

SERVICE AND MAINTENANCE

MAINTENANCE SCHEDULE

⚠ WARNING

Before performing any type of maintenance/service, disengage all controls and stop the engine. Wait until all moving parts have come to a complete stop. Disconnect spark plug wire and ground it against the engine to prevent unintended starting. Always wear safety glasses during operation or while performing any adjustments or repairs.

Follow the maintenance schedule given below. This chart describes service guidelines only. Use the Service Log column to keep track of completed maintenance tasks.

Refer to the Engine Operator's Manual for engine maintenance items listed in the table below.

	Before Each use	After First 5 Hours	Every 10 Hours	Every 25 Hours	Every 50 Hours	Every 100 Hours	Every 200 Hours	Prior to Storing	See Engine Manual
Check/Clean Engine Intake Screens & Cooling Fans #	✓							✓	
Check/Clean Exhaust Manifold, Muffler Pipe & Muffler Shields #	✓							✓	
Check/Clean Top & Underside of Deck, Under and Around Spindle Covers & Belt Area #	✓							✓	
Check/Clean Around Fuses, Wiring and Wiring Harnesses #	✓							✓	
Check/Clean Around Transmission, Axle and Fans #	✓							✓	
Check/Add/Change Transmission Fluid as needed							✓		
Check Air Filter for Dirty, Loose or Damaged Parts	✓								
Check Engine Oil Level	✓								
Clean Battery Terminals			✓					✓	
Grease All Lubrication Points			✓					✓	
Check Engine Intake Screen/Clean as Needed			✓					✓	
Check Blades/Sharpen or Replace as Needed			✓					✓	
Check Tire Pressure			✓					✓	
Check/Clean Underside of Deck	✓		✓						
Check Safety Interlock System			✓					✓	
Check Mower Blade Stop Time			✓					✓	
Inspect & Lube Deck Wheels				✓				✓	
Check Deck Level/Pitch				✓				✓	
Check Belts & Pulleys for Damage/Wear					✓				
Check That All Hardware is in Place & Secure						✓			
Check Engine Mounting Bolt Torque (Tighten to 325-450 in.-lbs. (37-50 N-m))		✓			✓			✓	✓
Check Blade Mount Nut Torque (Tighten to 70-90 ft. lbs. (95-122 N-m))		✓			✓			✓	
Check Spark Plug Condition & Gap						✓		✓	✓
Engine Break-In Oil Change		✓							✓
Change Engine Oil					✓			✓	✓
Check Fuel System (Lines, Tank, Cap, Fittings)		✓			✓			✓	✓
Check Spark Arrestor		✓			✓			✓	✓
Replace Oil Filter					✓			✓	✓
Clean or Change Air Filter					✓				✓
Replace Fuel Filter					✓				✓
Have Valve Lash Checked & Adjusted *									✓

* -- Have this item performed by an authorized service dealer

#-- Perform more often in dry conditions and/or when mulching

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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.

Post-Operation Tractor Care

After each operation of the tractor, to ensure safe operating conditions refer to Maintenance Schedule chart in this manual for proper tractor care.

⚠ WARNING

Failure to follow these recommendations may result in serious injury to yourself or others and may cause damage to the tractor.

Cleaning the Underside of the Deck

Deck Wash System

Your tractor's deck is equipped with a water port on its surface as part of its deck wash system.

Use the deck wash system to rinse grass clippings from the deck's underside and prevent the buildup of corrosive chemicals. Complete the following steps AFTER EACH MOWING:

1. Attach the nozzle adapter to a standard garden hose connected to a water supply.
2. Move the tractor to an area within reach of the hose where the dispersal of wet grass clippings is acceptable. Disengage the PTO, engage the parking brake and stop the engine.
3. Pull back the lock collar (a) of the nozzle adapter (b) and push the nozzle adapter onto the deck wash nozzle (c). Release the lock collar to lock the nozzle adapter on the deck wash nozzle. See Figure 29.
4. Turn on the water supply.
5. From the tractor operator's seat, start the engine and engage the PTO. Allow to run as needed. Disengage the PTO and stop the engine.
6. Turn off the water supply.
7. Pull back the lock collar of the nozzle adapter to disconnect the nozzle adapter from the deck wash nozzle.

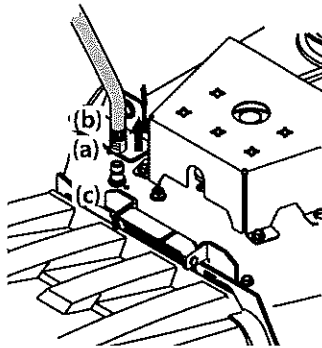


Figure 29

Cleaning the Tractor

⚠ WARNING

If the tractor has been recently run, the engine, muffler and surrounding metal surfaces will be very hot and can cause burns to the skin. Let the engine cool for at least five minutes. Exercise caution to avoid burns.

Your tractor must be cleaned after each use and under certain conditions, i.e. dry conditions and/or mulching situations, additional cleaning may be necessary.

One of the best ways to keep your tractor running efficiently and to reduce fire risk is to regularly remove debris buildup from the tractor. Follow the recommendations below and contact your authorized dealer with any questions.

- Allow the machine to cool for at least five minutes in an open area before cleaning.

Note: Using a pressure washer or garden hose is not recommended for cleaning your tractor other than to clean the underside of the deck. It may cause damage to electrical components, spindles, pulleys, bearings or the engine. The use of water will result in shortened life and reduce serviceability.

- Keep both sides of transmission cooling slots, exhaust manifold, around fuses, all wiring and harnesses, muffler pipe, muffler shield, engine intake screens and cooling fins, etc clear of grass clippings and leaves. See Figure 30.

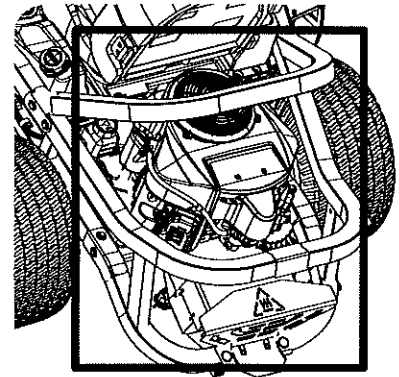


Figure 30

- Clean the top of the mower deck, under the spindle covers and belt area. See Figure 31.

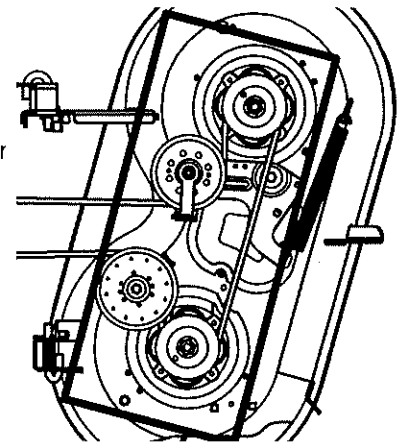
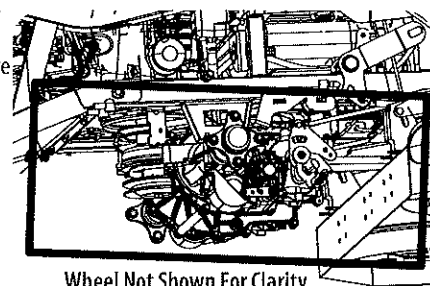


Figure 31

- Clean around and near the transmission, axle and the fan area. Figure 32.

- Debris can accumulate anywhere on the tractor, especially on horizontal surfaces. Additional cleaning may be necessary when mowing in dry conditions or when mulching.



Wheel Not Shown For Clarity

Figure 32

- Fuel leaks/spills, oil leaks/spills and excess lubrication can also become collections sites for debris. Immediate repair and cleaning up oil or fuel spills can help reduce fire hazards.
- In addition to cleaning the tractor before operating and storing, do not attempt to mow unusually tall grass (10" (25.4 cm) or higher), dry grass (e.g., pasture) or piles of dry leaves. Dry grass or leaves may contact the engine exhaust and/or build up on the mower deck presenting a potential fire hazard.

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Storing the Tractor

- Allow the machine to cool in an open area for at least five minutes before storing.
- Do not park the tractor near any flammable materials (wood, cloth or chemicals) or any open flames or other potential source of ignition (furnace, water heater or any other type of heater).
- Remove all combustible materials from the tractor before storing. Empty cargo boxes, grass catchers or containers.
- Always shut off fuel flow when storing or transporting if tractor is equipped with a fuel shutoff.
- Check the fuel system (lines, tank, cap and fittings) per the maintenance schedule for cracks or leaks. Repair and clean as necessary.

Maintenance

Removing the Floor Panel (If equipped)

⚠ WARNING

Do not operate tractor with floor panel removed.

On some models, the floor panel can be removed for maintenance, service and cleaning. To remove the floor panel:

1. Using the multi-tool (if equipped) or a 1/2" socket, remove the hex screw (a) that secures the floor panel in place. See 1 in Figure 33
2. Carefully lift the rear of the floor panel. See 2 in Figure 33.
3. Slide the floor panel rearward to free the front of the floor panel. See 3 in Figure 33.
4. Lift it off the tractor. See 4 in Figure 33.
5. To place the floor panel back on the tractor, carefully put the floor panel back in place and reinstall the hex screw removed in step 1. Torque to 108-132 in-lbs (12-15 N-m).

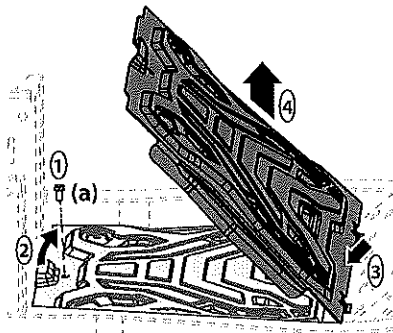


Figure 33

Engine

⚠ WARNING

Allow machine to cool in an open area for at least five minutes before storing or refueling.

Refer to the Engine Operator's Manual for all engine maintenance procedures and instructions.

Note: Maintenance, repair, or replacement of the emission control devices and systems which are being done at owner's expense may be performed by any engine repair establishment or individual. Warranty repairs must be performed by an authorized dealer.

Changing the Engine Oil

⚠ WARNING

If the tractor has been recently run, the engine, muffler and surrounding metal surfaces will be very hot and can cause burns to the skin. Let the engine cool for at least five minutes. Exercise caution to avoid burns.

Note: The oil filter should be changed at every oil change interval.

To complete an oil change, proceed as follows:

1. Locate the oil drain hose (a) on the side of the engine.
2. Place an appropriate oil collection container with at least a 2.5 quart (2.37 liter) capacity below the opening of the oil drain hose, to collect the used oil. Remove the oil fill cap/dipstick (b) from the oil fill tube.
3. While holding the free end of the oil drain hose over the oil collection container, unscrew the square head hose plug (c) from the end of the oil drain hose. See Figure 34. Drain the engine oil into the collection container.
4. After draining the oil, wipe any residual oil from the oil drain hose. Thread the square head hose plug into the oil drain hose fitting and tighten the square head hose plug to 16 ft.-lbs. (22 N-m).
5. Remove the oil filter (d) and drain into the collection container.
6. Replace the oil filter (d), and refill the engine with new oil as instructed in the Engine Operator's Manual.

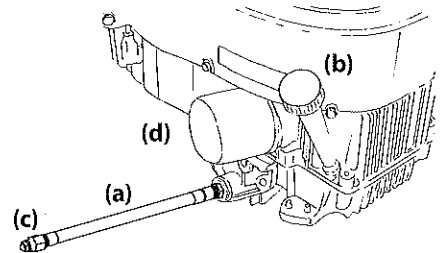


Figure 34

Note: Place an absorbent towel beneath the oil filter to keep oil off the clutch.

Note: Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Note: Maintenance, repair, or replacement of the emission control devices and systems which are being done at owner's expense may be performed by any engine repair establishment or individual. Warranty repairs must be performed by an authorized dealer.

Lubrication

⚠ WARNING

Before lubricating, repairing, or inspecting, always disengage PTO, set parking brake, stop engine and remove key to prevent unintended starting.

- Using a quality lubricating oil, lubricate all lubrication points. Refer to maintenance schedule chart located in this manual for proper service intervals.

Spark Arrestor Maintenance (If Equipped)

Spark arrestor assemblies must be inspected and cleaned periodically (see the service interval chart in this manual). Visually inspect the screen for tears, broken wires or loose welds. Replace the spark arrestor assembly if any of these conditions exist. If the screen is in good condition, clean the screen by brushing away loose dirt or carbon particles.

Tires

Keep the tires inflated to the recommended pressures. Improper inflation will shorten the tire service life. See the tire side wall for proper inflation pressures. Refer to maintenance schedule chart located in this manual for proper service intervals.

Observe the following guidelines:

- Do not inflate a tire above the maximum pressure shown on the sidewall of the tire.
- Do not reinflate a tire that has been run flat or seriously under inflated. Have it inspected and serviced by a qualified tire mechanic.

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Hydrostatic Transmission

Your zero turn tractor is equipped with two hydrostatic pumps/transaxles. Some models are equipped with a transmission oil expansion reservoir. Under normal operating conditions, the oil level in the expansion reservoirs does not need to be checked and no additional oil is needed.

Checking & Adding Transmission Oil

⚠ WARNING

Check the oil level **ONLY** before starting the tractor when the transmission oil is fully cooled.

1. Clean the reservoir cap and the area around the cap to prevent debris from contaminating the transmission oil. See Figure 35.
2. Turn the reservoir cap counter-clockwise to remove, then check the oil level in the reservoir. Oil should be visible at the bottom of the cup, but the oil level must **NOT** be above the "FULL COLD" line. See Figure 35. **DO NOT FILL THE RESERVOIR.**
3. If necessary to add oil because of some type of leakage, use a quality 20W50 motor oil and add only enough oil to bring the level to the "FULL COLD" line. Reinstall the cap and fully tighten.

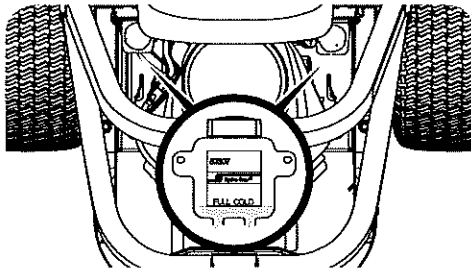


Figure 35

Note: Prior to the initial operation of the tractor, the oil level in the reservoir may be slightly higher than the maximum due to air in the oil lines. Operation of the tractor will eventually purge the air from the lines and the oil level will settle to the maximum.

4. Repeat the process for the other transmission.

Changing the Transmission Oil & Filter (If Equipped)

Note: Refer to maintenance schedule chart located in this manual for proper service intervals.

To change the transmission oil:

1. Remove the cap from the transmission oil expansion reservoir. See Figure 35.
2. Remove the three filter guard screws (a) and the filter guard (b). Clean any loose debris from around the filter (c). See Figure 36.
3. Place an oil drain pan with an eight quart (7.6 liter) capacity below the filter.
4. Remove the filter.
5. When the oil finishes draining, wipe the filter base and apply a thin coat of fresh oil on the filter base.
6. Install the new filter.
7. Re-install the filter guard.
8. Remove the top port plug (d) from the transaxles to allow the transaxles to vent during filling. See Figure 36.

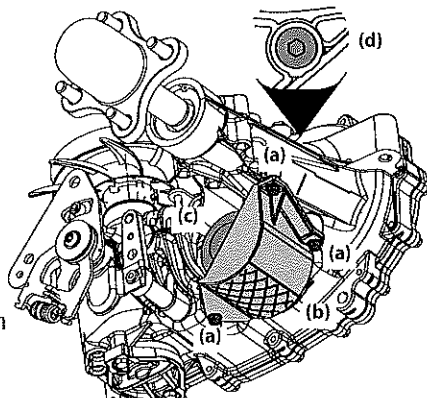


Figure 36

9. Using a high-quality 20W50 motor oil, slowly fill the transaxles until oil appears at the top port on the transaxles.
10. Re-install the top port plugs. Torque to 180 in-lbs (20.3 N-m), and continue to fill until the "FULL COLD" line is reached.
11. Replace the reservoir cap and fully tighten.
12. Repeat the process for the other transmission.
13. When replacing the transmission oil, a "purging" procedure should be performed to remove air from the system. The procedure should be performed with the rear wheels off the ground or in an area free of bystanders or objects. To perform the purging procedure:
 - a. Disengage the brake and open the bypass valve and start the tractor.
 - b. Move the lapbars in forward and reverse 5-6 times.
 - c. Close the bypass valves.
 - d. Move the lapbars in forward and reverse 5-6 times.
 - e. Check the oil level and add as necessary.
 - f. Repeat steps a-e until the transaxles operate at normal noise levels and normal speeds.

Off-Season Storage

If your tractor is not going to be operated for an extended period of time (thirty days or more), the tractor should be prepared for storage. Store the tractor in a dry and protected location. If stored outside, cover the tractor (including the tires) to protect it from the elements. The procedures outlined below should be performed whenever the tractor is placed in storage.

1. Change the engine oil and filter following the instructions provided in this manual as well as the engine manual provided with this tractor.

⚠ WARNING

Never store the tractor with fuel in the tank indoors or in poorly ventilated enclosures, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer, etc.

2. If storing the tractor for 30 days or more:
 - a. To prevent gum deposits from forming inside the engine's carburetor and causing possible malfunction of the engine, the fuel system must be either completely emptied, or the gasoline must be treated with a stabilizer to prevent deterioration.
 - b. Using a fuel stabilizer for storage between 30 and 90 days:
 - Read the product manufacturer's instructions and recommendations.
 - Add to clean, fresh gasoline the correct amount of stabilizer for the capacity (approximately 3 gallons) of the fuel system.
 - Fill the fuel tank with treated fuel and run the engine for 2-3 minutes to get stabilized fuel into the carburetor.
 - Fuel left in the fuel tank deteriorates and will cause serious starting problems.
 - c. Emptying the fuel system for storage of more than 90 days:
 - Prior to putting the tractor in storage, monitor fuel consumption with the goal of running the fuel tank empty.
 - Run the engine until it begins to stall. Use the choke to keep the engine running until all fuel in the carburetor has been exhausted.
 - Referring to the engine manual, drain the fuel from the carburetor bowl.
3. Clean the engine and the entire tractor thoroughly.

Note: Using a pressure washer or garden hose is not recommended for cleaning your tractor other than to clean the underside of the deck. It may cause damage to electrical components, spindles, pulleys, bearings or the engine. The use of water will result in shortened life and reduce serviceability.

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4. Fully charge the battery, then disconnect the negative cable at the battery to prevent possible discharge. Recharge the battery periodically when in storage.

Note: Remove the battery if exposed to prolonged periods of sub-freezing temperatures. Store in a cool, dry location where temperatures are above freezing.

5. Lubricate all lubrication points.

Removing The Tractor From Storage

1. Check the engine oil.
2. Fully charge the battery and inflate the tires to the recommended pressure. See tire side wall for proper tire inflation pressure.
3. Fill the fuel tank with clean, fresh gasoline.
4. Start the engine and allow to idle for a few minutes to ensure engine is operating properly.
5. Drive the tractor without a load to make certain all the tractor systems are functioning properly.

Adjustments

Adjusting Deck Lift Pedal

The deck lift pedal can be adjusted to operator preference.

1. Set the deck to the transport position.
2. Remove the hex bolt, washer and hex nut near the center of the pedal assembly. See Figure 37.
3. Position the pedal to the optimal position based on operator preference. See Figure 38.
4. Reinstall the hardware previously removed and torque the nut to 28-35 ft-lbs (38-47 N-m). See Figure 37.

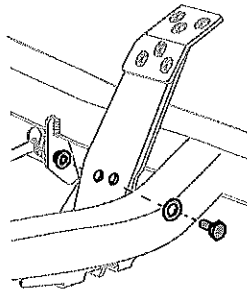


Figure 37

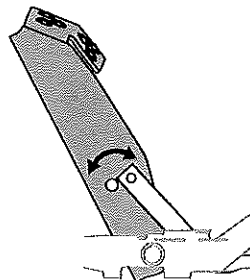


Figure 38

Deck Leveling

If the cutting deck appears to be mowing unevenly, leveling adjustments can be performed.

▲ WARNING

If the tractor has been recently run, the engine, muffler and surrounding metal surfaces will be very hot and can cause burns to the skin. Let the engine cool for at least five minutes. Exercise caution to avoid burns.

Leveling the Deck (Side-to-Side)

1. Place the deck lift handle or deck lift knob in a middle mowing position and rotate both outside blades so that they are perpendicular with the tractor.
2. Measure the distance from the outside of the left blade tip to the ground and the distance from the outside of the right blade tip to the ground. Both measurements taken should be equal. If they're not, proceed to the next step.
3. Locate the adjustment bolts (a) on the left and right side of the deck. See Figure 39.

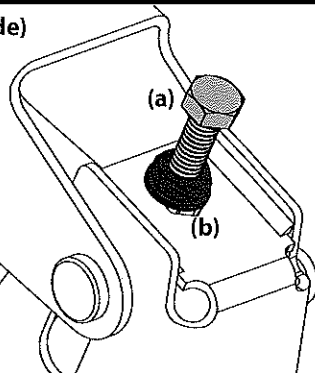


Figure 39

4. Loosen, but do not remove, the jam nuts (b) on the adjustment bolt. Adjust either the right or left adjustment bolt up or down as necessary until the side-to-side heights are equal. See Figure 39.

Note: Continue to check the front-to-back leveling as you make the side-to-side adjustment as the side-to-side adjustment can affect the front-to-back level. If necessary, adjust front-to-back as instructed previously.

5. When proper adjustment is achieved, re-tighten the jam nuts (b). Tighten to 57 ft-lbs (77.3 N-m).

Leveling the Deck (Pitch/Front-to-Rear)

The front of the deck should be between $\frac{1}{16}$ - $\frac{1}{4}$ " (2-6 mm) lower than the rear of the deck. Adjust if necessary as follows:

1. Park the tractor on a firm, level surface and place the deck lift handle or deck lift knob in a middle position.
2. Rotate the blade nearest the discharge chute so that it is parallel with the tractor.
3. Measure the distance from the front of the blade tip to the ground and the rear of the blade tip to the ground. The first measurement taken should be between $\frac{1}{16}$ - $\frac{1}{4}$ " (2-6 mm) less than the second measurement.
4. Determine the approximate distance necessary for proper adjustment and proceed, if necessary.
5. To raise the front of the deck, remove the end cap, loosen the outer jam nut (a) then tighten (thread inward) the inner nut (b) against the front hanger bracket. See Figure 40. When proper adjustment is achieved, re-tighten the outer jam nut (a) and replace the end cap.
6. To lower the front of the deck, remove the end cap, loosen the outer jam nut (a) then loosen (thread outward) the inner nut (b), away from the front hanger bracket. See Figure 40. When proper adjustment is achieved, re-tighten the outer jam nut (a) to 57 ft-lbs. (77.28 N-m) and replace the end cap.

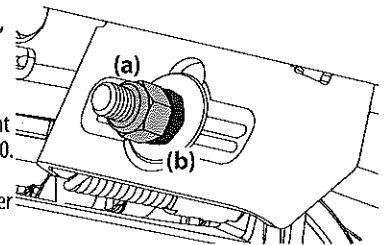


Figure 40

Adjusting the Deck Wheels

▲ WARNING

Keep hands and feet away from the discharge opening of the cutting deck.

Note: The deck wheels are an anti-scalp feature of the deck and are not designed to support the weight of the cutting deck. The deck wheels should be approximately $\frac{1}{4}$ - $\frac{1}{2}$ " (6.35-12.7 mm) above the ground when the deck is set in the desired height setting. To adjust the deck wheels see the Assembly section for instructions.

Lapbar Drive Control Lever Stop Adjustment

When the lapbar drive control levers are both fully extended forward to the full-speed position and the tractor drifts left or right, the lapbar drive control lever stop adjustment can be adjusted to sync the wheel speeds. To perform the adjustment, proceed as follows:

1. Identify the side that the tractor is drifting to and adjust the opposite lapbar drive control lever. If the tractor drifts right, adjust the left lapbar drive control lever down (decrease speed) and vice versa.

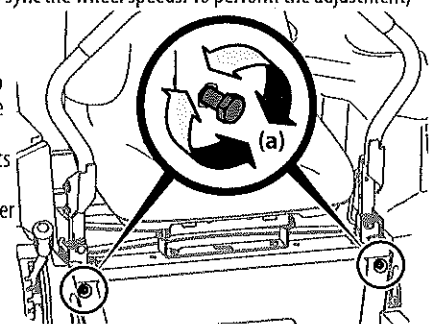


Figure 41

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2. Locate the lapbar drive control lever stop adjustment bolts (a) on the front of the seat frame. See Figure 41.

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

3. To decrease the forward speed, turn the lapbar drive control lever stop adjustment bolts (a) clockwise. To increase the forward speed, turn the lapbar drive control lever stop adjustment bolts (a) counter-clockwise. Turn the lapbar drive control lever stop adjustment bolts (a) in the necessary direction 1/4-turn at a time. After turning the lapbar drive control lever stop adjustment bolts (a), check the adjustment by driving the tractor.
4. Continue the adjustment until the wheel speeds are in sync and the tractor drives straight with the drive control levers fully extended forward in the full-speed position.

Note: Make sure the bolts extend through the nuts on the frame to engage the locking feature.

Service

Electrical System

A fuse is installed to protect the tractor's electrical system from damage caused by excessive amperage. Always use the same capacity fuse for replacement. If the electrical system does not function, check for a blown fuse.

If you have a recurring problem with blown fuses, have the tractor's electrical system checked by your authorized service dealer.

Relays and Switches

There are several safety switches in the electrical system. If a function of the safety interlock system described earlier is not functioning properly, have the electrical system checked by your authorized service dealer.

Parking Brake Adjustment

If the tractor does not come to a complete stop when the control levers are moved fully outward engaging the parking brake, or if the tractor's rear wheels can roll with the parking brake engaged (and the hydrostatic relief valve open), the brake is in need of adjustment. See your authorized service dealer to have the brake adjusted.

Deck Removal

Remove the tractor deck from the tractor as follows:

1. Move the tractor to a level surface, disengage the PTO, stop the engine, place the RH and LH drive control levers fully outward into the park brake engaged position.
2. There are two methods for removing the belt, to remove the belt by releasing belt tension go on to step 3, to remove the belt by rolling the belt off the PTO pulley skip ahead to step 4.

▲ WARNING

Use caution to avoid pinching your fingers when rolling the belt off the PTO pulley.

3. Releasing belt tension with the idler pulley:

- a. Using the deck lift handle or the deck lift pedal and knob, raise the deck to the position that provides the most horizontal run of the belt between the deck idler pulleys and the PTO pulley on the bottom of the engine. See Figure 42.

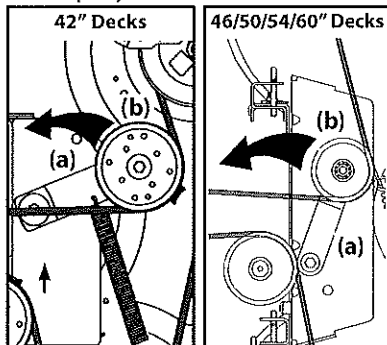


Figure 42

- b. Working from the middle of the tractor, pivot the idler bracket (a) and movable idler pulley (b) rearward just far enough to lift the belt up and over the spindle pulley. See Figure 42.
- c. From beneath the rear of the tractor, slide the belt off of the PTO pulley on the bottom of the engine.
- d. Lower the deck into the lowest mowing position.
- e. Skip ahead to step 5.

4. Rolling the belt off the PTO pulley:

- a. Raise the deck to the position that provides the most horizontal run of the belt between the deck idler pulleys and the PTO pulley on the bottom of the engine.
- b. Sitting behind the tractor facing forward, reach beneath the tractor to grasp the belt at the front of the PTO pulley.
- c. Pull the left side of the belt rearward and downward while manually turning the PTO pulley to the right until the belt rides out onto the edge of the lower sheave of the pulley.

Note: If pulling the right side of the belt, turn the pulley left.

- d. While still holding the PTO belt (a) downward, continue turning the PTO pulley (b) until the PTO belt (a) is rolled off the PTO pulley (b). Refer to Figure 43.
- e. Lower the deck into the lowest mowing position.
- f. Move on to step 5.

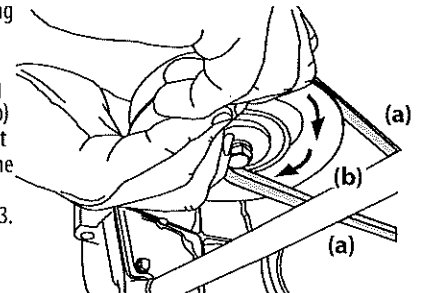


Figure 43

▲ WARNING

The deck lift on tractors with the deck lift knob is spring-assisted and under tension. Injury can occur if spring-assisted deck lift is released suddenly. Always use the multi-tool to secure the deck lift in place.

5. On tractors equipped with the deck lift knob, use the deck lift pedal and deck lift knob to place the deck in the lowest position and use the multi-tool (a) to lock the deck lift components in place as shown in Figure 44. On tractors with a deck lift handle, lower the deck into the lowest position.

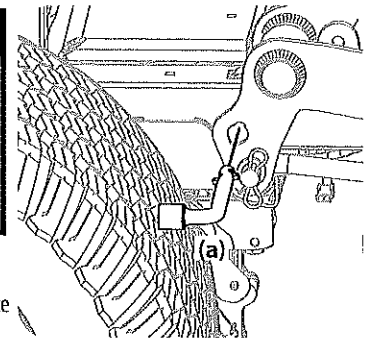


Figure 44

- a. Remove the two bow-tie pins (a) from the devis pins (b) that secure the lift link brackets (c) to the rear deck lift brackets (d) on the deck. Remove the devis pins (b). See Figure 45.

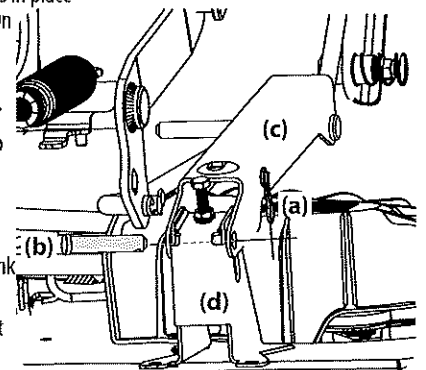


Figure 45

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- b. Remove the third bow-tie pin (a) from the clevis pin (b) that secures the front deck control rod (c) to the front deck lift bracket (d). Remove the clevis pin (b). See Figure 46.
- c. Carefully maneuver the deck out from beneath the tractor.

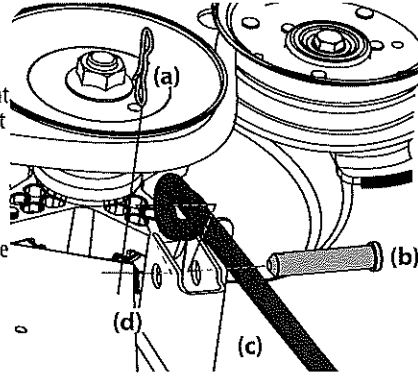


Figure 46

Deck Installation

Install the deck on the tractor as follows:

1. Carefully maneuver the the deck under the tractor from the right side, lining up the deck hanger brackets and the deck lift arms on deck lift rod/deck release pin tractors and align the lift link brackets and front deck control rod with the deck lift brackets on three-pin tractors.
2. Once the deck is under the tractor, move the deck to the lowest mowing position.

Note: To line the brackets up properly, it may be necessary to place a small block of wood under each side of the deck.
3. Re-install the applicable hardware for your tractor.
4. Make certain the "V" belt is in the spindle pulleys on the deck; then route the belt rearward beneath the tractor frame, above the transmission tube(s), to the PTO pulley on the bottom of the engine.
5. Raise the deck to the position that provides the most horizontal run of the belt between the deck idler pulleys and the PTO pulley on the bottom of the engine.
6. Make certain the belt is in the spindle pulleys of the deck, and that the backside of the belt is against both the fixed and movable idler pulleys.
7. Sitting behind the tractor, facing forward, make certain the belt is not twisted; then reach beneath the tractor to grasp the belt and pull it toward the PTO pulley.

⚠ WARNING

Use caution to avoid pinching your fingers when rolling the belt onto the PTO pulley.

8. Pull the right side of the PTO belt rearward and place the narrow V-side of the PTO belt into the PTO pulley. See Figure 43.
9. While holding the PTO belt and PTO pulley together, rotate the PTO pulley to the left (See Figure 43). Continue holding and rotating the PTO pulley and PTO belt until the PTO belt is fully rolled into the PTO pulley.

Note: Before using the tractor double-check the belt routing to make sure that the belt has been routed properly.

Replacing the Belt

1. Remove the deck from beneath the tractor, (refer to Deck Removal).
2. Loosen, but do not remove the hardware on the right (a) and left idler pulley (b). Refer to Figure 47 for 42" decks, Figure 48 for 46" decks and Figure 49 for 50", 54" and 60" decks.

Note: Take note of the position of the belt guards (c) to ensure they are properly re-installed.

Note: On some decks it may be necessary to remove the spindle covers to remove and/or install the new belt. To remove the spindle covers, remove the screws securing them to the deck.

3. Carefully remove the belt from around the idler pulleys (a & b) and the spindle pulleys (d).
4. Install the new belt pulleys as shown and reinstall the belt covers.
5. Place the belt around the idler pulleys removed in step 3 with the "V" side facing in. Once in place, reinstall all the hardware and tighten the flange lock nut to secure the assembly.
6. Route the belt as shown and then reinstall the deck (refer to Deck Installation)

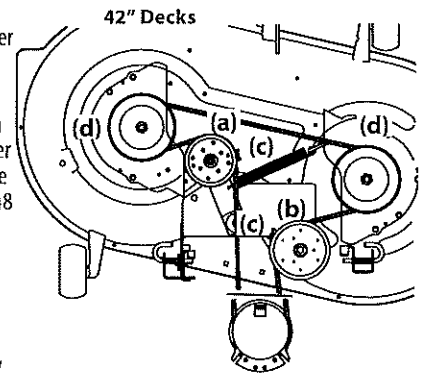


Figure 47

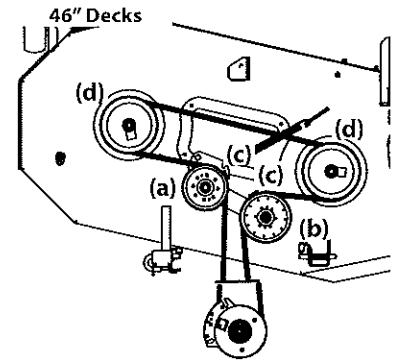


Figure 48

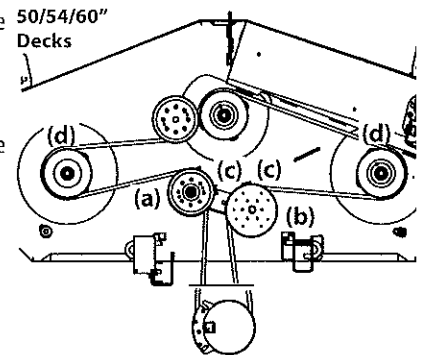


Figure 49

SERVICE AND MAINTENANCE

Tractor Blade Care

▲ WARNING

Before performing any maintenance, disengage the PTO and move the lapbar drive control levers fully outward into the Park Brake engaged position. If leaving the tractor unattended, turn the ignition key to the STOP position and remove key. Protect your hands by using heavy gloves when handling the blades. When servicing the tractor deck, be careful not to cut yourself on the sharpened blades.

The cutting blades must be kept sharp at all times. Sharpen the cutting edges of the blades evenly so that the blades remain balanced and the same angle of sharpness is maintained.

If the cutting edge of a blade has already been sharpened many times, or if any metal separation is present, it is recommended that new blades be installed. New blades are available at your authorized dealer.

The blades may be removed as follows.

1. Remove the deck from beneath the tractor, (refer to Deck Removal) then gently flip the deck over to expose its underside.
2. Use a $1\frac{5}{16}$ " wrench to hold the hex nut on top of the spindle assembly when loosening the hex nut (a) securing the blade (b). A block of wood (c) may be placed between the deck housing and the cutting edge of the blade (b) to help in breaking loose the hex nut (a) securing the blade. See Figure 50.
3. When reinstalling the blades, be sure they are installed so that the wings are pointing upward toward the top of the deck.
4. Tighten the hex nuts (a) to 70-90 ft. lbs. (95-122 N-m).
5. Reinstall the deck (refer to Deck Installation).

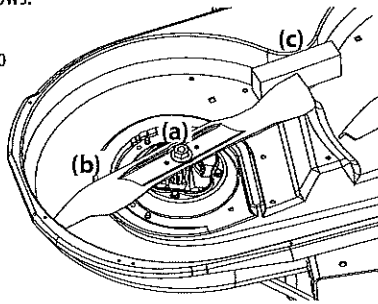


Figure 50

Changing the Transmission Drive Belt

Several components must be removed and special tools used in order to change the tractor's transmission drive belt. See your authorized service dealer to have the transmission drive belt replaced.

Tractor Creeping

Creeping is the slight forward or backward movement of the tractor when the throttle is on and the speed control levers are in the neutral position. If your tractor creeps, see an authorized service dealer.