

Husqvarna



5521CH

Owner's Manual



SAFETY RULES



Safe Operation Practices for Walk-Behind Mowers

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.

I. 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 the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Do not operate the mower when barefoot or wearing open sandals. Always wear substantial foot wear.
- Do not pull mower backwards unless absolutely necessary. Always look down and behind before and while moving backwards.
- 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.
- Stop the engine (motor) whenever you leave the equipment, before cleaning the mower or unclogging the chute.
- Shut the engine (motor) off and wait until the blade comes to complete stop before removing grass catcher.
- 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 and walk; never run.
- Disengage the self-propelled mechanism or drive clutch on mowers 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 safety goggles or safety glasses with side shields when operating mower.

II. SLOPE OPERATION

Slopes are a major factor related to slip and 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, or bumps. Tall grass can hide obstacles.

DO NOT:

- Do not trim near drop-offs, ditches or embankments. The operator could lose footing or balance.
- Do not trim excessively steep slopes.
- Do not mow on wet grass. Reduced footing could cause slipping.


III. CHILDREN


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 trimming area and under the watchful care of another responsible adult.
- 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.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.


IV. SERVICE


- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
 - Use only an approved container.
 - Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
 - Never refuel the machine indoors.
 - Never store the machine or fuel container inside where there is an open flame, such as a water heater.
- 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 nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- 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 (motor) 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 overspeed the engine.


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

 **CAUTION:** Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.

 **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.

 **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.



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”.

PRODUCT SPECIFICATIONS

Gasoline Capacity and Type:	1.0 Quarts (Unleaded Regular Only)
Oil Type (API-SF-SJ):	SAE 10W-30
Oil Capacity:	18.5 Ounces
Spark Plug:	NGK BPR6ES (Gap: .030")
Blade Bolt Torque:	35-40 ft. lbs.

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.

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.

TABLE OF CONTENTS

SAFETY RULES 2-3

PRODUCT SPECIFICATIONS 3

CUSTOMER RESPONSIBILITIES 3

ASSEMBLY 4

OPERATION 5-9

MAINTENANCE SCHEDULE 10

MAINTENANCE 10-12

SERVICE AND ADJUSTMENTS 13

STORAGE 14

TROUBLESHOOTING 15

REPAIR PARTS 16-19

WARRANTY 20

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 handles until lower handle section locks into place in mowing position.
2. Remove protective padding, raise upper handle section into place on lower handle and tighten both handle knobs.
3. Remove handle padding holding operator presence control bar to upper handle.

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

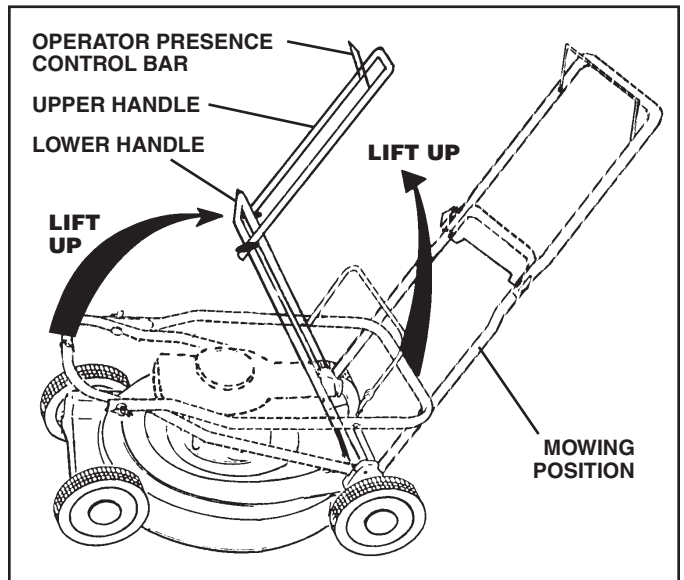


FIG. 1

TO ASSEMBLE GRASS CATCHER (See Fig. 2)

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.

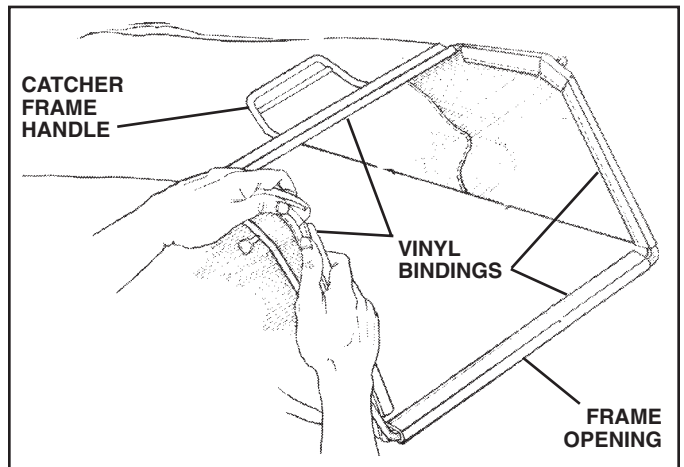


FIG. 2

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.

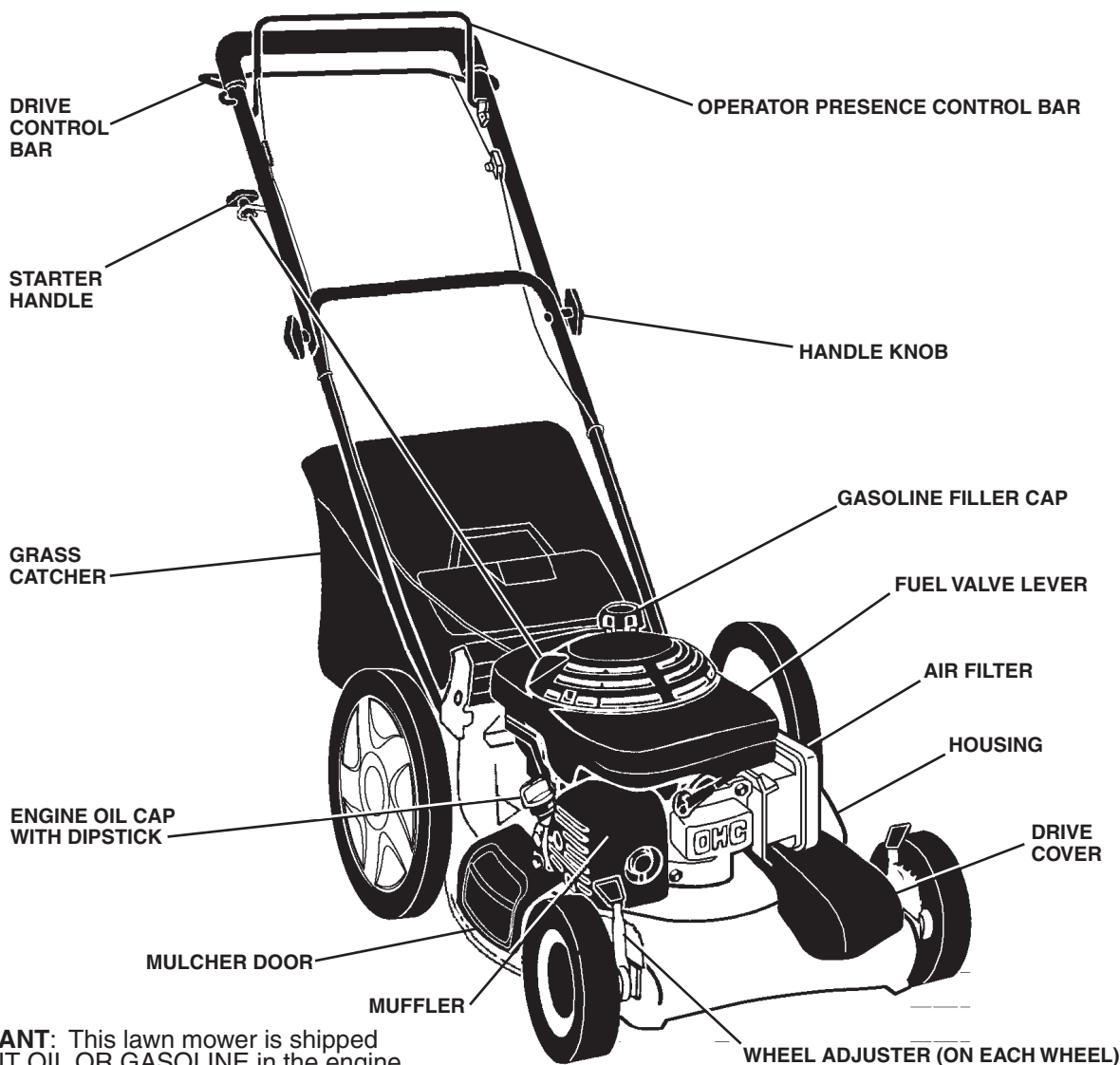
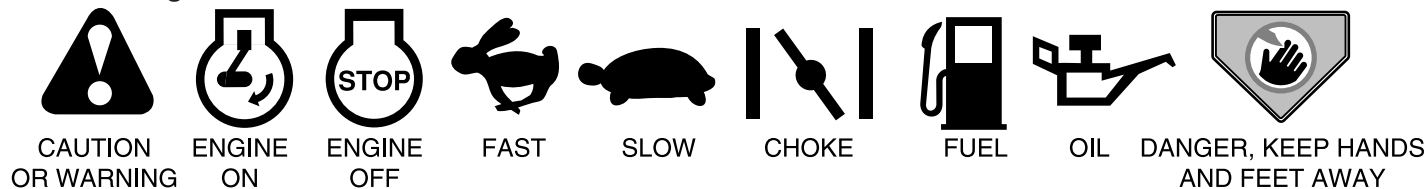
OPERATION

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.

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. 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 BAR - used to engage power-propelled forward motion lawn mower.

MULCHER DOOR - allows conversion to discharge 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.

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 lawn mower handle to start and operate the lawn mower.

DRIVE CONTROL (See Fig. 3)

- Self-propelling is controlled by holding the operator presence control bar down to the handle and pulling the drive control bar up to the handle. The closer to the handle the bar is pulled, the faster the unit will travel.
- Forward motion will stop when either the operator presence control bar or drive control bar are released. To stop forward motion without stopping engine, release the drive control bar 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.

- To keep drive control engaged when turning corners, push down on the handle to lift the front wheels off the ground while turning lawn mower.

DRIVE CONTROL ADJUSTMENT (See Fig. 3)

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

- Turn unit off and disconnect spark plug wire from spark plug.
- Rotate thumbscrew counter-clockwise to tighten the drive cable.
- Operate mower to test drive speed.
- If condition fails to improve after the above steps (forward speed remains the same), your drive belt is worn and should be replaced.

NOTE: If mower begins to “creep” forward, the drive cable is too tight. Rotate thumbscrew clockwise to loosen drive cable.

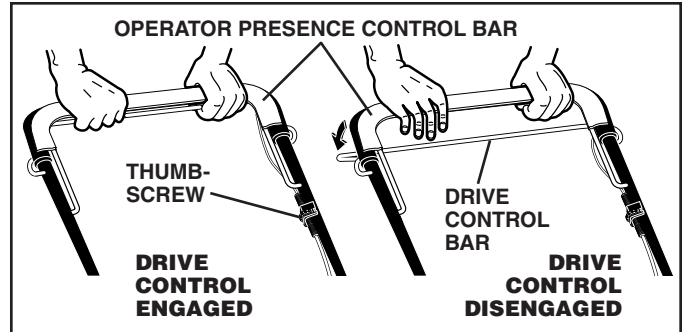


FIG. 3

TO ADJUST CUTTING HEIGHT (See Fig. 4)

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, squeeze adjuster lever toward wheel. Move wheel up or down to suit your requirements. Be sure all wheels are in the same setting.

NOTE: Adjuster is properly positioned when plate tab inserts into hole in lever. Also, 9-position adjusters (if so equipped) allow lever to be positioned between the plate tabs.

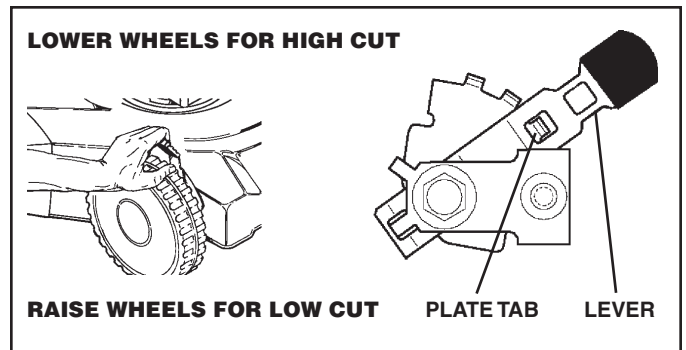


FIG. 4

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. 5)

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

SIDE DISCHARGING (See Fig. 6)

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

OPERATION

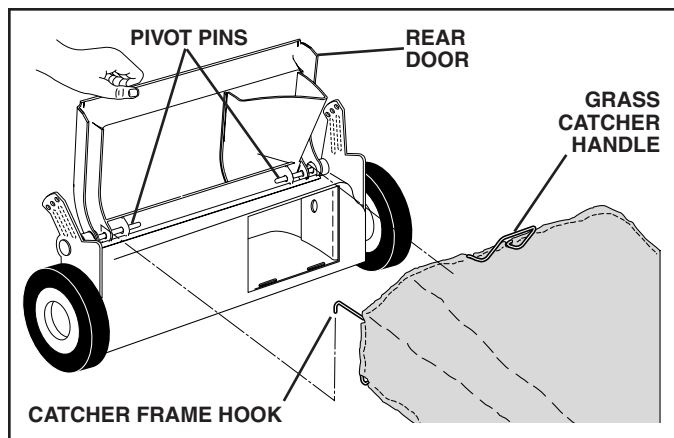


FIG. 5

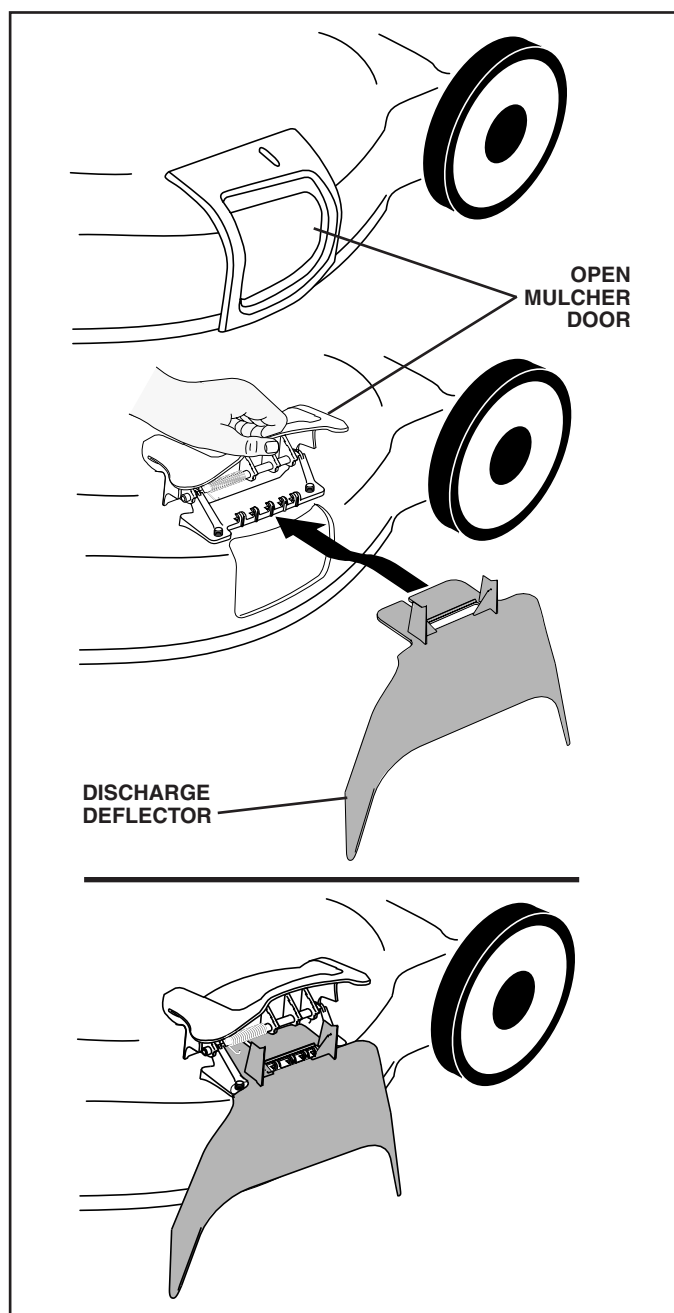


FIG. 6

SIMPLE STEPS TO REMEMBER WHEN CONVERTING YOUR LAWN MOWER

FOR MULCHING -

1. Rear door closed.
2. Mulcher door closed.

FOR REAR BAGGING -

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

FOR SIDE DISCHARGING -

1. Rear door closed.
2. Side discharge deflector installed.



CAUTION: Do not run your lawn mower without rear door closed or approved grass catcher in place. Never attempt to operate the lawn mower with the rear door removed or propped open.

TO EMPTY GRASS CATCHER (See Fig. 7)

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.

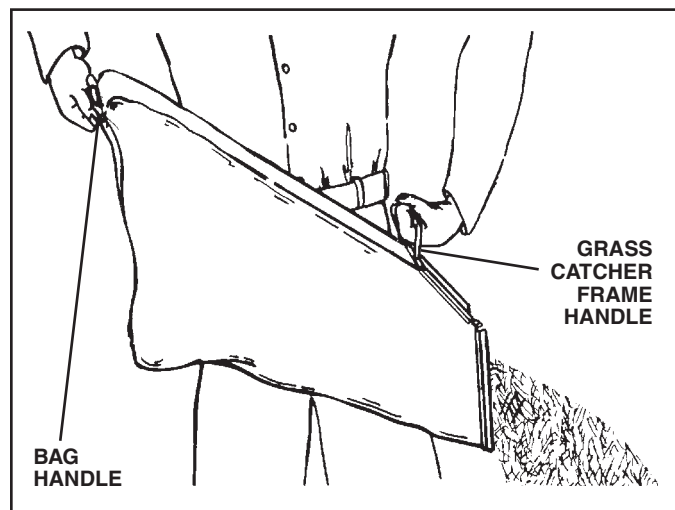


FIG. 7

OPERATION

BEFORE STARTING ENGINE

ADD OIL (See Figs. 7 and 8)

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 on startup.

1. Be sure lawnmower is level and area around oil fill is clean.
 2. Remove oil dipstick from oil fill spout. Make sure that rim of spout is clean.
 3. Engine holds 20 ounces of oil. For type and grade of oil to use, see "ENGINE" in the Maintenance section of this manual.
 4. Pour oil slowly. Do not overfill. Wait one minute to allow oil to settle. Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the tube. **DO NOT** thread the cap into the tube when taking reading.
 5. Always be sure to retighten oil dipstick before starting engine.
- 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.

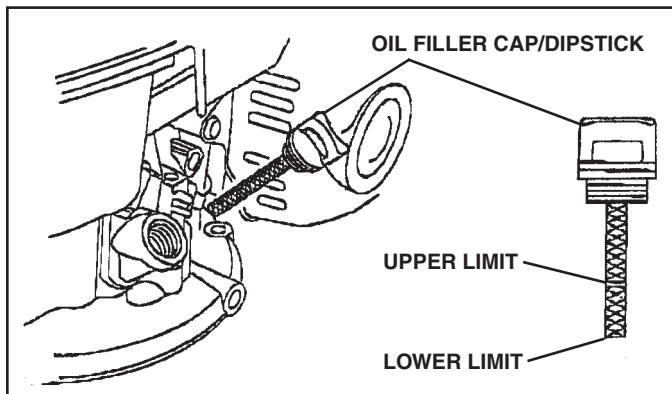


FIG. 7

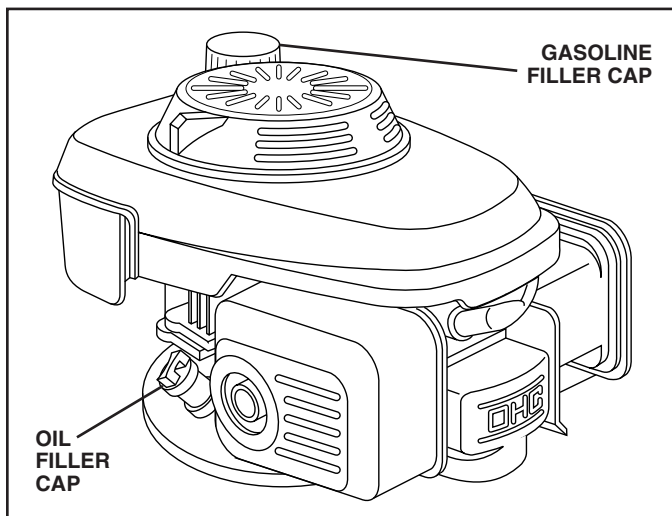


FIG. 8

ADD GASOLINE (See Fig. 8)

- 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: Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

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. Drain 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.

TO START ENGINE (See Fig. 9)

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.

1. Be sure fuel valve is in the ON position.
2. Move choke lever to ON (| \ |) position.
3. Hold operator presence control bar down to the handle and pull starter handle quickly. Do not allow starter rope to snap back.

NOTE: The choke lever automatically begins moving to the OFF position when operator presence control bar is held down to handle.

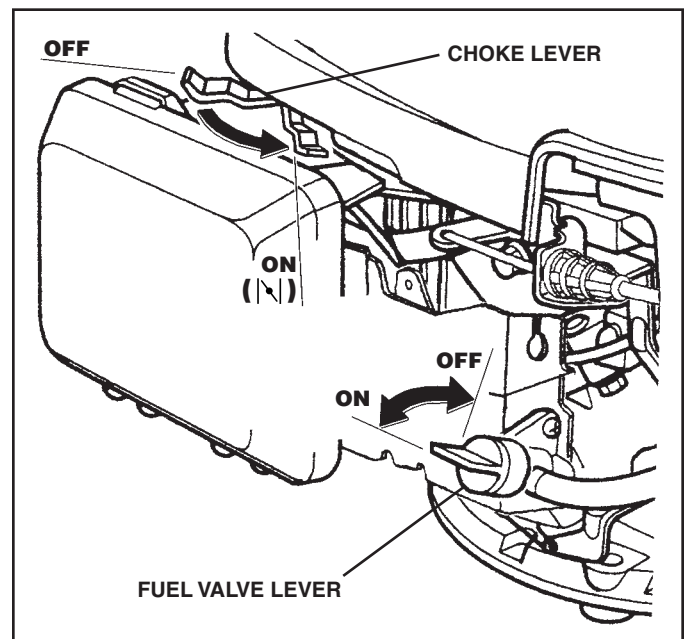


FIG. 9

OPERATION

TO STOP ENGINE

- To stop engine, release operator presence control bar. Wait until blade and all moving parts have stopped and turn fuel valve to OFF position if you do not intend to restart the engine soon.

MOWING TIPS

- 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 better grass bagging and most cutting conditions, the engine speed should be set in the fast position.
- 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 THE 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 and the newly cut area will not be exposed to the direct sun.
- 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. 10). 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.

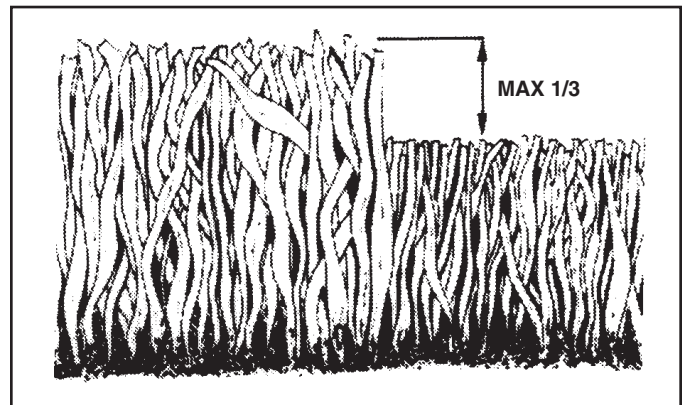


FIG. 10

- 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 or 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

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.

BLADE CARE

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

TO REMOVE BLADE (See Fig. 11)

1. Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with spark 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).

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. 11)

1. Position the blade adapter on the engine crankshaft. Be sure key in adapter and crankshaft keyway are aligned.
 2. Position blade on the blade adapter aligning the two (2) holes in the blade with the raised lugs on the adapter.
 3. Be sure the trailing edge of blade (opposite sharp edge) is up toward the engine.
 4. Install the blade bolt with the lock washer and hardened washer into blade adapter and crankshaft.
 5. 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.

IMPORTANT: BLADE BOLT IS GRADE 8 HEAT TREATED.

TO SHARPEN BLADE

NOTE: We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

Care should be taken to keep the blade 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, drive a nail into a beam or wall. Leave about one inch of the straight nail exposed. Place center hole of blade over the head of the nail. 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.

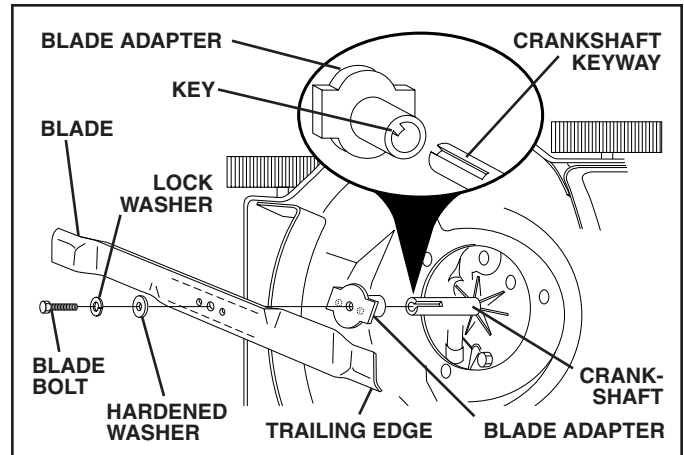


FIG. 11

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 a manufacturer approved replacement catcher. Give the lawn mower model number when ordering.

DRIVE WHEELS

Check front drive 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 area and must be cleaned to free drive wheels.

If necessary to clean the drive wheels, be sure to clean both front 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.

GEAR CASE

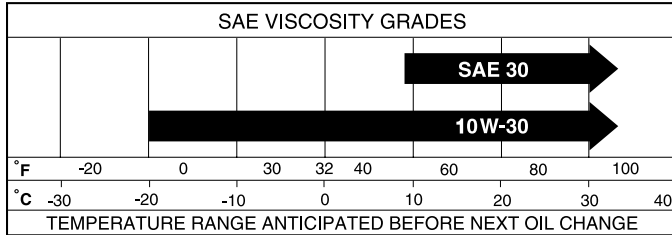
- To keep your drive system working properly, the gear case and area around the drive should be kept clean and free of trash build-up. Clean under the drive cover twice a season.
- The gear case is filled with lubricant to the proper level at the factory. The only time the lubricant needs attention is if service has been performed on the gear case.
- If lubricant is required, use only ELF Multis EP00. Do not substitute.

MAINTENANCE

ENGINE

LUBRICATION

Use only high quality detergent oil rated with API service classification SF-SJ. 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.

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. 12)

NOTE: Before tipping lawn mower to drain oil, drain 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 spark 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.
4. Wipe off any spilled oil from lawn mower or side of engine.
5. Fill engine with oil. (See "ADD OIL" in the Operation section of this manual).
6. Reconnect spark plug wire to spark plug.

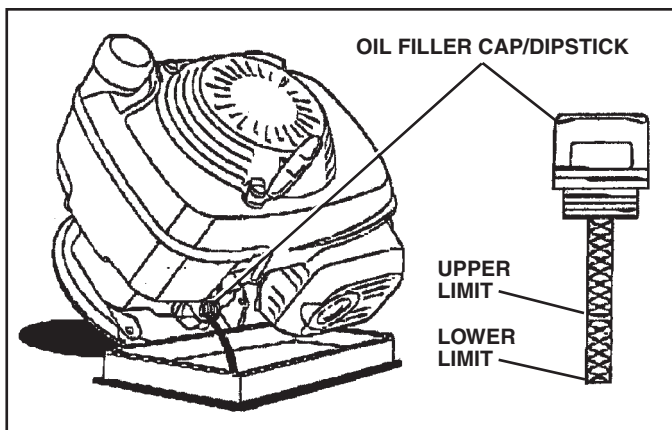


FIG. 12

AIR FILTER

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. See the maintenance section of your engine manual.

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 spark 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 and wheels free of all gasoline, oil, etc.
- We do not recommend using a garden hose to clean 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.

CLEAN UNDER DRIVE COVER

Clean under drive cover at least twice a season. Scrape underside of cover with putty knife or similar tool to remove any build-up of trash or grass on underside of drive cover.

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. If the deflector becomes damaged, it should be replaced.

TO REMOVE DRIVE BELT (See Fig. 13)

1. Remove drive cover and belt keeper.
2. Remove belt from gearcase pulley by pushing down on pulley and rolling belt off it.
3. Turn lawn mower on its side with air filter and carburetor up.
4. Remove blade and debris shield.
5. Remove belt from engine pulley on crankshaft.

TO REPLACE DRIVE BELT (See Fig. 13)

1. Install new belt on engine pulley.
2. Reinstall debris shield and blade.
3. Return mower to upright position.
4. Install new belt on gearcase pulley.
5. Reinstall belt keeper and drive cover.

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

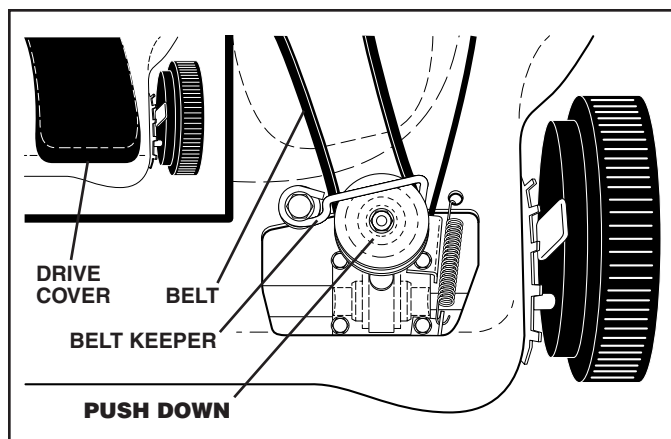


FIG. 13

TO ADJUST HANDLE (See Figs. 14 and 15)

The handle can be mounted in a high or low position. The mounting holes in the bottom of lower handle are off center for raising or lowering the handle.

1. Remove upper handle and all parts attached to lower handle.

2. Remove hairpin cotter from lower handle bracket mounting pin.
3. Squeeze lower handle in to remove it from mounting pins.
4. Turn lower handle over to raise or lower handle.
5. Squeeze lower handle in and position holes onto mounting pins on handle bracket.
6. Reassemble upper handle and all parts removed from lower handle.

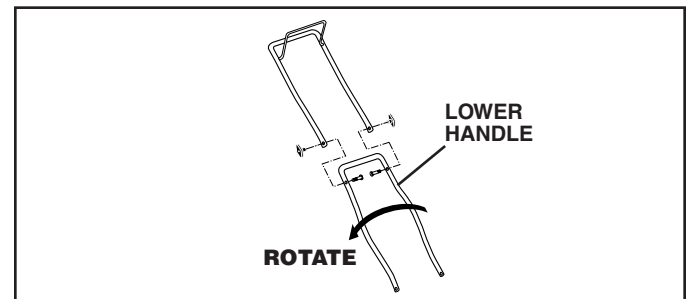


FIG. 14

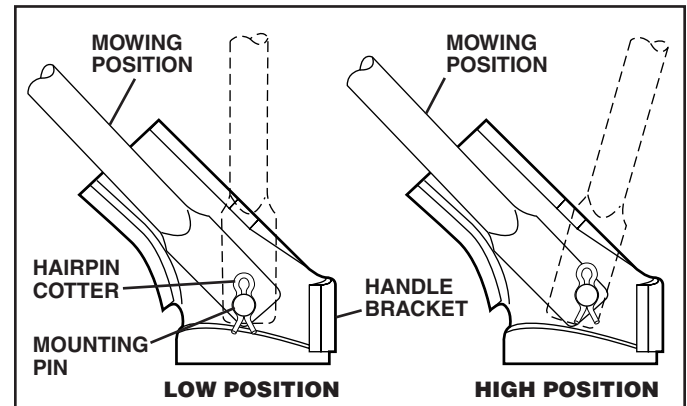


FIG. 15

ENGINE ENGINE SPEED

Your engine speed has been factory set. Do not attempt to increase engine speed or it may result in personal injury. If you believe that the engine is running too fast or too slow, take your lawn mower to an authorized service center for repair and adjustment.

CARBURETOR

Your carburetor is not adjustable. If your engine does not operate properly due to suspected carburetor problems, take your lawn mower to an authorized service center for repair and/or adjustment.

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 lawn 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. 16 and 17)

You can fold your lawn mower handle for storage.

1. Squeeze the bottom ends of the lower handle toward each other until the lower handle clears the handle bracket, then move handle forward.
2. Loosen upper handle mounting bolts enough to allow upper handle to be folded back.

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

- When setting up your handle from the storage position, the lower handle will automatically lock into mowing position.

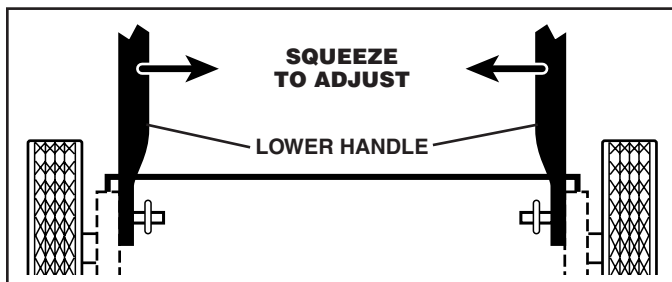


FIG. 16

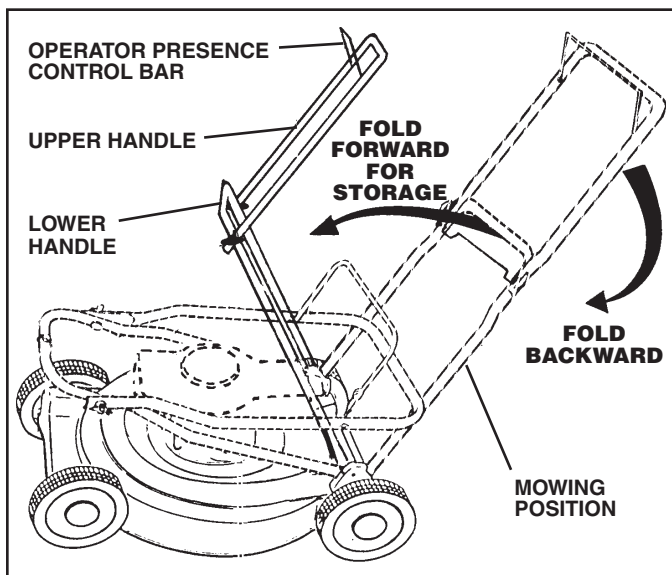


FIG. 17

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. ALSO, EXPERIENCE INDICATES THAT 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.

1. Drain the fuel tank.
 2. Start the engine and let 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 drain 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 AREAS 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. Drain tank and refill with fresh, clean fuel. 4. Drain fuel tank and carburetor and refill tank with fresh, clean fuel. 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. Set to "Higher Cut" position. 2. Set to "Higher Cut" position. 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. Dirt in drive pinions. 	<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. Clean drive pinions.

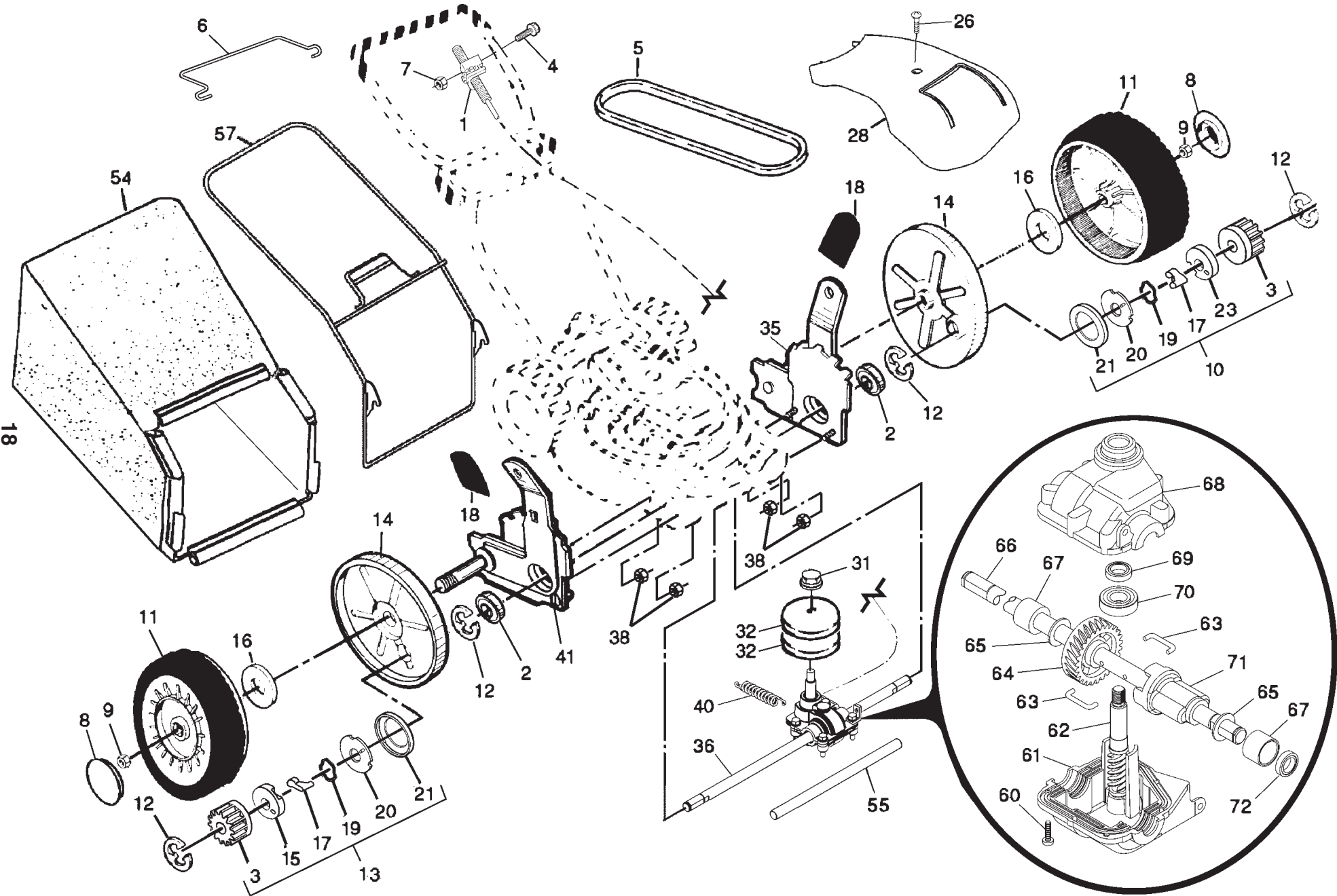
ROTARY LAWN MOWER - - MODEL NUMBER 5521CH (5521CHB) - PRODUCT NUMBER 954 22 32-34

KEY NO.	PART NO.	DESCRIPTION
1	532 18 60-24	Upper Handle (Includes Foam Grip)
2	532 15 34-18	Lower Handle
3	532 18 60-11	Control Bar
4	532 18 27-55	Engine Zone Control Cable
5	532 13 19-59	Handle Bolt
6	532 18 55-77	Handle Knob
7	532 05 17-93	Hairpin Cotter
8	532 06 64-26	Wire Tie
9	532 18 04-79	Rear Door Kit (Includes Key #16 and 17)
10	532 12 84-15	Pop Rivet
11	532 18 25-38	Support Bracket, LH
12	532 18 25-39	Support Bracket, RH
13	817 06 04-10	Screw 1/4-20 x 5/8
14	532 18 25-43	Handle Bracket Assembly (Left)
15	532 18 25-45	Handle Bracket Assembly (Right)
16	532 18 00-71	Spring, LH
17	532 18 00-72	Spring, RH
18	532 18 81-52	O-Ring
19	532 17 95-85	Rope Guide
20	532 17 83-98	Rear Skirt
21	532 08 86-52	Hinge Screw 1/4-20 x 1-1/4
22	532 16 97-47	Engine Pulley
23	532 08 76-77	Hi-Pro Key #505
24	- - -	Engine, Honda, Model Number GCV160 (Order parts from engine manufacturer)
25	532 15 04-06	Hex Head Thread Rolling Screw 3/8-16 x 1-1/8
26	532 08 39-23	Hex Flange Nut
27	532 18 55-72	Wheel
28	532 16 08-28	Shoulder Bolt 5/16-18 x .33
29	532 08 83-48	Washer, Flat 3/8
30	532 18 25-41	Axle Arm Assembly RR
31	532 18 55-75	Selector Knob
32	532 18 25-37	Selector Spring

KEY NO.	PART NO.	DESCRIPTION
33	873 80 05-00	Locknut
34	532 18 25-42	Axle Arm Assembly, LR
35	532 12 50-78	Washer
36	532 18 41-93	Bolt
37	532 15 00-78	Thread Cutting Screw w/Sems 5/16-18 x 3/4
38	532 18 39-01	Washer
39	532 85 10-74	Washer
40	532 18 38-65	Keeper, Belt
41	532 17 37-15	Screw
43	532 18 37-55	Bottom Belt Cover
44	532 18 55-83	Lawn Mower Housing (Includes Key Numbers 10, 11, 12 and 45)
45	532 10 73-39	Danger Decal
46	532 85 15-14	Blade Adapter
47	532 17 61-35	Blade 21"
48	532 18 60-39	Hardened Washer
49	532 85 02-63	Helical Washer 3/8-24 x 1-3/8 Grade 8
50	532 85 10-84	Hex Head Machine Screw 3/8-24 x 1-3/8 Grade 8
51	532 12 51-62	Bracket, Upstop
52	532 75 06-34	Screw
83	532 18 55-76	Mulch Door
84	532 17 57-35	Hinge Bracket Assembly
85	532 17 52-85	Spring
86	532 17 56-50	Rod, Hinge
87	873 80 04-00	Locknut
88	532 18 55-82	Clipping Deflector
91	532 18 55-73	Hubcap
92	532 13 20-04	Nut, Hex
93	532 18 63-62	Grip, Foam
--	532 16 23-00	Warning Decal (Not Shown)
--	532 18 73-87	Owner's Manual, English/French

NOTE: All component dimensions given in U.S. inches.
1 inch = 25.4 mm

ROTARY LAWN MOWER - - MODEL NUMBER 5521CH (5521CHB) - PRODUCT NUMBER 954 22 32-34



ROTARY LAWN MOWER - - MODEL NUMBER 5521CH (5521CHB) - PRODUCT NUMBER 954 22 32-34

19

KEY NO.	PART NO.	DESCRIPTION
1	532 18 56-85	Vari-Speed Drive Control Assembly
2	532 16 99-11	Bearing, Wheel Adjuster
3	532 17 51-03	Gear, Pinion
4	532 18 56-81	Screw
5	532 16 97-78	V-Belt
6	532 18 60-10	Bar, Control, Drive
7	532 75 11-52	Nut, Hex
8	532 18 06-26	Hubcap
9	532 14 52-12	Locknut
10	532 18 82-92	Pinion Assembly, LH
11	532 18 07-67	Wheel & Tire Assembly
12	812 00 00-58	E-Ring
13	532 18 82-93	Pinion Assembly, RH
14	532 18 05-04	Dust Cover
15	532 17 51-02	Retainer, Drive, RH
16	532 06 77-25	Washer 1/2 x 1-1/2 x .134
17	532 17 50-98	Pawl
18	532 18 55-74	Selector Knob
19	532 18 82-91	Spring, Torsion
20	532 17 51-04	Disc, Drive
21	532 17 51-01	Seal, Pinion
23	532 17 51-05	Retainer, Drive, LH
26	532 17 52-62	Pan Head Tapping Screw #10-24 x 2-3/4
28	532 18 55-79	Drive Cover
31	532 13 20-10	Hex Flange Nut
32	532 16 97-42	Pulley Half, Drive

KEY NO.	PART NO.	DESCRIPTION
35	532 18 09-15	Kit, Wheel Adjuster, LH (Includes Knob and Bearing)
36	532 18 72-12	Gear Case Assembly, Complete
38	873 80 04-00	Locknut 1/4-20
40	532 18 22-26	Spring
41	532 18 09-14	Kit, Wheel Adjuster, RH (Includes Knob and Bearing)
54	532 18 55-81	Grassbag Assembly
55	532 17 57-39	Driveshaft Cover
57	532 18 39-93	Frame
60	532 18 35-13	Screw
61	532 18 75-25 *	Case, Lower
62	532 18 75-27	Shaft, Input
63	532 18 35-05	Wire, Formed
64	532 18 34-99	Gear, 27 Teeth
65	532 18 35-09	Washer
66	532 18 75-29	Shaft, Output
67	532 18 35-11	Bushing
68	532 18 75-26 *	Case, Upper
69	532 18 35-14	Seal, Input Shaft
70	532 18 35-06	Bearing, Ball
71	532 18 75-28	Spacer
72	532 18 35-08	Seal, Output Shaft

* Use Dow Corning #709 to reseal Gear Case Halves.

NOTE: All component dimensions given in U.S. inches.
1 inch = 25.4 mm



WARRANTY STATEMENT

SECTION 1: LIMITED WARRANTY

Husqvarna Forest & Garden Company ("Husqvarna") warrants Husqvarna product to the original purchaser to be free from defects in material and workmanship from the date of purchase for the "Warranty Period" of the product as set forth below:

Lifetime Warranty: All tiller tines against breakage, trimmer shafts, ignition coils and modules on hand held product.

3 Year Warranty: Spindles (on Zero Turn Riders and Commercial Walk-Behinds)

2 Year COMMERCIAL-Warranty: Husqvarna Commercial Turf Equipment—zero turn riders, wide area walks, and ground engaging commercial equipment.

2 Year NON-COMMERCIAL Warranty: Automatic Mower, Riding lawn mowers, yard and garden tractors, walk behind mowers, tillers, chain saws, trimmers, brushcutters, clearing saws, snow blowers, handheld blowers, backpack blowers, hedge trimmers, electrical products and power-assist collection systems for noncommercial, nonprofessional, noninstitutional or nonincome producing use, except as herein stated.

Emission control system components necessary to comply with CARB-TIER-II and EPA regulations, except for those components which are part of engine systems manufactured by third party engine manufacturers for which the purchaser has received a separate warranty with product information supplied at time of purchase.

1 Year Warranty: Power cutters, stump grinder, pole pruners and pole saws for non-commercial, non-professional, non-institutional or non-income producing use. All trimmers, brushcutters, clearing saws, hovering trimmers, stick edgers, backpack blowers, hand held blowers, hedge trimmers, power-assist collection systems used for commercial, institutional, professional or income producing purposes or use.

Batteries have a one-year prorated limited warranty with 100% replacement during the first 6 months.

90 Day Warranty: Automatic Mower, Chain saws, power cutters, stump grinders, pole saws, pole pruners, snow throwers, model series 580 & 600 walk-behind mowers and commercial turf equipment or any Husqvarna product used for commercial, institutional, professional, or income producing purposes or use except as otherwise provided herein.

Husqvarna Safety Apparel carries a 90-day warranty from the date of the customer's original purchase for defects in material and workmanship. Normal wear, tear or abuse is not covered under warranty. Product must be returned to Charlotte with a warranty claim form. All care and maintenance instructions must be followed as stated by the manufacturer on the care label. The fit of the protective apparel/boot is not covered under warranty.

30 Day Warranty: Replacement parts, accessories including bars and chains, tools and display items.

SECTION 2: HUSQVARNA'S OBLIGATIONS UNDER THE WARRANTY

Husqvarna will repair or replace defective components without charge for parts or labor if a component fails because of a defect in material or workmanship during the warranty period.

SECTION 3: ITEMS NOT COVERED BY THIS WARRANTY

The following items are not covered by this warranty:

- (1) Normal customer maintenance items which become worn through normal regular use, including, but not limited to, belts, blades, blade adapters, bulbs, filters, guide bars, lubricants, rewind springs, saw chain, spark plugs, starter ropes and tines;
- (2) Natural discoloration of material due to ultraviolet light;
- (3) Engine and drive systems not manufactured by Husqvarna; these items are covered by the respective manufacturer's warranty as provided in writing with the product information supplied at the time of purchase; all claims must be sent to the appropriate manufacturer;
- (4) Lawn and garden attachments are covered by a third party which gives a warranty, all claims for warranty should be sent to the manufacturer; and
- (5) Emission Control System components necessary to comply with CARB-TIER-II and EPA regulations which are manufactured by third party engine manufacturer.

SECTION 4: EXCEPTIONS AND LIMITATIONS

This warranty shall be inapplicable to defects resulting from the following:

- (1) Accident, abuse, misuse, negligence and neglect, including stale fuel, dirt, abrasives, moisture, rust, corrosion, or any adverse reaction due to incorrect storage or use habits;
- (2) Failure to operate or maintain the unit in accordance with the Owner's/Operator's manual or instruction sheet furnished by Husqvarna;
- (3) Alterations or modifications that change the intended use of the product or affects the product's performance, operation, safety, or durability, or causes the product to fail to comply with any applicable laws; or:
- (4) Additional damage to parts or components due to continued use occurring after any of the above.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. HUSQVARNA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THESE PRODUCTS EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THESE PRODUCTS IS LIMITED IN DURATION TO THE WARRANTY PERIOD AS DEFINED IN THE LIMITED WARRANTY STATEMENT. HUSQVARNA RESERVES THE RIGHT TO CHANGE OR IMPROVE THE DESIGN OF THE PRODUCT WITHOUT NOTICE, AND DOES NOT ASSUME OBLIGATION TO UPDATE PREVIOUSLY MANUFACTURED PRODUCTS.

Some states do not allow the exclusion of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SECTION 5: CUSTOMER RESPONSIBILITIES

The product must exhibit reasonable care, maintenance, operation, storage and general upkeep as written in the maintenance section of the Owner's/Operator's manual. Should an operational problem or failure occur, the product should not be used, but delivered as is to an authorized Husqvarna dealer for evaluation. Proof of purchase, as explained in section 6, rests solely with the customer.

SECTION 6: PROCEDURE TO OBTAIN WARRANTY CONSIDERATION

It is the Owner's and Dealer's responsibility to make certain that the Warranty Registration Card is properly filled out and mailed to Husqvarna Forest & Garden Company. This card should be mailed within ten (10) days from the date of purchase in order to confirm the warranty and to facilitate post-sale service.

Proof of purchase must be presented to the authorized Husqvarna dealer in order to obtain warranty service. This proof must include date purchased, model number, serial number, and complete name and address of the selling dealer.

To obtain the benefit of this warranty, the product believed to be defective must be delivered to an authorized Husqvarna dealer in a timely manner, no later than thirty (30) days from date of the operational problem or failure. The product must be delivered at the owner's expense. Pick-up and delivery charges are not covered by this warranty. An authorized Husqvarna dealer can be normally located through the "Yellow Pages" of the local telephone directory or by calling 1-800-HUSKY62 for a dealer in your area.

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