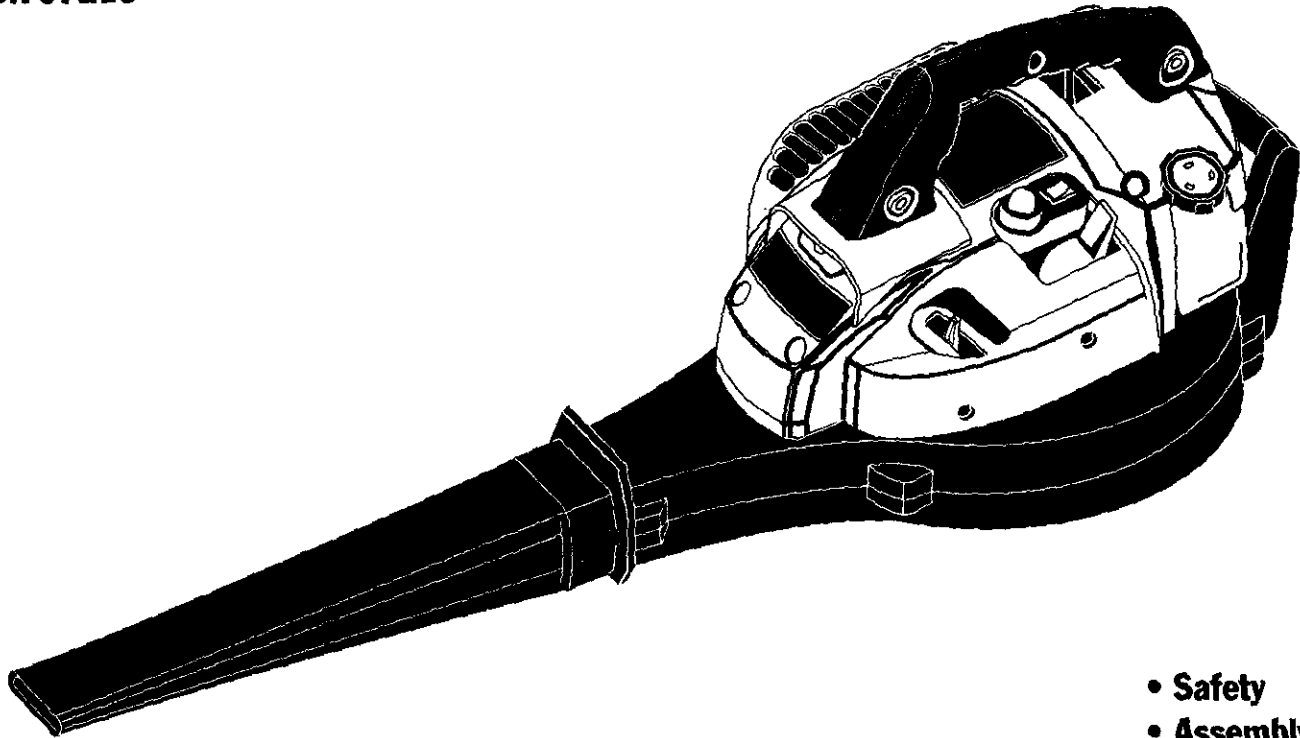


**Operator's Manual**

# **CRAFTSMAN®**

**31 cc/2-Cycle/210 MPH  
GAS POWERED BLOWER/VAC**

**Model No.  
316.797210**



- **Safety**
- **Assembly**
- **Operation**
- **Maintenance**
- **Parts List**
- **Español**



**WARNING:**  
Before using this product,  
read this manual and follow  
all its Safety Rules and Operating  
Instructions.

**Save this manual  
for future reference.**

**Sears, Roebuck, and Co., Hoffman Estates, IL 60179 USA**

**OPERATOR'S MANUAL PART NO. 182522  
PRINTED IN U.S.A.**

**Rev. B  
9/99 (7431)**

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## WARRANTY STATEMENT

### FULL TWO YEAR WARRANTY ON CRAFTSMAN® GAS-POWERED BLOWER AND BLOWER/VAC

For two (2) years from the date of purchase, when this Craftsman Gas-Powered Blower or Blower/Vac is maintained, lubricated and tuned up according to the operating and maintenance instructions in the operator's manual, Sears will repair, free of charge, any defect in materials or workmanship.

This warranty excludes blower tubes, spark plug, and air filter, which are expendable parts and become worn during normal use.

If this blower is used for commercial purposes, this warranty applies for 90 days from the date of purchase.

If this blower is used for rental purposes, this warranty applies for 30 days from the date of purchase.

This warranty applies only while this product is in use in the United States.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THE BLOWER OR BLOWER/VAC TO THE NEAREST SEARS SERVICE CENTER IN THE UNITED STATES.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., D/817 WA, Hoffman Estates, IL 60179

## SAFETY RULES

### California Proposition 65 Warning:



**WARNING:** The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

**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 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.**

**SPECIAL NOTE:** exposure to vibrations through prolonged use of gasoline powered hand tools could cause blood vessel or nerve damage in the fingers, hands, and joints of people prone to circulation disorders or abnormal swelling. Prolonged use in cold weather has been linked to blood vessel damage in otherwise healthy people. If symptoms occur such as numbness, pain, loss of strength, change in skin color or texture, or loss of feeling in the fingers, hands or joints, discontinue use of this tool and seek medical attention. An anti-vibration system does not guarantee the avoidance of these problems. Users who operate power tools on a continual and regular basis must monitor closely their physical condition and the condition of this tool.



**WARNING:** To guard against injury, basic safety precautions should be observed, including the following rules for safe operation:



**WARNING:** Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.



**CAUTION:** Failure to obey a safety warning may result in property damage or personal minor or moderate injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

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

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.



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



**DANGER:** Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

## • IMPORTANT SAFETY INFORMATION •

### READ ALL INSTRUCTIONS BEFORE OPERATING

- 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.
- Children and teens under the age of 15 must not use the unit, except for teens guided by an adult.
- 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.
- Carefully inspect the area before starting the unit. Remove all debris and hard or sharp objects such as glass, wire, etc.
- Clear the area of children, bystanders, and pets. At a minimum, keep all children, bystanders and pets outside a 50 ft. (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.

### 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.
- Avoid creating a source of ignition for spilled fuel. Do not start the engine until fuel vapors dissipate.

- Always stop the engine and allow it to cool before filling the fuel tank. Never remove the cap of the fuel tank, or add fuel, when the engine is hot. Never operate the unit without the fuel cap securely in place. Loosen the fuel tank cap slowly to relieve any pressure in the tank.
- Mix and add fuel in a clean, well-ventilated area outdoors where there are no sparks or flames. Slowly remove the fuel cap only after stopping engine. Do not smoke while fueling or mixing fuel. Wipe up any spilled fuel from the unit immediately.
- Move the unit at least 30 ft. (9.1 m) from the fueling source and site before starting the engine. Do not smoke, keep sparks and open flames from the area while adding fuel or operating the unit.

### WHILE OPERATING

- 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 area outdoors.
- To reduce the risk of injury associated with thrown objects, wear safety glasses or goggles that are marked as meeting ANSI Z87.1-1989 standards,
- To reduce the risk of hearing loss associated with sound level(s), always wear ear/hearing protection when operating this unit.
- Wear heavy, long pants, boots and gloves. Do not wear, short pants, sandals or go barefoot.
- To avoid static electricity shock, do not wear rubber gloves or any other insulated gloves while operating this unit.
- To reduce the risk of injury associated with objects being drawn into rotating parts, do not wear loose clothing, jewelry, scarves, and the like. Secure hair above shoulder level.

- Wear a face or dust mask if the operation is dusty. Long sleeve shirts are recommended.
- Use the unit only in daylight or good artificial light.
- Keep outside surfaces free from oil and fuel.
- 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. See Starting/Stopping Instructions.
- Do not set unit on any surface except a clean, hard area while engine is running. Debris such as gravel, sand, dust, grass, etc. could be picked up by the air intake and thrown out by the discharge opening, damaging unit, property, or causing serious injury to bystanders or operator.
- Use the right tool. Only use this tool for the purpose intended.
- Do not force unit. It will do the job better and with less likelihood of injury at a rate for which it was designed.
- Do not overreach or use from unstable surfaces such as ladders, trees, steep slopes, rooftops, etc. Always keep proper footing and balance.
- Always hold the unit with a firm grip when operating.
- Keep hands, face, and feet at a distance from all moving parts. Do not touch or try to stop the impeller when it is rotating. Do not operate without guards in place.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dirt, debris and anything that may reduce the air flow.
- Do not touch the engine or muffler. These parts get extremely hot from operation. When turned off they remain hot for a short time.
- Do not operate the engine faster than the speed needed to do the job. Do not run the engine at high speed when not in use.
- Always stop the engine when operation is delayed or when walking from one location to another.
- Stop the engine for maintenance, repair, to install or remove the blower tubes or vacuum attachments. The unit must be stopped and the impeller no longer turning to avoid contact with the rotating blades.
- Use only genuine Craftsman® replacement parts when servicing this unit. These parts are available from your authorized service dealer. Do not use parts, accessories or attachments not authorized by Craftsman® for this unit. Doing so could lead to serious injury to the user, or damage to the unit, and void your warranty.



**WARNING:** The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields that are marked as meeting ANSI Z87.1-1989 standards and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields, available at Sears.

- Never use this unit for spreading chemicals, fertilizers, or other substances which may contain toxic 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.

### WHILE OPERATING UNIT AS A BLOWER

- Never run the unit without the the proper equipment attached. When using unit as a blower, always install blower tubes.
- Never point the Blower in the direction of people or pets, or in the direction of windows. Always direct the blowing debris away from people, animals, glass, and solid objects such as trees, automobiles, walls, etc.

### WHILE OPERATING UNIT AS A VACUUM

- Never run the unit without the the proper equipment attached. When using unit as a vacuum, always install vacuum tubes, vacuum bag and make sure the vacuum bag is completely zipped closed.
- Avoid situations that could catch the vacuum bag on fire. Do not operate near an open flame. Do not vacuum warm ash from fireplaces, barbecue pits, brush piles, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.
- The unit is designed to pickup dry material such as leaves, grass, small twigs and bits of paper. Do not attempt to vacuum wet debris and/or standing water as this may result in damage to the Blower/ Vacuum. To avoid severe damage to the impeller, do not vacuum metal, broken glass, etc.












### OTHER SAFETY WARNINGS

- Never store the unit, with fuel in the tank, inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing or transporting. Be sure to secure the unit while transporting.
- Store the unit in a dry place, either locked up or up high to prevent unauthorized use or damage. Keep 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.
- 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

## 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 and maintenance and repair information.

SYMBOL	MEANING
	<ul style="list-style-type: none"><li>• <b>SAFETY ALERT SYMBOL</b> Indicates danger, warning, or caution. May be used with other symbols.</li></ul>
	<ul style="list-style-type: none"><li>• <b>READ OPERATOR'S MANUAL</b> Failure to follow these instructions can result in serious injury. Read and follow all safety precautions in the operator's manual before starting or operating this unit.</li></ul>
	<ul style="list-style-type: none"><li>• <b>WEAR EYE AND HEARING PROTECTION</b> <b>WARNING:</b> Thrown objects and loud noise can cause severe eye injury and hearing loss. Always wear eye protection meeting ANSI Z87.1-1989 standards and hearing protection when operating this unit.</li></ul>
	<ul style="list-style-type: none"><li>• <b>THROWN OBJECTS CAN CAUSE SEVERE INJURY</b> <b>WARNING:</b> Keep clear of blower outlet. Never point the blower at yourself or others. Objects can be thrown from blower. Do not operate unit without proper attachments and guards in place.</li></ul>
	<ul style="list-style-type: none"><li>• <b>KEEP CHILDREN AWAY</b> <b>WARNING:</b> Keep all bystanders, especially children and pets, at least 50 feet (15 m) from the operating area. Stop the unit immediately if you are approached.</li></ul>
	<ul style="list-style-type: none"><li>• <b>PRIMER BULB</b> Push primer bulb fully and slowly, 5 to 7 times.</li></ul>
	<ul style="list-style-type: none"><li>• <b>UNLEADED FUEL</b> Always use clean, fresh unleaded fuel.</li></ul>
	<ul style="list-style-type: none"><li>• <b>INDICATES OIL</b> Refer to operator's manual for the proper type of oil.</li></ul>
	<ul style="list-style-type: none"><li>• <b>CHOKE CONTROL</b> A <b>CHOKE</b> position. B <b>PARTIAL</b> choke position. C <b>RUN</b> position.</li></ul>
	<ul style="list-style-type: none"><li>• <b>ROTATING IMPELLER BLADES CAN CAUSE SEVERE INJURY</b> <b>WARNING:</b> Stop the engine and allow the impeller to stop before opening the vacuum door or installing or changing tubes or bag, or before performing any maintenance.</li></ul>
	<ul style="list-style-type: none"><li>• <b>HOT SURFACE WARNING</b> Do not touch the engine or muffler. These parts get extremely hot from operation. When turned off they remain hot for a short time.</li></ul>

## SYMBOL

## MEANING



- **ON/OFF STOP CONTROL**  
ON / START / RUN



- **ON/OFF STOP CONTROL**  
OFF or STOP



- **THROTTLE CONTROL**  
Indicates "HIGH" or "FASTEST" speed.



- **THROTTLE CONTROL**  
Indicates "IDLE", "LOW" or "SLOWEST" speed.

## ACCESSORIES OR ATTACHMENTS

This unit is vacuum capable and the vacuum attachment comes with your unit.

Be sure to read and follow all safety, assembly and operating instructions outlined in this operator's manual.



**WARNING:** Do not use parts, accessories or attachments not authorized by Craftsman® for this unit. Doing so could lead to serious injury to the user, or damage to the unit, and void your warranty.

## ASSEMBLY

### CARTON CONTENTS

- Blower
- Blower Tube
- Operator's Manual
- Bottle of 2-Cycle Engine Oil
- Upper Vacuum Tube
- Lower Vacuum Tube
- Vacuum Bag

### ASSEMBLY INFORMATION



**WARNING:** If received assembled, ensure your unit is properly assembled. Make sure all fasteners are in place and secure.

- No tools are required for assembly

### ASSEMBLING UNIT AS A BLOWER

#### Blower Tube Assembly



**WARNING:** To prevent serious personal injury, stop the engine and allow the impeller to stop before installing or changing tubes.



**WARNING:** To prevent serious personal injury or damage to the unit, the blower tube must be installed while operating this unit as a blower.

**NOTE:** If the unit was assembled as a vacuum unit, remove all vacuum parts and store away in a secure place for later use.

#### Installing

- Install the blower tube over the blower outlet and push on until both tabs snap into place (Fig. 1).

#### Removing

- Remove the blower tube by pressing both tabs at the same time and pulling off the blower (Fig. 1).

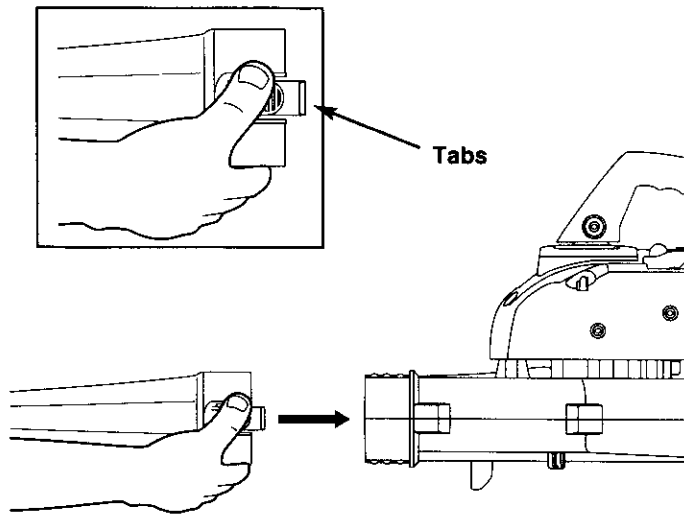


Fig. 1

## ASSEMBLING UNIT AS A VACUUM

### Vacuum Tube Assembly



**WARNING:** To prevent serious personal injury, stop the engine and allow the impeller to stop before installing or changing tubes.



**WARNING:** To prevent serious personal injury or damage to the unit, always install vacuum tubes, vacuum bag and make sure the vacuum bag is completely zipped closed when operating this unit as a vacuum.

**NOTE:** If the unit was assembled as a blower unit, remove all blower parts and store away in a secure place for later use.

### Installing

1. Assemble the vacuum tube by installing the lower tube into the upper tube with the tab on the lower tube aligning with the notch on the upper tube. Push the lower tube down and snap into place (Fig. 2)
2. Turn the unit over and open the vacuum door by pressing the tab button and swinging the door open (Fig. 3).
3. Install the upper vacuum tube by hooking under the hinge of the vacuum door and positioning the tube to where the knob threads align with the tapped hole (Figs 4 & 5).
4. Tighten the knob securely. The tube should set even with the bottom of the unit. Do not over tighten.

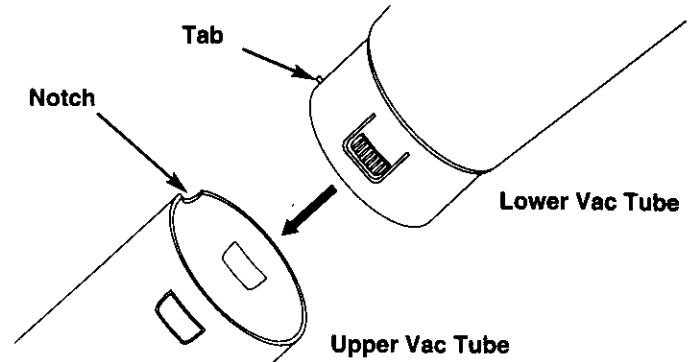


Fig. 2

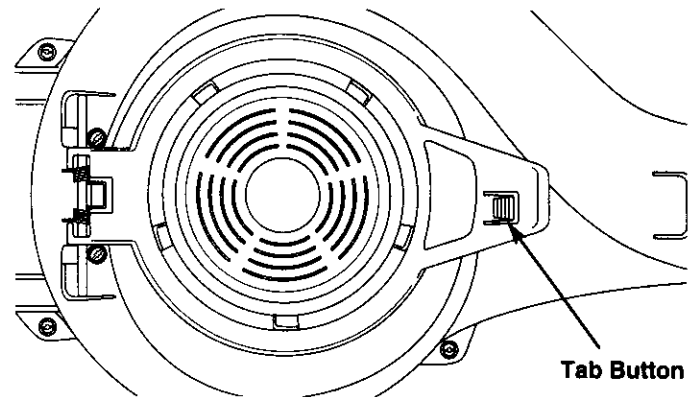


Fig. 3

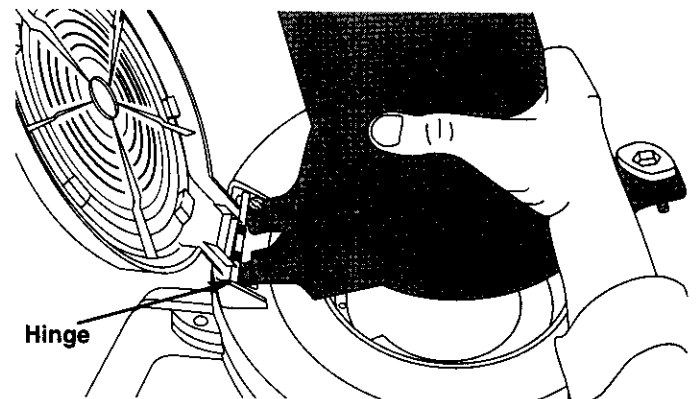


Fig. 4

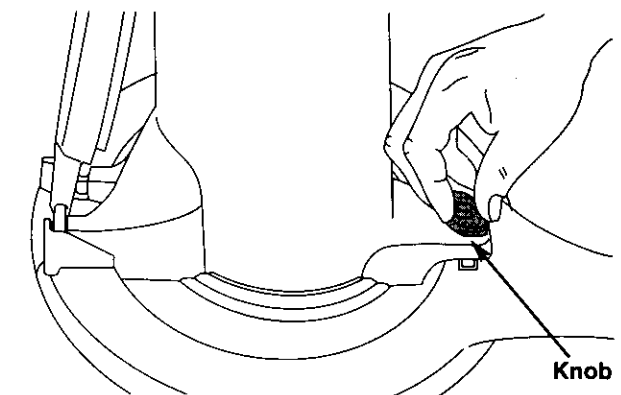


Fig. 5

5. Install the vacuum bag tube over the blower outlet and push on until both tabs snap into place (Fig. 6). Position so the elbow inside the bag slants upwards.

### Removing

1. Remove the vacuum bag by pressing both tabs on the vacuum bag elbow at the same time and pulling off the blower (Fig. 6).
2. Loosen the knob completely on the vacuum tube, swing back slightly and unhook from the bottom of the vacuum door to remove.
3. Close the vacuum door by pressing down to snap in place. Ensure the door is secure.

### ADJUSTING THE SHOULDER HARNESS (vacuum kit)

**NOTE:** Have the vacuum bag harness adjusted prior to starting the unit.

1. Extend the harness opening fully.
2. Place the harness over your head and onto your left shoulder. Hold the unit in the operating position to get a proper adjustment (Fig. 7).
3. Make sure the vacuum bag harness is adjusted to allow free flow of air into the vacuum bag elbow. If the bag is kinked, the unit will not perform correctly. The bottom of the bag should be parallel to the ground (Fig. 7).
4. Lengthen the harness by pulling down on the strap and moving the buckle up. Shorten the harness by pulling the strap back through the buckle while moving the buckle down (Fig. 8)



Fig. 7

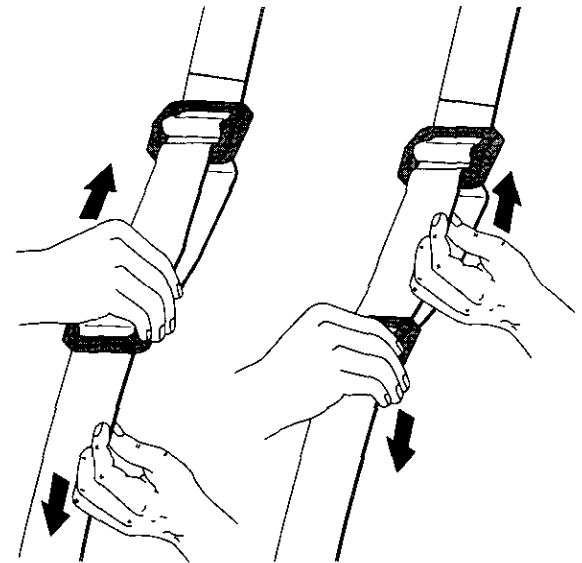


Fig. 8

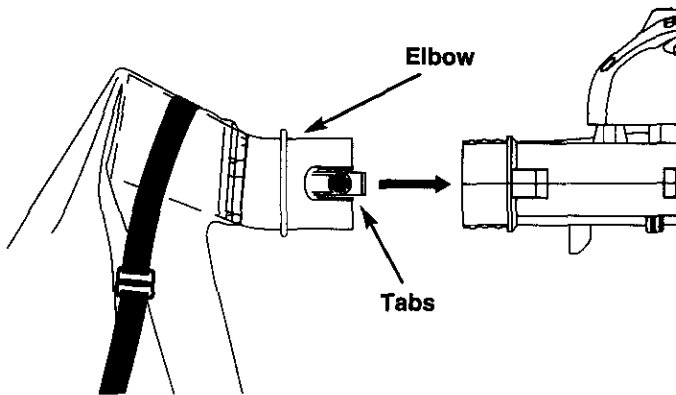
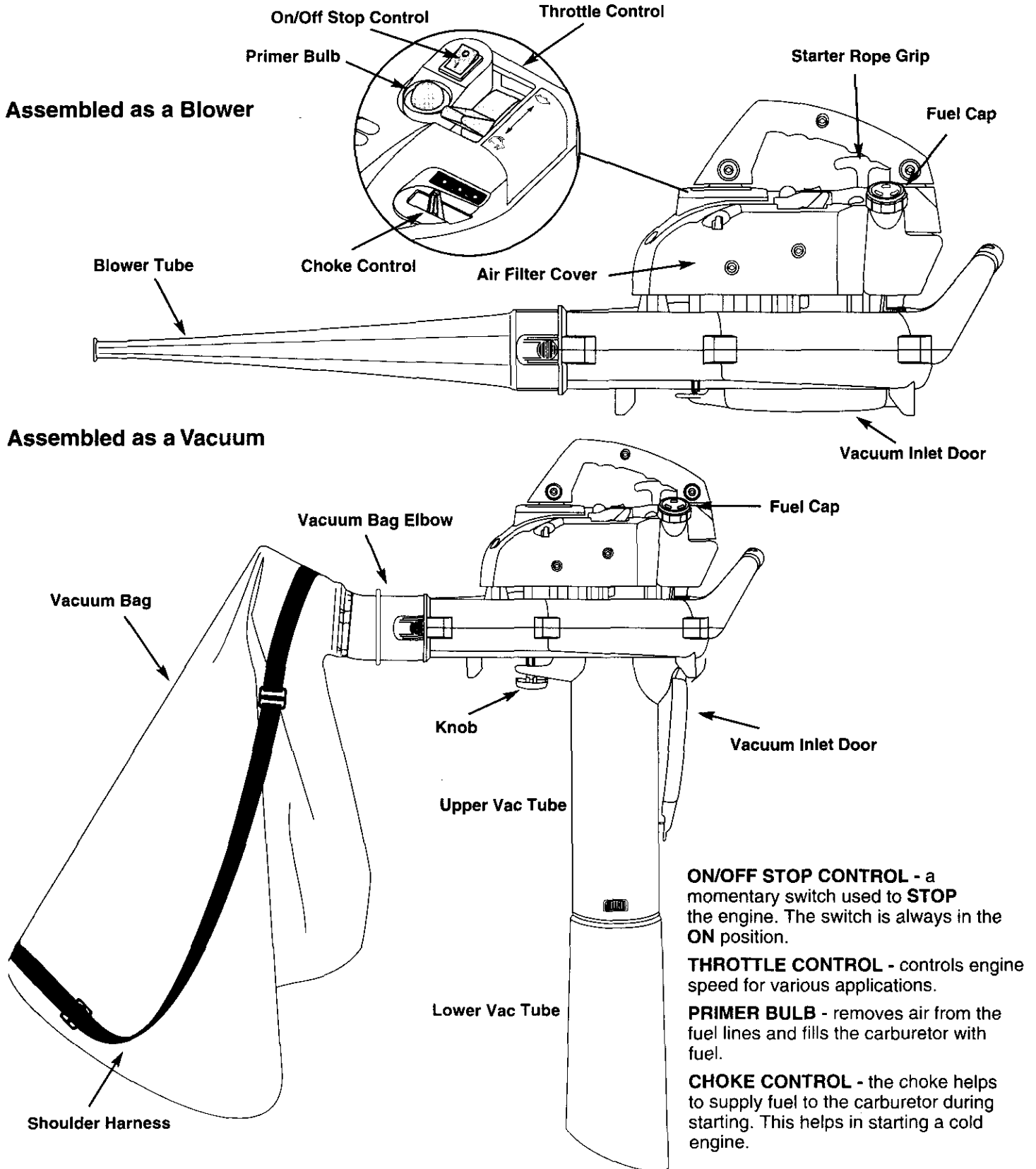


Fig. 6

# OPERATION

## KNOW YOUR BLOWER or BLOWER / VACUUM

READ THIS OPERATOR'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR UNIT. Compare the illustrations with your unit to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.



## THIS ENGINE IS CERTIFIED TO OPERATE ON UNLEADED GAS AND OIL MIXTURE.

### TO FUEL ENGINE



**CAUTION:** Be sure to read these instructions carefully before attempting to start or operate this unit. Using old or improper oil or fuel, or improperly mixing the oil and fuel can cause engine damage. This type of damage will VOID the engine warranty.



**WARNING:** Gasoline is extremely flammable and its vapors can explode if they are ignited. 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 away from the area.

### Recommended Oil Type

A 3.2 oz. (0.094 liter) bottle of Craftsman engine oil, containing fuel stabilizer, is included with your product. Craftsman brand oil is recommended for this outdoor power tool. If another brand is used, make sure it is high quality oil, formulated for 2-cycle, air-cooled engines.



**DANGER:** Combustible mixture contains petroleum distillate. Store away from heat or open flame. Harmful or fatal if swallowed. If swallowed, do not induce vomiting. **CALL PHYSICIAN IMMEDIATELY.** Avoid prolonged contact with skin. Wash thoroughly after handling. **Do not reuse bottle.**

### Recommended Fuel Type

Use clean, fresh, unleaded gasoline that is less than 60 days old.

### Oil and Fuel Mixing Instructions

Thoroughly mix the proper ratio of unleaded gasoline with 2-cycle engine oil in a separate fuel can, 40:1. Do not mix them directly in the engine fuel tank.

Use 3.2 oz. (0.094 liter) of 2-cycle engine oil per one gallon of unleaded gasoline to achieve a 40:1 fuel/oil ratio.

### Use of Blended Fuels

If you choose to use a blended fuel or its use is unavoidable, the following precautions are recommended.

1. Always use fresh fuel mix.
2. Use a special additive.
3. Always agitate the fuel mix before fueling the unit.
4. Drain the tank and run the engine dry before storing the unit.

### Use of Fuel Stabilizer

If using a brand of oil other than Craftsman, use of fuel stabilizer will inhibit corrosion and minimize the formation of gum deposit. Add 0.8 oz. (23 ml) per gallon of fuel per instructions on container. **NEVER** add fuel stabilizer directly to the unit's fuel tank. Using a fuel stabilizer can keep fuel fresh for up to six (6) months.



**CAUTION:** For proper engine operation and maximum reliability, pay strict attention to the oil and fuel mixing instructions on the 2-cycle oil container. Use a 40:1 fuel/oil ratio. Use 2-cycle oil. Using improperly mixed fuel can severely damage the engine.


## IMPORTANT

Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, empty the fuel system before storage of 30 days or longer. Drain the fuel tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season.

Never use engine or carburetor cleaner products in the fuel tank, or permanent damage may occur.

See the Storage section for additional information.

## STOPPING INSTRUCTIONS

1. Set the throttle control to the idle position (  ) (Fig. 10).
2. Press and hold the On/Off Stop Control down in the STOP position until the engine comes to a complete stop (Fig. 10).

## STARTING INSTRUCTIONS

**WARNING:** 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.







Also, **Do not** set unit on any surface except a clean, hard area while starting. Debris such as gravel, sand, dust, grass, etc. could be picked up by the air intake and thrown out by the discharge opening, damaging unit, property, or causing serious injury to bystanders or operator.


**NOTE:** Mix gas with oil (40:1 ratio). See gas and oil mixing instructions on page 10. Fill your unit with oil and gas mixture and hold unit firmly when starting (Figs. 11 & 12).

**NOTE:** Have the vacuum bag harness adjusted prior to starting the unit as a vacuum. See Adjusting the Shoulder Harness.



**NOTE:** The On/Off Stop Control is a momentary switch and is always in the ON position (Fig. 10).



1. Fully press and release primer bulb slowly 5 to 7 times. Fuel should be visible in the bulb (Fig. 10). If fuel is not visible, press three (3) more times, or until it is.
2. Move choke lever (Fig. 10) to **CHOKE** (  ) **A**.
3. Place the throttle control in the fast position (  ) and pull starter rope (Figs. 11 & 12) until engine attempts to start (1-3 pulls).
4. Move choke to **PARTIAL** (  ) **B**.

**NOTE:** The engine will not run in the **CHOKE** (  ) **A** position.

5. Pull starter rope (Figs. 11 & 12) until engine attempts to run (1-3 pulls).
6. Move choke control to RUN (  ) **C** position (Fig. 10). Pull starter rope (Figs. 11 & 12) until engine starts (1-7 pulls).

7. If the engine fails to start, repeat steps 1-6. If the engine still fails to start, perform the flooded engine starting procedure in the following note.

**NOTE:** If the engine floods while trying to start, place the choke control in the RUN (  ) **C** position. Move the throttle control to the fast position (  ) (Fig. 10). Pull the starter rope briskly. The engine should start with three (3) to eight (8) pulls.

**NOTE:** For a warm engine, go directly to Step 6. Move choke to RUN (  ) **C** position and the throttle control in the fast (  ) position. Pull starter rope (Figs. 11 & 12) until engine starts (1-7 pulls).

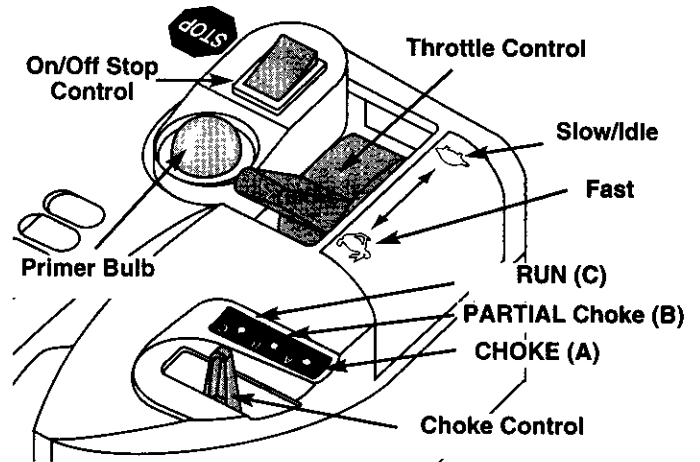


Fig. 10

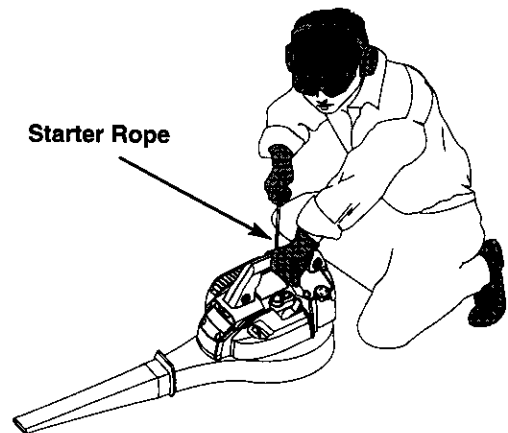


Fig. 11

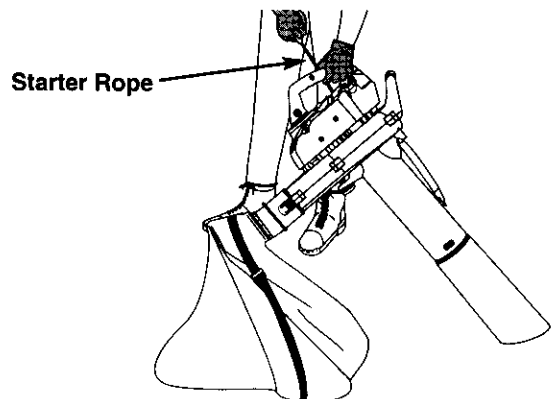


Fig. 12

## HOLDING THE BLOWER



**WARNING:** To prevent serious personal injury to yourself or others, or damage to the unit, make sure all tubes and guards are in place before operating your unit.

Check for the following before operating the unit:

- Operator is wearing proper clothing, such as boots, safety glasses or goggles, ear/hearing protection, gloves, long pants and long sleeve shirt.
  - If the conditions are dusty, a dust mask or face mask is being worn.
  - The unit is in good working condition. The tubes and guards are in place and secure.
1. Use the unit for cleaning debris away from driveways, walls and fences (Figs 13 & 14).
  2. Use for cleaning around gardens, shrubbery and trees (Fig. 15)

## OPERATING TIPS

- To reduce the risk of hearing loss associated with sound level(s), the use of hearing protection is required.
- Operate power equipment only at reasonable hours – not early in the morning or late at night when people might be disturbed. Comply with time listed in local ordinance. Usual recommendations are 9:00 am to 5:00 pm, Monday through Saturday.
- To reduce noise levels, limit the number of pieces of equipment used at any one time.
- To reduce noise levels, operate power blowers at the lowest possible speed to do the job.
- Check your equipment before operation, especially the muffler, air intakes, and air filters.
- Use rakes and brooms to loosen debris before blowing.
- In dusty conditions, slightly dampen surfaces or use a mister attachment when water is available.
- Conserve water by using power blowers instead of hoses for many lawn and garden applications, including areas such as gutters, screens, patios, grills, porches, and gardens.
- Watch out for children, pets, open windows, or freshly washed cars, and blow debris away.
- Use full blower nozzle extension so the air stream can work close to the ground.
- After using blowers and other equipment, **CLEAN UP!** Dispose of debris in trash receptacles.

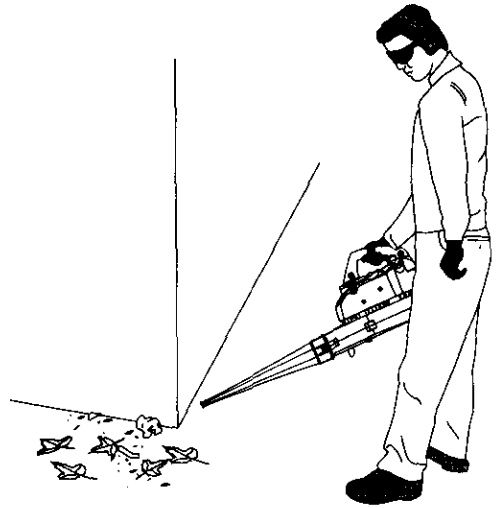


Fig. 13

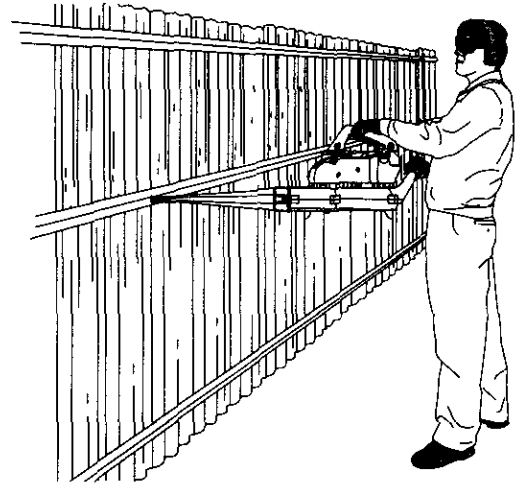


Fig. 14

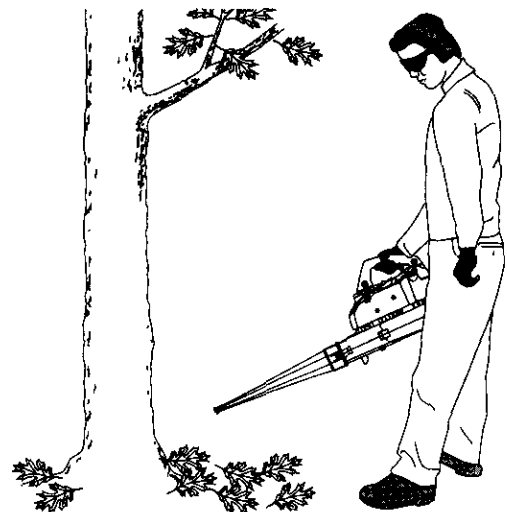


Fig. 15

## OPERATING AS A VACUUM



**WARNING:** To prevent serious personal injury or damage to the unit, always install vacuum tubes, vacuum bag and make sure the vacuum bag is completely zipped closed when operating this unit as a vacuum.

Check for the following before operating the unit:

- Operator is wearing proper clothing, such as boots, safety glasses or goggles, ear/hearing protection, gloves, long pants and long sleeve shirt.
  - If the conditions are dusty, a dust mask or face mask is being worn.
  - The unit is in good working condition. The vacuum tubes and vacuum bag are in place and secure.
  - The vacuum bag harness is in place and correctly adjusted.
1. Use the unit for vacuuming up light debris, leaves, paper, etc.

Hold the vacuum, tilting the vacuum tube slightly, and use a sweeping action to collect light debris (Fig. 16). The debris will flow into the vacuum bag. Things such as small leaves and small twigs will be mulched as they pass through the fan housing, allowing the vacuum bag to hold a lot of debris. See Emptying the Vacuum Bag.

When the bag is full, suction will noticeably decrease. Turn off the unit and allow the impeller to stop before you unzip the bag. Unzip the bag and empty the contents before continuing.



**WARNING:** To avoid serious personal injury, never unzip the vacuum bag without first stopping the unit.



**WARNING:** As a vacuum, the unit is designed to pick up dry material such as leaves, grass, small twigs and bits of paper. To avoid serious personal injury, do not attempt to vacuum wet debris and/or standing water as this may result in damage to the Blower/ Vacuum. To avoid severe damage to the impeller, do not vacuum metal, broken glass, etc.



**WARNING:** Avoid situations that could catch the vacuum bag on fire. Do not operate near an open flame. Do not vacuum warm ash from fireplaces, barbecue pits, brush piles, etc. Do not vacuum discarded cigars or cigarettes unless the cinders are completely cool.



**WARNING:** When the upper and lower vacuum tubes are removed, make sure the vacuum door is snapped closed before using the unit, to avoid injury from the impeller.

## Emptying the Vacuum Bag



**WARNING:** To avoid serious personal injury, turn off the unit and allow the impeller to stop before opening vacuum door or installing or removing vacuum bag.

1. Remove the vacuum bag by pressing the tabs on the elbow tube and pulling it out of the unit, See **Assembling Unit as A Vacuum**.
  2. Wearing eye protection and a dust mask, unzip the vacuum bag and empty the contents into a garbage bag or container.
  3. Turn the bag inside out after initial emptying and vigorously shake out dust and debris.
- NOTE:** If addition cleaning of the bag is required, see **Cleaning the Vacuum Bag in Maintenance**.
4. Zip close and reinstall the vacuum bag.



Fig. 16

# MAINTENANCE

## MAINTENANCE SCHEDULE

FREQUENCY	MAINTENANCE REQUIRED
Before each use	Check for loose or damaged parts.
Before each use	Check for loose fasteners and parts.
Between each use	Clean units and labels.
Every 10 hours	Clean and re-oil air filter
Every 50 hours	Check spark plug condition and gap.

## GENERAL RECOMMENDATIONS



**WARNING:** To prevent serious injury, never perform maintenance on the unit while it is running. Shut off the unit and allow it to cool down before doing any maintenance. Disconnect the spark plug wire to prevent the unit from starting.

The warranty on this blower does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the unit as instructed in this operator's manual.

These required maintenance procedures should be performed at the frequency stated in the table. They should also be included as part of any seasonal tune-up.

## CHECK FOR DAMAGED/WORN PARTS

Inspect the unit for any worn or damaged parts. Repair or replace damaged parts before operating.

## CHECK FOR LOOSE FASTENER PARTS

- Housing Screws
- Air Filter Cover
- Spark Plug Wire

## CLEAN UNIT AND LABELS

- Clean the unit and labels using a damp cloth with a mild detergent.
- Wipe off the unit with a clean dry cloth.
- Keep air vents free from debris at all times.

## AIR FILTER MAINTENANCE

**NOTE:** Clean and re-oil the air filter every 10 hours of operation. Your unit's air filter is one of the most important areas to maintain. If it is not maintained, you will VOID the warranty. Before cleaning, make sure the unit is turned off.

1. Wipe down the air filter cover and surrounding area. This will help prevent any debris entering the carburetor when the cover is removed.
2. Remove the screws on each side of the air filter cover. Remove the air filter cover (Fig. 17).
3. Remove the air filter (Fig. 18).
4. Wash the filter in detergent and water (Fig. 19). Rinse the filter thoroughly and allow it to dry.
5. Apply enough clean oil to saturate and squeeze out excess (Fig. 20).
6. Squeeze the filter to spread the oil (Fig. 21).
7. Reinstall the filter (Fig. 18), air filter cover and screws (Fig. 17).

**NOTE:** If the unit is operated without the air filter cover installed you will VOID the warranty.

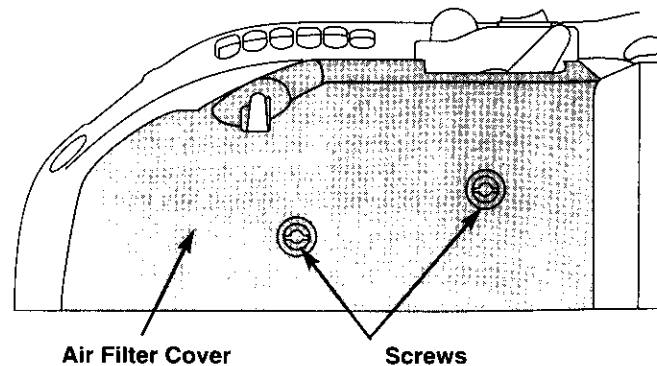


Fig. 17

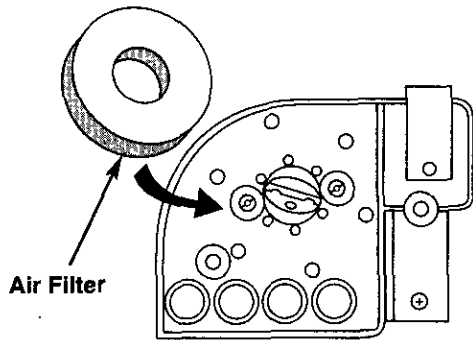


Fig. 18

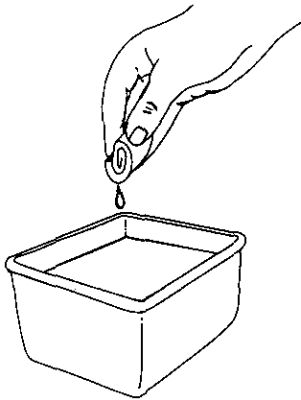


Fig. 19

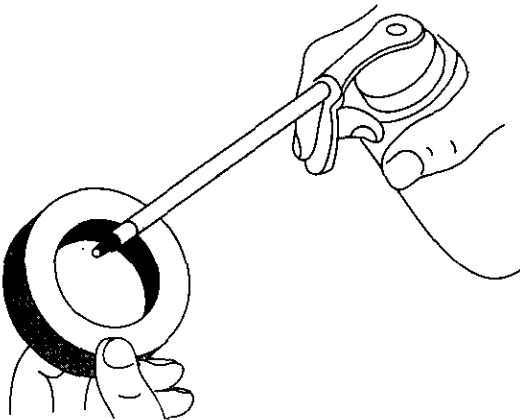


Fig. 20

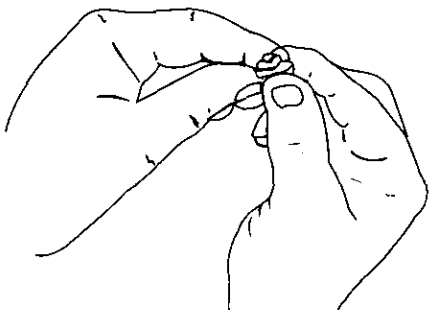


Fig. 21

## TO REPLACE SPARK PLUG

Use a Champion DJ7Y spark plug (or equivalent). Correct air gap is **0.020 in. (0.50 mm)**. Remove plug after every **50 hours** of operation and check its condition (Fig. 22).

1. Stop the engine and remove the air filter cover. See **Air Filter Maintenance**.
2. Pull the wire off of the spark plug.
3. Clean around the spark plug and remove it from the cylinder head.

**NOTE:** Replace a cracked, fouled or dirty spark plug. Do not sand blast, scrape or clean electrodes because the engine could be damaged by grit entering the cylinder.

3. Set the air gap at **0.020 in. (0.50 mm)** using a wire feeler gauge (Fig. 22). Install a correctly gapped spark plug into the cylinder head. Torque to **110-120 in•lb (12.3-13.5 N•m)**.

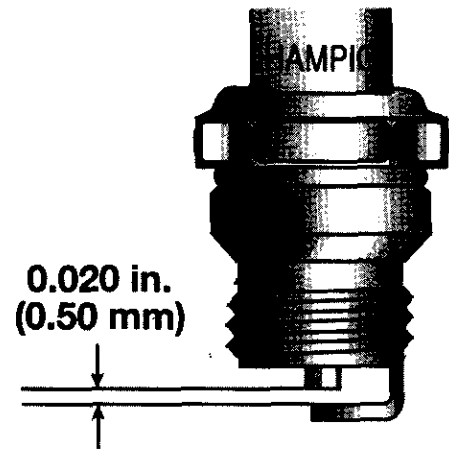


Fig. 22

## CLEARING A BLOCKED IMPELLER



**WARNING:** During normal operation, parts of this unit become hot. Wear protective clothing and observe all safety instructions to prevent serious personal injury.

1. Shut off the unit and wait for the engine to come to a complete stop. Disconnect the spark plug wire to prevent the unit from starting.
2. Remove the vacuum tubes. See **Assembling Unit as a Vacuum**. The vacuum bag can also be removed for easier handling of the unit.
3. Carefully remove material blocking the impeller. Inspect the blades to assure no damage has occurred. Rotate the blades by hand to assure the blockage is completely cleared.
4. Reconnect the spark plug wire.
5. Replace the vacuum bag and vacuum tubes.
6. Restart unit and resume use.

## CLEANING THE VACUUM BAG

1. Empty the bag after each use to avoid deterioration and obstructing air flow, which will reduce the performance of the vacuum.
2. Wearing eye protection and a dust mask, clean the bag as needed. Turn the bag inside out after initial emptying and vigorously shake out dust and debris.
3. Wash the bag once a year or more often if needed as follows:
  - a. Remove the vacuum bag.
  - b. Turn bag inside out.
  - c. Hang up.
  - d. Hose down thoroughly.
  - e. Hang to dry.
  - f. Turn bag right side out.

## SERVICE AND ADJUSTMENTS

### CARBURETOR ADJUSTMENT

The idle speed of the engine is adjustable, the air filter cover must be removed to do so. Only make adjustments while the unit is assembled as a blower.

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

#### Check Fuel Mixture

Old and/or improperly mixed fuel is usually the reason for the unit not running properly. Drain and refill the tank with fresh, properly mixed fuel prior to making any adjustments. Refer to Oil and Fuel Information Pg. 10.

#### Clean Air Filter

The condition of the air filter is important to the operation of the unit. A dirty air filter will restrict air flow and change the air/fuel mixture. 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 Air Filter Maintenance Pg. 14.

#### Adjust Idle Speed Screw



**WARNING:** The unit will be running during idle speed adjustments. Wear protective clothing and observe all safety instructions to prevent serious personal injury.

Also, **Do not** set unit on any surface except a clean, hard area during these adjustments. Debris such as gravel, sand, dust, grass, etc. could be picked up by the air intake and thrown out by the discharge opening, damaging unit, property, or causing serious injury to bystanders or operator.

If after checking the fuel mixture 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. See Starting/Stopping Instructions, Pg. 15.
2. Shut the unit off and remove the air filter cover. See steps 1 and 2 of Air Filter Maintenance Pg. 14.

3. Restart the unit, release the throttle trigger and let the engine idle. If the engine stops, insert a small phillips or flat blade screwdriver into the idle speed screw (Fig. 23). Turn the idle speed screw in, clockwise, 1/8 of a turn at a time (as needed) until the engine idles smoothly.
4. If the engine seems to idle fast, turn the idle speed screw counterclockwise 1/8 of a turn at a time (as needed), to reduce idle speed.
5. Before reinstalling the air filter cover, Turn the idle speed screw in, clockwise, 1/8 of a turn. This will compensate for the speed reduction when the air filter cover is back in place.
6. Reinstall the filter (Fig. 18, Pg. 15), air filter cover and screws (Fig. 17, pg. 14).

Checking the fuel mixture, cleaning the air filter, and adjusting the idle speed screw should solve most engine problems.

If not and:

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

have the unit checked and adjusted by an authorized service dealer.

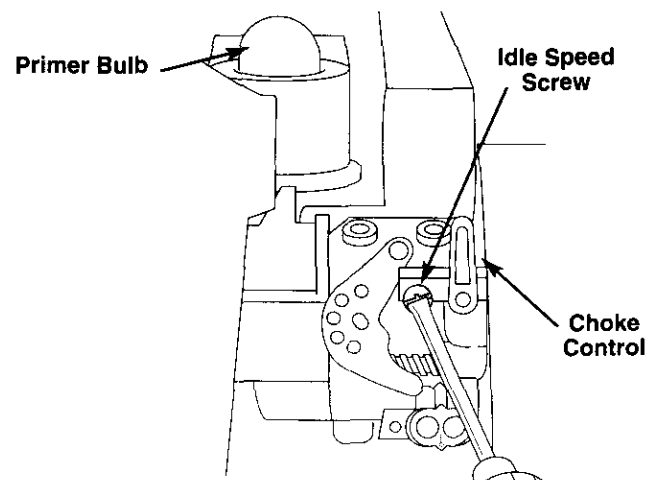


Fig. 23

## STORAGE

It is important to prevent gum deposits from forming in essential fuel system parts such as the carburetor, fuel filter, fuel hose or tank during storage. Also, experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine during storage.

To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Follow these instructions:

1. Drain all fuel from the fuel tank and drain into a container with the same 2-cycle fuel mixture. Do not use fuel that has been stored for more than 60 days. Dispose of the old fuel/oil mix in a safe manner and use a fresh mix.
2. Start the engine and allow it to run until it stalls. This ensures that all fuel has been drained from the carburetor.
3. Under To Fuel Engine in the Operation section of this manual, refer to the message labeled IMPORTANT, regarding the use of gasohol in your engine.
4. Allow the engine to cool. Remove the spark plug and put about 1 oz. (30 ml) of any high quality motor oil or 2-cycle 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 storage.

5. 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 now ready for storage.
6. Store the unit in a dry, well ventilated area and out of the reach of children.

## SPECIFICATIONS

### ENGINE

Engine Type	Air-Cooled, 2-Cycle
Displacement	31 cc
Operating RPM (Maximum)	8,000-8,600 rpm
Idle Speed	3,400-4,000 rpm
Blower Output (Maximum)	up to 210 MPH
Ignition Type	Electronic
Ignition Switch	Rocker Switch
Spark Plug	Champion DJ7Y
Spark Plug Gap	0.020 in. (0.50 mm)
Lubrication	Fuel/Oil Mixture
Fuel/Oil Ratio	40:1
Carburetor	Diaphragm, All-Position
Starter	Auto Rewind
Muffler	Baffled with Guard
Throttle	Lever
Fuel Tank Capacity	18 oz. (530 ml)
Bearings	Needle and Ball
Weight (Blower, no fuel)	10.8 Lbs. (4.9 kg)

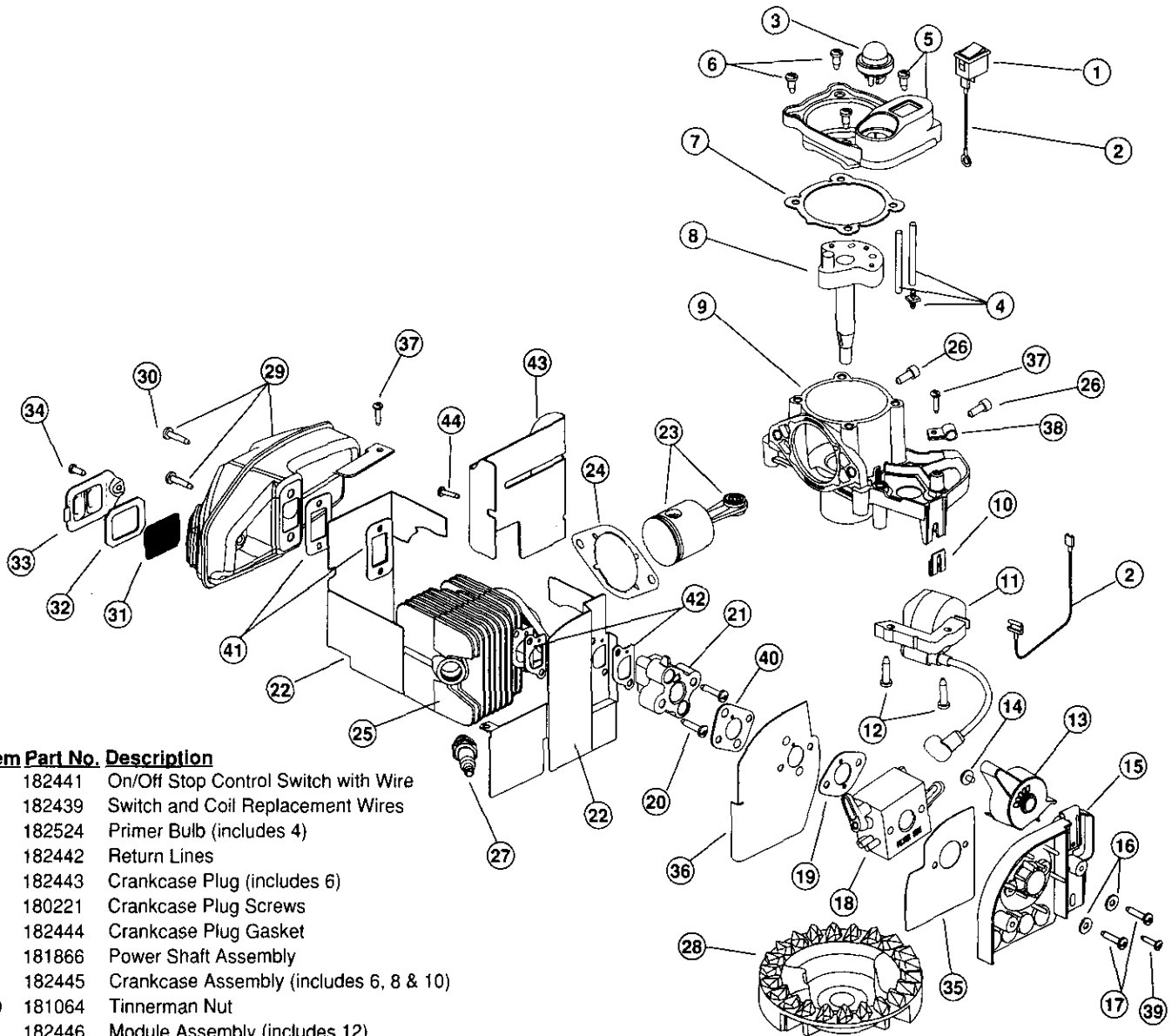
### VACUUM OPTION

Mulching Ratio	Up to 16:1
Vacuum Air Flow (Maximum)	up to 510 CFM
Vacuum Bag Capacity	2.1 Bushels (40.7 L)
Weight (Vacuum Bag Empty, no fuel)	12.5 Lbs. (5.7 kg)

## TROUBLESHOOTING CHART

TROUBLE	CAUSE	REMEDY
<b>Engine will not start</b>	Empty fuel tank Primer bulb wasn't pushed enough  Fouled spark plug Engine flooded  Old or improperly mixed fuel	Fill fuel tank Press primer bulb fully and slowly 5-7 times. Fuel should be visible in the bulb  Clean or replace spark plug; re-gap. Use starting procedure <b>WITHOUT USING CHOKE</b> Drain fuel tank/add fresh fuel mixture
<b>Engine will not idle</b>	Old or improperly mixed fuel Dirty air filter Carburetor misadjusted	Drain fuel tank/add fresh fuel mixture Clean or replace air filter Adjust carburetor
<b>Engine will not accelerate</b>	Old or improperly mixed fuel Dirty air filter Improper carburetor adjustment	Drain fuel tank/add fresh fuel mixture Clean or replace air filter Take to an authorized service dealer for carburetor adjustment
<b>Engine lacks power or stalls when under load</b>	Dirty air filter No oil in fuel or old fuel Fouled spark plug Improper carburetor adjustment	Clean or replace air filter Drain fuel tank/add fresh fuel mixture Clean or replace spark plug; re-gap. Take to an authorized service dealer for carburetor adjustment
<b>Engine smokes excessively</b>	Choke partially on Dirty air filter Too much oil in fuel mixture Improper carburetor adjustment	Adjust choke. Clean or replace air filter Drain fuel tank/add fresh fuel mixture Take to an authorized service dealer for carburetor adjustment
<b>Unit will not blow or vacuum</b>	Vacuum bag full of debris  Blocked tube  Blocked impeller  Damaged impeller	Empty bag. See <b>Empty the Vacuum Bag</b> . Clear blockage. See <b>Clearing a Blocked Tube/Impeller</b> Clear blockage. See <b>Clearing a Blocked Tube/Impeller</b> Take to an authorized service dealer

# PARTS LIST – Model 316.797210 Engine



**Item Part No. Description**

1	182441	On/Off Stop Control Switch with Wire
2	182439	Switch and Coil Replacement Wires
3	182524	Primer Bulb (includes 4)
4	182442	Return Lines
5	182443	Crankcase Plug (includes 6)
6	180221	Crankcase Plug Screws
7	182444	Crankcase Plug Gasket
8	181866	Power Shaft Assembly
9	182445	Crankcase Assembly (includes 6, 8 & 10)
10	181064	Tinnerman Nut
11	182446	Module Assembly (includes 12)
12	182447	Module Screw
13	182525	Throttle Lever
14	182449	Screw
15	182450	Air Cleaner Base
16	182451	Washer
17	182452	Carburetor Mount Screw
18	182526	Carburetor
19	182454	Carburetor Gasket
20	182455	Spacer Mounting Screw
21	182456	Carburetor Spacer
22	182457	Cylinder Baffle Assembly (includes 41 & 42)
23	182458	Piston and Rod Assembly
24	182459	Cylinder Gasket
25	182460	Cylinder Assembly (includes 24 & 26)
26	182461	Cylinder Bolt
27	610311	Spark Plug
28	182462	Flywheel
29	182463	Muffler Assembly (includes 30-34 & 37)
30	182464	Muffler Mounting Screw
31	182493	Spark Arrestor Screen
32	182523	Spark Arrestor Gasket
33	182494	Spark Arrestor Cover

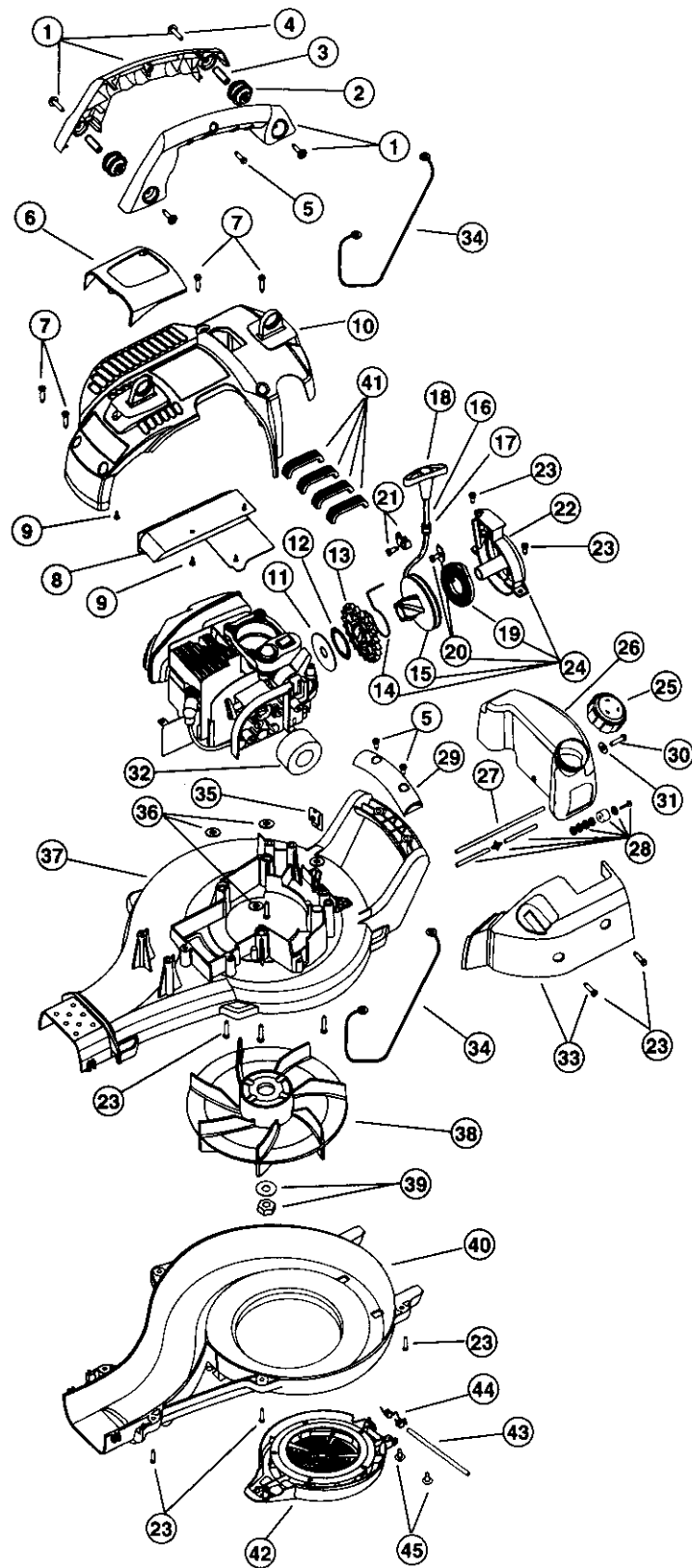
**Item Part No. Description**

34	182519	Spark Arrestor Cover Screw
35	182515	Air Filter Heat Shield
36	182516	Carburetor Heat Shield
37	182188	Screw
38	182491	Clip
39	181930	Screw
40	182518	Heat Shield Gasket
41	182564	Exhaust Gasket
42	182563	Intake Gasket
43	182565	Muffler Baffle (includes 44)
44	182566	Self Tapping Screw
*	182567	Kit, Foam Seal
*	182499	Engine Gasket Kit
*	182520	O.E.M. Carburetor Repair Kit (Walbro)
*	182521	Gasket Diaphragm Repair Kit (Walbro)
*	180530	Piston Ring
*	182498	Short Block Assembly (includes 8-10 & 23-27)
*	610309	Oil Seal
*		Not Shown



# PARTS LIST – Model 316.797210 Housing and Accessories

Item	Part No.	Description
1	182465	Handle Grip Assembly (includes 2-5)
2	182466	Vibration Dampener
3	182467	Dampener Spacer
4	182468	Handle Screw
5	182469	Screw
6	182527	Diverter (includes 9)
7	182471	Engine Cover Screw
8	182473	Upper Baffle
9	182474	Baffle Screw
10	182528	Engine Cover Assembly (includes 7-9)
11	182482	Washer
12	182483	Gear Return Spring
13	182484	Pulley Gear
14	182485	Friction Spring
15	182486	Starter Pulley
16	613103	Rope
17	611061	Rope Guide
18	181079	Pull Handle
19	613102	Rewind Spring
20	182488	Pulley Retainer Assembly
21	182487	Rope Guide Retainer Assembly
22	182489	Recoil Housing
23	147049	Screw
24	182490	Recoil Starter Assembly (includes 11-23)
25	182529	Fuel Cap
26	182530	Fuel Tank Assembly (includes 25-28 & 30-31)
27	182495	Fuel Line
28	182496	Fuel Line Assembly
29	182497	Assist Handle Cover
30	181930	Fuel Tank Screw
31	182568	Washer
32	182500	Air Filter
33	182531	Air Filter Cover (includes 23)
34	182502	Ground Wire
35	181064	Tinnerman Nut
36	182504	Washer
37	182503	Upper Housing Assembly (includes 35 & 36)
38	182506	Impeller
39	182507	Washer and Lock Nut Assembly
40	182508	Lower Housing with Insert
41	182509	Fuel Tank Pad
42	182510	Vacuum Door Assembly
43	182512	Hinge Shaft
44	182513	Spring
45	182449	Screw
*	182478	Blower Outlet Tube
*	182511	Ring Reducer Gasket (on vacuum door)
*	182532	Vacuum Bag Assembly (includes vacuum bag, cable tie and vacuum bag adapter)
*	182533	Vacuum Bag
*	612930	Cable Tie
*	182477	Vacuum Bag Adapter
*	182480	Vacuum Tube Assembly (includes Upper Vacuum Tube, Lower Vacuum Tube & Knob Assembly)
*	182479	Upper Vacuum Tube
*	182517	Lower Vacuum Tube
*	182481	Knob Assembly
*	182522	Operator's Manual
*	71-36549	Craftsman 2-Cycle Oil



\* Not Shown



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**Para pedir servicio de reparación a domicilio – 1-800-676-5811**

In Canada for all your service and parts needs call – **1-800-665-4455**  
Au Canada pour tout le service ou les pièces

**For the repair or replacement parts you need:**

Call 7 am – 7 pm, 7 days a week

**1-800-366-PART (1-800-366-7278)**

**Para ordenar piezas con entrega a domicilio – 1-800-659-7084**

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or to inquire about an existing Agreement:**

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**1-800-827-6655**



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