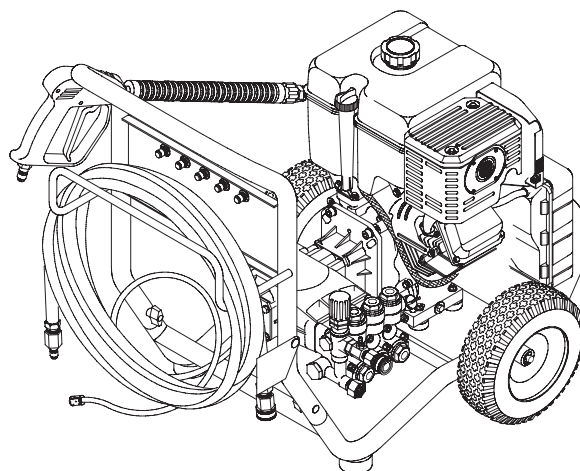
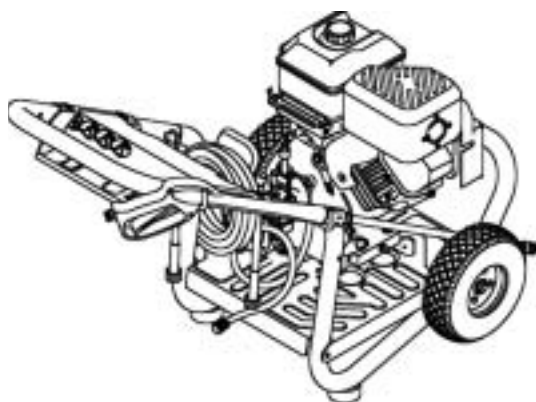
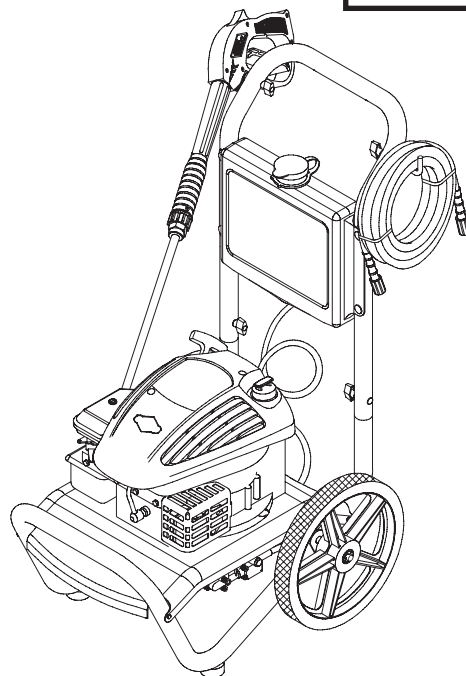
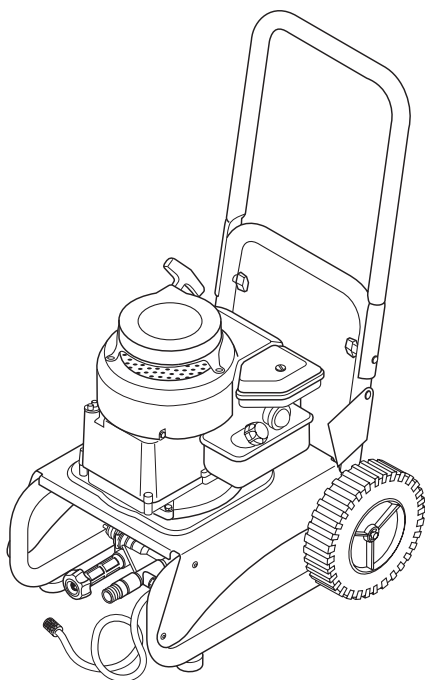


FACTORY RECONDITIONED PRESSURE WASHER

Operating and Maintenance Manual

Models may vary in function and
appearance from units shown



This pressure washer is rated in accordance to the Pressure Washer
Manufacture Association (PWMA) standard PW101 (Testing and Rating
Performance of Pressure Washers).

BRIGGS & STRATTON POWER PRODUCTS GROUP, LLC
JEFFERSON, WISCONSIN, U.S.A.

Manual No. 193207 Revision C (04/25/2008)

Thank you for purchasing this factory reconditioned Briggs & Stratton pressure washer. We are pleased that you've placed your confidence in the Briggs & Stratton brand. When operated and maintained according to the instructions in this manual, your Briggs & Stratton pressure washer will provide years of dependable service.

This manual contains safety information to make you aware of the hazards and risks associated with pressure washers and how to avoid them. Because Briggs & Stratton does not necessarily know all the applications this pressure washer could be used for, it is important that you read and understand these instructions thoroughly before attempting to start or operate this equipment. **Save these instructions for future reference.**

This pressure washer requires final assembly before use. Refer to the *Assembly* section of this manual for instructions on final assembly procedures. Follow the instructions completely.

Where to Find Us

You never have to look far to find Briggs & Stratton support and service for your pressure washer. Consult your Yellow Pages. There are over 30,000 Briggs & Stratton authorized service dealers worldwide who provide quality service. You can also contact Briggs & Stratton Customer Service by phone at **(800) 743-4115**, or on the Internet at BRIGGSandSTRATTON.COM.

Pressure Washer

Model Number

--	--	--	--	--	--

Revision

--	--

Serial Number

--	--	--	--	--	--	--	--	--	--

Engine

Model Number

--	--	--	--	--	--

Type Number

--	--	--	--	--	--	--	--

Code Number

--	--	--	--	--	--	--	--	--	--	--	--	--

Date Purchased

--	--	--	--	--	--

Briggs & Stratton Power Products Group, LLC
900 North Parkway
Jefferson, WI 53549

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Equipment Description



Read this manual carefully and become familiar with your pressure washer. Know its applications, its limitations and any hazards involved.

Every effort has been made to ensure that information in this manual is accurate and current. However, we reserve the right to change, alter or otherwise improve the product and this document at any time without prior notice.

The Emission Control System for this pressure washer is warranted for standards set by the Environmental Protection Agency and the California Air Resources Board.

Statement of Use

This pressure washer is designed to provide pressurized water or detergent spray for residential and light industrial detergent application and washing needs.

NOTICE

The equipment described herein is factory reconditioned to meet all original performance specifications. However:

- Your pressure washer may not include all accessories shown within this manual.
- Illustrations shown within this manual are typical and may not reflect your actual unit.

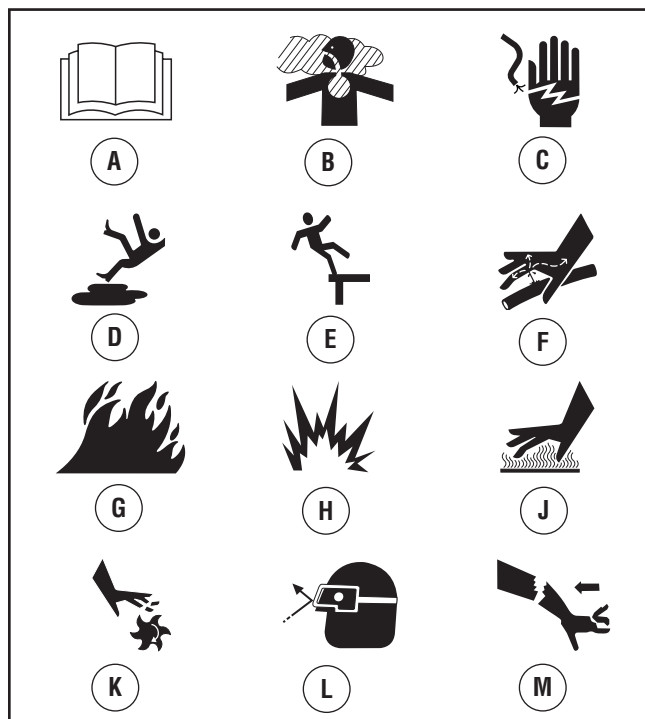
Safety Rules



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The safety alert symbol (▲) is used with a signal word (DANGER, CAUTION, WARNING), a pictorial and/or a safety message to alert you to hazards. **DANGER** indicates a hazard which, if not avoided, *will* result in death or serious injury. **WARNING** indicates a hazard which, if not avoided, *could* result in death or serious injury. **CAUTION** indicates a hazard which, if not avoided, *might* result in minor or moderate injury. **NOTICE** indicates a situation that could result in equipment damage. Follow safety messages to avoid or reduce the risk of injury or death.


Safety Symbols and Meanings







A - Read Manual
B - Toxic Fumes
C - Electric Shock
D - Slippery Surface
E - Fall
F - Fluid Injection




G - Fire
H - Explosion
J - Hot Surface
K - Moving Parts
L - Flying Objects
M - Kickback



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

 WARNING	
Certain components in this product and related accessories contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.	

 WARNING	
	Running engine gives off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide can cause headache, fatigue, dizziness, vomiting, confusion, seizures, nausea, fainting or death.
	Some chemicals or detergents may be harmful if inhaled or ingested, causing severe nausea, fainting, or poisoning.
<ul style="list-style-type: none"> • Operate pressure washer ONLY outdoors. • Keep exhaust gas from entering a confined area through windows, doors, ventilation intakes, or other openings. • DO NOT start or run engine indoors or in an enclosed area, even if windows and doors are open. • Use a respirator or mask whenever there is a chance that vapors may be inhaled. • Read all instructions with mask so you are certain the mask will provide the necessary protection against inhaling harmful vapors. 	

 WARNING	
	Use of pressure washer can create puddles and slippery surfaces.
	Kickback from spray gun can cause you to fall.
<ul style="list-style-type: none"> • Operate pressure washer from a stable surface. • The cleaning area should have adequate slopes and drainage to reduce the possibility of a fall due to slippery surfaces. • Be extremely careful if you must use the pressure washer from a ladder, scaffolding, or any other similar location. • Firmly grasp spray gun with both hands when using high pressure spray to avoid injury when spray gun kicks back. 	

 WARNING	
	Fuel and its vapors are extremely flammable and explosive.
	Fire or explosion can cause severe burns or death.
WHEN ADDING OR DRAINING FUEL	
<ul style="list-style-type: none"> • Turn pressure washer OFF and let it cool at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank. • Fill or drain fuel tank outdoors. • DO NOT overfill tank. Allow space for fuel expansion. • If fuel spills, wait until it evaporates before starting engine. • Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources. • DO NOT light a cigarette or smoke. 	
WHEN STARTING EQUIPMENT	
<ul style="list-style-type: none"> • Ensure spark plug, muffler, fuel cap, and air cleaner are in place. • DO NOT crank engine with spark plug removed. 	
WHEN OPERATING EQUIPMENT	
<ul style="list-style-type: none"> • DO NOT tip engine or equipment at angle which causes fuel to spill. • DO NOT spray flammable liquids. 	
WHEN TRANSPORTING OR REPAIRING EQUIPMENT	
<ul style="list-style-type: none"> • Transport/repair with fuel tank EMPTY or with fuel shutoff valve OFF. • Disconnect spark plug wire. 	
WHEN STORING FUEL OR EQUIPMENT WITH FUEL IN TANK	
<ul style="list-style-type: none"> • Store away from furnaces, stoves, water heaters, clothes dryers, or other appliances that have pilot light or other ignition source because they can ignite fuel vapors. 	

 WARNING	
	Risk of electrocution.
Contact with power source can cause electric shock or burn.	
<ul style="list-style-type: none"> • NEVER spray near power source. 	

⚠ WARNING



Starter cord kickback (rapid retraction) can result in bodily injury. Kickback will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises, or sprains could result.

- NEVER pull starter cord without first relieving spray gun pressure.
- When starting engine, pull cord slowly until resistance is felt and then pull rapidly to avoid kickback.
- After each starting attempt, where engine fails to run, always point spray gun in safe direction and squeeze spray gun trigger to release high pressure. Engage spray gun trigger lock.
- Firmly grasp spray gun with both hands when using high pressure spray to avoid injury when spray gun kicks back.

⚠ WARNING



Contact with muffler area can result in serious burns.



Exhaust heat/gases can ignite combustibles, structures or damage fuel tank causing a fire.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.
- Keep at least 5 feet (1.5 m) of clearance on all sides of pressure washer including overhead.
- Code of Federal Regulation (CFR) Title 36 Parks, Forests, and Public Property require equipment powered by an internal combustion engine to have a spark arrester, maintained in effective working order, complying to USDA Forest service standard 5100-1C or later revision. In the State of California a spark arrester is required under section 4442 of the California Public resources code. Other states may have similar laws.

⚠ WARNING



The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.

Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.

- DO NOT allow CHILDREN to operate pressure washer.
- NEVER repair high pressure hose. Replace it.
- NEVER repair leaking connections with sealant of any kind. Replace o-ring or seal.
- NEVER connect high pressure hose to nozzle extension.
- Keep high pressure hose connected to pump and spray gun while system is pressurized.
- ALWAYS point spray gun in safe direction and squeeze spray gun trigger, to release high pressure, every time you stop engine. Engage trigger lock when not in use.
- NEVER aim spray gun at people, animals, or plants.
- DO NOT secure spray gun in open position.
- DO NOT leave spray gun unattended while machine is running.
- NEVER use a spray gun which does not have a trigger lock or trigger guard in place and in working order.
- Always be certain spray gun, nozzles and accessories are correctly attached.

⚠ WARNING



Unintentional sparking can result in fire or electric shock.

WHEN ADJUSTING OR MAKING REPAIRS TO YOUR PRESSURE WASHER

- Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.

WHEN TESTING FOR ENGINE SPARK

- Use approved spark plug tester.
- DO NOT check for spark with spark plug removed.

**WARNING**

Starter and other rotating parts can entangle hands, hair, clothing, or accessories.

- NEVER operate pressure washer without protective housing or covers.
- DO NOT wear loose clothing, jewelry or anything that may be caught in the starter or other rotating parts.
- Tie up long hair and remove jewelry.

**WARNING**

Risk of eye injury.

Spray can splash back or propel objects.

- Always wear safety goggles when using this equipment or in vicinity of where equipment is in use.
- Before starting the pressure washer, be sure you are wearing adequate safety goggles.
- NEVER substitute safety glasses for safety goggles.

NOTICE

High pressure spray may damage fragile items including glass.

- DO NOT point spray gun at glass when using red 0° nozzle or Turbo nozzle.
- NEVER aim spray gun at plants.

NOTICE

Improper treatment of pressure washer can damage it and shorten its life.

- If you have questions about intended use, ask dealer or contact qualified service center.
- NEVER operate units with broken or missing parts, or without protective housing or covers.
- DO NOT by-pass any safety device on this machine.
- DO NOT tamper with governed speed.
- DO NOT operate pressure washer above rated pressure.
- DO NOT modify pressure washer in any way.
- Before starting pressure washer in cold weather, check all parts of the equipment to be sure ice has not formed there.
- NEVER move machine by pulling on hoses. Use handle provided on unit.
- Check fuel system for leaks or signs of deterioration, such as chafed or spongy hose, loose or missing clamps, or damaged tank or cap. Correct all defects before operating pressure washer.
- This equipment is designed to be used with Briggs & Stratton Power Products authorized parts **ONLY**. If equipment is used with parts that DO NOT comply with minimum specifications, user assumes all risks and liabilities.

Assembly

IMPORTANT: Read entire operator's manual before you attempt to assemble or operate your pressure washer.

IMPORTANT: Contact your local service center or look on the engine manufacturer's website to obtain an engine operator's manual. You will need the engine manual to find engine operation, maintenance and emissions warranty policy.

NOTE: Your pressure washer may not include all accessories shown herein.

Unpack the Pressure Washer

1. Remove everything from carton except pressure washer.
2. Open carton completely by cutting each corner from top to bottom.
3. Remove pressure washer from carton.

Attach Handle to Unit

Your pressure washer will be equipped with one of the following handles. Please see the handle attachment section that applies to your pressure washer.

To attach handle with accessory tray or cleaning tank:

1. Place handle (A) onto handle supports (B) connected to main unit. Make sure holes (C) in handle align with holes (C) on handle supports (see Figure 1).

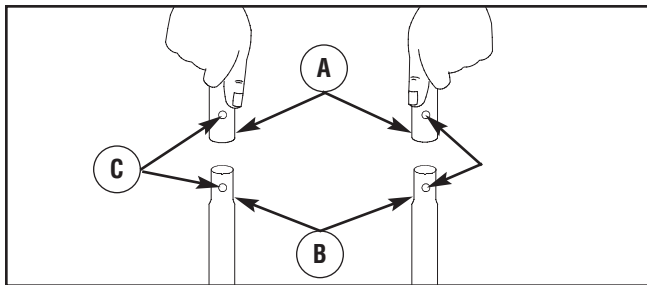


Figure 1 — Attach Handle to Base

NOTE: It may be necessary to move handle supports from side to side in order to align handle so it will slide over handle supports.

2. Insert carriage bolts (A) through holes from back of unit and attach a plastic knob (B) from front of unit. Tighten by hand (see Figure 2).

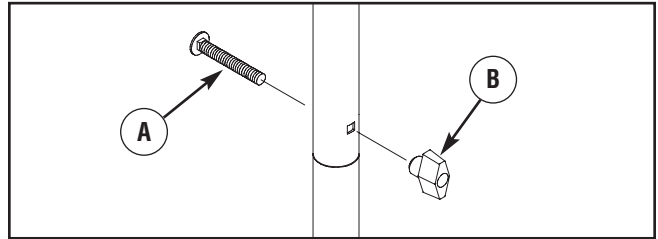


Figure 2 — Secure Handle

3. Place accessory tray or cleaning tank over holes on handle (viewing from front of unit). Push the tree clips into the holes until they sit flat against the accessory tray or cleaning tank (see Figure 3).

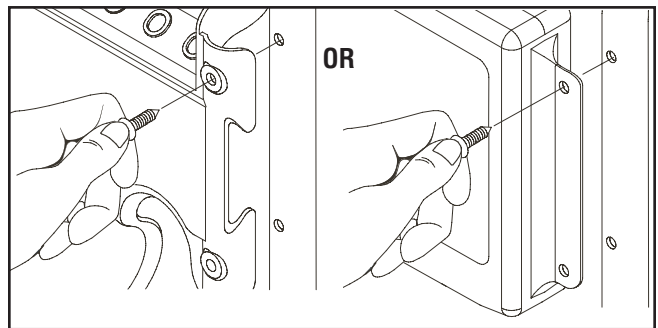


Figure 3 — Attach Accessory Tray or Cleaning Tank to Handle

To attach handle supplied with “L” hooks or Wireform:

Note: Your unit may be supplied with “L” hooks or wireform spraygun holders.

1. Follow steps 1 and 2 in the section *To attach handle with accessory tray or cleaning tank*.
2. Insert one “L” hook through hole just above billboard or cleaning tank on left side of handle (viewing from front of unit) and attach plastic knob. Tighten knob by hand (see Figure 4).

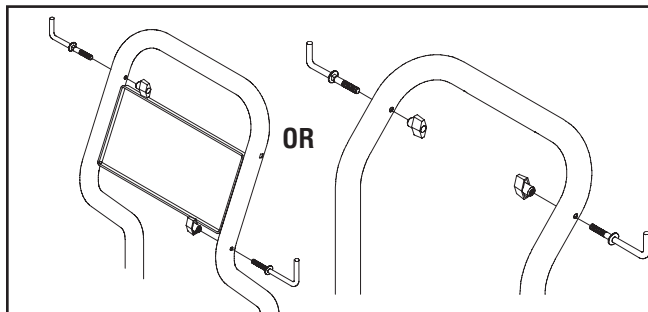


Figure 4 — Attach “L” Hooks to Handle

- 3A. Insert other “L” hook through hole just below billboard on right side of handle (viewing from front of unit) and attach plastic knob. Tighten knob by hand (see Figure 4).
- 3B. Insert other “L” hook through hole just above billboard or cleaning tank on right side of handle (viewing from front of unit). Hold hook in place and attach plastic knob from inside of unit (see Figure 4). Tighten by hand.
4. Insert spray gun holder wireform (A) through hole on left side of handle (viewing from front of unit). Hold wireform in place and attach a plastic knob (B) from inside of unit. Tighten by hand (see Figure 5).

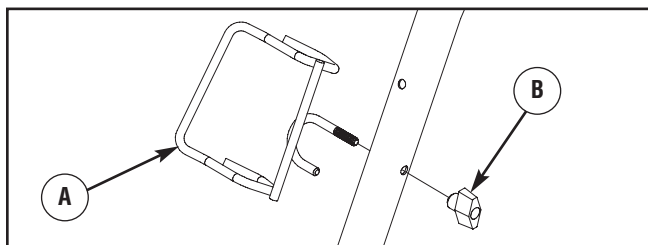


Figure 5 — Attach Wireform to Handle

To attach a slip-over handle:

A slip-over handle has a built-in nozzle storage tray as part of the handle.

1. Follow steps 1 and 2 in the section *To attach handle with accessory tray or cleaning tank*.
2. Insert multi-colored spray tips in spaces provided in handle.

Attach Detergent Siphon Hose to Pump

If equipped with a cleaning tank, attach detergent siphon hose to barbed hose fitting on pump (see Figure 6).

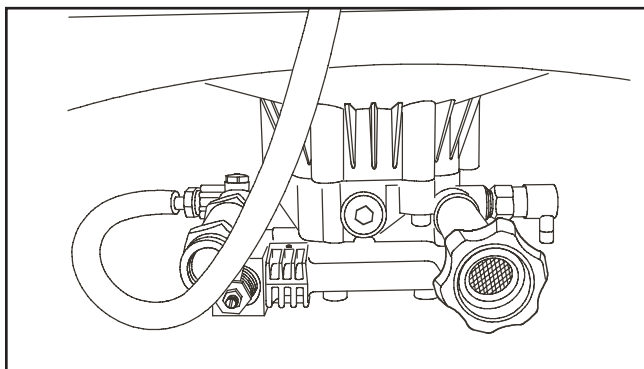


Figure 6— Attach Detergent Siphon Hose to Pump

Add Engine Oil

1. Place generator on a flat, level surface.
2. Clean area around oil fill and remove oil fill cap.

Refer to *Oil Recommendations* in *Maintenance* for oil specifications.

NOTICE

Any attempt to crank or start the engine before it has been properly filled with the recommended oil will result in equipment failure.

- Damage to equipment resulting from failure to follow this instruction will void warranty.

3. Using oil funnel (optional), slowly pour oil into oil fill opening. On engines without a dipstick, fill to the top of the oil fill opening, checking oil frequently. DO NOT overfill. Refer to *Adding Oil* in *Maintenance* for detailed instructions.
4. Replace oil fill cap and fully tighten.

Add Fuel

Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline.
- A minimum of 87 octane/87 AKI (91 RON). High altitude use, see *High Altitude*.
- Gasoline with up to 10% ethanol (gasohol) or up to 15% MTBE (methyl tertiary butyl ether) is acceptable.

NOTICE

Avoid pressure washer damage.

Failure to follow Operator's Manual for fuel recommendations voids warranty.

- DO NOT use unapproved gasoline such as E22 or E85.
- DO NOT mix oil in gasoline.
- DO NOT modify engine to run on alternate fuels.

WARNING



Fuel and its vapors are extremely flammable and explosive.

Fire or explosion can cause severe burns or death

WHEN ADDING FUEL

- Turn engine OFF and let it cool at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Fill fuel tank outdoors.
- DO NOT overfill tank. Allow space for fuel expansion.
- If fuel spills, wait until it evaporates before starting engine.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- DO NOT light a cigarette or smoke.

To protect the fuel system from gum formation, mix in a fuel stabilizer when adding fuel. See *Long Term Storage* in *Maintenance*. All fuel is not the same. If you experience starting or performance problems after using fuel, switch to a different fuel provider or change brands. This engine is certified to operate on gasoline. The emission control system for this engine is EM (Engine Modifications).

1. Clean area around fuel fill cap.
2. Remove cap.
3. Refer to the two illustrations in Figure 10. Slowly add regular unleaded fuel (A) to fuel tank (B). Be careful not to overfill. Allow about 1.5 inch of tank space (C) for fuel expansion.

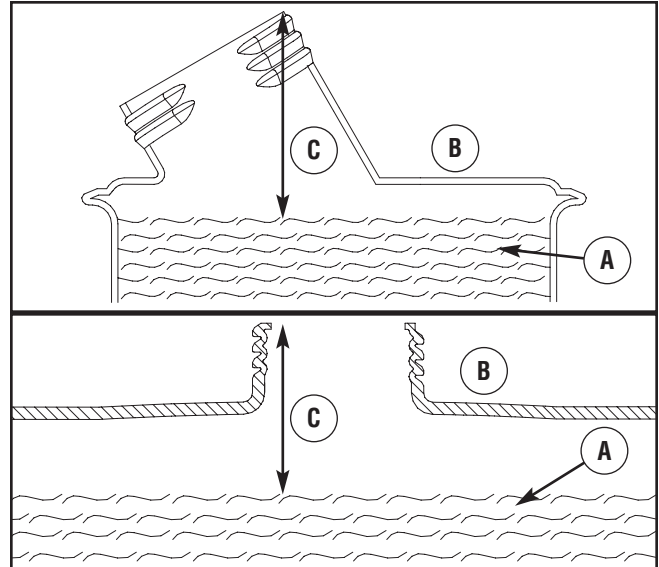


Figure 10 — Filling the Fuel Tank (2 styles shown)

4. Install fuel cap and let any spilled fuel evaporate before starting engine.

High-Altitude

At altitudes over 5,000 feet (1524 meters), a minimum 85 octane / 85 AKI (89 RON) gasoline is acceptable. To remain emissions compliant, high altitude adjustment is required. Operation without this adjustment will cause decreased performance, increased fuel consumption, and increased emissions. See an authorized dealer for high altitude adjustment information. Operation of the engine at altitudes below 2,500 feet (762 meters) with the high altitude kit is not recommended.

Connect Hose and Water Supply to Pump

NOTICE

DO NOT run the pump without the water supply connected and turned on.

- Damage to equipment resulting from failure to follow this instruction will void warranty.

- 1A. Uncoil high pressure hose and attach one end of hose to base of spray gun (see Figure 11). Tighten by hand.
- 1B. If unit is supplied with quick connects on high pressure hose and spray gun, attach quick connect end of hose to base of spray gun (see Figure 11). Pull down on collar of quick connect, slide onto spray gun and let go of collar. Tug on hose to be sure of tight connection.

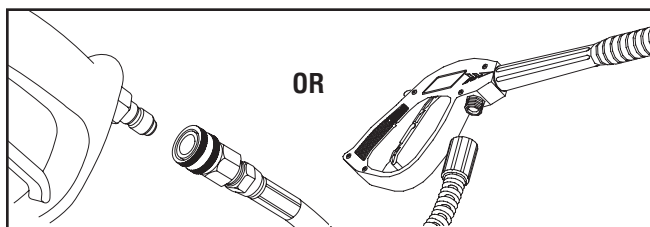


Figure 11 — Connect High Pressure Hose to Spray Gun

- 2A. Attach other end of the high pressure hose to high pressure outlet (A) on pump (Figure 12). Tighten by hand.

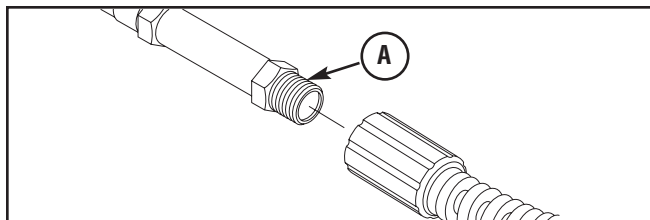


Figure 12— Connect High Pressure Hose to Pump

- 2B. If unit is supplied with quick connects on high pressure hose and pump, attach other end of high pressure hose to high pressure outlet on pump. Pull down on collar of quick connect, slide onto pump, and let go of collar. Pull on hose to be sure of a tight connection.
3. Before connecting garden hose to water inlet, inspect inlet screen (A) (Figure 13). Clean screen if it contains debris, replace if damaged. DO NOT RUN PRESSURE WASHER IF SCREEN IS DAMAGED OR MISSING.

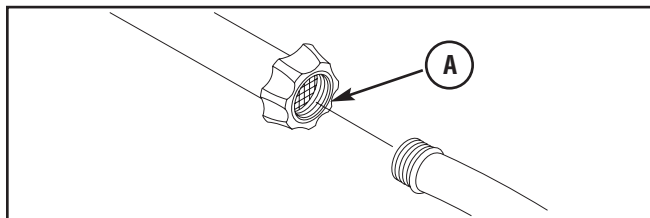


Figure 13— Connect the Garden Hose to Water Inlet

4. Run water through your garden hose for 30 seconds to flush out any debris.

IMPORTANT: DO NOT siphon standing water for the water supply. Use ONLY cold water, less than 100°F (37.7°C).

5. Connect garden hose (not to exceed 50 feet (15M) in length) to water inlet. Tighten by hand.

NOTICE

Using a One-Way Valve (vacuum breaker or check valve) at pump inlet can cause pump or inlet damage.

- There MUST be at least ten feet of unrestricted garden hose between the pressure washer inlet and any device, such as a vacuum breaker or check valve.
- Damage to equipment resulting from failure to follow this instruction will void warranty.

6. Turn ON water, point gun in a safe direction and squeeze trigger to purge pump system of air and impurities.

WARNING



Risk of eye injury.

Spray can splash back or propel objects.

- Always wear safety goggles when using this equipment or in vicinity of where equipment is in use.
- Before starting the pressure washer, be sure you are wearing adequate safety goggles.
- NEVER substitute safety glasses for safety goggles.

Checklist Before Starting Engine

Review the unit's assembly to ensure you have performed all of the following.

1. Make sure handle is in place and secure.
2. Check that oil has been added to proper level in the engine crankcase.
3. Add proper fuel to fuel tank.
4. Check for properly tightened hose connections.
5. Check to make sure there are no kinks, cuts, or damage to high pressure hose.
6. Provide a proper water supply at an adequate flow.
7. Be sure to read the *Operator Safety* and *Operation* section before using pressure washer.

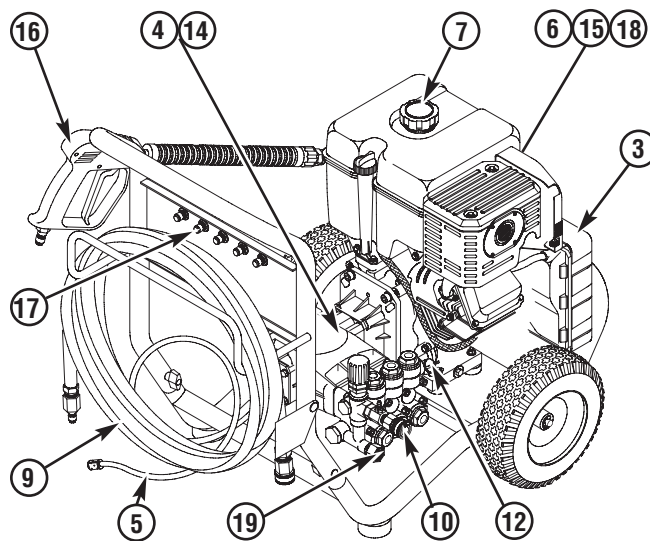
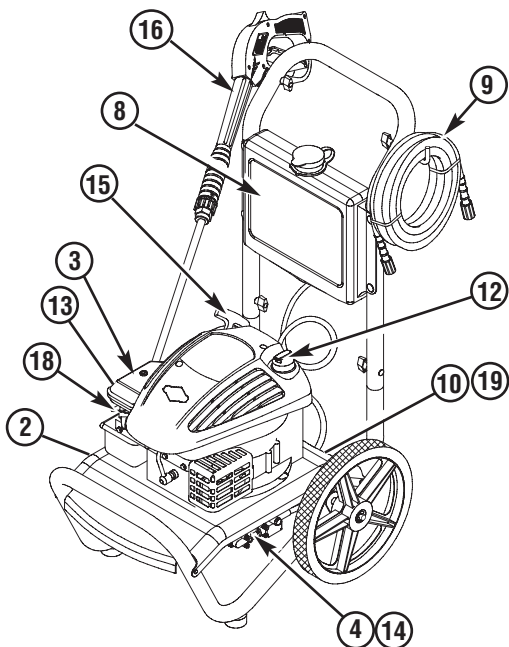
Features and Controls



Read this Operator's manual and safety rules before operating your pressure washer.

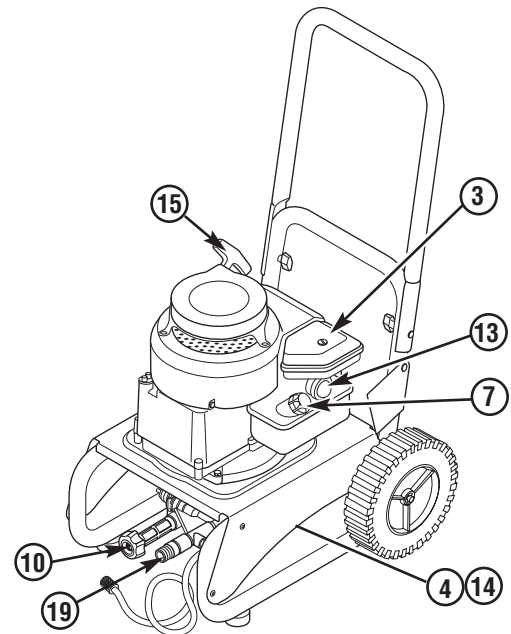
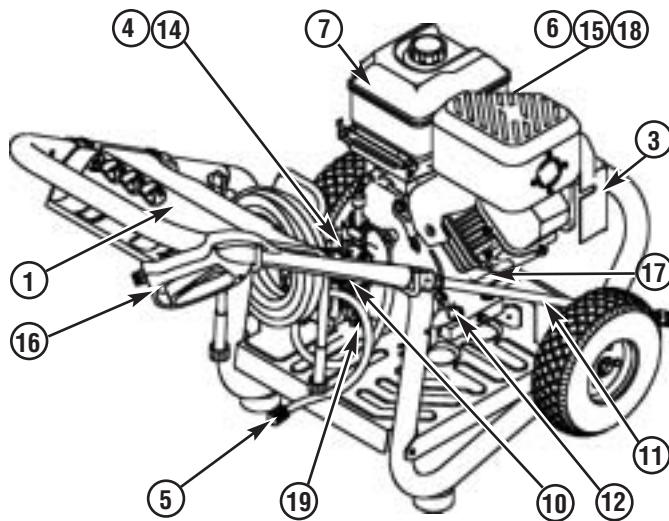
Your pressure washer may resemble one of the units shown below and on the next page. Compare the illustrations with your pressure washer to familiarize yourself with the locations of various controls and adjustments. Save this manual for further reference.

Controls



1. **Accessory Tray** — Provides convenient storage for standard and optional accessories, such as brushes, turbo wands, etc.
2. **Adjustable Nozzle** — (Not shown on some units). Always attached to nozzle extension. Adjustable nozzle allows you to adjust spray pressure and spray pattern.
3. **Air Filter** — Protects engine by filtering dust and debris out of intake air.
4. **Automatic Cool Down System** — Cycles water through pump when water reaches 125°-155°F (51.6°-68.3°C). Warm water will discharge from pump onto ground. This system prevents internal pump damage.
5. **Detergent Siphoning Tube/Filter** — Use to siphon detergents designed specifically for pressure washers into the low pressure stream.
6. **Choke Lever** — Prepares a cold engine for starting.
7. **Fuel Tank** — Fill tank with regular unleaded fuel. Always leave room for fuel expansion.
8. **Cleaning Tank** — Use to hold pressure washer detergent.
9. **High Pressure Hose** — Connect one end to water pump and the other end to spray gun.

Features and Controls continued




Controls

- 10. High Pressure Outlet** — Connection for high pressure hose.
- 11. Nozzle Extension with Quick Connect** — Allows you to switch between different spray tips.
- 12. Oil Fill Cap/Dipstick** — Check and add engine oil here.
- 13. Primer Bulb** — Prepares a cold engine for starting.
- 14. Pump** — Develops high water pressure.
- 15. Recoil Starter** — Used for starting the engine manually.


- 16. Spray Gun** — Controls the application of water onto cleaning surface with trigger device. Includes safety latch.
- 17. Spray Tips** — Detergent, 0°, 15°, 25°, and 40°: for various high pressure cleaning applications.
- 18. Throttle Lever** — Sets engine in starting mode for recoil starter and stops a running engine.
- 19. Water Inlet** — Connect garden hose from water supply here.

Operation

Pressure Washer Location

⚠ WARNING	
	Exhaust heat/gases can ignite combustibles, structures or damage fuel tank causing a fire.
<ul style="list-style-type: none">• Keep at least 5 ft. (152 cm) clearance on all sides of pressure washer including overhead.	

Place pressure washer outdoors in an area that will not accumulate deadly exhaust gas. DO NOT place pressure washer where exhaust gas (A) (Figure 14) could accumulate and enter inside or be drawn into a potentially occupied building. Ensure exhaust gas is kept away from any windows, doors, ventilation intakes, or other openings that can allow exhaust gas to collect in a confined area. Prevailing winds and air currents should be taken into consideration when positioning pressure washer.

⚠ WARNING	
	Running engine gives off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide can cause headache, fatigue, dizziness, vomiting, confusion, seizures, nausea, fainting or death.
<ul style="list-style-type: none">• Operate pressure washer ONLY outdoors.• Keep exhaust gas from entering a confined area through windows, doors, ventilation intakes, or other openings.• DO NOT start or run engine indoors or in an enclosed area, even if windows and doors are open.	

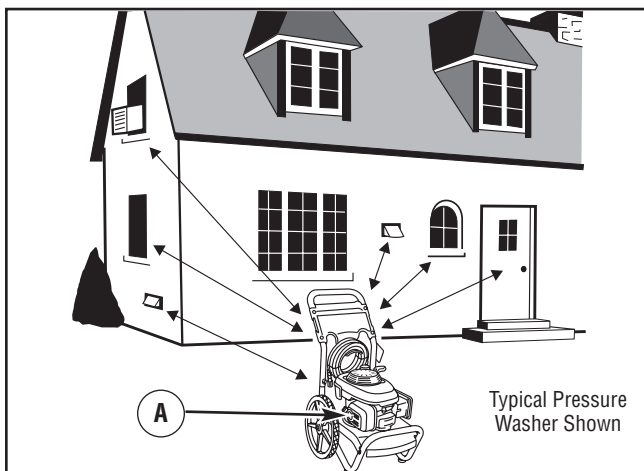


Figure 14 — Pressure Washer Clearance

How to Start Pressure Washer

To start your pressure washer for the first time, follow these instructions step-by-step. This starting information also applies if you have let the pressure washer sit idle for at least a day.

1. Make sure unit is in a level position.
2. Place pressure washer outside near a water source capable of supplying water at a flow rate greater than 1.0 gallon (3.8L) per minute **more** than the pressure washer is rated for and no less than 20 PSI (1.4 bars) at pressure washer end of garden hose.
3. Check that the high pressure hose is tightly connected to spray gun and to pump. See *Connect Hose and Water Supply to Pump* for illustrations.
4. Connect garden hose to water inlet on pressure washer pump.
5. Turn ON water, point gun in a safe direction and squeeze trigger to purge pump system of air and impurities.

NOTICE
DO NOT run the pump without the water supply connected and turned on.
<ul style="list-style-type: none">• Damage to equipment resulting from failure to follow this instruction will void warranty.

6. If equipped, place quick connect spray tips in holder attached to nozzle extension (see Figure 15).

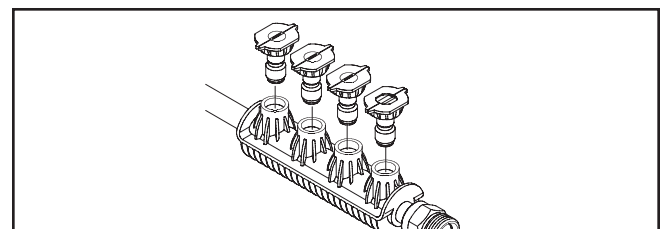


Figure 15 — Install Spray Tips in Holder

7. Attach nozzle extension to spray gun (see Figure 16). Tighten by hand.

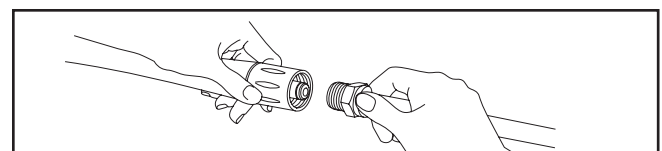


Figure 16 — Connect Nozzle Extension to Spray Gun

8. If equipped, choose desired spray tip and insert into nozzle extension.

- Engage trigger lock (A) on spray gun trigger (see Figure 17).

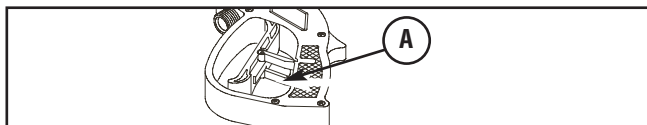




Figure 17 — Spray Gun with Trigger Lock Engaged

- If your engine has a fuel valve, turn it to the on position.

 WARNING	
	<p>Risk of eye injury.</p> <p>Spray can splash back or propel objects.</p>
<ul style="list-style-type: none"> Always wear safety goggles when using this equipment or in vicinity of where equipment is in use. Before starting the pressure washer, be sure you are wearing adequate safety goggles. NEVER substitute safety glasses for safety goggles. 	

- If equipped, move the throttle lever to “Fast” position (A), shown as a rabbit 🐰 (Figure 18).

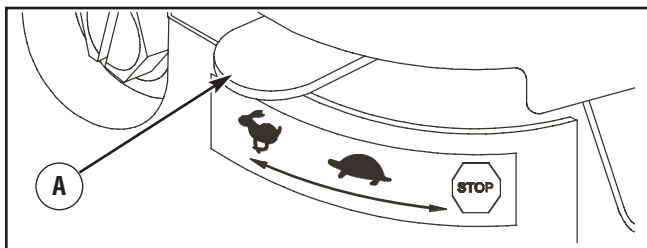


Figure 18 — Typical Engine Throttle Control

For Engines with a Choke

- Move choke lever (A) to “Choke” | \ | position (Figure 19).

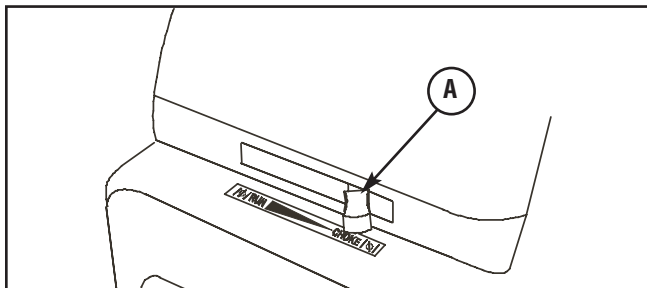


Figure 19 — Typical Engine Choke Control

NOTE: For a warm engine, be sure the choke lever is in the “Run” | ↑ | position.

- When starting engine, position yourself as shown in figures 21 and 22 on the following page, and grasp starter grip handle and pull slowly until you feel some resistance. Then pull rapidly to start engine.

- Return starter grip handle slowly. DO NOT let rope “snap back” against starter.
- When engine starts, slowly move choke lever to “Run” | ↑ | position, as engine warms. If engine falters, move choke lever to “Choke” | \ | position, then to “Run” | ↑ | position.
- After each starting attempt, where engine fails to run, always point gun in safe direction and squeeze spray gun trigger to release high pressure. Move choke lever to “Run” | ↑ | position, and repeat steps 2 through 4.
- If engine fails to start after six pulls, move choke lever to “Run” | ↑ | position, and repeat steps 2 through 4.

NOTE: Always keep the throttle lever in the “Fast” 🐰 position when operating the pressure washer.

For Engines with a Primer Bulb

To start an engine for the very first time:

- Push primer bulb (A) firmly 5 times, waiting 2 seconds between each push (Figure 20).

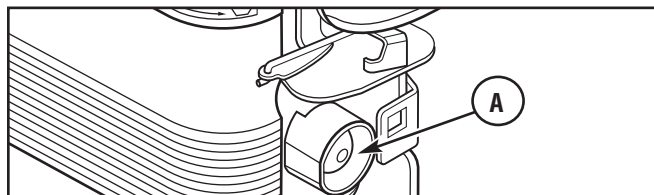


Figure 20 — Engine Primer Bulb

To start an engine thereafter:

- Push primer bulb (A) firmly 3 times, waiting 2 seconds between each push. DO NOT press primer bulb if the engine is warm.
- When starting engine, position yourself as shown in figures 21 and 22, and grasp starter grip handle and pull slowly until you feel some resistance. Then pull rapidly to start engine.

NOTE: Always keep the throttle lever in the “Fast” position when operating the pressure washer.



Figure 21- Typical Recommended Starting Position for Horizontal Engine Powered Pressure Washers



Figure 22 - Typical Recommended Starting Position for Vertical Engine Powered Pressure Washers

⚠ WARNING



Starter cord kickback (rapid retraction) can result in bodily injury. Kickback will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises, or sprains could result.

- NEVER pull starter cord without first relieving spray gun pressure.
- When starting engine, pull cord slowly until resistance is felt and then pull rapidly to avoid kickback.
- After each starting attempt, where engine fails to run, always point spray gun in safe direction and squeeze spray gun trigger to release high pressure. Engage spray gun trigger lock.
- Firmly grasp spray gun with both hands when using high pressure spray to avoid injury when spray gun kicks back.

⚠ WARNING



Contact with muffler area can result in serious burns.



Exhaust heat/gases can ignite combustibles, structures or damage fuel tank causing a fire.

- DO NOT touch hot parts and AVOID hot exhaust gases.
- Allow equipment to cool before touching.
- Keep at least 5 feet (1.5 m) of clearance on all sides of pressure washer including overhead.
- Code of Federal Regulation (CFR) Title 36 Parks, Forests, and Public Property require equipment powered by an internal combustion engine to have a spark arrester, maintained in effective working order, complying to USDA Forest service standard 5100-1C or later revision. In the State of California a spark arrester is required under section 4442 of the California Public resources code. Other states may have similar laws.

⚠ WARNING



The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.



Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.

- DO NOT allow CHILDREN to operate pressure washer.
- Keep high pressure hose connected to pump and spray gun while system is pressurized.
- NEVER aim spray gun at people, animals, or plants.
- DO NOT secure spray gun in open position.
- DO NOT leave spray gun unattended while machine is running.
- NEVER use a spray gun which does not have a trigger lock or trigger guard in place and in working order.
- Always be certain spray gun, nozzles and accessories are correctly attached.



How to Stop Your Pressure Washer

1. Release spray gun trigger and let engine idle for two minutes.
2. If equipped, move throttle to slow position, then to stop position.
3. ALWAYS point gun in a safe direction and squeeze spray gun trigger to release retained high water pressure.

IMPORTANT: Spray gun traps high water pressure, even when engine is stopped and water is disconnected.

 WARNING	
	The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.
	Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.
<ul style="list-style-type: none"> • Keep high pressure hose connected to pump and spray gun while system is pressurized. • ALWAYS point spray gun in safe direction and squeeze spray gun trigger, to release high pressure, every time you stop engine. Engage trigger lock when not in use. 	

4. Engage trigger lock on spray gun when not in use.

 WARNING	
	The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.
	<ul style="list-style-type: none"> • NEVER adjust spray pattern when spraying. • NEVER put hands in front of nozzle to adjust spray pattern.

How to Use the Nozzles

If Unit is Equipped with Adjustable Nozzle

Adjust the spray pattern and spray pressure as follows:

1. Slide nozzle forward to obtain low pressure mode (see Figure 23). Slide nozzle backward to achieve high pressure.

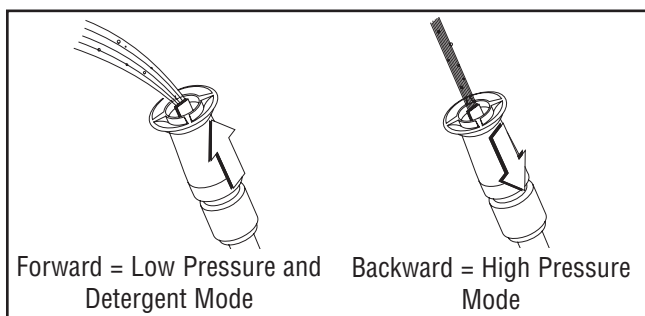


Figure 23— Adjusting Nozzle for Pressure

2. Point nozzle down towards a firm surface and press trigger to test pattern (see Figure 24).

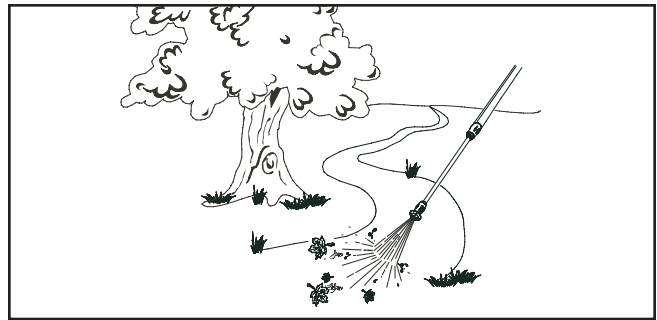


Figure 24— Testing the Spray Pattern

3. Twisting nozzle adjusts spray pattern from narrow pattern to fan pattern (see Figure 25).

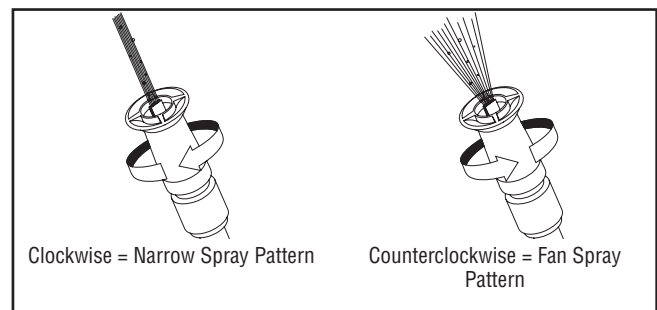


Figure 25— Adjusting the Nozzle for Spray Pattern

Usage Tips

- For most effective cleaning, keep spray nozzle from 8 to 24 inches (20 to 61 cm) away from cleaning surface.
- If you get spray nozzle too close, especially using high pressure mode, you may damage surface being cleaned.
- DO NOT get closer than 6 inches (15 cm) when cleaning tires.

If Unit is Equipped with Quick-Connect Spray Tips

The quick-connect on the nozzle extension allows you to switch between several different spray tips. The spray tips vary the spray pattern as shown below (see Figure 26).

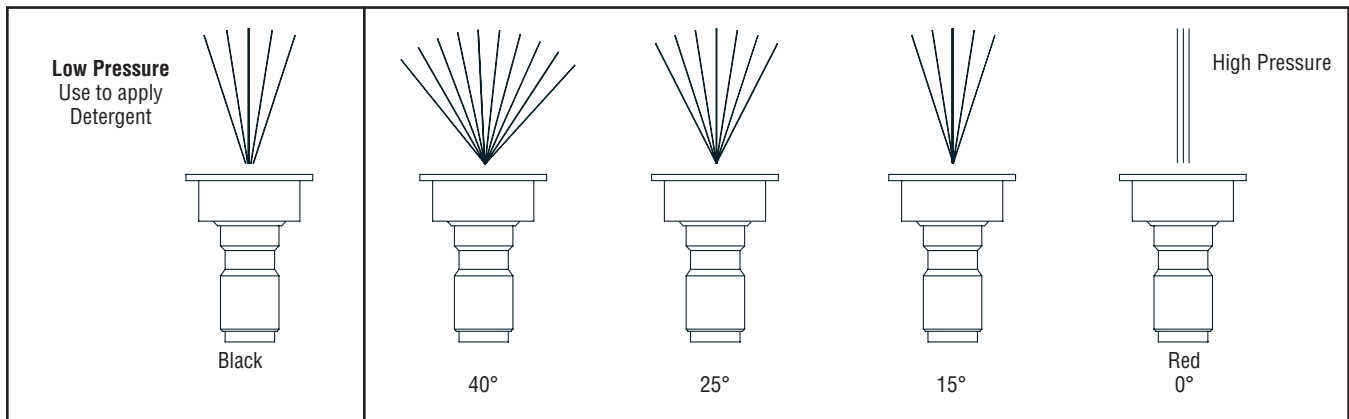




Figure 26— Quick Connect Spray Tips

To Change Spray Tips:



Operation

 WARNING	
	<p>The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.</p>
<ul style="list-style-type: none">• NEVER exchange spray tips without locking the trigger lock on the spray gun.• DO NOT twist spray tips while spraying.	

1. Engage trigger lock on spray gun.
2. Pull back collar on quick-connect and pull current spray tip off.
3. Select desired spray tip:
 - For gentle rinse, select 40° or 25° spray tip.
 - To scour surface, select 15° or red 0° spray tip.
 - To apply detergent, select black spray tip.

NOTE: Your unit may NOT be equipped with all five spray tips.

If Unit is Equipped with Turbo Nozzle

 WARNING	
	<p>The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.</p>
<p>The turbo nozzle produces an extremely high pressure spray which is capable of removing paint and cutting holes through surfaces if held too close.</p>	
<ul style="list-style-type: none">• Always make sure the surface you will clean will not be damaged by the high pressure spray by testing in a hidden area.	

How to Use the Turbo Nozzle

The turbo nozzle spins a 0° nozzle stream in a circular pattern, providing an intense wide-spray pattern for scouring large surface areas fast and efficient.

A turbo nozzle can easily cut through heavy oil and grease stains on concrete, brick and plastic and strip paint from various surfaces. DO NOT use the turbo nozzle on delicate materials, especially wood. Always start the turbo nozzle at a distance, gradually getting closer to the surface until you get the cleaning force you want. Always keep the turbo nozzle in a constant motion. NEVER dwell on a single spot. Pass over stubborn stains repeatedly until they are gone using even strokes.

To install the turbo nozzle with quick connect fitting:

1. Engage trigger lock on spray gun trigger.
2. Pull back collar on quick-connect and pull current spray tip off. Store spray tips in holder provided on the nozzle extension or the accessory tray.

3. Pull back on collar, insert turbo nozzle and release collar (Figure 27). Tug on turbo nozzle to make sure it is securely in place.

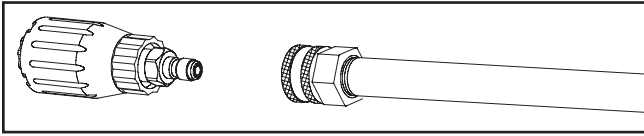


Figure 27- Attaching Turbo Nozzle to Quick Connect Nozzle Extension

4. Disengage trigger lock on spray gun trigger.

To attach the turbo nozzle to the spray gun: Threaded Connection

1. Engage trigger lock on spray gun trigger.
2. Remove nozzle extension from spray gun, if attached.
3. Attach turbo nozzle extension to spray gun (Figure 28). Tighten by hand.

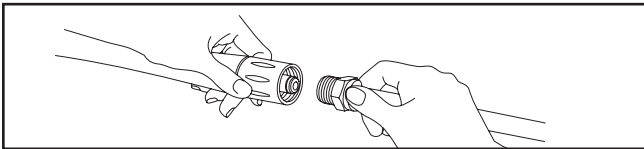


Figure 28- Attaching Turbo Nozzle to Spray Gun

4. Disengage trigger lock on spray gun trigger.


For most effective cleaning, keep turbo nozzle from 8 to 24 inches (20 to 61 cm) away from cleaning surface. If you get turbo nozzle too close, you may damage cleaning surface.

NOTE: Detergent cannot be applied with the turbo nozzle.

Cleaning and Applying Detergent

To apply detergent follow these steps:

1. Review use of adjustable nozzle or spray tips.

<div style="text-align: center;">  CAUTION </div>
Chemicals can cause bodily injury, and/or property damage.
<ul style="list-style-type: none"> • NEVER use caustic liquid with pressure washer. • Use ONLY pressure washer safe detergents/soaps. Follow all manufacturers instructions.

2. Prepare detergent solution as required by manufacturer.
- 3A. Place detergent siphoning tube/filter in detergent container.

NOTE: Make sure the filter is fully submerged while applying detergent.

NOTICE

Keep the detergent siphoning tube/filter from coming in contact with the hot muffler.

- When inserting the filter into a detergent solution bottle, route the tube so as to keep it from inadvertently contacting the hot muffler.

3B. If equipped, pour detergent solution into cleaning tank.

4A. If equipped with adjustable nozzle, slide the adjustable nozzle forward to low pressure position. Detergent cannot be applied with nozzle in high pressure position.

4B. If equipped with quick-connect spray tips, make sure the black spray tip is installed. Detergent cannot be applied with high pressure quick-connect spray tips.

5. Make sure garden hose is connected to water inlet. Check that the high pressure hose is connected to spray gun and pump. Turn on water.

NOTICE

You must attach all hoses before you start the engine.

- Starting the engine without all the hoses connected and without the water turned ON will damage the pump.
- Damage to equipment resulting from failure to follow this instruction will void warranty.

6. Engage trigger lock on the spray gun and start engine following instructions in *How to Start your Pressure Washer*.

7. If equipped with a cleaning tank, rotate detergent shut-off valve on cleaning tank to “On” position (see Figure 29).

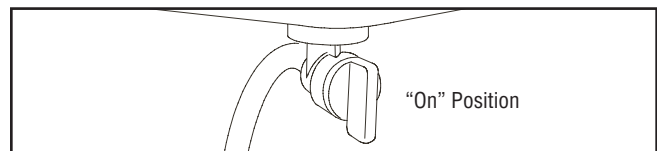


Figure 29 — Detergent Shut-Off Valve

8. Apply detergent to a dry surface, starting at lower portion of area to be washed and work upward, using long, even, overlapping strokes.



9. Allow detergent to “soak in” between 3 to 5 minutes before washing and rinsing. Reapply as needed to prevent surface from drying. Do NOT allow detergent to dry on surface (Prevents streaking).

IMPORTANT: If unit is NOT equipped with a cleaning tank, you must flush the detergent system after each use by placing the filter into a bucket of clean water, then run the pressure washer in low pressure for 1-2 minutes.

Pressure Washer Rinsing

After you have applied detergent, scour the cleaning surface with the high pressure water stream and then rinse it clean, as follows:

1. Engage trigger lock on spray gun.
2. If equipped, make sure detergent shut-off valve is in "Off" position.
3. Slide nozzle backwards or insert a high pressure quick connect spray tip to place pressure washer in high pressure mode. Detergent will not flow when in high pressure mode.
4. Keep spray gun a safe distance from area you plan to spray.

 WARNING	
	High pressure spray could cause you to fall if you are too close to the cleaning surface.
<ul style="list-style-type: none"> • Keep spray nozzle between 8 to 24 inches away from cleaning surface. • Operate this unit on a stable surface. • Be extremely careful if you must use the pressure washer from a ladder, scaffolding or any other relatively unstable location. • Firmly grasp spray gun with both hands when using high pressure spray to avoid injury when gun kicks back. 	

5. Disengage trigger lock on spray gun.
6. If equipped, increase or decrease spray pressure by turning pressure control knob (A) counterclockwise or clockwise respectively (see Figure 30). Use lower pressure to wash items like cars or boats. Use higher pressure to strip paint and degrease driveways.

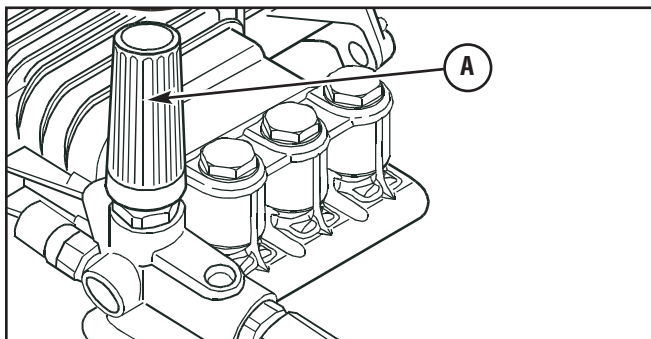


Figure 30— Pressure Control Knob



7. Expand spray pattern or select 40° or 25° quick connect spray tip for a more gentle rinsing action. Start at top of area to be rinsed, working down with same action as for cleaning.

Cleaning Detergent Siphoning Tube

If your unit is not equipped with a cleaning tank and you used the detergent siphoning tube, you must flush it with clean water before stopping the engine.

1. Place detergent siphoning tube/filter in a bucket full of clean water.
2. Engage trigger lock on spray gun.
3. Slide adjustable nozzle forward to low pressure position or attach black cleaning detergent nozzle.
4. Flush for 1-2 minutes.
5. Shut off engine following instructions *How to Stop Pressure Washer*, and turn off the water.
6. ALWAYS point gun in a safe direction and squeeze spray gun trigger to release retained high water pressure.

IMPORTANT: Spray gun traps high water pressure, even when engine is stopped and water is disconnected.

 WARNING	
	<p>The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.</p> <p>Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.</p>
<ul style="list-style-type: none"> • Keep high pressure hose connected to pump and spray gun while system is pressurized. • ALWAYS point spray gun in safe direction and squeeze spray gun trigger, to release high pressure, every time you stop engine. Engage trigger lock when not in use. 	

Automatic Cool Down System (Thermal Relief)

If you run the engine on your pressure washer for 3 to 5 minutes without pressing the trigger on the spray gun, circulating water in the pump can reach temperatures above 125°F (51.6°C). The system engages to cool the pump by **discharging the warm water onto the ground.**

Maintenance

Typical Maintenance Schedule

Follow the hourly or calendar intervals, whichever occurs first. More frequent service is required when operating in adverse conditions noted below.

Maintenance Schedule - Fill in Dates as You Complete Regular Service								
Maintenance Task	Service Dates					Service Dates		
	Before Each Use	Every 25 Hours or Yearly	Every 50 Hours or Yearly	Every 100 Hours or Yearly	100-300 Hours			
Pressure Washer								
Check/clean water inlet screen	X ¹							
Check high pressure hose	X							
Check detergent siphoning hose/filter	X							
Check spray gun and assembly for leaks	X							
Check in-line filter	X							
Prepare pump for storage below 32°F	See <i>Winter Storage</i>							
Engine								
Check oil level	X							
Clean debris	X							
Change engine oil			X ²					
Service air cleaner		X ³						
Service spark plug				X				
Service spark arrester			X					
Air cooling system				X ³				
Clean combustion chamber					X ⁴			
Prepare for storage	If unit is to remain idle for longer than 30 days.							

¹ Clean if clogged. Replace if perforated or torn.

² Change oil after the first (5) operating hours and every 50 hours or yearly thereafter. Change oil sooner when operating under dirty or dusty conditions.

³ Replace more often under dirty or dusty conditions.

⁴ "L" head engines only. These are side-valve engines (do not have overhead valves). See your dealer if you have questions about your engine.

General Recommendations

Regular maintenance will improve the performance and extend the life of the pressure washer. See any authorized dealer for service.

The Pressure washer's warranty 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 pressure washer as instructed in this manual.

Some adjustments will need to be made periodically to properly maintain your pressure washer.

All service and adjustments should be made at least once each season. Follow the requirements in the Maintenance Schedule chart above.

NOTE: Once a year you should clean or replace the spark plug and replace the air filter. New spark plugs and clean air filter assure proper fuel-air mixture and help your engine run better and last longer.

Emissions Control

Maintenance, replacement, or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individual.

Inspect In-Line Filter

Refer to Figure 31 and service the in-line filter if it becomes clogged, as follows:

1. Detach spray gun and nozzle extension from high pressure hose. Detach nozzle extension from spray gun and remove o-ring (A) and screen (B) from nozzle extension (C). Flush screen, spray gun, and nozzle extension with clean water to clear debris.

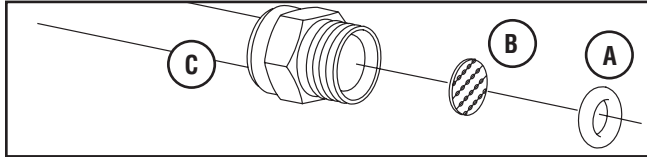


Figure 31 — Clean In-Line Filter

2. If screen is damaged, obtain a replacement in-line filter screen and o-ring. If undamaged, reuse screen.
3. Place in-line filter screen into threaded end of nozzle extension. Direction does not matter. Push screen in with eraser end of pencil until it rests flat at bottom of opening. Take care to not bend screen.
4. Place o-ring into recess. Push o-ring snugly against in-line filter screen.
5. Assemble nozzle extension to spray gun.

Inspect and Clean Inlet Screen

Examine the screen on the water inlet. Clean it if the screen is clogged or replace it if screen is damaged.

Inspect High Pressure Hose

The high pressure hose can develop leaks from wear, kinking, or abuse. Inspect the hose each time before using it. Inspect hose for cuts, leaks, abrasions or bulging of cover, damage or movement of couplings. If any of these conditions exist, replace the hose immediately.

WARNING



The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.

- NEVER repair high pressure hose. Replace it.
- Replacement hose rating MUST exceed maximum pressure rating of unit.

Check Detergent Siphon Tube/Filter

Examine the detergent siphon tube and clean if clogged. The hose should fit tightly on the detergent shut-off valve or filter and pump. Examine the hose for leaks or tears. Replace the hose if damaged.

Inspect Gun and Nozzle Extension

Examine the hose connection to the spray gun and make sure it is secure. Test the trigger by pressing it and making sure it springs back into place when you release it. Put the trigger lock in the “On” position and test the trigger. You should not be able to press the trigger.

Nozzle Maintenance

A pulsing sensation felt while squeezing the spray gun trigger may be caused by excessive pump pressure. The principal cause of excessive pump pressure is an orifice or spray tip clogged or restricted with foreign materials, such as dirt or sand. To correct the problem, immediately clean the orifice or spray tip following these instructions:

1. Shut off engine and turn off water supply.
2. ALWAYS point spray gun in a safe direction and squeeze spray gun trigger to release retained high pressure.

WARNING



The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.

Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.

- Keep high pressure hose connected to pump and spray gun while system is pressurized.
- ALWAYS point spray gun in safe direction and squeeze spray gun trigger, to release high pressure, every time you stop engine. Engage trigger lock when not in use.

Adjustable Nozzle:

1. Remove orifice (A) from end of nozzle extension. Separate nozzle extension from spray gun. Twist nozzle clockwise to stream position. Using a 2mm (5/64) allen wrench, Remove orifice from end of nozzle extension. (see Figure 32).
2. Remove nozzle extension (B) from spray gun.
3. Remove in-line filter from other end of nozzle extension following instructions *Inspect In-Line Filter*.
4. Use a small paper clip to free any foreign material clogging or restricting orifice (see Figure 32).

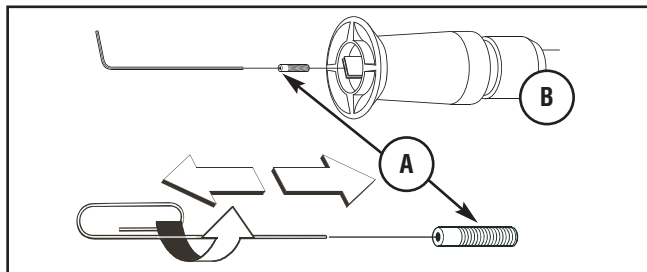


Figure 32— Remove and Clean Orifice

5. Using a garden hose, remove additional debris by back flushing water through nozzle extension (see Figure 33). Back flush between 30 to 60 seconds. Turn adjustable nozzle extension to stream spray and move nozzle from low to high while flushing.

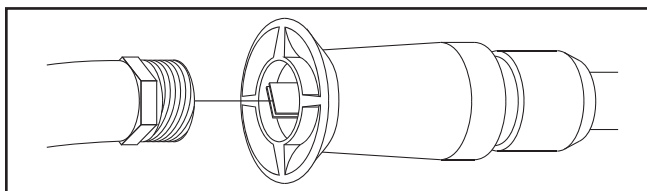


Figure 33 — Backflush the Nozzle

6. Reinstall orifice and in-line filter into nozzle extension. DO NOT over-tighten orifice with allen wrench.
7. Reconnect nozzle extension to spray gun.
8. Make sure garden hose is connected to water inlet. Check that high pressure hose is connected to spray gun and pump. Turn on water.
9. Engage trigger lock on spray gun and start engine following instructions *How to Start Your Pressure Washer*.
10. Test pressure washer by operating with nozzle in both high and low positions.

Quick-Connect Spray Tips:

1. Remove spray tip from end of nozzle extension.
2. Use a small paper clip to free any foreign material clogging or restricting spray tip (A) (see Figure 34).
3. Remove nozzle extension (B) from spray gun.

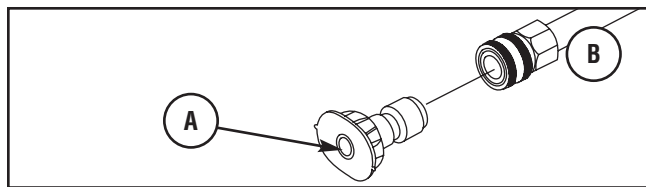


Figure 34 — Nozzle Maintenance

4. Remove in-line filter from other end of nozzle extension following instructions *Inspect In-Line Filter*.
5. Using a garden hose, remove additional debris by back flushing water through nozzle extension (see Figure 35). Back flush between 30 to 60 seconds.

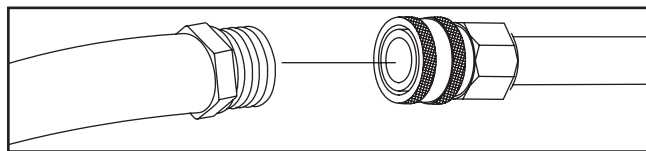




Figure 35— Backflushing the Nozzle Extension

6. Reinstall spray tip and in-line filter into nozzle extension.
7. Reconnect nozzle extension to spray gun.
8. Make sure garden hose is connected to water inlet. Check that high pressure hose is connected to spray gun and pump. Turn on water.
9. Engage trigger lock on spray gun and start engine following instructions *How to Start Your Pressure Washer*.
10. Test pressure washer by operating with each quick connect spray tip.

O-Ring Maintenance


Purchase an O-Ring/Maintenance Kit, model number 6048 by contacting the nearest authorized service center. It is not included with the pressure washer. This kit includes replacement O-rings, rubber washer and water inlet filter. Refer to the instruction sheet provided in the kit to service your unit's O-rings.

 WARNING	
	The high pressure stream of water that this equipment produces can pierce skin and its underlying tissues, leading to serious injury and possible amputation.
• NEVER repair leaking connections with sealant of any kind Replace O-ring or seal.	

Engine Maintenance

A typical engine maintenance schedule is shown in *Maintenance Schedule*. For instructions on properly maintaining the engine, refer to operating and maintenance manuals found on the engine manufacturer's website or from equipment dealers.

Engine Oil

 CAUTION
Avoid prolonged or repeated skin contact with used motor oil.
<ul style="list-style-type: none">• Used motor oil has been shown to cause skin cancer in certain laboratory animals.• Thoroughly wash exposed areas with soap and water.

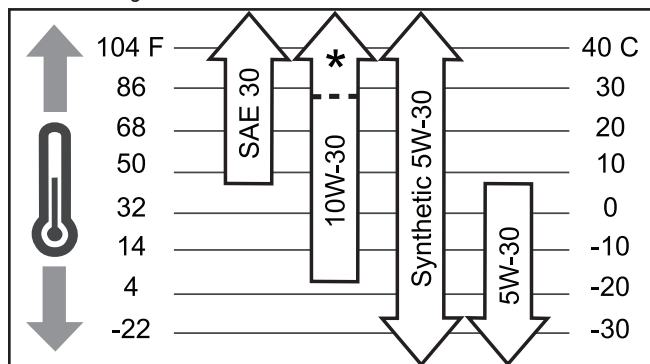


KEEP OUT OF REACH OF CHILDREN. DON'T POLLUTE. CONSERVE RESOURCES. RETURN USED OIL TO COLLECTION CENTERS.

Oil Recommendations

NOTE: Use a high quality detergent oil classified "For Service SF, SG, SH, SJ" or higher. **DO NOT** use special additives.

1. For Briggs and Stratton engines, choose a viscosity according to the table below. For other engines, follow the engine manufacturer's recommendations.



SAE 30: 40°F and higher (5°C and higher) is good for all purpose use above 40°F, use below 40°F will cause hard starting.

10W-30: 0 to 100°F (-18 to 38°C) is better for varying temperature conditions. This viscosity improves cold weather starting, but may increase oil consumption above 80°F (27°C).

*Check oil level frequently at higher temperatures.

Synthetic 5W-30: -20 to 120°F (-30 to 40 °C) provides the best protection at all temperatures as well as improved starting with less oil consumption.

5W-30: 40°F and below (5°C and below) is recommended for winter use and works best in cold conditions.

NOTE: Synthetic oil meeting ILSAC GF-2, API certification mark and API service symbol with "SJ/CF ENERGY CONSERVING" or higher, is an acceptable oil at all temperatures. Use of synthetic oil does not alter required oil change intervals.

Adding Oil

Models with oil fill cap (Figure 36)

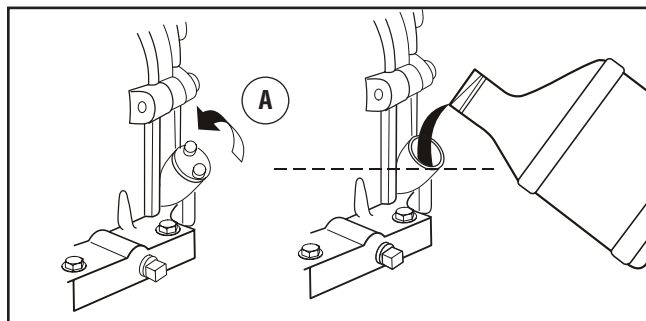


Figure 36 — Oil Fill Cap

1. Remove oil cap (A).
2. Pour oil slowly. Fill just to the point of overflowing.
3. Replace and tighten the oil fill cap.

Models with a short oil dipstick (Figure 37)

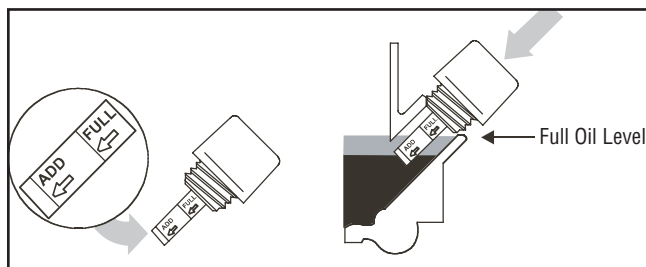


Figure 37 — Short Dipstick

1. Remove oil dipstick and wipe it with a clean cloth.
2. Insert the dipstick, but **DO NOT** screw it in.
3. Remove the dipstick. The oil level should be at the FULL mark.
4. If needed, add oil slowly. Check oil level frequently.
5. When full, replace and tighten the dipstick.

Models with an extended dipstick (Figure 38)

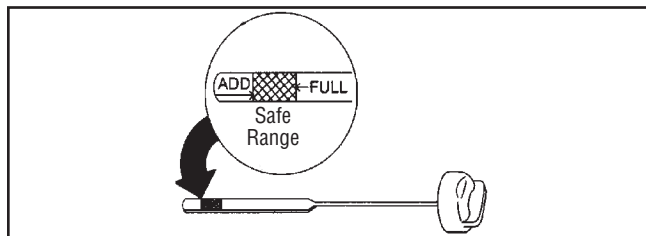


Figure 38— Extended Dipstick

1. Remove the dipstick and wipe it with a clean cloth.
2. Insert and tighten the dipstick.
3. Remove the dipstick and check the oil level. Make sure the oil level is at the FULL mark on the dipstick.
4. To add oil, pour the oil slowly into the engine oil fill opening. **DO NOT OVERFILL.** Recheck the oil level after waiting one minute.
5. Add more oil only if indicated.
6. Replace and tighten the dipstick.

Service Air Cleaner

Your engine will not run properly and may be damaged if you run it with a dirty air cleaner.

Service the air cleaner once every 25 hours of operation or once each year, whichever comes first. Service more often if operating under dirty or dusty conditions.

To service foam type air cleaner, (Figure 39)

1. Remove screw (A).

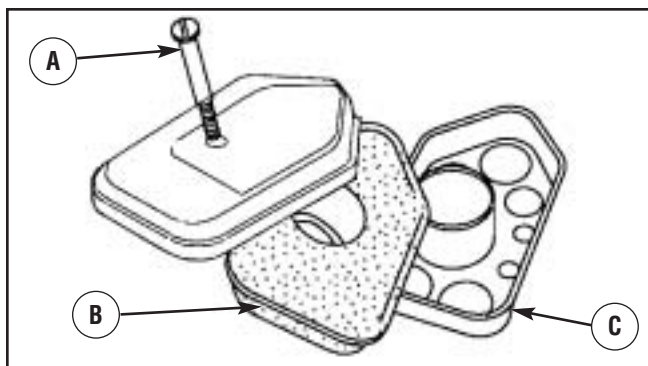


Figure 39. — Typical Foam Air Cleaner

2. Carefully remove air cleaner assembly to prevent debris from falling into carburetor.
3. Take air cleaner assembly apart and clean all parts. Wash foam air cleaner (B) in liquid detergent and water. Squeeze dry in a clean cloth.
4. SATURATE foam air cleaner in engine oil and squeeze in a clean cloth to remove excess oil.
5. Reinstall clean or new foam air cleaner in base (C).
6. Install air cleaner securely on carburetor with screw.

To service paper air cleaner (Figure 40)

1. Loosen screw (A) and tilt cover (B) down.

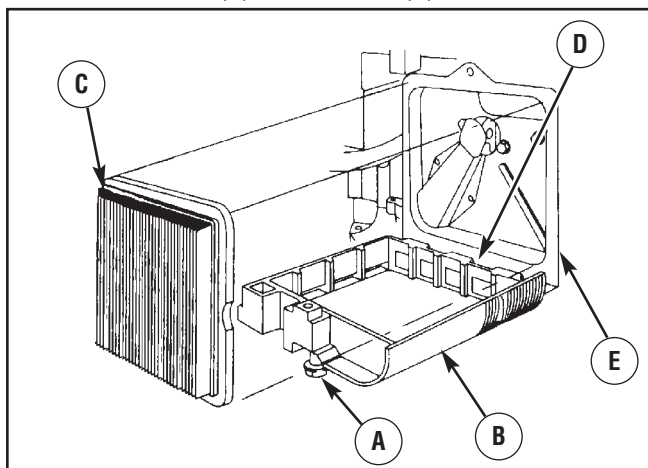


Figure 40. — Typical Paper Element Air Cleaner

2. Carefully remove cartridge (C) assembly.

3. To clean cartridge, gently tap pleated paper side on a flat surface.
4. Reinstall clean or new cartridge assembly inside cover.
5. Insert cover's tabs (D) into slots in bottom of base (E).
6. Tilt cover up and tighten screw securely to base.

Service Spark Plug

Change the spark plug every 100 hours of operation or once each year, whichever comes first. This will help your engine to start easier and run better.

1. Clean area around spark plug.
2. Remove and inspect spark plug.

For horizontal engines

- 3A. Check electrode gap (Figure 41) with wire feeler gauge and set spark plug gap to .030 inch (.76 mm) if necessary.

For vertical engines

- 3B. Set spark plug gap to .020 inch (.51 mm) if necessary.

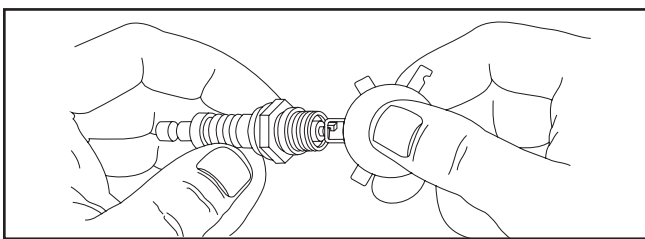


Figure 41. — Checking Spark Plug Gap

4. Replace spark plug if electrodes are pitted, burned or porcelain is cracked. Refer to the engine manual for the recommended replacement plug.
5. Install spark plug and tighten firmly.

Air Cooling System

Over time debris may accumulate in cylinder cooling fins and cannot be observed without partial engine disassembly. For this reason, we recommend you have a qualified service dealer clean the cooling system per recommended intervals (see *Maintenance Schedule* in beginning of *Maintenance* section). Equally important is to keep top of engine free from debris.

Clean Combustion Chamber

We recommend you have a qualified service dealer remove combustion deposits from the cylinder, cylinder head, top of piston and around valves per recommended intervals (see *Maintenance Schedule* in beginning of *Maintenance* section).

Pump Maintenance

Only the pumps shown in Figures 42, 43 & 44 need periodic service. All other pumps are maintenance-free.

If your pump looks like the pump shown in Figure 42, follow these instructions:

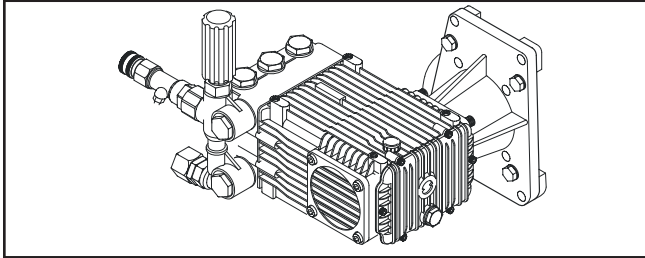


Figure 42— Annovi Pump

Changing Pump Oil

Change oil after first 50 hours of operation and then every 200 hours or 3 months, whichever occurs first.

NOTE: When changing pump oil, use only high quality nondetergent 30 weight oil. Use no special additives.

Change pump oil as follows:

1. Turn off engine, disconnect spark plug wire and secure it away from the spark plug before starting maintenance on the pump.
2. Clean area around brass oil drain plug at bottom of pump.
3. Remove oil drain plug. Drain oil completely into an approved container.
4. When oil has completely drained, install oil drain plug and tighten firmly.
5. Clean area around pump oil dipstick. Remove dipstick and fill pump with recommended oil to Full mark on dipstick.
6. Install pump oil dipstick.
7. Wipe up any spilled oil.

If your pump looks like the pump shown in Figure 43, follow these instructions:

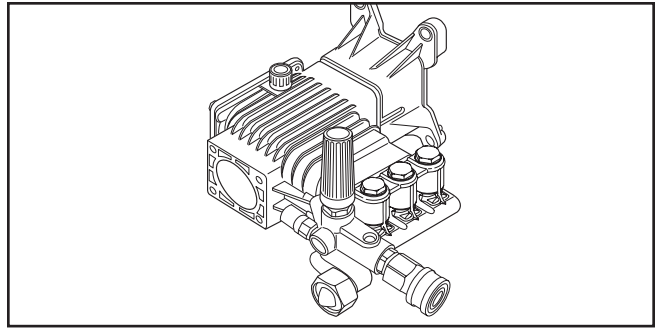


Figure 43 — Annovi Pump

Changing Pump Oil

Change oil after first 50 hours of operation and then every 200 hours or 3 months, whichever occurs first.

NOTE: When changing pump oil, use only high quality nondetergent 30 weight oil and fill to FULL mark on dipstick. Use no special additives.

If the pump has a drain plug, the oil can be changed without removing the pump (follow steps 1-7 under Figure 42).

If there is no drain plug, the pump will require disassembly from the engine. For this reason, we recommend you have a qualified service dealer change the pump oil per recommended intervals.

If your pump looks like the pump in Figure 44, follow these instructions;

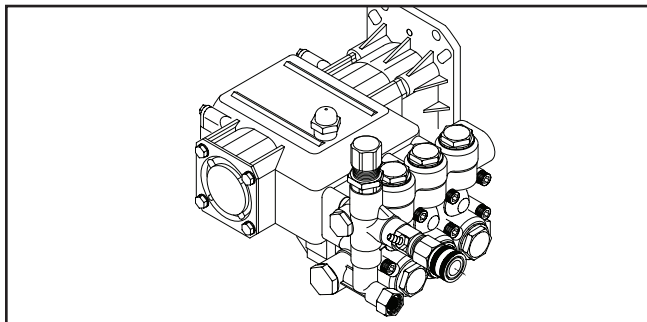


Figure 44 — CAT Pump

Changing Pump Oil

For longest lasting service, follow the schedule given in the *Pump Maintenance Checklist*.

IMPORTANT: Use 0.55 liter (18.6 ounces) of CAT Pump 6107 multi-viscosity oil. Oil alternatives include Mobil DTE16, Texaco Rondo 1660-HD150, Amoco Rykon-68, Shell Tellus T-68, and Exxon Univis-68.

Check Pump Oil Level

1. Place pressure washer on a level surface.
2. While pump and oil is cold, observe oil level visible in pump's oil sight gauge.
3. Oil level should be visible and just below red dot. If necessary, slowly add recommended oil through pump's oil filler opening until oil level just touches bottom of red dot. DO NOT fill above red dot!

Oil Change Procedure

1. Place pressure washer on an outside level surface.

CAT Pump Maintenance Checklist

Follow the daily, hourly or calendar intervals, whichever occurs first.

Maintenance Item:	Daily	50 hours	500 hours	1,500 hours	3,000 hours
Clean Inlet Water Filter	X				
Check Oil Level/Quantity	X				
Check for Oil Leaks	X				
Check for Water Leaks	X				
Break-in Oil Change		X			
*Routine Oil Change			X		
**Seal Change				X	
Valve Change					X
Check Accessories				X	

* If other than CAT Pump Model 6107 oil is used, change cycle should be every 300 hours.

** Each system's maintenance cycle will be exclusive. If system performance decreases, check immediately. If no wear at 1500 hours, check again at 2000 hours and each 500 hours until wear is observed. Valves typically require changing every other seal change. Duty cycle, temperature, quality of pumped liquid and inlet feed conditions all affect the life of pump wear parts and service cycle.

** Remember to service the unloader at each seal servicing and check all system accessories and connections before resuming operation. Contact your local service center if questions arise.

2. Start and run pressure washer for at least 5 minutes.
3. Turn off pressure washer and disconnect spark plug wire from spark plug.
4. Place suitable container under oil drain hole.
5. Remove pump's oil filler cap and o-ring (see Figure 45).

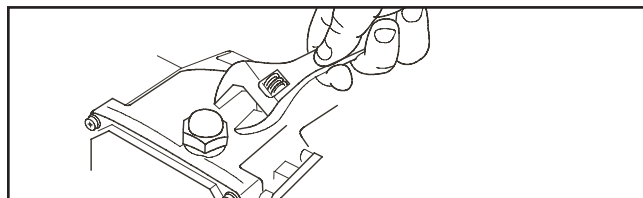


Figure 45 — Removing Pump's Oil Filler Cap

6. Remove oil drain plug (see Figure 46) and let oil drain out completely.

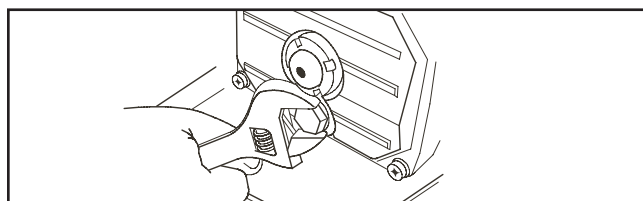


Figure 46— Removing Pump's Oil Drain Plug

7. Replace oil drain plug and tighten securely (50 in-lbs max. torque).
8. Use a funnel to add recommended amount and type of pump oil.
9. Replace domed oil filler cap and o-ring. Tighten finger-tight.
10. Reconnect spark plug wire to spark plug.
11. Take used oil to an oil recycling center.



All other pumps not pictured are sealed and do not require any maintenance for the life of the pump.

Storage




After Each Use

Water should not remain in the unit for long periods of time. Sediments or minerals can deposit on pump parts and freeze pump action. Follow these procedures after every use:

1. Flush detergent siphoning tube by placing the filter into a pail of clean water while running pressure washer in low pressure mode. Flush for one to two minutes.
2. Shut off engine, turn off water supply, point spray gun in a safe direction and squeeze trigger to relieve trapped pressure, engage trigger lock on spray gun and let engine cool.

 WARNING	
	<p>The high pressure stream of water that this equipment produces can cut through skin and its underlying tissues, leading to serious injury and possible amputation.</p> <p>Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.</p>
<ul style="list-style-type: none"> • Keep high pressure hose connected to pump and spray gun while system is pressurized. • ALWAYS point spray gun in safe direction and squeeze spray gun trigger, to release high pressure, every time you stop engine. Engage trigger lock when not in use. 	

3. Disconnect hose from spray gun and high pressure outlet on pump. Drain water from hose, spray gun, and nozzle extension. Use a rag to wipe off the hose.
4. Empty pump of all pumped liquids by pulling recoil handle about six times. This should remove most liquid in pump.
5. Store unit in a clean, dry area.
6. If storing for more than 30 days, see *Long Term Storage* on next page.

 WARNING	
	<p>Fuel and its vapors are extremely flammable and explosive.</p>
	<p>Fire or explosion can cause severe burns or death.</p>
<p>WHEN STORING FUEL OR EQUIPMENT WITH FUEL IN TANK</p> <ul style="list-style-type: none"> • Store away from furnaces, stoves, water heaters, clothes dryers, or other appliances that have pilot light or other ignition source because they can ignite fuel vapors. 	

Winter Storage

NOTICE
<p>You must protect your unit from freezing temperatures.</p> <ul style="list-style-type: none"> • Failure to do so will permanently damage your pump and render your unit inoperable. • Freeze damage is not covered under warranty.

To protect the unit from freezing temperatures:

1. If equipped with cleaning tank, empty as follows:
 - a. Disconnect hose connected to injection fitting on pump. Place end of hose into suitable container.
 - b. Rotate detergent shut-off valve to "**On**" position and open the tanks cover. Gravity will empty tank contents into container.
 - c. Reconnect hose to injection fitting on pump. Add 0.5 quart of clean fresh water to cleaning tank and close tanks cover.
2. Flush cleaning system by turning detergent shut-off valve to "**On**" position, in low pressure mode and run pressure washer. Flush until cleaning tank is empty. Turn its detergent shut-off valve to "**Off**" position.
3. For all pressure washers: Follow steps 1-4 in the previous section *After Each Use*.
4. Use pump saver, Model 6039, to treat pump. This minimizes freeze damage and lubricates pistons and seals.
5. If pump saver is not available, connect a 3-foot (1 m) section of garden hose to water inlet adapter. Pour RV-antifreeze (antifreeze without alcohol) into hose. Pull recoil handle twice. Disconnect 3-foot (1 m) hose.
6. Store unit in a clean, dry area.

Long Term Storage

If you do not plan to use the pressure washer for more than 30 days, you must prepare the engine and pump for long term storage.

Protect Fuel System

Fuel Additive:

Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system or on essential carburetor parts. To keep fuel fresh, use Briggs & Stratton FRESH START™ fuel stabilizer, available as a liquid additive or a drip concentrate cartridge.

There is no need to drain gasoline from the engine if a fuel stabilizer is added according to instructions. Run the engine for 2 minutes to circulate the stabilizer throughout the fuel system. The engine and fuel can then be stored up to 24 months.

If gasoline in the engine has not been treated with a fuel stabilizer, it must be drained into an approved container. Run the engine until it stops from lack of fuel. The use of a fuel stabilizer in the storage container is recommended to maintain freshness.

Storing the Engine

Contact your engine's local service center to obtain an engine operator's manual and engine emission control system warranty.

Protecting the Pump



To protect the pump from damage caused by mineral deposits or freezing, use PumpSaver, Model 6039, to treat pump. This prevents freeze damage and lubricates pistons and seals.

NOTE: PumpSaver is available as an optional accessory. It is not included with the pressure washer. Contact the nearest authorized service center to purchase PumpSaver.

To use PumpSaver, make sure the pressure washer is turned off and disconnected from supply water. Read and follow all instructions and warnings given on the PumpSaver container.

Other Storage Tips

1. DO NOT store fuel from one season to another unless it has been treated as described in *Protect Fuel System*.
2. Replace fuel container if it starts to rust. Rust and/or dirt in fuel can cause problems if it's used with this unit.
3. Cover unit with a suitable protective cover that does not retain moisture.

 WARNING	
	Storage covers can be flammable.
<ul style="list-style-type: none">• DO NOT place a storage cover over a hot pressure washer.• Let equipment cool for a sufficient time before placing the cover on the equipment.	

4. Store unit in a clean and dry area.

Troubleshooting

Problem	Cause	Correction
Pump has following problems: <ul style="list-style-type: none"> • Failure to produce pressure • Erratic pressure • Chattering • Loss of pressure • Low water volume 	<ol style="list-style-type: none"> 1. Low pressure nozzle installed. 2. Water inlet is blocked. 3. Inadequate water supply. 4. Inlet hose is kinked or leaking. 5. Clogged inlet hose strainer. 6. Water supply is over 100°F. 7. High pressure hose is blocked or leaks. 8. Gun leaks. 9. Nozzle is obstructed. 10. Pump is faulty. 	<ol style="list-style-type: none"> 1. Replace nozzle with high pressure nozzle. 2. Clear inlet. 3. Provide adequate water flow. 4. Straighten inlet hose, patch leak. 5. Check and clean inlet hose strainer. 6. Provide cooler water supply. 7. Clear blocks in outlet hose. 8. Replace gun. 9. Clean nozzle. 10. Contact authorized service facility.
Detergent fails to mix with spray.	<ol style="list-style-type: none"> 1. Detergent siphoning tube is not submerged. 2. Detergent siphoning tube is clogged or cracked. 3. Dirty in-line filter. 4. High pressure nozzle installed. 5. Detergent shut-off valve is closed 	<ol style="list-style-type: none"> 1. Insert detergent siphoning tube into detergent. 2. Clean or replace filter/detergent siphoning tube. 3. See <i>Inspect In-Line Filter</i>. 4. Replace nozzle with low pressure nozzle. 5. Open detergent shut-off valve.
Engine runs good at no-load but "bogs" when load is added.	Engine speed is too slow.	Move throttle control to FAST position. If engine still "bogs down", contact authorized service facility.
Pressure washer stops during operation.	Out of fuel.	Fill fuel tank.

BRIGGS & STRATTON POWER PRODUCTS GROUP, LLC RECONDITIONED EQUIPMENT OWNER WARRANTY POLICY

Effective December 1, 2005 replaces all undated Warranties and all Warranties dated before December 1, 2005

LIMITED WARRANTY

Briggs & Stratton Power Products Group, LLC will repair or replace, free of charge, any part(s) of the equipment that is defective in material or workmanship or both. Transportation charges on product submitted for repair or replacement under this warranty must be borne by purchaser. This warranty is effective for the time period and subject to the conditions stated below. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at BRIGGSandSTRATTON.COM.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE, OR TO THE EXTENT PERMITTED BY LAW. ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states or countries do not allow limitations on how long an implied warranty lasts, and some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.

WARRANTY PERIOD

90 DAYS

The warranty period begins on the date of purchase by the first retail consumer and continues for the period of time stated above.

NO WARRANTY REGISTRATION IS NECESSARY TO OBTAIN WARRANTY ON BRIGGS & STRATTON PRODUCTS. SAVE YOUR PROOF OF PURCHASE RECEIPT. IF YOU DO NOT PROVIDE PROOF OF THE INITIAL PURCHASE DATE AT THE TIME WARRANTY SERVICE IS REQUESTED, THE RECONDITIONED DATE SHOWN ON THE PRODUCT WILL BE USED TO DETERMINE THE WARRANTY PERIOD.

EQUIPMENT

Air Compressor
Outboard Motor

Portable Generator
Stationary Generator

Pressure Washer
Water Pump

ABOUT YOUR WARRANTY

We welcome warranty repair and apologize to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. For example, warranty service would not apply if equipment damage occurred because of misuse, lack of routine maintenance, shipping, handling, warehousing or improper installation. Similarly, the warranty is void if the reconditioning date shown on the equipment has been removed or the equipment has been altered or modified. During the warranty period, the Authorized Service Dealer, at its option, will repair or replace any part that, upon examination, is found to be defective under normal use and service. This warranty will not cover the following repairs and equipment:

- **Normal Wear:** Outdoor Power Equipment, like all mechanical devices, needs periodic parts and service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment.
- **Installation and Maintenance:** This warranty does not apply to equipment or parts that have been subjected to improper or unauthorized installation or alteration and modification, misuse, negligence, accident, overloading, overspeeding, improper maintenance, repair or storage so as, in our judgment, to adversely affect its performance and reliability. This warranty also does not cover normal maintenance such as air filters, adjustments, fuel system cleaning and obstruction (due to chemical, lime, dirt, and so forth).
- **Other Exclusions:** This warranty excludes wear items such as quick couplers, seals, o-rings, pumps that have been run without water supplied or damage or malfunctions resulting from accidents, abuse, modifications, alterations, or improper servicing or freezing or chemical deterioration. Accessory parts, such as generator adapter cord sets, storage covers, guns, hoses, nozzle extensions (wands), and nozzles, are excluded from the product warranty. This warranty excludes failures due to acts of God and other force majeure events beyond the manufacturers control. Also excluded are portable generators used for prime power in place of utility power and portable generators used in life support applications. 198190E, Rev. B, 12/31/2006

BRIGGS & STRATTON POWER PRODUCTS GROUP, LLC
JEFFERSON, WI, USA

Warranty



Briggs & Stratton Power Products Group, LLC
Jefferson, WI 53549