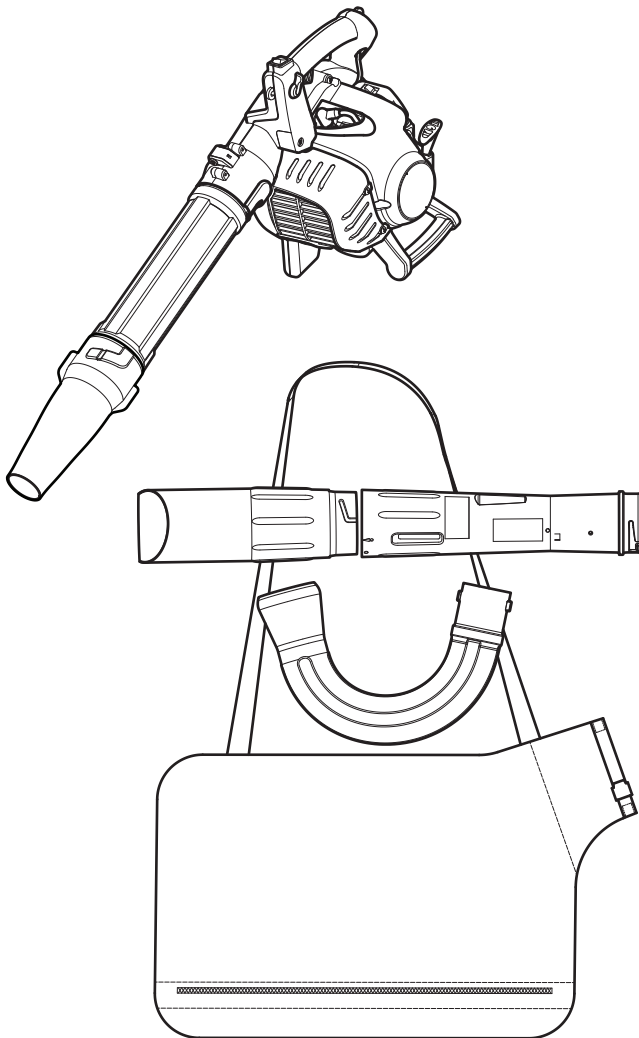




# Operator's Manual

## R2BV

### 2-Stroke Electric Start Capable Handheld Blower / Vacuum



#### TABLE OF CONTENTS

Service .....	1
Safety .....	2
Know Your Unit .....	6
Specifications .....	6
Assembly .....	7
Oil and Fuel .....	10
Starting and Stopping .....	11
Operation .....	13
Maintenance .....	15
Cleaning and Storage .....	17
Troubleshooting .....	18
Warranty .....	24

## SAVE THESE INSTRUCTIONS

#### SERVICE

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

For assistance regarding the assembly, operation or maintenance of the unit, please call **1300 951 594**. Additional information can be found at [www.rover.com.au](http://www.rover.com.au).

Warranty service is available through an authorized service center. To locate a service center in your area, please visit our website or call the number listed above. Service on this unit, both within and after the warranty period, should only be performed by an authorized and approved service center. When servicing, use only identical replacement parts.

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

The product may vary slightly from the illustrations contained in this manual.

Copyright© 2016 MTD SOUTHWEST INC, All Rights Reserved.

**IMPORTANT: Read this manual thoroughly before using this product. Follow all instructions.**

## SAFETY

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

SYMBOL	MEANING
--------	---------



**DANGER:** Signals an EXTREME hazard.  
Failure to obey a safety **DANGER** symbol **WILL** result in serious injury or death to yourself or to others.



**WARNING:** Signals a SERIOUS hazard.  
Failure to obey a safety **WARNING** symbol **CAN** result in serious injury to yourself or to others.



**CAUTION:** Signals a MODERATE hazard.  
Failure to obey a safety **CAUTION** symbol **MAY** result in property damage or injury to yourself or to others.

**NOTE:** Advises you of information or instructions vital to the operation or maintenance of the equipment.

### 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 state 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.** If it requires replacement, contact your local service dealer to install the appropriate muffler assembly.



#### CALIFORNIA PROPOSITION 65

**WARNING:** This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

**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.**

## • IMPORTANT SAFETY INSTRUCTIONS •

### READ ALL INSTRUCTIONS BEFORE OPERATING



**WARNING:** When using the unit, all safety instructions must be followed. Please read these instructions before operating the unit in order to ensure the safety of the operator and any bystanders. Please keep these instructions for later use.

- Read the instructions carefully. Be familiar with the controls and proper use of the unit.
- Do not operate this unit when tired, ill or under the influence of alcohol, drugs or medication.
- Never allow children to operate the unit. Teens must be trained, accompanied and supervised by an adult. Never allow adults to operate the unit without proper instruction.
- All guards and safety attachments must be installed properly before operating the unit.
- Inspect the unit before use. Replace 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.
- Be aware of risk of injury to the head, hands and feet.
- Carefully inspect the area before starting the unit. Remove rocks, broken glass, nails, wire, string and other objects that may be thrown or become entangled with the unit.

- Clear the area of children, bystanders and pets; keep them outside a 50-foot (15 m) radius, at a minimum. Even then, they are still at risk from thrown objects. Encourage bystanders to wear eye protection. If you are approached, stop the unit immediately.
- Squeeze the throttle control and check that it returns automatically to the idle position. Make all adjustments or repairs before using the unit.
- Do not change the engine governor settings or overspeed the engine.
- This unit is intended for occasional, household use only.

## SAFETY WARNINGS FOR GAS UNITS



**WARNING:** Gasoline is highly flammable and its vapors can explode if ignited. Take the following precautions:

- Store fuel only in containers specifically designed and approved for the storage of such materials.
- Always stop the engine and allow it to cool before filling the tank. Never remove the fuel tank cap or add fuel when the engine is hot. Always loosen the fuel tank cap slowly to relieve any pressure in the tank before fueling.
- Always mix and add fuel in a clean, well-ventilated outdoor area where there are no sparks or flames. DO NOT smoke.
- Never operate the unit without the fuel cap securely in place.
- Avoid creating a source of ignition for spilled fuel. Wipe up any spilled fuel from the unit immediately, before starting the unit. Move the unit at least 30 ft. (9.1 m) from the fueling source and site before starting the engine. DO NOT smoke.
- Never start or run the unit inside a closed room or building. Breathing exhaust fumes can kill. Operate this unit only in a well ventilated outdoor area.

## WHILE OPERATING

- Wear safety glasses or goggles that meet current ANSI / ISEA Z87.1 standards and are marked as such. Wear ear/hearing protection when operating this unit. Wear a face mask 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 and Stopping*.
- Use the right tool. Only use this tool for its intended purpose.
- Always hold the unit with a firm grip when operating.
- Do not overreach. Always keep proper footing and balance. Take extra care when working on stairs, steep slopes or inclines. To avoid serious injury, do not operate the unit while on a ladder or a roof.
- Keep hands, face, and feet away from all moving parts. Do not touch or try to stop 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 unit faster than the speed needed to do the job. Do not run the unit at high speed when not in use.
- Do not force the unit. It will do a better, safer job when used at the intended rate.
- Always stop the unit when operation is delayed or when walking from one location to another.
- Before setting the unit down, always make sure the engine is off and all moving parts have stopped.
- If you strike or become entangled with a foreign object, stop the unit immediately and check for damage. Do not operate the unit before repairing damage. Do not operate the unit with loose or damaged parts.
- Turn the engine off and disconnect the spark plug for maintenance or repair.

- Use only original equipment manufacturer (OEM) replacement parts and accessories for this unit. These are available from your authorized service dealer. Use of any other parts or accessories could lead to serious injury to the user, or damage to the unit, and void the warranty.
- Keep the unit clean. Carefully remove vegetation and other debris that could block moving parts.
- To reduce fire hazard, replace a faulty muffler and spark arrestor. Keep the engine and muffler free from grass, leaves, excessive grease or carbon build up.
- If the unit starts to vibrate abnormally, stop the unit immediately. Inspect the unit for the cause of the vibration. Vibration is generally an indicator of trouble.

## BLOWER / VACUUM SAFETY

- Do not insert anything into the air openings, blower tubes or nozzle. Do not operate the unit if any of the air openings or tubes are blocked. Keep the air openings free from dust, lint, hair and anything else that may reduce airflow.
- Do not operate the unit without the blower tubes, or vacuum tubes and vacuum bag, securely attached. Make sure the vacuum bag is completely zipped closed.
- Do not use the unit to spray liquids, especially flammable or combustible liquids, such as gasoline. Do not use the unit in areas where such liquids are present.
- Do not use the unit for spreading chemicals, fertilizer or any other substance that may contain toxic materials.
- Do not set the unit down on any surface while the unit is running. Debris can be picked up by the air intake and thrown out the discharge opening, resulting in damage to the unit or property or causing serious injury to bystanders or the operator.
- During operation, never point the unit in the direction of people, animals, windows or automobiles. Always direct blowing debris away from people, animals, windows or automobiles.
- Use extra caution when blowing debris near solid objects, such as trees, walls, fences, etc. When possible, blow away from such objects, not toward them.
- Take care when working near valuable plants. The force of the blown air could damage tender plants.
- The unit is designed to pick up dry materials, such as leaves, grass, small twigs or bits of paper. To avoid serious injury to the operator and severe damage to the unit, do not vacuum wet debris or water. To avoid severe damage to the unit, do not vacuum hard materials, such as metal, glass, etc.
- Avoid situations that could cause the vacuum bag to catch fire. Do not operate the unit near an open flame. Do not vacuum warm ash from fire places, fire pits, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.
- Never attempt to clear a clogged air intake opening while the unit is running.
- Keep hair, fingers and all other body parts away from moving parts and openings.

## OTHER SAFETY WARNINGS







- Maintain the unit with care.
- All service, other than the maintenance procedures described in this manual, should be performed by an authorized service dealer.
- Never remove, modify or make inoperative any safety device furnished with the unit.
- Before inspecting, servicing, cleaning, storing, transporting or replacing any parts on the unit:
  1. Stop the unit.
  2. Make sure all moving parts have stopped.
  3. Allow the unit to cool.
  4. Disconnect the spark plug wire.
- Secure the unit while transporting.
- Never store the unit with fuel in the tank, inside a building where fumes may reach an open flame (pilot lights, etc.) or sparks (switches, electrical motors, etc.).
- Store the unit in a dry place, secured or at a height to prevent unauthorized use or damage. Keep the unit out of the reach of children.
- Never douse or squirt the unit with water or any other liquid. Keep handles dry and clean (free from debris, oil and grease). Clean the unit after each use. Refer to *Cleaning and Storage*. Do not use solvents or strong detergents.
- Keep these instructions. Refer to them often and use them to instruct other users. If you loan this unit to others, also loan them these instructions.

## SAVE THESE INSTRUCTIONS









## • SAFETY & 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 and maintenance and repair information.

### SYMBOL MEANING

	<b>• SAFETY ALERT SYMBOL</b> Indicates danger, warning or caution. May be used in conjunction with other symbols or pictographs.
	<b>• READ OPERATOR'S MANUAL</b> <b>WARNING:</b> Read the operator's manual(s) and follow all warnings and safety instructions. Failure to do so can result in serious injury to the operator and/or bystanders.
	<b>• WEAR EYE AND HEARING PROTECTION</b> <b>WARNING:</b> Thrown objects and loud noise can cause severe eye injury and hearing loss. Wear eye protection meeting current ANSI / ISEA Z87.1 standards and ear protection when operating this unit. Use a full face shield when needed.
	<b>• UNLEADED FUEL</b> Always use clean, fresh unleaded fuel.
	<b>• OIL</b> Refer to operator's manual for the proper type of oil.
	<b>• DO NOT USE E85 FUEL IN THIS UNIT</b> <b>WARNING:</b> It has been proven that fuel containing greater than 10% ethanol will likely damage this engine and void the warranty.

### SYMBOL MEANING

	<b>• ON/OFF STOP CONTROL</b> ON / START / RUN
	<b>• ON/OFF STOP CONTROL</b> OFF or STOP
	<b>• PRIMER BULB</b> Push primer bulb, fully and slowly, 10 times.
	<b>• CHOKE CONTROL</b> <ol style="list-style-type: none"> <li>• FULL choke position</li> <li>• PARTIAL choke position</li> <li>• RUN choke position</li> </ol>
	<b>• THROWN OBJECTS CAN CAUSE SEVERE INJURY</b> <b>WARNING:</b> Small objects can be propelled at high speed, causing injury.
	<b>• KEEP BYSTANDERS AWAY</b> <b>WARNING:</b> Keep all bystanders, especially children and pets, at least 50 feet (15 m) from the operating area.
	<b>• HOT SURFACE</b> <b>WARNING:</b> Do not touch a hot muffler or cylinder. You may get burned. These parts get extremely hot from operation. When turned off, they remain hot for a short time.
	<b>• BLOWERS – ROTATING IMPELLER BLADES CAN CAUSE SEVERE INJURY</b> <b>WARNING:</b> Stop the unit and allow the impeller to stop before changing tubes, cleaning or performing any maintenance. Keep hands and feet away from moving parts.

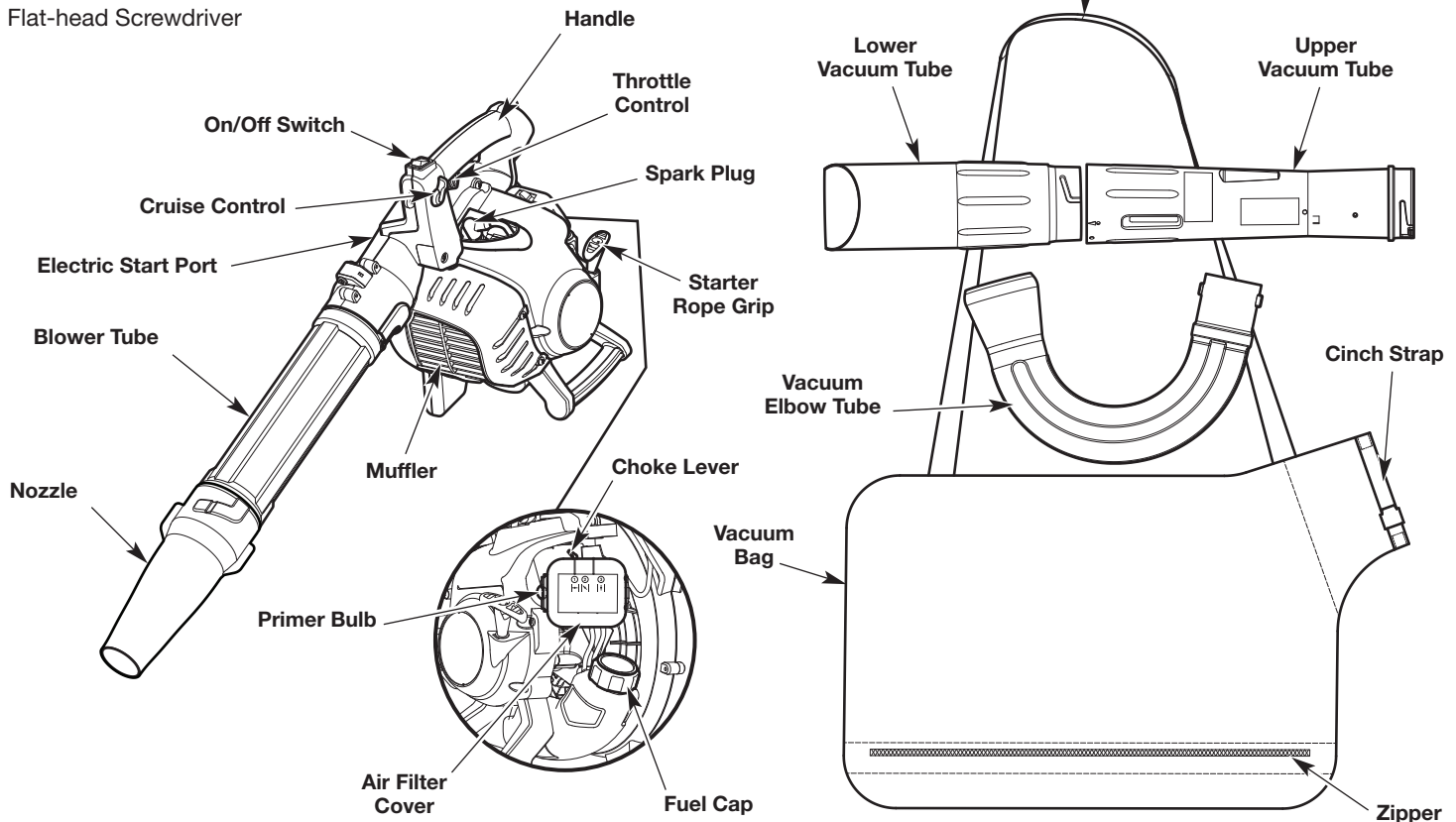
## KNOW YOUR UNIT

### APPLICATIONS

- Cleaning yards, garages, driveways, porches, patios, around walls, fences and more

### ASSEMBLY TOOLS REQUIRED

- Flat-head Screwdriver



## SPECIFICATIONS\*

Engine Type	Air-Cooled, 2-Stroke
Displacement	27 cc (1.64 cu. in.)
Spark Plug Gap	0.025 in. (0.635 mm)
Spark Plug	Champion® QDJ7J or equivalent plug
Lubrication	Fuel/Oil Mixture
Fuel/Oil Ratio	40:1
Fuel Tank Capacity	14 oz. (414 ml)
Approximate Unit Weight (No fuel)	10 - 12 lbs. (4.5 - 5.4 kg)
Air Volume** (measured at: outlet / blower tube / nozzle)	450 / 425 / 310 cfm (12 / 12 / 8 m³/min)
Air Speed (Peak)** (measured at: outlet / blower tube / nozzle)	120 / 125 / 205 mph (193 / 201 / 330 km/h)
Air Speed (Average)** (measured at: outlet / blower tube / nozzle)	100 / 105 / 175 mph (161 / 169 / 282 km/h)
Mulching Ratio	up to 16:1
Vacuum Bag Capacity	1.5 Bushel (54.6 L)
Sound Pressure Level	74 dB(A)

This spark ignition system complies with Canadian ICES-002.

\* All specifications are based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice.

\*\* Measured per ANSI B175.2.

## ASSEMBLY



**WARNING:** To avoid serious personal injury and damage to the unit, shut the unit off before removing or installing blower tubes, nozzles, vacuum tubes or the vacuum bag.



**WARNING:** To prevent serious personal injury, never operate the unit without the blower tubes, or vacuum tubes and vacuum bag, securely attached. Make sure the vacuum bag is completely zipped closed.

### ASSEMBLING THE UNIT AS A BLOWER

Always install the blower tube. The nozzle is optional.

#### Installing the Blower Tube

1. Set the unit on a flat, level surface.
2. Align the bumps on the upper end of the blower tube with the slots on the blower outlet (Fig. 1).
3. Insert the blower tube into the blower outlet (Fig. 1).
4. While holding the handle, twist the blower tube clockwise until it locks into place (Fig. 1).

#### Installing the Nozzle

1. Set the unit on a flat, level surface.
2. Align the slots on the nozzle with the bumps on the lower end of the blower tube (Fig. 2).
3. Install the nozzle onto the blower tube (Fig. 2).
4. While holding the blower tube, twist the nozzle clockwise until it locks into place (Fig. 2). The tabs on the blower tube should align with the tabs on the nozzle (Fig. 3).

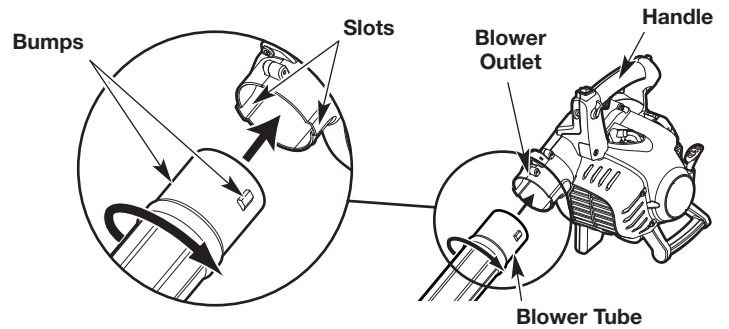


Fig. 1

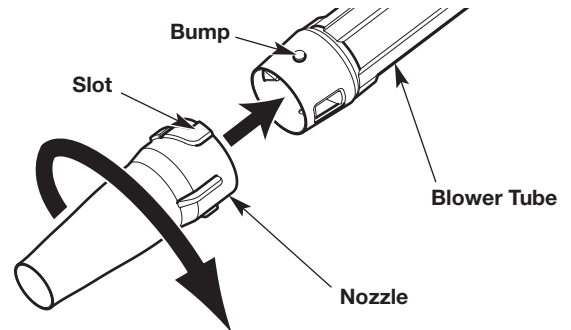


Fig. 2

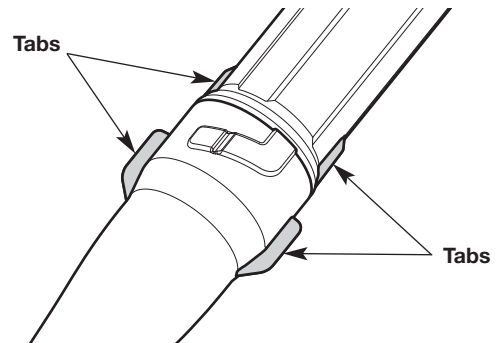


Fig. 3



## ASSEMBLING THE UNIT AS A VACUUM

### Removing the Nozzle

1. Set the unit on a flat, level surface.
2. While holding the blower tube, twist the nozzle counterclockwise until it unlocks from the blower tube.
3. Remove the nozzle from the blower tube.

### Removing the Blower Tube

1. Set the unit on a flat, level surface.
2. Insert a flat-head screwdriver into the tube lock. Turn the screwdriver counterclockwise 1/4 turn and hold it in place (Fig. 4).
3. Twist the blower tube counterclockwise until it unlocks from the blower outlet (Fig. 4).
4. Remove the blower tube from the blower outlet.

### Installing the Upper Vacuum Tube

1. Set the unit on a flat, level surface.
2. Insert a flat-head screwdriver into the hole in the impeller door and press the impeller door lock tab inward (Fig. 5). Open the impeller door.
3. While holding the impeller door open, align the slots on the upper vacuum tube with the tabs in the impeller intake (Fig. 6).
4. Insert the upper vacuum tube into the impeller intake (Fig. 7).
5. Twist the upper vacuum tube clockwise with both hands until it locks into place (Fig. 7).

### Installing the Lower Vacuum Tube

1. Set the unit on a flat, level surface.
2. Align the arrow on the lower vacuum tube with the arrow on the upper vacuum tube (Fig. 8).
3. Insert the lower vacuum tube into the upper vacuum tube (Fig. 8).
4. Twist the lower vacuum tube clockwise with both hands until it locks into place (Fig. 8).

**NOTE:** When properly assembled, the dot on the lower vacuum tube should align with the dot on the upper vacuum tube (Fig. 8).

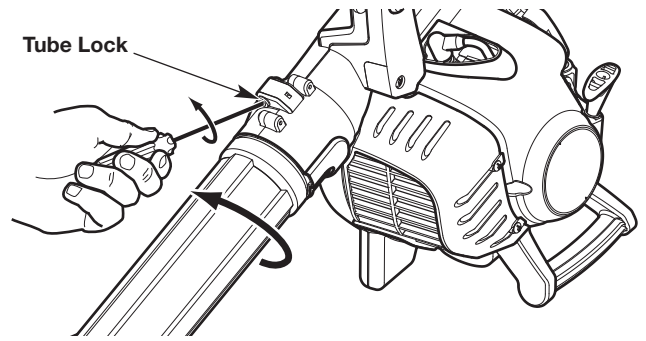


Fig. 4

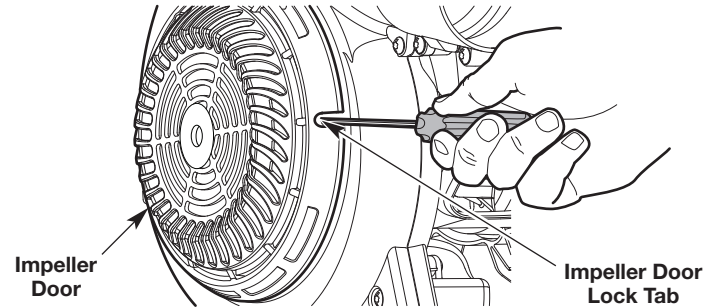


Fig. 5

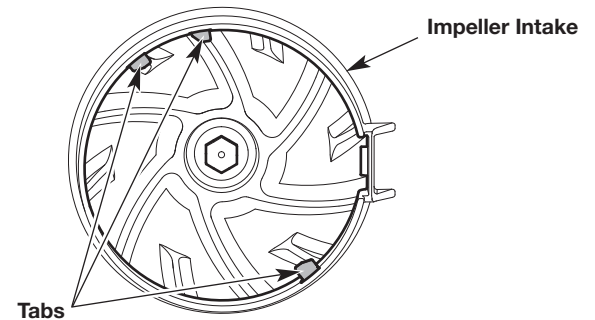


Fig. 6

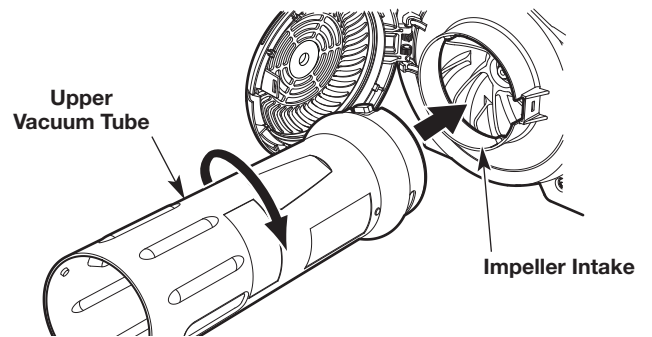


Fig. 7



## Installing the Vacuum Bag

1. Set the unit on a flat, level surface.
2. Align the bumps on the vacuum elbow tube with the slots on the blower outlet (Fig. 9). The flared end of the vacuum elbow tube should point to the right.
3. Insert the vacuum elbow tube into the blower outlet (Fig. 9).
4. Twist the vacuum elbow tube clockwise until it locks into place (Fig. 9).
5. Insert the flared end of the vacuum elbow tube approximately 4 inches (10 cm) into the vacuum bag (Fig. 10).
6. Pull the cinch strap to tighten the vacuum bag around the vacuum elbow tube (Fig. 10).

**NOTE:** The cinch strap should be tight enough to prevent the vacuum elbow tube from slipping out of the vacuum bag, but loose enough for the vacuum bag to have limited movement along the vacuum elbow tube.

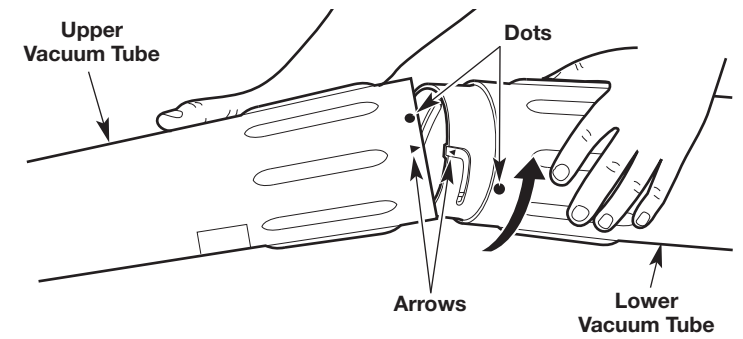


Fig. 8

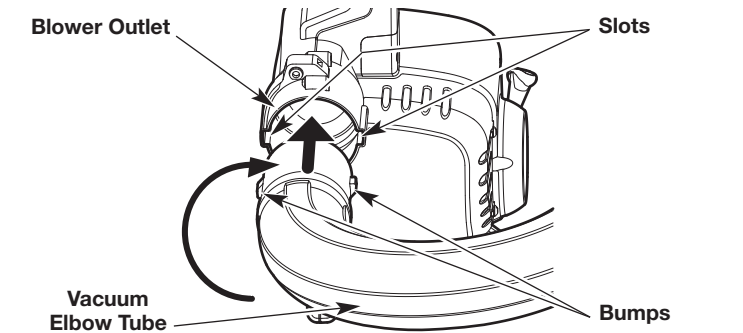


Fig. 9

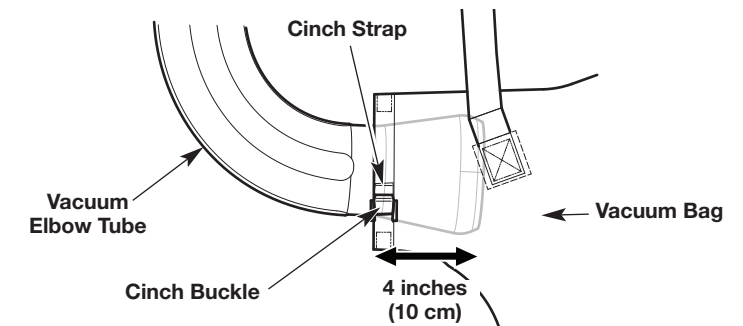


Fig. 10

## OIL AND FUEL

### OIL AND FUEL MIXING INSTRUCTIONS

The use of old and/or improperly mixed fuel is the most common cause of performance problems. Use only fresh, clean unleaded gasoline. Follow the instructions carefully for the proper gasoline/oil mixture.

#### Definition of Blended Fuels


Today's fuels are often a blend of gasoline and oxygenates such as ethanol, methanol or MTBE (ether). Alcohol-blended fuel absorbs water. As little as 1% water in the fuel can make fuel and oil separate, forming acids when stored. ALWAYS use fresh fuel (less than 30 days old).

**NOTE:** Dispose of old fuel according to local and national regulations.

#### Using Blended Fuels

If using a blended fuel:

- Always use the fresh fuel mix explained in this operator's manual
- Use the fuel additive STA-BIL® or an equivalent
- Always agitate the fuel mix before fueling the unit




**CAUTION: DO NOT USE E85 FUEL IN THIS UNIT.** It has been proven that fuel containing greater than 10% ethanol will likely damage this engine and void the warranty.

#### Using Fuel Additives

The container of 2-stroke oil provided with this unit includes a fuel additive to help inhibit corrosion and minimize gum deposits. Always use the brand of 2-stroke oil that came with this unit. If this is unavailable, use a 2-stroke oil designed for air-cooled engines and mix it with a fuel additive, such as STA-BIL Fuel Stabilizer or an equivalent. Add 0.8 oz. (23 ml) of fuel additive per gallon of fuel, according to the instructions on the container. NEVER add fuel additives directly to the unit's fuel tank.



#### Mixing the Fuel

**NOTE:** This unit comes with a 3.2 oz. (95 ml) container of 2-stroke oil. To obtain the correct fuel mixture described below, pour the entire container into one gallon of unleaded gasoline.




**CAUTION:** For proper engine operation and maximum reliability, pay strict attention to the gasoline and oil mixing instructions on the 2-stroke oil container. Using improperly mixed fuel can severely damage the engine.

Thoroughly mix the proper ratio of unleaded gasoline with 2-stroke engine oil. Do not mix them directly in the unit's fuel tank. Use a separate fuel can. Use a 40:1 gasoline/oil ratio. See the table below for specific gasoline and oil mixing ratios.


	
Unleaded gasoline	2-stroke oil
1 gallon U.S. (3.8 liters)	3.2 fl. oz. (95 ml)
1 liter	25 ml

MIXING RATIO - 40:1


### FUELING THE UNIT



**WARNING:** Gasoline is extremely flammable. Ignited vapors may explode. Always stop the engine and allow it to cool before filling the fuel tank. Do not smoke while filling the tank. Keep sparks and open flames at a distance from the area.



**WARNING:** Remove the fuel cap slowly to avoid injury from fuel spray. Never operate the unit without the fuel cap securely in place.



**WARNING:** Add fuel in a clean, well-ventilated outdoor area. Wipe up any spilled fuel immediately. Avoid creating a source of ignition for spilled fuel. Do not start the engine until fuel vapors dissipate.

1. Position the unit with the fuel cap facing up.
2. Slowly remove the fuel cap.
3. Place the fuel container spout into the fuel tank fill hole and fill the tank.

**NOTE:** Do not overfill the tank.

4. Wipe up any fuel that may have spilled.
5. Reinstall the fuel cap.
6. Move the unit at least 30 ft. (9.1 m) from the fuel container and the fueling site before starting the engine.

## STARTING AND STOPPING



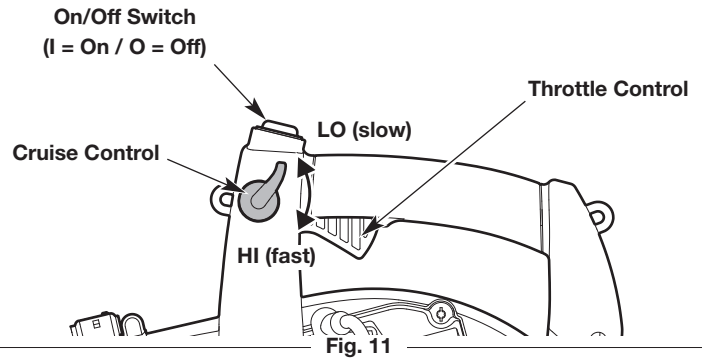
**WARNING:** Operate this unit only in a well-ventilated outdoor area. Carbon monoxide exhaust fumes can be lethal in a confined area.



**WARNING:** Avoid accidentally starting the unit. To avoid serious injury, the operator and the unit must be in a stable position when pulling the starter rope (Fig. 13).



**WARNING:** When starting the unit, make sure it is not directed toward people, animals, windows, automobiles or loose debris.



### STARTING INSTRUCTIONS

**NOTE:** This unit includes a cruise control, which allows the operator to maintain the desired engine speed without having to squeeze the throttle control.

1. Mix gasoline with oil. Refer to *Oil and Fuel Mixing Instructions*.
2. Fill the fuel tank. Refer to *Fueling the Unit*.

**NOTE:** There is no need to turn the unit on. The On/Off switch is in the **On (I)** position at all times (Fig. 11).

3. Slowly press and release the primer bulb **10 times** (Fig. 12). If fuel cannot be seen in the primer bulb, press and release the primer bulb until fuel is visible.
4. Move the choke lever to **Position 1** (Fig. 12).
5. Crouch in the starting position (Fig. 13).

**NOTE: SQUEEZE and HOLD** the throttle control, or move the cruise control to the **HI (fast)** position, for **ALL** further steps (Fig. 11).

6. Squeeze and hold the throttle control or move the cruise control to the **HI (fast)** position (Fig. 11). Pull the starter rope with a controlled and steady motion **5 times** (Fig. 13).
7. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Move the choke lever to **Position 2** (Fig. 12).
8. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Pull the starter rope with a controlled and steady motion **3 to 5 times** to start the engine.
9. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Allow the engine to warm up for 30 to 60 seconds.
10. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Move the choke lever to **Position 3** (Fig. 12). Allow the engine to warm up for an additional 60 seconds. The unit may be used during this time.

**NOTE:** The engine is properly warmed up when it accelerates without hesitation.

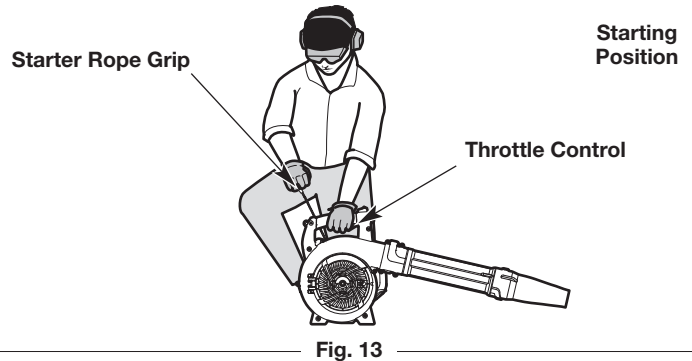
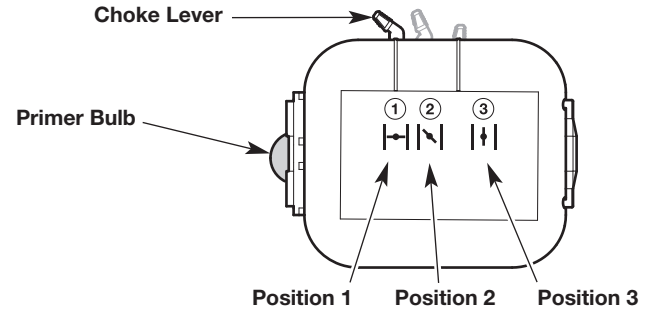
**NOTE:** Once the engine is properly warmed, the cruise control may be adjusted and the throttle control can be used normally.

**IF...** the engine hesitates, return the choke lever to **Position 2** (Fig. 12) and continue the warm-up.

**IF...** the engine does not start, begin the starting procedure with step 3.

**IF...** the engine fails to start after a few attempts: Move the choke lever to **Position 3**. Squeeze and hold the throttle control or move the cruise control to the **HI (fast)** position. Pull the starter rope with a controlled and steady motion until the unit starts.

**IF...** the engine is already warm, begin the starting procedure with step 7.



### STOPPING INSTRUCTIONS

1. Release the throttle control, or move the cruise control to the **LO (slow)** position, and allow the engine to idle.
2. Press and hold the On/Off switch in the **Off (O)** position until the engine comes to a complete stop (Fig. 11).

## USING THE ELECTRIC START ACCESSORY

This unit can be started with an optional electric start accessory (items sold separately). Refer to the electric start accessory operator's manual for the proper use of this feature.

Please contact your local retailer, call the Customer Support Department or visit our website for more information.

### ELECTRIC START ACCESSORIES

Item No.	Description
49MESCBP966	Engine Starter Bit
49MRBESY363	Cordless Electric Starter

### STARTING INSTRUCTIONS

**NOTE:** This unit includes a cruise control, which allows the operator to maintain the desired engine speed without having to squeeze the throttle control.

1. Mix gasoline with oil. Refer to *Oil and Fuel Mixing Instructions*.
2. Fill the fuel tank. Refer to *Fueling the Unit*.

**NOTE:** There is no need to turn the unit on. The On/Off switch is in the **On (I)** position at all times (Fig. 11).

3. Slowly press and release the primer bulb **10 times** (Fig. 12). If fuel cannot be seen in the primer bulb, press and release the primer bulb until fuel is visible.
4. Move the choke lever to **Position 1** (Fig. 12).
5. Crouch in the starting position (Fig. 13).
6. Insert the electric start accessory into the electric start port (Fig. 14). Refer to the *Operation* section of the electric start accessory operator's manual.

**NOTE: SQUEEZE and HOLD** the throttle control, or move the cruise control to the **HI (fast)** position, for **ALL** further steps (Fig. 11).

7. Squeeze and hold the throttle control or move the cruise control to the **HI (fast)** position (Fig. 11). Run the electric start accessory for 2 seconds.
8. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Move the choke lever to **Position 2** (Fig. 12).
9. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Run the electric start accessory in intervals no longer than 2 seconds each until the unit starts.
10. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Remove the electric start accessory from the unit.
11. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Allow the engine to warm up for 30 to 60 seconds.
12. Continue to squeeze the throttle control or keep the cruise control in the **HI (fast)** position. Move the choke lever to **Position 3** (Fig. 12). Allow the engine to warm up for an additional 60 seconds. The unit may be used during this time.

**NOTE:** The engine is properly warmed up when it accelerates without hesitation.

**NOTE:** Once the engine is properly warmed, the cruise control may be adjusted and the throttle control can be used normally.

**IF...** the engine hesitates, return the choke lever to **Position 2** (Fig. 12) and continue the warm-up.

**IF...** the engine does not start, begin the starting procedure with step 3.

**IF...** the engine fails to start after a few attempts: Move the choke lever to **Position 3**. Squeeze and hold the throttle control or move the cruise control to the **HI (fast)** position. Run the electric start accessory in intervals no longer than 2 seconds each until the unit starts.

**IF...** the engine is already warm, begin the starting procedure with step 8.

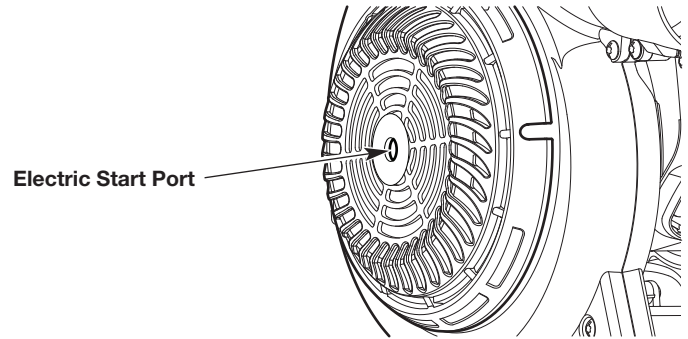


Fig. 14

### STOPPING INSTRUCTIONS

1. Release the throttle control, or move the cruise control to the **LO (slow)** position, and allow the engine to idle.
2. Press and hold the On/Off switch in the **Off (O)** position until the engine comes to a complete stop (Fig. 11).

## OPERATION



**WARNING:** To prevent serious personal injury, never operate the unit without the blower tubes, or vacuum tubes and vacuum bag, securely attached. Make sure the vacuum bag is completely zipped closed.



**WARNING:** Always wear eye, hearing, hand, foot and body protection to reduce the risk of injury when operating this unit. Wear a face mask or dust mask if the operation is dusty.

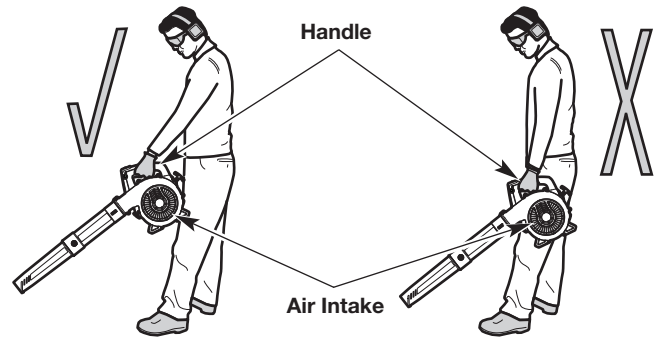


Fig. 15

### HOLDING THE UNIT

#### As a Blower

- Stand in the operating position (Fig. 15). Stand up straight. Do not bend over.
- Keep feet apart and firmly planted.
- Hold the unit with a firm grip.
- Hold the unit in front of, and away from, your body (Fig. 15).



**WARNING:** To prevent serious personal injury or damage to the unit, **DO NOT** hold the unit at your side (Fig. 15). The engine may be extremely hot. **DO NOT** block the air intake.



Fig. 16

#### As a Vacuum

- Stand in the operating position (Fig. 16). Stand up straight. Do not bend over.
- Keep feet apart and firmly planted.
- Place the shoulder strap over the left shoulder (Fig. 16).
- Hold the handle firmly with the right hand (Fig. 17). Hold the secondary handle firmly with the left hand (Fig. 17).

### TIPS FOR BEST RESULTS

- Operate the unit only at reasonable hours, not early in the morning or late at night when people might be disturbed. Comply with times listed in local ordinances. Usual recommendations are 9:00 a.m. to 5:00 p.m., Monday through Saturday.
- To reduce noise levels, operate the unit at the lowest speed needed to do the job. Limit the number of pieces of power equipment used at any one time.
- Use rakes or brooms to loosen debris before operation.
- Use the cruise control to make continuous operation easier (Fig. 11).
- Clean up after operation. Dispose of debris appropriately.

#### As a Blower

- Conserve water by using the blower instead of a hose to perform many outdoor cleaning actions.
- In dusty conditions, slightly dampen surfaces.
- Watch out for children, pets, open windows and freshly washed cars. Blow debris safely away. Never direct the unit toward anyone while the unit is in operation.
- Sweep the unit from side to side with the blower tube several inches above the ground. Slowly advance, keeping the accumulated debris in front of the operator.
- Use the nozzle to concentrate the air stream closer to the ground.

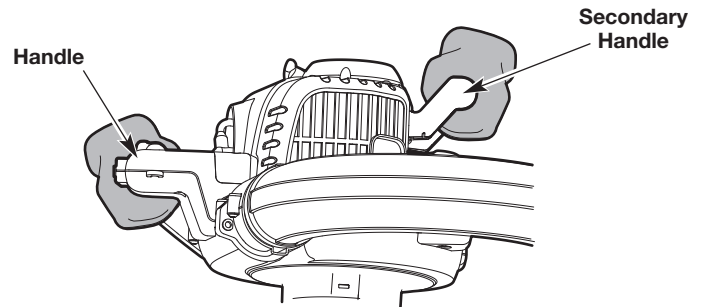


Fig. 17

## As a Vacuum



**WARNING:** The unit is designed to pick up dry materials, such as leaves, grass, small twigs or bits of paper. To avoid serious injury to the operator and severe damage to the unit, do not vacuum wet debris or water. To avoid severe damage to the unit, do not vacuum hard materials, such as metal, glass, etc.



**WARNING:** Avoid situations that could cause the vacuum bag to catch fire. Do not operate the unit near an open flame. Do not vacuum warm ash from fire places, fire pits, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.

- Tilt the vacuum tube slightly.
- Sweep the unit from side to side with the vacuum tube a few inches above the ground.

## EMPTYING THE VACUUM BAG



**WARNING:** To avoid serious personal injury, always stop the engine and allow the impeller to come to a complete stop before opening the vacuum bag.

Vacuumed debris is mulched as it passes through the impeller. This allows the vacuum bag to hold more debris.

Empty the vacuum bag whenever it becomes full. When the vacuum bag is full, suction will decrease noticeably. Also empty the vacuum bag after each operation to prevent the deterioration of the vacuum bag and the obstruction of air flow.

1. Wear eye protection and a dust mask.
2. Lift the buckle to loosen the cinch strap (Fig. 10).
3. Remove the vacuum elbow tube from the vacuum bag (Fig. 10).
4. Unzip the vacuum bag and empty the contents into a garbage bag or an appropriate container.
5. Turn the vacuum bag inside-out and vigorously shake out any remaining dust and debris. Turn the vacuum bag right-side-out.
6. Re-install the vacuum bag. Refer to *Installing the Vacuum Bag* in the *Assembly* section.



## MAINTENANCE



**WARNING:** To avoid serious personal injury, always stop the engine and allow it to cool before cleaning or maintaining the unit. Never perform cleaning or maintenance while the unit is running. Disconnect the spark plug wire to prevent the unit from starting accidentally.



**WARNING:** Wear protective clothing and observe all safety instructions to prevent serious personal injury.

### MAINTENANCE SCHEDULE

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:** Some maintenance procedures may require special tools or skills. If you are unsure about these procedures, take the unit to an MTD authorized service dealer.

**NOTE:** Maintenance, replacement, or repair of the emission control devices and system may be performed by an MTD authorized service dealer.

**NOTE:** Please read the California/EPA statement that came with the unit for a complete listing of terms and coverage for the emissions control devices, such as the spark arrestor, muffler, carburetor, etc.

FREQUENCY	MAINTENANCE REQUIRED
Every 10 hours (every 5 hours in vacuum mode)	<ul style="list-style-type: none"> <li>Clean and re-oil the air filter. Refer to <i>Maintaining the Air Filter</i>.</li> </ul>
Every 25 hours	<ul style="list-style-type: none"> <li>Check the spark plug condition and gap. Refer to <i>Maintaining the Spark Plug</i>.</li> </ul>

### MAINTAINING THE AIR FILTER

Failure to maintain the air filter can result in poor performance or can cause permanent damage to the engine. Engine failure due to improper air filter maintenance is not covered by the product warranty.

#### Cleaning the Air Filter

1. Open the air filter cover: press in the lock tab and swing the air filter cover to the left (Fig. 18).
2. Remove the air filter (Fig. 18).
3. Wash the air filter in detergent and water. Rinse the air filter thoroughly and allow it to dry.
4. Lightly coat the air filter with clean SAE 30 oil.
5. Squeeze the air filter to spread and remove excess oil.
6. Reinstall the air filter (Fig. 18).

**NOTE:** Operating the unit without the air filter and air filter cover will VOID the warranty.

7. Close the air filter cover: insert the tabs on the air filter cover into the slots on the backplate. Swing the air filter cover to the right and press it closed until the lock tab snaps into place (Fig. 18).

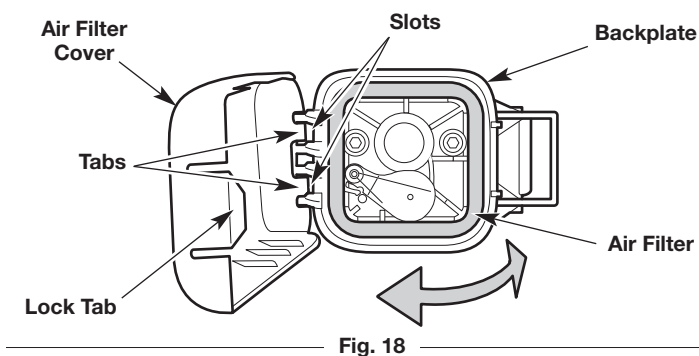


Fig. 18

## ADJUSTING THE IDLE SPEED

If the engine will not idle properly:

1. Start the engine. Refer to *Starting and Stopping*.
2. Move the cruise control to the **LO (slow)** position and let the engine idle. If the engine stops, increase the idle speed. Use a small Phillips screwdriver to turn the idle speed screw clockwise, 1/8 of a turn at a time, until the engine idles smoothly (Fig. 19).

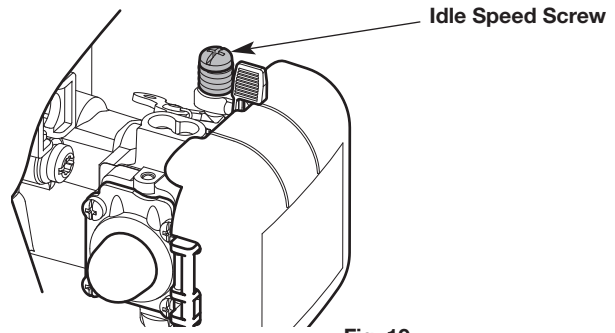



Fig. 19

## MAINTAINING THE SPARK PLUG

1. Stop the engine and allow it to cool. Grasp the spark plug boot firmly and pull it from the spark plug.
2. Clean around the spark plug. Remove the spark plug from the cylinder head with a 5/8-inch socket, turning counterclockwise.



**WARNING:** Do not sand blast, scrape or clean spark plug electrodes. Grit in the engine could damage the cylinder.

3. Inspect the spark plug. If the spark plug is cracked, fouled or dirty, replace it with replacement part **#794-00097**, a **Champion QDJ7J** or an equivalent spark plug.
4. Use a feeler gauge to set the air gap at **0.025 in. (0.635 mm)** (Fig. 20).
5. Install the spark plug in the cylinder head. Tighten the spark plug with a 5/8-inch socket, turning it 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.**

6. Reattach the spark plug boot.

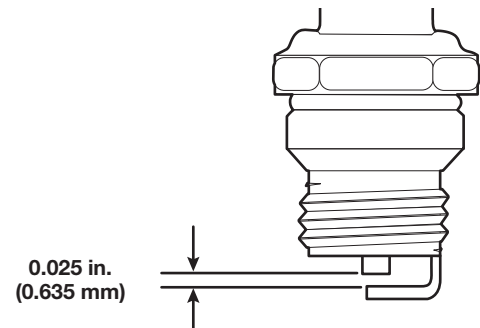


Fig. 20

## CLEANING AND STORAGE

### CLEANING



**WARNING:** To avoid serious personal injury, always stop the engine and allow it to cool before cleaning or maintaining the unit.

Use a small 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. Wipe off any moisture with a soft cloth.

### STORAGE

- Never store a fueled unit 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 the unit out of the reach of children.

#### Long-term Storage

1. Remove the fuel cap, tip the unit and drain the fuel into an approved container. Reinstall the fuel cap.
2. Start the engine and allow it to run until it stalls. This ensures that all fuel has been drained from the carburetor.
3. Allow the engine to cool. Remove the spark plug and put 5 drops of any high-quality motor oil or 2-stroke oil into the cylinder. Pull the starter rope slowly to distribute the oil. Reinstall the spark plug.
4. Thoroughly clean the unit and inspect it for any loose or damaged parts. Repair or replace damaged parts and tighten loose screws, nuts or bolts.

#### Preparing the Unit for Use after Long-term Storage

1. Remove the spark plug. Tip the unit and drain all of the oil from the cylinder into an approved container. Reinstall the spark plug.

**NOTE:** Do not use fuel that has been stored for more than 30 days. Dispose of old fuel and oil according to local and national regulations.

## TROUBLESHOOTING

PROBLEM	SOLUTION
<b>THE ENGINE WILL NOT START</b>	
The fuel tank is empty	Fill the fuel tank with properly-mixed fuel
The primer bulb was not pressed enough	Press the primer bulb 10 times or until fuel is visible
The engine is flooded	Move the choke lever to Position 3, squeeze the throttle control and pull the starter rope
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly-mixed fuel
The spark plug is fouled	Replace the spark plug
<b>THE ENGINE WILL NOT IDLE</b>	
The air filter is dirty	Clean or replace the air filter
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly-mixed fuel
The idle speed is incorrect	Adjust the idle speed
<b>THE ENGINE WILL NOT ACCELERATE</b>	
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly-mixed fuel
The air filter is dirty	Clean or replace the air filter
<b>THE ENGINE LACKS POWER OR STALLS</b>	
The fuel is old (over 30 days) and/or improperly mixed	Drain the fuel tank and add fresh, properly-mixed fuel
The air filter is dirty	Clean or replace the air filter
The spark plug is fouled	Replace the spark plug

If further assistance is required, contact an authorized service dealer.















## Warranty Conditions - Australia (Not applicable to other Regions)

The benefits given to you under this warranty are in addition to other rights and remedies that you have under Australian law in relation to the goods.

MTD Products Australia Pty Ltd warrants that this machine is free from defects in material and workmanship. This warranty is limited to repairing or replacing any part which appears upon inspection by MTD Products Australia Pty Ltd or its agent to be defective in material or workmanship.

Some products may have a separate warranty provided in respect of the engine for this machine. Refer to the engine warranty statement in the Engine Owner's Manual.

For domestic use, this warranty will apply for a period of 2 years from date of purchase. Warranty for commercial or industrial use is 90 days from the date of purchase. In the event of dispute, MTD Products Australia Pty Ltd will determine whether the machine was used for domestic, or commercial or industrial use.

All costs associated with claiming under this warranty must be borne by you, including transport costs incurred in the repair or replacement of any defective part.

This warranty excludes fair wear and tear and any damage caused by misuse or abuse. Parts such as Blades, Bump Knobs, Outer Spools, Cutting Line, Inner Reels, Starter Pulley, Starter Ropes, Drive Belts, Saw Blades, Guide Bars, Cultivator Tines, Tune-ups, Spark Plugs, Carburettor Adjustments, Filters, which can be subjected to use beyond their normal intended working capacity are also excluded.

This warranty is void if alterations are made to the machine without MTD Products Australia Pty Ltd prior written authority.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

**IN ORDER TO MAKE A CLAIM UNDER THIS WARRANTY YOU WILL NEED TO TAKE YOUR PRODUCT AND YOUR PROOF OF PURCHASE TO AN AUTHORISED MTD DEALER. YOUR NEAREST MTD DEALER CAN BE FOUND AT [WWW.MTD.COM.AU](http://WWW.MTD.COM.AU). ALL SERVICING AND REPAIRS MUST USE GENUINE SPARE PARTS OR YOUR WARRANTY WILL BE VOID.**

### For your Record:

Retailers Name: .....	Address: .....
Phone No: .....	Model No: .....
Serial No: .....	Date of Purchase: .....

MTD Products Australia Pty Ltd.

Postal Address: PO. Box 376 Dandenong. Vic. 3175

Business Address: 6 Zenith Road, Dandenong. Vic. 3175 and 97 Trade Street. Lytton. Qld. 4178

Email Address: [mtdservice@mtd.com.au](mailto:mtdservice@mtd.com.au)

Customer Service Phone: 1300 951 594



A.B.N. 96 004 873 572