

# Dealer Setup & Adjustment Instructions

S200X - 25HP, 27HP & 32HP

61" & 72" Mower Deck



This Dealer Setup Instruction covers the following products:

Model No.	Description
5900664	S200XKAV2561, 25HP Kawasaki w/ 61" Mower
5900692	S200XK2761, w/ 27HP Kohler & 61" Mower
5900695	S200XKAV2761 S/S, 27 Kawasaki w/61" Mower
5900693	S200XBV32 S/S, 32 B&S w/61" Mower
5900694	S200X/72, 72" Mower Deck

## ATTENTION SETUP PERSONNEL:



The safety warnings provided in this guide and in the operator's manual included with the unit contain important information that must be obeyed when assembling, setting-up, operating, servicing,

transporting, or storing the unit.

These warnings are highlighted by the safety alert triangle symbol shown above, which signifies that an important safety message is being provided.

**You must read, understand, and follow these warnings and instructions, and use safe shop and work practices at all times while working on or around this unit and all other outdoor power equipment.**

### Setup



Sections and items denoted by the **Setup** symbol provide the information necessary to fully assemble, test, and prepare the units described above for delivery to your customers.

**A Quick Setup List is provided on page 2 of this booklet to help you identify and check that the items have been performed.**

### Adjust



Additional information concerning functional tests, general adjustment procedures, and the location of normal lubrication points are included in these instructions.

Although all required lubrication and normal adjustments on factory-assembled components are done at the factory, this additional information is provided to assist you in ensuring that each unit is delivered to the customer in proper working order.

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### ADJUSTMENT PROCEDURES

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## Quick Setup List -

Page	Setup Procedure	Steps to Perform
3	<b>Uncrating</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Remove Crate &amp; Banding.</li><li><input type="checkbox"/> Loosen Hydraulic Release Valves.</li><li><input type="checkbox"/> Release Parking Brake and Roll Tractor forward off skid.</li><li><input type="checkbox"/> Tighten Hydraulic Release Valves.</li></ul>
3	<b>Battery Installation</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Install Battery.</li></ul>
4	<b>Tractor Assembly</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Assemble the Motion Control Handles.</li><li><input type="checkbox"/> Assemble the Seat.</li></ul>
5	<b>Roll Bar Assembly</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Install the Roll Bar.</li></ul>
6	<b>Check Fluid Levels</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Check Engine Oil level.</li><li><input type="checkbox"/> Check Hydraulic Oil level.</li><li><input type="checkbox"/> Check Tire Pressure</li></ul>
7	<b>Mower Assembly</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Check Blade Bolt Torque.</li><li><input type="checkbox"/> Install Deck Pusher Bars (72" Models).</li><li><input type="checkbox"/> Install the Mower Deck (72" Models).</li><li><input type="checkbox"/> Check &amp; Adjust Deck Lift Rod Timing.</li><li><input type="checkbox"/> Check &amp; Level Mower Deck.</li><li><input type="checkbox"/> Check Deck Drive Belt.</li></ul>
12	<b>Lubrication &amp; Fuel Preparation</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Lubricate all grease &amp; oil points.</li><li><input type="checkbox"/> Add fuel.</li><li><input type="checkbox"/> Start the Engine.</li></ul>
14	<b>SAFETY CHECKS</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Check for <u>LOOSE HARDWARE</u>.</li><li><input type="checkbox"/> Check all <u>OPERATOR CONTROLS</u>.</li><li><input type="checkbox"/> Perform <u>SAFETY INTERLOCK SYSTEM CHECK</u>.</li></ul>

**Setup**



## Uncrating

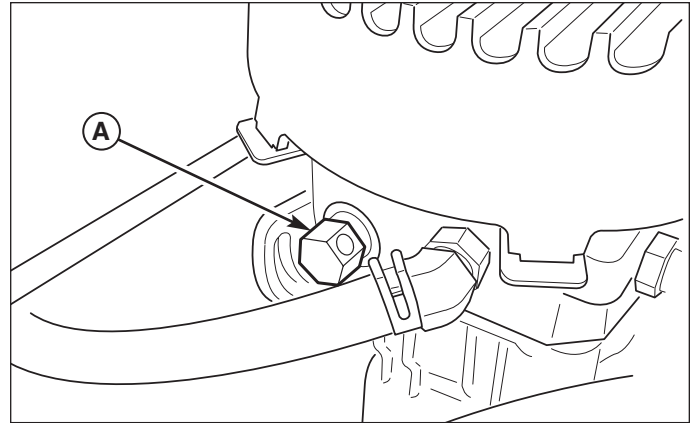
1. Using a reciprocating utility saw or equivalent, cut crate away from bottom skid. Remove crate. Remove shrink-wrap plastic.
2. Cut nylon banding from front of the frame and rear rear bumper.



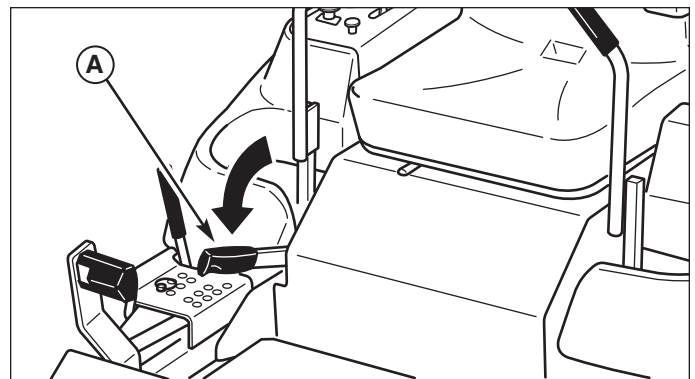
**IMPORTANT NOTE**

When cutting crate from bottom skid, use caution around tractor tires and mower rollers.

3. Open the hydraulic release valves. To open the release valves, turn the release valve, which is located on front of the pump, counter-clockwise 2 full turns MAX. See Figure 1 for valve location.
4. Push down on the parking brake lever (A, Figure 2) to release the parking brake.
5. Be sure there are no nails or sharp objects on the bottom skid to puncture the tractor's tires. Roll the tractor forward off the bottom skid.
6. After moving the tractor, re-engage the pumps (drive position) by turning the release valves clockwise and tighten to 80-120 in/lbs (9-13.5 N.m.).



**Figure 1. Hydraulic System By-Pass**  
A. Hydraulic Release Valve (left-hand pump shown)



**Figure 2. Disengaging the Parking Brake**  
(lever shown in disengaged position)  
A. Parking Brake Lever

**Setup**



## Battery Installation

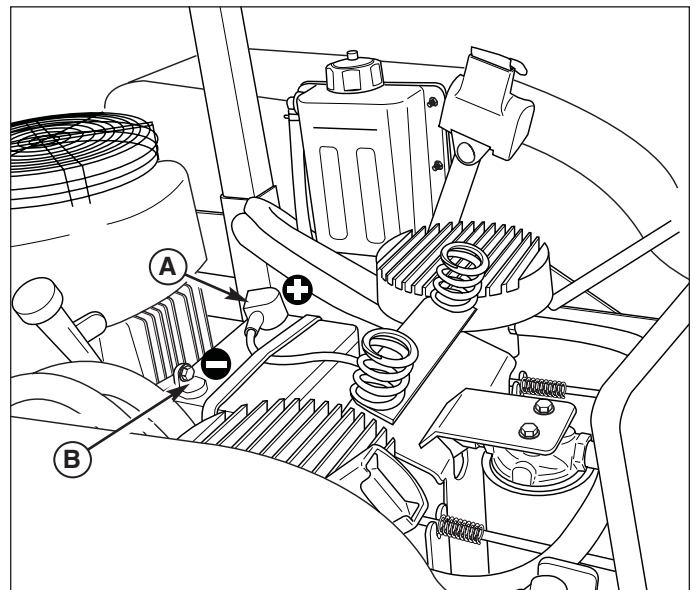
**⚠ WARNING**

**BATTERY SAFETY RULES**

- Battery acid causes severe burns. Avoid contact with skin.
- Wear eye protection while handling the battery.
- To avoid an explosion, keep flames and sparks away from the battery, especially while charging.
- When installing the battery cables, **CONNECT THE POSITIVE (+) CABLE FIRST** and the negative (-) cable last. If not done in this order, the positive terminal can be shorted to the frame by a tool.

### Connect Battery

1. Connect the red positive battery cable (B, Figure 3) to the positive battery post.
2. Connect the black negative battery cable (A) to the negative battery post.



**Figure 3. Connect the Battery**  
A. Positive (+) Cable & Terminal  
B. Negative (-) Cable & Terminal

## Setup

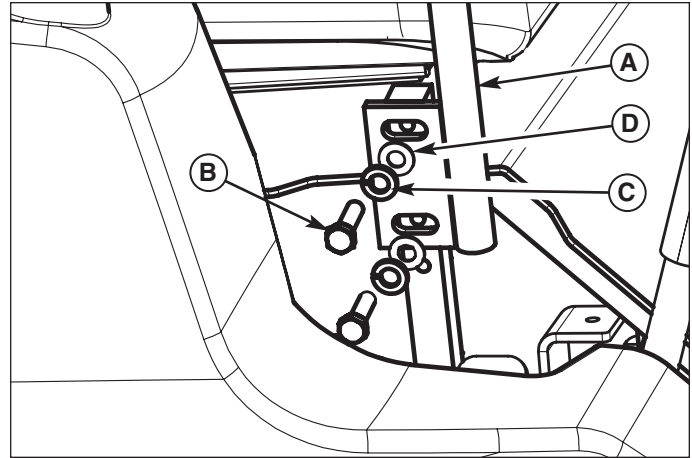


# Tractor Assembly

## Motion Control Handle Assembly

1. Remove the handles and mounting hardware from the handle bar box.
2. Install the ground speed control handles (A, Figure 4) onto the control lever base using the 5/16-18 x 3/4" bolts, 5/16" lock washers and 5/16" flat washers (B, C, & D). Prior to tightening the bolts, align the handles with each other.

*NOTE: There is a LEFT-HAND and a RIGHT-HAND control handle. When assembled to the base, the handle base should be pointing towards the rear as shown in Figure 4.*

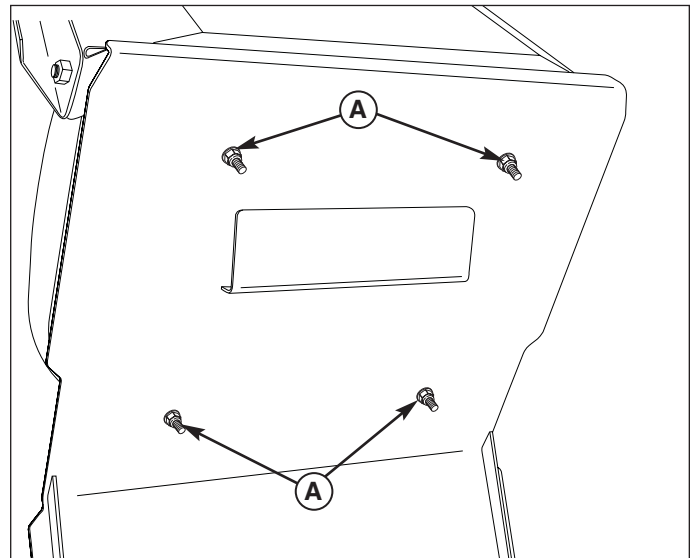


**Figure 4. Install the Control Handle(s)**

- A. Control Handle**
- B. 5/16-18 x 3/4" Bolt(s)**
- C. 5/16" Lock Washer(s)**
- D. 5/16" Flat Washer(s)**

## Seat Assembly

1. Unpack the seat.
2. Install the seat onto the seat mount plate and secure with the 5/16-18 nylock flange nuts (A, Figure 5).

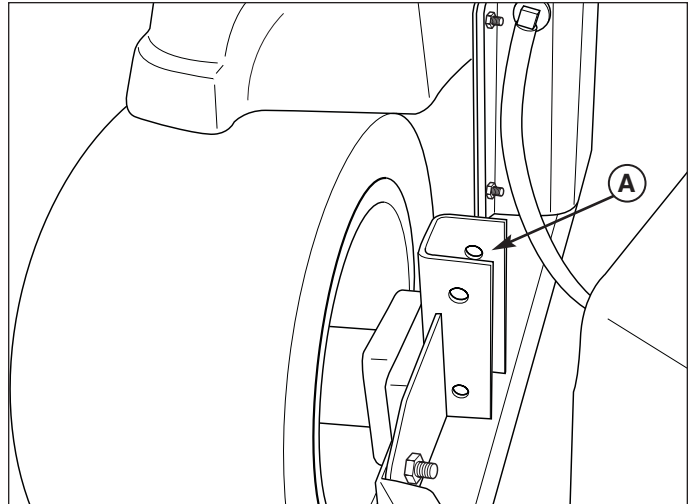


**Figure 5. Install the Seat**

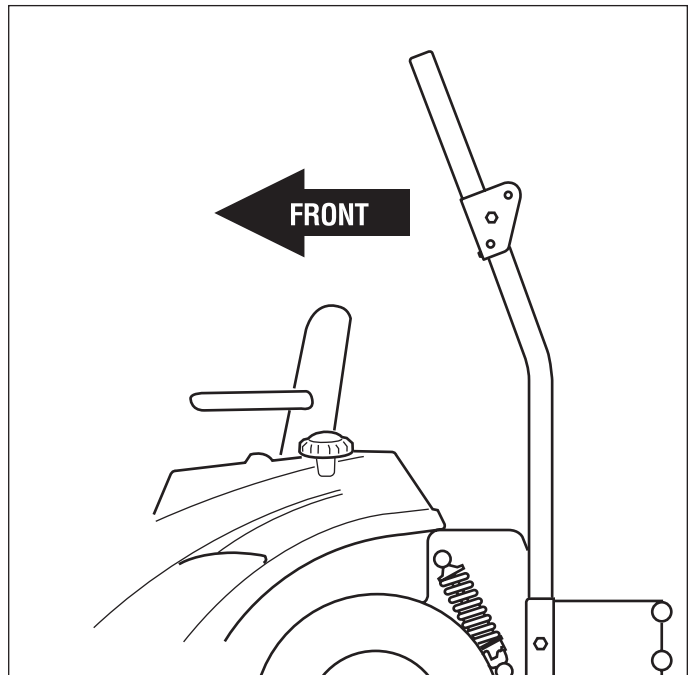
- A. 5/16-18 Nylock Flange Nuts**

**Setup****Roll Bar Installation****Install the Roll Bar**

1. Unpack the roll bar and hardware from the box.
2. Place the roll bar in to the roll bar pockets (A, Figure 6) on the frame. Refer to Figure 7 for the correct roll bar orientation.
3. Install the allen head bolt with a flat washer through the bottom hole of the roll bar pocket and roll bar from the rear of the machine. Secure with a flat washer and the center lock nut. Repeat for the other side.
4. Install the hex head bolt with washer through the top hole of the roll bar pocket and roll bar from the rear of the machine. Secure with a flat washer and the center lock nut. Repeat for the other side.
5. Tighten installation hardware to 80 ft/lbs (108 Nm) of torque.



**Figure 6. Roll Bar Pocket (Left Side Shown)**  
**A. Roll Bar Pocket**



**Figure 7. Roll Bar Orientation**

**Setup**



## Check Fluid Levels

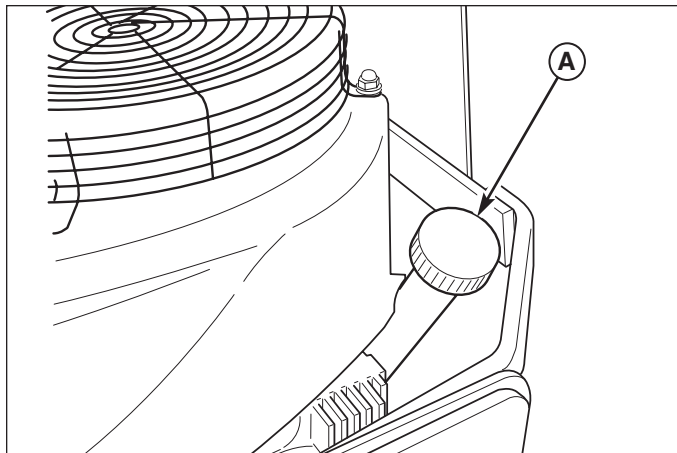
### Check the Engine Oil Level

1. Use the dipstick (A, Figure 8) to check the engine oil level. If necessary add engine oil. Check the engine manufacturer's owner's manual for the oil recommendations.

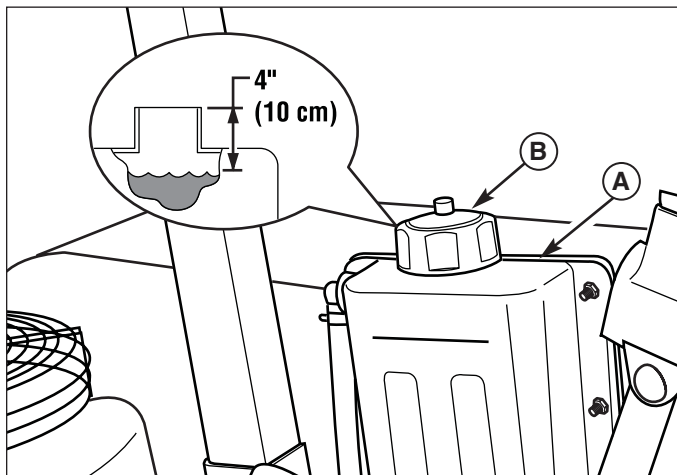
### Check the Hydraulic Oil Level

*NOTE: Do not open the hydraulic reservoir unless oil is being added.*

1. Before removing the reservoir cap, make sure the area around the reservoir cap and fill neck of the reservoir is free of dust, dirt, or other debris.
2. Unscrew the reservoir cap (B, Figure 9).
3. Look down the filler neck of the hydraulic oil reservoir (A) and observe the oil level. When cold, the oil level should be approximately 4" (10 cm) below top of the filler neck.
4. If necessary, add SAE 20W-50 motor oil.
5. Reinstall the reservoir cap.



**Figure 8. Pre-start Checks**  
A. Crankcase Oil Fill



**Figure 9. Checking the Hydraulic Oil Level**  
A. Hydraulic Oil Reservoir  
B. Reservoir Cap

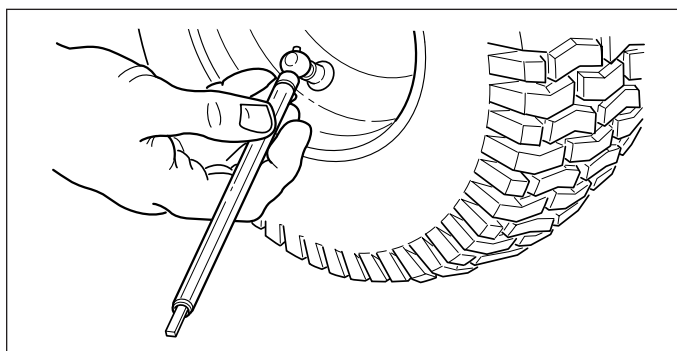
**Setup**



## Check Tire Pressures

Tire pressure should be checked periodically, and maintained at the levels shown in the chart. Note that these pressures may differ slightly from the "Max Inflation" stamped on the side-wall of the tires. The pressures shown provide proper traction, improve the cut quality, and extend the tire life.

Tire	Pressure
Front	25 psi (1,72 bar)
Rear	15 psi (1,03 bar)



**Figure 10. Checking Tire Pressure**



## Check the Mower Assembly

### Check Torque - Mower Blades

#### ⚠ WARNING

Mower blades are sharp. For your personal safety, do not handle mower blades with bare hands. Careless or improper handling of blades may result in serious injury. Blade mounting bolts must each be installed with a flat washer then securely tightened. Torque blade mounting bolts to 70 ft.lbs. (94 N.m.)

1. Park the machine on a flat, level surface and engage the parking brake.
2. Lock the deck lift pedal in the 5" (12,7 cm) position.
3. Check that blades are installed with the tabs pointing up toward the deck as shown in Figure 11. Torque the bolts to 70 ft.lbs. (94 N.m.).

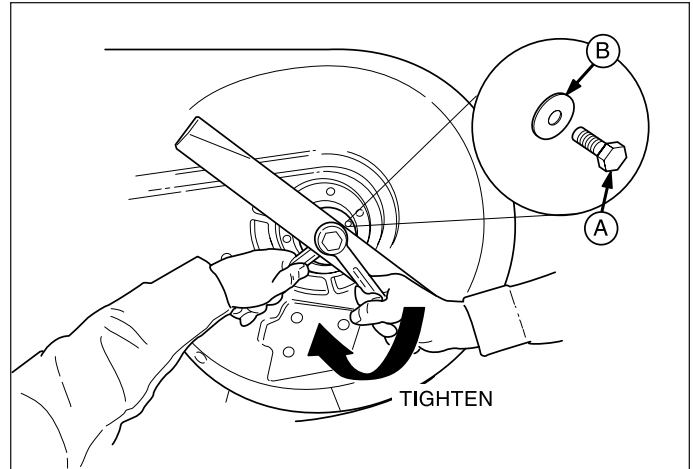


Figure 11. Check the Blade Torque

- A. Blade Bolt
- B. Flat Washer



## Install Deck Pusher Bars (72" Models)

Check the pusher bar length from the outside of the cross tube to the center of the ball joint. This should be 16-5/8" (42,2 cm). See insert Figure 12. Adjust if necessary prior to installing the pusher bars onto the deck.

1. Holding the pusher bar (A, Figure 12) in place, insert the mount pin (B) through the bracket and the pusher bar.
2. Secure the mount pin to the mower deck bracket with a 5/16 x 1" bolt (C), 5/16" flat washer (D) and serrated flange nut (E) that are provided. Repeat for the other side.

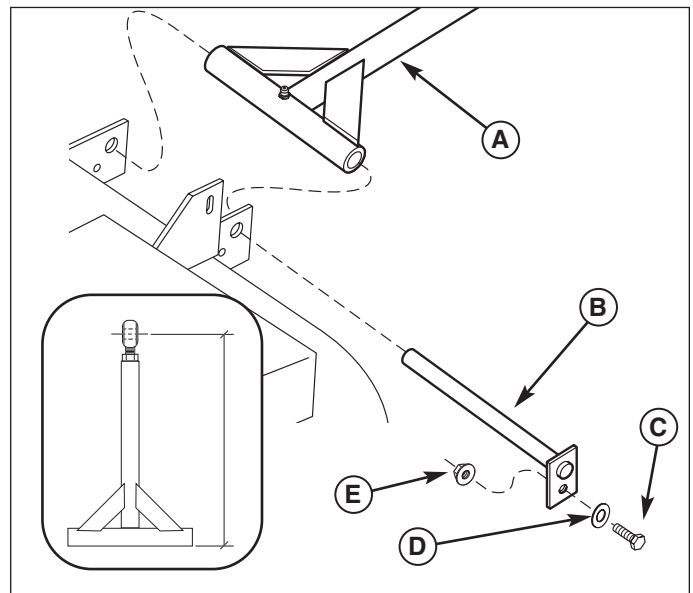


Figure 12. Install Pusher Bars

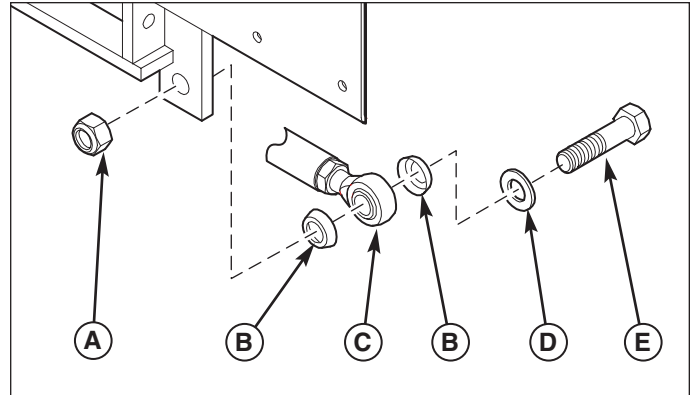
- A. Deck Pusher Bar
- B. Mount Pin
- C. 5/16-18 x 1" Bolt
- D. 5/16" Flat Washer
- E. 5/16-18" Serrated Flange Nut

## Setup



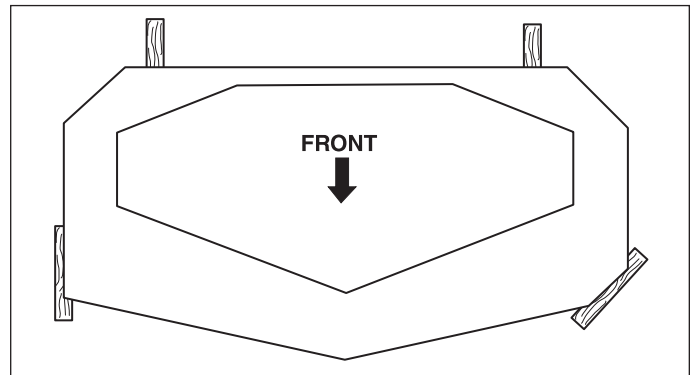
## Install the Mower Deck (72" Models)

1. Park machine on a flat, level surface and engage the parking brake.
2. Lock the deck lift pedal in the 5" (12,7 cm) position. Place the deck height adjustment pin in the 4" (10,2cm) position and lower the deck lift pedal until the arm contacts the pin. Secure in place if necessary.
3. Center the mower deck under the tractor frame.
4. Fasten the ball joints to the pusher bar mounts using the 3/4" bolt, washer, rod end seals, and the 3/4" nut (see Figure 13). Using a 1-1/16" wrench and 1-1/8" socket, tighten the assembly. Repeat for other side.
5. See Figure 14. Place 2 x 4 blocks under each corner of the mower deck with the 3-1/2" sides being vertical. Place a 1/4" (0,64cm) thick spacer on top of the rear 2 x 4 blocks.
6. See Figure 15. Install the deck hanger chains on the hanger pivots. Install the bolts from the outside and secure with the 3/8-16 nylon lock nuts.

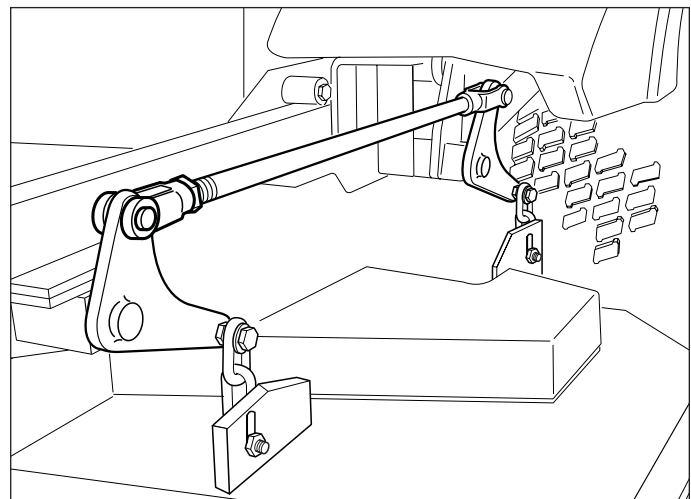


**Figure 13. Deck Pusher Bar Installation**

- A. 3/4" Nylon Lock Nut**
- B. Rod End Seal**
- C. Pusher Bar Ball Joint**
- D. 3/4" Washer**
- E. 3/4" Bolt**



**Figure 14. 2 x 4 Locations**



**Figure 15. Deck Hanger Chain Installation**



## Setup



## Check Deck Rod Timing

1. Park machine on a flat, level surface. Disengage the PTO, stop the engine and engage the parking brake. Rear tires must be inflated to 15 psi (1,03 bar); front tires to 25 psi (1,72 bar).
2. To check the lift rod timing, measure and record the distance between the lift pivots and the rod pivots. Repeat for the other side of the machine. See Figure 16.
3. If the measurements for the rods are equal, no further adjustment is required. If the measurements are NOT equal (greater than 1/8" (3,17mm) difference), adjustment is required, continue with Step 5.
4. Lock the deck lift pedal in the 5" (12,7cm) position. Remove the cutting height adjustment pin and lower the mower deck.
5. To ensure that the deck is in the lowest position, push the pedal by hand towards the rear of the machine and install the height adjustment pin in the 3" (7.6cm) position to hold in place.
6. Block up the mower deck until all hanger chains are slack. Refer to Figure 18.
7. See Figure 17. To adjust the lift rod, loosen the jam nut on the front clevis then remove the 1/2" clevis pin fastening the clevis to the lift pivot arm. Turn the clevis clockwise to shorten the distance between the rod pivots or counterclockwise to lengthen the distance between the rod pivots. Reinstall the clevis on the lift pivot arm and secure with the 1/2" clevis pin previously removed. Tighten the jam nut against the clevis.
8. Remove the blocks from under the mower deck.
9. Remove the the cutting height adjustment pin from in front of the deck lift pedal arm. Lift the mower deck and reinstall the adjustment pin in the desired mowing height.

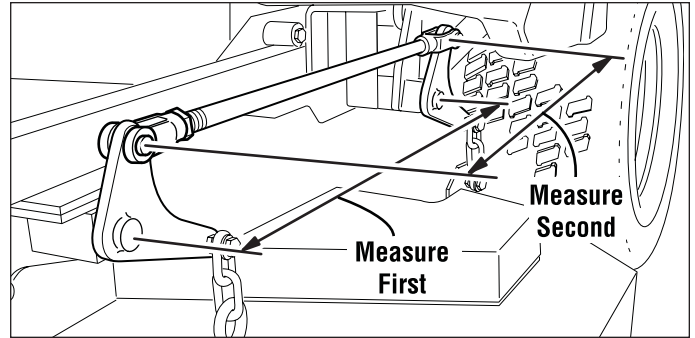


Figure 16. Check Lift Rod Timing

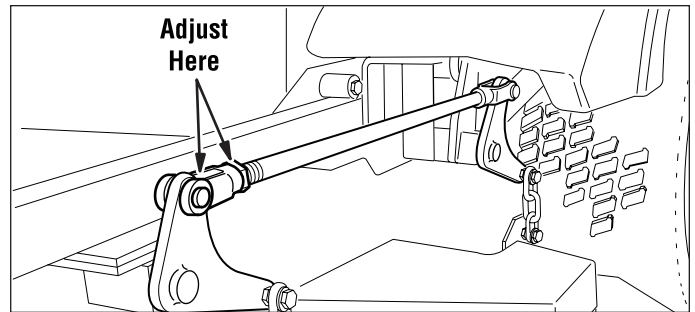


Figure 17. Adjust Lift Rod Timing

## Setup



## Deck Leveling Adjustment

**NOTE:** Before adjusting the deck level, the deck lift rod timing must be checked and/or adjusted.

1. Park machine on a flat, level surface. Disengage the PTO, stop the engine and engage the parking brake. Rear tires must be inflated to 15 psi (1,03 bar); front tires to 25 psi (1,72 bar).
2. Lock the deck lift pedal in the 5" (12,7cm) position. Place the deck height adjustment pin in the 4" position and lower the deck lift pedal until the arm contacts the pin.
3. Place the 2 x 4 blocks under each corner of the mower deck with the 3-1/2" sides being vertical. Place a 1/4" (0,64cm) thick spacer on top of the rear 2 x 4's. See Figure 18.
6. **For 61" Deck Models:** Adjust the front eyebolts until the chains are tight and the deck is still resting on the 2 x 4's. Tighten the jam nuts. See Figure 19.
- For 72" Deck Models:** Loosen the nuts and allow the front of the deck to rest on the 2 x 4's. Slide the chains down in the slots until the chains are tight and tighten the nuts. See Figure 19.
7. Loosen the nuts and allow the rear of the deck to rest on the 2 x 4's and 1/4" spacers. Slide the chains down in the slots until the chains are tight and tighten the nuts. See Figure 19.
8. Remove all the 2 x 4's and spacers from under the mower deck.
9. **For your safety, DO NOT handle mower blades with bare hands.** Position the outside mower blades so that they face front-to-back (Figure 20).
10. Measure from the front tip of the blade from the cutting edge to the ground. Measure from the rear tip of the blade from the cutting edge to the ground. Repeat this process for the other side of the machine. The front measurements should be 4" (10,2 cm), the back measurements should be 4-1/4" (10,8 cm). If the measurements are greater than 1/8" (3,17 mm) of what they should be adjust the deck height until they are correct.

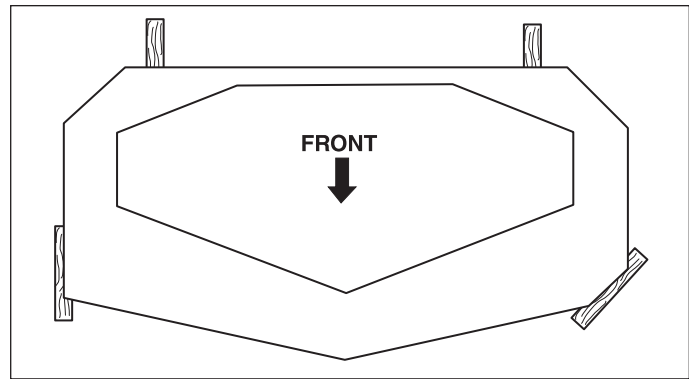


Figure 18. 2 x 4 Locations

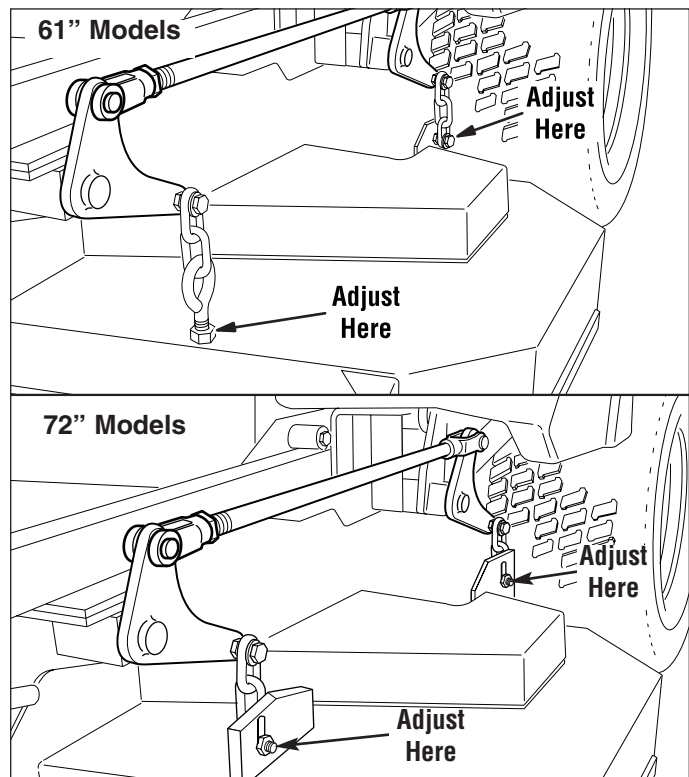


Figure 19. Hanger Chain Adjustment

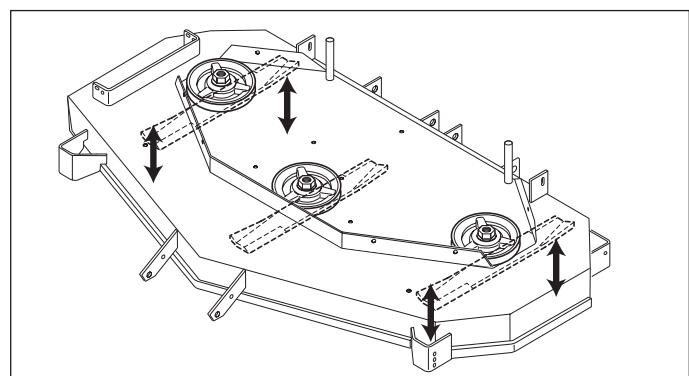


Figure 20. Checking The Blade Height Measurement

**Setup**

## Check Deck Drive Belt

1. Lower the mower deck to its lowest cutting position.
2. Remove the mower deck guards.
3. Make sure the V-side of the belt runs in the pulley grooves (Figures 21 & 22).

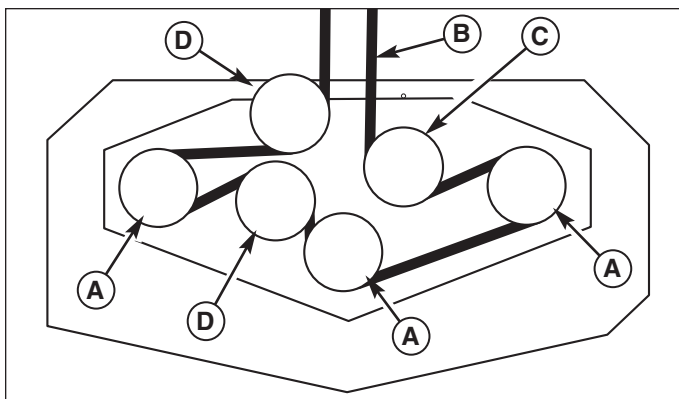
### **! WARNING**

Use extreme caution when rotating the idler arm with the breaker bar, due to the increased tension in the spring as the idler arm is being rotated. Injury may result if the breaker bar is prematurely released while the spring is under tension.

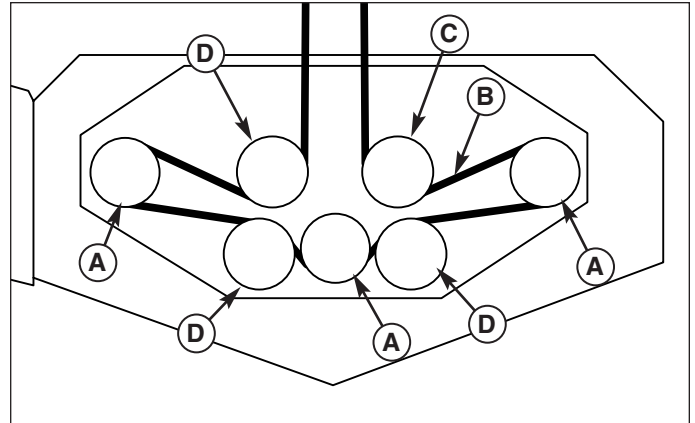
4. **For 61" Models:** If the belt is not properly seated, use a 1/2" breaker bar, and place the square end in the square hole located in the end of the idler arm (A, Figure 23). Carefully rotate the breaker bar counter clockwise, which will relieve the tension on the belt exerted from the idler arm.

**For 72" Models:** If the belt is not properly seated, use a 3/4" combination wrench, and place the box end on the nut (A, Figure 24) securing the idler pulley located in the end of the idler arm. Carefully rotate the wrench **CLOCKWISE**, which will relieve the tension on the belt exerted from the idler arm.

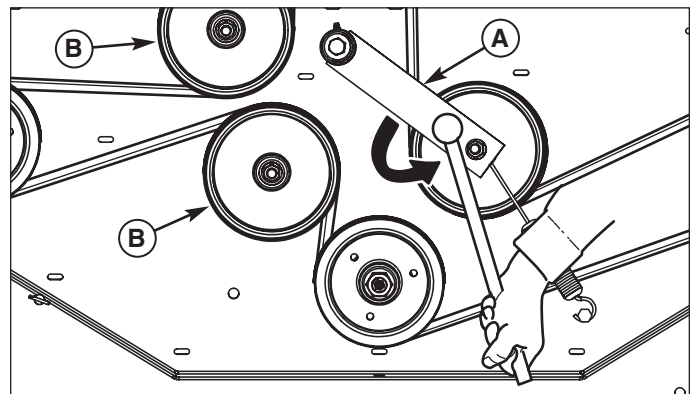
5. Re-seat belt and carefully release the tension on the breaker bar.
6. Reinstall the mower deck guards.



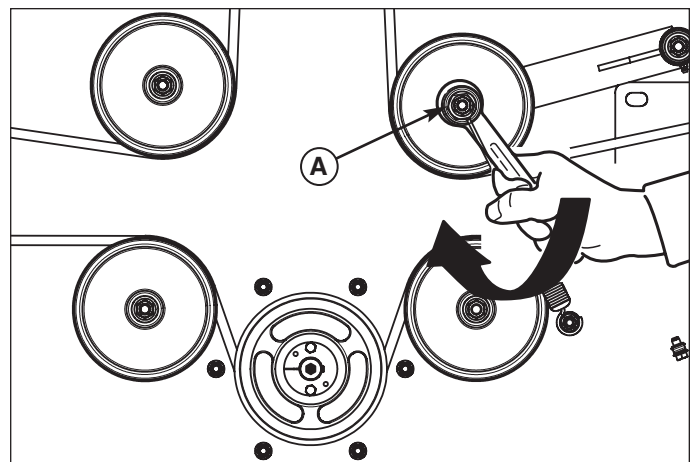
**Figure 21. Mower PTO Belt Routing (61" Models)**  
 A. Spindle Pulley  
 B. PTO Drive Belt  
 C. Spring-loaded Idler Pulley  
 D. Stationary Idler Pulley



**Figure 22. Mower PTO Belt Routing (72" Models)**  
 A. Spindle Pulley  
 B. PTO Drive Belt  
 C. Spring-loaded Idler  
 D. Stationary Idler Pulley



**Figure 23. Mower PTO Belt (61" Models)**  
 A. Idler Arm  
 B. Stationary Idler Pulley



**Figure 24. Mower PTO Belt (72" Models)**  
 A. Nut

# S200X 25HP & 27HP - 61" Mower Deck

## Setup

## Lubrication

Lubricate the unit at the locations shown in Figure 25 through 28 as well as the following lubrication points.

### Grease:



- front caster wheel axles and yokes
- deck lift pivot blocks
- mower deck spindles
- mower deck idler arm

Use grease fittings when present. Disassemble parts to apply grease to moving parts when grease fittings are not installed.

Not all greases are compatible. Red Grease (p/n 5022285) is recommended, automotive-type high-temperature, lithium grease may be used when this is not available.

### Oil:



- control handle pivots
- seat plate pivots
- deck lift pivots
- discharge chute hinge

Generally, all the moving metal parts should be oiled where contact is made with other parts. Keep oil and grease off belts and pulleys. Remember to wipe the fittings and surfaces clean both before and after lubrication.

### Lubricating the Front Casters:

*NOTE: Front casters should be lubricated annually.*

1. Remove the 1/4-28 bolt (A, Figure 28) screwed into the front caster and install a 1/4-28 grease fitting.
2. Grease the front caster.
3. Remove the 1/4-28 grease fitting and reinstall the 1/4-28 bolt.
4. Repeat the process for the other side of the machine.

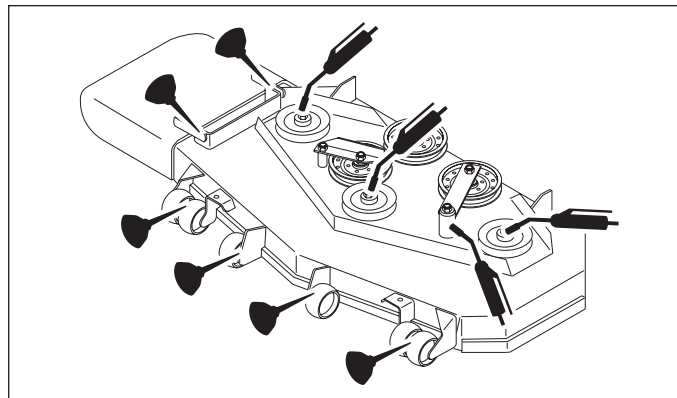


Figure 25. Deck Lubrication

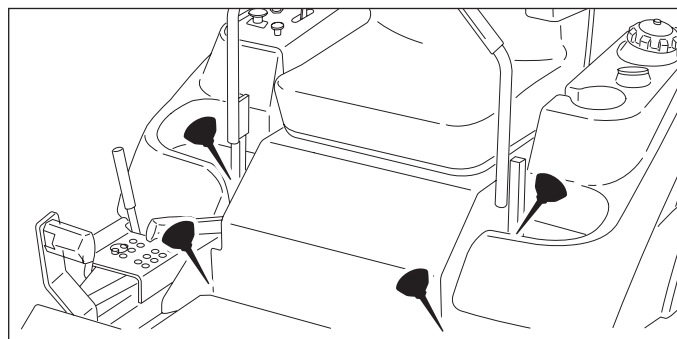


Figure 26. Control Handle Pivots & Seat Plate Pivots

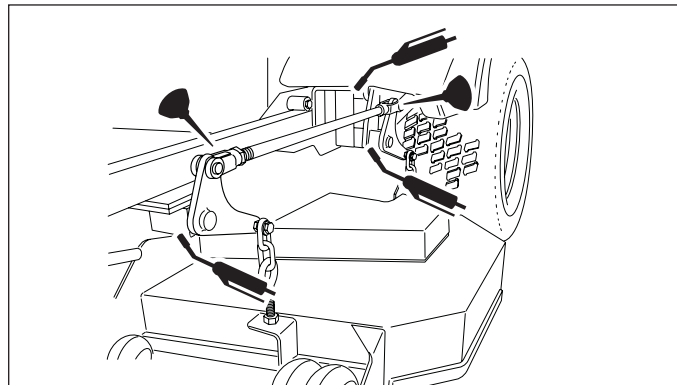


Figure 27. Deck Lift Linkage Pivots

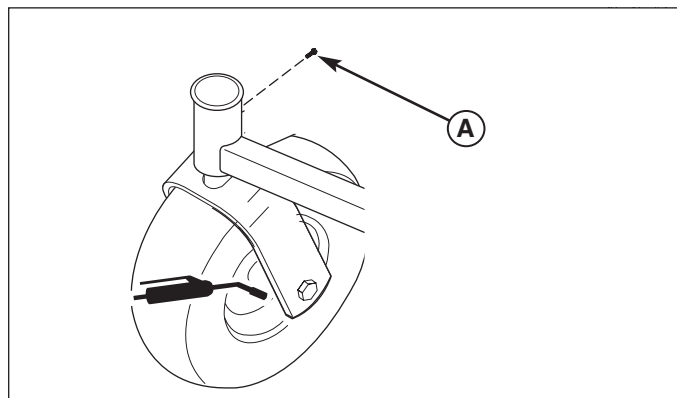


Figure 28. Front Caster & Wheel  
A. 1/4-28 Bolt

## Setup



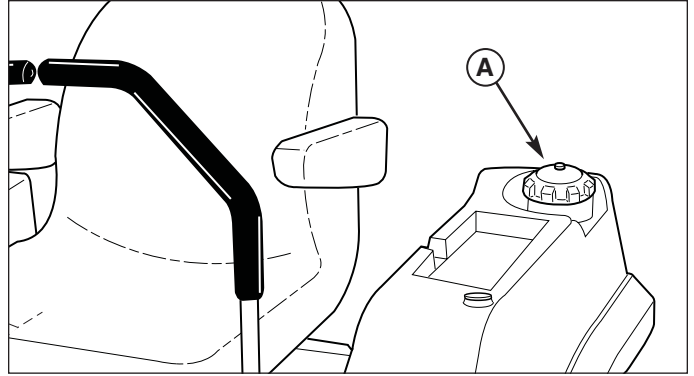
### Adding Fuel

#### To add fuel:

1. Remove the fuel cap (see A, Figure 29).
2. Fill the tank to about 1-1/2" (3,81 cm) of the bottom of the filler neck. This will allow for fuel expansion.

*NOTE: Do not overfill. Refer to your engine manual for specific fuel recommendations.*

3. Install and hand tighten the fuel cap.



**Figure 29. Adding Fuel**

**A. Fuel Cap**

## Setup



### Starting The Engine

1. While sitting in the operator's seat, engage the parking brake and make sure the PTO switch is disengaged and the motion control handles are locked in the NEUTRAL position.
2. Set the engine throttle control to FULL throttle position. Then fully close the choke by pulling the knob OUT fully.
3. Insert the key into the ignition switch and turn it to START.
4. After the engine starts, gradually open the choke (push knob down fully). Reduce to half throttle speed and allow to warm up.

*Warm up the engine by running it for at least a minute before engaging the PTO switch or driving the rider.*

5. After warming the engine, ALWAYS operate the unit at FULL THROTTLE when mowing.

Setup



## Perform the Safety Checks

### **WARNING**

Disengage the PTO, stop the engine, set the parking brake, and wait for moving parts to stop before leaving operator's position for any reason.

If the tractor does not pass the test, do not operate tractor. Under no circumstance should you attempt to defeat the purpose of the safety system.

### Functional Tests

1. Check the tractor for loose bolts, screws, nuts, etc.
2. Start the engine and check all the controls for proper operation: ground speed control levers, parking brake, throttle cable, electric PTO clutch, etc.
3. Stop the engine and check for fluid leaks: oil, fuel and hydraulic oil.
4. If any control fails to operate properly during testing or seems to be out of adjustment, check and readjust it according to the following Adjustments section.



### **SAFETY INTERLOCK SYSTEM**

This unit is equipped with safety interlock switches. These safety systems are present for your safety, do not attempt to bypass the safety switches, and never tamper with the safety devices. Check their operation regularly.

#### Operational SAFETY Checks

##### Test 1 — Engine should NOT crank if:

- PTO switch is engaged, OR
- Parking brake is not engaged, OR
- Motion control handles are not in the NEUTRAL position.

##### Test 2 — Engine SHOULD crank if:

- PTO switch is NOT engaged, AND
- Parking brake is engaged, AND
- Motion control handles are locked in the NEUTRAL position.

##### Test 3 — Engine should SHUT OFF if:

- Operator rises off seat with PTO engaged, OR
- Operator rises off seat with parking brake disengaged.
- Operator moves motion control handles out of their neutral positions before disengaging parking brake.

##### Test 4 — Blade Brake Check

Mower blades and the mower drive belt should come to a complete stop within seven (7) seconds after the electric PTO switch is turned off (or the operator rises off seat). If the mower drive belt does not stop within seven (7) seconds, see your dealer.

*NOTE: Once the engine has stopped, PTO switch must be turned off, parking brake must be engaged, and the motion control handles must be locked in the NEUTRAL position after the operator returns to the seat in order to start the engine.*

### **WARNING**

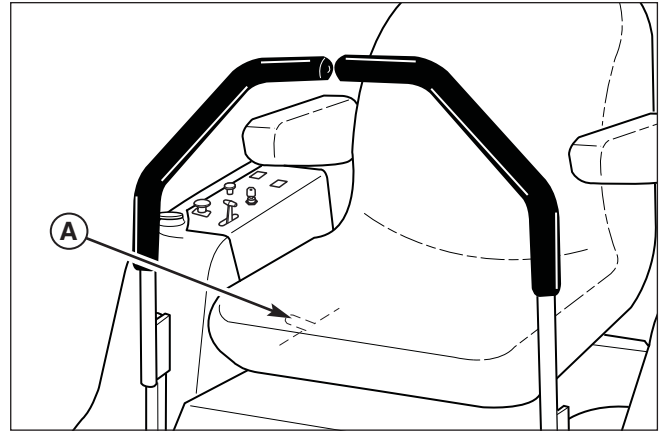
If the unit does not pass a safety test, do not operate it. See your authorized dealer. Under no circumstance should you attempt to defeat the purpose of the safety interlock system.

# Adjustment Procedures



## Seat Adjustment

See Figure 30. The seat can be adjusted forward and backward. Move the lever forward, position the seat as desired, and release the lever to lock the seat into position.



**Figure 30. Seat Adjustment**  
A. Seat Adjustment Lever



## Seat Adjustment (Suspension Seat)

See Figure 31. In addition to the forward and backward seat adjustment, models equipped with suspension seats can be adjusted for lumbar support, suspension and back angle. The seat can be adjusted forward and backward.

### Forward and Backward Adjustment:

Move the forward / backward seat adjustment lever (A, Figure 31) away from the seat, position the seat as desired, and release the lever to lock the seat into position.

### Lumbar Adjustment:

Turn the lumbar adjustment knob (B) until the desired amount of lumbar is achieved.

### Back Angle Adjustment:

Turn the back angle adjustment knob (C) until the desired amount of back angle is achieved.

### Suspension Adjustment:

Turn the suspension adjustment knob (D) until the display scale has a reading that matches the weight of the operator.



**Figure 31. Suspension Seat Adjustment**  
A. Forward / Backward Seat Adjustment Lever  
B. Lumbar Adjustment Knob  
C. Back Angle Adjustment Knob  
D. Suspension Adjustment Knob



## Motion Control Handle Adjustment

The control levers can be adjusted in three ways. The alignment of the control levers, the placement of the levers (how close the ends are to one another) and the height of the levers can be adjusted.

### TO ADJUST THE HANDLE ALIGNMENT

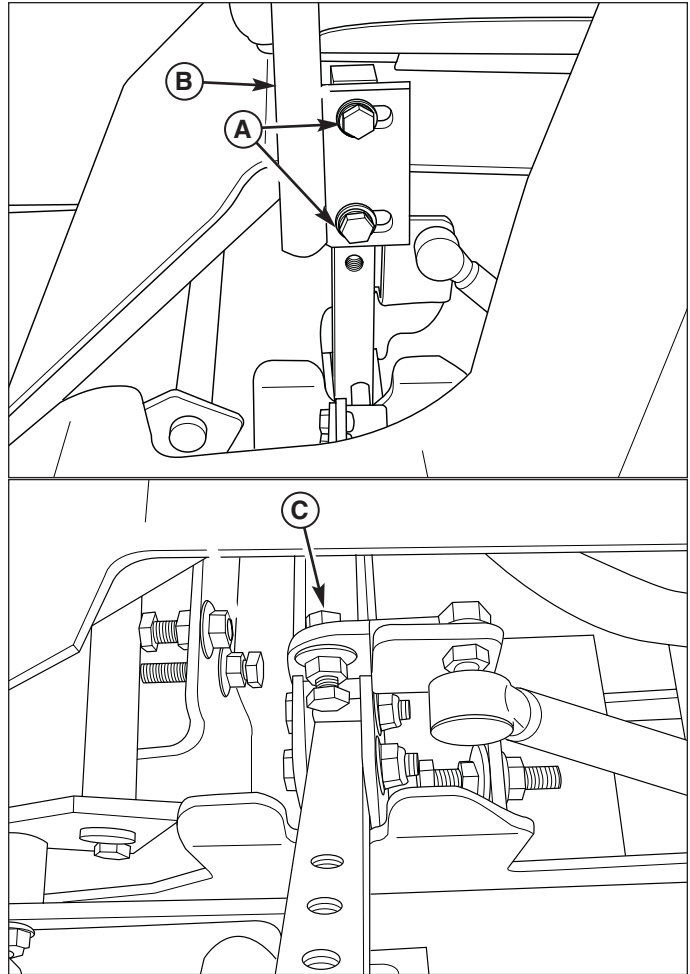
Loosen the mount bolts (A, Figure 32) and pivot the lever(s) (B) to align with each other.

### TO ADJUST THE HANDLE PLACEMENT

Loosen the jam nuts and adjust the placement bolt (C) in or out to properly adjust the lever end spacing.

### TO ADJUST THE HANDLE HEIGHT

Remove the mounting hardware and reposition the handle either up or down from its original position. You will need to readjust the handle alignment as described above.



**Figure 32. Control Lever Adjustment**

- A. Placement Hardware**
- B. Ground Speed Control Lever**
- C. Alignment Hardware**



**Adjust** **Return-To-Neutral & Neutral Adjustment**

**RETURN-TO-NEUTRAL ADJUSTMENT**

To determine if it is necessary to adjust the neutral return, perform the following steps.

1. Disengage the PTO, engage the parking brake and turn off the engine.
2. Move the ground speed control levers into the operating position, pull levers rearward and release.
3. Move the ground speed control levers out towards the neutral position. If the levers do not align with the notches in the neutral lock plate, it is necessary to adjust the adjustment linkage rod (B, Figure 33).

**ADJUSTMENT**

1. Pull the ground speed control lever rearward and release to check position. If the ground speed control lever does not align itself with the notch in the neutral plate, then move the set collar (A, Figure 33) forward or back on the adjustment linkage rod (B) until the ground speed control lever aligns with the notch. Retighten the set collar.
2. Make sure that the neutral return bushing (D) is seated correctly in the spring stop plate (E).
3. Pull the ground speed control lever rearward and release to check position again. Adjust as necessary to align the ground speed control levers with the notches in the neutral lock plate.

*It is important to note that after every adjustment of the adjustment linkage rod, the lever must be pulled rearward and released to properly check the neutral position.*

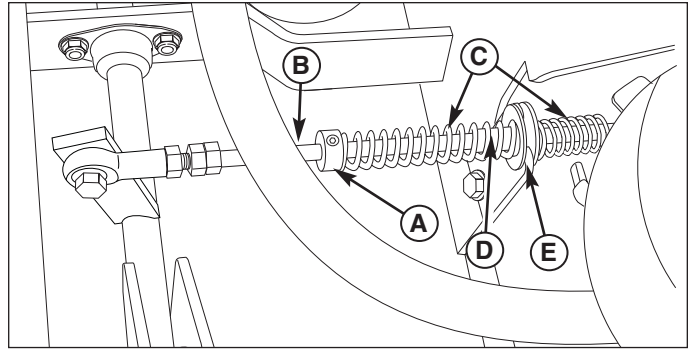
**NEUTRAL ADJUSTMENT**

If the tractor “creeps” while the ground speed control levers are locked in NEUTRAL, than it may be necessary to adjust the linkage rod.

*NOTE: Perform this adjustment on a hard, level surface such as a concrete floor.*

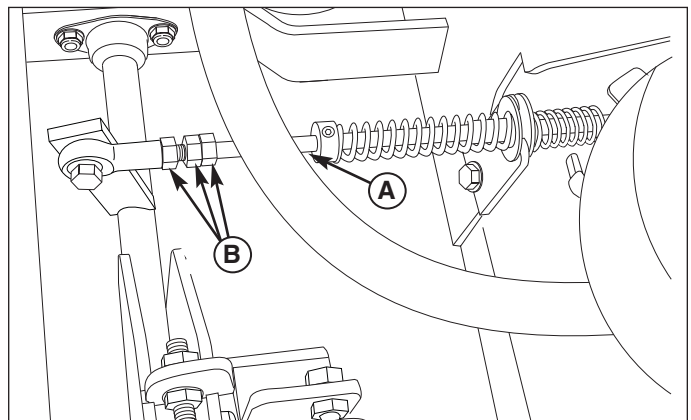
1. Disengage the PTO, engage the parking brake and turn off the engine.
2. There are three nuts (B, Figure 34) on the linkage rod. The first two are to be used together to turn the rod and the third (towards the front of the machine) is used to lock the rod in place. Loosen the jam nut that locks against the ball joint (B) and turn the linkage rod (A) to adjust. If the machine creeps forward, turn the rod CLOCKWISE (while standing at the rear of the machine, facing forward), if the machine creeps backward, turn the rod COUNTER-CLOCKWISE.
3. Lock the jam nut (B) against the ball joint when neutral is achieved.

*NOTE: This adjustment should not be performed while the machine is running. It may take several attempts to achieved neutral, depending upon how much the machine creeps.*



**Figure 33. Neutral Return Spring Adjustment**

- A. Set Collar**
- B. Adjustment Linkage Rod**
- C. Neutral Return Spring**
- D. Neutral Return Bushing**
- E. Spring Stop Plate**



**Figure 34. Neutral Adjustment (Left side shown)**

- A. Adjustment Linkage Rod**
- B. Nuts**



## Parking Brake Adjustment

1. Disengage the PTO, engage the parking brake, stop the engine and remove the ignition key.
2. Locate the brake spring (A, Figure 35).
3. With the parking brake engaged, measure the compressed spring length. The spring should be 2" - 2-1/8" (5,0 - 5,4 cm) when compressed.
4. If the spring is not within this range, release the parking brake and turn the adjustment nut (B) to compress or release the spring.
5. Engage the parking brake and remeasure the spring.

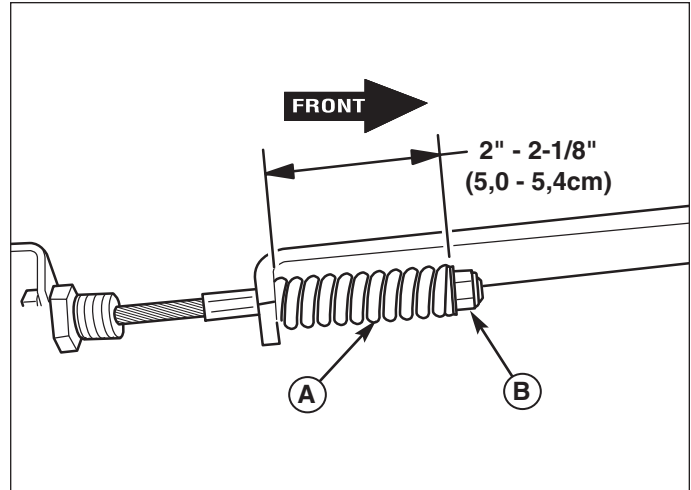


Figure 35. Parking Brake Adjustment

- A. Brake Spring
- B. Adjustment Nut

### CAUTION

Do not adjust the spring to be shorter than 1-15/16" (4,9 cm) when compressed. This may damage the brake mechanism.

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