

# LEHR®

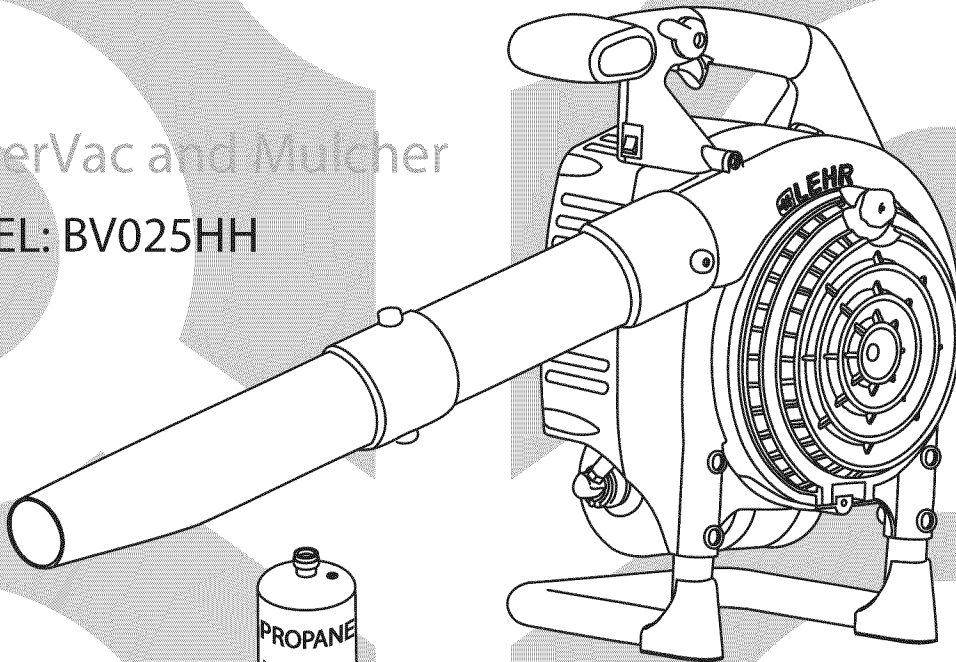
Environmentally friendly technology

## OPERATOR'S MANUAL

### PROPANE POWERED ECO BLOWER

BlowerVac and Mulcher

MODEL: BV025HH



16.4 oz Propane Bottle  
Not Included

### TABLE OF CONTENTS

Service and Safety.....	2
Safe Operation Rules.....	3
Understanding Your Unit.....	5
Oil Information.....	6
Understanding Propane.....	7
Installing the Propane Canister.....	8
Assembly.....	9
Starting / Stopping.....	10
Operation.....	11
Maintenance.....	12
Cleaning and Storage.....	16
Troubleshooting.....	16
Specifications.....	17
Warranty.....	18

**DO NOT RETURN THE UNIT  
TO THE RETAILER**

**Call 1-866-941-LEHR (5347)**



**WARNING:**

THE ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

# SERVICE AND SAFETY

## LEHR ECO-BLOWER

4-CYCLE PROPANE BLOWER / VAC and MULCHER

For service call 1-866-941-LEHR in the United States, to obtain a list of authorized service dealers near you. For more details about your unit, visit our web site at: [www.golehr.com](http://www.golehr.com).

DO NOT RETURN THE UNIT TO THE RETAILER. PROOF OF PURCHASE WILL BE REQUIRED FOR WARRANTY SERVICE.

THIS PRODUCT IS COVERED BY ONE OR MORE U.S. PATENTS. OTHER PATENTS ARE PENDING.

Service on this unit both within and after the warranty period should be performed only by an authorized and approved service dealer.

### SPARK ARRESTOR NOTE

NOTE: For users on U.S. Forest Land and in the states of California, Maine, Oregon, and Washington. All U.S. Forest Land and the states of California (Public Resources Codes 4442 and 4443), Oregon, and Washington require by law that certain internal combustion engines operated on forest brush and/or grass-covered areas be equipped with a spark arrestor, maintained in effective working order, or the engine be constructed, equipped and maintained for the prevention of fire. Check with your state or local authorities for regulations pertaining to these requirements. Failure to follow these requirements could subject you to liability or a fine. This unit is factory equipped with a spark arrestor.

All information, illustrations, and specifications in this manual are based on the latest production information available at the time of printing. We reserve the right to make changes at any time without notice.



#### WARNING:

WHEN USING THE UNIT, YOU MUST FOLLOW THESE SAFETY RULES. PLEASE READ THESE TO ENSURE THE SAFETY OF THE OPERATOR AND ANY BYSTANDERS. PLEASE KEEP THESE INSTRUCTIONS FOR LATER USE.

## IMPORTANT SAFETY INSTRUCTIONS

### READ ALL INSTRUCTIONS BEFORE OPERATING

- Inspect the unit before use. Replace any missing or damaged parts.
- Check for fuel leaks. Make sure all fasteners are in place and secure. Replace parts that are cracked, chipped, or damaged in any way. Do not operate the unit with loose or damaged parts.
- Carefully inspect the area before starting the unit. Remove all debris and hard or sharp objects such as glass, wire, etc.
- Be aware of the risk of injury to the head, hands and feet.
- Clear the area of children, bystanders, and pets at a minimum, keep all children, bystanders, and pets outside a 50 feet (15 m) radius; there still may be a risk to bystanders from thrown objects. Bystanders should be encouraged to wear eye protection. If you are approached, stop the unit immediately.
- Use only original equipment manufacturer replacement parts.
- Squeeze the throttle control and check that it returns automatically to the idle position. Make all adjustments or repairs before using unit.
- Do not operate this unit when tired, ill, or under the influence of alcohol, drugs or medications.
- This unit is intended for adult use only. Do not allow children or untrained individuals to use the unit.
- Familiarize yourself with the controls and proper use of your unit prior to using.



#### WARNING:

WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS. USE OF ANY OTHER PARTS MAY CREATE A HAZARD OR CAUSE PRODUCT DAMAGE.

# SAFE OPERATION RULES

## DURING OPERATION

- Never start or run the unit inside a closed room or building. Breathing exhaust fumes can be fatal. Operate this unit only in a well ventilated outdoor area.
- Wear safety glasses or goggles that meet ANSI Z87.1 standards and are marked as such. Wear ear / hearing protection when operating this unit. Wear a face or dust mask if the operation is dusty.
- Wear heavy long pants, boots, gloves and a long sleeve shirt. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair above shoulder level.
- Use the unit only in daylight or good artificial light.
- Avoid accidental starting. Be in the starting position whenever pulling the starter rope. The operator and unit must be in a stable position while starting. Refer to Starting/Stopping Instructions (p. 10).
- Only use this tool for its intended purpose.
- Do not overreach. Always keep proper footing and balance.
- Always hold the unit with both hands when operating. Keep a firm grip on handle or grips.
- Keep hands, face, and feet at a distance from all moving parts.
- Do not touch the engine or muffler. These parts get extremely hot from operation, even after the unit is turned off.
- Do not operate the engine faster than the speed needed to blow, or vacuum.
- Do not operate the unit with loose or damaged parts. Stop the unit, switch the engine to off, and disconnect the spark plug for maintenance or repair.
- Use only original equipment manufacturer replacement parts and accessories for this unit. These are available from your authorized service dealer. Use of any unauthorized parts or accessories could lead to serious injury to the user, or damage to the unit, and void your warranty.
- Keep unit clean of vegetation and other materials.
- To reduce fire hazard, replace faulty muffler and spark arrestor. Keep the engine and muffler free from grass, leaves, excessive grease or carbon build up.

## OTHER SAFETY WARNINGS

- Never store a unit with the propane canister attached inside a building where vapor may reach an open flame or spark.
- Allow the engine to cool before storing or transporting.
- Store the unit in a dry area, locked up or up high to prevent unauthorized use or damage, out of the reach of children.
- Never douse or squirt the unit with water or any other liquid. Keep handles dry, clean and free from debris. Clean after each use, see Cleaning and Storage instructions. (p. 16)
- Keep these instructions. Refer to them often and use them to instruct other users. If you loan someone this unit, also loan them these instructions.

SAVE THESE INSTRUCTIONS

# SAFE OPERATION RULES

## SAFETY AND INTERNATIONAL SYMBOLS

This operator's manual describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating, maintenance and repair information.



**WARNING:** Indicates danger, warning or caution. May be used in conjunction with other symbols or pictographs.



**WARNING: READ OPERATOR'S MANUAL:** Read the operator's manual and follow all warnings and safety instructions. Failure to do so can result in serious injury to the operator and/or bystanders.



**WEAR EYE AND HEARING PROTECTION WARNING:** Thrown objects and loud noise can cause severe eye injury and hearing loss. Wear eye protection meeting ANSI Z87.1 standards and ear protection when operating this unit. Use a full face shield when needed.



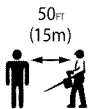
**OIL:** Refer to operator's manual for the proper type of oil.



**ON/OFF CONTROL ON/START/RUN**



**ON/OFF CONTROL OFF or STOP**



**KEEP BYSTANDERS AWAY WARNING:** Keep all bystanders, especially children and pets, at least 50 feet (15 m) from the operating area.



**HOT SURFACE WARNING**  
Do not touch a hot muffler, gear housing or cylinder. You may get burned. These parts get extremely hot from operation. They remain hot for a short time after the unit is turned off.

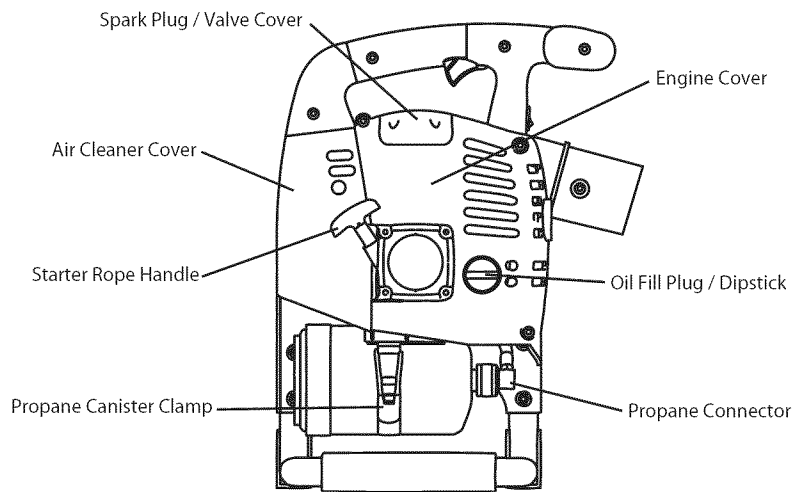
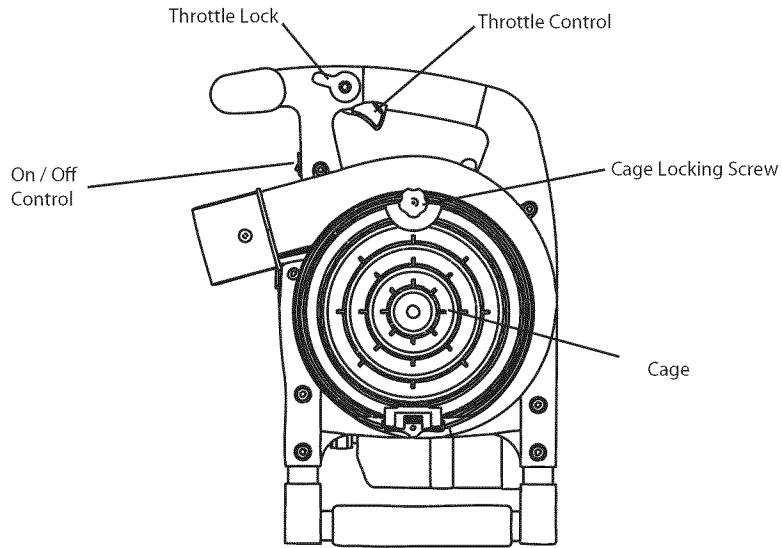


**THROWN OBJECTS CAN CAUSE SEVERE INJURY WARNING:**  
Do not blow objects towards bystanders. Propelled objects can cause serious injury.

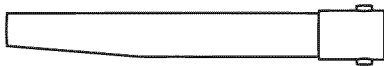


**BLOWER IMPELLER CAN CAUSE SERIOUS INJURY**  
Make sure to turn the engine off and wait for the impeller to come to a complete stop before opening the cage. Never insert hands into the vacuum tube while unit is on.

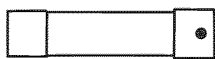
# UNDERSTANDING YOUR UNIT



## BLOWER ATTACHMENTS

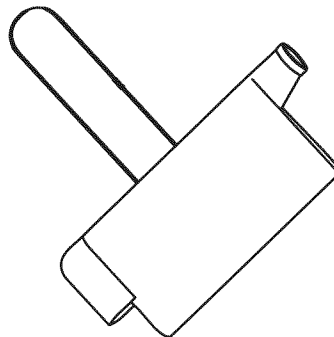


Blower Nozzle

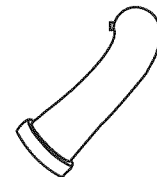


Blower Nozzle Extension

## VACUUM / MULCHER ATTACHMENTS



Mulch Collection Bag



Mulch Collection Bag Adapter



Vacuum / Mulcher Nozzle



Vacuum / Mulcher Nozzle Extension

# OIL INFORMATION

## RECOMMENDED OIL TYPE

Using the proper type and weight of oil in the crankcase is extremely important. Check the oil before each use and change the oil regularly. Failure to use the correct oil, or using dirty oil, can cause premature engine wear and failure. Use a high-quality SAE 10W-40 weight oil of API (American Petroleum Institute) service class SF, SG, or SH.

## ADDING OIL TO THE CRANKCASE INITIAL USE

**NOTE:** This unit is shipped without oil in the crankcase. In order to avoid damage to the unit, put oil in the crankcase before you attempt to start the unit.

Your unit is supplied with one 1.7 fluid oz. (50 mL) bottle of SAE 10W-40 SF, SG or SH oil (Fig. 1).

1. Unscrew the top of the bottle of oil and remove the seal covering the opening. Replace the top (Fig. 1).

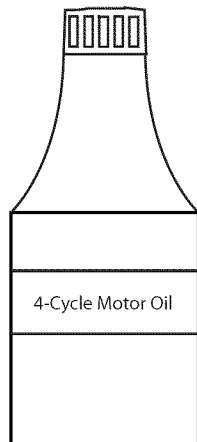


Fig. 1



### WARNING:

OVERFILLING CRANKCASE MAY CAUSE HOT OIL TO DRIP FROM AIR FILTER, AND SMOKE TO COME OUT FROM THE EXHAUST. CHECK AND MAINTAIN THE PROPER OIL LEVEL IN THE CRANK CASE; IT IS IMPORTANT AND CANNOT BE OVEREMPHASIZED. CHECK THE OIL BEFORE EACH USE AND CHANGE AS NEEDED. SEE CHANGING THE OIL (p.13).

2. Place the unit (cage side down) on a level surface (Fig. 2).

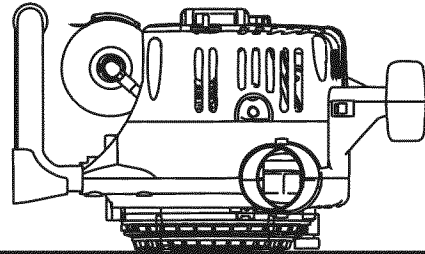


Fig. 2

3. Remove the oil plug / dipstick from the crankcase by turning it counterclockwise (Fig. 3).
4. Pour the entire bottle of oil into the oil fill hole (Fig. 3).

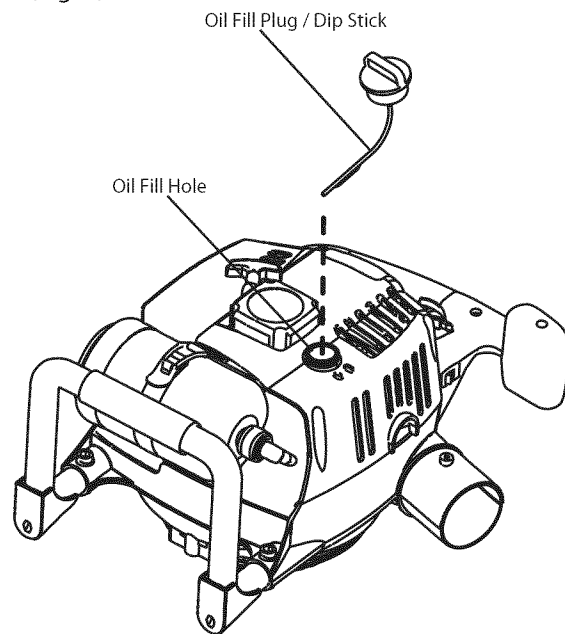


Fig. 3

Check oil before each use and change as needed. Refer to Changing the Oil (p.13).

5. Wipe up any oil that may have spilled and reinstall the oil plug / dipstick.

# UNDERSTANDING PROPANE

## SAFETY WARNINGS FOR PROPANE UNITS

NOTE: Use propane only in containers specifically designed and approved for this unit. Propane is a combustible gas, it is colorless and thus invisible to the naked eye. Propane has a harmless odorant added so that it is possible to smell it. The user should be familiar with the smell of propane (smells like sulfur or rotten eggs). If at any time the smell of propane is identified, turn the engine off. If the leak persists, remove the propane canister. Never attempt to operate a unit that has a suspected leak. Always remove the propane canister from any unit that has a suspected leak.

## CARBON MONOXIDE HAZARD

Burning propane makes Carbon Monoxide (CO). CO is invisible, has no smell and can kill you. Operating your trimmer in an enclosed area can be dangerous.

1. Use only in well ventilated areas. If you experience headache, drowsiness, or nausea, turn unit off and get fresh air quickly.
2. Never use where people are sleeping.
3. Follow unit instructions for proper use.

## HANDLING & STORAGE

1. Keep out of reach of children.
2. Never expose cylinder to heat, sparks, or flame. Never leave in direct sunlight. Never store at temperatures above 120 degrees F° (49 C).
3. Never store in living spaces.
4. Always use cylinder until it is completely empty.
5. Never refill a disposable cylinder. Refilling may cause an explosion. Federal law forbids transportation if refilled, a penalty up to \$500,000, and 5 years imprisonment (49 U.S.C. 5124).
6. Never put in luggage or take on trains or aircraft.
7. To discard, contact local refuse hauler or recycle center. Never put in fire or incinerator. Do not puncture. If your cylinder was purchased with a "Green Key" \* or similar device, install it when empty and cylinder may be recycled with other steel items.

## NOTE: FIRE / EXPLOSION HAZARD

The propane canister contains enough gas to cause serious fire, explosion, and burns. To reduce chance of leak, fire, or explosion, take the following precautions:

### BEFORE USE

1. Check cylinder and appliance seals. Never use with damaged or missing seals. Discard cylinder if dirt or rust particles are in valve area.
2. Turn unit off.
3. Attach cylinder outdoors away from pilot lights, flames, sparks or other ignition sources. These sources can ignite leaking gas.
4. Hand tighten only. Never use tools to tighten. Overtightening can damage seals.
5. Check for leaks. Put soapy water on connections. Look for bubbles. Listen for hiss of escaping gas. Feel for extreme cold. Smell for rotten egg odor. Do not use if leaking.
6. Read and follow appliance instructions.

### DURING USE

Never use near pilot lights, flames, sparks, or other ignition sources. They can ignite leaking gas.

### AFTER USE

1. Turn unit off and let cool.
2. Detach cylinder when not in use.
3. Detach outdoors away from pilot lights, flames, sparks, or other ignition sources, they can ignite leaking gas.
4. Replace cap to keep valve clean.

### IN CASE OF FIRE

1. Leave area quickly and call 911 or your local fire department for help.
2. Let cylinder burn out.



**WARNING:**  
PROPANE IS HIGHLY FLAMMABLE, AND ITS VAPORS  
CAN EXPLODE IF IGNITED.

\* Green Key- is a trademark of the Coleman company

# INSTALLING THE PROPANE CANISTER

## USE THE CORRECT PROPANE CANISTER

Always use propane canisters or "bottles" that are the correct size. The 17 ounce or 16.4 ounce / 465g canisters that are approximately 3-7/8 inches (9.5 cm) in diameter are the correct canisters (Fig. 4). Do not use smaller diameter canisters as they will not latch securely to the unit and vibration may cause damage to the unit and potentially result in a dangerous leak.



Fig. 4

## ATTACHING THE PROPANE CANISTER

1. Make sure the engine is off.
2. If the propane canister to be installed has a protective plastic cap over the threaded end, remove it. Make sure the canister clamp is in the un-latched position.
3. Insert the threaded end of the propane canister into the canister clamp until it contacts the canister stop (Fig. 5).
4. Insert the propane connector onto the threaded end of the canister and screw it onto threads clockwise (Fig. 6). Screw it until snug. Do not over tighten. It may be normal to hear or smell a slight momentary leak of propane as the connector is being screwed in. Make sure that the connector is installed tight enough that any leakage stops. Hand tight is sufficient.
5. Latch the canister clamp.

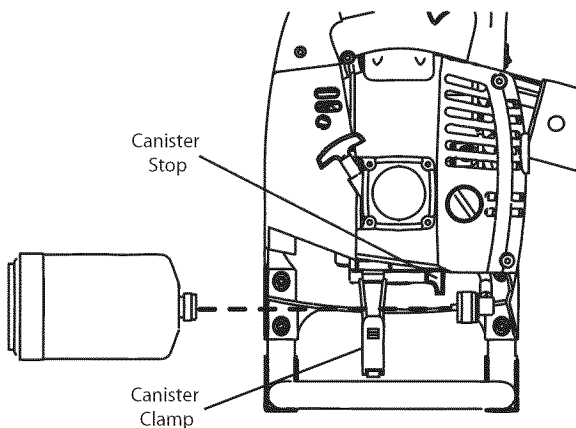


Fig. 5

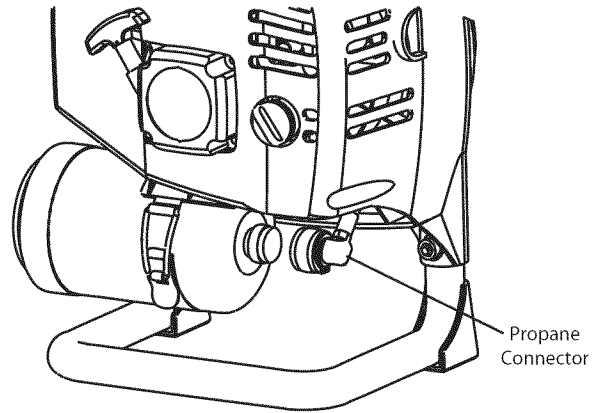


Fig. 6

## REMOVING THE PROPANE CANISTER

1. Make sure the engine is off.
2. Un-latch the canister clamp and remove the propane connector by turning it counterclockwise.
3. Remove the empty canister.
4. Dispose of empty propane canisters in accordance to Federal, State and local Regulations.



### WARNING:

NEVER ATTEMPT TO FORCE A CONNECTOR ONTO A PROPANE CANISTER THAT HAS IMPROPER OR DAMAGED THREADS.



### WARNING:

THIS CONTAINER AND BY-PRODUCTS OF THE COMBUSTION OF ITS CONTENTS CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.



### WARNING:

EXTREMELY FLAMMABLE FIRE / EXPLOSION. HAZARD CONTENTS UNDER PRESSURE. CARBON MONOXIDE HAZARD.



### WARNING:

PROPANE IS EXTREMELY FLAMMABLE. VAPOR MAY EXPLODE. ALWAYS STOP THE ENGINE AND ALLOW IT TO COOL BEFORE REPLACING THE PROPANE CANISTER. DO NOT SMOKE. KEEP SPARKS AND OPEN FLAMES AT A DISTANCE FROM THE AREA.



# ASSEMBLY

## BLOWER MODE

NOTE: Place the unit on the ground or on a work bench to make attachment installation or removal easier.

1. Install blower attachments in sequence shown, aligning the grooves on the nozzles with the pegs (Fig. 7).
2. Slide the nozzles onto the pegs.
3. Twist the nozzles clockwise to lock in place.

NOTE: Make sure the Cage Screw is tightened down.

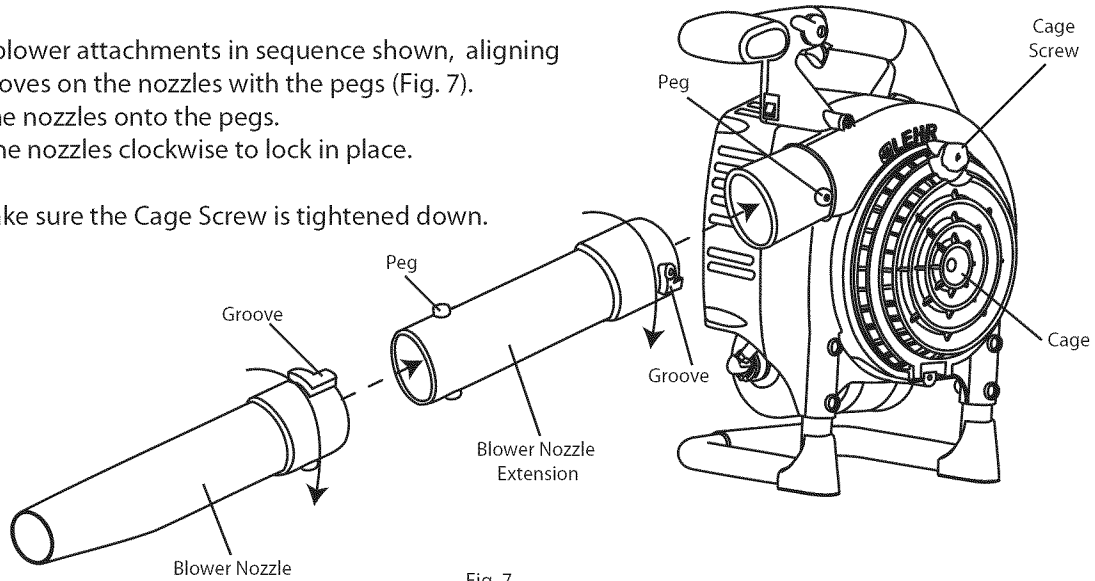


Fig. 7

## VACUUM / MULCHER MODE

1. Loosen the Cage Screw and pull down the Cage (Fig. 8).
2. Install vacuum attachments in sequence shown, aligning the grooves on the nozzles with the pegs.
3. Slide the nozzles onto the pegs.
4. Twist nozzles clockwise to lock in place.
5. Secure Mulch Collection Bag onto the Mulch Collection Bag Adapter by strapping down the Velcro Strap. Place the shoulder strap over your left shoulder and adjust the Shoulder Strap Adjustment as necessary.

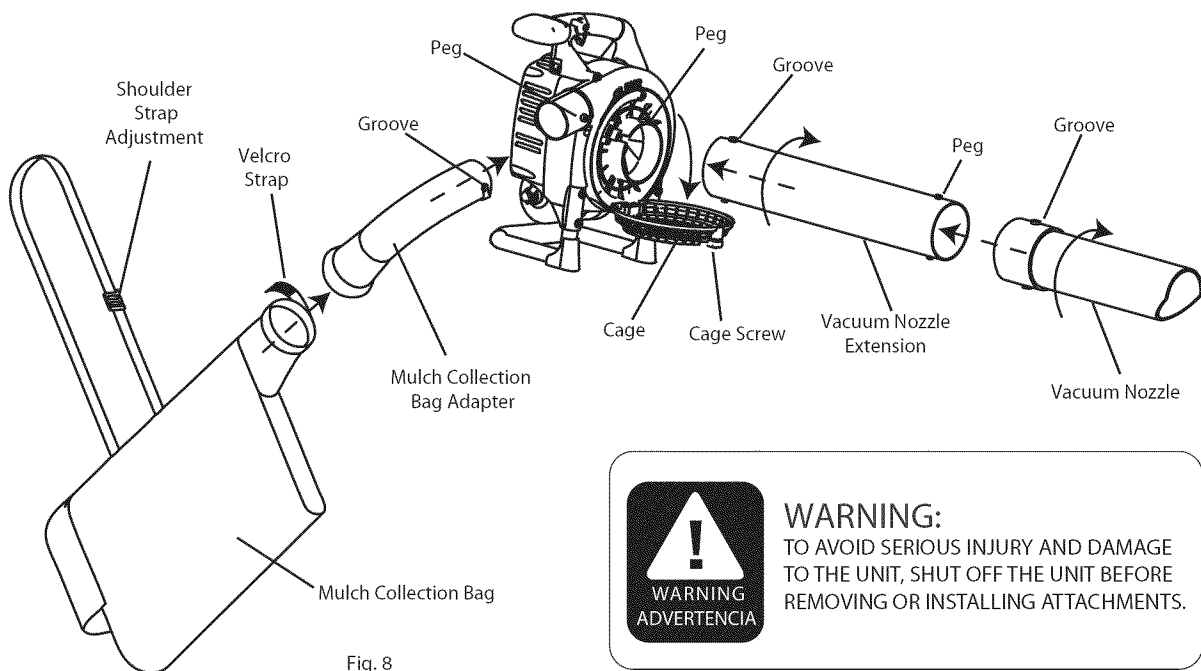


Fig. 8



**WARNING:**  
TO AVOID SERIOUS INJURY AND DAMAGE TO THE UNIT, SHUT OFF THE UNIT BEFORE REMOVING OR INSTALLING ATTACHMENTS.

# STARTING / STOPPING

## STARTING INSTRUCTIONS

1. Check the oil level in the crankcase. Refer to Checking the Oil Level (p. 12).
2. Turn switch to ON position (Fig. 9).

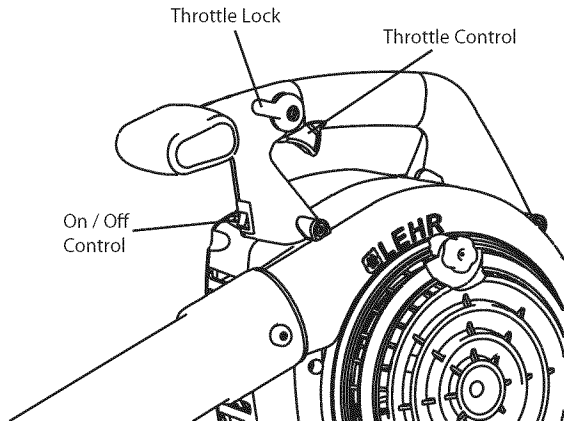


Fig. 9

NOTE: If your unit is equipped with a spring loaded type ON/OFF switch, it will always remain in the ON position.

3. Place the unit firmly on the ground or a very sturdy work surface. Make sure all bystanders are a minimum of 50 feet (15 m) away. Do not attempt to start near pilot lights or any open flame. Do not smoke. Grasp the Blower Handle with one hand and Starter Rope with the other (Fig. 10).

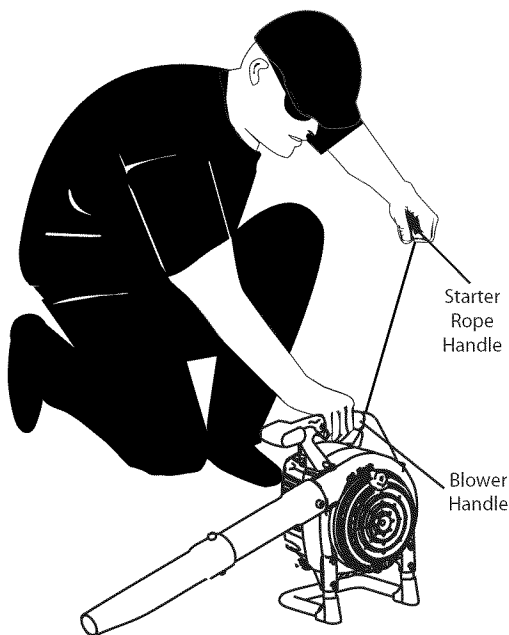


Fig. 10

4. With the unit in the starting position, pull the rope smoothly and briskly (Fig. 10). Do not squeeze the throttle control. The engine should start with 3-5 pulls. Once warm, the engine should start on the first pull.

NOTE: On the first use, it may take extra pulls to fill the fuel system with propane.

5. Squeeze the throttle control slightly to warm up the engine for 15 to 30 seconds. In cold weather, move the throttle slowly until the engine warms up for 30 to 60 seconds.

NOTE: When starting the engine in very hot or cold conditions it may be necessary to squeeze the throttle open while pulling the starter rope.

## STOPPING INSTRUCTIONS

1. Release your hand from the throttle control. Allow the engine to cool down by idling.
2. If your unit is equipped with a spring loaded ON/ OFF switch, press and hold the button on OFF until the unit stops. Otherwise, push the switch to the off position.
3. When done using the unit for the day, disconnect the propane canister from the unit.



WARNING  
ADVERTENCIA

### WARNING:

AVOID ACCIDENTAL STARTING. MAKE SURE YOU ARE IN THE STARTING POSITION WHEN PULLING THE STARTER ROPE (FIG. 10). TO AVOID SERIOUS INJURY, THE OPERATOR AND UNIT MUST BE IN A STABLE POSITION WHILE STARTING. MAKE SURE THAT ANY ADD-ON ITEM IS INSTALLED CORRECTLY AND SECURE BEFORE STARTING UNIT.



WARNING  
ADVERTENCIA

### WARNING:

ALWAYS WEAR EYE, HEARING, FOOT AND BODY PROTECTION TO REDUCE THE RISK OF INJURY WHEN OPERATING THIS UNIT.

# OPERATION

## BLOWER MODE

Before operating the unit, check for the following:

- The operator is wearing proper clothing, eye and ear protection.
- All blower attachments are properly installed and secure.

1. Start the unit.
2. Direct the nozzle in the direction in which to blow (Fig 11).
3. Pull the throttle control.
4. Set the throttle lock at any desired speed by pushing the knob to the lock position. To adjust throttle speed, push the throttle lock to the off position, adjust, and relock the throttle control.



Fig. 11

NOTE: The lower grip is an assist handle, which will allow the operator to hold the unit with both hands. Be sure to hold the assist handle with your right hand only (Fig. 12).

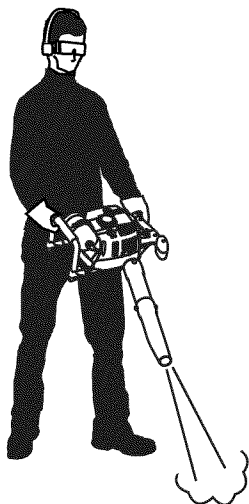


Fig. 12

## VACUUM / MULCHER MODE

Before operating the unit, check for the following:

- All vacuum attachments are properly installed and secure.
- Make sure Mulch Collection Bag is not twisted or constricted in any way.

1. Start the unit.
2. Place collection bag strap over the left shoulder and adjust the strap as necessary (Fig 13).
3. Pull the trigger to start the vacuum.
4. Set the throttle lock at desired speed.
5. Empty the bag as necessary by removing it from unit and opening the zipper Located at the top edge.



Fig. 13

NOTE: Do not operate this unit with the cage side up or the handle side down. This will cause oil contamination and smoke to come out the exhaust (Fig. 14).

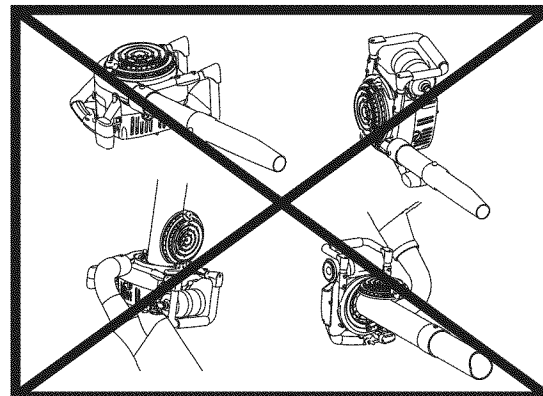


Fig. 14



### WARNING:

- Never allow gasoline, kerosine, or any other flammable substance to enter the unit during vacuum mode. Otherwise fire may occur.
- Do not allow oversized wood chips, metal, glass, or any other material to enter the vacuum. Otherwise failure may occur.
- Never overfill the vacuum collection bag.
- Do not store debris inside vacuum collection bag.
- Never reach inside vacuum tubes with hands while unit is operating, sever injury may result from mulch blade.

# MAINTENANCE

FREQUENCY	MAINTENANCE REQUIRED	REFER TO
BEFORE STARTING ENGINE	CHECK OIL	PAGE 12
EVERY 10 HOURS	CLEAN AND RE-OIL AIR FILTER	PAGE 13
FIRST CHANGE AT 10 HOURS	CHANGE OIL	PAGE 13
EVERY 25 HOURS THEREAFTER	CHANGE OIL	PAGE 13
EVERY 25 HOURS	CHECK SPARK PLUG POSITION AND GAP	PAGE 14
EVERY 25 HOURS	ROCKER ARM CLEARANCE ADJUSTMENT	PAGE 15

Perform these required maintenance procedures at the frequency stated in the table. These procedures should also be a part of any seasonal tune-up.

**NOTE:** Failure to maintain your unit at the recommended schedule may result in poor performance and / or cause permanent damage to your unit.

**NOTE:** Some maintenance procedures may require special tools or skills. If you are unsure about these procedures call 1-866-941-LEHR for the location of your nearest authorized service dealer.

**NOTE:** Maintenance, replacement, or repair of the emission control devices and system may be performed by any non-road engine repair establishment, individual or authorized service dealer.

## CHECKING THE OIL LEVEL

The importance of checking and maintaining the proper oil level in the crankcase cannot be overemphasized.

Check oil before each use:

1. Stop the engine and allow it to cool.
2. Place the unit upright on a flat, level surface to get a proper oil level reading.
3. Keep dirt, grass clippings and other debris out of the engine. Clean the area around the oil fill plug / dipstick before removing it.
4. Remove the oil fill plug/dipstick and wipe off oil. Reinsert it all the way back in.
5. Remove the oil fill plug/dipstick and check the oil level. Oil should be between the add and fill marks (Fig. 15).
6. If the level is low, add a small amount of oil to the oil fill hole (Fig. 16) and recheck. Repeat this procedure until the oil level reaches the full mark of the dipstick.

**NOTE:** Make sure the O-Ring is in place on the oil fill plug/dipstick when checking and changing the oil. Do not overfill the unit.

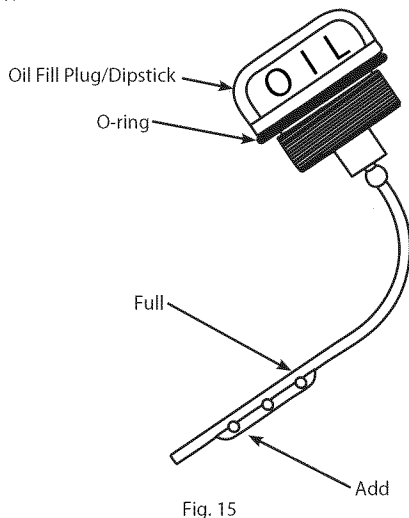


Fig. 15

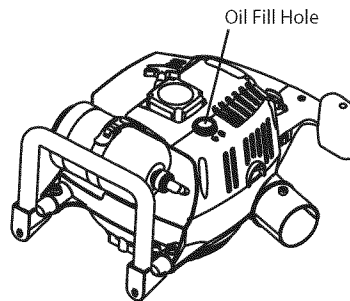


Fig. 16



**WARNING:**  
WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS. USE OF ANY OTHER PARTS MAY CREATE A HAZARD OR CAUSE PRODUCT DAMAGE.



**WARNING:**  
TO PREVENT EXTENSIVE ENGINE WEAR AND DAMAGE TO THE UNIT, ALWAYS MAINTAIN THE PROPER OIL LEVEL IN THE CRANKCASE. NEVER OPERATE THE UNIT WITH THE LEVEL BELOW THE BOTTOM OF THE DIPSTICK.

# MAINTENANCE

## CHANGING THE OIL

For a new engine, change the oil after the first 10 hours of operation. Change the oil while the engine is still warm but not hot. The oil will flow freely and carry away more impurities.

1. Unplug spark plug boot to prevent accidental starting.
2. Remove the oil fill plug / dipstick.
3. Pour the oil out of the oil fill hole and into a container by tipping the unit to its side (Fig. 17). Allow ample time for complete drainage.

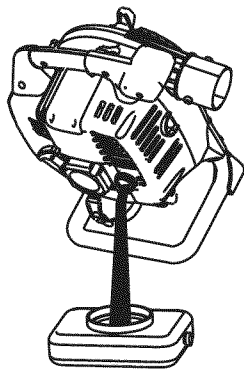


Fig. 17

NOTE: Wear gloves to prevent injury when handling the unit.

4. Wipe up any oil residue on the unit and clean up any oil that may have spilled. Dispose of the oil according to Federal, State and local regulations.
5. Refill the crankcase with 1.7 fluid oz. (50 mL) of SAE 10W-40 SF, SG, or SH oil (Fig. 18).

NOTE: Carefully check the oil level with the dipstick. If the level is low, add a small amount of oil and recheck. Do not over fill (Fig. 15).

6. Replace the oil fill plug / dipstick.
7. Reconnect the spark plug boot.

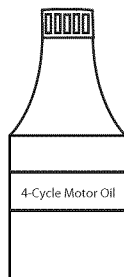


Fig. 18

## CLEANING THE AIR FILTER

Clean and re-oil the air filter every 10 hours of operation. It is an important item to maintain. Failure to maintain your air filter properly can result in poor performance or can cause permanent damage to your engine.

1. Remove phillips head screw in air filter cover. Then remove the air filter cover (Fig. 19).
2. Remove the air filter (Fig. 19).

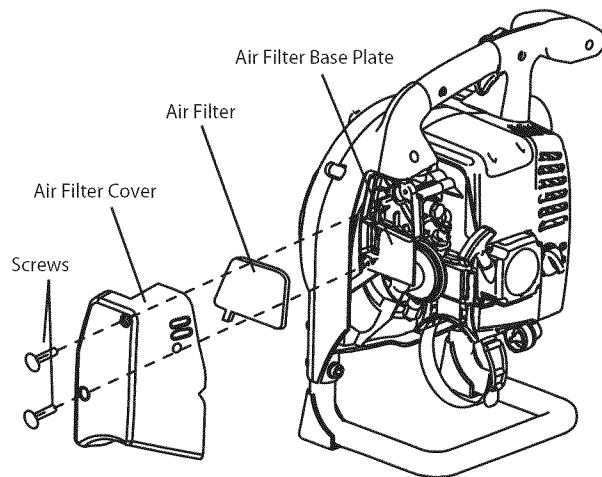


Fig. 19

3. Wash the filter in detergent and water. Rinse the filter thoroughly and allow it to dry.
4. Apply enough clean SAE 10W-40 motor oil to lightly coat the filter.
5. Squeeze the filter and remove excess oil.

6. Replace the filter.

NOTE: If the unit is operated without the air filter, you will VOID the warranty.

7. Reinstall the air filter cover.



**WARNING:**  
TO AVOID SERIOUS PERSONAL INJURY, BE SURE TO TURN THE UNIT OFF BEFORE SERVICING IT.

# MAINTENANCE

## CARBURETOR ADJUSTMENT

The idle speed of the engine is adjustable. An idle adjustment screw is on the rear side of the carburetor (Fig. 20).

**NOTE:** Careless adjustments can seriously damage your unit. An authorized service dealer should make carburetor adjustments.

## CLEAN AIR FILTER

The condition of the air filter is important to the operation of the unit. A dirty or oil saturated air filter will restrict air flow. This is often mistaken for an out of adjustment carburetor. Check the condition of the air filter before adjusting the idle speed screw. Refer to *Cleaning the Air Filter* (p. 13).

## ADJUST IDLE SPEED SCREW

If, after checking the fuel and cleaning the air filter, the engine still will not idle, adjust the idle speed screw as follows:

1. Start the engine and let it run at a high idle for a minute to warm up. Refer to *Starting / Stopping* (p. 10).
2. Release the throttle trigger and let the engine idle. If the engine stops, use a small phillips or flat blade to turn the idle speed screw in, clockwise, 1/8 of a turn at a time (as needed) until the engine idles smoothly (Fig. 20).

**NOTE:** Checking the fuel, cleaning the air filter, and adjusting the idle speed should solve most engine problems. If not and all of the following are true:

- The engine will not idle.
- The engine hesitates or stalls on acceleration.
- There is a loss of engine power.

Check the spark plug for proper gap and condition. If problem still occurs, have the carburetor adjusted by an authorized service dealer.



**WARNING:**  
DO NOT SAND BLAST, SCRAPE, OR CLEAN SPARK PLUG ELECTRODES. GRIT IN THE ENGINE COULD DAMAGE THE CYLINDER.

## REPLACING THE SPARK PLUGS

Use a replacement part number NGK CMR6A, or Champion RCJ6Y. The correct air gap is 0.02 in. (0.5 mm). Remove the plug after every 25 hours of operation and check its condition.

1. Stop the engine and allow it to cool. Remove the spark plug cover. Grasp the plug wire firmly and pull the cap from the spark plug.
2. Clean dirt from around the spark plug. Remove the spark plug from the cylinder head by using a 5/8 in. socket turning it counterclockwise.
3. Replace cracked, fouled or dirty spark plug. Set the air gap at 0.02 in. (0.5 mm.) using a feeler gauge (Fig. 21).
4. Install a correctly-gapped spark plug in the cylinder head. Turn the 5/8 in. socket clockwise until snug.

**NOTE:** If using a torque wrench torque to: 110-120 in. lb. (12.3-13.5 N-m). Do not over tighten.

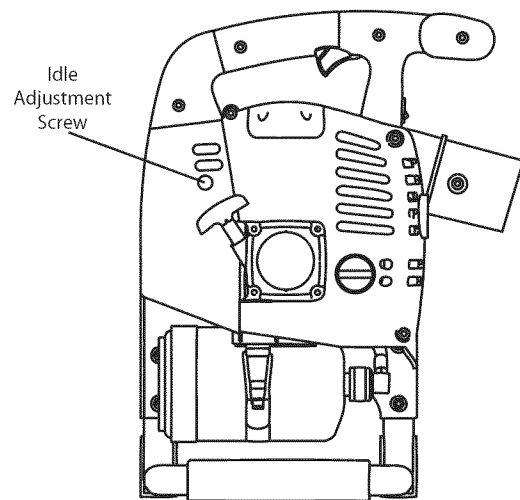


Fig. 20

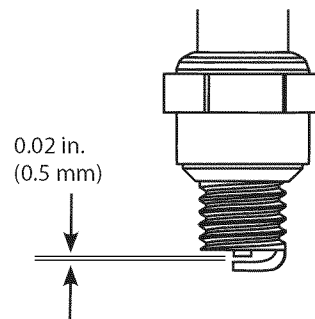


Fig. 21

# MAINTENANCE

## ROCKER ARM CLEARANCE ADJUSTMENT

This requires partial disassembly of the engine. If you feel unsure or unqualified to perform this, take the unit to an authorized service center.

**NOTE:** Inspect the valve to rocker arm clearance with a feeler gage after the first 25 hours of operation. The engine must be cold when checking or adjusting the valve clearances. This task should be performed in a clean dust free environment.

1. Remove the five screws on the engine cover with a phillips head screw driver (Fig. 22).
2. Remove the engine cover.
3. Disconnect the spark plug wire.
4. Clean dirt from around the spark plug. Remove the spark plug by using a 16mm socket, turn CCW.

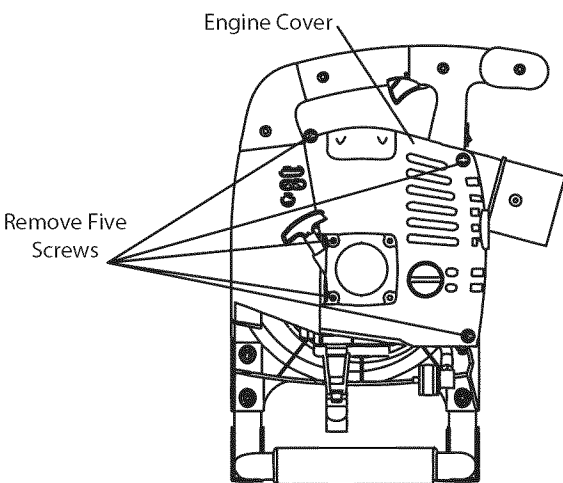


Fig. 22

5. Clean dirt from around the rocker arm cover.
6. Remove the three screws holding the rocker arm cover with a phillips head screwdriver.
7. Remove the rocker arm cover and gasket (Fig. 23).

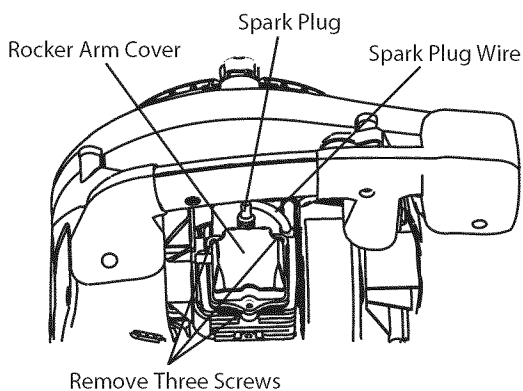


Fig. 23

8. Pull the starter rope slowly to bring the piston to the top of its travel, (This position is known as top dead center). Check that the piston is at the top of its travel by looking down into the spark plug hole. Both valves should be closed and the rocker arms should move freely. If this statement is not true, repeat this step.
9. Slide a feeler gage between the rocker arm and the valve return spring. Measure the distance between the rocker arm and valve stem (Fig. 24). Take care to only measure the free play. It is very easy to insert too thick a feeler gauge and accidentally depress the valve and spring. Measure both the intake and exhaust valve clearances.

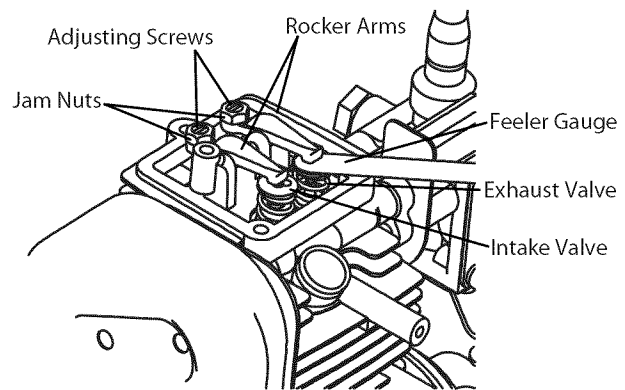


Fig. 24

10. Check the spark plug and reinstall. Refer to Replacing the Spark Plug (p.14).
11. Reinstall the spark plug wire.

## IF THE CLEARANCE IS NOT WITHIN SPECIFICATION

1. Loosen the jam nut and turn the adjusting screw as necessary. To increase the clearance, turn the adjusting screw CCW. To decrease the clearance, turn the adjusting screw CW.
2. Tighten the jam nut when the clearance is set.
3. Recheck the both clearances. Readjust if necessary.
4. Reinstall the rocker arm cover using a new gasket.
5. Tighten cover screws evenly until snug.
6. Reinstall the engine cover checking the alignment of the cover. Tighten the five engine cover screws until snug.

- The recommended clearance for both intake and exhaust is 0.003-0.006in (0.076-0.152mm).
- Use a standard automotive 0.005in (0.127mm) feeler gage.

# CLEANING AND STORAGE

## CLEANING

- Use a small soft brush to clean the outside of the unit. Do not use strong detergents. Household cleaners that contain aromatic oils such as pine and lemon, and solvents such as kerosene, can damage plastic housing or handle. Wipe off any moisture with a soft cloth.
- Empty the vacuum bag. Turn it inside out and shake off any excess debris. Hand wash the empty vacuum bag annually with soapy water and allow to air dry.

## STORAGE

- Remove propane canister.
- Never store the unit with attached propane canister where fumes may reach an open flame or spark.
- Allow the engine to cool before storing.
- Lock up the unit to prevent unauthorized use or damage.
- Store the unit in a dry, well-ventilated area.
- Store unit out of reach of children.



### WARNING:

TO AVOID SERIOUS INJURY, ALWAYS TURN YOUR UNIT OFF AND ALLOW IT TO COOL BEFORE YOU SERVICE IT.

## LONG TERM STORAGE

1. Remove propane canister.
2. Allow the engine to cool. Remove the spark plug and put 5 drops of high quality motor oil into the cylinder. Pull the starter rope slowly to distribute the oil. Reinstall the spark plug.

NOTE: Remove the spark plug and drain all of the oil from the cylinder before attempting to start the unit after long term storage.

3. Change the oil, referring to Changing the Oil (p.13). Dispose of the old oil in accordance to Federal, State and Local regulations.
4. Thoroughly clean the unit and inspect for any loose or damaged parts. Repair or replace damaged parts and tighten loose screws, nuts or bolts. The unit is ready for storage.

## TRANSPORTING

- Allow the engine to cool before transporting.
- Secure the unit while transporting.
- Remove propane canister.

## TROUBLE SHOOTING

### ENGINE WILL NOT START

CAUSE	ACTION
EMPTY PROPANE CANISTER	INSTALL FULL CANISTER
CAGE DOOR NOT CLOSED	CLOSE THE CAGE DOOR
VACUUM TUBE NOT PROPERLY INSTALLED	INSTALL VACUUM TUBE PROPERLY

### ENGINE WILL NOT IDLE

CAUSE	ACTION
AIR FILTER IS PLUGGED	REPLACE THE AIR FILTER
IMPROPER CARBURETOR ADJUSTMENT	ADJUST ACCORDING TO THE 'CARBURETOR ADJUSTMENTS' SECTION OR TAKE TO AN AUTHORIZED SERVICE DEALER FOR AN ADJUSTMENT

### ENGINE WILL NOT ACCELERATE

CAUSE	ACTION
DIRTY AIR FILTER	CLEAN OR REPLACE THE AIR FILTER

### ENGINE LACKS POWER OR STALLS WHEN IN USE

CAUSE	ACTION
BAD SPARK PLUG	REPLACE SPARK PLUG

IF FURTHER ASSISTANCE IS REQUIRED, CONTACT LEHR AT 1-866-941-5347



# SPECIFICATIONS

## MODEL BV025HH

ENGINE TYPE	AIR COOLED 4-CYCLE
DISPLACEMENT	25.4 CC
OPERATING R.P.M.	6,800-9,300 R.P.M.
IDLE SPEED	3,000-3,400 R.P.M.
IGNITION TYPE	ELECTRONIC
IGNITION SWITCH	SPRING LOADED ON / OFF SWITCH
VALVE CLEARANCE	0.003-0.006 in. (0.076-0.152 mm)
SPARK PLUG GAP	0.020 INCH (0.5 mm)
LUBRICATION	SAE 10W-40 OIL
CRANKCASE OIL CAPACITY	1.7 FL OZ (50mL)
FUEL	PROPANE 16.4 OZ CANISTER
CARBURETOR	CHOKE-LESS, ALL POSITION
STARTER	AUTO REWIND
MUFFLER	BAFFLED WITH GUARD
THROTTLE	SAFETY LOCK WITH MANUAL SPRING RETURN
THROTTLE CONTROL	FINGER- TIP TRIGGER
MAX. AIR VELOCITY	150 MPH
MAX. AIR VOLUME	370 cfm

\*ALL SPECIFICATIONS ARE BASED ON THE LATEST PRODUCT INFORMATION AT THE TIME OF PRINTING.  
WE RESERVE THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE.

# MANUFACTURER'S LIMITED WARRANTY

The limited warranty set forth below is given by LEHR with respect to new merchandise purchased and used in the United States and Canada, its possessions and territories.

LEHR warrants to the original purchaser that each new LEHR brand power tool or attachment is free from defects in material and workmanship and agrees to repair or replace under this warranty any defective power product or attachment as follows from the original date of purchase.

3 YEARS -- Parts and Labor, on carburetor.

2 YEARS -- Parts and Labor, when used for household purposes.

90 DAYS -- Parts and Labor, when used for commercial, professional, or income producing purposes.

30 DAYS -- Parts and Labor, if used for rental purposes.

This warranty is not transferable and does not cover damage or liability caused by improper handling, improper maintenance, or the use not specifically recommended by LEHR for this product. In addition, it does not cover any product that has been subject to misuse, neglect, negligence, or accident, or has been operated in any way contrary to the operating instructions specified in this operator's manual. Additionally, this warranty does not cover tune-ups, spark plugs, carburetor adjustments, filters, starter pulley, or parts that will wear and require replacement with reasonable use during the warranty period.

This warranty does not cover pre delivery setup or normal adjustments explained in the instruction manual.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. NO CLAIMS FOR CONSEQUENTIAL OR OTHER DAMAGES WILL BE ALLOWED, AND THERE ARE NO OTHER EXPRESS WARRANTIES EXCEPT THOSE EXPRESSLY STIPULATED HEREIN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LAST OR THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSION MAY NOT APPLY TO YOU.

LEHR does not extend any warranty for products sold or exported outside of the United States or Canada, its possessions and territories, except those sold through LEHR's authorized channels of export distribution.

The policy of LEHR is to continuously improve its products. Therefore, LEHR reserves the right to change, modify, or discontinue models, designs, specifications, and accessories of all products at any time without notice or obligation to any purchaser.

**HOW TO OBTAIN SERVICE:** Warranty service is available, with proof of purchase through your local authorized service dealer. To locate the dealer in your area, visit our website at [www.golehr.com](http://www.golehr.com) or call 1-866-941-LEHR or write to 8922 Ellis Ave. LA, CA 90034.

## YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board, the Environmental Protection Agency and LEHR, Inc. are pleased to explain the emissions control system's warranty on your 2009 and later small off-road engine. In California and the 49 states, new equipment that use small off-road engines must be designed, built, and equipped to meet the State's stringent anti-smog standards. LEHR, Inc. must warrant the emissions control system on your small off-road engine for the period listed below provided there has been no abuse, neglect or improper maintenance of your equipment. Your emissions control system may include parts such as: carburetors or fuel injection system, ignition system, catalytic converters, fuel tanks, valves, filters, clamps, connectors, and other associated components. Also, included may be hoses, belts, connectors, sensors, and other emission-related assemblies. Where a warrantable condition exists, LEHR will repair your small off-road engine at no cost to you including diagnosis, parts and labor at an authorized service dealer.

## MANUFACTURER'S WARRANTY COVERAGE:

This emissions control system is warranted for two years. If any emissions-related part on your equipment is defective, the part will be repaired or replaced by LEHR.

## OWNER'S WARRANTY RESPONSIBILITIES:

As the small off-road engine owner, you are responsible for performance of the required maintenance listed in your owner's manual. LEHR recommends that you retain all receipts covering maintenance on your small off-road engine, but LEHR cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance. As the small off-road engine owner, you should be aware that LEHR may deny you warranty coverage if your small off-road engine or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road engine to a LEHR service center as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact LEHR at 1-866-941-LEHR.

## DEFECTS WARRANTY REQUIREMENTS:

(a) The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser.

(b) General Emissions Warranty Coverage. The manufacturer of each small off-road engine or equipment must warrant to the ultimate purchaser and each subsequent owner that the engine or equipment is:

Designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board; and free from defects in materials and workmanship that causes the failure of a warranted part for a period of two years.

(c) The warranty on emissions-related parts will be interpreted as follows:

Any warranted part that is not scheduled for replacement as required maintenance in the written instructions required by Subsection (d) must be warranted for the warranty period defined in Subsection (b). If any such part fails during the period of warranty coverage, it must be repaired or replaced by the manufacturer according to Subsection (1) below. Any such part repaired or replaced under the warranty must be warranted for the remaining warranty period.

Any warranted part that is scheduled only for regular inspection in the written instructions required by Subsection (d) must be warranted for the warranty period defined in Subsection (b). A statement in such written instructions to the effect of "repair or replace as necessary" will not reduce the period of warranty coverage. Any such part repaired or replaced under warranty must be warranted for the remaining warranty period.

Any warranted part that is scheduled for replacement as required maintenance in the written instructions required by Subsection (d) must be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part must be repaired or replaced by the engine manufacturer according to Subsection (1) below.

Section 1: Any such part repaired or replaced under warranty must be warranted for the remainder of the period prior to the first scheduled replacement point for the part. Repair or replacement of any warranted part under the warranty must be performed at no charge to the owner at a warranty station.

Notwithstanding the provisions of Subsection (1) above, warranty services or repairs must be provided at all manufacturer distribution centers that are franchised to service the subject engines. The owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station. The manufacturer is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part. Throughout the emissions warranty period defined in Subsection (b), the manufacturer must maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of the manufacturer. Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part. The manufacturer issuing the warranty shall provide any documents that describe that manufacturer's warranty procedures or policies within five working days of request by the Air Resources Board.

(d) Emission Warranty Parts List.

The following components are included in the emission related warranty of the engine:

Air Filter, Carburetor, Regulator, Fuel Lines & Fittings, Fuel Valve, Ignition Coil, Spark Plug, Valves, CAM and Muffler.

LEHR will furnish with each new engine written instructions for the maintenance and use of the engine by the owner.

# NOTES

NOTES