Form No. 3375-555 Rev C

Z Master® Riding Mower

For All Z Master® Riding Mowers

Setup Instructions

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	Rear wheels (Wooden crate only)	2	Remove the machine from a crate.
2	No parts required	–	Add fuel to the machine.
3	No parts required	–	Check the engine-oil level.
4	No parts required	–	Check the tire pressure.
5	No parts required	–	Check the wheel lug nut torque.
6	No parts required	–	Check the grass deflector.
7	J-bolt Wing nut Hold-down clamp	2 2 1	Install a battery (Diesel machines only).
8	Clamp Wing nut (1/4 inch) Battery hold-down	1 2 2	Install a battery (Gasoline machines only).
9	No parts required	–	Charge the battery.
10	Seat Seat plate (fixed seats only) Flange nuts (3/8 inch)—fixed seats only Spacers (3/8 inch)—fixed seats only Flange nuts (3/8 inch)—tilting seats only Long spacers (tilting, deluxe seats only) Short spacers (tilting, deluxe seats only)	1 1 8 4 4 2 4	Install the seat (International machines using gasoline only).
11	No parts required	–	Check the seat belt (International machines using gasoline only).
12	Right-control lever Left-control lever Bolt (3/8 x 1 inch)—2 are assembled Nut (3/8 inch)—2 are assembled	1 1 4 4	Install the motion-control levers (International machines using gasoline only).
13	Carriage bolt (3/8 x 1-1/2 inches) Flange locknut (3/8 inch)	1 1	Install the lift-assist pedal (International machines using gasoline only).
14	Air-cleaner cap Hose clamp	1 1	Install the air-cleaner cap (International machines using gasoline only).

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CE

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3375-555 C

Procedure	Description	Qty.	Use
15	Bolt (1/2 x 3-1/4 inch) Locknut (1/2 inch)	1 1	Install the ROPS hardware (LPG machines only).
16	Roll-Over Protection System (ROPS) Kit	1	Install the ROPS (International machines using gasoline only).
17	Roll bar, right section Roll bar, left section Roll bar, center section Bolt (3/8 x 1 inch) Curved washer Flange nut (3/8 inch) Bolt (1/2 x 3–1/4 inch) Flange nut (1/2 inch)	1 1 1 8 8 8 2 2	Install the ROPS (Diesel machines only).
18	Number 2 general-purpose lithium-base or molybdenum-base grease. (Purchase separately.)	1 tube	Check the machine for grease.
19	No parts required	–	Remove the shipping straps.
20	No parts required	–	Check the machine before delivery to the customer (All machines).
21	Operator's Manual Engine Owner's Manual Registration card Operator-training material Key	1 1 1 1 2	Delivering the machine to the customer (All machines).

1

Removing the Machine from a Crate

Parts needed for this procedure:

2	Rear wheels (Wooden crate only)

Removing a Machine from a Metal Crate

If removing the machine from a metal crate, refer to the *Dealer/Distributor Portal* for further information.

Removing the Machine from a Wooden Crate

1. Remove the screws holding the right angle retaining plate to the crate.

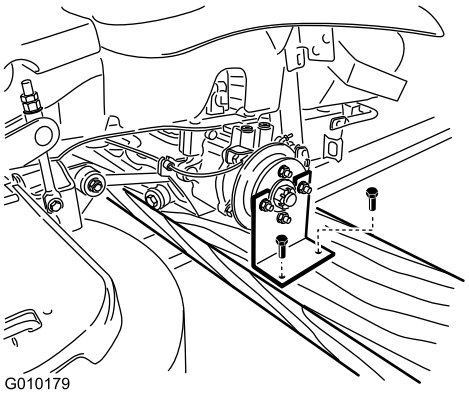

Figure 1
Gasoline Machine Shown

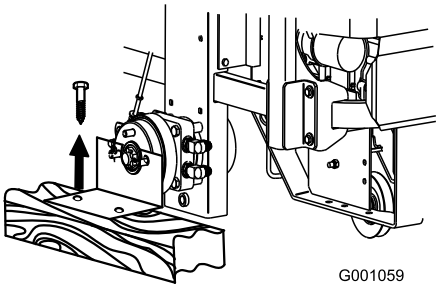

Figure 2
Diesel Machine Shown

2. Raise the back of the machine up and support it with jack-stands.

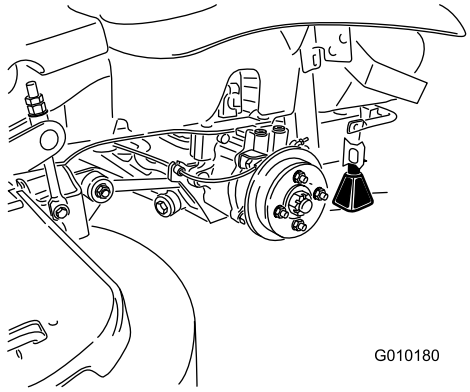

Figure 3
Gasoline Machine Shown

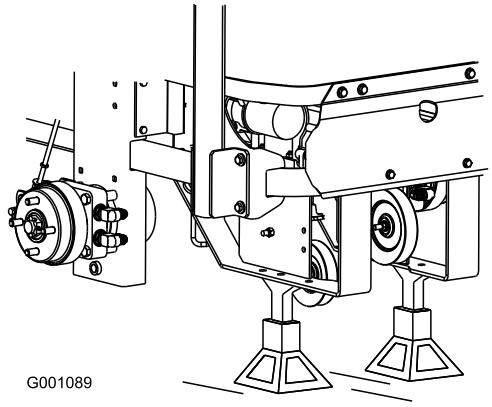

Figure 4
Diesel Machine Shown

3. Remove the wheel nuts from both sides of the vehicle and remove the right angle retaining plate. Discard the screws and retaining plate.

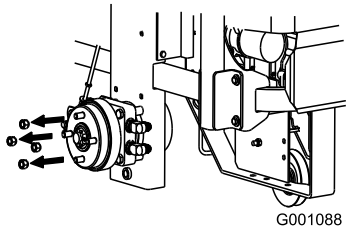

Figure 5
Diesel Machine Shown

4. Mount the wheels with the valve stem to the outside and secure them with the wheel nuts previously removed.
5. Torque the wheel nuts to 95 ft-lb (128 N-m).
6. Remove the jack stands.

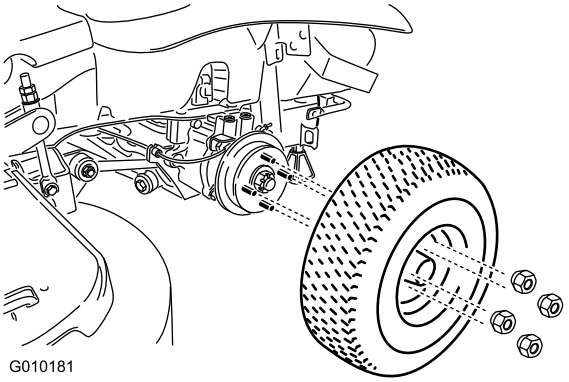

Figure 6
Gasoline Machine Shown

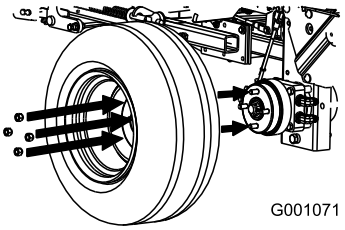

Figure 7
Diesel Machine Shown

2

Adding Fuel to the Machine

No Parts Required

Adding Fuel to Machines

Add fuel to the machine before starting it. Refer to your *Operator's Manual* for the correct fuel and procedure.

Adding Fuel to Liquid Propane Gas (LPG) Powered Machines

⚠ CAUTION

Under no circumstances should you fill propane tanks beyond 80% capacity.

If you use an overfilled tank, it may result in the release of highly concentrated and extremely-flammable liquid propane. Refer to the Safety section of the *Operator's Manual.*

1. Remove the LPG-fuel tank from the front of the .
2. Have the tank filled by trained and qualified personnel.

3. Cut the ties securing the tank brackets and move them out of the way.
4. Align the center hole over the mounting pin that points straight up on the as shown in Figure 8.

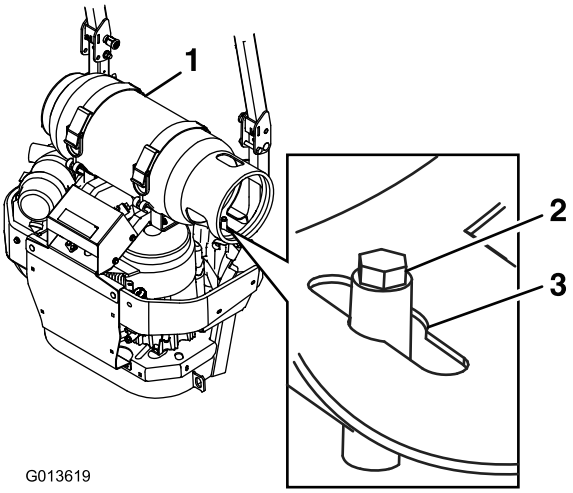

Figure 8

1. Tank collar
2. Mounting pin
3. Center hole

Important: If you do not install the LPG tank correctly, the valves and gauges may not function properly.

5. Latch the brackets and ensure that the tank is securely fastened to the machine.
6. Carefully connect the fuel hose. Make sure the hose is not kinked.
7. Slowly open the fuel valve to equalize the pressure in the tank. If you open the fuel valve too quickly, the pressure relief valve is equipped with a back pressure check valve that will shut off the fuel supply. If this happens, close the fuel valve completely and wait five seconds. Slowly open the fuel valve.

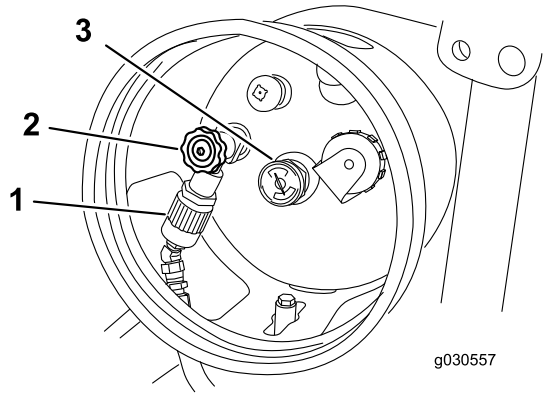

Figure 9

1. LPG fuel hose connection fitting
2. Tank valve
3. Fuel gauge

8. Check for leaks as described in the Safety section of the *Operator's Manual*.

3 Checking the Engine-Oil Level

No Parts Required

Procedure

Before you start the engine and use the machine, check the oil level in the engine crankcase; refer to Servicing the Engine-Oil Level in the *Operator's Manual*.

4 Checking the Tire Pressure

No Parts Required

Procedure

Pressure: 13 psi (90 kPa)

Note: Check the tire pressure before starting the machine. Refer to your *Operator's Manual* for the correct tire type, correct air pressure needed, and procedure.

5 Checking the Wheel Lug Nut Torque

No Parts Required

Procedure

Before you start the engine and use the machine, check the wheel lug nut torque; refer to Checking the Wheel Lug Nuts in the *Operator's Manual*

6

Checking the Grass Deflector

No Parts Required

Procedure

If there are plastic ties holding the grass deflector up, remove them and lower the deflector into place.

⚠ WARNING

An uncovered discharge opening could allow the machine to throw objects in the operator's or bystander's direction and result in serious injury or death. Also, contact with the blade could occur.

Never operate the lawn mower unless you install a cover plate, a mulch plate, grass deflector or bagger.

1. Make sure that one end of the spring is installed behind the deck edge before installing the bolt as shown in Figure 10.
2. Place the other end of the spring around grass deflector (Figure 10).

   Important: The grass deflector must be free to rotate with downward tension. Lift the deflector up to the full open position and ensure that it rotates freely,without binding into the full down position.

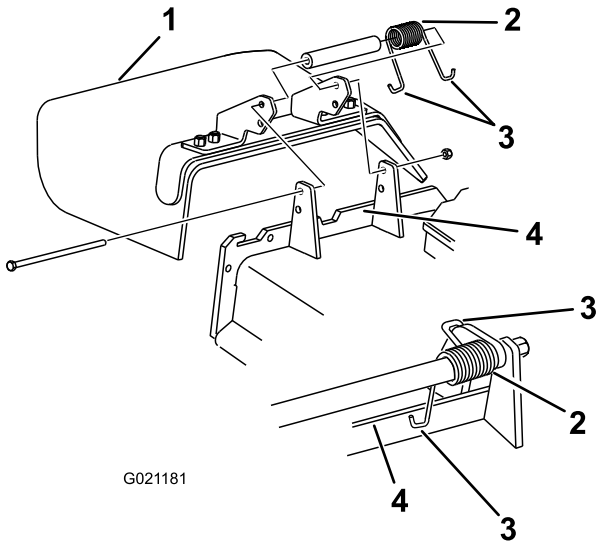

Figure 10

1. Grass Deflector
2. Spring
3. End of spring
4. Deck edge

7

Installing a Battery (Diesel Machines Only)

Parts needed for this procedure:

2	J-bolt
2	Wing nut
1	Hold-down clamp

Procedure

Important: This procedure only applies to machines that do not come with a battery installed.

Purchase a 12V battery and install it into the machine. The engine requires a minimum of 540 CCA.

Use the hardware included to install the new battery. Refer to Installing the Battery in the *Operator's Manual*.

8

Installing a Battery (Gasoline Machines Only)

Parts needed for this procedure:

1	Clamp
2	Wing nut (1/4 inch)
2	Battery hold-down

Procedure

Important: This procedure applies only to machines that do not come with a battery installed.

1. Purchase a 12V battery.

   Models with a 29hp engine and below require a battery with a minimum of 260 CCA.

   Models with a 30hp engine and higher require a battery with a minimum of 340 CCA.
2. Locate the battery-mounting hardware and install it into the machine. Refer to Installing the Battery in the *Operator's Manual*.

9

Charging the Battery

No Parts Required

Procedure

⚠ WARNING

Charging the battery produces gasses that can explode and cause serious injury.

- **Keep cigarettes, sparks and flames away from the battery.**
- **Make sure the ignition switch is off.**
- **Ventilate when charging or using the battery in an enclosed space.**

Important: Do not run the machine with the battery disconnected; electrical damage may occur to the engine.

Charge the battery. Refer to the *Operator's Manual* for instructions.

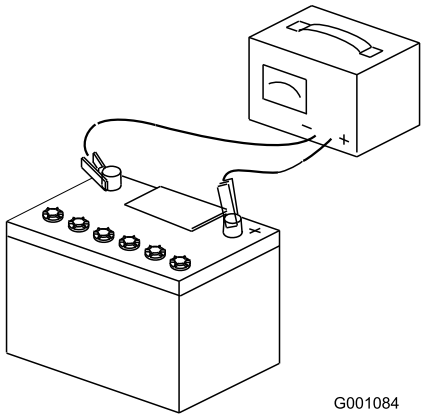

Figure 11

10

Installing the Seat (International Machines Using Gasoline Only)

Parts needed for this procedure:

1	Seat
1	Seat plate (fixed seats only)
8	Flange nuts (3/8 inch)—fixed seats only
4	Spacers (3/8 inch)—fixed seats only
4	Flange nuts (3/8 inch)—tilting seats only
2	Long spacers (tilting, deluxe seats only)
4	Short spacers (tilting, deluxe seats only)

Installing the Seat on Models with a Fixed Seat

1. Remove the hydraulic-unit shroud from the machine.

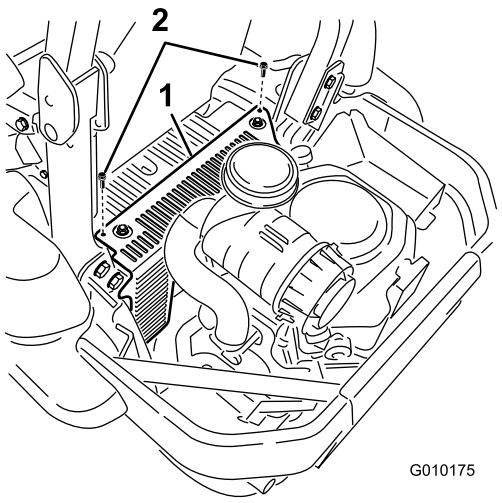

Figure 12

1. Hydraulic-unit shroud 2. Bolts

2. Remove the 4 nuts holding the seat plate to the machine. Discard these nuts, they are used for shipping only.

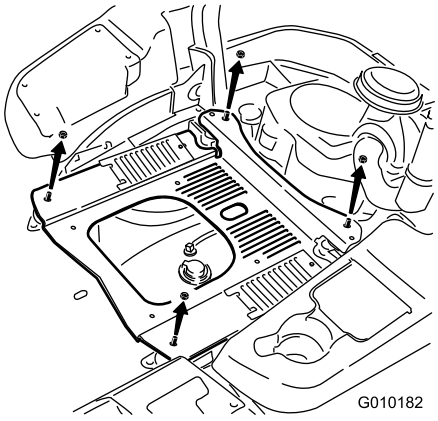

Figure 13

3. Secure the seat plate to the seat with 4 spacers and 4 flange nuts (3/8 inch).

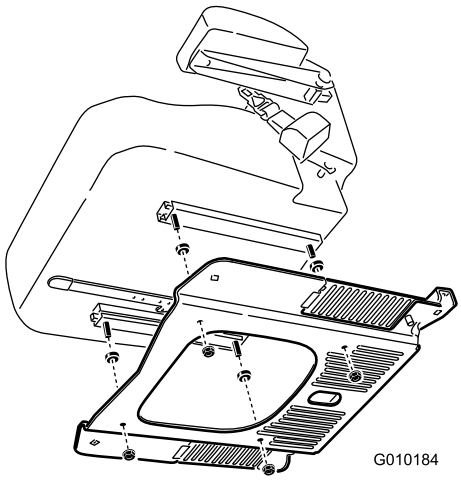

Figure 14

4. Plug the harness connector into the seat switch located under the seat towards the front.
5. Install the seat to the machine frame with 4 flange nuts (3/8 inch).

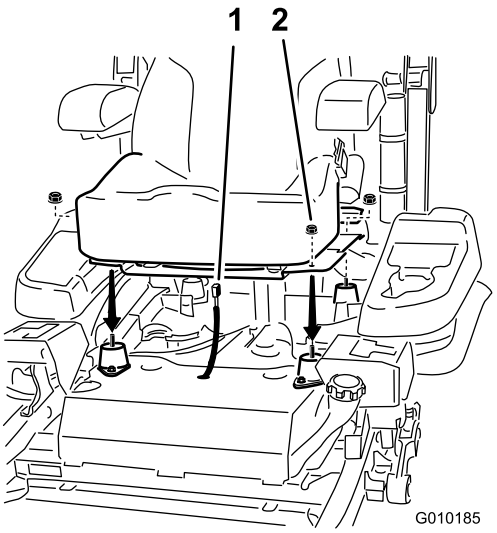

Figure 15

1. Harness connector
2. Flange nuts

Installing the Seat on Models with a Tilting Seat

1. Tilt the seat frame up.
2. For deluxe seats only, install the spacers as shown in Figure 16.

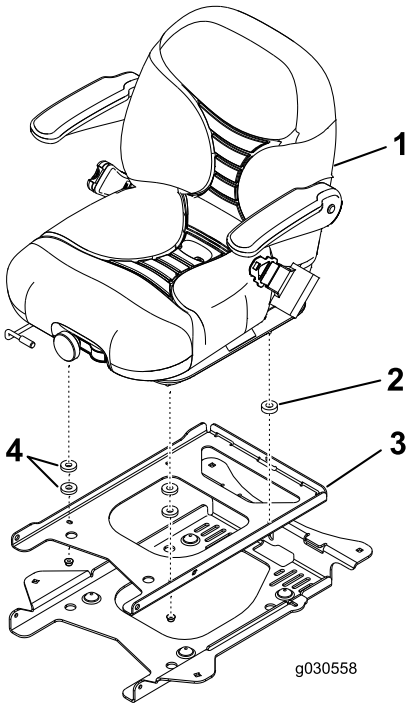

Figure 16

For machines with a deluxe seat only

1. Deluxe seat
2. Long spacer
3. Seat frame
4. Short spacers

3. Install the seat to the seat frame with 4 flange nuts (3/8 inch)—Figure 17.

4. Plug the harness connector into the seat switch located under the seat towards the front.

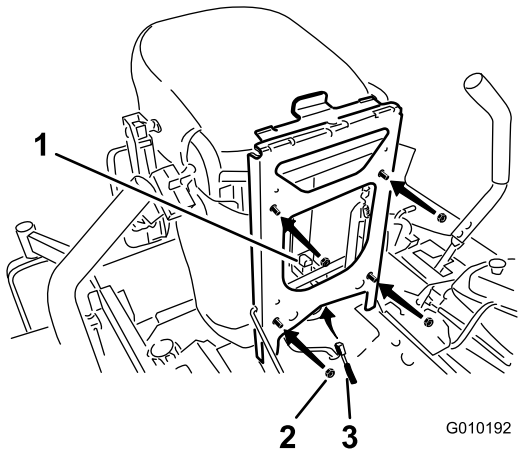

Figure 17

1. Seat switch
2. Flange nuts
3. Harness connector

11

Checking the Seat Belt (International Machines Using Gasoline Only)

No Parts Required

Procedure

Important: Ensure the bolt torque is set between 49 to 61 ft-lb (67 to 83 N-m).

Check the seat belt angle and the seat belt bolt torque before operating.

1. Check the angle of the seat belt compared to the bottom of the seat. The angle needs to be 47 degrees. See (Figure 18)
2. If needed, set the seat belt to the correct angle.
3. Check and set the bolt torque between 49 to 61 ft-lb (67 to 83 N-m).

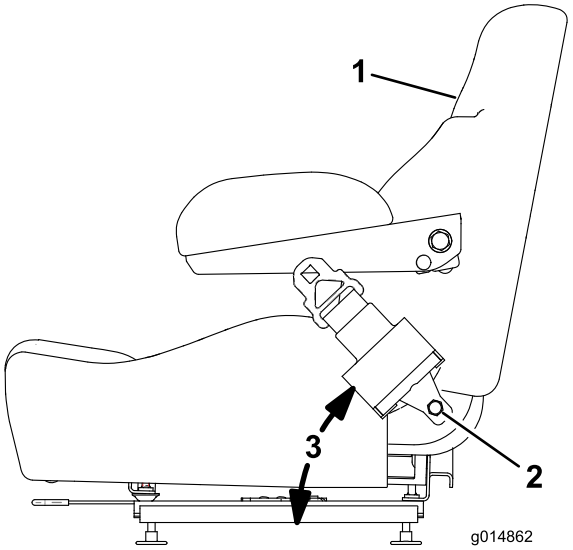

Figure 18

1. Side of seat
2. Seat belt bolt, Set torque between 49 to 61 ft-lb (67 to 83 N-m)
3. 47 degrees

12

Installing the Motion-Control Levers (International Machines Using Gasoline Only)

Parts needed for this procedure:

1	Right-control lever
1	Left-control lever
4	Bolt (3/8 x 1 inch)—2 are assembled
4	Nut (3/8 inch)—2 are assembled

Procedure

1. Rotate the motion-control levers to the upright position.
2. Loosely install the control levers on the inside of the posts, using 4 bolts and 4 nuts.

   Note: Install the control levers in the top and middle holes for the high position or the middle and bottom holes for the low position, as desired.

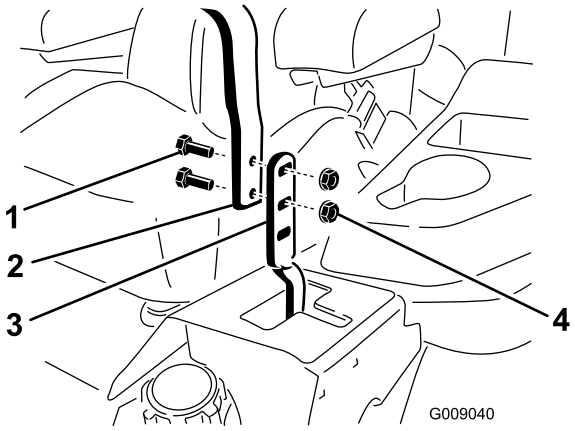

Figure 19

1. Bolt (3/8 x 1 inch)
2. Handle
3. Control lever
4. Nut (3/8 inch)

3. Raise the levers and align them together in the neutral position and tighten the bolts.

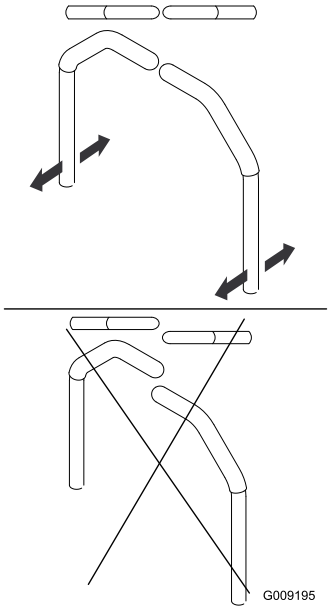

Figure 20

Note: If the machine is not properly tracking, refer to Adjusting the Tracking in your *Operator's Manual*.

13

Installing the Lift-Assist Pedal (International Machines Using Gasoline Only)

Parts needed for this procedure:

1	Carriage bolt (3/8 x 1-1/2 inches)
1	Flange locknut (3/8 inch)

Procedure

1. If needed, loosen the existing bolt and nut for the lift-assist pedal.
2. Rotate the lift-assist pedal to the correct position and install the carriage bolt (3/8 x 1-1/2 inches) and locknut (3/8 inch) (Figure 21). Tighten both bolts.

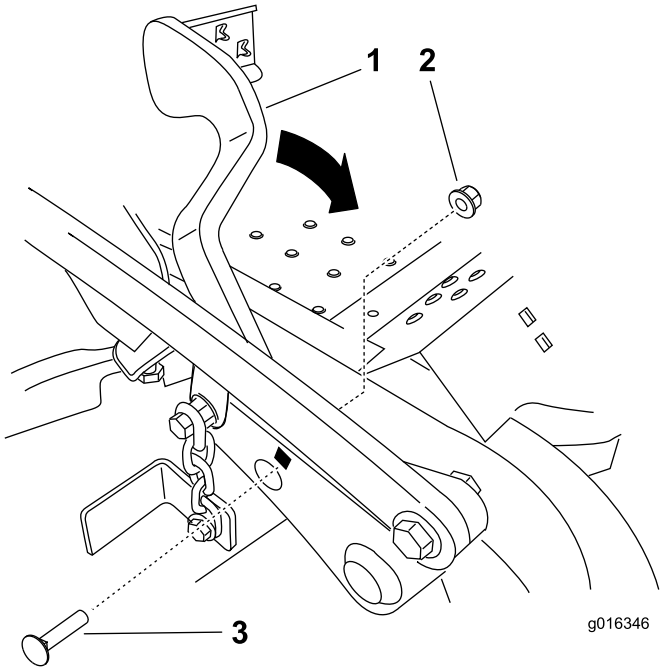

Figure 21

1. Lift-assist pedal
2. Flange locknut (3/8 inch)
3. Carriage bolt (3/8 x 1-1/2 inches)

14

Installing the Air-Cleaner Cap (International Machines Using Gasoline Only)

Parts needed for this procedure:

1	Air-cleaner cap
1	Hose clamp

Procedure

Note: Not all units come with a heavy duty air cleaner. This procedure only applies to models that have a heavy duty air cleaner.

1. Remove the plastic plug or tape covering the air cleaner.

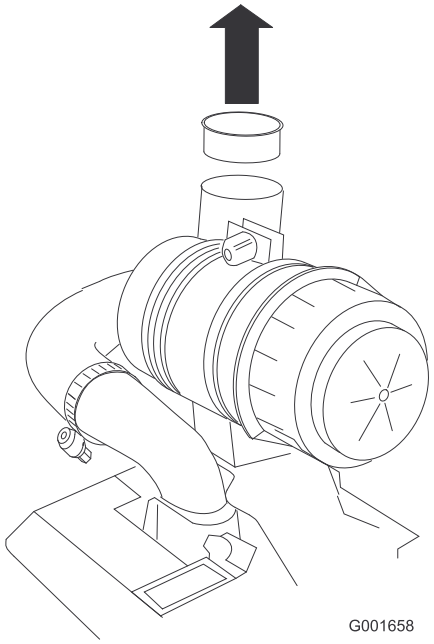

Figure 22

2. Install the hose clamp onto the air-cleaner cap.

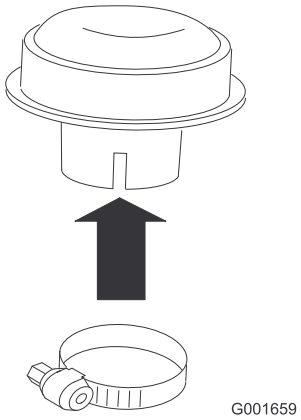

Figure 23

3. Install the air-cleaner cap onto the air cleaner and secure it with the hose clamp.

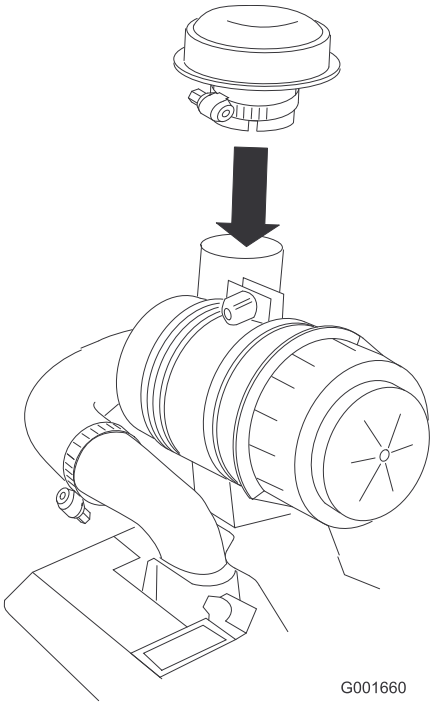

Figure 24

15

Installing the ROPS Hardware (LPG Machines Only)

Parts needed for this procedure:

1	Bolt (1/2 x 3-1/4 inch)
1	Locknut (1/2 inch)

Procedure

Install the bolt (1/2 x 3-1/4 inch) and locknut (1/2 inch) into the open hole in the Roll-Over Protection System (ROPS)—Figure 25. This will prevent the roll bar from hitting the cylinder when lowered to the down position.

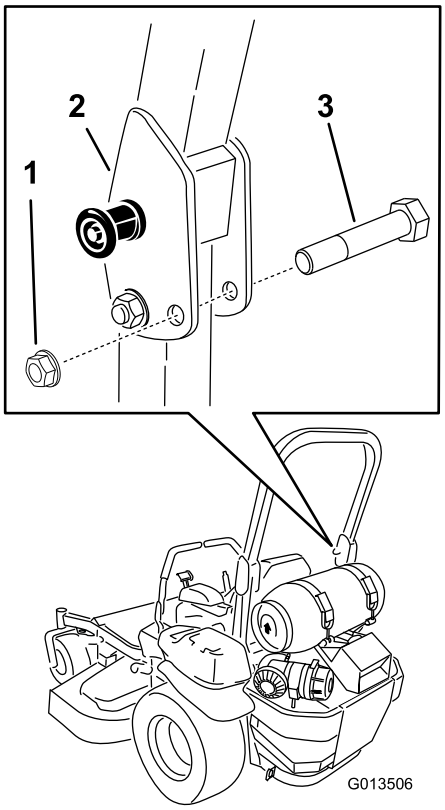

Figure 25

1. Locknut (1/2 inch)
2. ROPS
3. Bolt (1/2 x 3-1/4 inch)

16

Installing the ROPS (International Machines Using Gasoline Only)

Parts needed for this procedure:

1	Roll-Over Protection System (ROPS) Kit

Procedure

Install the Roll-Over Protection System (ROPS) Kit. Follow the instructions included with the ROPS Kit.

17

Installing the ROPS (Diesel Machines Only)

Parts needed for this procedure:

1	Roll bar, right section
1	Roll bar, left section
1	Roll bar, center section
8	Bolt (3/8 x 1 inch)
8	Curved washer
8	Flange nut (3/8 inch)
2	Bolt (1/2 x 3–1/4 inch)
2	Flange nut (1/2 inch)

Procedure

1. Loosely install the right and left roll bar section to the frame, with 8 bolts (3/8 x 1 inch), 8 curved washers, and 8 flange nuts (3/8 inch).

   Note: Install the curved washer cone toward the bolt head.

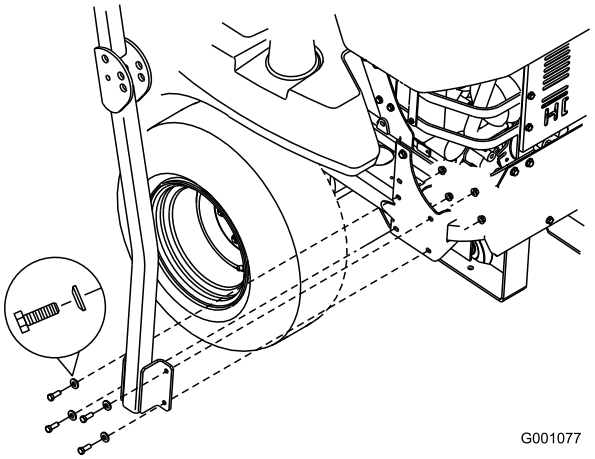

Figure 26

2. Install the lanyard clips onto the long bolts (1/2 x 3-1/4 inch).

   Note: Make sure the bent tab points toward the head of the bolt.

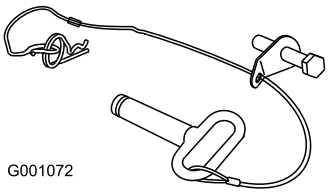

Figure 27

3. Lightly oil the ends of the center roll bar section.
4. Loosely install the center roll bar section using 2 bolts (1/2 x 3-1/4 inch) and 2 flange nuts (1/2 inch).

   Note: Install the bolts from the outside of the roll bar.

   Note: Install the lanyard tab oriented as shown in Figure 28 and pointing forward.

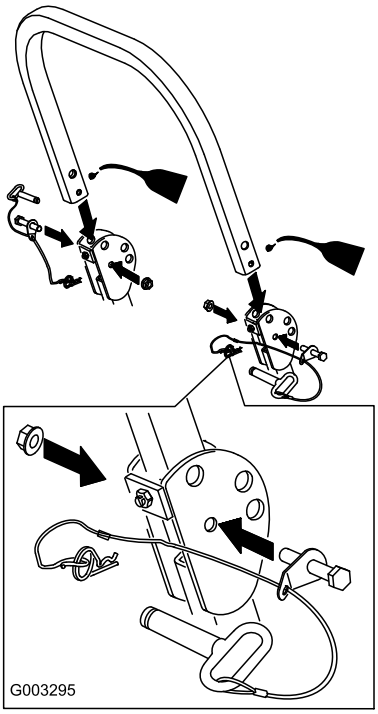

Figure 28

5. Raise the roll bar into the upright position and secure it with the pins and hairpin cotter pins fastened to the lanyards.

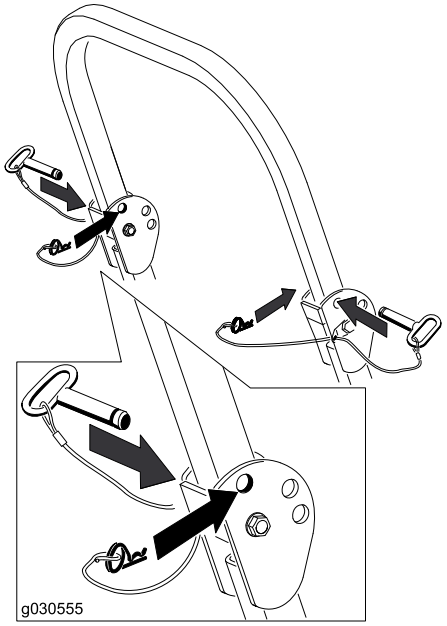

Figure 29

6. Torque all of the lower fasteners, attached to the machine frame, to 30 ft-lb (40.7 N-m).
7. Tighten the center roll-bar bolts (1/2 x 3-1/4 inch) so it rotates freely with some resistance.

   Note: No more than one thread should be exposed outside the nut.

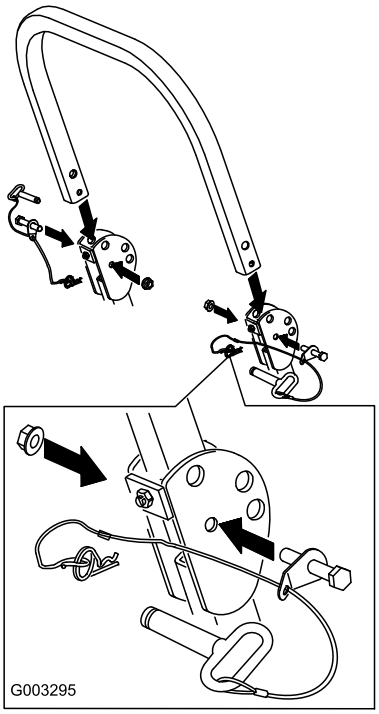

Figure 30

18

Checking the Machine for Grease

Parts needed for this procedure:

1 tube	Number 2 general-purpose lithium-base or molybdenum-base grease. (Purchase separately.)

Procedure

Before you use the machine, check the machine for grease; refer to Lubrication in the *Operator's Manual*.

19

Removing the Shipping Straps

No Parts Required

Procedure

Note: This procedure is only for machines with a MyRide™ suspension system.

⚠ WARNING

The springs are compressed by the shipping straps. When the straps are cut, the seat will raise up quickly by approximately 8.9 cm (3-1/2 inches).

Note: Ensure the straps are removed before operating the machine.

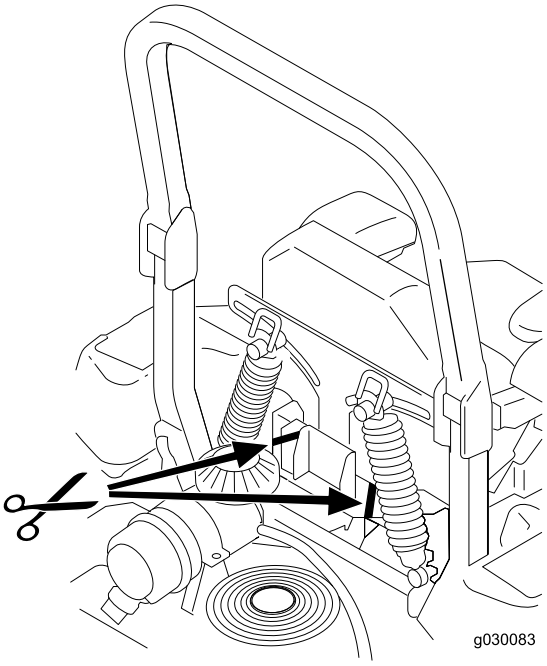

Figure 31

20

Checking the Machine Before Delivery to the Customer (All Machines)

No Parts Required

Procedure

Before delivering the machine to the customer, ensure that you perform or have performed the procedures listed in the following table and initial each when finished. Refer to the *Operator's Manual* for instructions on performing these procedures.

Initial	Check Procedure
	Check the tire pressure.
	Check the level of the machine.
	Check that all spindles are greased.
	Check the engine-oil level.
	Check the hydraulic-fluid level.
	Check ROPS is secure.
	On liquid cooled machines, check the level of the coolant in the radiator and overflow bottle.
	Check the adjustment of the parking brake.
	Ensure that the machine tracks correctly; refer to the *Operator's Manual* for the adjustment procedure.
	Check the safety interlock system; refer to the *Operator's Manual*.
	Ensure that the PTO works.
	Check all fasteners that you installed to ensure that they are tight.

When you finish setting up the machine, sign and date in the space provided below:

Signature: _____ **Date:** _____

21

Delivering the Machine to the Customer (All Machines)

Parts needed for this procedure:

1	*Operator's Manual*
1	*Engine Owner's Manual*
1	Registration card
1	Operator-training material
2	Key

Procedure

At delivery, fill in the model and serial number, complete the items listed in the following table, and initial each when finished.

Model No. _____ **Serial No.** _____

Dealer Initial	Customer Initial	Check Procedure
		Show the customer where the following features are located and how they function: • Fuel tank • Oil fill cap/Oil dipstick • Spark plug(s) • Engine-oil filter • Engine-oil drain • Fuel gauge, valve and hose • Air filter • Radiator coolant (if applicable) • Hydraulic-fluid reservoir • Hydraulic filter • Battery • Ignition switch • Throttle lever • Choke (if applicable) • Power take off switch (PTO) • Motion-control levers • Parking brake • Height-of-cut • Lift-assist lever (if applicable)
		• Z Stand® (if applicable) • Adjustable seat • Hydraulic-bypass valves • Rollover Protection System (ROPS) • Deck-flow baffle
		Refer to the*Operator's Manual* to point out safety procedures, operation, and maintenance procedures.
		Review the warranty statement as shown in the *Operator's Manual.*
		Describe the post sale service procedures for your store.
		Assist the customer in filling out and mailing the registration card or register online at www.Toro.com
		Make sure that the customer receives the *Operator's Manual*, *Engine Owner's Manual*, *Set Up Instructions*, and operator training material.
		Make sure the customer knows the *Parts Catalog* is available at www.Toro.com.
		Assist the customer in loading the machine.

Note: When you, the dealer representative, have finished delivering the machine to the customer, sign and date in the space provide below and keep a copy of this page for dealer records. Also, the dealer must remind the customer to use a full-width trailer ramp to load the machine.

Signature: _____ **Date:** _____

Signature: _____ **Date:** _____