

Dealer Setup & Adjustment Instructions

IS1500Z - 44", 48" & 52" Mower Deck



This Dealer Setup Instruction covers the following products:	
Model No.:	Description:
Flat-Nosed Style Mower Decks	
5900849	IS1500ZKAV1944CE
5900850	IS1500ZKAV1944RDCE
5900878	IS1500ZKAV2044
5900893	IS1500ZKAV2044 ANSI-EXP
5900888	IS1500ZKAV2044CE
5900889	IS1500ZKAV2044RDCE
5900892	IS1500ZKAV2048 ANSI-EXP (S/N: 2014744585 & Below)
5900905	IS1500ZKAV2048 CAL
5900877	IS1500ZKAV2048 (S/N: 2014744585 & Below)
5900575	IS1500ZKAV1944
5900589	IS1500ZB2644
5900580	IS1500ZKAV1944 ANSI-EXP
5900577	IS1500ZKAV1944CE
5900578	IS1500ZKAV1944RDCE
iCD Slope-Nosed Style Mower Decks	
5900877	IS1500ZKAV2048 (S/N: 2014744586 & Above)
5900892	IS1500ZKAV2048 ANSI-EXP (S/N: 2014744586 & Above)
5900832	IS1500ZKAV2552 AUS/NZ
5900833	IS1500ZKAV2552
5900836	IS1500ZKAV2552 CAL
5900576	IS1500ZKAV1948
5900579	IS1500ZKAV1948 ANSI-EXP

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.



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.



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.

TABLE OF CONTENTS:

SETUP PROCEDURES

Quick Setup List	2
Uncrating	3
Battery Installation	3
Tractor Assembly	4
Motion Control Handle Assembly	4
Seat Assembly.....	4
Roll Bar Assembly	5
Check Fluid levels	7
Check Engine Oil Level	7
Check Hydraulic Oil Level	7
Check Tire Pressure	7
Mower Assembly	8
Check Torque - Mower Blades	8
Check & Level the Mower Deck	9
Check Deck Drive Belt	12
Lubrication	13
Adding Fuel	14
Starting The Engine	14
Perform Safety Checks	15
Functional Tests	15
Safety Interlock System	15

ADJUSTMENT PROCEDURES

Seat Adjustment	16
Motion Control Handle Adjustment	16
Return-To-Neutral Adjustment	17
Neutral Adjustment	17
Parking Brake Adjustment	18
Rear Suspension Adjustment	19



Quick Setup List

Page	Setup Procedure	Steps to Perform
3	Uncrating	<input type="checkbox"/> Remove Crate & Banding. <input type="checkbox"/> Loosen Hydraulic Release Valves. <input type="checkbox"/> Release Parking Brake and Roll Tractor forward off skid. <input type="checkbox"/> Tighten Hydraulic Release Valves.
3	Battery Installation	<input type="checkbox"/> Install Battery.
4	Tractor Assembly	<input type="checkbox"/> Assemble the Motion Control Handles. <input type="checkbox"/> Assemble the Seat. <input type="checkbox"/> Connect the Seat Switch Harness.
5	Roll Bar Assembly	<input type="checkbox"/> Assemble the Retainer Pins. <input type="checkbox"/> Assemble the Top Loop. <input type="checkbox"/> Install the Roll Bar.
7	Check Fluid Levels	<input type="checkbox"/> Check Engine Oil level. <input type="checkbox"/> Check Hydraulic Oil level. <input type="checkbox"/> Check Tire Pressure
8	Check Mower Assembly	<input type="checkbox"/> Check Blade Bolt Torque. <input type="checkbox"/> Check & Level Mower Deck. <input type="checkbox"/> Check Deck Drive Belt.
13	Lubrication & Fuel Preparation	<input type="checkbox"/> Lubricate all grease & oil points. <input type="checkbox"/> Add fuel. <input type="checkbox"/> Start the Engine.
15	SAFETY CHECKS	<input type="checkbox"/> Check for <u>LOOSE HARDWARE</u> . <input type="checkbox"/> Check all <u>OPERATOR CONTROLS</u> . <input type="checkbox"/> Perform <u>SAFETY INTERLOCK SYSTEM CHECK</u> . <input type="checkbox"/> Start the Engine.
15	Register Product	<input type="checkbox"/> To register the product: log onto www.thepowerportal.com , select the appropriate brand, click "My Resources," select the "Product Registration and Rebate" icon and then the "New Product Registration / Rebate" tab. Fill out and submit the online product registration form.

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 parking brake lever (A, Figure 2) to release parking brake.
5. Be sure there are no nails or sharp objects on 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.).

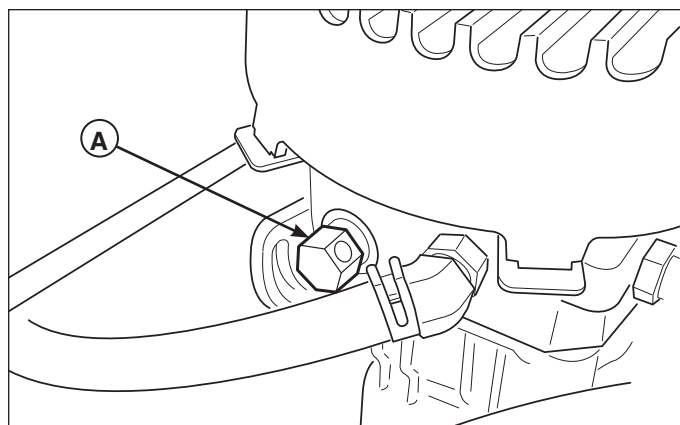


Figure 1. Hydraulic System By-Pass
A. Hydraulic Release Valve
(left-hand pump shown)

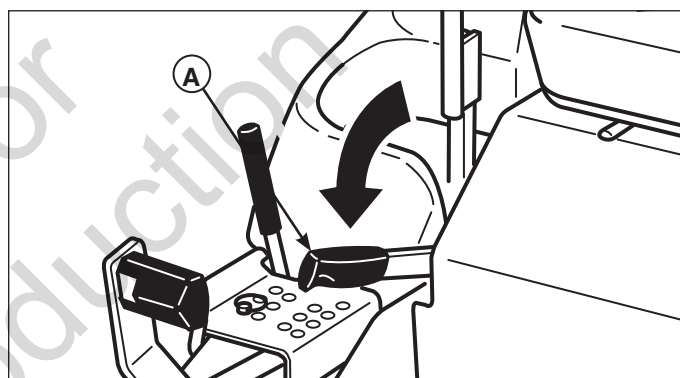


Figure 2. Disengaging the Parking Brake
(lever shown in disengaged position)
A. Parking Brake Lever

Setup



Battery Installation

Connect Battery

⚠ 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 battery, especially while charging.
- When installing battery cables, **CONNECT THE POSITIVE (+) CABLE FIRST** and negative (-) cable last. If not done in this order, the positive terminal can be shorted to the frame by a tool.

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.

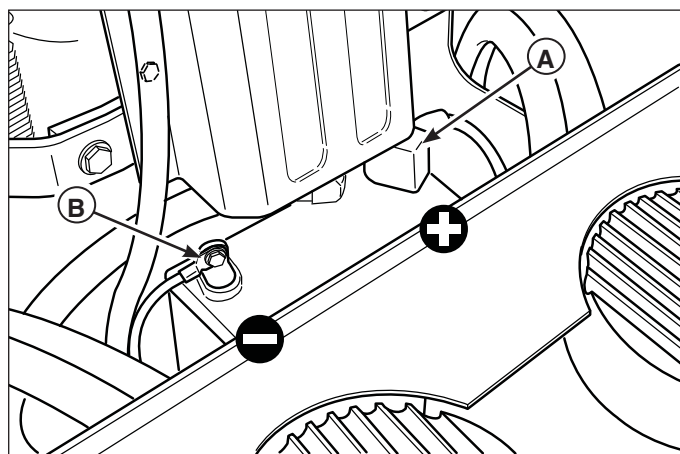


Figure 3. Connect Battery
A. Positive (+) Cable & Terminal
B. Negative (-) Cable & Terminal

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.

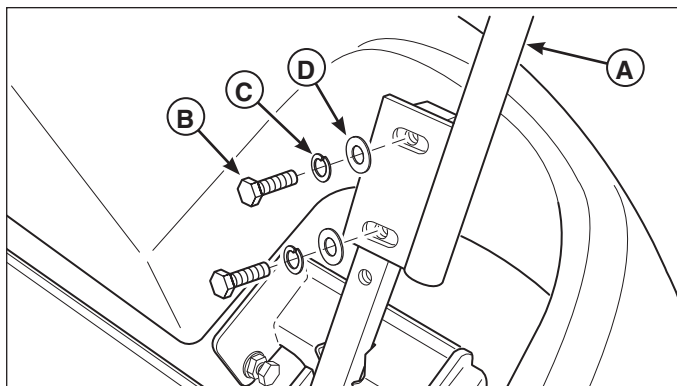


Figure 4. Control Handle Installation

- 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).
3. Connect the seat switch wire harness (B, Figure 5) to the seat switch.

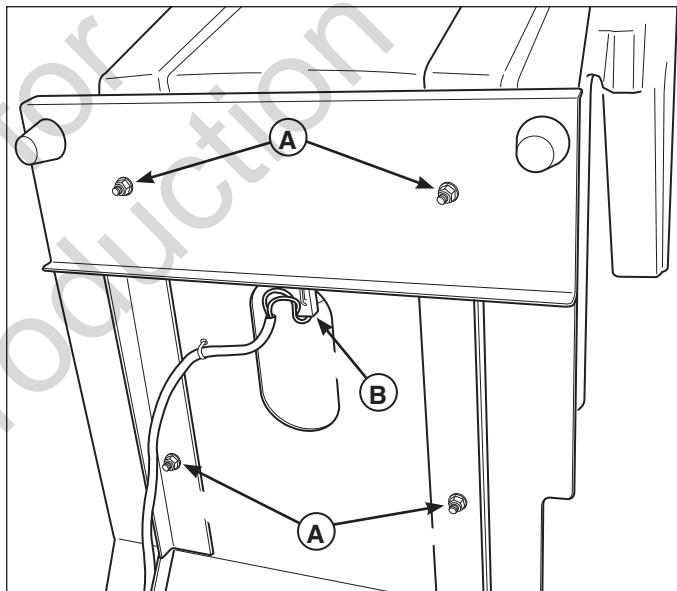


Figure 5. Install Seat & Connect Harness

- A. 5/16-18 Nylock Flange Nuts
- B. Seat Switch Harness Plug

Setup



Roll Bar Assembly

Assemble Retainer Pins

1. Unpack the roll bar and hardware from the box.
2. Assemble the foam ring (A, Figure 6) onto the retainer pin (B).
3. Loop the snap end of the lanyard (C) through the retainer pin handle and snap together.
4. Install the lanyard anchor (D) onto the lanyard.
5. Install the clevis pin (E) onto the loop end of the lanyard as shown in Figure 6.

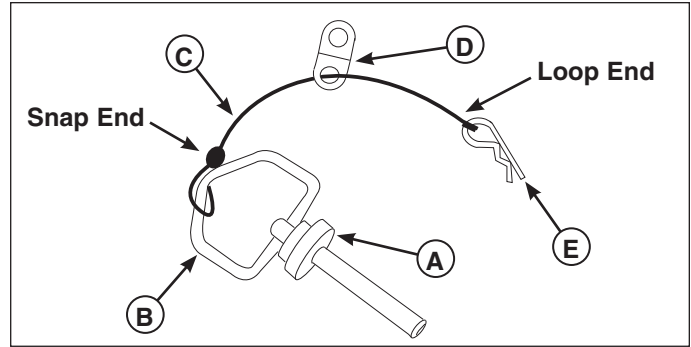


Figure 6. Assemble the Retainer Pins

- A. Foam Ring
- B. Retainer Pin
- C. Lanyard
- D. Lanyard Anchor
- E. Clevis Pin

Assemble the Top Loop

1. Install the plastic cap (B, Figure 7) into the end of the top loop tube (A). Repeat for other end of tube.
2. Make sure the rubber stop (C) is properly seated against the inside of the pivot mount. See Figure 7.

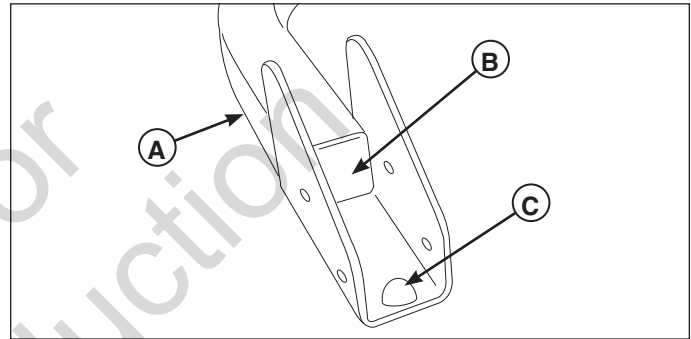


Figure 7. Assemble the Top Loop

- A. Top Loop Tube
- B. Plastic Cap
- C. Rubber Stop

Install the Roll Bar

1. Remove and save the 1/2" x 3-1/2" bolts, 1/2" flat washers and 1/2" nylock flange nuts (D, E & F) retaining the bumper to the frame. Remove and discard the spacers between the bumper and frame.
2. Install the upright tubes (A) in between the bumper (B) and frame (C) as shown in Figure 8 and loosely reinstall the 1/2" hardware previously removed.

IMPORTANT: Make sure the upright tubes are angled towards the front of the unit. See Figure 9.

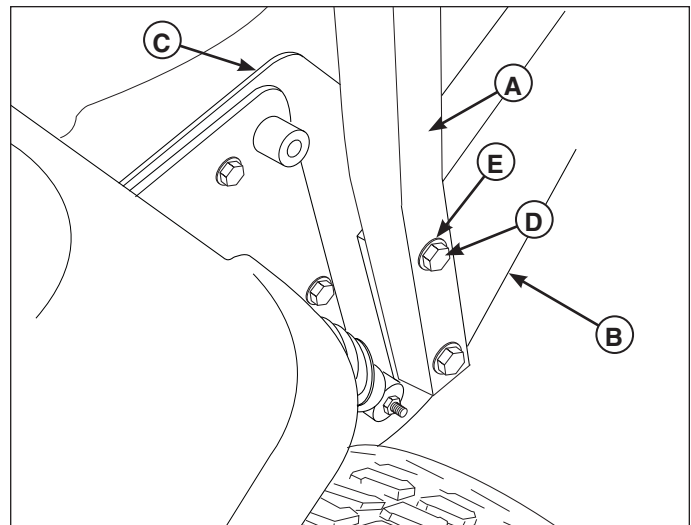


Figure 8. Install the Upright Tubes

- A. Upright Tube
- B. Bumper
- C. Frame
- D. 1/2" x 3-1/2" Bolt GD.5
- E. 1/2" Flat Washer
- F. 1/2" Nylock Flange Nut (not shown)

IS1500Z - 44", 48" & 52" Mower Deck

3. Install the top loop (A, Figure 10) onto the upright tubes (B). From the outside, install the 1/2" x 3" bolt (C) through the retainer pin assembly (D), then through the top loop and upright tube and shown in Figure 10. Loosely install the 1/2" side lock nut (E). Repeat for other side.
4. Tighten the hardware securing the upright tubes to the frame and bumper (see Figure 8). Torque the hardware to 75 ft. lbs. (102 Nm).
5. Tighten the 1/2" x 3" bolts and hex side lock nuts (C & E) securing the top loop (A) to the upright tubes (B). Do not over-tighten. The top loop should pivot snugly with the retainer pins removed.
6. Raise the top loop (A) until the rubber stops (F) contact the upright tubes.
7. Push or pull the top of the roll bar forward against the rubber stops and install the retainer pins and hair pin clips to secure the roll bar in the raised position.

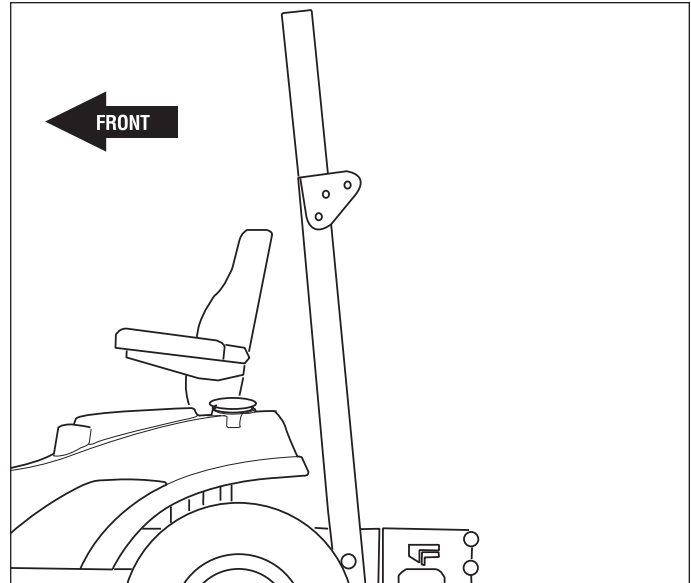


Figure 9. Upright Tube Orientation

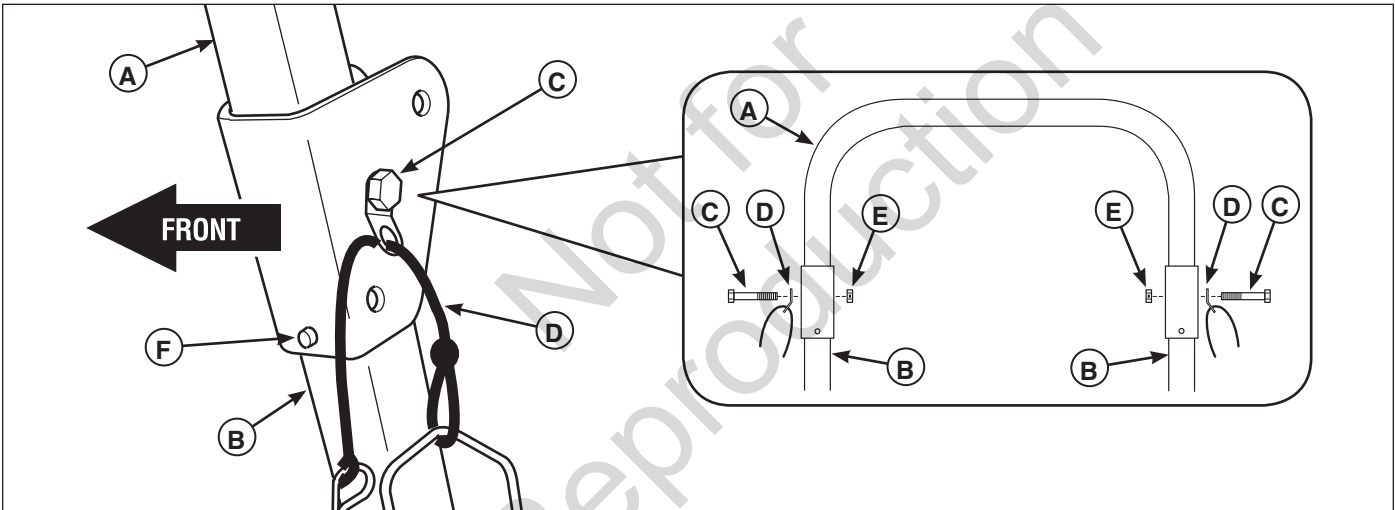


Figure 10. Install Top Loop

- A. Top Loop
- B. Upright Tube
- C. 1/2" x 3" Bolt GD.5
- D. Retainer Pin Assembly
- E. 1/2" Side Lock Nut
- F. Rubber Stop

Install The Safety Decals (Export Models)

1. Remove the black and yellow CE safety decals (A & B, Figure 11) from the publication packet.
2. Install safety decal part no. 5100536 (A) over existing decal located below pivot point of the roll bar (C) of RH upright tube. Install safety decal part no. 5100537 (B) over existing decal located above the pivot point of the roll bar (C) of RH upright tube. Repeat procedure for LH upright tube.

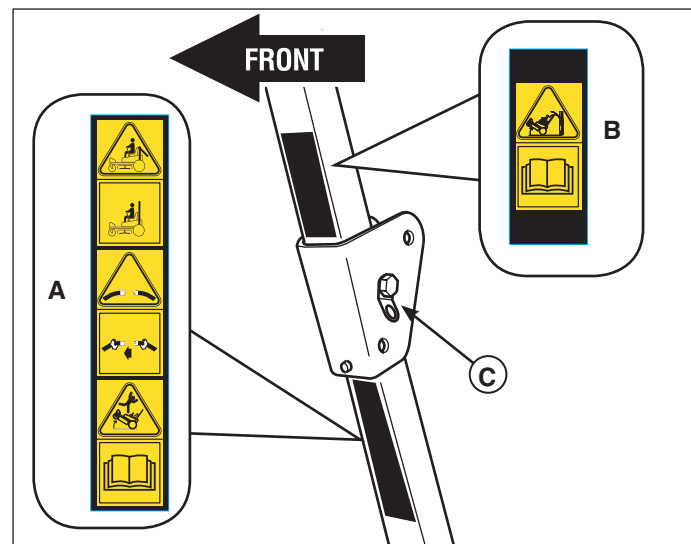


Figure 11. Install CE Safety Decals (LH Side Shown)

- A. Part No. 5100536
- B. Part No. 5100537
- C. Pivot Point of the Roll Bar

Setup



Check Fluid Levels

Check Engine Oil Level

1. Use the dipstick (A, Figure 12) to check the engine oil level. If necessary add engine oil. Check engine manufacturer's owner's manual for oil recommendations.

Check 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 13).
3. Look down the filler neck of the hydraulic oil reservoir (A, Figure 13) and observe the oil level. When cold, the oil level should be approximately 2-1/2" (6,4 cm) below top of the filler neck.
4. If necessary, add either Mobil 1™, 15W-50 synthetic oil or Castrol Syntec™ 5W-50 oil. **DO NOT** use conventional oils.
5. Reinstall the reservoir cap.

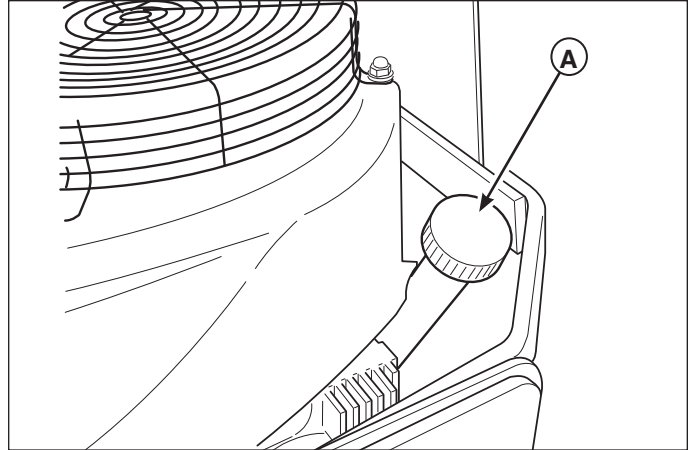


Figure 12. Pre-start Checks
A. Crankcase Oil Fill

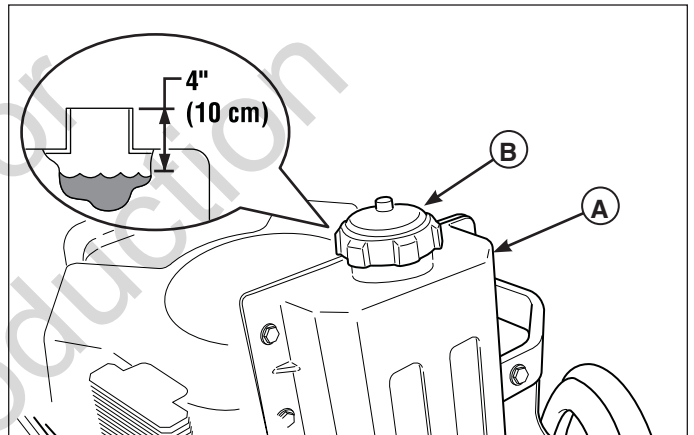


Figure 13. Checking Hydraulic Oil Level
A. Hydraulic Oil Reservoir
B. Reservoir Cap

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 cut quality, and extend tire life.

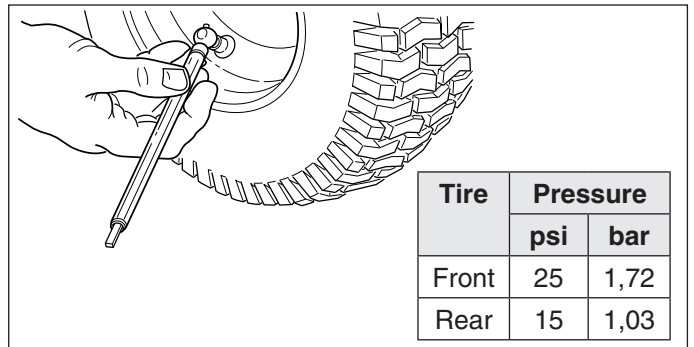


Figure 14. Checking Tire Pressure

Setup

Check 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 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 deck as shown in Figure 15. Torque bolts to 70 ft.lbs. (94 N.m.).

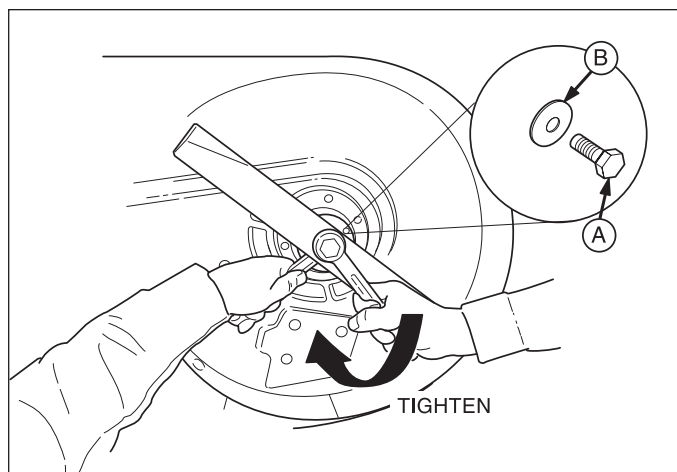


Figure 15. Check Blade Torque

A. Blade Bolt
B. Flat Washer

Setup**Check & Level the Mower Deck****44" Mower Deck****48" Mower Deck (S/N: 2014744585 & Below)**

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 other side of unit. See Figure 16.
3. If the measurements are equal, skip to Step 5. If the measurements are NOT equal (greater than 1/8" (3,17mm) difference), adjustment is required, continue with Step 4.
4. Refer to Figure 17. To adjust the lift rod timing, adjust the 5/8" hex nuts on either side of the front lift pivot until the measurements are equal. Repeat for other side.
5. Place the deck height adjustment pin in the 4" (10,2 cm) position.
6. Place 2 x 4 blocks under each corner of the mower deck with the 3-1/2" sides being vertical. Place a 1/4" (0,64 cm) thick spacer on top of the rear 2 x 4 blocks. See Figure 18.
7. Adjust the front eyebolts until the chains are tight and the deck is still resting on the 2 x 4's. Tighten jam nuts. See Figure 19.
8. 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 in the slots until the chains are tight and tighten the nuts. See Figure 19.
9. Remove all 2 x 4 blocks and spacers from under the mower deck.

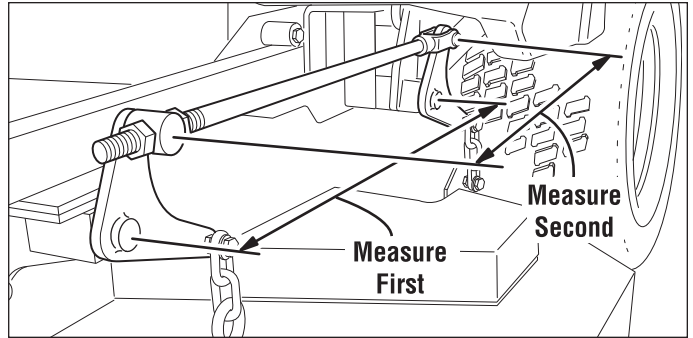


Figure 16. Check Lift Rod Timing

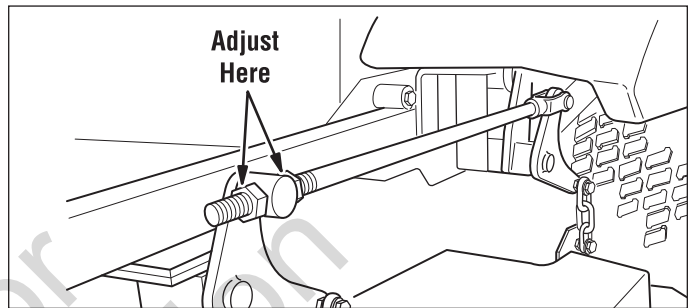


Figure 17. Adjust Lift Rod Timing

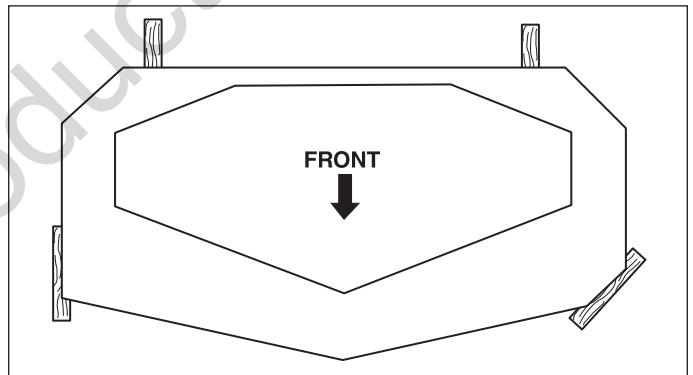


Figure 18. 2 x 4 Locations

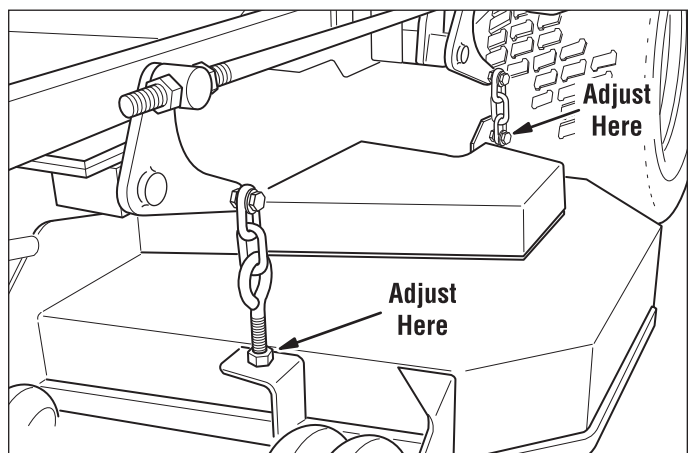


Figure 19. Hanger Chain Adjustment

IS1500Z - 44", 48" & 52" Mower Deck

10. **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).
11. 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.

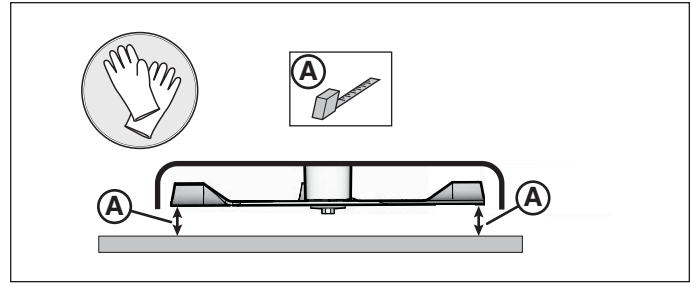


Figure 20. Checking The Blade Height Measurement



Check & Level the Mower Deck

48" Mower Deck (S/N: 2014744586 & Above)

52" Mower Deck

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 other side of unit. See Figure 21.
3. If the measurements are equal, skip to Step 5. If the measurements are NOT equal (greater than 1/8" (3,17mm) difference), adjustment is required, continue with Step 4.
4. Refer to Figure 22. To adjust the lift rod timing, adjust the 5/8" hex nuts on either side of the front lift pivot until the measurements are equal. Repeat for other side.
5. Place the deck height adjustment pin in the 4" (10,2 cm) position.
6. Place 2 x 4 blocks under each corner of the mower deck with the 3-1/2" sides being vertical. See Figure 23.

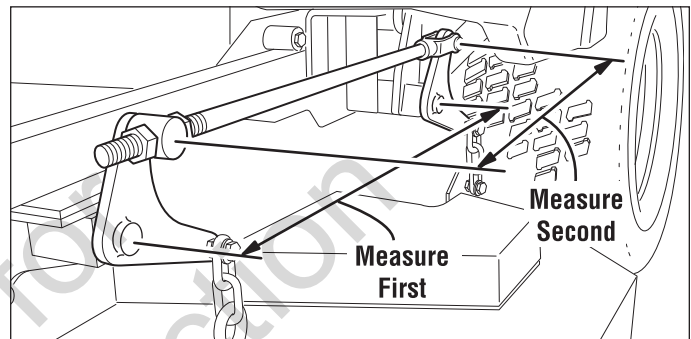


Figure 21. Check Lift Rod Timing

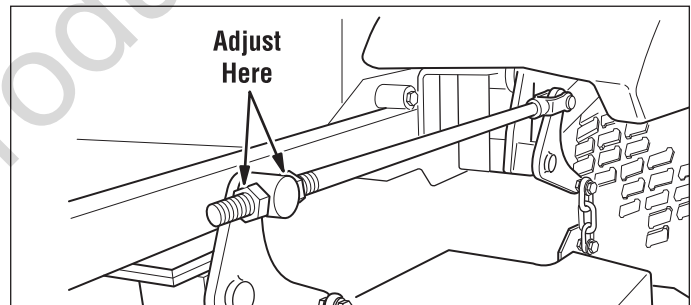


Figure 22. Adjust Lift Rod Timing

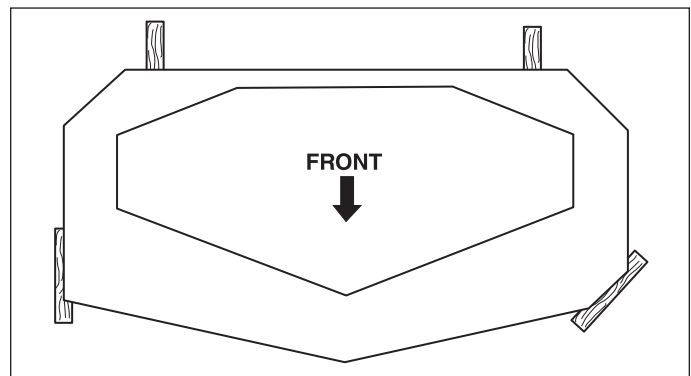


Figure 23. 2 x 4 Locations

7. Adjust the front eyebolts until the chains are tight and the deck is still resting on the 2 x 4's. Tighten jam nuts. See Figure 24.
8. Loosen the nuts and allow the rear of the deck to rest on the 2 x 4's. Slide the chains in the slots until the chains are tight and tighten the nuts. See Figure 24.
9. Remove all 2 x 4 blocks from under the mower deck.
10. **For your safety, DO NOT handle mower blades with bare hands.** Position the outside mower blades so that they face front-to-back (Figure 25).
11. 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.

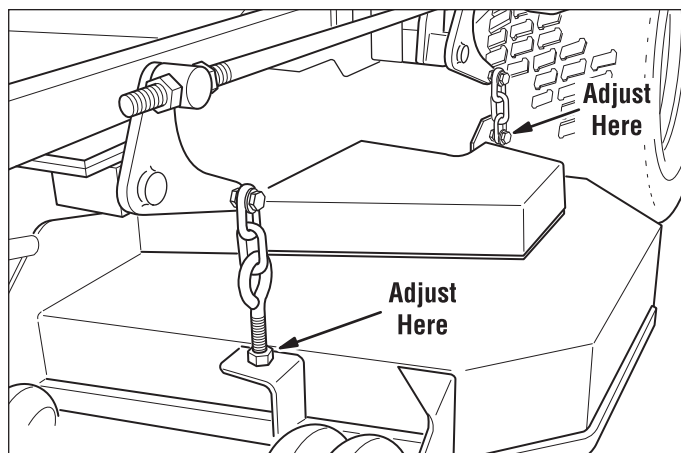


Figure 24. Hanger Chain Adjustment

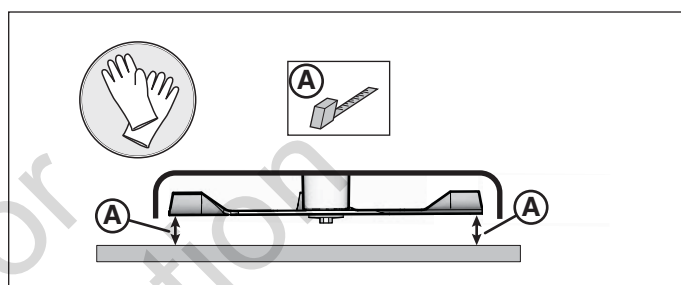


Figure 25. Checking The Blade Height Measurement

Setup



Check Deck Drive Belt

1. Park the machine on a smooth level surface such as a concrete floor. Disengage the PTO, engage the parking brake, turn off the engine and remove the ignition key.
2. Lower the mower deck to its lowest cutting position.
3. Remove the mower deck guards.
4. Make sure the V-side of the belt runs in the pulley grooves (Figure 26).

! 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.

5. If 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 27). Carefully rotate the breaker bar clockwise, which will relieve the tension on the belt exerted from the idler arm.
6. Re-seat belt and carefully release the tension on the breaker bar.
7. Reinstall the mower deck guards.

Check the Mower Belt Idler Tensioner Spring Length

1. Lower the mower deck to its lowest cutting position.
2. Use the Mower Belt Idler Spring Length Chart to determine the correct spring length.
3. Measure the coil length of the mower belt tensioner spring (A, Figure 28). The measurement should equal the measurement as designated in the chart. If the measurement does not equal the measurement as designated in the chart, adjust the anchor eyebolt (B).

Adjusting the Mower Belt Idler Spring Length

1. Loosen the jam nut (C, Figure 28).
2. Turn the adjustment nut (D) until the measurement as designated in the chart is achieved.
3. Retighten the jam nut.

Mower Belt Idler Spring Length		
Deck Size	Measurement	
	inch	cm
44"	7-1/4"	18,4
48"	6-3/4"	17,1
52"	7"	17,8

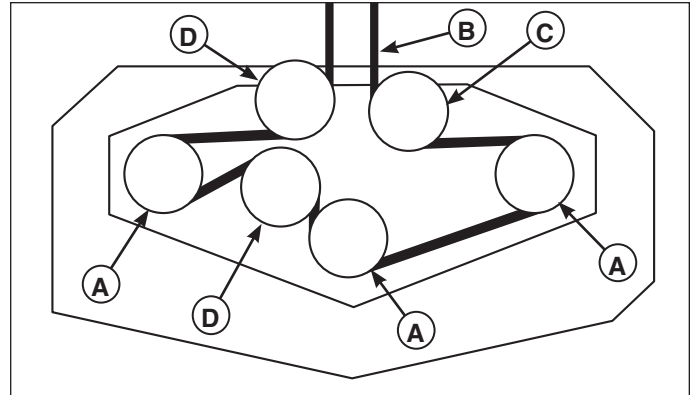


Figure 26. Mower PTO Belt Routing

- A. Spindle Pulley
- B. PTO Drive Belt
- C. Spring-loaded Idler Pulley
- D. Stationary Idler Pulley

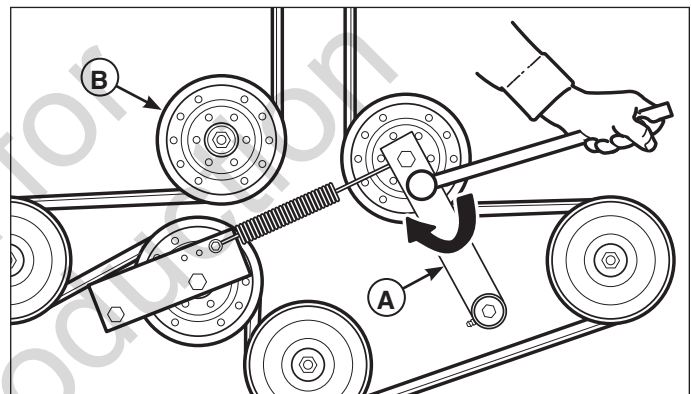


Figure 27. Mower PTO Belt

- A. Idler Arm
- B. Stationary Idler Pulley

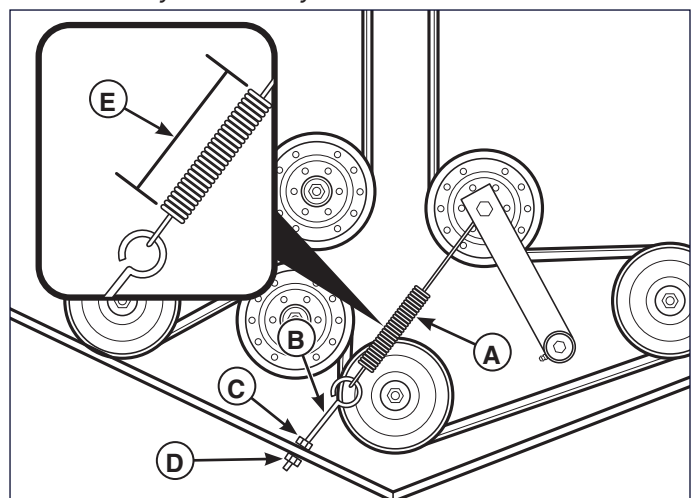


Figure 28. Mower Belt Idler Spring Length

- A. Mower Belt Tensioner Spring
- B. Anchor Eyebolt
- C. Jam Nut
- D. Adjustment Nut
- E. Measurement

Setup**Lubrication**

Lubricate the unit at the locations shown in Figure 29 through 32 as well as the following lubrication points.

Grease:

- front caster wheel axles & 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 22285) 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 moving metal parts should be oiled where contact is made with other parts. Keep oil and grease off belts and pulleys. Remember to wipe fittings and surfaces clean both before and after lubrication.

LUBRICATING THE FRONT CASTERS

NOTE: Casters should be lubricated annually.

1. Remove the 1/4-28 bolt (A, Figure 32) screwed into the 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.

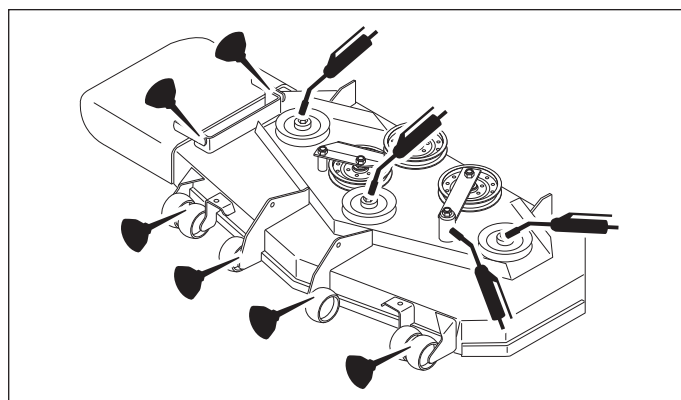


Figure 29. Deck Lubrication

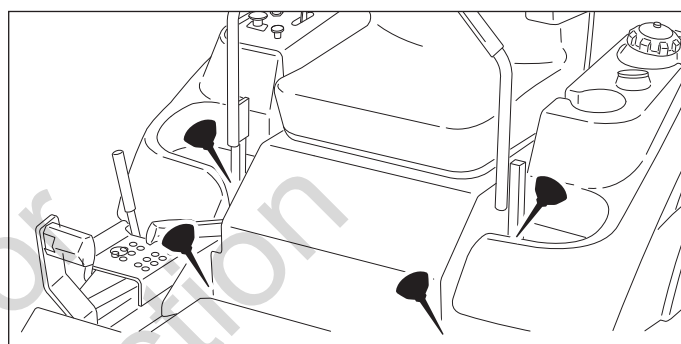


Figure 30. Control Handle Pivots & Seat Plate Pivots

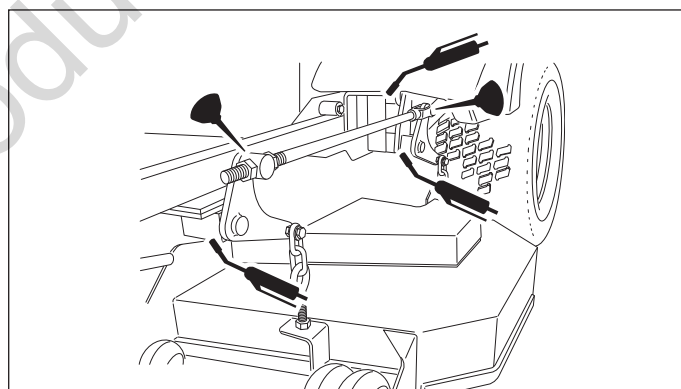


Figure 31. Deck Lift Linkage Pivots

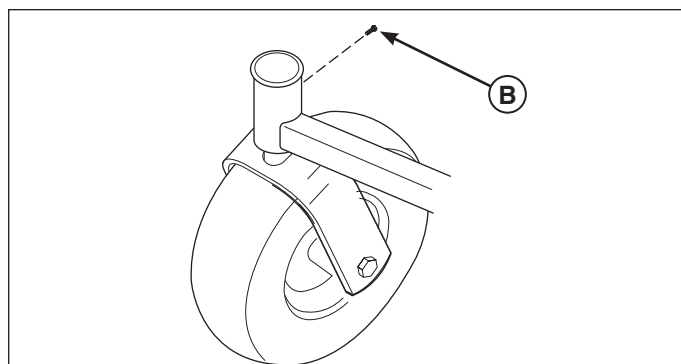


Figure 32. Front Caster & Wheel
A. 1/4-28 Bolt

Setup



Adding Fuel

To add fuel:

1. Remove the fuel cap (A, Figure 33).
2. Fill the tank to 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.

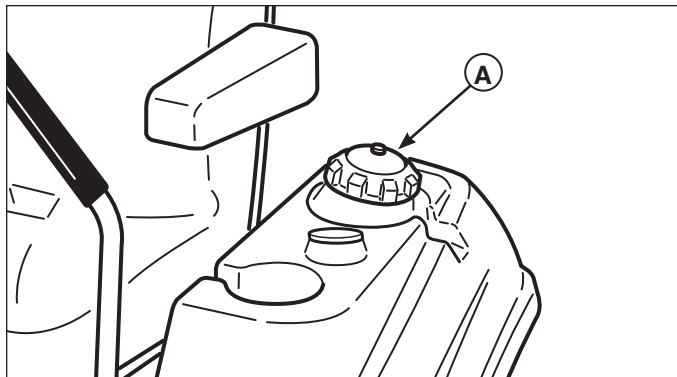


Figure 33. Adding Fuel

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 FAST 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).

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 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 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 safety switches, and never tamper with 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 mower drive belt should come to a complete stop within seven (7) seconds after electric PTO switch is turned off (or operator rises off seat). If 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 34. The seat can be adjusted forward and back. Move the lever towards the left, position the seat as desired, and release the lever to lock the seat into position.

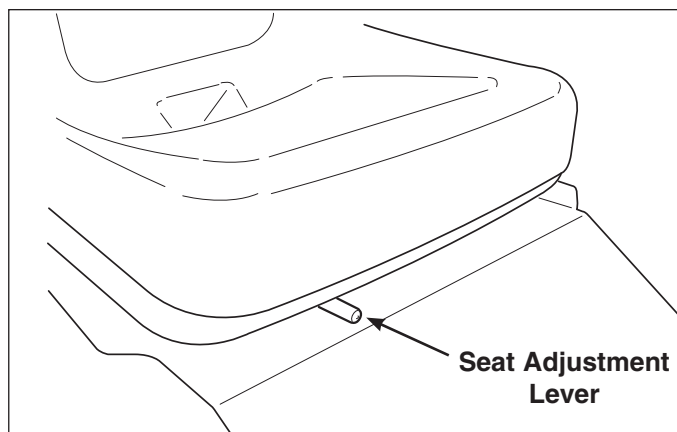


Figure 34. Seat Adjustment



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 35) and pivot the levers (C) to align with each other.

To Adjust the Handle Placement

Loosen the jam nuts and adjust the placement bolt (B) 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.

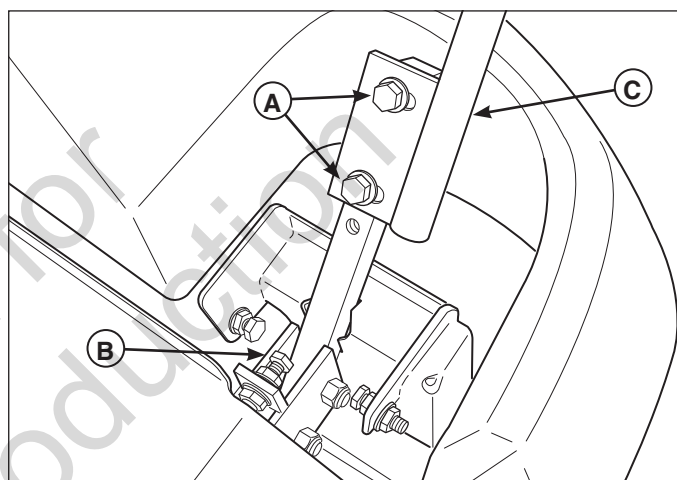


Figure 35. Control Lever Adjustment

A. Alignment Hardware

B. Placement Hardware

C. Ground Speed Control Lever



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 neutral return rod (C, Figure 36).

TO ADJUST:

1. Loosen the jam nut (B) locked against the clevis (A).
2. Turn the neutral return rod (C) to adjust handle position.
4. Pull lever rearward and release to check position again. Adjust as necessary to align levers with notches.

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

5. Once the lever alignment has been adjusted, lock jam nut against the clevis.

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 37) 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, Figure 37) 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.

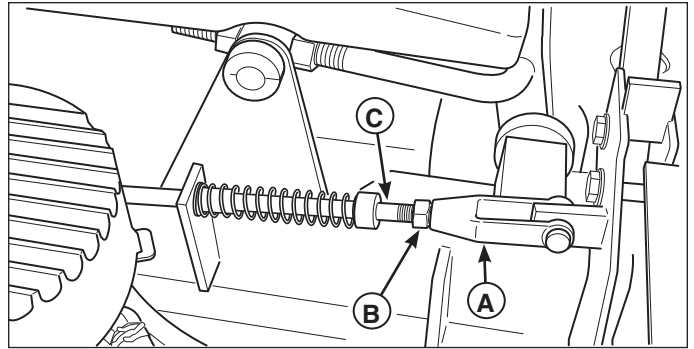


Figure 36. Neutral Spring Return Adjustment

- A. Clevis
B. Jam Nut
C. Neutral Return Rod

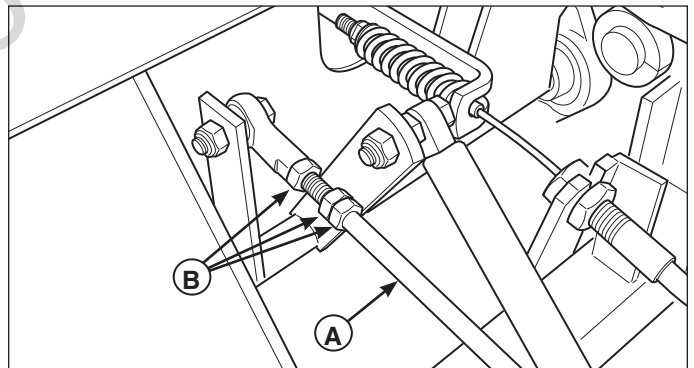


Figure 37. Neutral Adjustment (RH side shown)

- 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. Raise the seat plate.
3. Locate the brake spring (A, Figure 38).
4. With the parking brake engaged, measure the compressed spring length. The spring should be $1\frac{15}{16}$ " - 2" (4,9 - 5,1 cm) when compressed.
5. If the spring is not within this range, release the parking brake and turn the adjustment nut (B) to compress or release the spring.
6. Engage the parking brake and remeasure the spring.

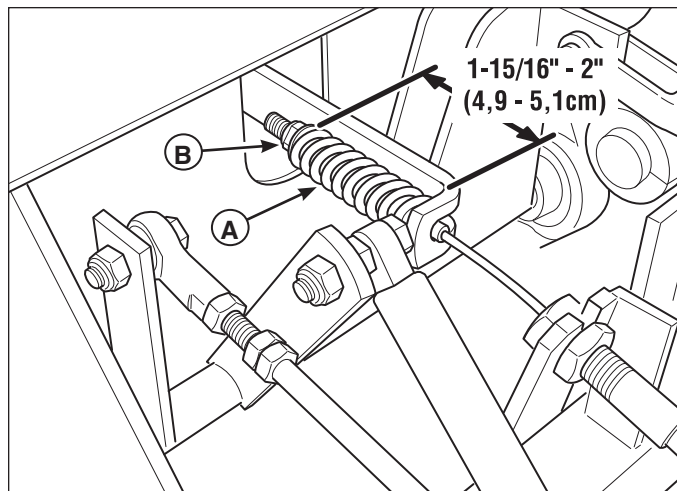


Figure 38. Parking Brake Adjustment

A. Brake Spring

B. Adjustment Nut

CAUTION

Do not adjust the spring to be shorter than $1\frac{15}{16}$ " (4,9 cm) when compressed. This may damage the brake mechanism.



Rear Suspension Adjustment

The shock assembly can be adjusted in two ways to allow the operator to customize the ride according to operator's weight and/or operating conditions. You have the option of adjusting the spring pre-load and/or the upper mounting position.

Items to consider before adjusting the suspension.

- Less spring pre-load should be used with light weight operators, which will provide a softer, more cushioned ride.
- More spring pre-load or upper mounting position #2 should be used with heavy weight operators, or when a rear-mount grass bagger system is installed, which will provide a stiffer, more rigid ride.

To adjust the spring pre-load:

1. Park machine on a flat, level surface. Disengage the PTO, stop the engine and engage the parking brake.
2. Raise the rear of the machine and secure with jackstands. Chock the front wheels to prevent the machine from rolling.
3. Remove the rear drive tires.
4. See Figure 39. Using the supplied spanner wrench (p/n 5022853), insert the tip of the wrench into the notch in the pre-load adjuster. While holding the wrench in place with one hand, turn COUNTER-CLOCKWISE to increase the pre-load, turn CLOCKWISE to decrease the pre-load. Make sure both shocks are set to the same amount of pre-load.
5. Reinstall the rear drive tires. Torque the lug bolts to 85-95 ft/lbs. (115-129 Nm). Remove the jackstands from under the machine.

NOTE: Spanner wrench is located under the seat on the right-hand side of the machine.

To adjust the upper mounting position:

1. Park machine on a flat, level surface. Disengage the PTO, stop the engine and engage the parking brake.
2. Raise the rear of the machine and secure with jackstands. The jackstands must be under the bumper. Chock the front wheels to prevent the machine from rolling.
3. Position the jack under the cross member that ties the suspension arms together and slowly raise the rear suspension to relieve the pressure on the upper shock mounting bolts.
4. Remove the upper shock mounting hardware and pivot the shock to the position #2 (see Figure 39). Adjust the jack to align the shock mounts to the shocks.
5. Reinstall the upper shock mounting hardware and tighten securely.
6. Remove the jack from under the suspension cross member.
7. Remove the jackstands from under the machine.

NOTE: This will require small adjustments to the jack's position. The shock should move freely on the mounting bolt when the pressure is relieved.

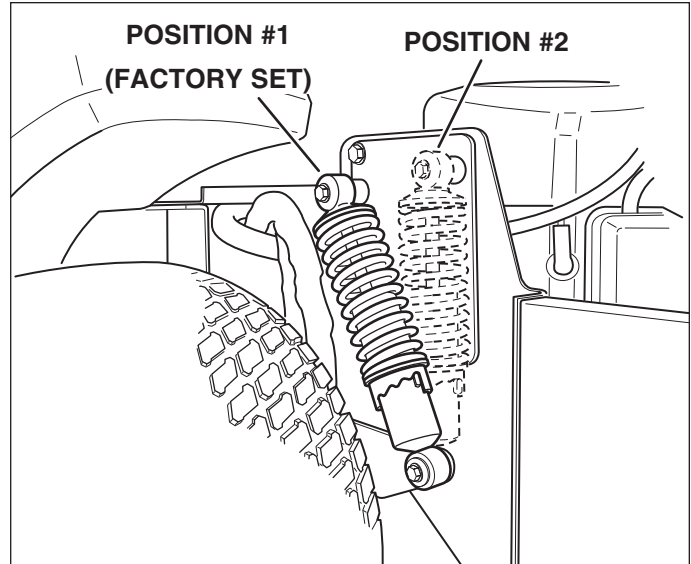


Figure 39. Rear Suspension Adjustments



WARNING

Use two hands when adjusting the shock springs. This will prevent the wrench from slipping while pressure is being applied.

IS1500Z - 44", 48" & 52" Mower Deck

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