

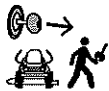
**SAFE OPERATION PRACTICES, cont'd**



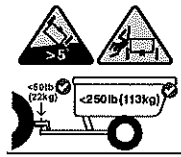
**WARNING - Avoid Crush/Pinch Point Injury**  
Read, understand, and follow all the safety rules and Instructions in the manual(s) and on the tractor before attempting to service this tractor. For foot lift models only, the deck lift system is spring-assisted and under tension. Always use the provided multi-tool to secure the lift system in the locked position before attempting to remove the mower deck.



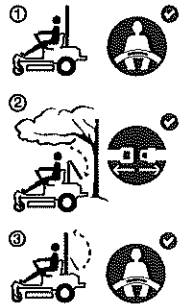
**WARNING - Remove Key**  
Always turn off blade(s), move the drive control levers outward into park position, stop engine, and remove key before dismounting. If you are leaving the tractor unattended, always remove the key to prevent unauthorized use by children or others.



**WARNING - Avoid Towing Related Injury**  
Do not tow a load that exceeds 250 lbs (113 kg) rolling weight and never exceed 50 lbs (22 kg) tongue weight. Never allow children or others in or on towed equipment. Do not tow on slopes greater than 5° (9%). On slopes, the weight of the towed equipment may cause loss of traction, loss of control, and/or loss of the ability to stop. Travel slowly and allow extra distance to stop.



**WARNING - Avoid Serious Injury or Death from Roll Over**  
Keep roll bar in the raised upright position with seat belt fastened. Lower roll bar and do not fasten seat belt in low clearance situations. Raise roll bar and fasten seat belt as soon as clearance permits.



**WARNING: Your Responsibility** — Restrict the use of this power machine to persons who read, understand, and follow the warnings and instructions in this manual and on the machine. **SAVE THESE INSTRUCTIONS!**

**Slope Gauge (Back Cover)**

**WARNING: Slopes are a major factor related to slip and fall accidents which can result in severe injury or death. All slopes require extra caution. If you feel uneasy on the slope, do not mow it. Do not mow on slopes greater than 15° (25%). Do not mow up or down slopes, only mow across slopes.**

**USE THE SLOPE GAUGE ON THE BACK COVER AS SHOWN TO DETERMINE IF A SLOPE IS TOO STEEP FOR SAFE OPERATION!**

To check the slope, proceed as follows:

1. Open manual to the back cover and fold along the dashed line.
2. Locate a vertical object on or behind the slope (e.g. a pole, building, fence, tree, etc.).
3. Align either side of the slope gauge with the object.
4. Adjust gauge up or down until the left corner touches the slope.
5. If there is a gap below the gauge, the slope is too steep for safe operation.

**SAVE THESE INSTRUCTIONS FOR FUTURE USE**

**ASSEMBLY**

**NOTE:** This Operator's Manual covers several models. Tractor features may vary by model. Not all features in this manual are applicable to all tractor models and the tractor depicted may differ from yours.

**NOTE:** All references in this manual to the left or right side and front or back of the tractor are from the operating position only. Exceptions, if any, will be specified.

**Preparation**

**Manually Move the Tractor**

1. To engage the transmission bypass rods, pull the rod back (a) and into lower section of "J" slot. Repeat on opposite side. See Figure 1.
2. After moving tractor, reverse Step 1 to disengage the bypass rods.

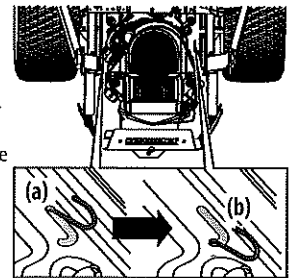


Figure 1

**Install Hitch (If necessary)**

1. Locate Hitch (a) and install on the rear of the frame using the two hex washer screws (b) provided. See Figure 2.

**NOTE:** Hitch and hex washer screws will be in the hardware pack.

**Roll Over Protective System (ROPS)**

Refer to Figure 3 and the following descriptions and uses for the three (3) positions for the Upper ROPS.

- **TRANSPORT:** Only to be used when transporting the tractor or when they need to be momentarily folded-down to avoid contact with items such as tree limbs, clothes lines, utility poles, buildings, etc.
- **TRANSPORT WITH BAGGER:** Allows for the ROPS to be lowered for situations outlined for the TRANSPORT position when the tractor is equipped with a bagger.
- **OPERATION:** The ROPS should always be in this position when operating unless the situations involved outlined in the TRANSPORT and TRANSPORT WITH BAGGER descriptions arise.

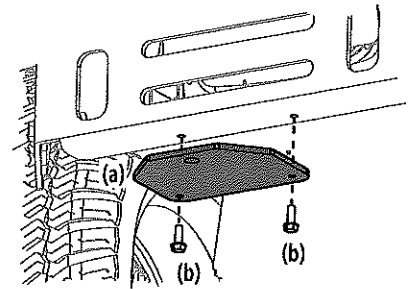


Figure 2

**Upper ROPS Positions**

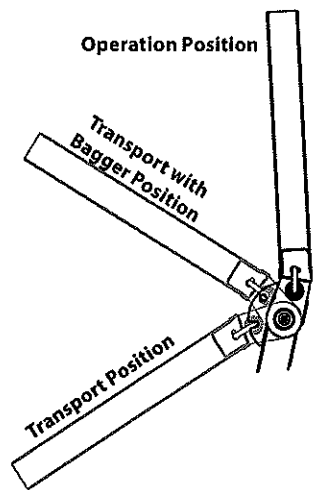


Figure 3

To change the position of the ROPS:

1. Pull slightly up on the ROPS to relieve any tension on the locking pin (a) and rotate the locking pin (a) from the LOCKED (b) position into the ADJUSTMENT (c) position. Repeat the procedure for the locking pin on the opposite side. See Figure 4.
2. Move the ROPS into the desired position. See Figure 5.

**NOTE:** The three positions are TRANSPORT (a) position, TRANSPORT WITH BAGGER (b) position and into the OPERATION (c) position.

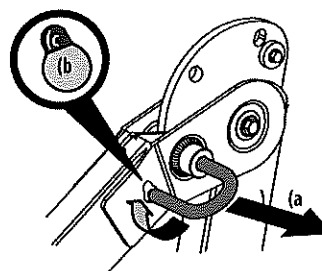


Figure 4

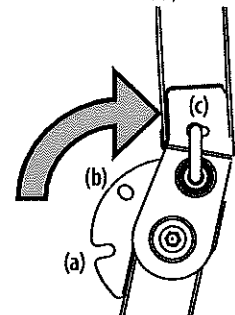


Figure 5

**ASSEMBLY, cont'd**

3. Rotate both locking pins into the LOCKED position. Move the upper ROPS slightly until the locking pins settle, engaged in the LOCKED position.

**NOTE:** See properly seated (fully engaged) ROPS pin in Figure 6.

**⚠ DANGER:** Always verify that both right and left locking pins of the ROPS are settled and fully engaged all the way through the hinge assembly so that each locking pin is visible on the inside face. Failure to fully lock each locking pin may result in serious injury or death.

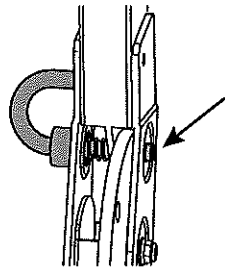


Figure 6

**Operator's Seat**

**Seat Installation (If necessary)**

1. Cut any straps securing the seat assembly to the tractor. Remove all packing material.

**NOTE:** Be careful not to cut the seat wiring harness.

2. Install the seat onto the seat pan (b) using flange lock nuts (a). See Figure 7.
3. If necessary, securely connect the seat switch wiring harness (a) to the seat switch (b). See Figure 8. Secure excess wire away from pinch points before continuing.

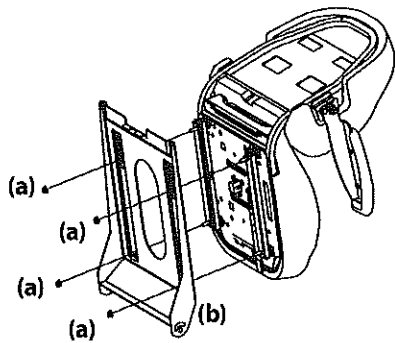


Figure 7

**NOTE:** Tractor will not operate without the seat switch wiring harness connected.

**Adjusting Seat from Shipping Position (If necessary)**

1. Remove and discard packing material, as applicable.
2. Remove the two screws (one right side, one left side) securing seat in shipping position. See Figure 9.
3. Pivot seat forward into operating position. See Figure 10.
4. Secure with two screws (one right side, one left side) removed in Step 2. See Figure 11.

**NOTE:** Torque screws to 68-102 in-lbs (7.7-11.5 N-m).

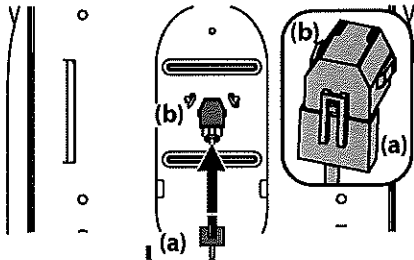


Figure 8

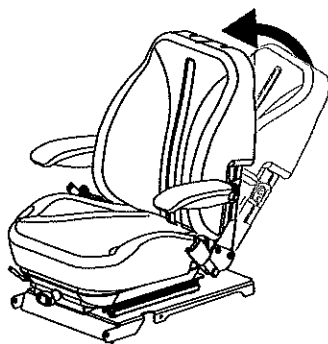


Figure 10

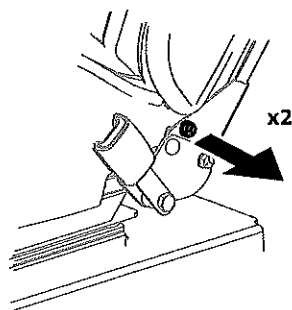


Figure 9

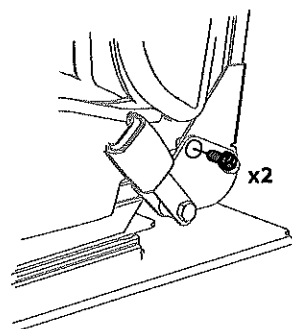


Figure 11

**Position Lapbar Drive Control Levers**

The lapbar drive control levers can be adjusted up/down and forward/backward for the operator's comfort. Three height positions are available and/or levers can be rotated forward or rearward using the knob.

To adjust the lapbar drive control lever height, proceed as follows:

1. Remove the two carriage screws (a) and two flange lock nuts (b) that secure the lapbar drive control lever (c) to the upper handle adjuster (d). See Figure 12.

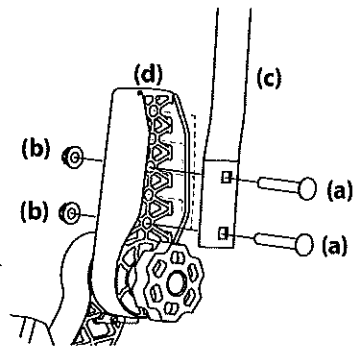


Figure 12

**NOTE:** The multi-tool (if equipped) can be used to make this adjustment.

2. Move the lapbar drive control lever into one of the three available heights and secure in place with the carriage screws and flange lock nuts. See Figure 12.

To adjust the lapbar drive control levers forward/rearward, proceed as follows:

1. Rotate the knob (a) counter-clockwise to loosen the knob (a). See Figure 13.
2. Lift and rotate the lapbar drive control lever into the desired position.
3. Rotate the knob clockwise to secure the lapbar drive control lever into position. See Figure 13.
4. If the lapbars do not line up after making the knob adjustment, loosen nuts (b), align lapbars and retighten nuts. Once this fine adjustment is made, the lapbars will align when using the knob adjustment. See Figure 12.

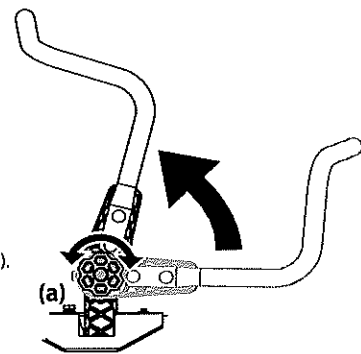


Figure 13

**Lower Deck Discharge Chute Deflector**

**⚠ WARNING:** Never operate the mower deck without the chute deflector installed and in the down position.

1. The chute is shipped attached and with a stop bracket holding the chute upright. The stop bracket must be removed prior to operating the tractor. See Figure 14.
2. Holding the chute deflector fully upward, remove the stop bracket:
  - a. Grasp the bracket (a) from behind the chute on top of the deck.
  - b. Lift up slightly to free the bracket from the notch (b).
  - c. Pull back to fully remove the bracket (c).

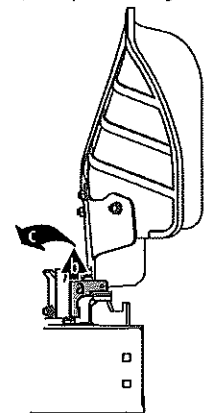


Figure 14

**Setting Deck Wheels**

**NOTE:** The deck wheels are an anti-scalp feature of the deck and are not designed to support the weight of the cutting deck.

1. Move the tractor to a level surface, preferably pavement.
2. Check tire pressure, adjust, if necessary. See tire side wall for proper tire pressure.
3. Make sure the deck is level side-to-side and properly pitched. See the Service and Maintenance section for deck leveling information and instructions.
4. Place knob in the desired mowing height position and lower the deck.
5. Check the deck wheels for contact or excessive clearance with the surface below.

**NOTE:** The deck wheels should have between 1/4" (6.35 mm) and 1/2" (12.7 mm) clearance above the ground.

**ASSEMBLY, cont'd**

- Remove the lock nut (a) securing one of the front gauge wheels to the deck. Remove the shoulder screw (b), tube spacer (c) and shoulder spacer (e) to remove the wheel (d). See Figure 15.
- Line up the gauge wheel with the tube spacer through the center, with the shoulder spacer on the shorter side hub of the gauge wheel and position the assembly inside the brackets at the desired height.

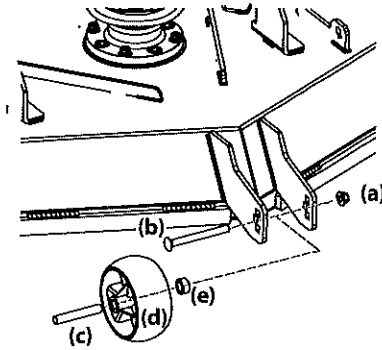


Figure 15

**NOTE:** Allow a 1/4-1/2" (6.35-12.7 mm) clearance between the ground and gauge wheel.

- Insert the shoulder screw into the chosen index hole on the front gauge wheel bracket.

**NOTE:** On the left side and right side deck gauge wheels, the shoulder screw must be installed from the outside of the tractor inward, through the square hole on the bracket. On center deck gauge wheels (if equipped) the shoulder screw side of the assembly can be installed from either direction. See Figure 16.

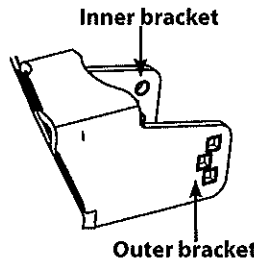


Figure 16

- Secure with the lock nut previously removed.

**Battery Information**

- ⚠ CALIFORNIA PROPOSITION 65 WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.
- ⚠ WARNING:** Should battery acid accidentally splatter into the eyes or onto the skin, rinse the affected area immediately with clean cold water. Seek prompt medical attention. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water. NEVER connect (or disconnect) battery charger clips to the battery while the charger is turned on, as it can cause sparks. Keep all sources of ignition (cigarettes, matches, lighters) away from the battery. The gas generated during charging can be combustible. As a further precaution, only charge the battery in a well ventilated area. Always shield eyes and protect skin and clothing when working near batteries. Batteries contain sulfuric acid and may emit explosive gases. Use extreme caution when handling batteries. Keep batteries out of the reach of children.
- ⚠ CAUTION:** When attaching battery cables, always connect the POSITIVE (Red) wire to terminal first, followed by the NEGATIVE (Black) wire.

**NOTE:** The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

**Connecting Battery Cables**

**⚠ WARNING:** Always connect the positive lead to the battery before connecting the negative lead. This will prevent sparking or possible injury from an electrical short caused by contacting the tractor body with tools being used to connect the cables.

For shipping reasons the factory may leave both battery cables disconnected from the terminals. To connect the battery cables, proceed as follows:

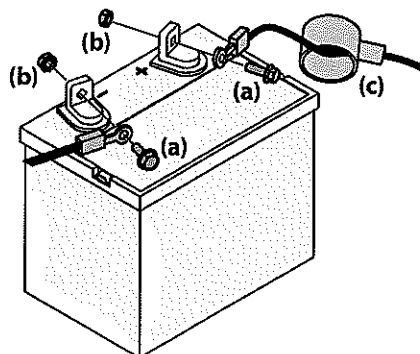


Figure 17

- If present, remove the plastic cover from the positive battery terminal. Attach the red connector to the positive battery terminal (+) using the bolt (a) and hex nut (b). See Figure 17.

- If present, remove the plastic cover from the negative battery terminal and attach the black cable to the negative battery terminal (-) with the bolt (a) and hex nut (b). See Figure 17.
- Position the red rubber boot (c) over the positive battery terminal (+) to help protect it from corrosion. See Figure 17.

**NOTE:** If the battery is put into service after date shown on top/side of battery, charge the battery as instructed in the Service and Maintenance section, prior to operating.

**Battery Maintenance**

- The battery is filled with battery acid and then sealed at the factory. However, even a "maintenance free" battery requires some maintenance to ensure its proper life cycle.
- Spray the terminals and exposed wire with a battery terminal sealer, or coat the terminals with a thin coat of grease or petroleum jelly, to protect against corrosion.
- Always keep the battery cables and terminals clean and free of corrosion.
- Avoid tipping. Even a sealed battery will leak electrolyte when tipped.

**Battery Storage**

- When storing the tractor for extended periods, disconnect the negative battery cable. It is not necessary to remove the battery.
- All batteries discharge during storage. Keep the exterior of the battery clean, especially the top. A dirty battery will discharge more rapidly.
- The battery must be stored with a full charge. A discharged battery can freeze sooner than a charged battery. A fully charged battery will store longer in cold temperatures than hot.
- Recharge the battery before returning to service. Although the tractor may start, the engine charging system may not fully recharge the battery.

**Battery Removal**

**⚠ WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds. Wash hands after handling.

The battery is located beneath the seat frame. To remove the battery:

- Remove the hex washer screw (a) securing the battery hold-down bracket (b) to the frame. Then flip the battery hold-down bracket (b) up to free the battery. See Figure 18.
- Remove the hex cap screw and sems nut securing the black negative battery lead to the negative battery post (marked NEG). Move the cable away from the negative battery post.
- Remove the hex cap screw and sems nut securing the red positive battery lead to the positive battery post (marked POS).
- Carefully lift the battery out of the tractor.
- Install the battery by repeating the above steps in the reverse order.

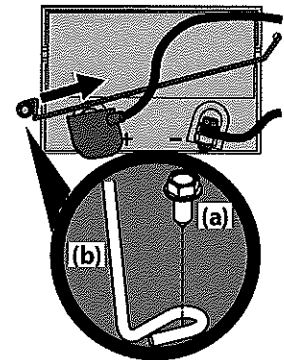


Figure 18

**Charging the Battery**

Test and, if necessary, recharge the battery after the tractor has been stored for a period of time.

- A voltmeter or load tester should read 12.6 volts (DC) or higher across the battery terminals. See Figure 19.
- Charge the battery with a 12-volt battery charger at a MAXIMUM rate of 10 amps.

Voltmeter Reading	State of Charge	Charging Time
12.7	100%	Full Charge
12.4	75%	90 Min.
12.2	50%	180 Min.
12.0	25%	280 Min.

Figure 19

**Operating the Seat Latch**

- Place the lapbar drive control levers fully out in the parking brake position.
- Locate the seat latch at the rear base of the seat.
- Press downward on the front tabs to disengage the seat latch.
- Rotate the entire seat pan upward. See Figure 20.

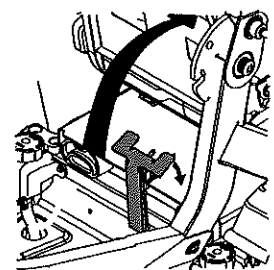


Figure 20

**ASSEMBLY, cont'd**

**Adjusting the Seat**

1. Push left and hold the seat adjustment lever to adjust the seat position.
2. Slide seat forward or rearward to desired position.
3. Release the adjustment lever. Ensure seat is locked into position before operation. See Figure 21.

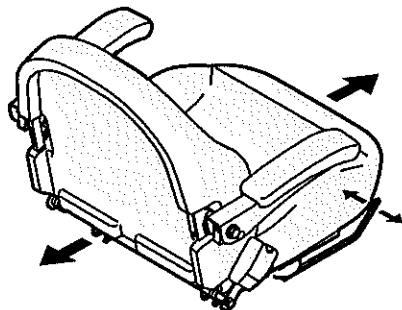


Figure 21

**Adjusting the Mechanical Suspension Mechanism (Z360 models only)**

The mechanical suspension mechanism (if equipped) incorporates weight/ride adjustment controls for operators in the 125 to 275 lb (57-124 kg) weight range. Turn the knob on the front of the seat clockwise to increase the weight capacity and counter-clockwise to decrease. See Figure 22.

**NOTE:** The seat base must be secured by the latch, otherwise, the seat assembly could tilt forward. The Operator Presence Sensor must be connected to the electrical wiring harness.

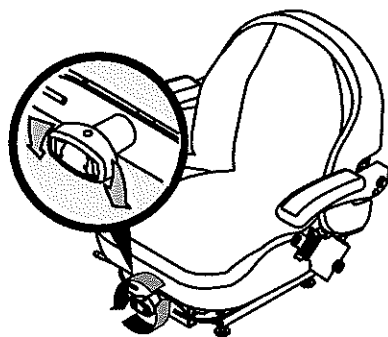


Figure 22

**OPERATION**

**NOTE:** This Operator's Manual covers several models. Tractor features may vary by model. Not all features in this manual are applicable to all tractor models and the tractor depicted may differ from yours.

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**1) Lapbar Drive Control Levers**

The RH (Right Hand) and LH (Left Hand) lapbar drive control levers are located on each side of the operator's seat. The hinged levers pivot outward to permit the operator to sit in the seat, or dismount. To start the tractor's engine, the lapbar drive control levers must be fully out and in park position. When the lapbar drive control levers are fully outward, the parking brake is engaged.

Each drive control lever controls the respective transmission. Consequently, these levers control all of the tractor's movement. Driving and steering using these control levers is quite different from a conventional tractor and will take practice to master. Refer to Practice Operation section for further instructions.

**2) Deck Height Index**

Each rotation represents a 1/4" (6.35 mm) change in deck height. Positions range from 1" (2.5 cm) to 4-3/4" (12 cm) at the highest point. See 4a and 4b in Figure 23.

**3) Deck Transport Lock Control**

The deck transport lock control is used to lock the deck above its highest cut setting into transport mode. To engage the deck transport lock control depress the deck lift pedal (4a) and move the deck transport lock control into its rear position. To disengage the transport lock and set the deck to its designated cut height, depress the deck lift pedal and move the deck transport lock control into its front position.

**4a) Deck Lift Pedal**

The deck lift pedal is located on the front, right corner of the platform. The pedal is used in conjunction with the deck lift knob to raise and lower the mowing deck. Push forward on the deck lift pedal, rotate the deck lift knob to the desired height and release the deck lift pedal.

**4b) Deck Lift Knob**

The deck lift knob is used in conjunction with the deck lift pedal to raise and lower the mowing deck. Push forward on the deck lift pedal, rotate the deck lift knob to the desired height and release the deck lift pedal.

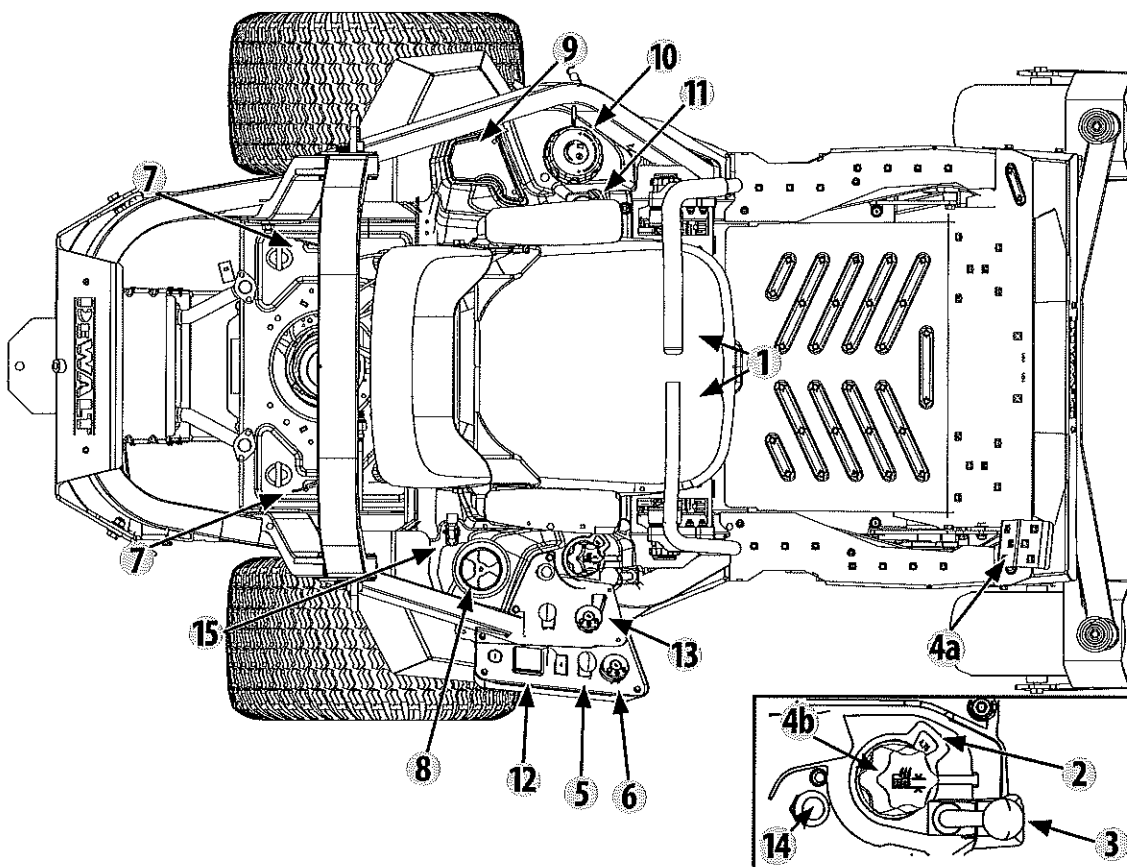


Figure 23