

Gasoline containing up to 10% ethanol (E10) is acceptable for use in this machine. The use of any gasoline exceeding 10% ethanol (E10) will void the product warranty.

Vous pouvez utiliser de l'essence contenant jusqu'à 10 % d'éthanol (E10) avec cet appareil. L'utilisation d'essence contenant plus de 10 % d'éthanol annulera la garantie du produit.



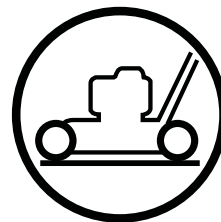
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Operator's Manual Manuel de L'Opérateur

HU725AWDHC / 961450028

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

Lisez très attentivement et soyez certain de comprendre ces instructions avant d'utiliser cette machine.



English/French

⚠ SAFETY RULES ⚠

IMPORTANT: THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.



Look for this symbol to point out important safety precautions. It means CAUTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.



WARNING: In order to prevent accidental starting when setting up, transporting, adjusting or making repairs, always disconnect spark plug wire and place wire where it cannot come in contact with plug.



CAUTION: Muffler and other engine parts become extremely hot during operation and remain hot after engine has stopped. To avoid severe burns on contact, stay away from these areas.



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



WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.



WARNING: This lawn 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 arrester meeting applicable local or state laws (if any). If a spark arrester 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 arrester for the muffler is available through your nearest authorized service center.

I. CHILDREN



WARNING: CHILDREN CAN BE SERIOUSLY INJURED OR KILLED BY THIS EQUIPMENT. Carefully read and follow all of the safety instructions below.

The American Academy of Pediatrics recommends that children be a minimum of 12 year of age before operating a pedestrian controlled lawn mower and a minimum of 16 years of age before operating a riding lawn mower.

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of a responsible adult *other than* the operator.
- Be alert and turn machine off if children enter the area.
- Before and while walking backwards, look behind and *down* for small children.
- Never allow children to operate the machine.

II. GENERAL OPERATION

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting. Be thoroughly familiar with the controls and the proper use of the machine before starting.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Only allow responsible individuals, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, bones, sticks, etc., which could be picked up and thrown by blade. Stay behind the handle when the engine (motor) is running.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Do not operate machine barefooted or while wearing sandals. Always wear substantial footwear with good ankle support while mowing.
- Do not pull mower backwards unless absolutely necessary. Always look down and behind before and while moving backwards.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop blade when crossing gravel surfaces.
- Do not operate the mower without proper guards, plates, grass catcher or other safety protective devices in place.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Stop the blade(s) when crossing gravel drives, walks, or roads.
- Never leave a running machine unattended.
- Stop the engine (motor) and wait until the blade comes to a complete stop before cleaning the machine, removing the grass catcher, or unclogging the discharge chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.

- Never operate machine in wet grass. Always be sure of your footing: keep a firm hold on the handle; walk, never run.
- Disengage the drive system, if so equipped, before starting the engine (motor).
- If the equipment should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
- Always wear eye protection when operating machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- When loading or unloading this machine, do not exceed the maximum recommended operation angle of 15°.
- Wear proper Personal Protective Equipment (PPE) while operating this machine, including (at a minimum) sturdy footwear, eye protection, and hearing protection. Do not mow in shorts or open toed footwear.

Always let someone know you are outside mowing.

III. SLOPE OPERATION

Slopes are a major factor related to slip & fall accidents, which can result in severe injury. All slopes require extra caution. If you feel uneasy on a slope, do not mow it.

DO:

- Mow across the face of slopes: never up and down. Exercise extreme caution when changing direction on slopes.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, bumps or hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.

DO NOT:

- Do not mow near drop-offs, ditches or embankments. You could lose your footing or balance.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip and fall accident.

IV. SAFE HANDLING OF GASOLINE

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Use only an approved container.
- Never remove gas cap or add fuel with the engine running.
- Allow engine to cool before refueling.

- Never refuel the machine indoors.
- Never store the machine or fuel container where there is an open flame, spark or pilot light such as a water heater or on other appliances.
- Never fill containers inside a vehicle, on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the 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.
- If fuel is spilled on clothing, change clothing immediately.
- Never overfill fuel tank. Replace gas cap and tighten securely.

V. GENERAL SERVICE

- Never run a machine inside a closed area.
- Never make adjustments or repairs with the engine (motor) running. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly. Never do anything to interfere with the intended function of a safety device or reduce the protection provided by a safety device.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never attempt to make wheel height adjustments while the engine is running.
- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting or over-speed the engine.
- Maintain or replace safety and instruction labels, as necessary.

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CONGRATULATIONS on your purchase of a new lawn mower. It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest authorized service center/department. We have competent, well-trained technicians and the proper tools to service or repair this lawn mower.

Please read and retain this manual. The instructions will enable you to assemble and maintain your lawn mower properly. Always observe the "SAFETY RULES".

SERIAL NUMBER: _____

DATE OF PURCHASE: _____

THE MODEL AND SERIAL NUMBERS WILL BE FOUND ON A DECAL ATTACHED TO THE REAR OF THE LAWN MOWER HOUSING.

YOU SHOULD RECORD BOTH SERIAL NUMBER AND DATE OF PURCHASE AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.

PRODUCT SPECIFICATIONS

Gasoline Capacity and Type:	1.6 Quarts (1.51 Liters) (Unleaded Regular Only)
Oil Type (API SG-SL):	SAE 30 (above 0°C/32°F); SAE 5W-30 (below 0°C/32°F)
Oil Capacity:	15.5 Ounces (0.44 Liters)
Spark Plug (Gap: 0.020" / 0.5mm):	Autolite 3924
Blade Bolt Torque:	35-40 ft. lbs. (47-54 Nm)

CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your lawn mower.
- Follow the instructions under "Maintenance" and "Storage" sections of this owner's manual.

ASSEMBLY

Read these instructions and this manual in its entirety before you attempt to assemble or operate your new lawn mower.

IMPORTANT: THIS LAWN MOWER IS SHIPPED WITHOUT OIL OR GASOLINE IN THE ENGINE.

Your new lawn mower has been assembled at the factory with the exception of those parts left unassembled for shipping purposes. All parts such as nuts, washers, bolts, etc., necessary to complete the assembly have been placed in the parts bag. To ensure safe and proper operation of your lawn mower, all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to ensure proper tightness.

TO REMOVE LAWN MOWER FROM CARTON

1. Remove loose parts included with mower.
2. Cut down two end corners of carton and lay end panel down flat.
3. Remove all packing materials except padding between upper and lower handle and padding holding operator presence control bar to upper handle.
4. Roll lawn mower out of carton and check carton thoroughly for additional loose parts.

HOW TO SET UP YOUR LAWN MOWER TO UNFOLD HANDLE (See Figs. 1 and 2)

IMPORTANT: UNFOLD HANDLE CAREFULLY SO AS NOT TO PINCH OR DAMAGE CONTROL CABLES.

1. Raise lower handle section to operating position and align holes in lower handle with holes in handle brackets.
2. Insert handle bolts through lower handles and handle brackets; secure with lower ("standard") knobs.

3. Remove protective padding, raise upper handle section into place on lower handle and tighten both upper ("star") knobs.

4. Remove any packing material from around control bar.

Your handles may be adjusted for your mowing comfort. Refer to "ADJUST HANDLE" in the Service and Adjustments section of this manual.

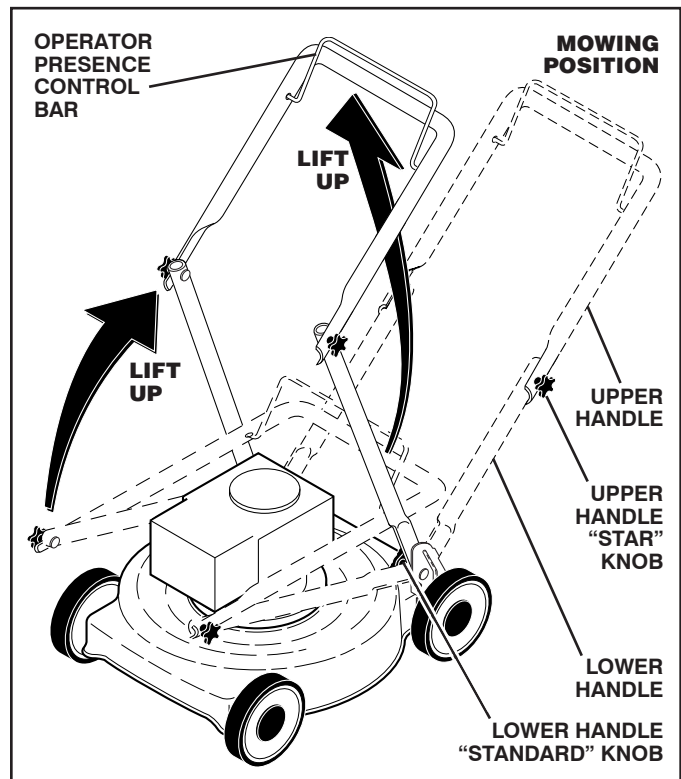


FIG. 1

ASSEMBLY

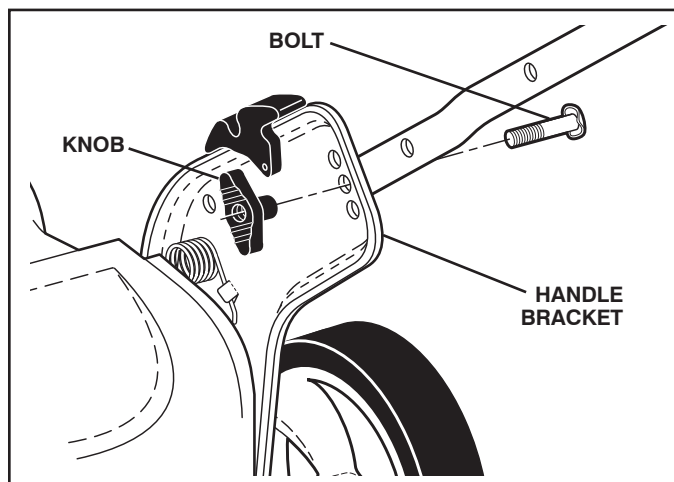


FIG. 2

TO ASSEMBLE GRASS CATCHER (See Fig. 3)

1. Put grass catcher frame into grass bag with rigid part of bag on the bottom. Make sure the frame handle is outside of the bag top.
2. Slip vinyl bindings over frame.

NOTE: If vinyl bindings are too stiff, hold them in warm water for a few minutes. If bag gets wet, let it dry before using.

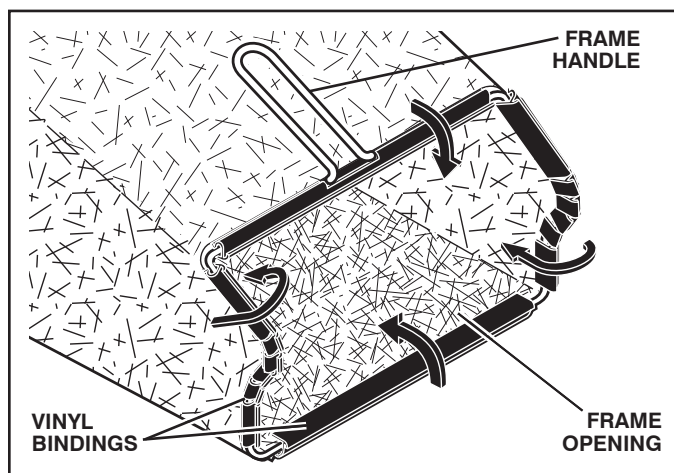


FIG. 3

INSTALL STARTER ROPE (See Fig. 4)

1. Loosen T-knob.
2. Hold control bar against upper handle.
3. Slowly pull engine starter rope out until rope will slip into loop of rope guide.
4. Tighten T-knob.

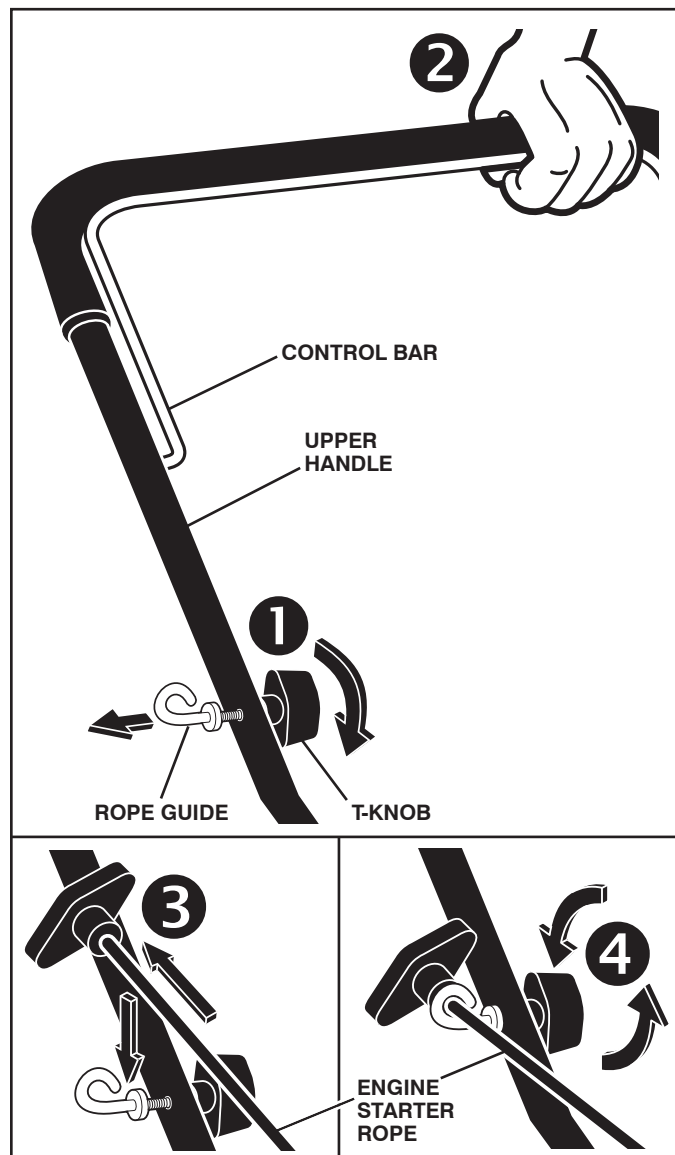


FIG. 4

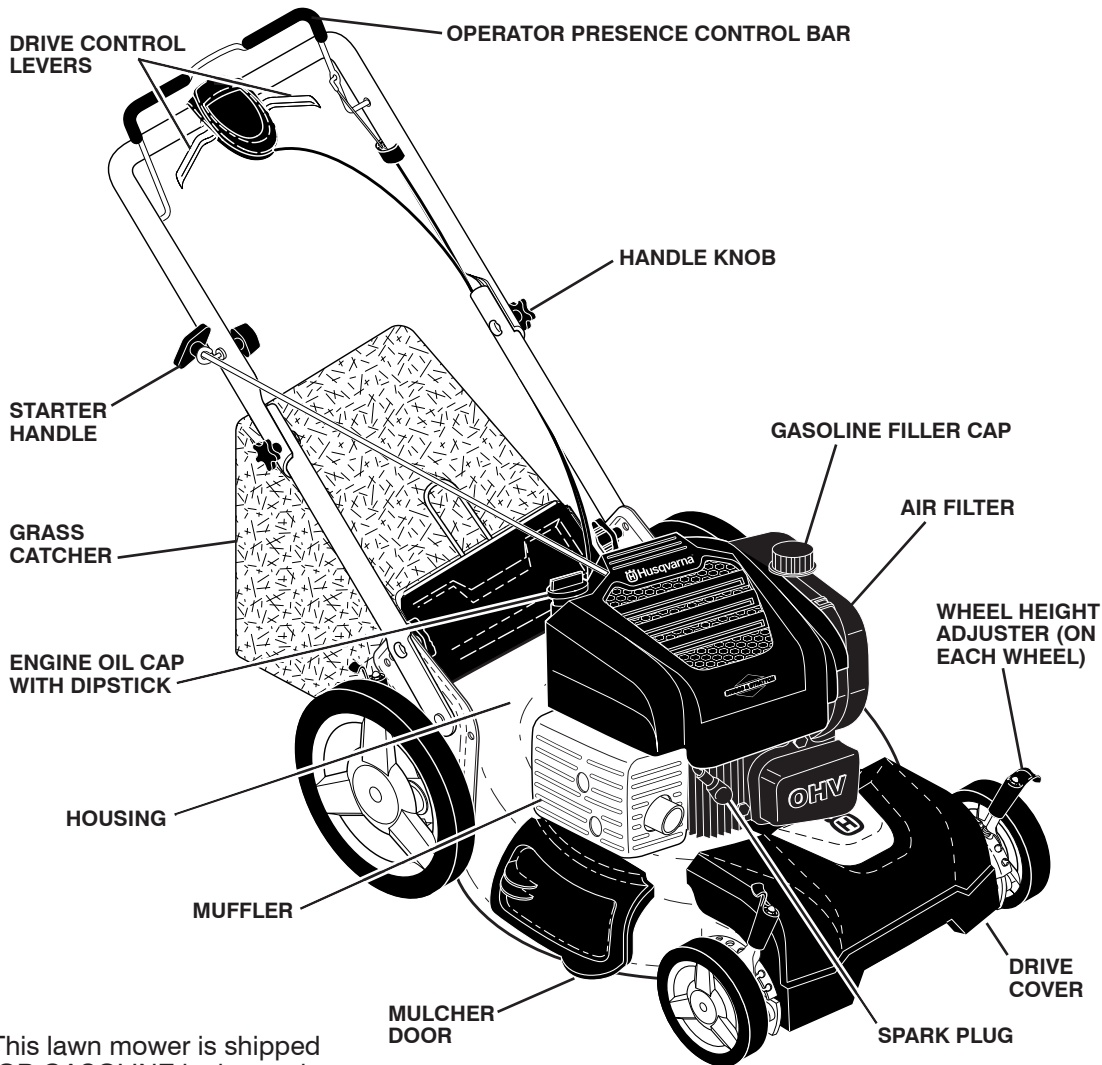
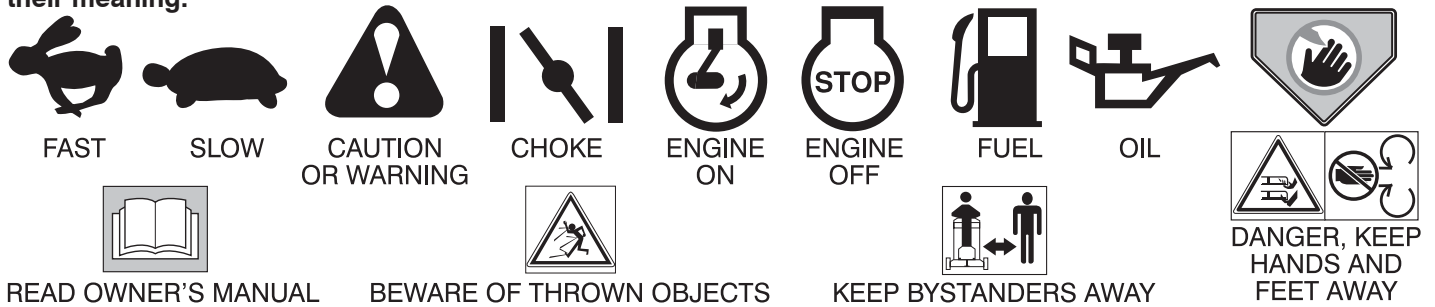
TO INSTALL ATTACHMENTS

Your lawn mower was shipped ready to be used as a mulcher. To convert mower to bagging or discharging, see "TO CONVERT MOWER" in the Operation section of this manual.

OPERATION

KNOW YOUR LAWN MOWER. READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR LAWN MOWER. Compare the illustrations with your lawn mower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.

These symbols may appear on your lawn mower or in literature supplied with the product. Learn and understand their meaning.



IMPORTANT: This lawn mower is shipped WITHOUT OIL OR GASOLINE in the engine.

NOTE: Gasoline containing up to 10% ethanol (E10) is acceptable for use in this machine. The use of any gasoline exceeding 10% ethanol (E10) will void the product warranty.

MEETS CPSC SAFETY REQUIREMENTS

Our rotary walk-behind power lawn mowers conform to the safety standards of the American National Standards Institute and the U.S. Consumer Product Safety Commission. **WARNING:** The blade turns when the engine is running.

OPERATOR PRESENCE CONTROL BAR – must be held down to the handle to start the engine. Release to stop the engine.

STARTER HANDLE – used for starting the engine.

DRIVE CONTROL LEVERS – used to engage power-propelled forward motion lawn mower.

MULCHER DOOR – allows conversion to discharging or bagging operation.

OPERATION



The operation of any lawn mower can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your lawn mower or performing any adjustments or repairs. We recommend standard safety glasses or a wide vision safety mask over spectacles.



Use ear protectors to avoid damage to hearing.

HOW TO USE YOUR LAWN MOWER

ENGINE SPEED

The engine speed was set at the factory for optimum performance. Speed is not adjustable.

ENGINE ZONE CONTROL



CAUTION: Federal regulations require an engine control to be installed on this lawn mower in order to minimize the risk of blade contact injury. Do not under any circumstances attempt to defeat the function of the operator control. The blade turns when the engine is running.

- Your lawn mower is equipped with an operator presence control bar which requires the operator to be positioned behind the mower handle to start and operate the mower.

DRIVE CONTROL (See Fig. 5)

- Self-propelling is controlled by holding the operator presence control bar down to the handle and pulling either drive control lever rearward to the handle. The further toward the handle a lever is pulled, the faster the unit will travel.
- Forward motion will stop when either the operator presence control bar or a drive control lever are released. To stop forward motion without stopping engine, release a drive control lever only. Hold operator presence control bar down against handle to continue mowing without self-propelling.

NOTE: If after releasing the drive control the mower will not roll backwards, push the mower forward slightly to disengage drive wheels.

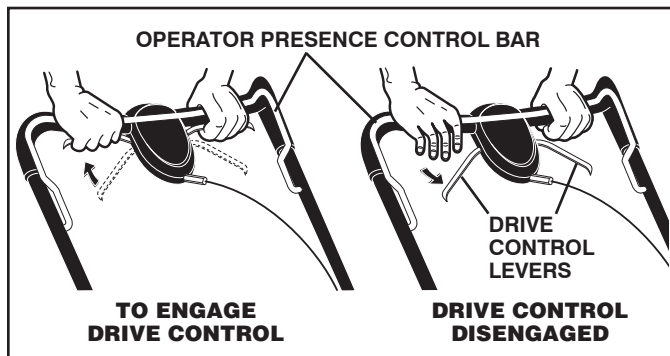


FIG. 5

DRIVE CONTROL ADJUSTMENT (See Fig. 6)

Over time, the drive control system may become "loose", resulting in decreased speed. There is a turnbuckle on the drive control housing to increase tension on the drive cable. Proceed as follows:

- Turn unit off, disconnect spark plug wire from plug.
- Rotate turnbuckle on drive control to increase drive speed.

- Operate mower to test drive speed. Readjust as required.
- If condition fails to improve after the above steps (forward speed remains the same), your drive belt is worn and should be replaced.

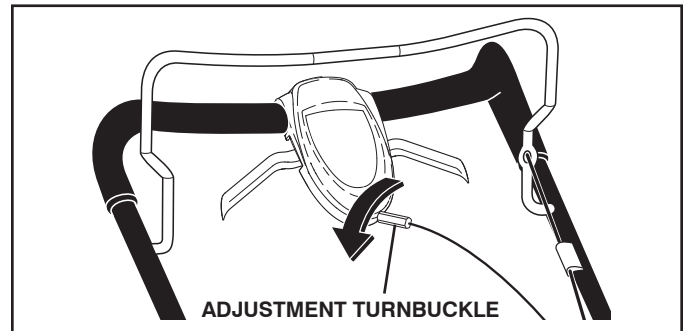


FIG. 6

TO ADJUST CUTTING HEIGHT (See Fig. 7)

Raise wheels for low cut and lower wheels for high cut, adjust cutting height to suit your requirements. Medium position is best for most lawns.

- To change cutting height, pull up on adjuster lever, move wheel up or down to suit your requirements and release adjuster lever. Be sure all wheels are in the same setting.

NOTE: Adjuster is properly positioned when lever inserts into hole in plate.

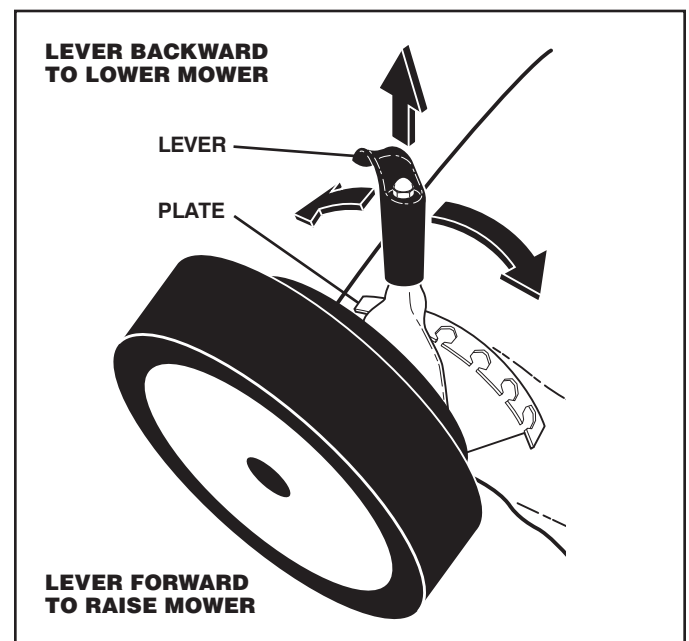


FIG. 7

OPERATION

TO CONVERT MOWER

Your lawn mower was shipped ready to be used as a mulcher. To convert to bagging or discharging:

REAR BAGGING (See Fig. 8)

- Lift rear door of the lawn mower and place the grass catcher frame hooks onto the grass bag brackets.
- To convert to mulching or discharging operation, remove grass catcher and close rear door.

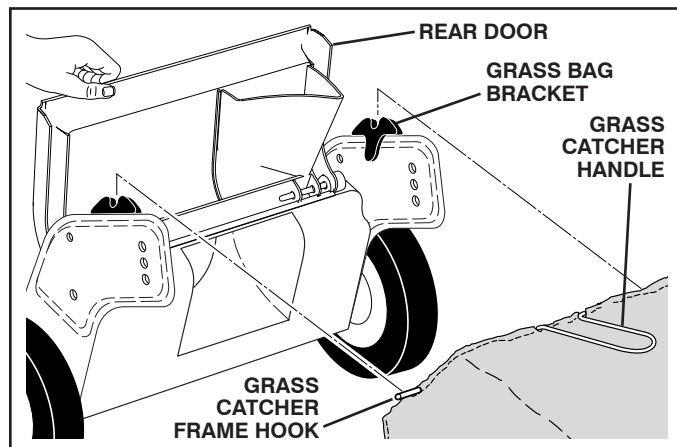


FIG. 8

SIDE DISCHARGING (See Fig. 9)

- Rear door must be closed.
- Open mulcher door and install discharge deflector under door as shown.
- Mower is now ready for side discharging operation.
- To convert to mulching or bagging operation, discharge deflector must be removed and mulcher door must be closed and locked.

SIMPLE STEPS TO REMEMBER WHEN CONVERTING YOUR LAWN MOWER

FOR MULCHING -

1. Rear door closed.
2. Mulcher door closed and locked.

FOR REAR BAGGING -

1. Grass catcher installed.
2. Mulcher door closed and locked.

FOR SIDE DISCHARGING -

1. Rear door closed.
2. Discharge deflector installed.

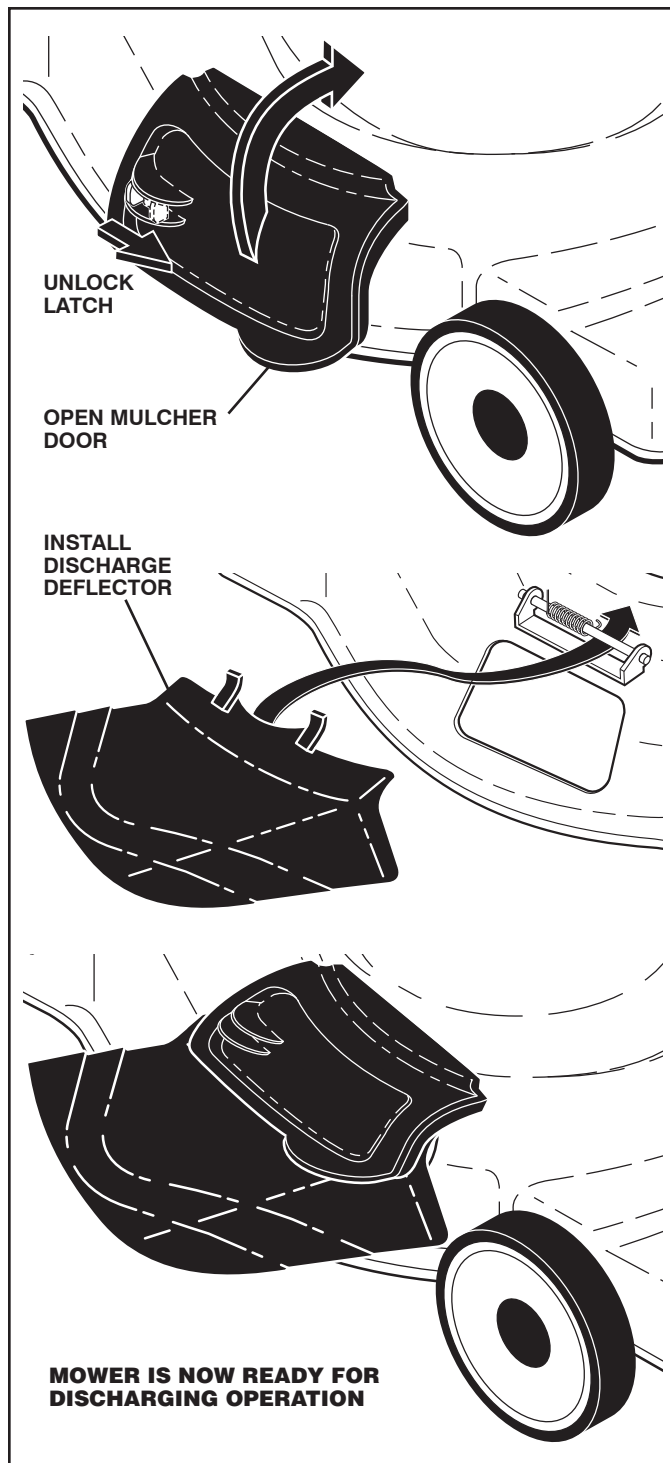
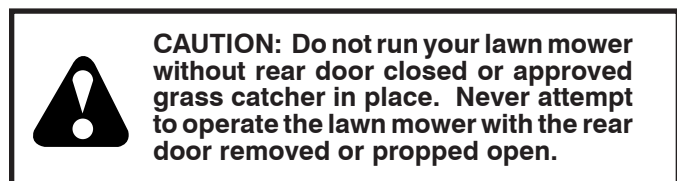


FIG. 9

TO EMPTY GRASS CATCHER (See Fig. 10)

1. Lift up on grass catcher using the frame handle.
2. Remove grass catcher with clippings from under lawn mower handle.
3. Empty clippings from bag using both frame handle and bag handle.

NOTE: Do not drag the bag when emptying; it will cause unnecessary wear.

OPERATION

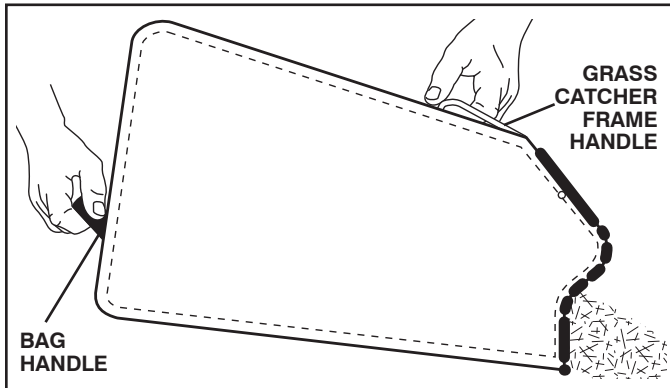


FIG. 10

BEFORE STARTING ENGINE ADD OIL (See Fig. 11)

Your lawnmower is shipped without oil in the engine. For type and grade of oil to use, see "ENGINE" in the Maintenance section of this manual.



CAUTION: DO NOT overfill engine with oil, or it will smoke heavily from the muffler on startup.

1. Be sure lawnmower is level.
2. Remove oil dipstick from oil fill spout.
3. You receive a container of oil with the unit. Slowly pour the entire container down the oil fill spout into the engine.

NOTE: Initial oil fill requires only 13.5 oz. (0.38 Liters) due to residual oil in engine from the manufacturers 100% quality testing. When changing oil you may need 15.5 oz. (0.44 Litres).

4. Insert and tighten dipstick.

IMPORTANT:

- Check oil level before each use. Add oil if needed. Fill to full line on dipstick.
- Change the oil after every 25 hours of operation or each season. You may need to change the oil more often under dusty, dirty conditions. See "TO CHANGE ENGINE OIL" in the Maintenance section of this manual.

ADD GASOLINE (See Fig. 11)

- Fill fuel tank to bottom of tank filler neck. Do not overfill. Use fresh, clean, regular unleaded gasoline with a minimum of 87 octane. Do not mix oil with gasoline. Purchase fuel in quantities that can be used within 30 days to assure fuel freshness.



CAUTION: Alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage.



Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Empty the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

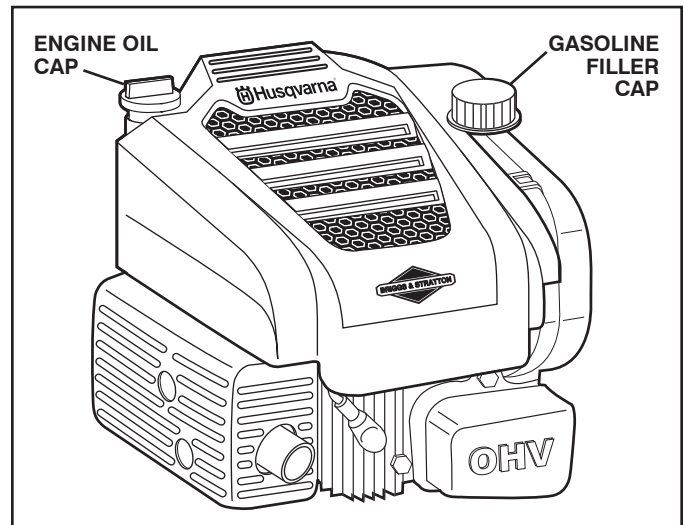


FIG. 11

TO STOP ENGINE

- To stop engine, release operator presence control bar.

TO START ENGINE

NOTE: Due to protective coatings on the engine, a small amount of smoke may be present during the initial use of the product and should be considered normal.

NOTE: Your engine is equipped with an automatic choke system. No priming or choking is required before starting.

- To start engine, hold operator presence control bar down to the handle and pull starter handle quickly. Do not allow starter rope to snap back.

OPERATION

MOWING TIPS



CAUTION: Do not use de-thatcher blade attachments on your mower. Such attachments are hazardous, will damage your mower and could void your warranty.

- Under certain conditions, such as very tall grass, it may be necessary to raise the height of cut to reduce pushing effort and to keep from overloading the engine and leaving clumps of grass clippings. It may also be necessary to reduce ground speed and/or run the lawn mower over the area a second time.
- For extremely heavy cutting, reduce the width of cut by overlapping previously cut path and mow slowly.
- For side discharge operation, cut in a counterclockwise direction, starting at the outside of the area to be cut, in order to spread grass clippings more evenly and to put less load on the engine. To keep clippings off of walkways, flower beds, etc., make the first cuts in a clockwise direction (See Fig. 13).

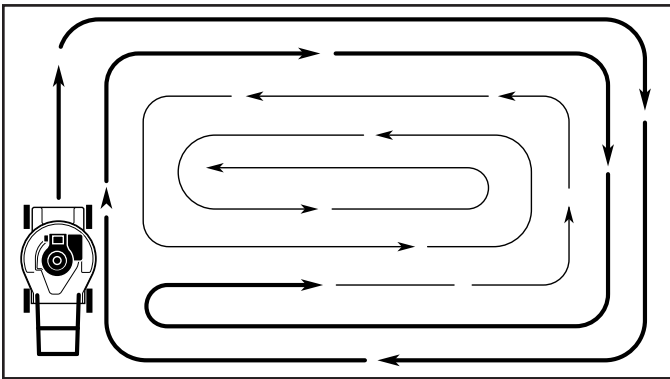


FIG. 13

- If a trail of grass clipping is left on the right side of the lawn mower during rear discharge operation, mow in a clockwise direction with a small overlap to collect the clippings on the next pass.
- Pores in cloth grass catchers can become filled with dirt and dust with use and catchers will collect less grass. To prevent this, regularly hose catcher off with water and let dry before using.
- Keep top of engine around starter clear and clean of grass clippings and chaff. This will help engine air flow and extend engine life.

MULCHING MOWING TIPS

IMPORTANT: FOR BEST PERFORMANCE, KEEP MOWER HOUSING FREE OF BUILT-UP GRASS AND TRASH. SEE "CLEANING" IN MAINTENANCE SECTION OF THIS MANUAL.

- The special mulching blade will recut the grass clippings many times and reduce them in size so that as they fall onto the lawn they will disperse into the grass and not be noticed. Also, the mulched grass will biodegrade quickly to provide nutrients for the lawn. Always mulch with your highest engine (blade) speed as this will provide the best recutting action of the blades.
- Avoid cutting your lawn when it is wet. Wet grass tends to form clumps and interferes with the mulching action. The best time to mow your lawn is the early afternoon. At this time the grass has dried, yet the newly cut area will not be exposed to direct sunlight.
- For best results, adjust the lawn mower cutting height so that the lawn mower cuts off only the top one-third of the grass blades (See Fig. 14). If the lawn is overgrown it will be necessary to raise the height of cut to reduce pushing effort and to keep from overloading the engine and leaving clumps of mulched grass. For extremely heavy mulching, reduce your width of cut by overlapping previously cut path and mow slowly.

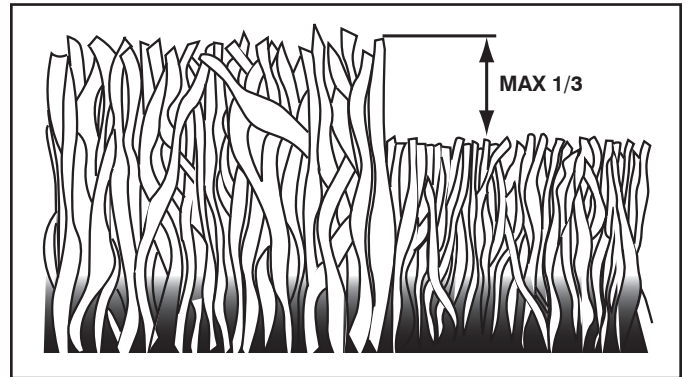


FIG. 14

- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across (perpendicular) to the first cut path.
- Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This will help prevent matting and graining of the lawn.

MAINTENANCE

MAINTENANCE SCHEDULE		BEFORE EACH USE	AFTER EACH USE	EVERY 10 HOURS	EVERY 25 HOURS OR SEASON	EVERY 100 HOURS	BEFORE STORAGE
LAWN MOWER	Check for Loose Fasteners	✓					✓
	Clean / Inspect Grass Catcher *	✓	✓				✓
	Check Tires	✓					
	Check Drive Wheels ***	✓					
ENGINE	Clean Lawn Mower ****		✓				✓
	Clean under Drive Cover ***			✓			
	Check Drive Belt / Pulleys ***				✓		
	Check / Sharpen / Replace Blade				✓ ³		
	Lubrication				✓		
	Clean and Recharge Battery **				✓		✓ ⁴
ENGINE	Check Engine Oil level	✓ ⁵					
	Change Engine Oil				✓ ^{1,2,6}		
	Clean Air Filter				✓ ²		
	Inspect Muffler				✓		
	Replace Spark Plug					✓	
	Replace Air Filter Paper Cartridge					✓ ²	
	Empty fuel system or add Stabilizer						✓

- * (if so equipped)
- ** Electric-Start mowers
- *** Power-Propelled mowers
- **** Use a scraper to clean under deck

- 1 - Change more often if operating under a heavy load or in high outdoor temperatures.
- 2 - Service more often if operating in dirty or dusty conditions.
- 3 - Replace blades more often when mowing in sandy soil.
- 4 - Charge 48 hours at end of season.
- 5 - And after each 5 hours of use.
- 6 - See "LUBRICATION" in the Maintenance section of this manual.

GENERAL RECOMMENDATIONS

The warranty on this lawn mower does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain mower as instructed in this manual. Some adjustments will need to be made periodically to properly maintain your unit. At least once a season, check to see if you should make any of the adjustments described in the Service and Adjustments section of this manual.

- At least once a year, replace the spark plug, clean or replace air filter element and check blade for wear. A new spark plug and clean/new air filter element assure proper air-fuel mixture and help your engine run better and last longer.
- Follow the maintenance schedule in this manual.

BEFORE EACH USE

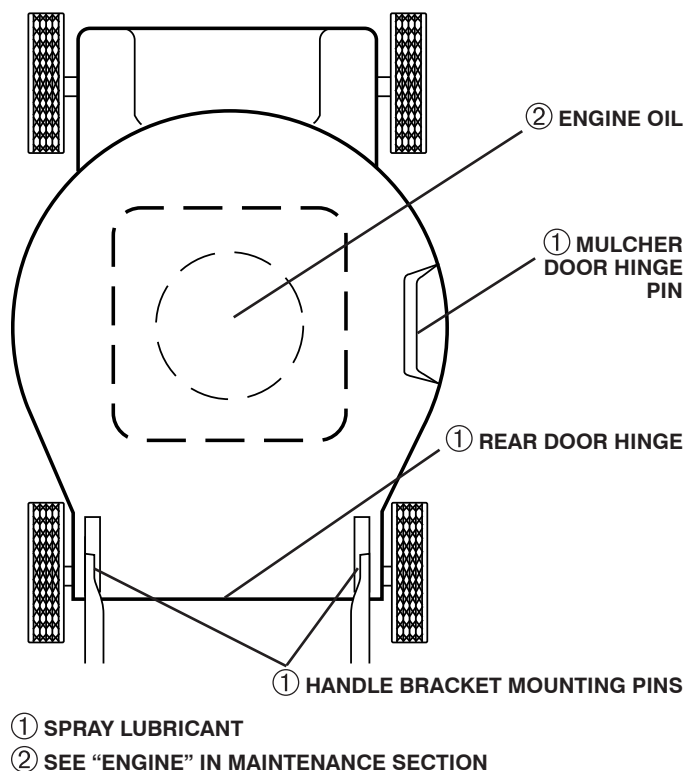
1. Check engine oil level.
2. Check for loose fasteners.

LUBRICATION

Keep unit well lubricated (See "LUBRICATION CHART").

IMPORTANT: DO NOT OIL OR GREASE PLASTIC WHEEL BEARINGS. VISCOUS LUBRICANTS WILL ATTRACT DUST AND DIRT THAT WILL SHORTEN THE LIFE OF THE SELF-LUBRICATING BEARINGS. IF YOU FEEL THEY MUST BE LUBRICATED, USE ONLY A DRY, POWDERED GRAPHITE TYPE LUBRICANT SPARINGLY.

LUBRICATION CHART



MAINTENANCE

LAWN MOWER

Always observe safety rules when performing any maintenance.

TIRES

- Keep tires free of gasoline, oil, or insect control chemicals which can harm rubber.
- Avoid stumps, stones, deep ruts, sharp objects and other hazards that may cause tire damage.

DRIVE WHEELS

Check wheels each time before you mow to be sure they move freely.

The wheels not turning freely means trash, grass cuttings, etc. are in the drive wheel or dust cover area and must be cleaned to free drive wheels. If necessary to clean the drive wheels, be sure to clean all wheels.

1. Remove hubcaps, locknuts and washers.
2. Remove wheels from wheel adjusters.
3. Remove any trash or grass cuttings from inside the dust cover, pinion and/or drive wheel gear teeth.
4. Put wheels back in place.

NOTE: If after cleaning, the drive wheels do not turn freely, contact a qualified service center.

BLADE CARE

For best results, mower blade must be kept sharp. Replace bent or damaged blades.



CAUTION: Use only a replacement blade approved by the manufacturer of your mower. Using a blade not approved by the manufacturer of your mower is hazardous, could damage your mower and void your warranty.

TO REMOVE BLADE (See Fig. 15)

1. Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.
2. Turn lawn mower on its side. Make sure air filter and carburetor are up.
3. Use a wood block between blade and mower housing to prevent blade from turning when removing blade bolt.

NOTE: Protect your hands with gloves and/or wrap blade with heavy cloth.

4. Remove blade bolt by turning counter-clockwise.
5. Remove blade and attaching hardware (bolt, lock washer and hardened washer).
6. Remove debris shield.

NOTE: Remove the blade adapter and check the key inside hub of blade adapter. The key must be in good condition to work properly. Replace adapter if damaged.

TO REPLACE BLADE (See Fig. 15)

1. Position the blade adapter on the engine crankshaft. Be sure key in adapter and crankshaft are aligned; and that the drive belt is inside the tab of the belt retainer.

2. Install debris shield.
 3. Position blade on the blade adapter.
- IMPORTANT:** TO ENSURE PROPER ASSEMBLY, CENTER HOLE IN BLADE MUST ALIGN WITH STAR ON BLADE ADAPTER.
4. Be sure the trailing edge of blade (opposite sharp edge) is up toward the engine.
 5. Install the blade bolt with the lock washer and hardened washer into blade adapter and crankshaft.
 6. Use block of wood between blade and lawn mower housing and tighten the blade bolt, turning clockwise.
- The recommended tightening torque is 35-40 ft. lbs. (47-54 Nm).

IMPORTANT: BLADE BOLT IS HEAT TREATED. IF BOLT NEEDS REPLACING, REPLACE ONLY WITH APPROVED BOLT.

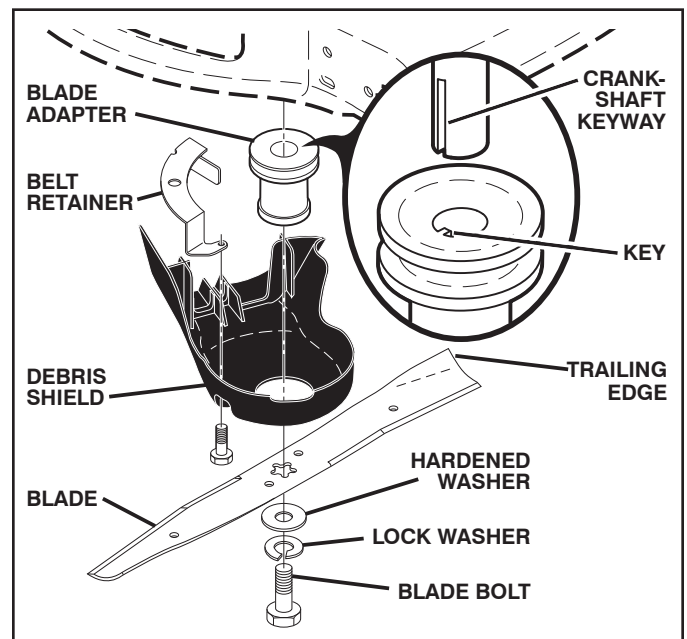


FIG. 15

TO SHARPEN BLADE (See Fig. 16)

NOTE: We do not recommend sharpening blade - but if you do, be sure the blade is balanced. An unbalanced blade will cause eventual damage to lawn mower or engine.

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check blade balance, you will need a 5/8" diameter steel bolt, pin, or a cone balancer. (When using a cone balancer, follow the instructions supplied with balancer.)

NOTE: Do not use a nail for balancing blade. The lobes of the center hole may appear to be centered, but are not.

- Slide blade on to an unthreaded portion of the steel bolt or pin and hold the bolt or pin parallel with the ground. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

MAINTENANCE

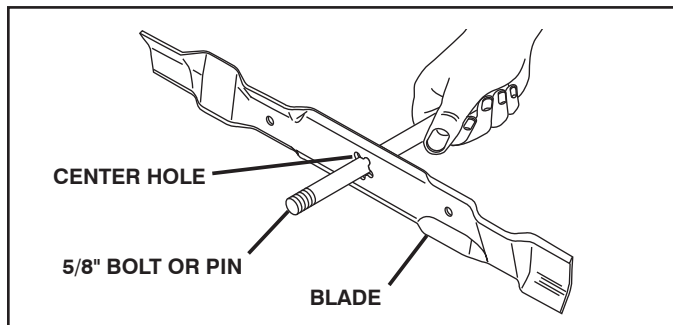


FIG. 16

GRASS CATCHER

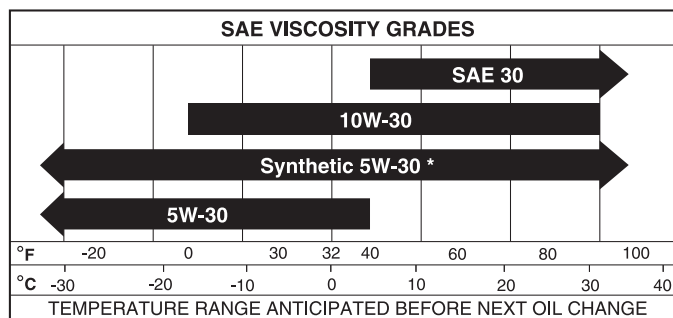
- The grass catcher may be hosed with water, but must be dry when used.
- Check your grass catcher often for damage or deterioration. Through normal use it will wear. If catcher needs replacing, replace only with approved replacement catcher shown in the Repair Parts section of this manual. Give the lawn mower model number when ordering.

GEAR CASES

- To keep your drive system working properly, the gear cases and area around the drive should be kept clean and free of trash build-up. Clean under the drive cover twice a season.
- The gear cases are filled with lubricant to the proper level at the factory. The only time the lubricant needs attention is if service has been performed on the gear case.

ENGINE LUBRICATION

Use only high quality detergent oil rated with API service classification SG-SL. Select the oil's SAE viscosity grade according to your expected operating temperature.



NOTE: Multi-viscosity oils (5W30, 10W30 etc.) improve starting in cold weather, and you should check your engine oil level frequently to avoid possible engine damage from running low on oil.

Change the oil after every 25 hours of operation or at least once a year if the lawn mower is not used for 25 hours in one year.

* **NOTE:** An oil change is not required but if you desire to change the oil follow the procedure below.

Check the crankcase oil level before starting the engine and after each five (5) hours of continuous use. Tighten oil plug securely each time you check the oil level.

TO CHANGE ENGINE OIL (See Fig. 17)

NOTE: Before tipping lawn mower to drain oil, empty fuel tank by running engine until fuel tank is empty.

1. Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.
2. Remove engine oil cap; lay aside on a clean surface.
3. Tip lawn mower on its side as shown and drain oil into a suitable container. Rock lawn mower back and forth to remove any oil trapped inside of engine.

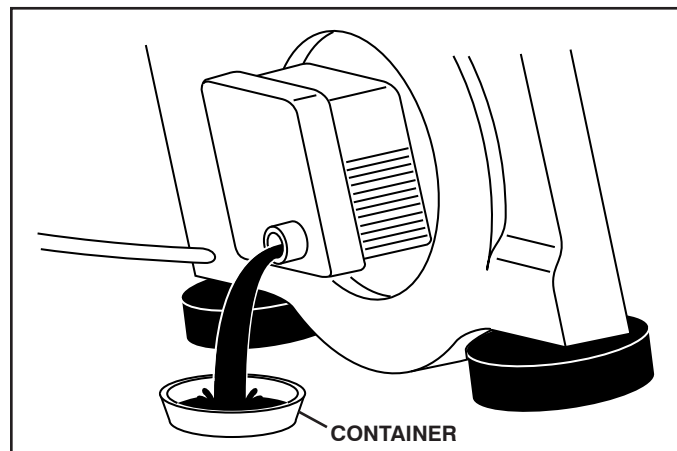


FIG. 17

4. Wipe off any spilled oil from lawn mower or side of engine.
5. Slowly pour oil down the oil fill spout, stopping every few ounces to check the oil level with the dipstick.
6. Stop adding oil when you reach the FULL mark on the dipstick. Wait a minute to allow oil to settle.
7. Continue adding small amounts of oil, rechecking the dipstick until oil level settles at FULL. DO NOT overfill, or engine will smoke heavily from the muffler on startup.
8. Always be sure to retighten oil dipstick before starting engine.
9. Reconnect spark plug wire to spark plug.

AIR FILTER (See Fig. 18)

Your engine will not run properly and may be damaged by using a dirty air filter. Replace the air filter every 100 hours of operation or every season, whichever occurs first. Service air cleaner more often under dusty conditions.

TO CLEAN AIR FILTER

1. Remove cover.
2. Carefully remove cartridge.
3. Clean by gently tapping on a flat surface. If very dirty, replace cartridge.



CAUTION: Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. Do not oil cartridge. Do not use pressurized air to clean or dry cartridge.

4. Install cartridge, then replace cover.

MAINTENANCE

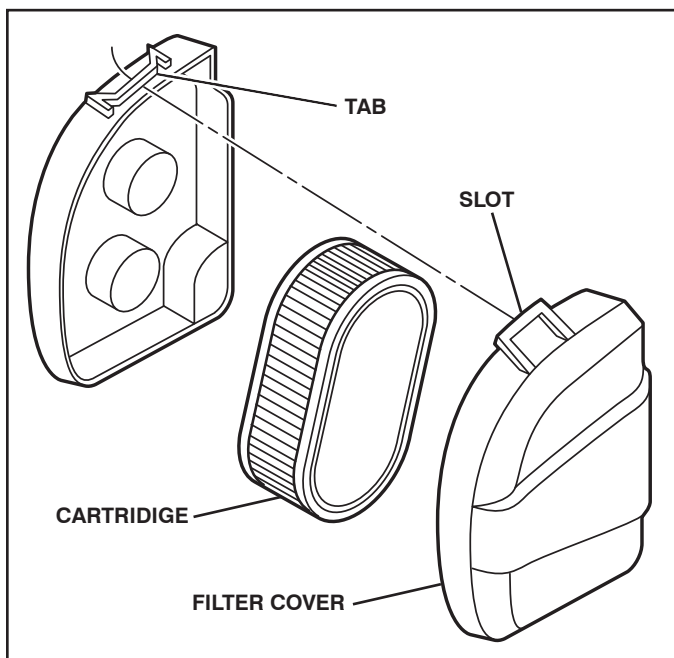


FIG. 18

MUFFLER

Inspect and replace corroded muffler as it could create a fire hazard and/or damage.

SPARK PLUG

Replace spark plug at the beginning of each mowing season or after every 100 hours of operation, whichever occurs first. Spark plug type and gap setting are shown in the "PRODUCT SPECIFICATIONS" section of this manual.

CLEANING

IMPORTANT: FOR BEST PERFORMANCE, KEEP MOWER HOUSING FREE OF BUILT-UP GRASS AND TRASH. CLEAN THE UNDERSIDE OF YOUR MOWER AFTER EACH USE.



CAUTION: Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.

- Clean the underside of your lawn mower by scraping to remove build-up of grass and trash.
- Clean engine often to keep trash from accumulating. A clogged engine runs hotter and shortens engine life.
- Keep finished surfaces / wheels free of gasoline, oil, etc.
- With the exception of the water washout port (if equipped), we do not recommend using a garden hose to clean the outside of your lawn mower unless the electrical system, muffler, air filter and carburetor are covered to keep water out. Water in engine can result in shortened engine life.

WATER WASHOUT FEATURE (See Fig. 19)

Your lawn mower is equipped with a fitting that allows quick and easy cleaning of the underside of the housing. To use this feature, proceed as follows:

1. Move lawn mower to an area of cut grass or another hard surface.
2. Remove grass catcher and discharge chute assembly from lawn mower.
3. Close mulcher door (if equipped).
4. Connect a garden hose to the fitting where shown.

NOTE: Water, grass and other debris will drain from beneath the mower housing during the washout process.

IMPORTANT: BE SURE THE GARDEN HOSE IS NOT ROUTED UNDER THE LAWN MOWER HOUSING OR ENTANGLED IN THE WHEELS.

5. Turn on water supply and check for leaks at the fitting.
- If no leaks are present, start engine (as described in the Operation section of this manual) and let engine run until the underside of the lawn mower is clean.



WARNING: Do not engage the drive system during the washout process.

6. Shut off the engine.
7. Shut off water supply and remove hose from fitting.



CAUTION: Do not remove hose from fitting while engine is running. Water in engine can result in shortened engine life.

8. Start engine (as described in the Operation section of this manual) and let engine run for a full minute to remove excess water from mower.

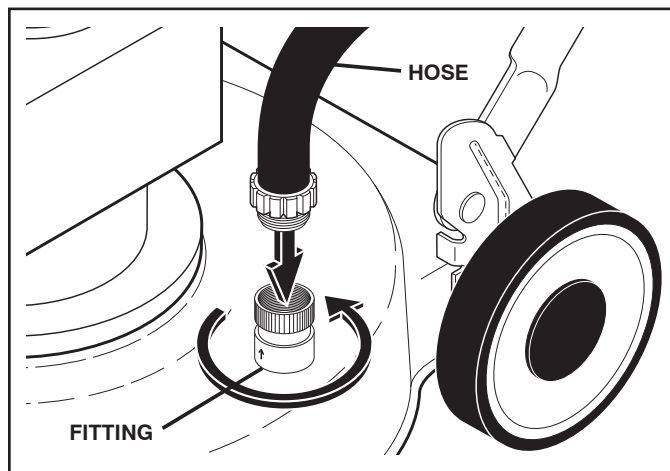


FIG. 19

SERVICE AND ADJUSTMENTS



CAUTION: TO AVOID SERIOUS INJURY, BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:

1. Release control bar and stop engine.
2. Make sure the blade and all moving parts have completely stopped.
3. Disconnect spark plug wire from spark plug and place where it cannot come in contact with plug.

LAWN MOWER TO ADJUST CUTTING HEIGHT

See "TO ADJUST CUTTING HEIGHT" in the Operation section of this manual.

REAR DEFLECTOR

The rear deflector, attached between the rear wheels of your mower, is provided to minimize the possibility that objects will be thrown out of the rear of the mower into the operator's mowing position. Replace the deflector if damaged.

TO REMOVE DRIVE BELT (See Figs. 20 & 21)

NOTE: Before tipping lawn mower to remove drive belt, empty fuel tank by running engine until fuel tank is empty.

1. Turn lawn mower on its side with air filter and carburetor up.
2. Remove blade bolt, lockwasher, hardened washer and blade.
3. Remove debris shield.
4. Remove rear baffle.

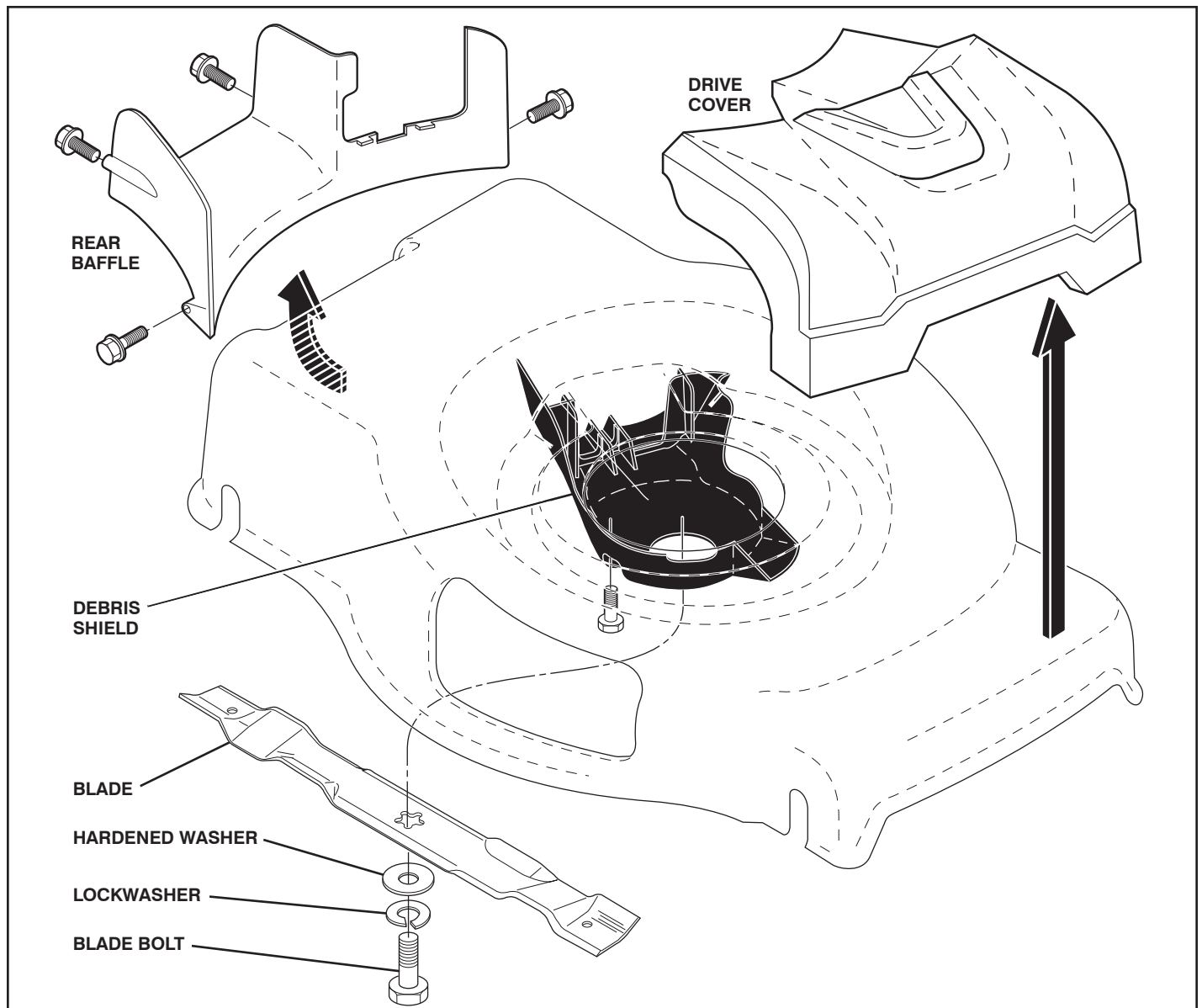


FIG. 20

SERVICE AND ADJUSTMENTS

5. Disconnect return spring from rear baffle / rear gearcase belt keeper.
6. Disconnect cable from rear gearcase.
7. Remove drive cover.
8. Remove front belt keeper.
9. Remove belt from front gearcase pulley.
10. Remove all three idler pulleys from idler assembly.
11. Remove belt from blade adapter/engine pulley and idler assembly.
12. Remove rear gearcase pulley by clamping locking pliers to input shaft (beneath pulley) and loosening pulley with a 9/16" box wrench.
13. Remove old belt from mower and discard.

TO REPLACE DRIVE BELT (See Figs. 20 & 21)

NOTE: Always use factory approved belt to assure proper fit and long life.

1. Place new belt on rear gearcase pulley. Be sure the new belt is inside the tabs of the belt keeper.
2. Reinstall rear gearcase pulley.
3. Route the other end of the new belt through hole in

housing to front gearcase pulley.

4. Route new belt through idler assembly to blade adapter/engine pulley.
5. Reinstall all three idler pulleys.
6. Position the blade adapter/engine pulley on the engine crankshaft. Be sure key in blade adapter/engine pulley and crankshaft keyway are aligned; and that the new belt is inside the tab of the belt retainer.
7. Install new belt on front gearcase pulley.
8. Reinstall front belt keeper. Be sure the new belt is inside the front belt keeper.
9. Reinstall drive cover.
10. Reattach cable to rear gearcase.
11. Reattach return spring to rear baffle / rear gearcase belt keeper.
12. Reinstall rear baffle.
13. Reinstall debris shield.
14. Reinstall blade. The recommended tightening torque is 35–40 ft. lbs. (47–54 Nm).
15. Return mower to upright position.
16. Reattach spark plug wire to spark plug.

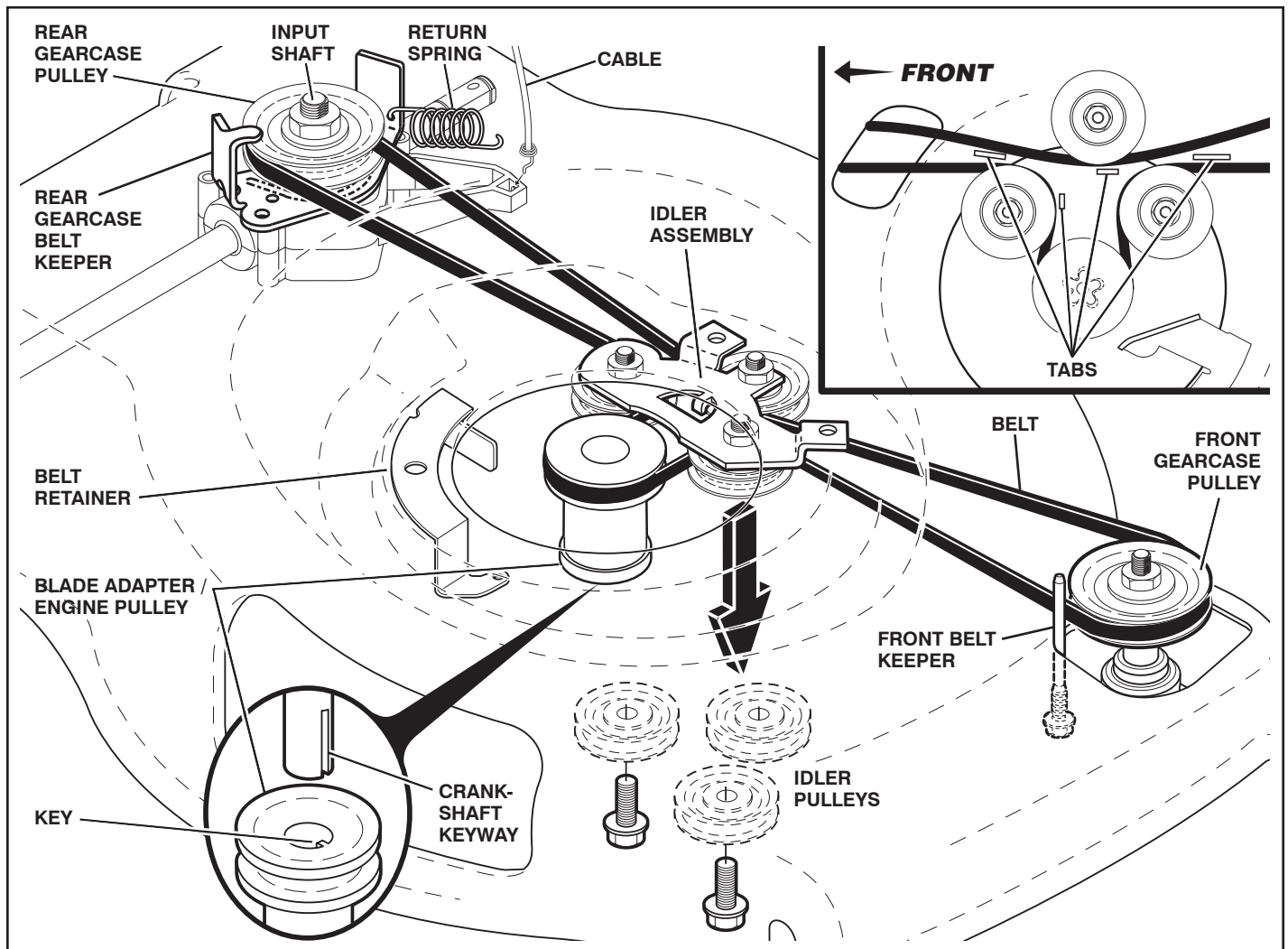


FIG. 21

SERVICE AND ADJUSTMENTS

TO ADJUST HANDLE (See Fig. 22)

The handle on your lawn mower has three (3) height positions - adjust to height that suits you.

1. Remove knob and carriage bolt on one side of the lower handle.
2. While holding handle assembly, remove knob and carriage bolt from opposite side, align hole in handle with desired hole in handle bracket and reassemble bolt and knob and tighten securely.
3. Align opposite side of handle with same positioning hole and secure with bolt and knob.

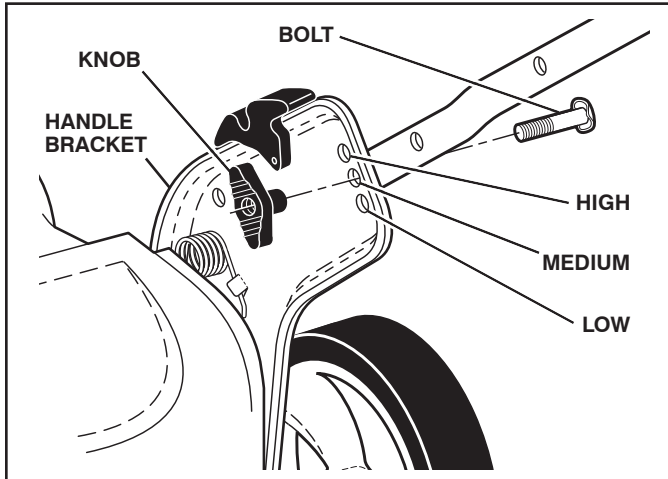


FIG. 22

ENGINE

ENGINE SPEED

Your engine speed has been factory set.

CARBURETOR

Your carburetor is not adjustable.

IMPORTANT: NEVER TAMPER WITH THE ENGINE GOVERNOR, WHICH IS FACTORY SET FOR PROPER ENGINE SPEED. OVERSPEEDING THE ENGINE ABOVE THE FACTORY HIGH SPEED SETTING CAN BE DANGEROUS. IF YOU THINK THE ENGINE-GOVERNED HIGH SPEED NEEDS ADJUSTING, CONTACT YOUR NEAREST AUTHORIZED SERVICE CENTER, WHICH HAS PROPER EQUIPMENT AND EXPERIENCE TO MAKE ANY NECESSARY ADJUSTMENTS.

STORAGE

Immediately prepare your mower for storage at the end of the season or if the unit will not be used for 30 days or more.

LAWN MOWER

When lawn mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

1. Clean entire lawn mower (See "CLEANING" in the Maintenance section of this manual).
2. Lubricate as shown in the Maintenance section of this manual.
3. Be sure that all nuts, bolts, screws, and pins are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
4. Touch up all rusted or chipped paint surfaces; sand lightly before painting.

HANDLE (See Figs. 23 and 24)

You can fold your lawn mower handle for storage.

1. Loosen the two (2) handle knobs on sides of the upper handle and allow handle to fold down to the rear.
2. Remove the two (2) handle knobs and carriage bolts on sides of the lower handle and pivot entire handle assembly forward and allow it to rest on mower.
3. Reinstall knobs and carriage bolts to lower handle or handle brackets for safe keeping.
 - When setting up your handle from the storage position, the lower handle will require manually locking into the mowing position.

IMPORTANT: WHEN FOLDING THE HANDLE FOR STORAGE OR TRANSPORTATION, BE SURE TO FOLD THE HANDLE AS SHOWN OR YOU MAY DAMAGE THE CONTROL CABLES.

STORAGE

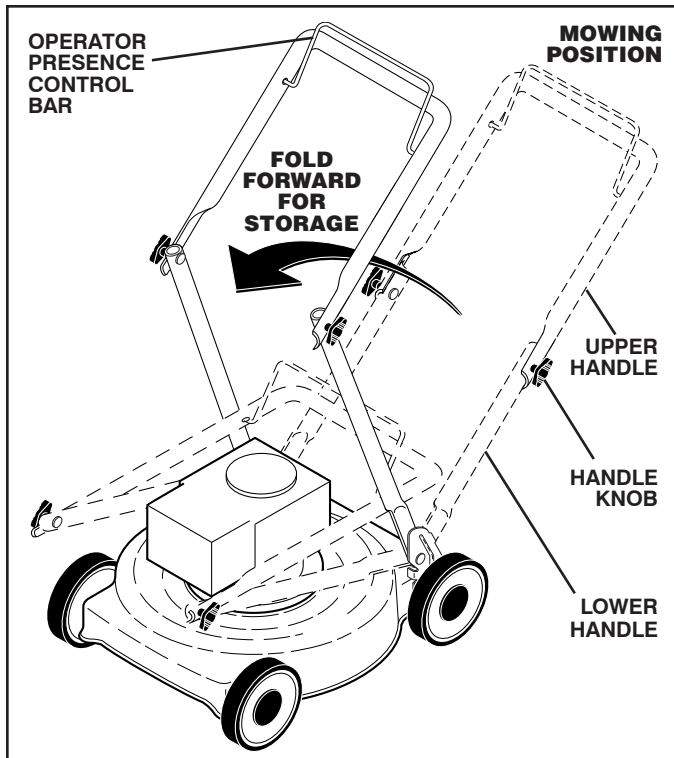


FIG. 23

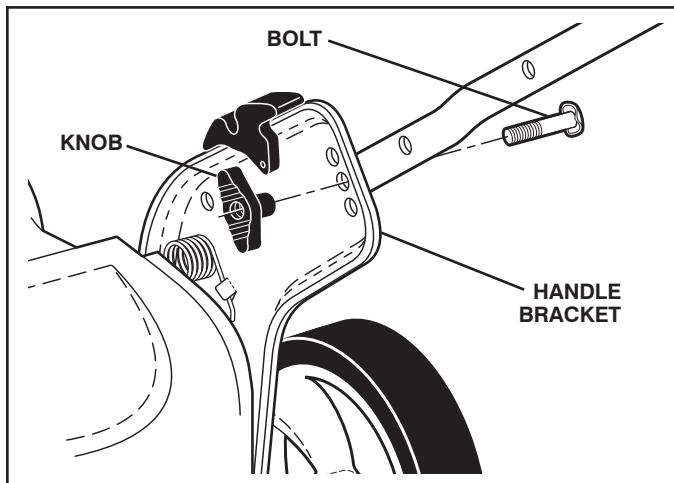


FIG. 24

ENGINE FUEL SYSTEM

IMPORTANT: IT IS IMPORTANT TO PREVENT GUM DEPOSITS FROM FORMING IN ESSENTIAL FUEL SYSTEM PARTS SUCH AS CARBURETOR, FUEL FILTER, FUEL HOSE, OR TANK DURING STORAGE. ALCOHOL BLENDED FUELS (CALLED GASOHOL OR USING ETHANOL OR METHANOL) CAN ATTRACT MOISTURE WHICH LEADS TO SEPARATION AND FORMATION OF ACIDS DURING STORAGE. ACIDIC GAS CAN DAMAGE THE FUEL SYSTEM OF AN ENGINE WHILE IN STORAGE.

- Empty the fuel tank by starting the engine and letting it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

NOTE: Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not empty the gas tank and carburetor if using fuel stabilizer.

ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See "ENGINE" in the Maintenance section of this manual).

CYLINDER

1. Remove spark plug.
2. Pour one ounce (29 ml) of oil through spark plug hole into cylinder.
3. Pull starter handle slowly a few times to distribute oil.
4. Replace with new spark plug.

OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust. Rust and/or dirt in your gasoline will cause problems.
- If possible, store your unit indoors and cover it to give protection from dust and dirt.
- Cover your unit with a suitable protective cover that does not retain moisture. Do not use plastic. Plastic cannot breathe, which allows condensation to form and will cause your unit to rust.

IMPORTANT: NEVER COVER MOWER WHILE ENGINE AND EXHAUST ARE STILL WARM.



CAUTION: Never store the lawn mower with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
Does not start	<ol style="list-style-type: none"> 1. Dirty air filter. 2. Out of fuel. 3. Stale fuel. 4. Water in fuel. 5. Spark plug wire is disconnected. 6. Bad spark plug. 7. Loose blade or broken blade adapter. 8. Control bar in released position. 9. Control bar defective. 10. Fuel valve lever (if equipped) in OFF position. 11. Weak battery (if equipped). 12. Disconnected battery connector (if equipped). 	<ol style="list-style-type: none"> 1. Clean/replace air filter. 2. Fill fuel tank. 3. Empty fuel tank and refill tank with fresh, clean gasoline. 4. Empty fuel tank and refill tank with fresh, clean gasoline. 5. Connect wire to plug. 6. Replace spark plug. 7. Tighten blade bolt or replace blade adapter. 8. Depress control bar to handle. 9. Replace control bar. 10. Turn fuel valve lever to the ON position. 11. Charge battery. 12. Connect battery to engine.
Loss of power	<ol style="list-style-type: none"> 1. Rear of lawn mower housing or cutting blade dragging in heavy grass. 2. Cutting too much grass. 3. Dirty air filter. 4. Buildup of grass, leaves and trash under mower. 5. Too much oil in engine. 6. Walking speed too fast. 	<ol style="list-style-type: none"> 1. Raise cutting height. 2. Raise cutting height. 3. Clean/replace air filter. 4. Clean underside of mower housing. 5. Check oil level. 6. Cut at slower walking speed.
Poor cut – uneven	<ol style="list-style-type: none"> 1. Worn, bent or loose blade. 2. Wheel heights uneven. 3. Buildup of grass, leaves and trash under mower. 	<ol style="list-style-type: none"> 1. Replace blade. Tighten blade bolt. 2. Set all wheels at same height. 3. Clean underside of mower housing.
Excessive vibration	<ol style="list-style-type: none"> 1. Worn, bent or loose blade. 2. Bent engine crankshaft. 	<ol style="list-style-type: none"> 1. Replace blade. Tighten blade bolt. 2. Contact a qualified service center.
Starter rope hard to pull	<ol style="list-style-type: none"> 1. Engine flywheel brake is on when control bar is released. 2. Bent engine crankshaft. 3. Blade adapter broken. 4. Blade dragging in grass. 	<ol style="list-style-type: none"> 1. Depress control bar to upper handle before pulling starter rope. 2. Contact a qualified service center. 3. Replace blade adapter. 4. Move lawn mower to cut grass or other hard surface before starting.
Grass catcher not filling (if so equipped)	<ol style="list-style-type: none"> 1. Cutting height too low. 2. Lift on blade worn off. 3. Catcher not venting air. 	<ol style="list-style-type: none"> 1. Raise cutting height. 2. Replace blade. 3. Clean grass catcher.
Hard to push	<ol style="list-style-type: none"> 1. Grass is too high or wheel height is too low. 2. Rear of lawn mower housing or cutting blade dragging in heavy grass. 3. Grass catcher too full. 4. Handle height position not right for you. 	<ol style="list-style-type: none"> 1. Raise cutting height. 2. Raise rear of lawn mower housing one (1) setting higher. 3. Empty grass catcher. 4. Adjust handle height to suit.
Loss of drive (or slowing of drive speed)	<ol style="list-style-type: none"> 1. Belt wear. 2. Belt off of pulley. 3. Drive cable worn or broken. 4. “Loose” drive control system. 	<ol style="list-style-type: none"> 1. Check/replace drive belt. 2. Check/reinstall drive belt. 3. Put belt on pulleys / replace belts if broken. 4. Adjust drive control.