

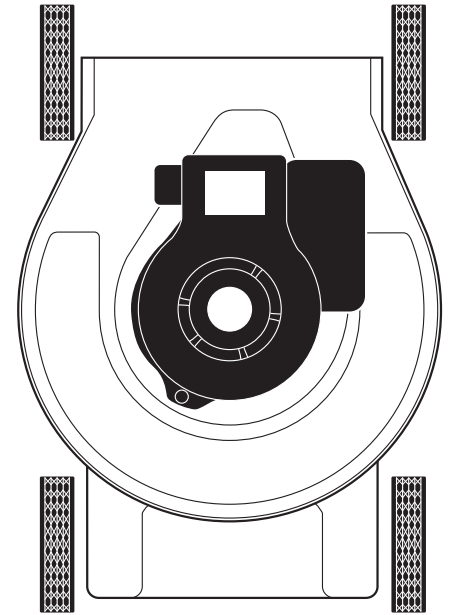
HUSKEE®

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OPERATOR'S MANUAL

HUSKEE 3in1 PUSH MOWER

HSK2131KLR

- **Assembly**
 - **Operation**
 - **Maintenance**
 - **Service and Adjustments**
 - **Storage**
 - **Troubleshooting**

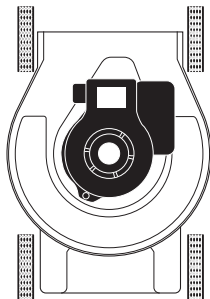


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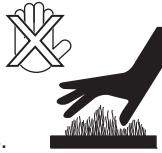
SAFETY RULES

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.



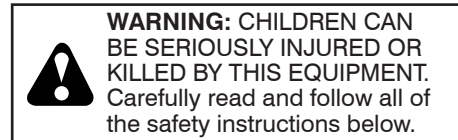
▲ **WARNING:** Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

▲ **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



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.

TROUBLESHOOTING

See appropriate section in manual unless directed to an authorized Service Center.

PROBLEM	CAUSE	CORRECTION
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 to hard surface.
Grass catcher not filling (HSK2131KLR)	<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 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.

TROUBLESHOOTING

See appropriate section in manual unless directed to an authorized Service Center.

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. Blown fuse (if equipped). 	<ol style="list-style-type: none"> 1. Clean/replace air filter. 2. Fill fuel tank. 3. Drain fuel tank and refill tank with fresh, clean gasoline. 4. Drain 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. Replace fuse.
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.

SAFETY RULES

- 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.

SAFETY RULES

- 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.
- 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 overspeed the engine.
- Maintain or replace safety and instruction labels, as necessary.

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

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 problems you cannot easily remedy, please contact your nearest authorized service center. They have competent, well trained technicians and the proper tools to service or repair this unit.

- Read the SAFETY RULES and this Operator's Manual in its entirety before you attempt to assemble or operate your new lawn mower to insure proper operation and to prevent injury to yourself and others. Save this manual for future reference.
- Your new lawn mower has been assembled at the factory with the exception of those parts left unassembled for shipping purposes. 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.
- All parts such as nuts, washers, bolts, etc., necessary to complete the assembly have been placed in the parts bag.

TO REMOVE LAWN MOWER FROM CARTON

- Remove all loose parts from carton.
- Remove lawn mower housing with care. Avoid touching blade under housing. Always wear gloves or other protection when working under or lifting mower.

STORAGE

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.

- Drain the fuel tank.
- 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.

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.

ENGINE OIL

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

CYLINDER

- Remove spark plug.
- Pour one ounce (29 ml) of oil through spark plug hole into cylinder.
- Pull starter handle slowly to distribute oil.
- 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 protect it 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.

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.

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.

LAWN MOWER

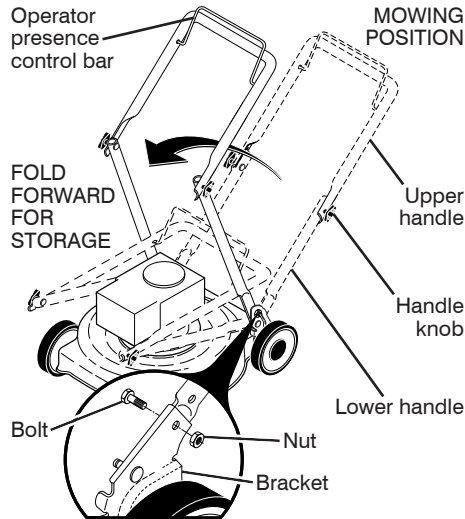
When lawn mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

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

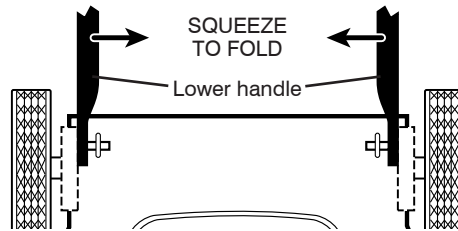
HANDLE

Your handle may be folded for storage as shown.

- Remove bolts and nuts.



- Squeeze the bottom ends of lower handle towards each other until handle clears the handle brackets and swing handles forward over mower.



- Loosen upper handle mounting hardware enough to allow upper handle to be folded back.

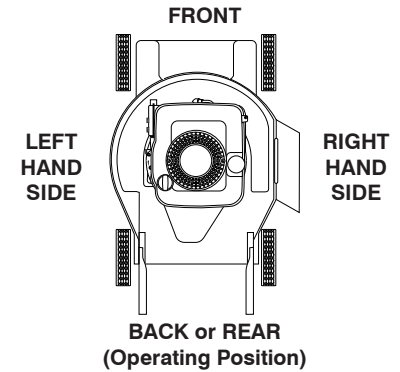
IMPORTANT: When folding handles for storage or transportation, be sure to fold handles as shown or you may damage the control cables.

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

THINGS TO KNOW BEFORE YOU ASSEMBLE OR OPERATE YOUR LAWN MOWER

Do I have a side or rear discharge lawn mower?

Look for the grass discharge opening on your mower. If the opening is on the right side of the mower housing, it is a side discharge mower. If the opening is at the back of the mower housing, it is a rear discharge mower. Only rear discharge lawn mowers have a grass catcher included with the mower. Approved grass catchers for side discharge mowers may be purchased from your nearest authorized dealer.



Do I have a mulching lawn mower?

Look for the grass discharge opening on your mower. Raise the discharge deflector (rear door on rear discharge mowers). If the opening is closed off by a plate, then your lawn mower is mulcher ready. To convert to a discharging mower, see the Operation section of this manual.

What is the right and left side of the lawn mower?

When right hand (RH) or left hand (LH) is mentioned in this manual, it means when you are in the operating position (standing behind the handle).

What kind of engine is on my lawn mower?

When learning how to operate your new lawn mower, you will need to know what kind of engine powers the mower. A decal on the engine will indicate the manufacturer and type or brand name of the engine.

KOHLER

ASSEMBLY

CAUTION: Do not operate this lawn mower without the discharge deflector or an entire approved grass catcher in place. These guards are for your protection and are required by the American National Standards Institute and Consumer Products Safety Commission.

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

TOOLS REQUIRED FOR ASSEMBLY

1/2" Wrench

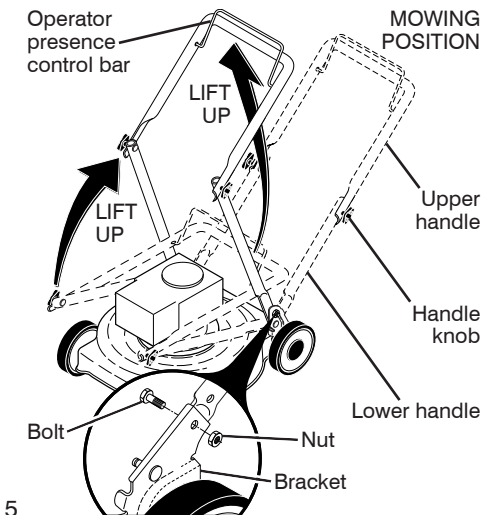
HOW TO SET UP YOUR MOWER

UNFOLD HANDLE

IMPORTANT: Unfold handle carefully so as not to pinch or damage control cables.

- Raise handles until lower handle section locks into place in mowing position.
- Insert bolt through handle and bracket and secure with nut. A 1/2" wrench will be required.

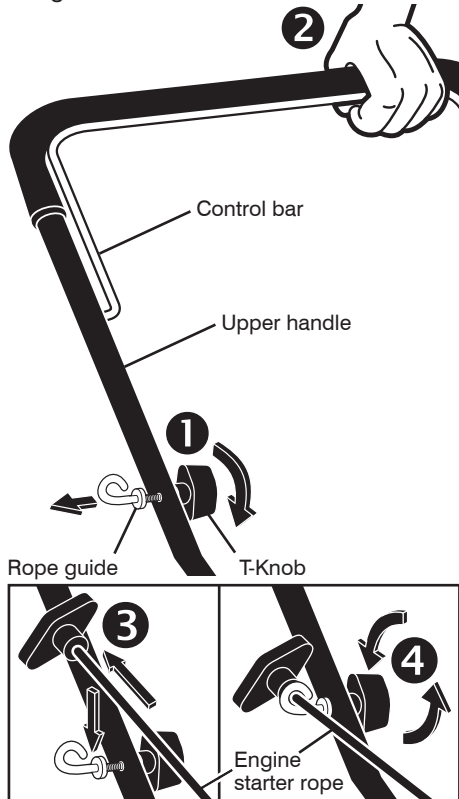
- Raise upper handle section into place on lower handle, remove protective padding and tighten both handle knobs.
- Remove handle padding holding operator presence control bar to upper handle.



ASSEMBLY

INSTALL STARTER ROPE

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

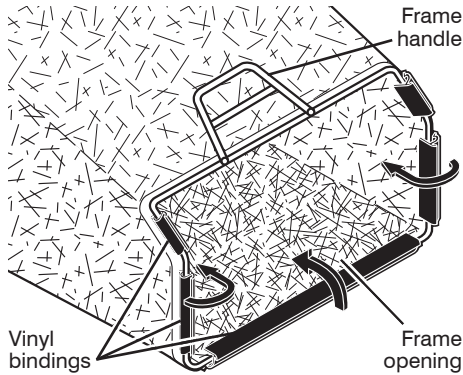


ASSEMBLE GRASS CATCHER

To convert mower to bagging or discharging, see the Operation section in this manual.

- Put grass catcher frame into grass bag with rigid part of bag on the bottom.
- 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.



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 CONTROL

Engine speed was set at the factory for optimum performance. Engine speed is not adjustable.

TO ADJUST CUTTING HEIGHT

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

NOTE: For shipping purposes, the rear wheels on your lawn mower may not be adjusted to the same position as the front wheels. Before operating mower adjust all wheels to the same cutting height.

SERVICE AND ADJUSTMENTS

CAUTION: Before performing any service or adjustments:

- Release operator presence control bar.
- Make sure the blade and all moving parts have completely stopped.
- Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with the spark plug.

LAWN MOWER

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 it becomes damaged.

DISCHARGE DEFLECTOR

The discharge deflector, attached to the discharge opening of your lawn mower, is provided to prevent the possibility of injury resulting from objects being thrown out of the discharge opening into the operator mowing position. Replace the discharge deflector if it becomes damaged.

TO ADJUST CUTTING HEIGHT

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

ENGINE CARBURETOR

The carburetor has been preset at the factory.

- The air filter must be assembled to the carburetor when running engine.

See the ADJUSTMENT section of your engine manual for further instructions.

ENGINE SPEED

The engine speed has been factory set.

MAINTENANCE

SPARK PLUG

Replace spark plug at the beginning of each mowing season or after every 100 hours of operation, whichever occurs first. Set spark plug gap according to engine manual specifications.

CLEANING

IMPORTANT: For best performance, keep mower housing free of grass build-up and trash. Clean the underside of your mower after each use.

- Clean the underside of your lawn mower by scraping to remove buildup 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 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.

GRASS CATCHER

Grass catcher may be hosed with water but must be dry when used.

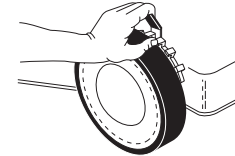
CAUTION: Under normal usage, the catcher material is subject to deterioration and wear and should therefore be checked to ensure compliance with original manufacturer specifications.

OPERATION

- 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.

LEVER BACKWARD TO LOWER MOWER



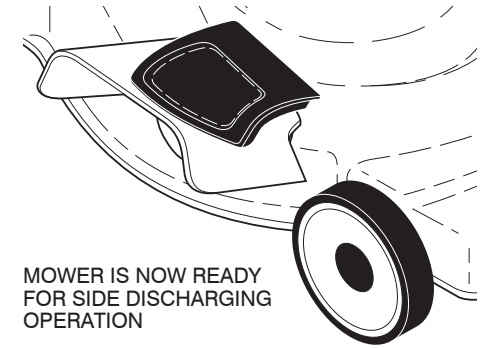
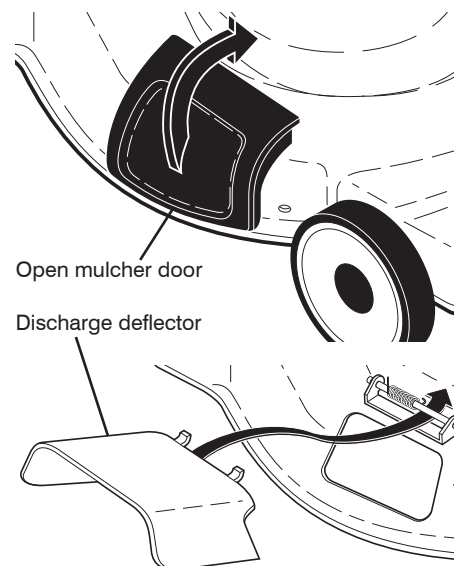
LEVER FORWARD TO RAISE MOWER

TO CONVERT MOWER

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

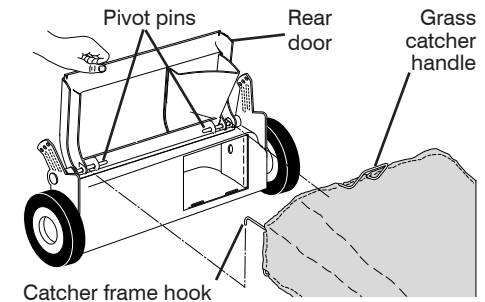
SIDE DISCHARGING:

- Open mulcher door and install discharge deflector under door as shown.
- Mower is now ready for side discharging operation.
- Rear door must be closed



REAR BAGGING:

- 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.
- To convert to mulching or bagging operation, discharge deflector must be removed and mulcher door must be closed.



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. 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.

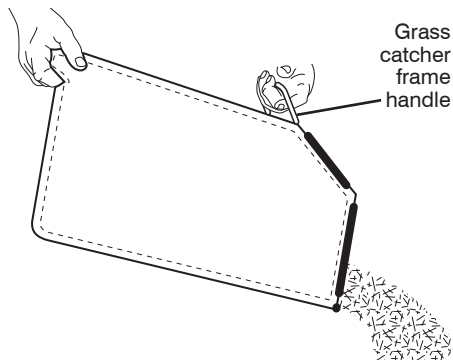
OPERATION

TO EMPTY GRASS CATCHER

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.

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

CAUTION: Under normal usage, the catcher material is subject to deterioration and wear and should, therefore, be checked frequently for replacement. Any replacement catcher should be checked to ensure compliance with original manufacturer's specifications.



OPERATOR PRESENCE CONTROL BAR

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

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.

BEFORE STARTING ENGINE

Read the engine manual packed with your mower.

ADD OIL

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.

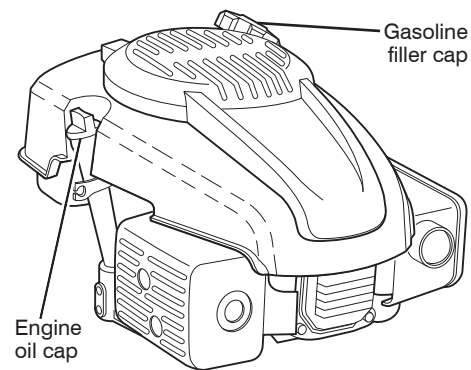
1. Be sure lawnmower is level.
2. Remove oil dipstick from oil fill spout.
3. You receive a container of oil with the unit. Slowly pour the entire container down the oil fill spout into the engine.

NOTE: Initial oil fill requires only 18 oz. due to residual oil in engine from the manufacturers 100% quality testing. When changing oil you may need 20 oz.

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.

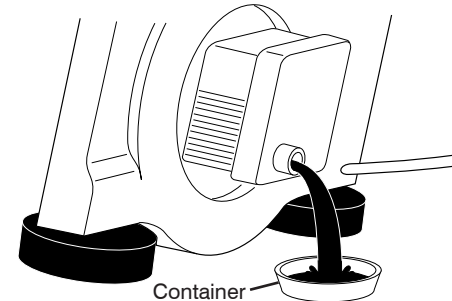


MAINTENANCE

TO CHANGE ENGINE OIL (SEE ENGINE MANUAL)

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.
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 plug.

AIR FILTER

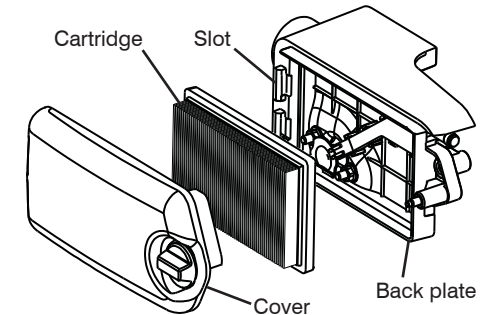
Your engine will not run properly and may be damaged by using a dirty air filter. Replace the air filter every 100 hours of operation or every season, whichever occurs first. Service air cleaner more often under dusty conditions.

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. See the maintenance section of your engine manual.



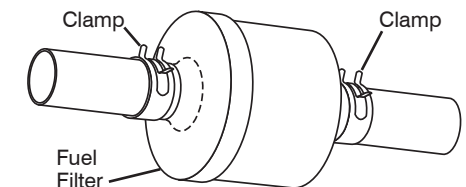
MUFFLER

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

IN-LINE FUEL FILTER

The fuel filter should be replaced once each season. If fuel filter becomes clogged, obstructing fuel flow to carburetor, replacement is required.

1. With engine cool, remove filter and plug fuel line sections.
2. Place new fuel filter in position in fuel line with arrow pointing towards carburetor.
3. Be sure there are no fuel line leaks and clamps are properly positioned.
4. Immediately wipe up any spilled gasoline.



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, blade must be kept sharp. Replace a bent or damaged blade.

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

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, 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 the blade adapter if damaged.

TO REPLACE BLADE

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.

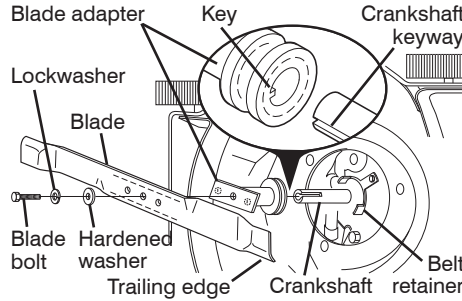
- The recommended tightening torque is 35–40 ft. lbs. (47–54 Nm).

IMPORTANT: Blade bolt is heat treated. If bolt needs replacing, replace only with approved bolt.

TO SHARPEN BLADE

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 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.



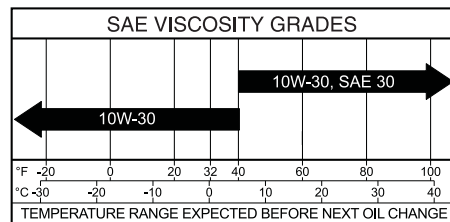
- To check blade balance, drive a nail into a beam or wall. Leave about one inch of the straight nail exposed. Place center hole of blade over the head of the nail. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

ENGINE

Read the maintenance section of your engine manual.

LUBRICATION

Use only high quality detergent oil rated with API service classification SJ–SN. Select the oil's SAE viscosity grade according to your expected operating temperature. Change the oil after the first two hours of operation and every 25 hours thereafter or at least once a year if the mower is not used for 25 hours in one year. Refer to engine manual.



OPERATION

ADD GASOLINE

- 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.

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.

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.

TO STOP ENGINE

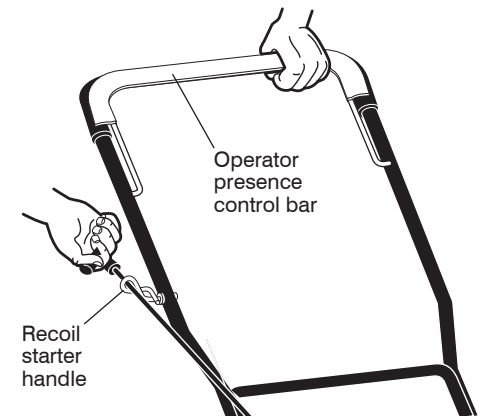
- To stop engine, release operator presence control bar.

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.

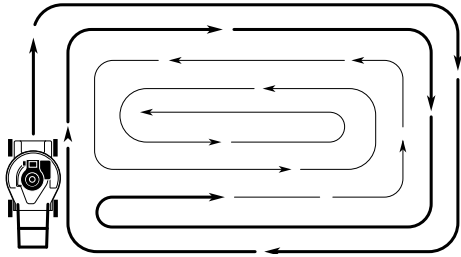


OPERATION

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 when mowing very tall grass, raise the mower height on the first cut to reduce pushing effort, to avoid overheating the engine, and to avoid leaving clumps of grass clippings. Make the second cut to the desired height.
- For extremely heavy cutting, reduce the width of cut.
- For side discharge lawn mowers, 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.

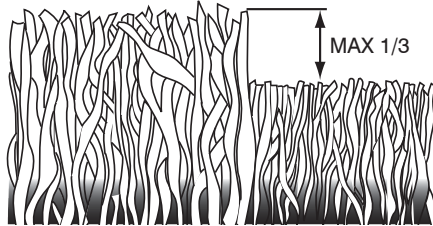


- When using a rear discharge lawn mower in moist, heavy grass, clumps of cut grass may not enter the grass catcher. Reduce ground speed (pushing speed) and/or run the lawn mower over the area a second time.
- If a trail of grass clipping is left on the right side of a rear discharge lawn mower, mow 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 the catcher will collect less grass. To prevent this, regularly hose catcher off with water and let dry before use.

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, 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. 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 grass, reduce your width of cut by overlapping previously cut path and mow slowly.



- 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		
ENGINE	Lubrication				✓		
	Clean and Recharge Battery **				✓		✓ ₄
	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. All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

- 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 assures proper air-fuel mixture and helps your engine run better and last longer.
- Follow the Maintenance Schedule in this manual.

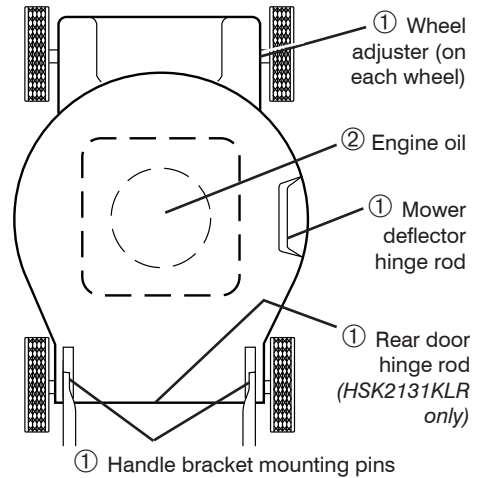
BEFORE EACH USE

- Check engine oil level.
- Check for loose fasteners.

LUBRICATION

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

LUBRICATION CHART



① Spray lubricant

② See "ENGINE" in Maintenance section.

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.