Safe Operation Practices • Assembly • Operation • Service • Troubleshooting

Operator's Manual

Zero-Turn Mower
Rear Wheel Drive
Stand-On

Record Product Information

Before setting up and operating your new mower, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate at the rear of the mower above the operator's platform. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

Model Number

☐☐☐☐☐☐☐☐☐☐☐

Serial Number

☐☐☐☐☐☐☐☐☐☐☐

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⚠ WARNING

Read and follow all safety rules and instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury - SAVE THESE INSTRUCTIONS.

⚠ WARNING

CALIFORNIA PROPOSITION 65

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

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

Form No. 769-25808
(August 14, 2020)

SAFE OPERATION PRACTICES

⚠ WARNING

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this mower. Failure to comply with these instructions may result in personal injury. When you see this symbol. HEED ITS WARNING!

⚠ WARNING

California Proposition 65

Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. .

⚠ DANGER

This mower was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This mower is capable of amputating fingers, hands, toes and feet and throwing debris. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Only allow operators who are responsible, trained, familiar with the instructions, and physically capable to operate the mower.
2. Be familiar with the areas in which the mower is to be used. Walk all areas to be mowed, evaluate slopes and other terrain and look for obstacles to be avoided to ensure safe operation before you mow.
3. See the Practice Operation section of this manual for further instructions.

General Operation

1. Read, understand, and follow all instructions on the mower and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference by each operator and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the mower and disengage the controls quickly.
3. Do not allow anyone to operate or maintain this mower who has not read the manual. Never permit children under the age of 16 to operate this mower.
4. Do not remove any shields, guards, labels or safety devices. If a shield, guard, label or safety device is damaged or does not function, repair or replace it before operating the mower.
5. To help avoid blade contact or a thrown object injury, keep bystanders, helpers, children and pets at least 75 feet (22.9 meters) from the mower while it is in operation. Stop mower if anyone enters the area.
6. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys, and other foreign objects that could be picked up and thrown by the blade(s). Thrown objects can cause serious personal injury.
7. Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the mower manufacturer.
8. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction which may cause discharged material to ricochet back toward the operator.
9. Always wear appropriate clothing and personal protective equipment (e.g. safety glasses, long pants, gloves, hearing protection , safety shoes, hard hat) when operating or maintaining this mower. Long hair, loose fitting clothing or jewelry may get entangled in moving parts. Follow all federal, state and local guidelines regarding the use of personal protective equipment.
10. For extended use of this product, hearing protection is recommended.
11. Be aware of the mower and attachment discharge direction and do not point it at anyone. Do not operate the mower without the discharge cover or entire grass catcher in its proper place.
12. Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade(s) can amputate hands and feet.
13. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
14. Stop the blade(s) when crossing gravel drives, walks, or roads and while not cutting grass.
15. Watch for traffic when operating near or crossing roadways. This mower is not intended for use on any public roadway.
16. Do not operate the mower while under the influence of alcohol or drugs.
17. Mow only in daylight or good artificial light.
18. Never carry passengers.
19. Back up slowly. Always look down and behind before and while backing to avoid a back-over accident.
20. Slow down before turning. Operate the mower smoothly. Avoid erratic operation and excessive speed. Be aware of your direction of travel to avoid accidents.
21. Disengage blade(s), set parking brake, stop engine and wait until the blade(s) come to a complete stop before removing grass catcher, emptying grass, unclogging chute, removing any grass or debris, or making any adjustments.

22. Never leave a running mower unattended. Always stop on level ground, turn off blade(s), place drive speed control levers in neutral, set parking brake, stop engine and remove key before leaving the operator position.
23. Use extra care when loading or unloading the mower on a trailer. The mower should not be driven on unstable, unsecured or inadequate ramps because the mower could tip over causing serious personal injury.
24. Check overhead clearances carefully before driving under low hanging tree branches, wires, door openings etc., where the operator may be struck which could result in serious injury.
25. Muffler and engine become hot and can cause a burn. Do not touch.
26. Disengage the blades, set the parking brake to the 'on' position and make sure the speed control levers are in the neutral position before attempting to start the engine. Only start the engine from the operator's position.
27. Do not attempt to mow unusually tall, 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.
28. Do not stop or park the mower over dry leaves, grass, debris or other combustible material.
29. Never attempt to operate the mower without the mowing deck attached; the mower could tip over.
30. Keep the mower and especially the engine exhaust system and hydraulic components clean and free of grease, grass and leaves to reduce the potential for overheating and fire.
31. Allow the mower to cool at least 5 minutes before storing.
32. Use only accessories and attachments approved for this mower by the mower manufacturer. Read, understand and follow all instructions provided with the approved accessory or attachment.
33. Data indicates that operators, age 65 years and above, are involved in a large percentage of riding mower-related injuries. Operators should evaluate their ability to operate this mower safely enough to protect themselves and others from serious injury.
34. Do not operate or start mower if there is fuel or oil leaks; repair immediately.
35. When looking for oil leaks, never run your hand over hydraulic hoses, lines or fittings. Never tighten or adjust hydraulic hoses, lines or fittings while the system is under pressure. If high-pressure oil penetrates the skin seek immediate medical attention or gangrene and permanent damage may result. Do not check for hydraulic leaks with your hands, use paper or cardboard instead. Wear gloves and safety glasses when checking for leaks.
36. Do not operate mowers that have been damaged or have not been properly maintained. If the mower has been damaged, then have it repaired.
37. When operating this mower in the forward direction, do not allow the speed control levers to return to the neutral position on their own. Always operate them smoothly and avoid any sudden movements of the levers when starting or stopping.
38. If situations occur which are not covered in this manual use care and good judgement. Contact your customer service representative for assistance.

Slope Operation

Slopes are a major factor related to loss of control and tip-over accidents that can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it or drive on the slope.

For your safety, use the slope gauge included as part of this manual to measure slopes before operating this mower on a sloped or hilly area. If the slope is greater than 15 degrees as shown on the slope gauge, do not operate this mower on that area or serious injury could result.

Do:

1. Mow across slopes, not up and down. Exercise extreme caution when changing direction on slopes.
2. Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the mower. Tall grass can hide obstacles.
3. Use slow speed. Choose a low enough speed so that you will not have to stop while on the slope. Avoid starting or stopping on a slope. If the tires are unable to maintain traction, disengage the blades and proceed slowly and carefully straight down the slope.
4. Keep all movements on the slopes slow and gradual. Do not make sudden changes in speed or direction. Rapid acceleration could cause the front of the mower to lift and rapidly flip over backwards, which could cause serious injury or death.
5. Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
6. Use extra care with grass catchers or other attachments. These can change the stability of the mower.

Do Not:

1. Do not turn on slopes unless necessary; then turn slowly uphill and use extra care while turning.
2. Do not mow near drop-offs, ditches or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff, ditch, or if an edge caves in.
3. Do not operate on slopes or near the edge of water such as a lake, pond, river or stream where the mower could slip, tip or roll-over into the water.
4. Do not try to stabilize the mower by putting your foot on the ground.
5. Do not use a grass catcher on slopes steeper than 15 degrees.
6. Do not mow on wet grass. Reduced traction could cause sliding and/or loss of control.

SAFE OPERATION PRACTICES

Children

1. Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.
    a. Keep children out of the mowing area and in watchful care of a responsible adult other than the operator.
    b. Be alert and turn mower off if a child enters the area.
    c. Always look behind and down for small children. Use slow speed.
    d. Never carry children, even with the blade(s) shut off. They may fall off and be seriously injured or interfere with safe mower operation.
    e. Use extreme care when approaching blind corners, doorways, shrubs, trees or other objects that may block your vision of a child who may run into the path of the mower.
    f. To avoid back-over accidents, always disengage blades before traveling in reverse.
    g. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
    h. Remove key when mower is unattended to prevent unauthorized operation.
2. Never allow children under 16 years of age to operate this mower. Children 16 and over should read and understand the instructions and safe operation practices in this manual and on the mower and should be trained and supervised by an adult.

Transporting Mowers

1. This mower is not intended for use on public roads. Mowers operated on public roads must comply with state & local ordinances, SAE J137, and ANSI/ASABE S279 (lighting and marking requirements).
2. Use care when loading or unloading mowers onto trailers.
3. If ramps are used, they must be full width, stable, have an adequate capacity rating and be secured to the trailer. Ramp angle should not exceed 15 degrees and trailer should be parked on level terrain.
4. Mowers must be secured onto trailers with straps, chains, cables, ropes, or other means deemed adequate for that purpose. The front and rear of the mowers must be secured to the trailer in both the lateral and vertical directions.
5. Inspect the mower on a regular basis for damage and improper operation. Replace all components that are damaged or are not functioning properly with authorized replacement parts.

Hydraulic Devices & Systems

Hydraulic fluid escaping under pressure may have sufficient force to penetrate skin and cause serious injury. If foreign fluid is injected into the skin or eyes, see immediate medical attention or gangrene and permanent damage may result.

⚠ WARNING

Keep body and hands away from pinholes or nozzles that could inject hydraulic fluid under high pressure. Use paper or cardboard, not your hands, to search for leaks! Wear gloves and safety glasses.

Safely relieve all pressure in the system before performing any work on the system, and make sure that:

- The ignition switch is OFF
- The key is removed
- The engine spark plug wire(s) removed
- All connections to the negative terminal of the battery are removed
- The park brake is set
- All by-pass valves, if so equipped, are open
- Hydraulic controls are actuated to release pressure on pumps, cylinders, etc. If "float" positions are available, they should be used.

After the above operations are completed, it should be safe to begin disconnecting the lines or components. It is still a good idea to cover the connection with a cloth shield and then gently loosen connections.

⚠ WARNING

Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.

Service

Safe Handling of Fuel

To avoid personal injury or property damage use extreme care in handling fuel. Fuel is extremely flammable and the vapors are explosive. Serious personal injury can occur when fuel is spilled on yourself or your clothes which can ignite. Wash your skin and change your closes immediately.

- Use only approved containers.
- Never fill containers inside a vehicle or a truck or trailer bed with a carpeted or plastic liner. Always place containers on the ground away from your vehicle before fueling.
- When practical, remove mowers from the truck or trailer and refuel it on the ground. If this is not possible, then refuel equipment on a trailer with a portable container rather than from a fuel dispenser nozzle.
- Keep nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never fuel mower indoors or near ignition sources.

- Never remove fuel cap or add fuel while the engine is hot or running. Allow engine to cool at least two minutes before refueling.
- Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to allow space for expansion.
- If necessary, use a funnel to avoid spillage.
- Replace fuel cap and tighten securely.
- If fuel is spilled, wipe off the engine and equipment. Wait 5 minutes before starting the engine.
- To reduce fire hazards, keep mower free of grass, leaves, or other debris build-up. Clean up oil and fuel spillage and remove any fuel soaked debris.
- Never store the mower or fuel container inside where there is an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliance.

General Service

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless, and deadly gas.
2. Before cleaning, repairing, or inspecting, make certain the blade(s) and all moving parts have stopped. Disconnect the spark plug wires and remove the key from the ignition to prevent unintended starting.
3. Periodically check to make sure the blades come to complete stop within approximately (7) seven seconds after operating the blade disengagement control. If the blades do not stop within this time frame, your mower should be serviced.
4. Never tamper with the safety interlock system or other safety devices.
5. Regularly check the safety interlock system for proper function, as described later in this manual. If the safety interlock system does not function properly, have your mower serviced.
6. Check brake operation frequently as it is subjected to wear during normal operation. Adjust and service as required.
7. Check the blade(s) and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade(s) for damage (e.g., excessive wear, bent, cracked). Replace the blade(s) with the original equipment manufacturer's (O.E.M.) blade(s) only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
8. Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
9. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
10. After striking a foreign object (or if abnormal vibration occurs), stop the blades and engine and thoroughly inspect the mower for any damage. Make necessary repairs before resuming operation.
11. Never attempt to make adjustments or repairs to the mower while the engine is running.
12. Grass catcher components and the discharge cover are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
13. Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
14. Maintain or replace safety and instruction labels, as necessary.
15. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Do Not Modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice Regarding Emissions

This mower is equipped with an engine that is certified to federal EPA emission standards for non-road engines and equipment, and where applicable to California Air Resources Board (CARB) emission standards. The engine owner's manual is supplied by the engine manufacturer, and provides additional information relating to the emission system, warranty, maintenance of the engine in accordance with EPA and/or CARB regulations. Making any unauthorized alterations or modifications to the engine, fuel, or venting systems may violate EPA and CARB regulations.

When required, models are equipped with low permeation fuel lines and fuel tanks for evaporative emission control. California models may also include a carbon canister. Please contact Customer Support for information regarding the evaporative emission control configuration for your model.

This mower is designed to run on regular, unleaded gasoline, 87 octane or higher. Never use gasoline containing methanol or gasoline containing more than 10% ethanol (i.e., E15 or E85 fuels) because the fuel system may be damaged.

Spark Arrestor

⚠ WARNING

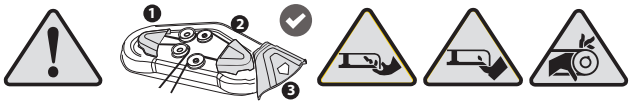
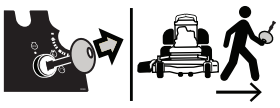
This mower is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrestor meeting applicable local or state laws (if any).

If a spark arrestor is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.
A spark arrestor for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

SAFE OPERATION PRACTICES

SAFETY SYMBOLS

This page depicts and describes safety symbols that MAY APPEAR on this product.

Symbol	Description
OPESymbol.com	WARNING – READ OPERATOR'S MANUAL: Read, understand and follow all the safety rules and instructions in the manual(s) and on the mower before attempting to operate this mower. Failure to comply with this information may result in personal injury or death. Keep this manual in a safe location for future and regular reference. Using a Smart Phone, scan the QR code symbol to learn more information concerning the warnings contained on this mower. You can also go to www.OPESymbol.com for more information.
	WARNING – TRAINING: Read Operator's Manual. Do not operate this mower unless you are trained.
	WARNING – AVOID THROWN OBJECTS INJURY: Keep helpers at least 75' (23 meters) from mower during operation. Remove all stones, sticks, wire, bones, toys, and other foreign objects which could be picked up and thrown by the blade(s). Do not operate the mower without the discharge cover or entire grass catcher in its proper place.
	WARNING – AVOID CHILD BACKOVER/RUNOVER/BLADE INJURY: To avoid back-over accidents, always look behind and down for small children. Never carry children, even with the blade(s) shut off. Keep bystanders, children and pets inside during operation under the watchful care of a responsible adult other than the operator. Stop mower if anyone enters the area.
	WARNING – AVOID TIP-OVER/ROLL-OVER INJURY: Do not operate mower on a slope greater than 15° (25%). Do not mow up or down slopes, only mow across slopes that are less than 15 degrees (25%). Use low speeds and avoid sudden turns on slopes. Stay at least 10 feet (3 meters) from drop-offs, ditches, embankments or the edge of water
	WARNING – AVOID FIRES: Your mower is designed to cut normal residential grass of a height no more than 10" (25cm). Do not attempt to mow through unusually tall, dry grass (e.g., pasture) or piles of dry leaves. Allow a mower to cool at least five minutes before fueling or storing inside an enclosed garage or storage shed.
	WARNING – AVOID TRANSPORT INJURY: Use care when loading and unloading mowers onto trailers. DO NOT drive mower forward onto trailers. ALWAYS back the mower onto trailers. Use full width ramp for loading and unloading. Ramp angle should not exceed 15 degrees and trailer should be parked on level terrain.
	WARNING – AVOID AMPUTATION INJURY: Do not put hands or feet near or under the cutting deck. Contact with the blade(s) can amputate hands and feet.
	WARNING – AVOID AMPUTATION INJURY: Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade(s) can amputate hands and feet. Ensure that all safety devices (guards, shields, switches, etc.) are in place and working. Belt and/or blade spindle contact can crush or injury body parts.
	WARNING – AVOID CRUSH/PINCH POINT INJURY: Read, understand and follow all the safety rules and instructions in the manual(s) and on the mower before attempting to service this mower. For foot lift models only, the deck lift system is spring-assisted and under tension. Always use the provided multi-tool to secure the lift system in the locked position before attempting to remove the mower deck.
	WARNING – REMOVE KEY: Always turn off blade(s), move the drive control levers outward into park position, stop engine and remove key before dismounting. If you are leaving the mower unattended, always remove the key to prevent unauthorized use by children or others.

⚠ WARNING

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

Slope Gauge

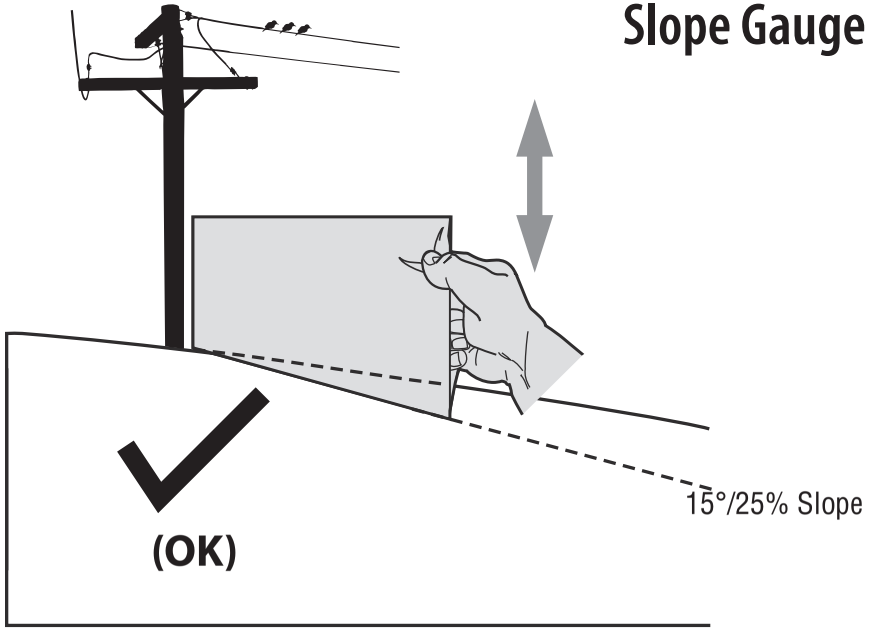


Figure 1

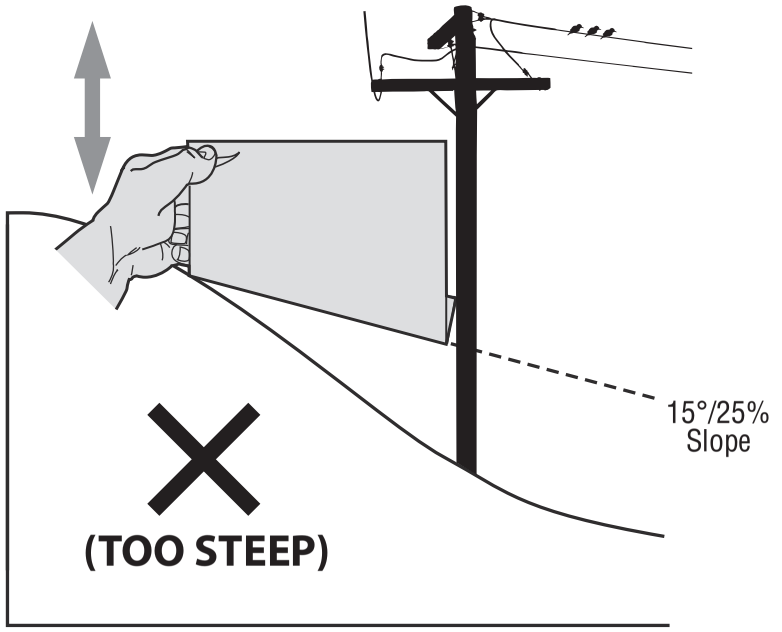


Figure 2

15°/25% dashed line

USE THIS SLOPE GAUGE TO DETERMINE
IF A SLOPE IS TOO STEEP FOR SAFE OPERATION!

To check the slope, proceed as follows:

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

⚠ WARNING

Slopes are a major factor related to slip and fall accidents which can result in severe injury or death. All slopes require extra caution. If you feel uneasy on the slope, do not mow it. Do not mow on slopes greater than 15 degrees (25%). Only mow across slopes, never mow up and down slopes.

IMPORTANT: This mower is shipped without gasoline in the engine. Be certain to service engine with gasoline and check oil as instructed in the Operation section of the Engine Manual before starting or operating your mower.

NOTE: References to LEFT, RIGHT, FRONT, and REAR indicate that position on the mower when facing forward while standing on the operator's platform.

Mower Preparation

TOOLS NEEDED: Safety glasses, leather gloves, wire cutters.

1. Remove the upper crating material from the shipping pallet, and cut any bands or tie straps securing the mower to the pallet.
2. Use the deck lift handle (a) to raise the deck to the transport lock position (b) and insert the clevis pin (c) into the highest mowing setting (d) to secure the deck lift handle in place. See Figure 1.

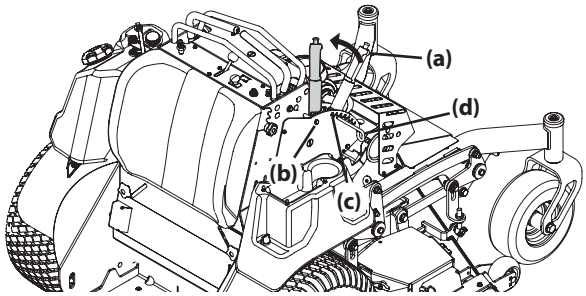


Figure 1

IMPORTANT: The mower is equipped with two hydrostatic transmissions. Each transmission is equipped with a bypass valve that MUST be opened before manually moving the mower.

3. Perform the following to open the two hydrostatic transmission bypass valves. See Figure 2:
   a. Loosen the two star knobs (e) securing the leg pad (f) to the mower.
   b. Remove the leg pad from the mower.
   c. Remove the two star knobs (g) securing the rear panel (h) to the mower.
   d. Remove the rear panel from the mower.

   IMPORTANT: DO NOT open the bypass valves more than a maximum of two turns.

   e. Locate the hydrostatic transmissions and open the two bypass valves (i) a maximum of two turns.
   f. Using the two star knobs, reinstall the rear panel.
   g. Using the two star knobs, reinstall the leg pad.

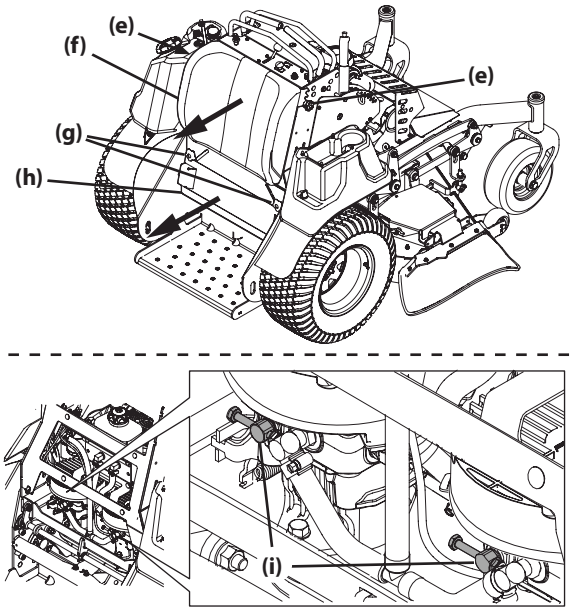


Figure 2

⚠ WARNING

Do not tow the mower, even with the bypass valves engaged. Serious transmission damage will result from doing so.

4. Carefully roll the mower off the shipping pallet.

IMPORTANT: The bypass valves MUST be closed before operating the mower.

5. Reverse STEP 3 to close the two bypass valves.
6. To engage the parking brake, pull back completely on the parking brake lever (j) See Figure 3.

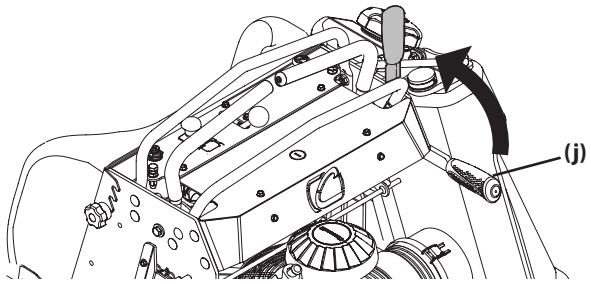


Figure 3

7. Cut any wire ties holding the chute deflector up and discard any packing material.

Lubrication & Grease Points

Before operating the mower, refer to the Product Care section of this manual to check the lubrication and grease points. Grease and lubricate if necessary.

Checking Tire Pressure

⚠ WARNING

For proper traction and deck leveling the maximum recommended tire pressure is 12 psi. Equal tire pressure should be maintained at all times. NEVER exceed the Maximum PSI noted on the tire side wall.

Inflation Pressure

Rear Tires — 10-12 psi (69-82.7 kPa) max recommended operating pressure.

Front Tires — N/A - Front tires are semi pneumatic and do not require inflation.

The tires on your mower may be over-inflated for shipping purposes. Reduce the tire pressure before operating the mower. Recommended operating tire pressure is 10-12 psi (69-82.7 kPa) for rear tires.

Connecting the Battery Cables

⚠ WARNING

California PROPOSITION 65 Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

⚠ WARNING

When attaching battery cables, always connect the POSITIVE (Red) wire to its terminal first, followed by the NEGATIVE (Black) wire.

For shipping reasons, both battery cables on your equipment may have been left disconnected from the terminals at the factory. To connect the battery cables, proceed as follows See Figure 4:

1. Remove the two thumb screws (a) securing the battery cover (b) to the right fender and remove the battery cover.

   NOTE: The positive battery terminal is marked POS. (+) (c). The negative battery terminal is marked NEG. (–) (d).

   NOTE: If the positive battery cable (e) is already attached, skip ahead to step 4.

2. Remove the red boot (f), if present, from the positive battery terminal (c) and attach the red cable (e) to the positive battery terminal (c) with the bolt (g) and hex nut (h).

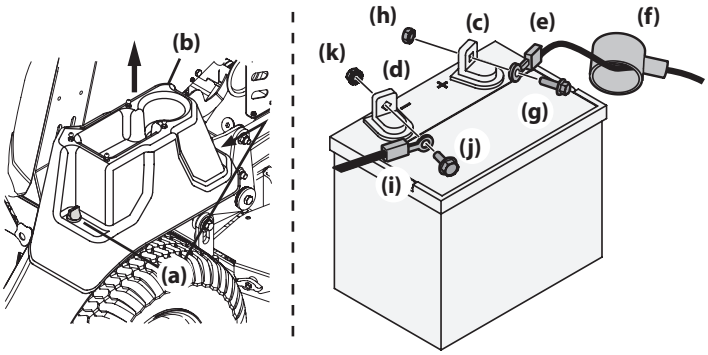


Figure 4

3. Position the red boot (f) over the positive battery terminal (c) to insulate it and help protect it from corrosion.
4. Attach the black cable (i) to the negative battery terminal (d) with the bolt (j) and hex nut (k).
5. Using the two thumb screws removed in STEP 1, secure the battery cover to the left fender.

Note: If the battery is put into service after the date shown on top/side of battery, charge the battery prior to operating the machine.

Adjustments

LEG PAD HEIGHT

1. Loosen the two star knobs (a) securing the leg pad (b) to the mower. See Figure 5
2. Remove the leg pad from the mower.
3. Reposition the leg pad into one of three height positions (c).
4. Using the two star knobs, secure the leg pad to the mower.

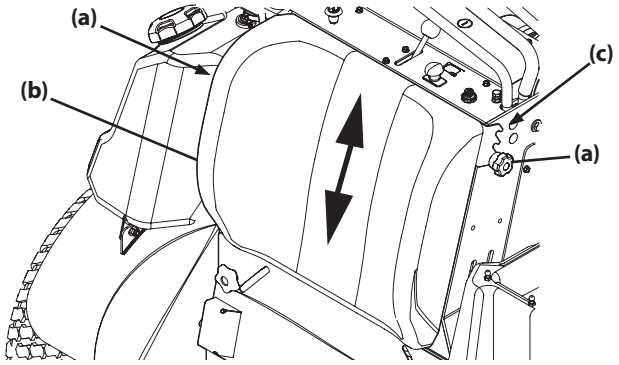


Figure 5

SUSPENSION

The mower is equipped with a three position adjustable suspension. Moving the suspension lever (a) to the top position (b) provides a firmer suspension. The lower setting (c) provides a softer suspension. See Figure 6.

1. Ensure the mower is unoccupied with the engine off and parking break engaged.
2. Move the suspension lever up and away from the mower.
3. Move the suspension lever to one of three suspension settings.
4. Lower the suspension lever into the suspension setting. Ensure the suspension lever fully engages the setting before releasing the lever.

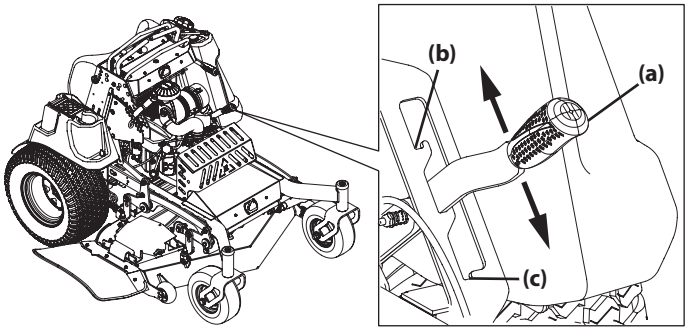


Figure 6

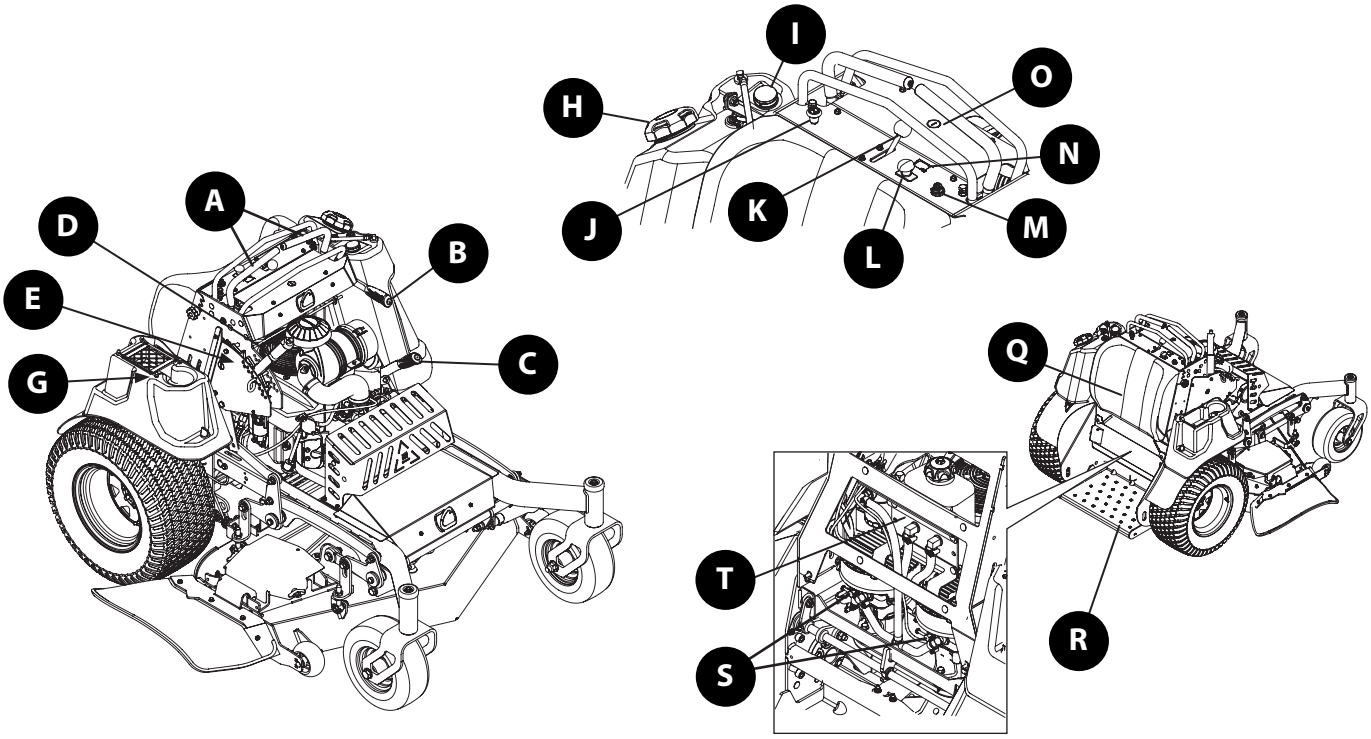


Figure 7

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

NOTE: References to LEFT, RIGHT, FRONT, and REAR indicate that position on the mower when facing forward while standing on the operator's platform.

Features

A. DRIVE CONTROL LEVERS

The RH (Right Hand) and LH (Left Hand) drive control levers are located on each side of the control panel.

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

B. PARKING BRAKE LEVER

The parking brake lever is located to the left of the control panel. Pull the parking brake lever back to engage the brake (ON position "🔒") or push the parking brake lever forward to disengage the brake (OFF position "🔓").

C. SUSPENSION LEVER

Used to select suspension firmness of the operator's platform.

D. DECK LIFT HANDLE

The deck lift handle is located on the right side of the mower, and is used to raise and lower the mower deck.

Depress the button on the end of the handle and push downward to lower the deck, or pull upward to raise the deck. When the desired height is attained, secure the pin in the desired index hole and release the button on the handle.

NOTE: Make certain the deck is secured and the pin is fully inserted into the deck height index. The pin is keyed to help keep it in place and fits into the slotted holes on the deck height index.

NOTE: The deck lift handle must always be above the pin, never hang the deck lift handle from the pin when mowing.

E. DECK HEIGHT INDEX

The deck height index consists of several holes located on the right of the mower. Each hole corresponds to a ¼" (6.4 mm) change in the deck height position ranging from 1 ½" (38.1 mm) at the lowest setting to 4 ½" (114.3 mm) at the highest setting. Insert the connected pin to select the desired deck height.

F. TRANSPORT LOCK (NOT SHOWN)

The transport lock is the highest setting on the deck height index, and is used to lock the deck into the transport position. Use the deck lift handle to engage or disengage the transport lock.

NOTE: Do not mow with the deck in the transport position.

G. CUP HOLDER/STORAGE TRAY

The cup holder is located on the top of the battery cover.

H. FUEL CAP

Turn the fuel cap counter clockwise and pull upward to remove. The fuel cap is tethered to the mower to prevent its loss. Do not attempt to remove the fuel cap from the mower. Fill tank to 1/2" (12.7 mm) below the bottom of the filler neck, allowing some space in the tank for fuel expansion. Do not overfill the tank.

Push the fuel cap downward on the fuel tank fill neck and turn clockwise until the cap clicks at least two times to tighten. Always re-install the fuel cap tightly onto the fuel tank after removing.

⚠ WARNING

Never fill the fuel tank when the engine is running. If the engine is hot from recently running, allow to cool for at least five minutes before refueling. Highly flammable gasoline could splash onto the engine and cause a fire.

I. FUEL GAUGE

There is a fuel gauge on top of the tank to the left of the operator's platform.

J. CHOKE KNOB (IF EQUIPPED)

The choke knob is located on the control panel. Pull the knob out to choke the engine; push the knob in/down to open the choke. Having the choke in the "ON" position helps the engine to start during initial start-up. During normal operation the choke should be "OFF".

K. THROTTLE CONTROL LEVER

NOTE: When set in a given position, a uniform engine speed will be maintained.

Throttle Control Lever - Push the throttle control lever forward to increase the engine speed. The mower is designed to operate with the throttle control lever at full throttle (FAST) when the mower is being driven and the mower deck is engaged. Pull the throttle control lever rearward to decrease the engine speed (SLOW) .

L. POWER TAKE-OFF (PTO) ELECTRIC PTO

The PTO switch operates the electric PTO clutch mounted on the bottom of the engine crankshaft. Pull the switch knob upward to engage the PTO clutch, or push the knob downward to disengage the clutch.

The PTO switch must be in the "OFF" position when starting the engine.

M. IGNITION SWITCH

⚠ WARNING

Never leave a running machine unattended. Always disengage PTO, set parking brake, stop engine and remove key to prevent unintended starting.

The ignition switch has three positions:

STOP — The engine and electrical system is turned off.

RUN — The riding mower electrical system is energized.

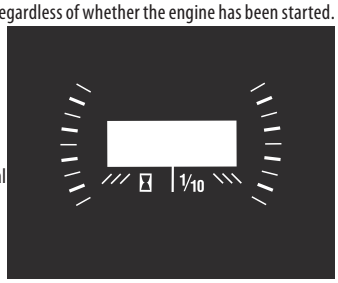
START — The starter motor will turn over the engine. Release the key immediately when the engine starts, the key will automatically return to "Run" position.

Note: To prevent accidental starting and/or battery discharge, remove key from the ignition switch when mower is not in use.

N. HOUR METER & LCD SERVICE MINDER (IF EQUIPPED)

The LCD service minder will remind the operator of maintenance intervals for changing the engine oil, air filter service, low engine oil and low battery warnings. When the key is rotated out of the STOP position but is not in the START position, the LCD service minder & hour meter will briefly display the battery voltage, followed by the mower's accumulated hours.

Note: When the ignition key is out of the STOP position the hourglass symbol is illuminated/blinks to indicate it is recording the hours of mower operation, regardless of whether the engine has been started.



- Change Oil - The LCD screen will alternate the letters "CHG", followed by "OIL", followed by "SOON", followed by the meter's accumulated time. "CHG/OIL/SOON/TIME" will alternate on the display for 7 minutes after the meter reaches 50 hours. This oil service minder interval will occur every 50 hours. Before the interval expires, change the engine oil as instructed in the Engine Operator's Manual
- **Low Oil -** The LCD screen will alternate the letters "LO" followed by "OIL", followed by the meter's accumulated time, which indicates the engine has low oil pressure. This is common when starting an engine. The indicator will remain active until the engine sufficiently builds pressure after starting. If it remains on with the engine at full speed and after a few minutes of operation, stop the mower immediately and check the engine oil level and add as instructed in the Engine Operator's Manual. If the oil level is correct and the indicator persists, contact an authorized service dealer.

NOTE: The low oil pressure function only works if the engine is equipped with an oil pressure switch.

- **Low Battery -** At startup, the battery voltage will briefly display, then changes to accumulated hours. The letters "LO" followed by the letters "BATT" will display, followed by the meter's accumulated time. "LO/BATT/TIME" is displayed on the LCD when the voltage drops below 11.5 volts. When this occurs, the battery is in need of a charge or the engine's charging system is not generating sufficient amperage. Charge the battery as instructed in the Product Care section of this manual or have the charging system checked by your local service dealer.
- **Air Filter Service -** The LCD screen will display the letters "CLN" followed by the letters "AIR", followed by "FILT", followed by the meter's accumulated time. "CLN/AIR/FILT/TIME" will alternate on the display for 7 minutes after the meter reaches 25 hours. This air filter service minder time interval will be every 25 hours. On intervals that are common with oil service, the oil message will be displayed first followed by the air filter message.

O. ACCESSORY SWITCH/POWER BAGGER ASSIST/12 VOLT ACCESSORIES RECEPTACLES

The receptacles for optional accessories are on the control panel. See the Attachments & Accessories section for information. The receptacles are for a 12 volt outlet and head light.

P. HEADLIGHTS (NOT SHOWN/IF EQUIPPED)

The headlight located in front of the control panel. The headlights are ON whenever the ignition key is rotated out of the STOP position and OFF when the ignition key is moved to the STOP position.

Q. LEG PAD

The leg pad is located in front of the operator's position to provide a cushion between the operator and the mower. Refer to the Adjustments section for instructions on adjusting the leg pad position.

R. OPERATOR'S PLATFORM

The operator's platform is at the rear of the mower.

S. TRANSMISSION BYPASS VALVES

The transmission bypass valves are located on the RH and LH Transmission (one for each transmission). When in use, the two valves open a bypass within the hydrostatic transmissions, which allows the mower to be pushed short distances by hand. Refer to the Assembly section for additional instructions.

⚠ CAUTION

Never tow your mower. Towing the mower with the rear wheels on the ground may cause severe damage to the hydrostatic transmissions.

T. HYDROSTATIC TRANSMISSION OIL RESERVOIR

The hydrostatic transmission oil reservoir is connected by hoses to the RH and LH transmission assemblies, and is located behind the access panel in front of the operator's platform.

NOTE: Prior to the initial operation of the mower, check the hydrostatic transmission oil level. Refer to Checking The Hydrostatic Transmission Oil Level in the Product Care Section

Before Operating Your Machine

1. Before you operate the mower, study this manual carefully to familiarize yourself with the operation of all the instruments and controls. It has been prepared to help you operate and maintain your machine efficiently.
2. Fill the fuel tank with only clean, fresh, unleaded gasoline with a pump sticker octane rating of 87 or higher. When the fuel reaches 1/2" (12.7 mm) below the bottom of the fill neck, stop. DO NOT OVERFILL. Space must be left for expansion.
   - This engine is certified to operate only on clean, fresh, unleaded gasoline. Fill only with clean, fresh, unleaded gasoline with a pump sticker octane rating of 87 or higher.
   - Do not use gasoline left over from the previous season, to minimize gum deposits in the fuel system.
   - Gasohol (up to 10% ethyl alcohol, 90% unleaded gasoline by volume) is an approved fuel. Other gasoline/alcohol blends are not approved.
   - Methyl Tertiary Butyl Ether (MTBE) and unleaded gasoline blends (up to a maximum of 15% MTBE by volume) are approved fuels. Other gasoline/ether blends are not approved.
3. Check the engine oil level as instructed in the Engine Operator's manual.
4. Check the hydrostatic transmission oil level. Refer to Checking The Hydrostatic Transmission Oil Level in the Product Care Section.
5. Check the rear tire inflation pressure is 10-12 psi (69-82.7 kPa).

   NOTE: New tires are over-inflated in order to properly seat the bead to the rim.
6. Check that all nuts, bolts and screws are tight.
7. Check the tension of the deck drive belts.
   a. Remove the deck cover
   b. The tension of the deck drive belts are maintained by a spring mechanism that adjusts for wear and stretch.

c. Examine the belts for cuts, fraying, and excessive wear. Replace if any of these are detected.

d. Replace the deck cover.

8. Check if deck is level. When correctly adjusted the mower deck should be level side to side, and the front of the deck should be approximately 1/4" (6.4 mm) lower than the rear of deck. If deck needs to be leveled, refer to the Service section.

9. Lubricate all pivot points listed in the Service section.

10. Adjust the leg pad and operator's platform suspension for operator's maximum comfort, visibility and for maintaining complete control of the machine. Refer to the Assembly & Set-Up section for instructions on adjusting the leg pad and suspension.

Safety Interlock System

⚠ WARNING

Do not operate the mower if the safety interlock system is malfunctioning. This system was designed for your safety and protection.

This mower is equipped with a safety interlock system for the protection of the operator. If the interlock system should ever malfunction, do not operate the mower. Contact an authorized service dealer.

- The safety interlock system prevents the engine from cranking or starting unless the parking brake is engaged, and the PTO lever is in the DISENGAGED (OFF) position.
- The engine will automatically shut OFF if the operator leaves the operator's platform before engaging the parking brake.
- The PTO will automatically shut OFF if the operator leaves the operator's platform with the PTO switch in the ENGAGED (ON) position, regardless of whether the parking brake is engaged.

NOTE: The PTO must be disengaged to restart the engine.

Standing on The Operator's Platform

⚠ WARNING

Only one person at a time may occupy the operator's platform - Otherwise injury may occur.

NOTE: Stepping off of the operator's platform without engaging the parking brake will cause the safety interlock system to stop the engine.

When standing on the operator's platform:

- Do not turnaround or face away from the controls.
- When operating the mower, lean forward into the leg pad.

NOTE: The operator's platform is equipped with an adjustable leg pad. If necessary, adjust the leg pad height. Refer to Adjustments, Leg Pad Height in the Assembly & Set-Up section.

NOTE: The operator's platform is equipped with an adjustable suspension. If necessary, adjust the operator's platform suspension. Refer to Adjustments, Suspension in the Assembly & Set-Up section.

Starting the Engine

⚠ WARNING

This machine is equipped with a safety interlock system designed for protection of the operator. Do not operate the machine if any part of the interlock system is malfunctioning. Periodically check the functions of the interlock system for proper operation.

⚠ WARNING

For personal safety, the operator must be standing on the operator's platform when starting the engine.

1. Operator must be standing on the operator's platform with both drive control levers in the neutral/start position.
2. Engage the parking brake.
3. Make certain the PTO is in the disengaged (down) position.
4. Lift the choke knob (if equipped) into the ON position.

   NOTE: If the engine is warmed up, it may not be necessary to choke the engine.

5. Move the throttle control to midway between the SLOW and FAST positions.
6. Turn the ignition key clockwise to the START position and release it as soon as the engine starts; however, do not crank the engine continuously for more than 5 seconds at a time. If the engine does not start within this time, turn the key to OFF and wait at least 30 seconds to allow the engine's starter motor to cool. Try again after waiting. If after a few attempts the engine fails to start, do not keep trying to start it with the choke closed as this will cause flooding and make starting more difficult.
7. Once the engine starts, push the choke (if equipped) halfway down and as the engine warms, push the choke all the way down.

COLD WEATHER STARTING

When starting the engine at temperatures near or below freezing, ensure the correct viscosity motor oil is used in the engine and the battery is fully charged. Start the engine as follows:

1. Be sure the battery is in good condition. A warm battery has much more starting capacity than a cold battery.
2. Use fresh winter grade fuel. Winter grade gasoline has higher volatility to improve starting. Do not use gasoline left over from summer.
3. Follow the previous instruction for Starting the Engine.

USING JUMPER CABLES TO START ENGINE

⚠ WARNING

Batteries contain sulfuric acid and produce explosive gasses. Make certain the area is well ventilated, wear gloves and eye protection, and avoid sparks or flames near the battery.

If the battery charge is not sufficient to crank the engine, recharge the battery. If a battery charger is unavailable and the mower must be started, the aid of a booster battery will be necessary. Connect the booster battery as follows:

1. Connect the end of one cable to the disabled mower battery's positive terminal; then connect the other end of that cable to the booster battery's positive terminal.
2. Connect one end of the other cable to the booster battery's negative terminal; then connect the other end of that cable to the frame of the disabled mower, as far from the battery as possible.
3. Start the disabled mower following the normal starting instructions previously provided; then disconnect the jumper cables in the exact reverse order of their connection.
4. Have the mower's electrical system checked and repaired as soon as possible to eliminate the need for jump starting.

STOPPING THE ENGINE

1. Move the RH and LH drive control levers neutral position.
2. Engage the parking brake.
3. Disengage the PTO.
4. Move the throttle control to the SLOW position.
5. Allow the engine to run for one minute then turn the key to STOP and remove the from the ignition module.

   NOTE: Always remove the key from the ignition module to prevent accidental starting or battery discharge if the equipment is left unattended.

Practice Operation (Initial Use)

Operating a zero-turn mower is not like operating a conventional type riding mower. Although and because a zero turn mower is more maneuverable, getting used to operating the drive control levers takes some practice.

It is strongly recommended that you locate a reasonably large, level and open "practice area" where there are no obstructions, pedestrians, or animals. You should practice operating the mower for a minimum of 30 minutes.

Carefully move (or have moved) the mower to the practice area. When performing the practice session, the PTO should not be engaged. While practicing, operate the mower at approximately 1/2-3/4 throttle and at less than full speed in both forward and reverse.

Carefully practice maneuvering the mower using the instructions in the following section "Driving the Mower." Practice until you are confident that you can safely operate the mower.

Driving the Mower

⚠ WARNING

Keep all movement of the drive control levers slow and smooth. Abrupt movement of the control levers can affect the stability of the mower and could cause the mower to flip over, which may result in serious injury or death to the operator.

1. Ensure the RH and LH drive control levers are in the neutral position and the parking brake is disengaged. See to Figure 8.

   NOTE: If the drive control levers are not even in the neutral position, refer to Product Care for instructions to adjust the drive control levers so that they are even.

2. Move the throttle to the full throttle position.

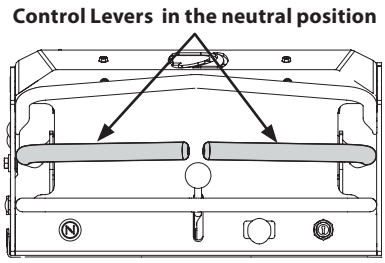


Figure 8

⚠ WARNING

Always maintain a firm grip on the control levers. DO NOT release the control levers to slow or stop the mower; move levers to neutral position using your hands.

3. To drive the mower, firmly grasp the respective drive control levers with your right and left hands.

DRIVING THE MOWER FORWARD

4. Slowly and evenly move both drive control levers forward. The mower will start to move forward. See Figure 9.
5. As the drive control levers are pushed farther forward the speed of the mower will increase.
6. To slow the mower move the drive controls lever rearward to attain the desired speed, or move the drive control levers to the neutral position to stop the mower.

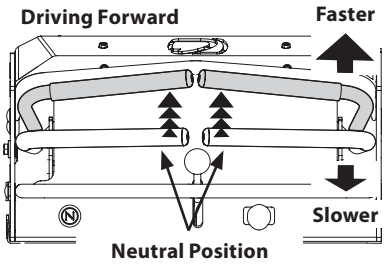


Figure 9

TURNING THE MOWER WHILE DRIVING FORWARD

⚠ WARNING

Sharp turns can affect control of the mower. ALWAYS slow the mower before making sharp turns.

To turn the mower while driving forward, move the drive control levers as necessary so that one drive control lever is rearward of the other. The mower will turn in the direction of the rearward drive control lever.

1. To turn to the right, move the right drive control lever rearward of the left lever. See Figure 10.
2. To turn to the left, move the left drive control lever rearward of the right drive control lever. See Figure 10.
3. The greater the distance between the two levers, the sharper the mower will turn.
4. To execute a "pivot turn," move the turn side drive control lever to the neutral position, while moving the other control lever forward.

   Note: Making a "pivot turn" on grass will greatly increase the potential for defacement of the turf.

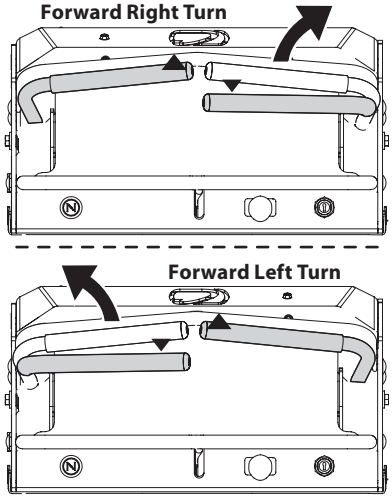


Figure 10

DRIVING THE MOWER IN REVERSE

⚠ WARNING

Always look behind and down on both sides of the mower before backing up. Always look behind while traveling in the reverse direction. Mowing in reverse is not recommended.

1. Slowly and evenly move both drive control levers rearward. The mower will start to move in the reverse direction. See Figure 11.
2. As the drive control levers are pushed farther rearward the speed of the mower will increase.
3. To slow the mower move the drive control levers forward to attain the desired speed, or move the drive control levers to the neutral position to stop the mower.

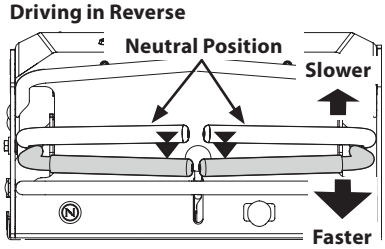


Figure 11

TURNING WHILE DRIVING REARWARD

To turn the mower while driving rearward, move the drive control levers as necessary so that one drive control lever is forward of the other. The mower will turn in the direction of the forward drive control lever.

1. To turn to the left while traveling in reverse, move the left drive control lever forward of the right drive control lever. See Figure 12.
2. To turn to the right while traveling in reverse, move the right drive control lever forward of the left drive control lever. See Figure 12.

   The greater the distance between the two drive control levers, the sharper the mower will turn.
3. To execute a "pivot turn," move the turn side drive control lever to the neutral position, while moving the other drive control lever rearward.

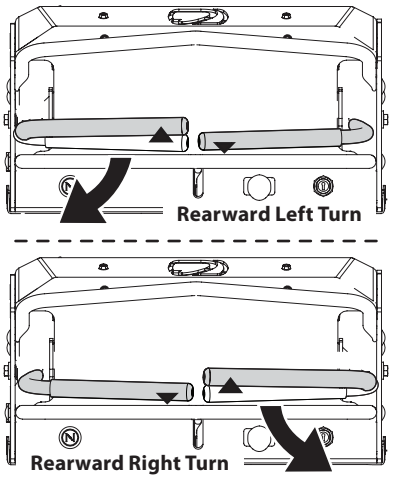


Figure 12

Note: Making a "pivot turn" on grass will greatly increase the potential for defacement of the turf.

EXECUTING A ZERO TURN

1. Stop the forward or reverse motion of the mower by moving the two drive control levers to neutral.
2. To turn clockwise, move the left drive control lever forward while simultaneously moving the right drive control lever rearward. See Figure 13.
3. To turn counterclockwise, move the right drive control lever forward while simultaneously moving the left drive control lever rearward. See Figure 13.

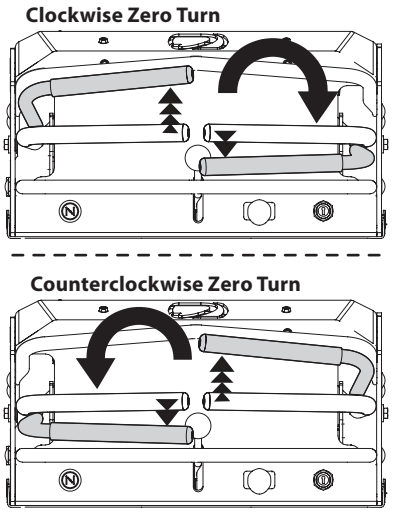


Figure 13

EXECUTING A "Y" MANEUVER

For low traction conditions, follow these procedures for zero turns (the "Y" maneuver):

To turn clockwise (front of machine moves toward RIGHT) when traveling FORWARD:

1. Come to a stop.
2. Slowly move both drive control lever rearward (no more than ½ maximum reverse speed) to initiate REVERSE travel,
3. Slowly move the LEFT drive control lever forward while maintaining the RIGHT drive control lever in the rearward travel position.
4. To stop the turn and re-initiate FORWARD travel, slowly move the RIGHT drive control lever from the REVERSE travel position to a FORWARD travel position equal to that of the LEFT drive control lever.
5. For counter-clockwise turns, reverse the above procedure.

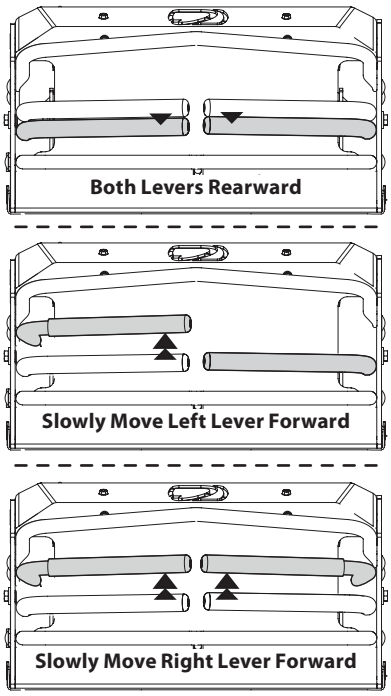


Figure 14

STOPPING THE MOWER

1. Move both drive control levers to the neutral position to stop the motion of the mower.
2. Push the PTO downward to the OFF position.
3. Use the deck lift knob/handle to raise the deck to its highest position.
4. If dismounting the mower, ensure the drive control levers are in the neutral position, engage the parking brake, move the throttle to the SLOW position. Allow the engine to run for one minute then turn the key to STOP and remove the from the ignition module.

⚠ WARNING

Do not leave the operator's platform of the mower without disengaging the PTO and engaging the Parking Brake. If leaving the mower unattended, turn the ignition key to the STOP position and remove key.

DRIVING ON SLOPES

Refer to the slope gauge in the Safe Operation Section to help determine slopes where you may operate safely.

⚠ WARNING

Do not operate on inclines with a slope in excess of 15°/26% (a rise of approximately 4 feet every 10 feet). The machine could overturn and cause serious injury.

1. Always drive across slopes, never up and down. Control the speed and direction of the mower using primarily the control lever on the downhill side of the mower, with the uphill control lever remaining essentially in a fixed position.
2. Avoid turning downhill if possible. Start at the bottom of a slope and work upward. Always slow down before turning.
3. Use extra care and go slowly when turning downhill.

OPERATION

ENGAGING THE PTO

Engaging the PTO transfers power to the cutting deck. To engage the PTO:

1. Move the throttle to the FAST position.
2. Pull the PTO switch up/out into the ENGAGED (ON) position.

   NOTE: When operating the mower be certain that the throttle is always in the FAST position. Operating with the throttle at less than full throttle may lead to premature battery wear and a poor quality cut.

3. To disengage the PTO, push the PTO switch down/into the DISENGAGED (OFF) position.

MOWING

⚠ WARNING

To help avoid blade contact or a thrown object injury, keep bystanders, helpers, children and pets at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.

⚠ WARNING

Make certain the area to be mowed is free of debris, sticks, stones, wire or other objects that can be thrown by the rotating blades.

NOTE: Do not engage the mower deck when lowered in grass. Premature wear and possible failure of the 'V" belt and PTO clutch will result. Fully raise the deck or move to a non grassy area before engaging the mower deck.

- Mow across slopes, not up and down. If mowing a slope, start at bottom and work upward to ensure turns are made uphill.
- Do not mow at high ground speed, especially if a mulch kit or grass collector is installed.
- Do not cut the grass too short. Short grass is prone to weed growth and yellows quickly in dry weather.
- Always operate the mower with the throttle in the FAST position while mowing.
- On the first pass pick a point on the opposite side of the area to be mowed. Follow the point to maintain a straight line
- move the throttle control or throttle control to the FAST position and engage the PTO.
- Lower the mower deck to the desired height setting.
- For best results it is recommended that the first two laps be cut with the discharge thrown towards the center. After the first two laps, reverse the direction to throw the discharge to the outside for the balance of cutting. This will give a better appearance to the lawn.
- Slowly and evenly push the RH and LH drive control levers forward to move the mower forward, and keep the mower headed directly toward the alignment point.

  NOTE: The speed of the mower will affect the quality of the mower cut. Mowing at full speed will adversely affect the cut quality. Control the ground speed with the drive control levers.
- Your mower is designed to cut normal residential grass of a height no more than 10" (25cm). Do not attempt to mow through unusually tall, 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.
- Do NOT attempt to mow heavy brush and weeds or extremely tall grass. Your mower is designed to mow lawns, NOT clear brush.
- Keep the blades sharp and replace the blades when worn.
- When approaching the other end of the strip, slow down or stop before turning. A Y-turn is recommended unless a pivot or zero turn is required.
- Align the mower with an edge of the mowed strip and overlap approximately 3" (7.6 cm).
- Direct the mower on each subsequent strip to align with a previously cut strip.
- To prevent rutting or grooving of the turf, if possible, change the direction that the strips are mowed by approximately 45° for the next and each subsequent mowing.

When stopping the mower for any reason while on a grass surface, always:

- Return the RH and LH drive control levers to the natural position and engage the park brake lever.
- Shut engine off and remove the key.
- Doing so will minimize the possibility of having your lawn "browned" by hot exhaust from your mower's running engine.

MOWER CUTTING BLADES

The blades normally factory installed on a mower afford the best grass cutting performance on the majority of grasses and mowing conditions; however, there will be occasions whereby the grass type, stage of grass growth, soil conditions, and weather conditions will require different cutting blade types. Since the mower decks are designed so that over-lap of the cutting blades generally exceed 1.5", there is no need for orientation of one cutting blade to an adjacent blade (i.e., the blades do not need to be "timed" nor synchronized).

Hi-lift — These are generally the best cutting blades for most grasses and mowing conditions. The Hi-Lift blades are the factory installed blades on these mowers. These blades will provide extra "lift" for the thinner leaf grasses, will handle lush grasses, and will provide maximum grass and debris discharge. These blades are generally required for material collection systems. More horsepower is required for these blades when compared to others, and they generally produce the highest noise levels.

Medium-lift — These blades require less horsepower than the hi-lift, and they generally work well in wider leaf grasses and some mulch applications.

Low-lift — These blades require less horsepower than hi-lift and medium-lift blades, and they generally work best with wide leaf grasses, sparse grass growth, and sandy soil conditions. They produce the lowest noise levels. Low-lift blades are configured without offset, and with a maximum amount of sharpened cutting edge.

Mulch — These blades are generally designed for use in cutting decks equipped with mulch baffles. The shape of the blade generally produces higher turbulence in order that the grass can be repeatedly cut and re-cut into smaller pieces. These blades generally require more horsepower than other blades. Mulch blades work best when the grasses are cut at the highest levels, minimal lengths of grasses are removed, and grass conditions are generally dry.

Note: Refer to the Attachment & Accessories section for a list of part numbers.

Reconfigurable Mower

	Inner Baffle	Discharge Baffle	Cutting Blades	Gauge Wheels
Standard set-up	Installed	Installed	Hi-lift	Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Stems (Dandelion, Bahia, Buckhorn, etc.)	Removed	Installed	Hi-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Very Lush &/or tall grass	Removed	Installed	Hi-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Low cut height (1 to 2")	Installed	Installed	Low-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm)
Mulch	Installed	Removed	Hi-lift/Mulch	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Material collection	Installed	Installed	Hi-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Abrasive (sandy), dry	Removed	Installed	Low-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)
Wet	Installed	Installed	Hi-lift	High = 1-½ to 2-½" (3.8 to 6.4 cm) High = 2-½ to 3-½" (6.4 to 8.9 cm) Low = 3-½ to 4-½" (8.9 to 11.4 cm)

Table Notes: This table is a general outline of suggested settings, mowing conditions may vary.

Inner Baffle: The inner baffle (a) regulates grass discharge. Remove the inner baffle for high-volume grass and install the inner baffle for precision cutting. See Figure 15.

Discharge Baffle: The discharge baffle (b) enhances the grass discharge pattern. The discharge baffle reduces clumping and should be removed for mulching. See Figure 15.

Gauge Wheels: The gauge wheels reduce scalping, help with precision cutting and reduce turf defacement during turns.

Cutting Blades: The cutting blades cut grass, create grass lift and discharge grass through the discharge chute.

Discharge Chute: The discharge chute controls the mower deck discharge and enhances the discharge pattern

NOTE: To avoid damaging grass, no more than ⅓ of the grass height should be removed during a single cutting (i.e. if the grass is 6" (15.2 cm) tall, cut it to 4" (10.2 cm).

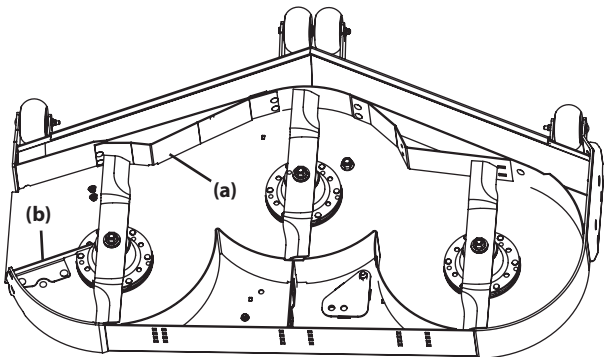


Figure 15

MAINTENANCE SCHEDULE

	Before Each Use	Every 25 Hours	Every 50 Hours	Every 500 Hours	After Each Use
Check gasoline level	✓				
Check hydraulic hoses for leaks	✓				
Check tires & tire pressure	✓				
Check deck, mower and hydro drive belts	✓				
Check blades and blade bolt tightness	✓				
Check safety switches for proper operation	✓				
Check fluid level in transmission oil expansion reservoir	✓				
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 *	✓				✓
Blow out/clean the engine/ pump control					✓
Blow out/clean the operator's platform area					✓
Lubricate wear points (see chart)			✓		✓
Clean engine cooling fins & external surfaces *			✓		
Change hydrostatic fluid & filter in transaxles †				✓	

† — After first 300 hours, change hydrostatic fluid and filter in transaxles

* — Perform more frequently under dusty conditions.

OIL CHART

Apply a few drops of SAE engine oil, grease, or use a spray lubricant. Apply the oil to both sides of pivot points. Wipe off any excess. Start engine and operate mower briefly to insure that oil spreads evenly.

Number of Oil Points	Description
DAILY	
4	Deck Suspension Pivots
2	Rear Deck Stabilizer Pivots
4	Height Adjustment Turnbuckle Clevis Pin
2	Height Adjustment Handle Pivots
6	Deck Lift Linkage Pivots
2	Deck Lift Handle Pivots
1	Deck Lift Handle Pin
2	Deck Frame Up-and-Down Pivots
WEEKLY	
4	Operator's platform Linkage pivot points
4	Speed Control Linkage Rod End Bearings
2	Pump Control Lever Pivots
1	Operator's Platform Suspension Adjustment Lever Pivot
1	Brake Lever Pivot
1	Brake Lever Pivot Clevis Pin
1	Brake Lever Control Rod Pivot

HYDRAULIC FLUID

- Cub Drive System Fluid Plus (Shell TT-SB)

GENERAL PURPOSE LUBRICATION:

Use any NLGI grade 2 multi-purpose grease. Shell Albida EP2 is recommended. Shell Albida EP 2 is a red-colored multi-purpose grease designed for heavy-duty bearing applications. It has high base oil viscosity for mechanical stability, has been formulated for high load, low-speed applications, and has excellent lubrication and corrosion protection.

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

Maintenance

⚠ WARNING

Before performing any maintenance or repairs, disengage the PTO, move the drive control levers in the neutral position and engage the parking brake. Stop the engine and remove the key to prevent unintended starting.

Post-Operation Mower Care

After each operation of the mower, the following procedures should be implemented to extend the life of your mower and ensure safe operating conditions.

⚠ DANGER

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

CLEANING THE UNDERSIDE OF THE DECK

Rinse grass clippings from the deck's underside and prevent the buildup of corrosive chemicals.

⚠ WARNING

Make certain the mower's discharge chute is directed AWAY from people, your house, garage, parked cars, etc.

1. Disengage the PTO, set the parking brake and stop the engine.
2. Use a hose to spray the underside of the deck.

   NOTE: Make sure that the hose is not routed under the deck and is clear of all moving parts.
3. After cleaning your deck, return to the operator's platform and engage the PTO. Keep the deck running for a minimum of two minutes, allowing the underside of the deck to thoroughly dry.

CLEANING THE MOWER

⚠ WARNING

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

Your mower should 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 mower running efficiently and to reduce fire risk is to regularly remove debris buildup from the mower. Follow the recommendations below and contact your authorized dealer with any questions.

- Allow the machine to cool in an open area before cleaning.
- Do not use water on any part of the mower except the underside of the cutting deck. Doing so can cause damage to the mower's spindle bearings, electrical system and engine, leading to premature failures. The use of compressed air and/or leaf blower will help keep the mower clean.
- Clean around the exhaust manifold, fuses, all wiring and harnesses, muffler pipe, muffler shield, engine intake screens and cooling fins, etc. See Figure 15.

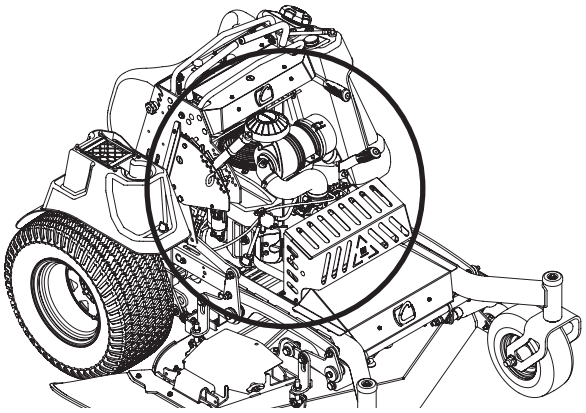


Figure 15

- Clean the top of the mower deck, under the spindle covers and belt area. See Figure 16.

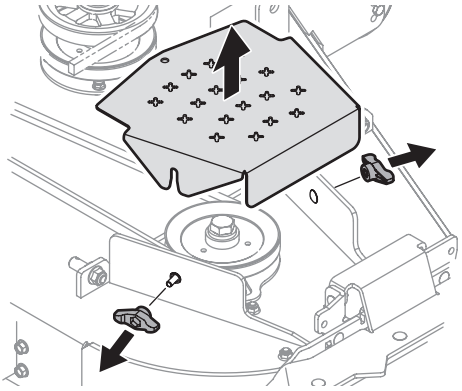


Figure 16

- Clean around and near the transmission, axle and the fan area. See Figure 17.

NOTE: Wheel not shown for clarity.

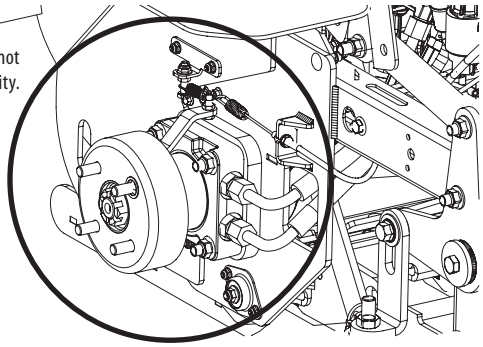


Figure 17

- Debris can accumulate anywhere on the mower, especially on horizontal surfaces. Additional cleaning may be necessary when mowing in dry conditions or when mulching.
- 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 mower before operating and storing, do not attempt to mow unusually tall grass (10" 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.

LUBRICATION

Periodically lubricate all pivot points with a quality lubricating oil.

STORING THE MOWER

- Allow the machine to cool in an open area before storing.
- Do not park the mower 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 mower before storing. Empty cargo boxes, grass catchers or containers.
- Check the fuel system (lines, tank, cap and fittings) frequently for cracks or leaks. Repair and clean as necessary.

Engine Care

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

CHANGING THE ENGINE OIL

⚠ WARNING

If the engine has been recently run, the engine, muffler and surrounding metal surfaces will be hot and can cause burns to the skin. Exercise caution to avoid burns.

Maintain oil level as instructed in Engine Operator's Manual. Be careful not to spill oil on any of the belts.

To complete an oil change, proceed as follows:

1. Run the engine for a short time to warm the engine oil. The oil will flow more freely and carry away more impurities. Use care to avoid burns from hot oil.
2. Locate the oil drain hose on the engine. See Figure 18.

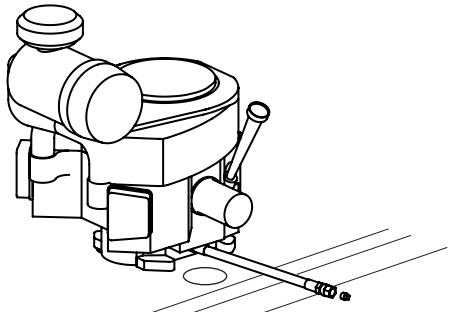


Figure 18

3. Route the free end of the oil drain hose through the hole in the mower frame toward an appropriate oil collection container with at least a 2.5 quart (2.65 Liter) capacity, to collect the used oil.

   NOTE: Avoid getting oil on the muffler when draining.
4. While holding the free end of the oil drain hose over the oil collection container, unscrew the square-head hose plug from the end of the hose. See Figure 18. Drain the engine oil into the collection container.
5. Remove the oil filter to make sure all the oil is drained.
6. After draining the oil, wipe any residual oil from the oil drain hose. Thread the square head plug into the drain hose fitting and fully tighten the plug.
7. Replace the oil filter and refill the engine with new oil as instructed in the engine operator's manual. Refer to the Engine Operator's Manual for information regarding the volume and weight of engine oil.
8. Place the oil drain hose back in original position.

Battery Information

⚠ WARNING

Should battery acid accidentally splatter into the eyes or onto the skin, rinse the affected area immediately with clean cold water. If there is any further discomfort, seek prompt medical attention.

If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

NEVER connect (or disconnect) battery charger clips to the battery while the charger is turned on, as it can cause sparks.

Keep all sources of ignition (cigarettes, matches, lighters) away from the battery. The gas generated during charging can be combustible.

As a further precaution, only charge the battery in a well ventilated area.

Always shield eyes and protect skin and clothing when working near batteries.

Batteries contain sulfuric acid and may emit explosive gases. Use extreme caution when handling batteries. Keep batteries out of the reach of children.

BATTERY MAINTENANCE

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

⚠ WARNING

Batteries contain sulfuric acid and may emit explosive gases. Use extreme caution when handling batteries. Keep batteries out of the reach of children.

BATTERY STORAGE

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

REMOVING/INSTALLING THE BATTERY

1. Remove the two thumb screws (a) securing the battery cover (b) to the right fender and remove the battery cover. See Figure 19.
2. Remove the nut securing the strap holding the battery in place.

   NOTE: The positive battery terminal is marked POS. (+) (c). The negative battery terminal is marked NEG. (–) (d).
3. Remove the hex cap screw (e) and sems nut (f) securing the black negative battery lead (g) to the negative battery post (marked NEG) (d). Move the cable away from the negative battery post.
4. Remove the red boot (h), hex cap screw (i) and sems nut (j) securing the red positive battery lead (k) to the positive battery post (marked POS) (c).
5. Carefully lift the battery out of the mower.
6. To Install the battery reverse STEPS 1-5.

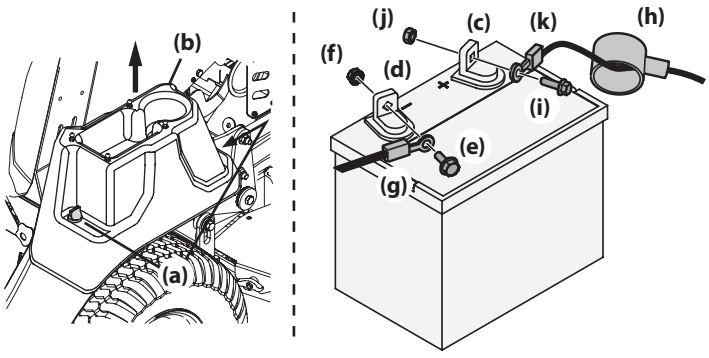


Figure 19

Tires

⚠ WARNING

For proper traction and deck leveling the maximum recommended tire pressure is 12 psi. Equal tire pressure should be maintained at all times. NEVER exceed the Maximum PSI noted on the tire side wall.

Check the tire air pressure after every 50 hours of operation or weekly. Keep the tires inflated to the recommended pressures. Improper inflation will shorten the tire service life and produce an uneven cut. Observe the following guidelines:

Rear Tires — 10-12 psi (69-82.7 kPa) max recommended operating pressure.

Front Tires — N/A - Front tires are semi pneumatic and do not require inflation.

- Do not inflate a tire above the operational pressure of 12 psi (82.7 kPa).
- Do not reinflate a tire that has been run flat or seriously under inflated. Have it inspected and serviced by a qualified tire mechanic.

Using the Transmission Bypass Valves

If for any reason the mower will not drive or you wish to move the mower, the two hydrostatic transmissions are equipped with a bypass valve that will allow you to manually move the mower short distances.

⚠ WARNING

Do not tow the mower, even with the bypass valve open. Serious transmission damage will result from doing so.

IMPORTANT: The mower is equipped with two hydrostatic transmissions. Each transmission is equipped with a bypass valve that MUST be opened before manually moving the mower.

IMPORTANT: Unless purging air from the hydrostatic transmission oil system, the bypass valves MUST be closed before operating the mower.

1. Loosen the two star knobs (a) securing the leg pad (b) to the mower. See Figure 20.
2. Remove the leg pad from the mower.
3. Remove the two star knobs (c) securing the rear panel (d) to the mower.
4. Remove the rear panel from the mower.

IMPORTANT: DO NOT open the bypass valves more than a maximum of two turns.

5. Locate the hydrostatic transmissions and open the two bypass valves (e) a maximum of two turns.
6. Using the two star knobs, reinstall the rear panel.
7. Using the two star knobs, reinstall the leg pad.
8. Reverse STEPS 1-7 to close the two bypass valves.

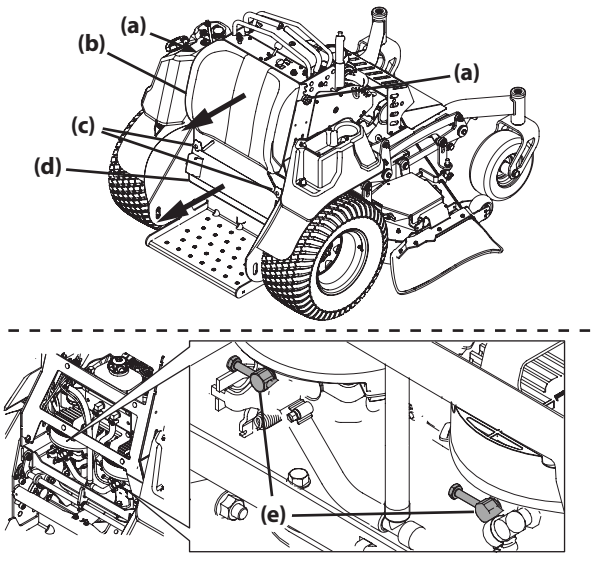


Figure 20

Hydrostatic Transmission Oil

⚠ WARNING

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

NOTE: This procedure contains the following instructions for checking , changing and adding hydrostatic transmission oil:

- Checking The Hydrostatic Transmission Oil Level
- Changing The Hydrostatic Transmission Oil
- Adding Hydrostatic Transmission Oil
- Purging Air From The Hydrostatic Transmission

CHECKING THE HYDROSTATIC TRANSMISSION OIL LEVEL

1. Locate the hydrostatic transmission oil reservoir (a) behind the engine under the control panel.
2. Ensure the hydrostatic transmission oil reservoir level is just above the upper reservoir mounting bolts (c) as shown in Figure 21.

NOTE: The hydrostatic transmission oil level must always stay above the hose fittings on the rear of the tank, otherwise air may be introduced into the system.

3. If necessary, add hydrostatic transmission oil. Refer to Adding Hydrostatic Transmission Oil in this procedure.

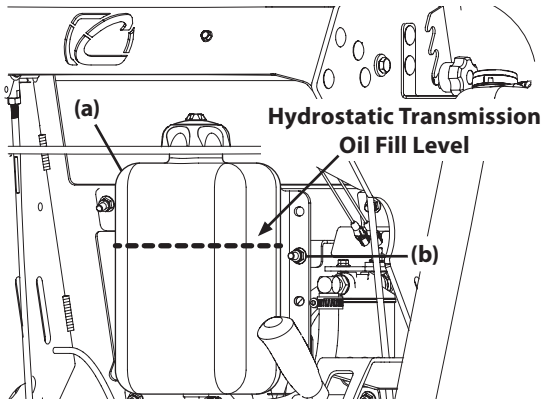


Figure 21

CHANGING THE HYDROSTATIC TRANSMISSION OIL/OIL FILTER

⚠ WARNING

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

NOTE: Use care when changing the hydrostatic transmission oil and oil filter. Do not allow oil to drip onto the hydrostatic transmission oil pumps.

1. Place a suitable container on the left side of the mower deck as close as possible to the oil filter.
2. Loosen the hose clamp (a) securing the transmission oil hose (b) to the transmission oil filter assembly (c). See Figure 22.
3. Positioning a funnel under the transmission oil filter assembly so that the funnel will empty into the container positioned in STEP 1.
4. Disconnect the transmission oil hose from the transmission oil filter assembly and allow the hydrostatic transmission oil to drain into funnel.

5. If necessary, perform the following to replace the oil filter:
   a. Remove the existing oil filter (d) from the transmission oil filter assembly (c).
   b. Apply a light amount of oil to the filter gasket.
   c. Install the new oil filter and tighten 3/4 to 1 turn after gasket contacts transmission oil filter assembly base.
6. Reconnect the transmission oil hose to the transmission oil filter assembly and secure hose using the hose clamp loosened in STEP 2.
7. Tighten the hose clamp (a) securing the transmission oil hose (b) to the transmission oil filter assembly (c).
8. Add new hydrostatic transmission oil. Refer to Adding Hydrostatic Transmission Oil in this procedure.

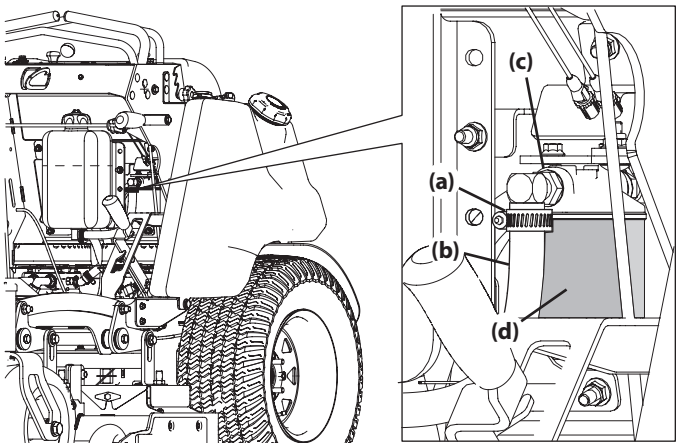


Figure 22

ADDING HYDROSTATIC TRANSMISSION OIL

1. Loosen the two star knobs securing the leg pad to the mower.
2. Remove the leg pad from the mower.
3. Remove the two star knobs securing the rear panel to the mower.
4. Remove the rear panel from the mower.
5. Remove the hydrostatic transmission oil reservoir cap (a) and insert a funnel into the reservoir (b). See Figure 23.
6. Add hydrostatic transmission oil until the level is even with the upper reservoir mounting bolts.
7. Purge air from the hydrostatic transmission. Refer to Purging Air From The Hydrostatic Transmission in this procedure.
8. Using the two star knobs, reinstall the rear panel.
9. Using the two star knobs, reinstall the leg pad.

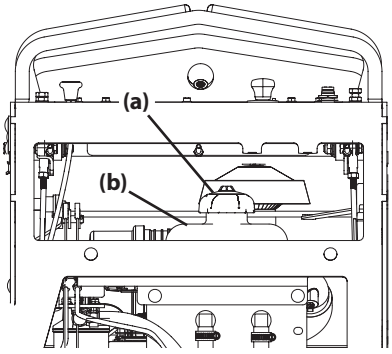


Figure 23

PURGING AIR FROM THE HYDROSTATIC TRANSMISSION

Due to the effects air has on efficiency in hydrostatic drive applications, it is critical that air is removed or purged from the system.

IMPORTANT: These purge procedures must be preformed any-time a hydrostatic system has been opened for maintenance or repair, or if any additional oil has been added to the system.

Air creates inefficiency because it has compression and expansion rates that are higher than that of oil.

Air trapped in the oil may cause the following symptoms:

1. Noisy operation.
2. Lack of power or drive after short-term operation.
3. High operation temperature and excessive expansion of oil.

Before starting, make sure the reservoir is at the proper oil level. Refer to Checking The Hydrostatic Transmission Oil Level in this Section.

IMPORTANT: The following procedures should be performed with the mower drive wheels off the ground, then repeated under normal operating conditions.

⚠ WARNING

Certain procedures require the mower engine to be operated and the vehicle to be raised off of the ground. To prevent possible injury to the servicing technician and/or bystanders, insure the vehicle is properly secured.

1. With the bypass valves open and the engine running, slowly move the drive control levers in both forward and reverse directions (5 to 6 times). As air is purged from the unit, the oil level in the reservoir will drop.
2. With the bypass valve closed and the engine running, slowly move the directional control in both forward and reverse directions (5 to 6 times). Check the oil level, and add oil as required after stopping engine.
3. It may be necessary to repeat STEPS 1 and 2 until all the air is completely purged from the system. When the wheels moves forward and reverse at normal speed and the reservoir oil remains at a constant level, purging is complete.

Mower Storage

If your mower is not going to be operated for an extended period of time (30 days to approximately 6 months), the mower should be prepared for storage. Store the mower in a dry and protected location. If stored outside, cover the mower (including the tires) to protect it from the elements. The procedures outlined below should be performed whenever the mower is placed in storage.

1. Change the engine oil and filter following the instructions provided in the Engine Operator's Manual packed with this manual.

⚠ WARNING

Never store the mower 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 mower 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.

⚠ WARNING

Fuel left in the fuel tank deteriorates and will cause serious starting problems.

   b. Use 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.

c. Emptying the fuel system for storage of more than 90 days:

- Prior to putting the mower 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 Operator's Manual, drain the fuel from the carburetor bowl.

3. Clean the engine and the entire mower thoroughly.
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.

   NOTE: Using a pressure washer or garden hose is not recommended for cleaning your mower. 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.

REMOVING THE MOWER FROM STORAGE

1. Check the engine oil.
2. Fully charge the battery and inflate the tires to the recommended 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 mower without a load to make certain all the mower systems are functioning properly.

Adjustments

⚠ WARNING

Shut the engine off, remove the ignition key and engage the parking brake before making adjustments. Protect your hands by using heavy gloves when handling the blades.

MOWER TRACKING

If your mower tracks to the left or right, a tracking adjustment is needed. See Figure 24.

To adjust the tracking, use the tracking bolts on the control panel and follow these instructions.

Mower Tracks (Pulls) To The Left:

6. Locate the left tracking bolt (a) on the left side of the control panel.
7. Loosen the jam nut (b) and rotate the tracking bolt counterclockwise in ¼-turn increments until the mower tracks straight.
8. Securely tighten the jam nut.

   NOTE: If the mower still tracks to the left after making the maximum tracking adjustment perform the following:

   a. Locate the right tracking bolt (c) on the right side of the control panel.

   b. Loosen the jam nut (d) and rotate the tracking bolt clockwise in ¼-turn increments until the mower tracks straight.

   c. Securely tighten the jam nut.

Mower Tracks (Pulls) To The Right:

1. Locate the right tracking bolt (c) on the right side of the control panel.
2. Loosen the jam nut (d) and rotate the tracking bolt counterclockwise in ¼-turn increments until the mower tracks straight.
3. Securely tighten the jam nut.

   NOTE: If the mower still tracks to the right after making the maximum tracking adjustment perform the following:

   a. Locate the left tracking bolt (a) on the left side of the control panel.

   b. Loosen the jam nut (b) and rotate the tracking bolt clockwise in ¼-turn increments until the mower tracks straight.

   c. Securely tighten the jam nut.

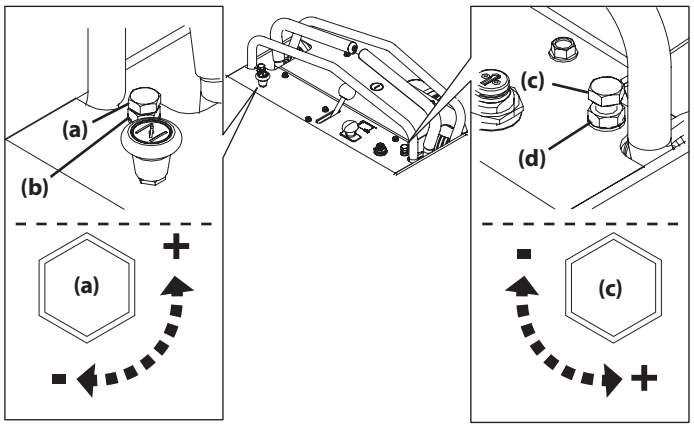


Figure 24

MAXIMUM SPEED

The mowers maximum forward speed can be set by adjusting the front cruse bar to limit how far the drive control levers move. See Figure 25.

1. Locate the four carriage bolts and locknuts (a) securing the front cruse bar (b) to the mower.
2. Loosen but do not remove the four locknuts.
3. Tilt the front cruse bar forward to increase the maximum forward speed or towards the rear of the mower to decrease the maximum forward speed.
4. Securely tighten the four carriage bolts and locknuts.

NOTE: After adjusting the front cruse bar the mower may require tracking adjustment. If necessary refer to Mower Tracking in this section.

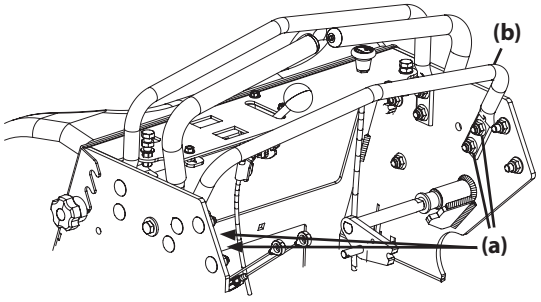


Figure 25

DECK LEVELING

NOTE: Check the mower's tire pressure before performing any deck leveling adjustments. Refer to Tires for information regarding tire pressure. Always level the deck side-to-side before front to rear.

Side-to-Side Leveling

1. Park the mower on a flat paved surface, engage the parking brake, shut off the engine, remove the key from the ignition switch, disconnect the spark plug wires, using the deck height index position the mowing deck into the 4" (10.2 cm) height of cut position (the 4" height of cut position is recommended in order for one to see and obtain a measurement. Any height of cut position is acceptable as long as a proper measurement can be taken) and rotate both outside blades so that they are perpendicular with the mower.
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. Adjust the eyebolt (a) at the left front of the deck so that the blade-to-ground height at the right outside blade tip matches that of the left outside blade tip. This is done by loosening the jam nuts (b) on the eyebolt (a) and tightening the upper jam nut (b) to raise the deck and loosening the jam nut (b) to lower the deck. The right outer blade tip height is fixed by the right, front eyebolt (a) so you must adjust the left outer tip to match it. See Figure 26.

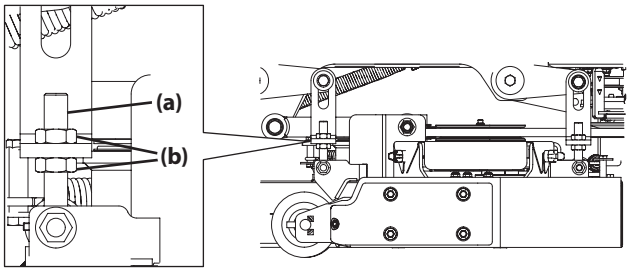


Figure 26

4. Once the proper adjustment is made, re-tighten the jam nuts (b).

Front-to-Back Leveling

1. Park the mower on a flat paved surface, engage the parking brake, shut off the engine, remove the key from the ignition switch, disconnect the spark plug wires, using the deck height index position the mowing deck into the 4" (10.2 cm) height of cut position (the 4" (10.2 cm) height of cut position is recommended in order for one to see and obtain a measurement. Any height of cut position is acceptable as long as a proper measurement can be taken) and rotate both outside blades so that they are parallel with the mower.
2. Measure the blade-to-ground height at the right rear blade tip. Again be sure to measure at the blade tip at the rear of the right blade when aligned along the mower center line. The blade-to-ground height at the rear of the blade tip should be 1/8" to 1/4" (3.2 to 6.4 mm) higher than the front tip. This is referred to as blade pitch. The same height difference should be true for the left blade, measured front and back. The pitch should not exceed 1/16" (1.6 mm) if cut height is below 1-1/2" (3.8 cm).
3. Loosen the jam nuts (b) at the rear left and right of the deck eyebolts (a). Refer to Figure 26.
4. Start at the right rear to raise the rear of the deck, tighten the upper jam nut (b) to raise the deck or loosen the upper jam nut (b) to lower the deck.
5. Adjust the jam nut (b) at the left rear to take the "slack" out of the threaded rod.
6. Tighten both lower jam nuts (b) to secure the deck adjustment.
7. The final adjustment would be to take the "slack" out of the left rear linkage if the rear of the deck was raised by adjusting the jam nuts (b) on the eyebolt (a). Loosen the jam nuts (b) and tighten the upper jam nut (b) to remove "slack".
8. In many cases it will be necessary to adjust deck height using both eyebolt (a) adjustments and pitch adjustment to achieve the correct blade-to-ground heights. If you remember that the front right blade tip adjustment is fixed and you level to that height, adjusting the decks will be simplified.

ADJUSTING THE FRONT GAUGE WHEELS

⚠ WARNING

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

The front gauge wheels on the mower deck are an anti-scalp feature, and should not ride on the ground. The front gauge wheels should be approximately 1/4-1/2" (6.4 to 12.7 mm) above the ground when the deck is set in the desired height setting.

Using the deck lift handle, set the deck in the desired height setting, then check the gauge wheel distance from the ground below. If necessary adjust the front gauge wheels as follows:

1. Visually check the distance between the front gauge wheels and the ground. If the gauge wheels are near or touching the ground, they should be raised. If more than 1/2" (12.7 mm) above the ground, they should be lowered.
2. Remove the lock nut (a) securing one of the front gauge wheel (b) to the deck. Remove the front gauge wheel (b), hex screw (c) and spacer (d). See Figure 27.

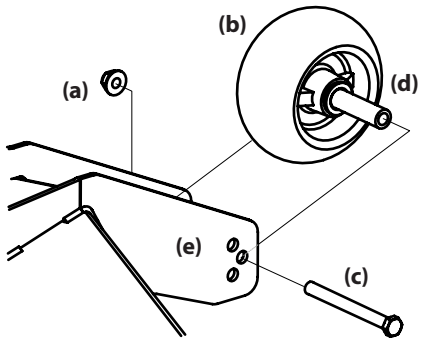


Figure 27

NOTE: There are a pair of front gauge wheels on the nose of the 54" and 60" decks.

3. Insert the hex screw (c) into the one of three index holes in the front gauge wheel bracket (e) that will give the front gauge wheel (b) a 1/4-1/2" (6.4 to 12.7 mm) clearance with the ground.
4. Note the index hole of the just adjusted front gauge wheel (b), and adjust the other front gauge wheel (b) into the respective index hole of the other front gauge wheel bracket (e).

Service

CHARGING THE BATTERY

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

- A voltmeter or load tester should read 12.6 volts (DC) or higher across the battery terminals. See Figure 28.

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

Figure 28

- Charge the battery with a 12-volt battery charger at a MAXIMUM rate of 10 amps.

SERVICING ELECTRICAL SYSTEM

Fuse

The 25 amp fuse holder is located on the right side of the mower frame under the control panel. The fuse is a standard plug-in type automotive fuse. Always use the same capacity fuse for replacement. Check the 25 amp fuse for any electrical problems.

If you have a recurring problem with blown fuses, have the mower's electrical system checked by your Cub Cadet Service Dealer.

SAFETY INTERLOCK SYSTEM & SWITCH OPERATION CHECKS

The following operational checks should be made daily with the mower on a flat surface and the wheels blocked to prevent unintentional movement of the mower:

PTO Switch

1. Stand on the operator's platform. With the drive control levers in the neutral position and the parking brake engaged, engage the PTO switch by pulling up on the knob and try to start the engine. The engine should not start. If it does, the PTO switch must be replaced. See your Cub Cadet Service Dealer.
2. If the engine does not start, disengage the PTO by pressing the knob down and start the engine. Now engage the PTO and the blades should rotate.
3. If the blades do not turn, the PTO switch must be replaced, the platform switch must be replaced or the electric PTO clutch must be repaired. See your Cub Cadet Service Dealer.

Parking Brake Switch

1. Stand on the operator's platform. With the drive control levers in the neutral position and the PTO disengaged, release the parking brake and try to start the engine. The engine should not start.
2. If it does, the parking brake switch must be repositioned or replaced. See your Cub Cadet Service Dealer. If the engine does not start, engage the parking brake and start the engine.

Operator's Presence Control Switch

1. With the drive control levers in the neutral position, the parking brake engaged and the PTO disengaged, start the engine. Disengage the parking brake and step off of the operator's platform. The engine should stop.
2. If the engine does not stop, the operator's platform switch must be replaced. See your Cub Cadet Service Dealer.
3. With the drive control levers in the neutral position, the parking brake engaged and the PTO disengaged, stand on the operator's platform and start the engine. Engage the PTO and the blades should start to rotate. Step off of the operator's platform and the blades should stop.
4. If the blades do not stop when you step off of the operator's platform, the operator's platform switch must be replaced. See your Cub Cadet Service Dealer.

Electric PTO Clutch

This clutch operates when the engine is running, the operator is on the operator's platform and the PTO is engaged. This electric clutch is a normally trouble free device. If a problem develops and the blades do not turn first check the 25 amp fuse, then investigate the wiring harness and the connections to the platform switch, the PTO switch and the electric blade clutch. Then check the operator's platform switch, the PTO switch and finally the electric blade clutch. If the PTO clutch is still not working properly, see an authorized service dealer.

REAR TIRE REMOVAL

1. With the tires on the ground, loosen, but do not remove the four lug nuts (a). See Figure 29.
2. Elevate the mower so tire is off the ground.
3. Remove the four lug nuts to remove tire from mower.
4. With the mower elevated, use the four lug nuts to reinstall the tire onto the mower. Hand tighten lug nuts.
5. Lower the mower so tire is on the ground.
6. Torque the lug nuts (a) to 65-70 ft-lbs (88.13-94.91 N-m). in a crisscross pattern.

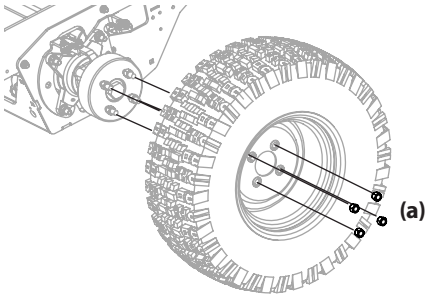


Figure 29

DECK REMOVAL

⚠ WARNING

The muffler and any surrounding parts at the rear of the mower may be extremely hot, and could cause serious burns. Use extreme caution when near the muffler. Allow the muffler to fully cool before removing the belt from the PTO pulley.

Remove the mower deck from the mower as follows:

1. Lower the deck to the ground. Capture the deck lift by placing the clevis pin behind the lowest position.
2. Apply the parking brake. Remove ignition key and the spark plug cap.
3. Using a 1/2" (12.7 mm) drive in the idler pulley bracket (a), turn the wrench towards the front of the mower and slide the PTO belt (b) off the PTO pulleys (c). See Figure 30.

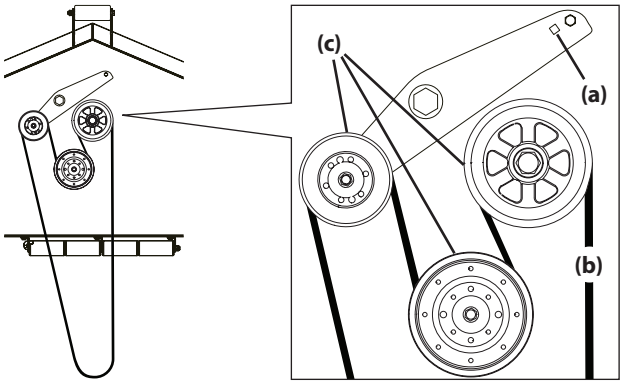


Figure 30

4. Remove the four lynch pins (a) that secure the deck to the deck lift assembly. See Figure 31.
5. Remove the lynch pin (b) securing the rear stabilizer bar to the rear, right side of the deck. See Figure 31.

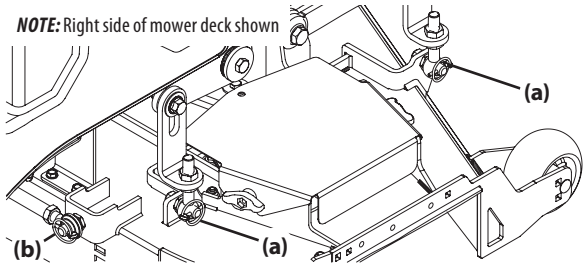


Figure 31

⚠ CAUTION

The spring is under tension due to the weight of the deck. When removing the lift linkage from the deck the tension of the springs will go from the deck to the deck lift handle. Not capturing the deck height index by placing the clevis pin behind the lowest position while removing the lift linkage from the deck will cause it to snap back.

6. Remove the hex screws (a) flange lock nuts (b) securing the front deck control rods (c) to the deck. See Figure 32.

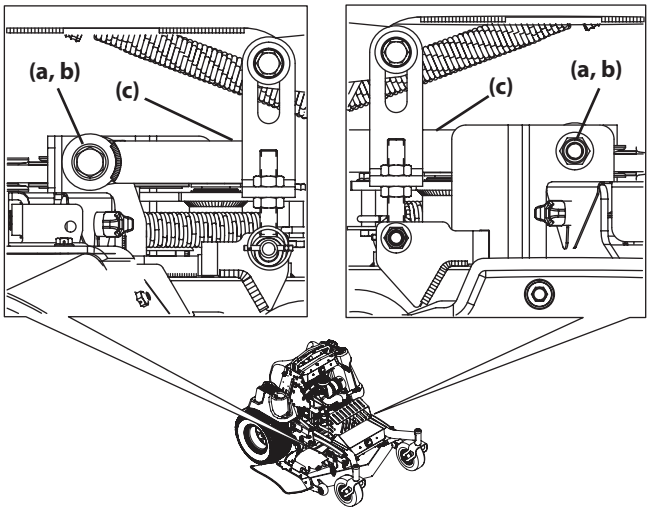


Figure 32

7. Turn front wheels as if to make a pivot turn.
8. Shift the deck toward the right side of the mower and remove.
9. To install reverse the process.

REPLACING THE PTO BELT

1. Remove the PTO belt (a) from the deck as instructed in the Deck Removal section then remove it from around the PTO clutch (b). See Figure 33.

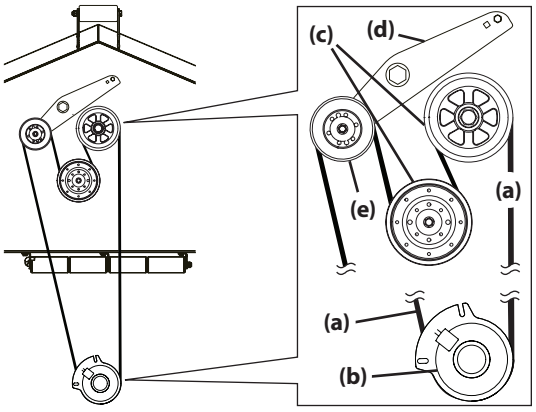


Figure 33

2. Route the PTO belt (a) as shown in Figure 33.
3. After routing the belt around the PTO pulley (c), use a 1/2" (12.7 mm) drive in the idler pulley bracket (d) and turn towards the right of the mower to finish routing the belt around the idler pulley (e).
4. Reinstall the deck.

REPLACING THE DECK BELT

1. Set the parking brake. Remove ignition key and both spark plug caps.
2. Remove the PTO belt, (refer to Deck Removal on page 24).
3. To remove the belt covers (a) , remove the wing knobs (b) from the carriage screws (c) securing it to the deck. See Figure 34.

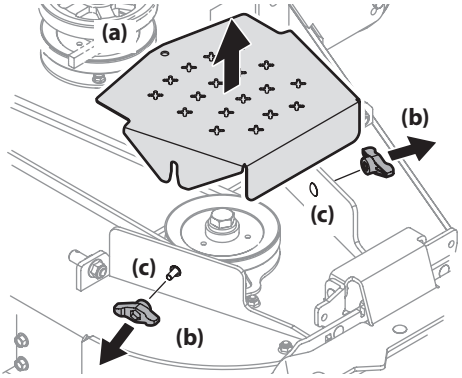


Figure 34

4. The speed nut should hold the carriage screw (c) and tab bolt in place, if not re-install as shown in Figure 34.
5. Using a 1/2" (12.7 mm) drive insert the end into the 1/2" (12.7 mm) square opening in the deck idler assembly (d) and rotate the deck idler assembly clockwise. See Figure 35.
6. While holding the deck idler assembly, loosen the deck belt from the pulley and slide the belt away from the pulley.

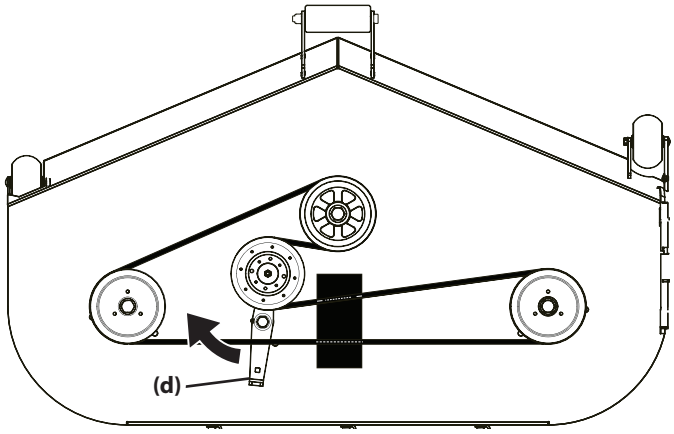


Figure 35

⚠ WARNING

Avoid pinching injuries. Never place your fingers on the idler spring or between the belt and a pulley while removing the belt.

7. Route the new belt as shown in Figure 35. Then reinstall the deck and PTO belt as instructed on page 25.

REPLACING THE BLADES

⚠ WARNING

Before performing any maintenance, disengage the PTO, engage the parking brake lever, turn the ignition key to the "OFF" position and remove the key from the switch. Protect your hands by using heavy gloves when handling the blades. When servicing the mower deck, be careful not to cut yourself on the sharpened blades.

To Remove the Blades:

1. Remove the deck as instructed in the Deck Removal section on page 24.
2. Jack up the front of the mowing deck about one foot and block it in that position.
3. Wrap a rag around one end of the blade (a) and grasp it to prevent it from turning, or secure the blade (a) by placing a block of wood (b) between the blade (a) and the deck housing (c). See Figure 36.

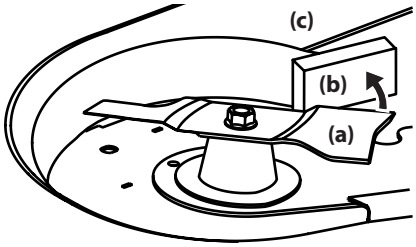


Figure 36

4. Remove the flange nut (d) and flat washer (e) at the blade (a) and remove the blade. See Figure 37.

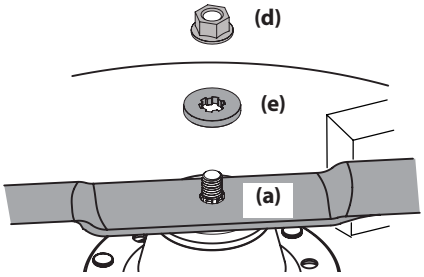


Figure 37

5. If necessary, sharpen the blade. See Sharpening The Blade in the Product Care Section.

To Reinstall the Blades

1. Place blade on the spindle shaft. Be sure to install the blade with the side marked "Bottom", "Grass Side" or with a part number stamped facing the ground when the deck is reinstalled on the tractor and in the operating position.
2. Carefully place the flat washer on the spindle shaft. Be sure that the splines at the base of the spindle shaft threads line up with the washer splines. See Figure 38.

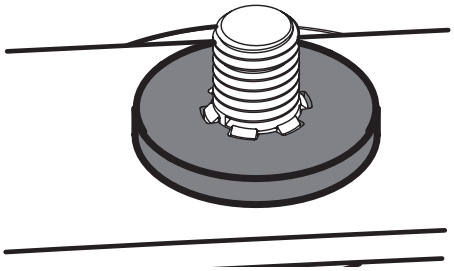


Figure 38

3. Secure the blade from turning clockwise when reinstalling the flange lock nut (the opposite direction of blade removal).
4. Install the flange lock nut onto the spindle shaft over the blade and flat washer. Torque to 110-130 ft-lbs (149.14-176.26 N-m).

Sharpening the Blades

1. Remove the blades. See Replacing The Blade in the Product Care Section.
2. Clean any debris from the blades. Keep blades sharp and free of build up at all times.
3. To properly sharpen the cutting blades, remove equal amounts of metal from both ends of the blades along the cutting edges, parallel to the trailing edge, at a 25°-30° angle. Always grind each cutting blade edge equally to maintain proper blade balance. See Figure 39.

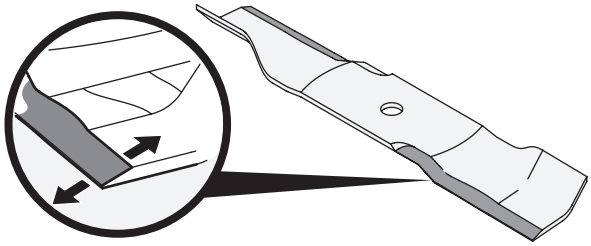


Figure 39

⚠ WARNING

If a blade is bent or otherwise damaged, replace the blade with a new one. Use only original equipment blades.

⚠ WARNING

A poorly balanced blade will cause excessive vibration, may damage the machine and/or result in personal injury.

4. Test the blade's balance using a blade balancer. Grind metal from the heavy side until it balances evenly.
5. Reinstall the blades. See Replacing The Blade in the Product Care Section.

CHANGING THE SPINDLE ASSEMBLY

1. Remove the deck as instructed in the Deck Removal section on page 24.
2. Jack up the front of the mowing deck about one foot and block it in that position.
3. Remove the deck cover.
4. Remove the drive belts. See Replacing the Deck Belt on page 25.
5. Remove the blade. See Replacing the Blades on page 26.
6. Remove the hex flange bolts (a) and flat washers (b) securing the left and right spindle pulleys (c) to the spindle assembly (d). See Figure 40.

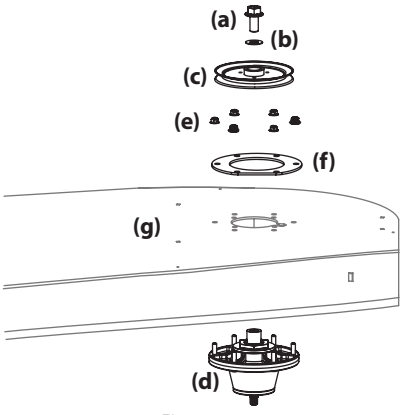


Figure 40

7. Remove the six (6) flange lock nuts (e)securing the left and right spindle assemblies (d) and the support plates (f) to the deck shell (g). See Figure 40.
8. Remove the hex flange bolt (a) and flat washer (b) securing the drive pulley (c) and center spindle pulley (d) to the spindle assembly (e). See Figure 41.

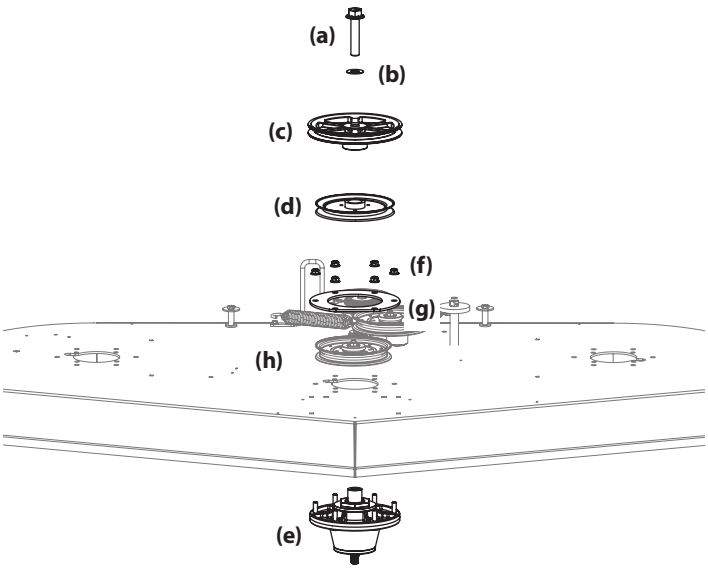


Figure 41

9. Remove the six (6) flange lock nuts (f)securing the center (d) spindle assembly (e) and the support plates (g) to the deck shell (h). See Figure 41.
10. Reverse the process to install the spindle assembly. When installing the new spindle assembly be sure to install the hardware exactly as shown in Figure 40. Torque the hex flange bolts to 250 ft-lbs. (338.95 N-m) and the flange lock nuts to 21-32 ft-lbs (28.47-43.39 N-m).

CHANGING THE TRANSMISSION DRIVE BELT

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

MOWER CREEPING

Creeping is the slight forward or backward movement of the mower when the throttle is on and the drive levers are in the neutral position. If your mower creeps, see your Cub Cadet service dealer.

Troubleshooting

EXCESSIVE VIBRATION

1. Cutting blade loose or unbalanced.
   a. Tighten blade and spindle.
2. Damaged or bent cutting blade.
   a. Replace blade.

UNEVEN CUT

1. Deck not properly leveled.
   - Perform side-to-side deck adjustment.
2. Cutting blade dull or damaged.
   - Sharpen or replace cutting blade.
3. Uneven tire pressure.
   - Check and correct tire pressure in all four tires.

MOWER WILL NOT MULCH GRASS.

1. Engine speed too low.
   - Place throttle in FAST (rabbit) position.
2. Wet grass.
   - Do not mulch when grass is wet.
3. Excessively high grass.
   - Mow once at a high cutting height, then mow again at desired height or make a narrower cutting swath.
4. Dull blade.
   - Sharpen or replace blade.

ENGINE FAILS TO START

1. PTO/Blade engaged.
   - Place blade engage lever in disengaged (OFF) position.
2. Blown fuse.
   - Replace fuse
3. Parking brake not engaged.
   - Engage parking brake.
4. See Engine Operator's Manual.

ENGINE/MOWER DECK INTERMITTENT STOP/START

1. Engine or mower deck stops and starts when going over rough ground.
   - Operator's platform switch engages and disengages when driving over rough ground. Adjust suspension lower(softer) setting. If suspension is already in lowest setting see your Cub Cadet service dealer.

REPLACEMENT PARTS & ACCESSORIES

Replacement Parts

Part Number	Description
754-06514 954-04327 954-04319	Deck Belt (48″ Deck) Deck Belt (54″ Deck) Deck Belt (60″ Deck)
754-06034 754-06074 754-06075	PTO Belt (48″ Deck) PTO Belt (54″ Deck) PTO Belt (60″ Deck)
754P05914A	Drive Belt
942-04417 942-04416 942-04415	Hi-Lift Blade, 17.0 (48″ Deck) Hi-Lift Blade, 19.0 (54″ Deck) Hi-Lift Blade, 21.0 (60″ Deck)
618-08473	Deck Spindle
634-05451	Deck Wheel
731-11926	Deck Skid Guard
925-1707D	Battery
951-12754	Gas Cap
946-05434	Throttle Control Cable (If Equipped)
946-05341A	Choke Control (If Equipped)
925-06908	Ignition Key (PRO-Z key Set)
946-05103A	Park Brake Cable
931-05396D	Chute Assembly (48/54/60″ Decks)
934-05424 634-05228 634-05193	Rear Wheel Assembly, 24 x 9.5-12 (48) Rear Wheel Assembly, 24 x 12-12 (54) Rear Wheel Assembly, 24 x 12-12 (60)
634-06144	Front Wheel Assembly, 13 x 5-6
741-05262	Front Axle Ball Bearings

Attachments & Accessories

Part Number	Description
19A70037100	48″ Mulch Kit
19A70038100	54″ Mulch Kit
19A70039100	60″ Mulch Kit
59B30021150	12V Outlet Receptacle
59B50005150	Work Light Kit
59A50011150	Discharge Restrictor Kit, 48″
59A50012150	Discharge Restrictor Kit, 54/60″
59B30052150	Heavy Duty Striping Roller
490-850-0008	Oil Siphon
490-850-0005	Blade Removal Tool
490-325-0020	Tire Sealant
490-900-0045	Oil Filter Wrench
490-900-0062	Armortek Non-Stick Spray
490-000-0028	Carburetor & Choke Cleaner

MTD Product Warranty

1. Statutory Warranty

1.1 If you are a "consumer" pursuant to the Australian Consumer Law, then MTD Products Australia Pty Ltd ACN 004 873 572 (**MTD**) confirms the following: *Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.*

1.2 Your right to replacement, refund or compensation under the Australian Consumer Law may be against MTD and/or the party that supplied the relevant product to you, as specified in the Australian Consumer Law.

1.3 The benefits provided to you by this Warranty are in addition to other rights and remedies available to you under the law.

2. Contractual Warranty

2.1 In addition to the rights and remedies you have under law :

MTD Products Australia Pty Ltd
of 6-8 Zenith Road, Dandenong South, Victoria 3175
Email: enquiries@mtdproducts.com
Telephone: 1300 951 594

provides the following additional contractual warranty in support of the products listed in Table A (**MTD Product**), supplied by MTD or an authorised MTD dealer within Australia to you.

2.2 Subject to the terms and conditions of the warranty set out in this document (**Warranty**), MTD warrants that the MTD Product will be free from defects in materials and workmanship for the period set out in Table A below (**Warranty Period**).

2.3 The Warranty Period will commence on the date you purchase the MTD Product from MTD or an MTD dealer. The Warranty Period varies, as set out in the Table A, according to:

(a) the type of MTD Product;

(b) the part of the MTD Product that is defective; and

(c) whether the MTD Product is:

(i) solely used for personal and domestic purposes, which excludes any use in connection with a business or trade (**Residential Use**); or

(ii) not solely used for personal and domestic purposes, or is used in connection with a business or trade (**Commercial Use**).

TABLE A

LAWN MOWERS	General Warranty Period Domestic Use	General Warranty Period Commercial	Engine Warranty Period	Attachments Warranty Period
	Excludes engine, attachments and normal wear parts			
Rover Steel Deck / Rover Engine/Endeavor	2 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Steel Deck / Non-Rover Engine	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	Nil
Rover Steel Deck / Rover Engine	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Rover Steel Deck / Non-Rover Engine	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Alloy Deck / Rover Engine	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Rover Alloy Deck / Non-Rover Engine	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Cylinder Mowers / Petrol	5 Years	Nil	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Cylinder Mowers / Battery	2 Years	Nil	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
HANDHELD EQUIPMENT	**General Warranty Period Domestic Use**	**General Warranty Period Commercial**	**Engine Warranty Period**	**Attachments Warranty Period**
	Excludes engine, attachments and normal wear parts			
Line Trimmers	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Blowers	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Chainsaws	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Hedge Trimmer	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Edger	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Edger	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Powered by CORE	**General Warranty Period Domestic Use**	**General Warranty Period Commercial**	**Charger & Battery Warranty Period**	**Attachments Warranty Period**
	Excludes motor, attachments and normal wear parts			
Rover CORE Powered Product	5 Years	90 Days	3 Years Domestic / 90 Day Commercial	N/A
SEASONAL	**General Warranty Period Domestic Use**	**General Warranty Period Commercial**	**Engine Warranty Period**	**Attachments Warranty Period**
	Excludes engine, attachments and normal wear parts			
Log Splitter	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Log Splitters Rover Engine	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Rover Log Splitters Non-Rover Engine	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Chipper Shredders	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Chipper Shredders	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Chipper Shredder Vacs	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Chipper Shredder Vacs Rover Engine	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Rover Chipper Shredder Vacs Non-Rover Engine	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Tillers	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Rover Tillers Rover Engine	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	N/A
Rover Tillers Non-Rover Engine	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A
Wheeled String Trimmer	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	N/A

TABLE A CONTINUED

ROVER RIDE ONS & ZERO- TURNS	General Warranty Period Domestic Use	General Warranty Period Commercial Use	Engine Warranty Period	Attachments Warranty Period
	Excludes engine, attachments and normal wear parts			
Micro Rider 24"	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Micro Rider 24"	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Mini Rider 30"	2 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Mini Rider 30"	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Mini Rider 30"Hydrostatic Transmission	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
439/38	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover 420/38	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Rancher 547/38	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Raider 17/42	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Rancher 547/42	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Lawn King 547/42	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Lawn King 18/42 Kawasaki	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover Lawn King 24/42 Kawasaki	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZT L 34	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZT L 42 Kohler	5 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZT L 46 Kawasaki	5 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZT S 46 Kohler	5 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZ L 42 679cc	5 Years	90 Days	5 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZT 50 Kohler	5 Years 5 Year fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial
Rover RZ L 46 Kawasaki	5 Years 5 Year fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / 90 Day Commercial

TABLE A CONTINUED

CUB CADET RIDE ONS & ZERO-TURNS	General Warranty Period Domestic Use	General Warranty Period Commercial Use	Engine Warranty Period	Attachment Warranty Period
	Excludes engine, attachments and normal wear parts			
CC30 e (Electric Rider)	3 Years	90 Days	N/A	1 Year Domestic / Nil Commercial
LT42 e (Electric Rider)	3 Years	90 Days	N/A	1 Year Domestic / Nil Commercial
LX 42 Kohler	3 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
LX 42 EFI Cub Cadet	3 Years	90 Days	2 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
LX 46 Kohler	3 Years. 5 Year chassis, front axle & fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
LX 54 Kohler	3 Years. 5 Year chassis, front axle & fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
RZT L 42 Kohler	3 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
RZT S 42 Kohler	3 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
RZT L 50 Kohler	3 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
RZT S 50 Kohler	3 Years	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
RZT S 46 Kohler	3 Years. 5 Year fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
ZT2 L 54 Kawasaki	3 Years. 5 Year fabricated deck shell.	90 Days	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
Z-Force LZ 54 Kohler	3 Years. 5 Year fabricated deck shell.	1 Year	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
Z-Force LX 48 Kohler	3 Years. 5 Year fabricated deck shell.	1 Year	3 Year Domestic / 1 Year Commercial	1 Year Domestic / Nil Commercial
Z-Force SX 54 Kohler	3 Years. 5 Year fabricated deck shell.	1 Year	3 Year Domestic / 1 Year Commercial	1 Year Domestic / Nil Commercial
Z-Force LX 60 Kohler	3 Years. 5 Year fabricated deck shell.	1 Year	3 Year Domestic / 1 Year Commercial	1 Year Domestic / Nil Commercial
Z-Force SX Kawasaki Models	3 Years. 5 Year fabricated deck shell.	1 Years	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial
ZTX5 Kawasaki Models	3 Years. 5 Year fabricated deck shell.	1 Years	3 Year Domestic / 90 Day Commercial	1 Year Domestic / Nil Commercial

TABLE A CONTINUED

CUB CADET COMMERCIAL Handheld	General Warranty Period Domestic Use Excludes engine, attachments and normal wear parts	General Warranty Period Commercial Use	Engine Warranty Period	Attachments Warranty Period
Brush Cutter	3 Years	1 year	1 year	N/A
Hedge Trimmer	3 Years	1 year	1 year	N/A
CUB CADET COMMERCIAL PRO Z	**General Warranty Period Domestic Use** **Excludes engine, attachments and normal wear parts**	**General Warranty Period Commercial Use**	**Engine Warranty Period**	**Attachments Warranty Period**
PRO Z 148 S	3 Years. 5 Year fabricated deck shell.	2 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 154 L	3 Years. 5 Year fabricated deck shell.	2 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 154 S	3 Years. 5 Year fabricated deck shell.	2 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 554 S	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 760 L	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 760 L	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 760 S	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 972 S	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
PRO Z 972 SD & SDL	3 Years. 5 Year fabricated deck shell.	3 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
Pro HW300 Hydro Walk Kawasaki	3 Years. 5 Year fabricated deck shell.	2 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial
Pro X 648 Kawasaki	3 Years 5 Year fabricated deck shell.	2 Years	3 Year Domestic / 3 Year Commercial	1 Year Domestic / Nil Commercial

TABLE A CONTINUED

WOLF- Garten	General Warranty Period Domestic & Commercial Use	Engine Warranty Period	Attachments Warranty Period
WOLF-Garten multi-Star® unit system, multi-star® Minis and the multi-star® tree care without ladder	Lifetime	NA	NA
Hand tools and all manually controlled trimmers	10 years	NA	NA

2.4 For the purpose of Table A:

(a) "*Attachments*" means any component of a product that is not a supplied as a standard component (i.e. it is purchased separately)

(b) Where a primary or secondary school purchases an MTD Product for use by that school, that use will be classified as Residential Use;

(c) Honda, Briggs & Stratton and Kohler & Kawasaki engines are "*NonRover*" engines;

(d) Normal Wear Parts include batteries, blades, blade bolts, V-belts, line heads, spark plugs and filters, as classified by MTD; and

(e) "*rolling chassis*" means the frame plus the "running gear" like handle bars, wheels, driveshaft and axle.

2.5 In the event of dispute, MTD will determine whether the MTD Product was used for a Residential Use or Commercial Use.

3. Exclusions and limitations

3.1 The Warranty ceases to apply to any MTD Product if it is:

(a) serviced or repaired using non-genuine parts (being parts or components not originally manufactured or imported into Australia by MTD); or

(b) assembled, serviced, modified or adjusted by a person not appropriately trained in the assembly, servicing, modification or adjustment of the MTD Product, as determined by MTD.

3.2 This Warranty does not apply to, or in any way cover:

(a) normal wear and tear;

(b) defects in or related to the battery;

(c) any defect that was brought to your attention, or would reasonably have been revealed to you if you had conducted an examination, before acquiring the MTD Product;

(d) any defect in, or defect caused by, parts or components that were not:

(i) manufactured or imported into Australia by MTD;

(ii) supplied by a supplier approved by MTD; or

(iii) approved by MTD for use with the MTD Product;

(e) any failure arising from accident, abuse, act of God, fire, sabotage, vandalism, contaminated fluids or neglect or failure to operate, store and/or maintain and service the MTD Product in accordance with the instruction manual supplied with the MTD Product;

(f) any parts or services required for the normal and regular maintenance of the MTD Product e.g. lubricants;

(g) normal adjustments which are noted in the instruction manual supplied with the MTD Product;

(h) any defect caused by the engine being turned other than in accordance with the instruction manual supplied with the MTD Product;

(i) any alleged defect in the MTD Product that MTD or an authorised MTD dealer cannot establish after testing and inspection;

(j) any MTD Product that has been used other than for the purpose for which it was designed;

(k) any MTD Product that has been overloaded or involved in an accident; or

(l) any defect arising from the use of:

(i) fuel or fuel and oil mix for the engine;

(ii) chain and bar oil for the oil pump; or

(iii) lubricating oil in a four-stroke engine;

in the MTD Product other than in accordance with the instruction manual supplied with the MTD Product.

3.3 This Warranty:

(a) is not transferable; and

(b) does not apply to an MTD Product acquired by way of auction, or online, or from a person other than MTD or an authorised MTD dealer.

3.4 This warranty does not cover the cost of claiming under the warranty, including any freight or delivery costs. Such costs must be paid by you.

3.5 Despite any other provision of this Warranty, MTD's liability arising from, under or in connection with this Warranty is limited as set out in paragraph 5.1. Except as expressly set out in paragraph 5 and subject to law, MTD is not liable under this Warranty for any damages, losses, costs or expenses including, without limitation, loss of profit, loss of production or any financial or economic loss, and other indirect or consequential loss, which may be suffered by you or by any third party arising out of or in any way connected with any defect in an MTD Product.

3.6 Except to the extent expressly set out in this warranty, and subject to law, MTD does not make any promise or representation as to the quality, performance, or freedom from defects, of any MTD Product.

4. How to claim

4.1 To make a claim under this Warranty you must promptly, and at your own expense, take your:

(a) MTD Product;

(b) proof of purchase with purchase date;

(c) evidence of warranty registration; and

(d) full details of the alleged MTD Product defect.

to an authorised MTD dealer upon discovery of any defect in the MTD Product, and within the relevant Warranty Period. Your nearest MTD dealer can be found at cubcadet.com.au, rover.com.au or mtd.com.au. You must also provide your name, address and phone number to the MTD dealer to whom you return the MTD Product.

4.2 If you have any inquiries about making a claim, please contact the MTD dealer from whom you purchased your MTD Product or your nearest MTD dealer.

5. MTD's Obligations

5.1 The obligations of MTD under this warranty will be limited to one of the following at the election of MTD:

(a) repair of the MTD Product;

(b) provision of a replacement MTD Product; or

(c) a refund of the price you paid for the MTD Product.

5.2 MTD reserves the right to replace the defective parts or components of an MTD Product with parts and components of similar quality, grade and composition where an identical part or component is not available.