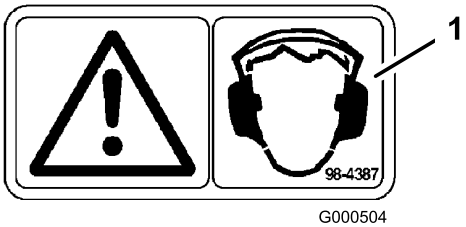


Figure 98

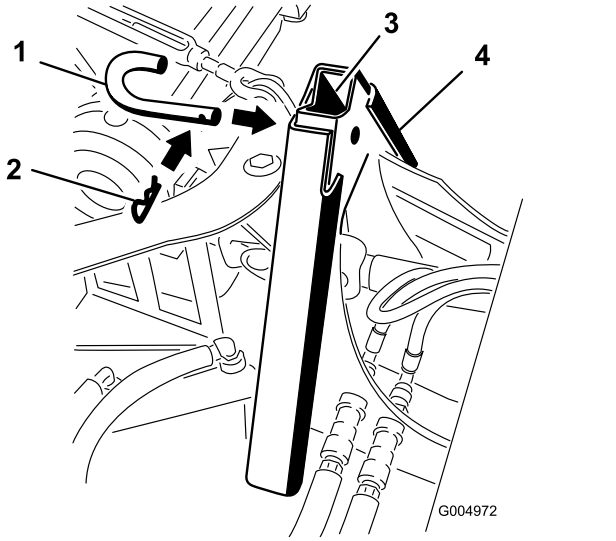
1. Warning— wear hearing protection

Using the Attachments

- Read the *Operator's Manual* supplied with the attachment before operating.
- Ensure that the hydraulic quick couplers are free of any contaminates before connecting.
- Keep output shaft oiled to prevent rust.
- Never operate the PTO with attachment in the raised position. You will hear noise from the PTO drive line if the attachment is raised.

Install the attachment as follows:

1. Remove any attachment from the machine.
2. Drive the machine into position behind the attachment mount adapter. Raise the mount adapter of the machine into the attachment adapter.
3. Secure the mount adapters together with the attachment pin and hairpin as shown in Figure 99.



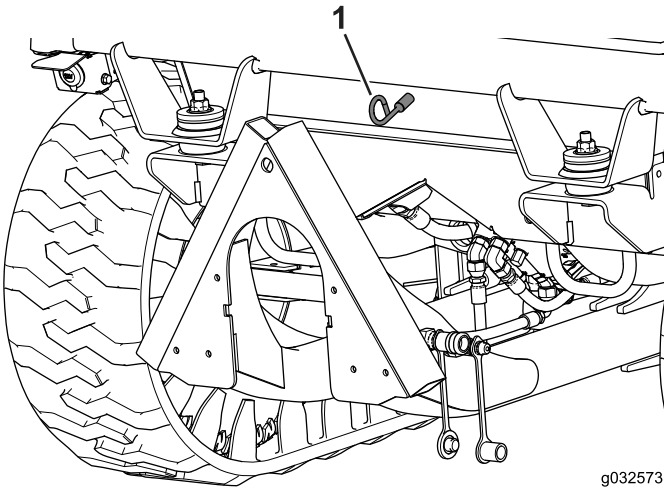
g004972

Figure 99

1. Attachment pin
2. Hairpin
3. Machine mount adapter
4. Attachment mount adapter

Routing the Snowthrower Wires

Route the snow thrower wires from the cab, through the eyelet and to the snowthrower.



g032573
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Figure 100

1. Wire eyelet

Removing the Winter Frame

Note: Retain or loosely install the hardware that you removed during this procedure so that it is available for seasonal changeover.

Preparing the Machine for Seasonal Changeover

1. Start the machine and remove any attachments.

   Note: Position the machine so that you can roll away the winter frame, you can install the summer frame, and you can raise the rear of the machine with a floor jack. Store the attachment as instructed in the manufacturers *Operator's Manual*.
2. Lower the lift arm A-frame.
3. Disconnect the battery cable connected to the negative (-) battery terminal.

Disconnecting the PTO

1. Remove the 2 bolts securing the floor-plate cover and remove the cover (Figure 101).

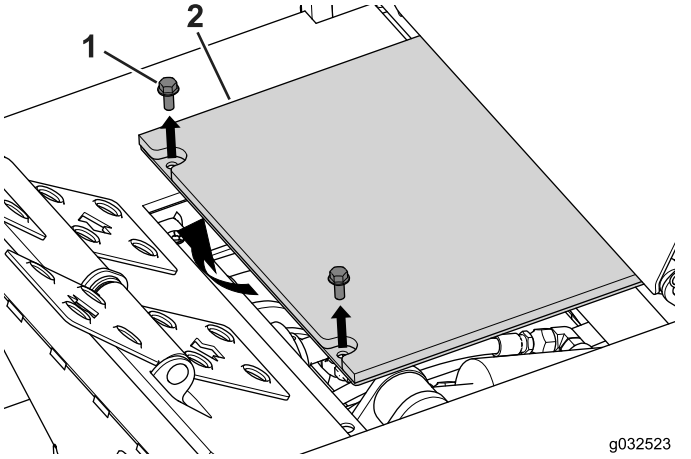

Figure 101

1. Bolt
2. Operator deck

2. Remove the roll pin and loosen the 2 bolts securing the drive shaft to the gearbox shaft (Figure 102).

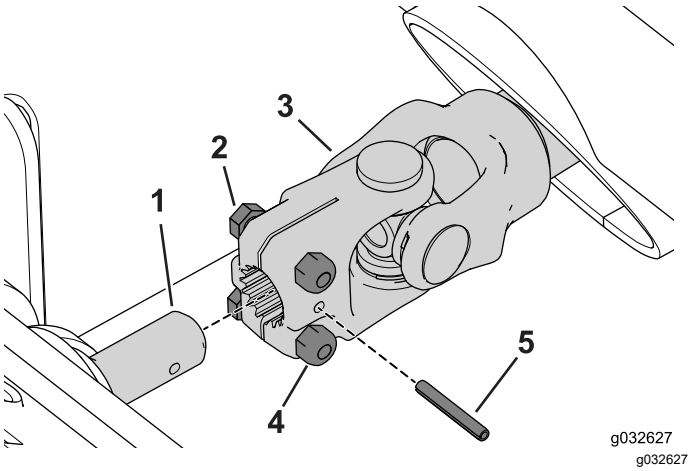

Figure 102

1. PTO shaft
2. Bolt
3. PTO yolk
4. Locknut
5. Roll pin

3. Set aside the roll pin.

Removing the Tracks

1. Place 2 jack stands underneath the back of machine frame (Figure 103).

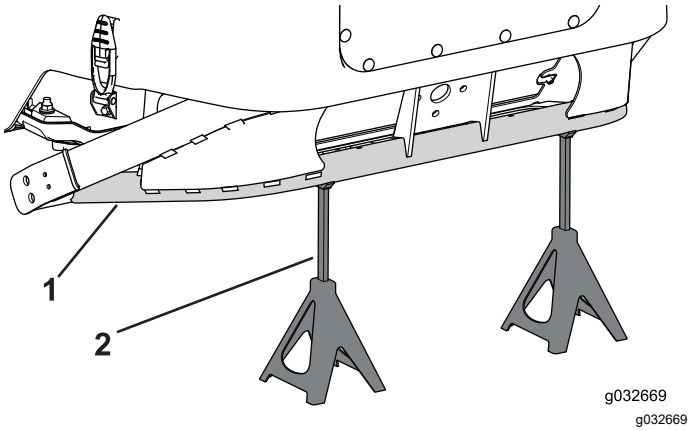

Figure 103

1. Machine frame
2. Jack stand

2. Remove the locknut and washer from the threaded stud on the bogie-stop assembly (Figure 104).

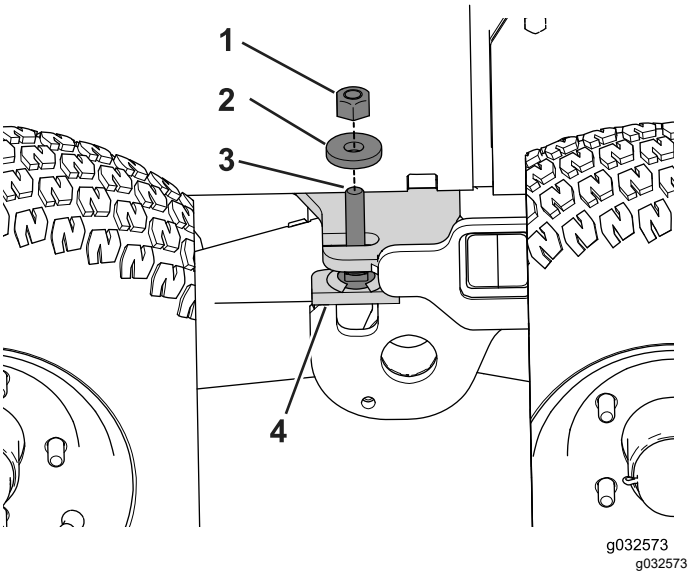

Figure 104

1. Locknut
2. Washer
3. Threaded stud
4. Bogie-stop assembly

3. Position a floor jack under the pivot point for the attachment assembly and raise the front of the frame until the center wheels swing back, nearly contacting the rear wheels (Figure 105).

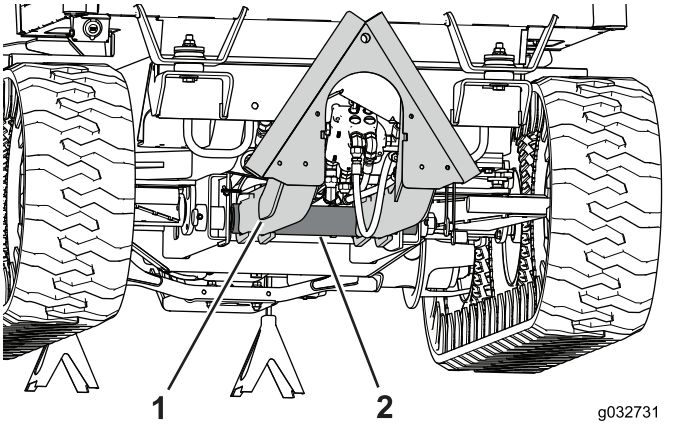

Figure 105

1. Attachment assembly
2. Attachment-assembly pivot

4. Use jack stands to support the front of the winter frame.
5. Remove the front wheels from the winter frame.
6. Remove the tracks from the winter frame.
7. Install the front wheels to the winter frame; refer to Installing the Wheels (page 38)
8. Use a floor jack to lower the winter frame to the ground.
9. Install and tighten the flat washer (1/2 inch) and locknut to the bogie-pivot assembly (Figure 104).

Disconnection the Hydraulic Hoses

1. Place a suitable drain pan underneath the control valve (Figure 106).
2. Disconnect the supply hose from the tube connector and pull it out of the through hole (Figure 106).

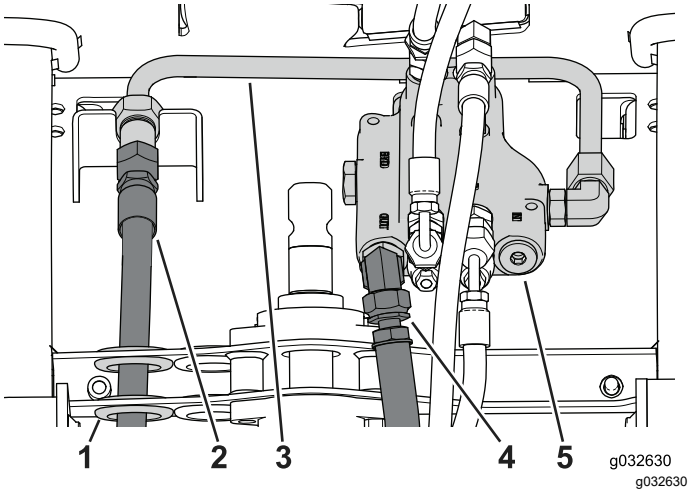

Figure 106

1. Through hole
2. Supply hose
3. Tube
4. Return hose
5. Control valve

3. Disconnect the return hose from the control valve (Figure 106).
4. Place caps on the fittings for seasonal storage.

Note: Wipe up any fluid that spilled.

Disconnecting the Wire Harness

1. Remove 5 bolts securing the rear cover to the cab (Figure 107).

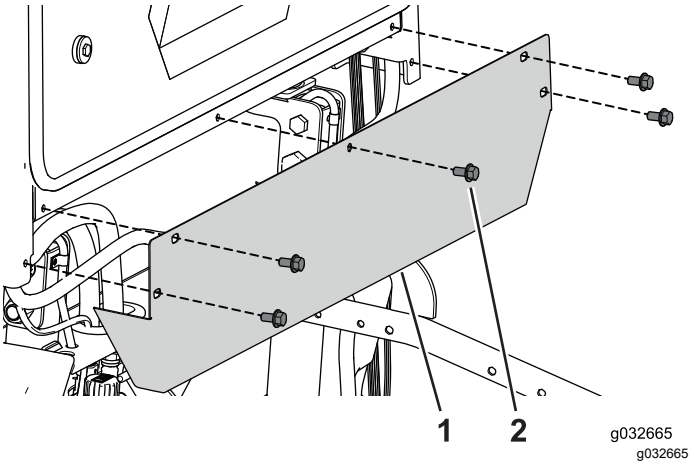

Figure 107

1. Rear cover
2. Bolt (3/8 x 3/4 inch)

2. Remove any cable ties securing the auxiliary wire to the cab and pull it toward the machine.
3. Disconnect the machine wire harness from the cab wire harness (Figure 108).

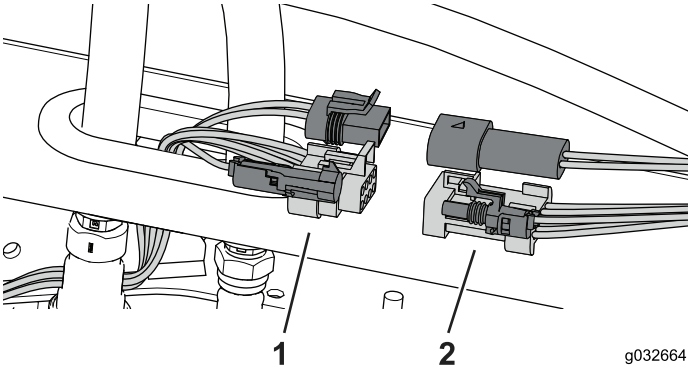

Figure 108

1. Machine wire harness
2. Cab wire harness

4. Secure each wire harness for seasonal storage.

Disconnecting the Cab Hoses

1. Disconnect the washer tube, heater-supply hose, and heater-return hose (Figure 109).

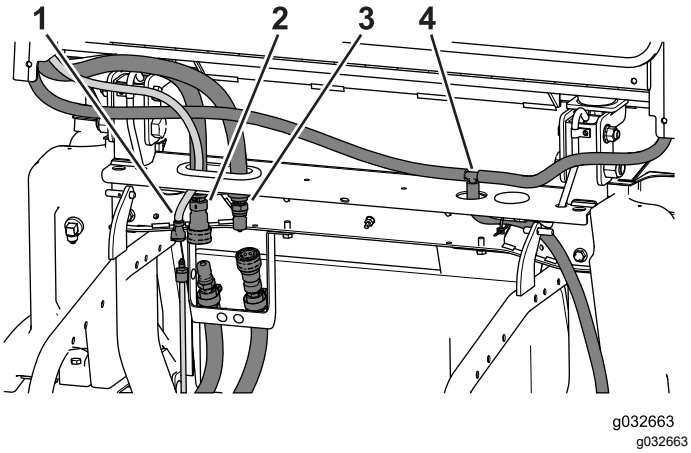

Figure 109

1. Washer tube
2. Heater-supply hose
3. Heater-return hose
4. Drain tube

2. Remove any cable tie that secure the drain tube to the machine (Figure 109).
3. Pull all hoses and tubes out of the grommets and secure them for seasonal storage.
4. Use the hose plugs to cap the hoses for seasonal storage.
5. Replace the winter grommet with the summer grommet (Figure 110).

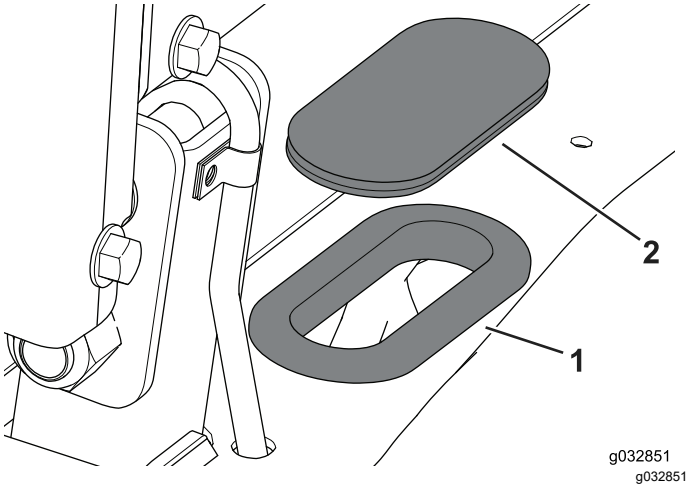

Figure 110

1. Winter grommet
2. Summer grommet

6. Install the rear cover; refer to Installing the Rear Cover (page 36)

Note: Wipe up any spilled fluid.

Disconnecting the Cab

1. Remove the bolts securing the cab-mount bracket to the ROPS tube at the rear of the cab frame (Figure 111).

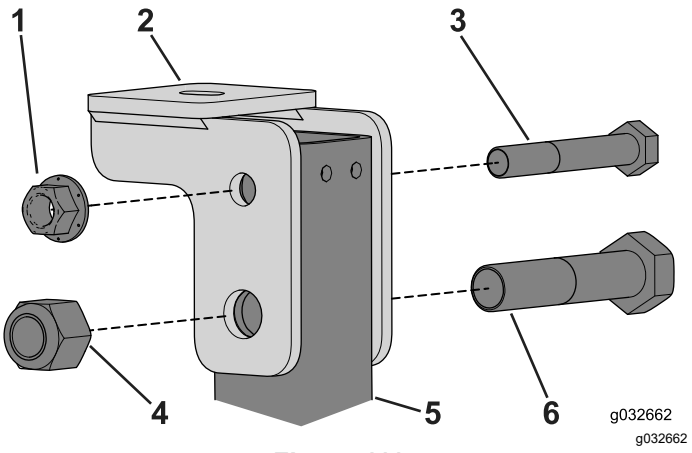

Figure 111

1. Flange nut (1/2 inch)
2. Cab-mount bracket
3. Bolt (1/2 x 3-1/4 inches)
4. Locknut (3/4 inch)
5. ROPS tube
6. Bolt (3/4 x 3-1/2 inches)

2. Remove the 2 bolts securing the access cover on each side of the machine (Figure 112).

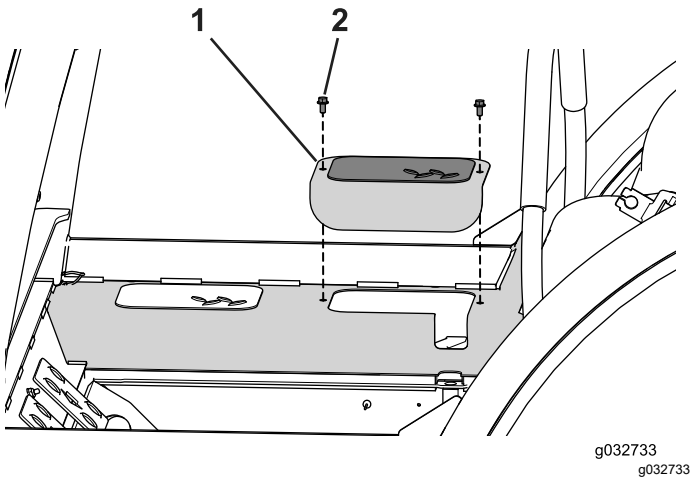

Figure 112

1. Access cover
2. Bolt

3. Position the lift bar across the cab frame (Figure 113).

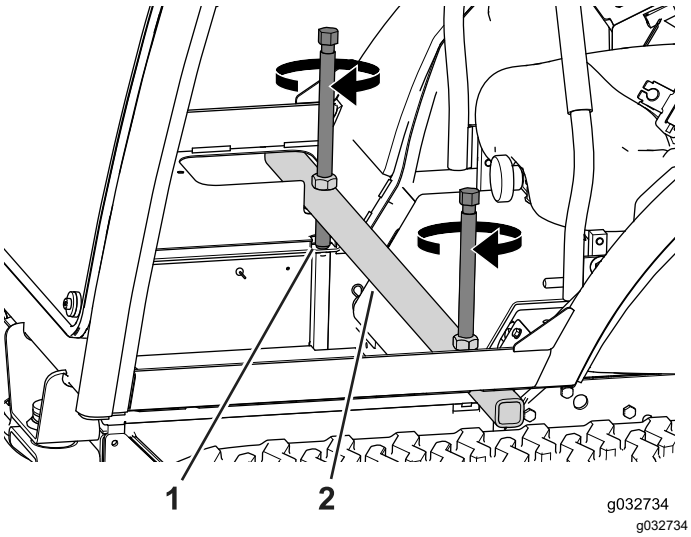

Figure 113

1. Lift bar
2. Lift screws

4. Alternate between turning the lift screws, a few turns at a time until the cab pivots forward (Figure 113).

Disconnecting the Winter Frame from the Machine

1. Remove the cover plates and set them aside (Figure 114).

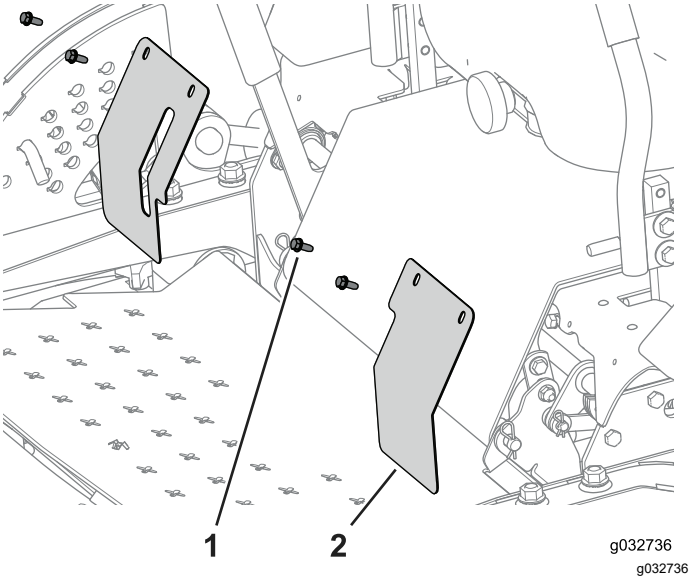

Figure 114

1. Bolts
2. Cover plates

2. Use a floor jack to raise the back of the machine high enough to install the summer wheels and support the frame with jack stands (Figure 115).

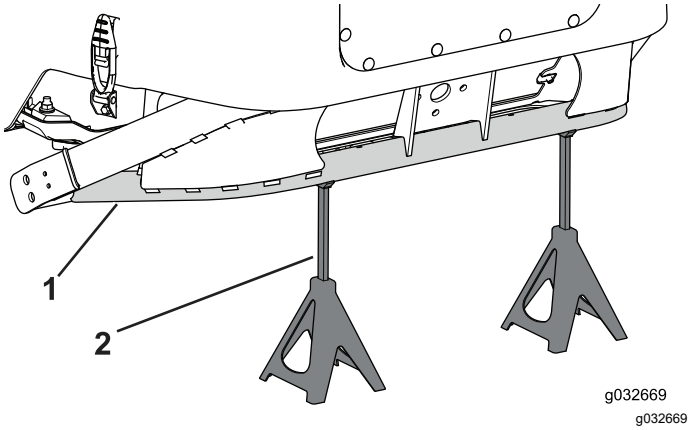

Figure 115

1. Machine frame
2. Jack stand

3. Remove the rear wheels.
4. Remove the bolts and washers that are nearest the rear hubs (Figure 116).

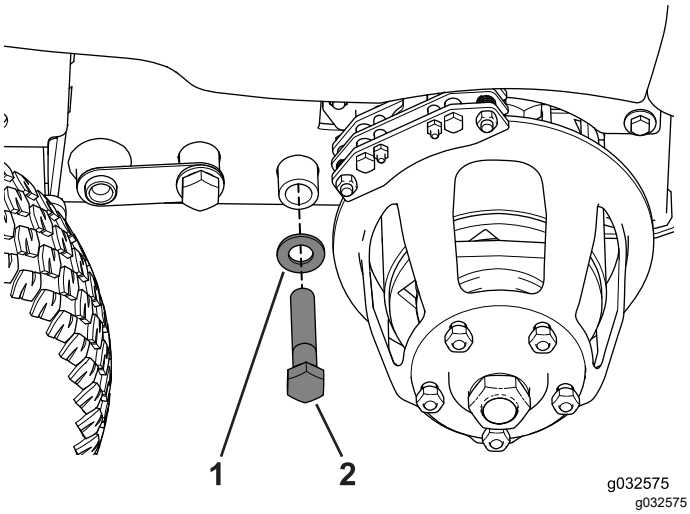

Figure 116

1. Bolt
2. Washer

5. Install the summer wheels.
6. Use a floor jack to lower the summer wheels to the ground and support the back of the frame with jack stands (Figure 115).
7. Remove the bolt, washer, and coupler link from the machine frame (Figure 117).

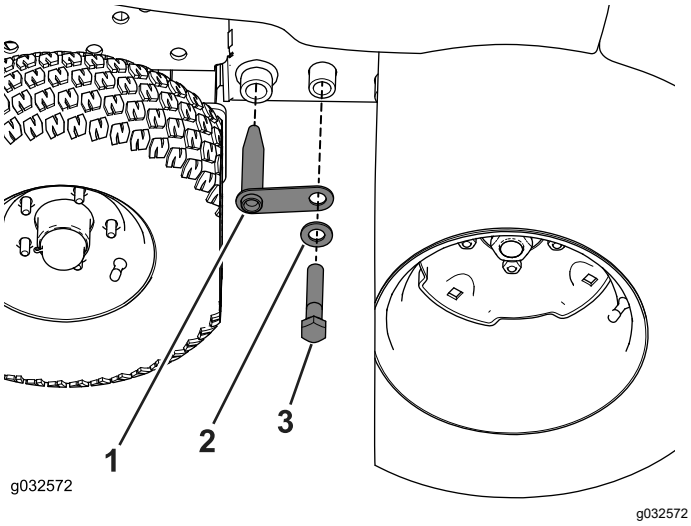

Figure 117

1. Coupler link
2. Washer
3. Bolt

8. Roll the winter frame away from the machine frame (Figure 118).

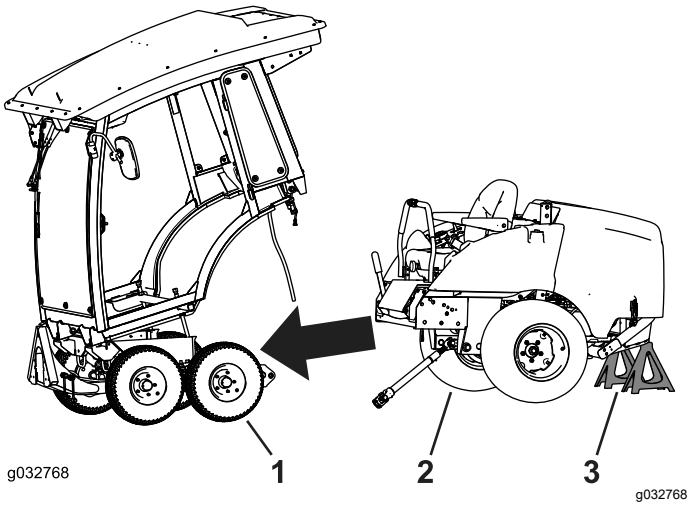

Figure 118

1. Winter frame
2. Machine
3. Jack stands

9. Install the rear cover to the cab; refer to Installing the Rear Cover (page 36).

Installing the Summer Frame

Connecting the Summer Frame to the Machine

1. Align the summer frame to the machine frame and roll it back (Figure 119).

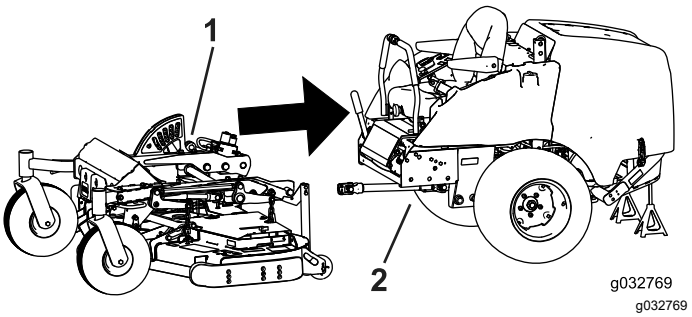

Figure 119

1. Summer frame
2. Machine frame

2. Align the bolt holes to loosely install the bolts and spacers on the left side of the machine (Figure 121).

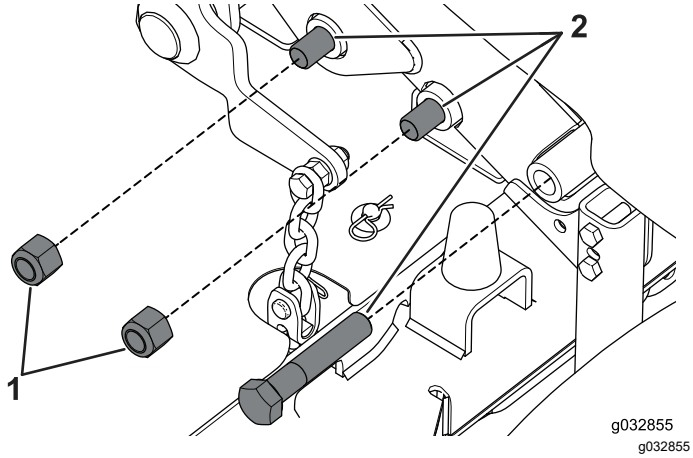

Figure 120

1. Locknut
2. Bolt (3/4 x 4 inches)

3. Align the bolt holes to loosely install the bolts and spacers on the right side of the machine (Figure 122).

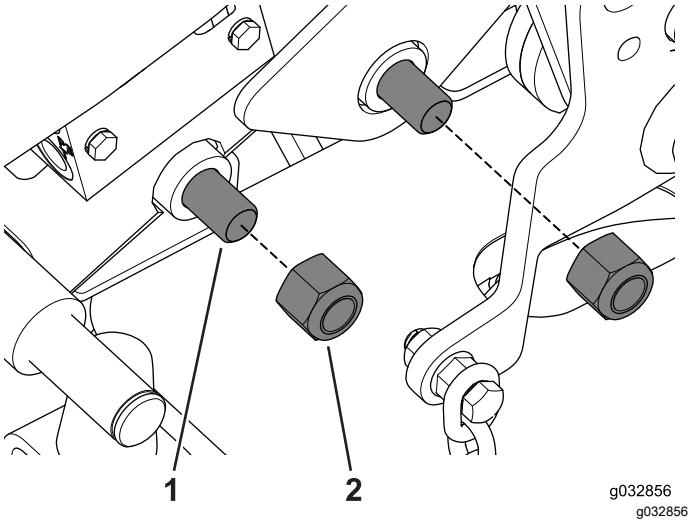

Figure 121

1. Bolt (3/4 x 4 inches)
2. Locknut

4. Torque the bolts to 359 N·m (265 ft-lb) to secure the summer frame to the machine frame.

Connecting the Hydraulics to the Summer Frame

1. Place a suitable drain pan underneath the valve and disconnect the hydraulic hoses from the control valve.
2. Loosen the supply-hose fitting that is connected to the gear pump and rotate the supply hose toward the right side of the machine (Figure 122).

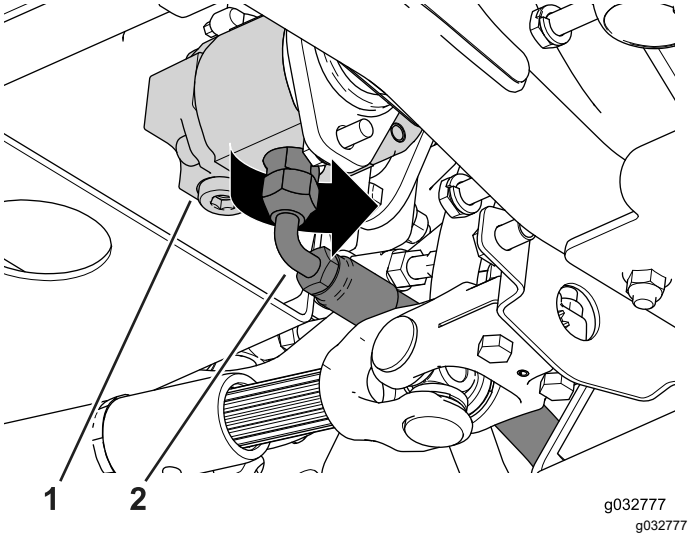

Figure 122

1. Gear pump
2. Supply-hose fitting

3. Use the retaining ring, pivot pin, and bolt to secure the deck-lift cylinder to the pivot post (Figure 123).

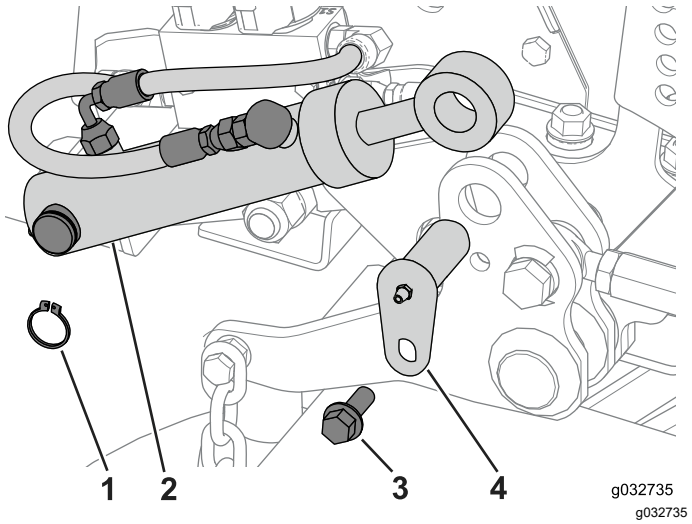

Figure 123

1. Retaining ring
2. Lift cylinder
3. Bolt
4. Pivot pin

4. Install the hydraulic-return hose to the port marked T on the control valve (Figure 124).

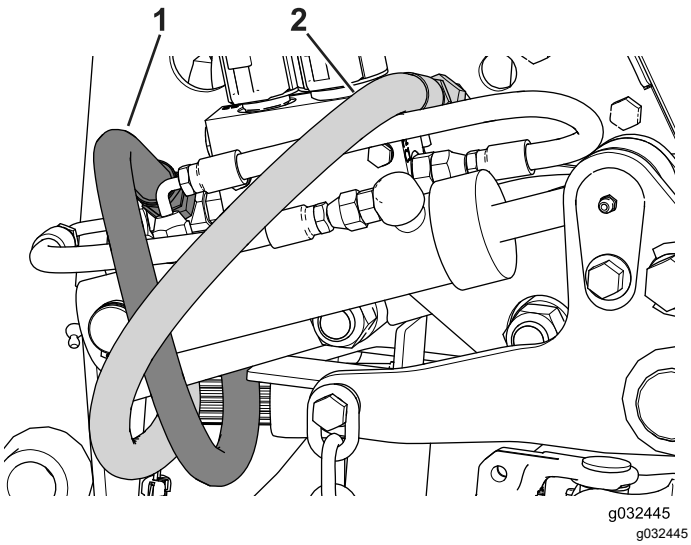

Figure 124

1. Hydraulic-return hose
2. Hydraulic-supply hose

5. Install the hydraulic-supply hose to the port marked P2 on the control valve (Figure 124).
6. Tighten all hose fittings to prevent them from leaking.

Connecting the PTO

1. Use the roll pin connect the drive shaft to the gearbox shaft (Figure 125).

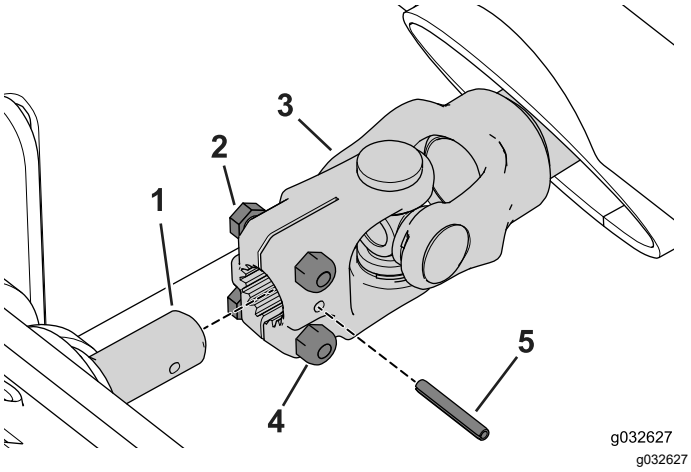

Figure 125

1. Gearbox shaft
2. Bolt
3. PTO yolk
4. Locknut
5. Roll pin

2. Torque the bolts on the PTO yolk to 20 to 25 N·m (15 to 18 ft-lb).

Installing the Deck and Cover Plates

1. Use the pivot pin and hairpin to secure the operator deck as shown in Figure 126.

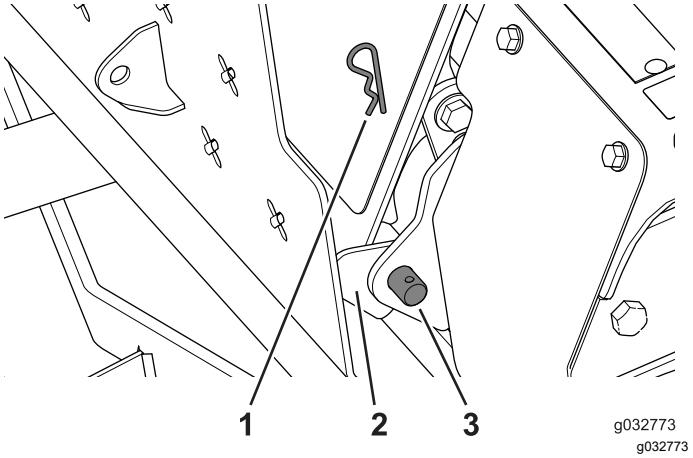

Figure 126

1. Hairpin
2. Operator deck
3. Pivot pin

2. Use the washer and hairpin to secure the lift arm to the operator plate (Figure 127).

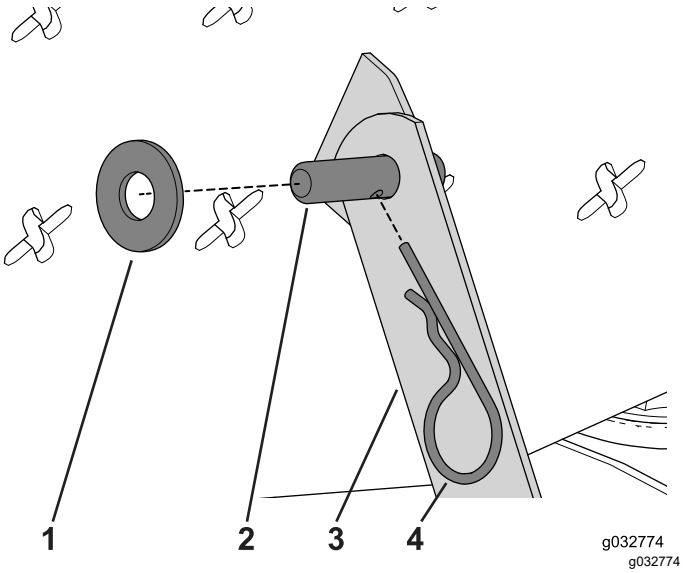

Figure 127

1. Washer
2. Pivot pin
3. Lift arm
4. Hairpin

3. Use the bolts (1/4 x 5/8 inch) to secure the cover plates to the machine (Figure 128).

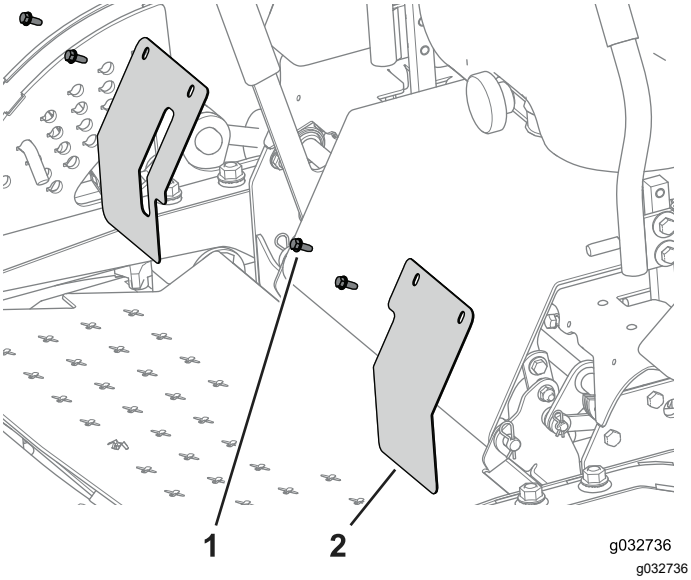

Figure 128

1. Bolts (1/4 x 5/8 inch)
2. Cover plates

Removing the Conversion Rollers

1. Remove the conversion rollers that are on each side of the summer frame (Figure 129).

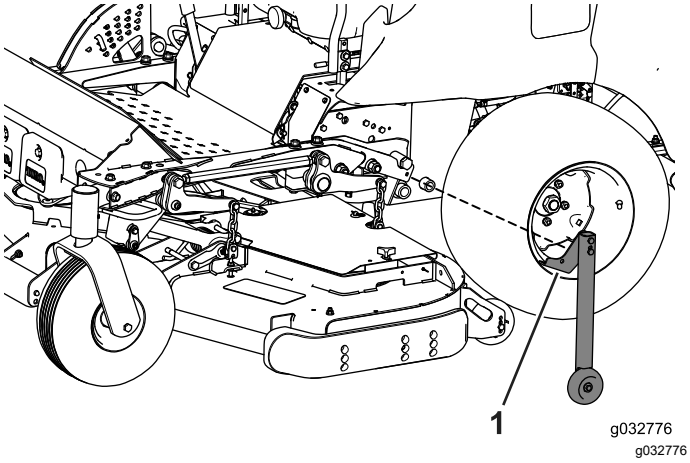

Figure 129

1. Conversion roller

2. Set them aside for the next seasonal conversion.

Installing the Roll Bar

Note: Have an another person help you install the roll bar.

1. Align the holes in the roll bar with the holes in the lower-ROPS tube (Figure 130).

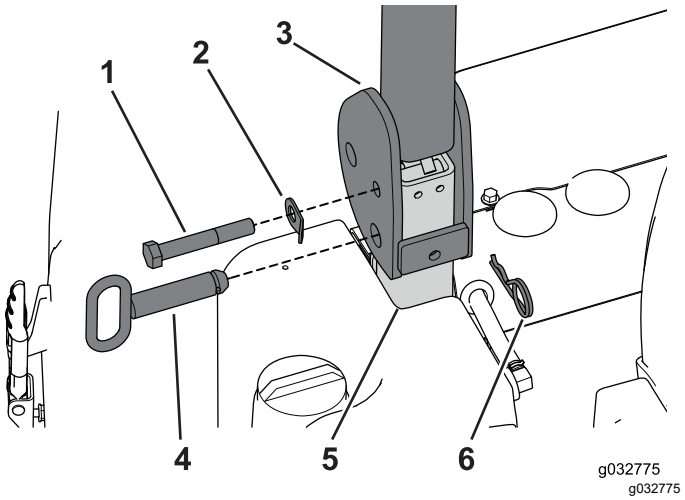

Figure 130

1. Pivot bolt
2. Lanyard washer
3. Roll bar
4. Pivot-lock pin
5. Lower-ROPS tube
6. Hairpin

2. Assemble the pivot bolt and lanyard washer to the upper holes in the roll bar and lower-ROPS tube and tighten the bolt by hand (Figure 130).
3. Repeat step 2 at the other side of the machine.
4. Install the pivot-lock pins through the lower holes in the roll bar and lower-ROPS tube, and secure the lock pins with the hairpins (Figure 130).

Completing the Summer Frame Installation

Connect the battery; refer to Connecting the Battery (page 25).

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	• Torque the frame mounting bolts. • Torque the wheel lug nuts.
After the first 250 hours	• Clean the cab air filters (replace the filters if damaged or excessively dirty).
Every 50 hours	• Lubricate grease fittings. —Grease the machine more often when operating the machine in extremely dusty or sandy conditions. • Check the tire pressure.
Every 200 hours	• Torque the wheel lug nuts.

⚠ WARNING

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

Remove the key from the switch before you perform any maintenance.

Lubrication

Greasing and Lubricating the Machine

Service Interval: Every 50 hours —Grease the machine more often when operating the machine in extremely dusty or sandy conditions.

Note: Refer to the machine *Operator's Manual* for the appropriate grease fittings.

1. Park the machine on a level surface, disengage the PTO, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before you leave the operating position.
3. Clean the grease fittings with a rag.

   Note: Remove any paint off the front of the fitting.
4. Connect a grease gun to the fitting and pump grease into the fittings until grease begins to ooze out of the bearings.
5. Wipe clean excess grease.

Electrical System Maintenance

Important: **Whenever working with the electrical system, always disconnect the battery cables, negative (-) cable first, to prevent possible wiring damage from short-outs.**

Checking the Fuses

Refer to the *Operator's Manual* supplied with the cab for instructions on fuses.

If the machine has any electrical system issues, check the fuses. One at a time, remove each fuse from the fuse block and check the fuse to determine if it is open (blown). If you need to replace a fuse, always use the **same type and amperage rated fuse** as the fuse you are replacing, **otherwise you may damage the electrical system**.

Note: If a fuse blows frequently, you may have a short in the electrical system and should have it serviced by a qualified service technician.

Drive System Maintenance

Checking the Tire Pressure

Service Interval: Every 50 hours

Important: **Check the air pressure in the tires before the machine is operated.**

Check that the air pressure tires is 240 kPa (35 psi); refer to Figure 131.

Note: Uneven air pressure in the tires can cause loss of traction. If the machine losses traction, increase air pressure in the tire to 344 kPa (50 psi) to increase track tension.

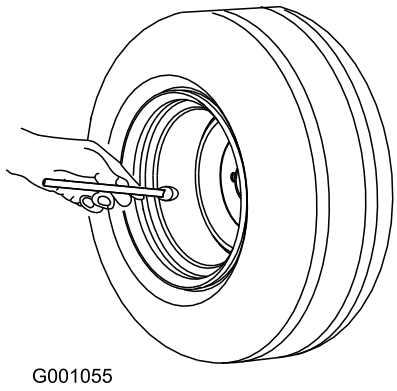

Figure 131

Cab Maintenance

Cleaning the Cab

Important: **Use care around the cab seals and lights (Figure 132).**

If you are using a pressure washer, keep the washer wand at least 0.6 m (2 ft) away from the machine. Do not use the pressure washer directly on the cab seals and lights or under the rear overhang.

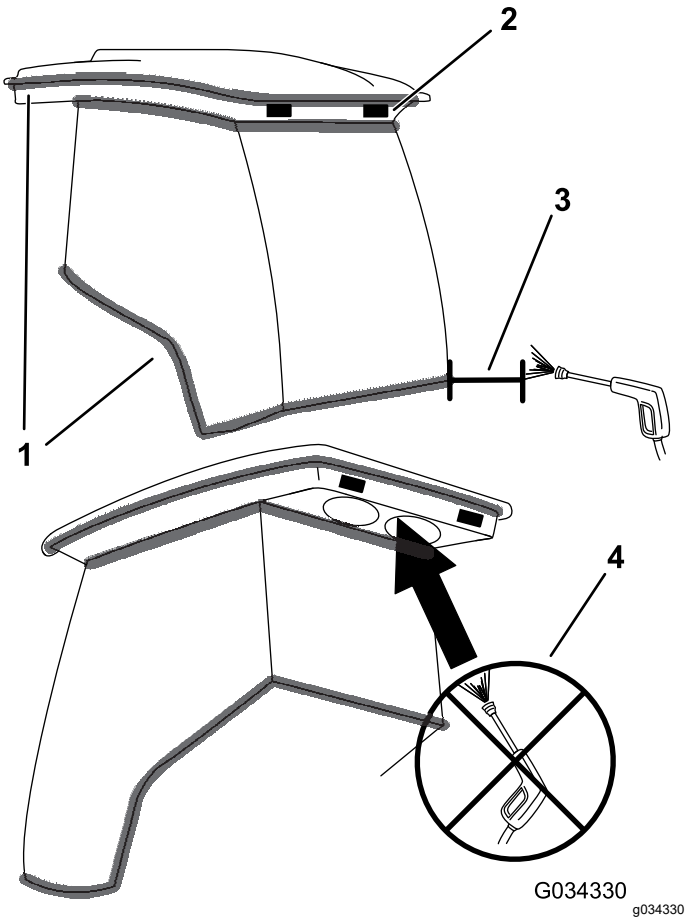

Figure 132

1. Seal
2. Light
3. Keep wand 0.6 m (2 ft) away.
4. Do not pressure-wash under the rear overhang.

Cleaning the Air Filters

Service Interval: After the first 250 hours (replace the filters if damaged or excessively dirty).

1. Remove the thumb screws and the grates from both the in-cab and rear cab air filters (Figure 133 and Figure 134).

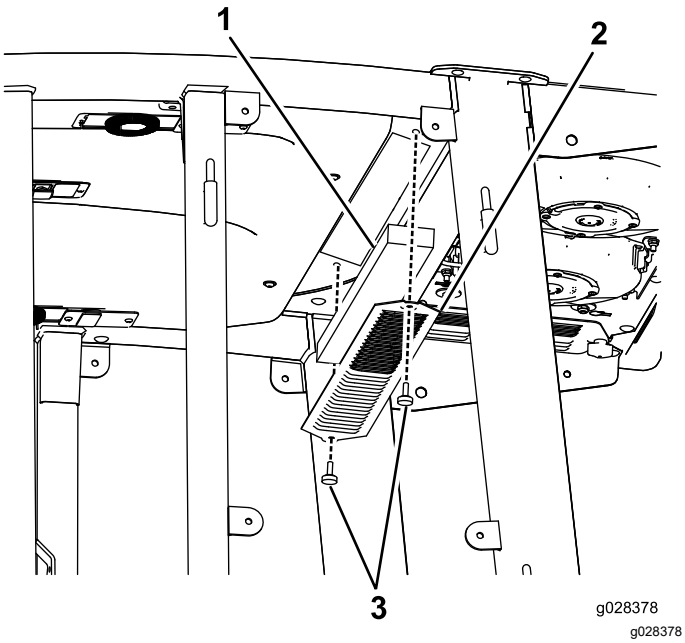

Figure 133

1. Filter
2. Grate
3. Thumb screw

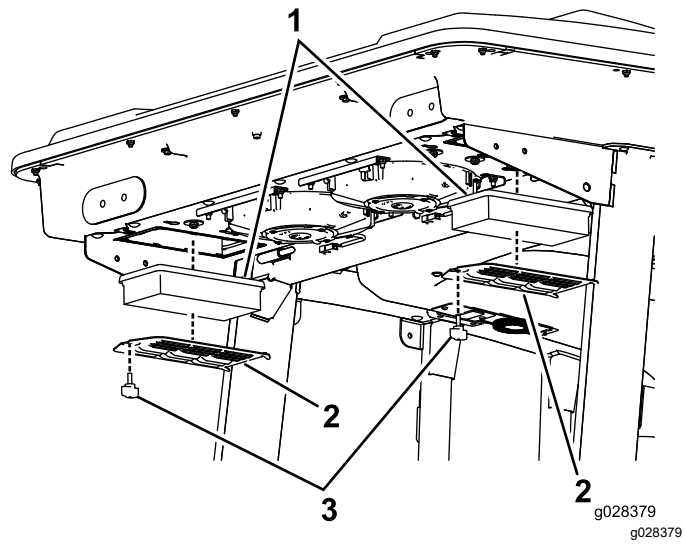

Figure 134

1. Filter
2. Grate
3. Thumb screw

2. Clean the filters by blowing clean, oil free, compressed air through them.

Important: **If either filter has a hole, tear, or other damage, replace it.**

3. Install the filters and grate, securing them with the thumb screws.

Storage

Storing the Machine

1. Park the machine on a level surface, lower any equipped attachments, shut off the engine, and remove the key.
2. Thoroughly clean the machine and cab, paying special attention to these areas:
   - PTO shaft assembly
   - All grease fittings and pivot points
   - Oil the spline on the PTO output shaft to prevent rusting
3. Check and adjust the tire pressure; refer to Checking the Tire Pressure (page 54).
4. Check all fasteners for looseness and tighten them as necessary. Ensure that the 5 bolts that secure the winter frame to the traction unit are torqued to 359 N·m (265 ft-lb).
5. Grease or oil all grease fittings and pivot points and wipe off any excess lubricant.
6. Lightly sand and use touch up paint on painted areas that are scratched, chipped, or rusted. Repair any dents in the metal body.

Notes:

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California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:

WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning "is not the same as a regulatory decision that a product is 'safe' or 'unsafe.'" Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to https://oag.ca.gov/prop65/faqs-view-all.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does Toro include this warning?

Toro has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. Toro provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from Toro products may be negligible or well within the "no significant risk" range, out of an abundance of caution, Toro has elected to provide the Prop 65 warnings. Moreover, if Toro does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.