

CHAMPION

POWER EQUIPMENT™

70002
Rev 70002-20080214



Owner's Manual and Operating Instructions



2700 PSI – 2.4 GPM

PRESSURE WASHER

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Introduction

Congratulations on your purchase of a Champion Power Equipment pressure washer. CPE designs and builds pressure washers to strict specifications. With proper use and maintenance, this pressure washer will bring years of satisfying service.

Pressure Washer

This unit is a gasoline engine driven pressure washer. It is designed for use in cleaning with or without detergent and is suitable for decks, patios, house siding, vehicles, lawn furniture, barbecue grills, gardening tools and more.

Record the model and serial numbers as well as date and place of purchase for future reference. Have this information available when ordering parts and when making technical or warranty inquiries.

Accessories

Champion Power Equipment manufactures and sells accessories designed to help you get the most from your purchase. To find out more about our accessories, please visit our web site at

www.championpowerequipment.com

This Booklet

Every effort has been made to ensure the accuracy and completeness of the information in this manual. We reserve the right to change, alter and/or improve the product and this document at any time without prior notice.

Champion Power Equipment Support
1-877-338-0999
Model Number
70002
Serial Number
Date of Purchase
Purchase Location

Manual Conventions

Manual Conventions

This manual uses the following symbols to help differentiate between different kinds of information. The safety symbol is used with a key word to alert you to potential hazards in operating and owning power equipment.

Follow all safety messages to avoid or reduce the risk of serious injury or death.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, *will* result in death or serious injury.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, *could* result in death or serious injury.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, *may* result in minor or moderate injury.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, *may* result in property damage.



NOTE

If you have questions regarding your pressure washer, we can help. Please call our help line at 1-877-338-0999.

Safety Rules

WARNING

Read this manual thoroughly before operating your pressure washer. Failure to follow instructions could result in serious injury or death.

WARNING

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

DANGER

Engine exhaust contains carbon monoxide, a colorless, odorless, poison gas. Breathing carbon monoxide will cause nausea, dizziness, fainting or death.

Operate pressure washer outdoors only in a well ventilated area
DO NOT operate the pressure washer inside any building, enclosure or compartment.
DO NOT allow exhaust fumes to enter a confined area through windows, doors, vents or other openings.

DANGER

Rotating parts can entangle hands, feet, hair, clothing and/or accessories.

Traumatic amputation or severe laceration can result.

Keep hands and feet away from rotating parts.
Tie up long hair and remove jewelry.
Operate equipment with guards in place.
DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught.

WARNING

Sparks can result in fire or electrical shock.

When servicing the pressure washer:

Disconnect the spark plug wire and place it where it cannot contact the plug.
DO NOT check for spark with the plug removed.
Use only approved spark plug testers.

WARNING

Running engines produce heat.
Severe burns can occur on contact.
Combustible material can catch fire on contact.

DO NOT touch hot surfaces.
Avoid contact with hot exhaust gases.
Allow equipment to cool before touching.
Maintain at least three feet of clearance on all sides to ensure adequate cooling.
Maintain at least five feet of clearance from combustible materials.

WARNING

Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go.

Unintentional startup can result in entanglement, traumatic amputation or laceration.

Broken bones, fractures, bruises or sprains could result.

When starting engine, pull the starter cord slowly until resistance is felt and then pull rapidly to avoid kickback.

Safety Rules

DANGER

Fuel and fuel vapors are highly flammable and extremely explosive.
Fire or explosion can cause severe burns or death.

Unintentional startup can result in entanglement, traumatic amputation or laceration.

When adding or removing fuel

Turn the engine off and let it cool for at least two minutes before removing the fuel cap. Loosen the cap slowly to relieve pressure in the tank. Only fill or drain fuel outdoors in a well-ventilated area.

DO NOT overfill the fuel tank.

Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition.

DO NOT light or smoke cigarettes.

When starting the pressure washer

DO NOT attempt to start a damaged pressure washer.

Make certain that the gas cap, air filter, spark plug, fuel lines and exhaust system are properly in place.

Allow spilled fuel to evaporate fully before attempting to start the engine.

Make certain that the pressure washer is resting firmly on level ground.

When operating the pressure washer:

DO NOT move or tip the pressure washer during operation.

DO NOT tip the pressure washer or allow fuel or oil to spill.

When transporting or servicing the pressure washer:

Make certain that the ignition switch is in the off position and the fuel tank is empty.

Disconnect the spark plug wire.

When storing the pressure washer:

Store away from sparks, open flames, pilot lights, heat and other sources of ignition.

CAUTION

Improper treatment or use of the pressure washer can damage it, shorten its life and void your warranty.

Use the pressure washer only for intended uses. Operate only on level surfaces.

DO NOT expose pressure washer to excessive moisture, dust, or dirt.

DO NOT allow any material to block the cooling slots.

DO NOT use the pressure washer if:

Equipment sparks, smokes or emits flames

Equipment vibrates excessively

DANGER

Keep clear of nozzle.

DO NOT point the pressure wand at a person, an animal or yourself.

Always wear safety glasses or goggles and protective equipment (hearing protection, gloves, rubber boots, protective clothing) when operating or performing maintenance.

- Never put hand or fingers over the spray tip while operating the unit.
- Never try to stop or deflect leaks with any body part.
- Always engage the trigger safety latch in the safe position when spraying is stopped even if only for a few moments.

WARNING

NEVER spray flammable liquids or use pressure washer in areas containing combustible dust, liquids, or vapors.

NEVER operate this machine in a closed building or in or near an explosive environment.

- Do not remove fuel tank cap or fill fuel tank while engine is hot or running (allow engine to cool two minutes before refueling). Always fill the tank slowly.
- Never disconnect the high pressure discharge hose from the machine while the system is pressurized.



WARNING

NEVER run the unit dry.

Be sure the water supply is completely turned on before operating the unit.



WARNING

If water has frozen in the pressure washer, thaw the pressure washer in a warm room before starting.

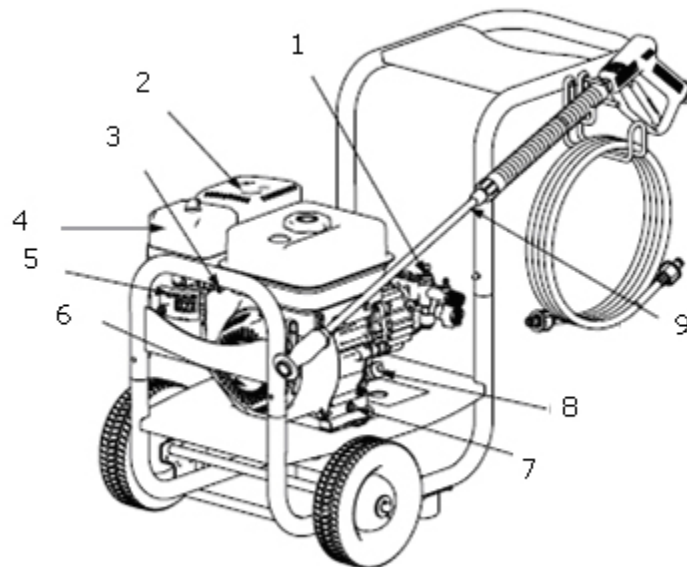
DO NOT pour hot water on or into the pump; internal parts will be damaged and your warranty will be voided.

Controls and Features

Controls and Features

Read this owner's manual before operating your pressure washer. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.

Pressure Washer



High Pressure Pump (1) – gas-engine driven wobble plate pressure pump.

Muffler (2) – Full-size muffler for sound abatement.

Throttle (3) – Controls the engine speed.

Air Cleaner (4) – Protects the engine by filtering dust and debris from the intake air.

Choke (5) – Used to start the engine

Recoil Starter (6) – Used to start the engine

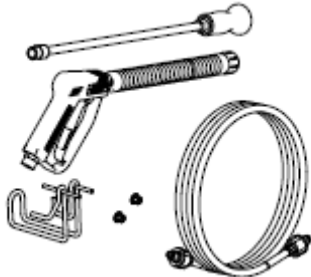
Low Oil Sensor (7) – Senses the level of oil in the crankcase and shuts the engine down if the level falls too low.

Oil Filler Cap (8) – Check and fill engine oil level.

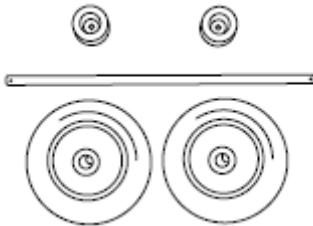
Wand Assembly (9) – Hose, Gun and High Pressure Wand for power washing.

Parts Included

Your 70002 Gasoline Powered Pressure Washer ships with the following parts:



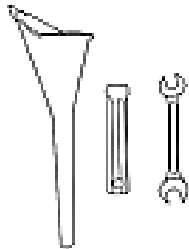
- Hose Kit**
- Pressure Gun 1 piece
- Wand 1 piece
- Hose 1 piece
- Hook w/Nuts 1 set



- Wheel Kit**
- Axle 1 piece
- 10" Solid Wheel 2 pieces
- Vibration Mounts 2 pieces



- Bolt Kit**
- Wheel Retaining Pins 2 pieces
- Flat Washers 2 pieces
- Cap Screws and Nuts 6 sets



- Oil Funnel** 1 piece
- Wrench** 1 piece
- Spark Plug Socket** 1 piece



- Inline Hose Filter** 1 piece

Assembly

Assembly

Your pressure washer requires some assembly. This unit ships from our factory without oil. It must be properly serviced with fuel and oil before operation.

If you have any questions regarding the assembly of your pressure washer, call our help line at 1-877-338-0999. Please have your serial number and model number available.

Remove the Pressure Washer from the Shipping Carton

1. Set the shipping carton on a solid, flat surface.
2. Remove everything from the carton except the pressure washer.
3. Carefully cut each corner of the box from top to bottom. Fold each side flat on the ground to provide a surface area to install the wheel kit and vibration mounts.

Install the Wheel Kit

CAUTION

The wheel kit is not intended for over-the-road use.

You will need the following tools to install the wheels:

- 12 mm wrench
- Socket wrench with a 12 mm socket
- Pliers

1. Before adding oil to the engine, tip the pressure washer slowly so that the pump side is up.
2. Slide the axle through both mounting brackets.
3. Slide a wheel onto the axel.
4. Place a washer on the end.
5. Install the cotter pin through the hole on the end of the axle.
6. Carefully bend the legs of the cotter pin back around the axle.
7. Repeat steps 3-6 to attach the second wheel.

Install the Support Leg

1. Attach each rubber vibration mount to the base frame with a cap screw (M8x20) and lock nut (M8).
2. Tip the pressure washer slowly so that it rests on the wheels and support leg.

Assemble the Frame

1. Remove the hitch pins holding the handle and frame end to the base frame.
2. Rotate the handle assembly and insert the ends into the pump side of the base frame.
3. Insert the hitch pins and secure each one with a cotter pin.
4. Insert the frame end into the engine side of the base frame.
5. Insert the hitch pins and secure each one with a cotter pin.

Add Engine Oil

CAUTION

DO NOT attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage to the pressure washer as a result of failure to follow these instructions will void your warranty.

1. Place the pressure washer on a flat, level surface.
2. Remove oil fill cap/dipstick to add oil.
3. Add 0.63 qt (0.6 L) of oil and replace oil fill cap/dipstick.
4. Check engine oil level daily and add as needed.

CAUTION

The engine is equipped with a low-oil-shutoff and the will stop when the oil level in the crankcase falls below the threshold level.

NOTE

Check oil often during the break-in period. Refer to the Maintenance section for recommended service intervals.

Add Fuel

1. Use clean, fresh, regular unleaded fuel with a minimum octane rating of 85.
2. DO NOT mix oil with fuel.
3. Clean the area around the fuel cap.
4. Remove the fuel cap
5. Slowly add fuel to the tank. DO NOT overfill. Allow approximately ¼ inch of space for fuel expansion.
6. Screw on the fuel cap and wipe away any spilled fuel.



CAUTION

Use regular unleaded gasoline with a minimum octane rating of 85.

Do not mix oil and gasoline.
Fill tank to approximately ¼" below the top of the tank to allow for fuel expansion.
DO NOT fill fuel tank indoors.
DO NOT fill fuel tank when the engine is running or hot.
DO NOT overfill the fuel tank.
DO NOT light cigarettes or smoke when filling the fuel tank.

Install the Hoses

Attach the Pressure Gun

1. Attach the wand with nozzle to the gun.
2. Connect the high pressure hose to the outlet connection on the pump.
3. Connect the other end of the high pressure hose to the gun.

Connect to Garden Hose

Secure a garden hose (not included) to the inlet connection on the pump.

Attach the Detergent Hose

Connect the clear detergent hose to the brass barb on the pumps outlet connector.
Place the filter end of the detergent hose into pressure washer detergent (not included).

Operation

Pressure Washer Location

This pressure washer must have at least five feet of clearance from combustible material. Leave at least three feet of clearance on all sides of the pressure washer to allow for adequate cooling, maintenance and servicing.

Place the pressure washer in a well-ventilated area. **DO NOT** place the pressure washer near vents or intakes where exhaust fumes could be drawn into occupied or confined spaces. Carefully consider wind and air currents when positioning pressure washer.

Starting the Engine

1. Make certain the pressure washer is on a flat, level surface.
2. Connect the pressure washer to the garden hose and turn on the water supply. Never start or run the pressure washer if the water supply is disconnected or turned off.
3. Move the choke lever to the “Choke” position.
4. Pull the starter cord slowly until resistance is felt and then pull rapidly
5. As engine warms up, move the choke lever to “Run”.
6. Move the throttle lever to the “Open” (Hare) position.

NOTE

If the engine starts but does not run, make certain that the pressure washer is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.

High Pressure Wash

CAUTION

Always engage the trigger safety latch when the unit is not in use.

The trigger safety latch prevents the gun from being triggered accidentally. Push the latch fully down to engage it.

Adjusting the Spray Fan Angle

Your unit is equipped with an adjustable fan nozzle. The spray end of the wand can be rotated to have a narrow high impact stream to a 60° wide fan spray. A narrow stream has high impact force on the cleaning surface and results in maximum deep cleaning in a concentrated area.

CAUTION

The narrow high impact spray can damage some surfaces.

A wide fan pattern distributes the impact of the water over a larger area resulting in excellent cleaning action with reduced risk of surface damage. Clean large surface areas quickly using a wide fan pattern.

Distance from Cleaning Surface

The distance between the spray nozzle and the cleaning surface is another factor that affects the impact force of the water. The impact force of the water increases as the nozzle is moved closer to the surface. You can vary the impact force by controlling

1. the nozzle's fan pattern,
2. the nozzle's angle to the cleaning surface,
3. and the nozzle's distance from the cleaning surface.

Never use a narrow high impact stream on a surface that is susceptible to damage. Avoid spraying windows with a narrow high impact stream or turbo nozzle. Doing so may break the glass.

1. Before triggering the gun, adjust the nozzle or quick connect tip to a wide fan pattern.
3. Place the nozzle approximately 4-5 feet away from the cleaning surface. Then hold the nozzle at a 45 degree angle to the cleaning surface. Trigger the gun.
4. Vary the fan pattern spray angle and the distance to the cleaning surface until optimum cleaning efficiency is achieved without damaging the surface.

WARNING

Never slide the nozzle from low to high pressure or from high to low pressure when the gun is triggered.

Low Pressure Wash

Detergent Use

The use of detergents can dramatically reduce cleaning time and assist in the removal of difficult stains. Many detergents are customized for pressure washer use on specific cleaning tasks. Pressure washer detergents are as thick as water. Using thicker detergents – like dish soap – will clog the chemical injection system

NOTE

Use only detergents specially formulated for pressure washers.

You can effectively clean surfaces by combining the chemical action of detergents with high pressure rinses. On vertical surfaces, apply the detergent starting at the bottom and work your way upward. This method prevents the detergent from sliding down and causing streaks. Begin high pressure rinsing at the bottom and work your way upward. On particularly tough stains, use a brush in combination with detergents and high pressure rinsing.

CAUTION

Never make the nozzle pressure adjustment when the gun is triggered.

Adjusting the high-low nozzle when the gun is triggered can result in damage to the seals in the nozzle and will void your warranty.

System Flush

After using detergents, flush the suction system by placing the detergent suction tube into a bucket of clean water.

WARNING

NEVER turn the water supply off before turning the engine/motor off.

Depressurize System

To depressurize, turn engine/motor off, turn water supply off and squeeze gun trigger 2-3 times.

WARNING

NEVER disconnect the high pressure discharge hose from the machine while the system is pressurized.

To reduce the risk of bodily injury or property damage, always follow this procedure whenever spraying is stopped, when work is completed, and before checking or repairing any part of the system.

1. Engage the trigger safety latch.
2. Turn the unit off.
3. Remove the ignition cable from the spark plug.
4. Shut off the water supply.
5. Disengage the trigger safety latch and trigger the gun to relieve pressure.
6. Re-engage the trigger safety latch.
7. Before overnight storage, long term storage, or transporting unit, disconnect the water supply and turn off the fuel supply valve.

Operation

Operating Tips

CAUTION

Never operate your pressure washer without water.

CAUTION

Never connect your pressure washer to a hot water supply.

Connecting your pressure washer to a hot water source will significantly reduce the life of the pump and will void your warranty..

CAUTION

Running the unit for more than one minute without spraying water causes heat to build up in the pump.

Running the unit without spraying water can damage pump components and will void your warranty.

CAUTION

Release the trigger prior to switching the wand between high and low pressure.

Failure to do so may reduce the life of the o-rings in the wand and will void your warranty.

Stopping the Engine

1. Turn the ignition switch to the "Off" position.
2. Depressurize system.
3. Turn off and unplug all hoses. Never start or stop the pressure washer unless the water supply is turned on.

Maintenance

The owner/operator is responsible for all periodic maintenance.

WARNING

Never operate a damaged or defective pressure washer.

WARNING

Improper maintenance will void your warranty.

Complete all scheduled maintenance in a timely manner. Correct any issue before operating the pressure washer.

NOTE

For service or parts assistance, contact our help line at 1-877-338-0999.

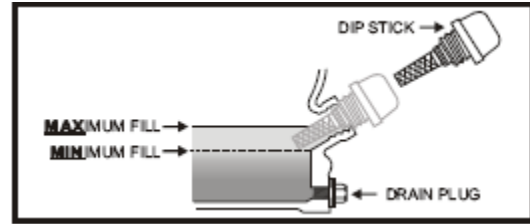
Engine Maintenance

To prevent accidental starting, remove and ground spark plug wire before performing any service.

Oil

Change oil when the engine is warm. Refer to the oil specification to select the proper grade of oil for your operating environment.

1. Remove the oil drain plug with a 15 mm socket and extension.
2. Allow the oil to drain completely.
3. Replace the drain plug.
4. Remove oil fill cap/dipstick to add oil.
5. Add 0.63 qt (0.6 L) of oil and replace oil fill cap/dipstick.
6. Dispose of used oil at an approved waste management facility.



Spark Plugs

1. Remove the spark plug cable from the spark plug.
2. Use the spark plug tool that shipped with your pressure washer to remove the plug.
3. Inspect the electrode on the plug. It must be clean and not worn to produce the spark required for ignition.
4. Make certain the spark plug gap is 0.7 - 0.8mm (0.028 - 0.031 in.).
5. Refer to the spark plug recommendation chart when replacing the plug.
6. Carefully thread the plug into the engine.
7. Use the spark plug tool to firmly install the plug.
8. Attach the spark plug wire to the plug.

Air Filter

1. Remove the wing nut holding the air filter cover to the assembly.
2. Remove the foam element.
3. Wash in liquid detergent and water. Squeeze thoroughly dry in a clean cloth.
4. Saturate in clean engine oil.
5. Squeeze in a clean, absorbent cloth to remove all excess oil.
6. Place the filter in the assembly.
7. Reattach the air filter cover and attach with the wing nut.

Cleaning

CAUTION

DO NOT spray engine with water.

Water can contaminate the fuel system.

Use a damp cloth to clean exterior surfaces of the engine.

Use a soft bristle brush to remove dirt and oil.

Use an air compressor (25 PSI) to clear dirt and debris from the engine.

Maintenance

Adjustments

CPE recommends that you contact our service line at 1-877-338-0999 for all other service and/or adjustment needs.

Maintenance Schedule

Follow the service intervals indicated in the schedule below.

Service your pressure washer more frequently when operating in adverse conditions.

Contact our help line at 1-877-338-0999 to locate the nearest Champion Power Equipment certified service dealer for your maintenance needs.

Every 8 hours or daily
Check oil level
Clean around air intake and muffler
First 5 Hours
Change oil
First 10 hours
Check/Adjust Valve Clearance *
Every 50 hours or every season
Clean air filter
Change oil if operating under heavy load or in hot environments
Every 100 hours or every season
Change oil
Clean/Adjust spark plug
Check/Adjust valve clearance *
Clean fuel tank and filter *
Every 3 years
Replace fuel line

* To be performed by knowledgeable, experienced owners or Champion Power Equipment certified service dealers

Pressure Washer Maintenance

Make certain that the pressure washer is kept clean and stored properly. Only operate the unit on a flat, level surface in a clean, dry operating environment. DO NOT expose the unit to extreme conditions, excessive dust, dirt, moisture or corrosive vapors.

CAUTION

DO NOT use a garden hose to clean the pressure washer.

Use a damp cloth to clean exterior surfaces of the pressure washer.

Use a soft bristle brush to remove dirt and oil.

Use an air compressor (25 PSI) to clear dirt and debris from the pressure washer.

Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Storage

For long term storage, please follow these guidelines.

Engine Storage

1. Allow the engine to cool completely before storage.
2. Clean the engine according to the instructions in the Maintenance section.
3. Drain all fuel completely from the fuel line and carburetor to prevent gum from forming.
4. Add a fuel stabilizer into the fuel tank.
5. Change the oil.

6. Remove the spark plug and pour about $\frac{1}{2}$ ounce of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
7. Reattach the spark plug.

Pressure Washer Storage

1. Allow the pressure washer to cool completely before storage.
2. Turn off the fuel supply at the fuel valve.
3. Clean the pressure washer according to the instructions in the Maintenance section.
4. Store the unit in a clean, dry area out of direct sunlight.

Specifications

Specifications

Engine Specifications

Engine 6.5 HP OHV CPE
EPA & CARB certified

NOTE

The gross horsepower of this engine was laboratory-rated at our factory in accordance with SAE J1940 as configured to meet safety, emissions, and operating requirements. The actual engine horsepower on this class of engine may be significantly lower.

Pressure Washer Specifications

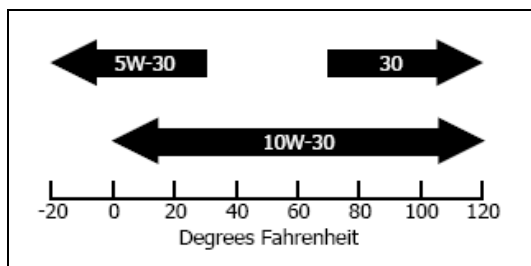
Fuel Capacity 0.97 gallons (3.67 L)
Weight 82.7 lbs. (37.5 kg)
Height 27.4 inches (69.5 cm)
Width 23.4 inches (59.5 cm)
Length 37 inches (94 cm)

Fuel

Fuel capacity is 0.97 US gallons (3.67 L).
Use regular unleaded gasoline with a minimum octane rating of 85.

Oil

Oil capacity is 0.63 qt (0.6 L).



Spark Plugs

Your pressure washer comes equipped with a 3/4" long reach plug (18mm)

Intermittent use (less than 1 hour/month) or colder temperatures (below 60°F)
NGK B6ES or equivalent

Moderate use (less than 3 hours/month) or seasonal temperatures (50-80°F)
NGK B7ES or equivalent

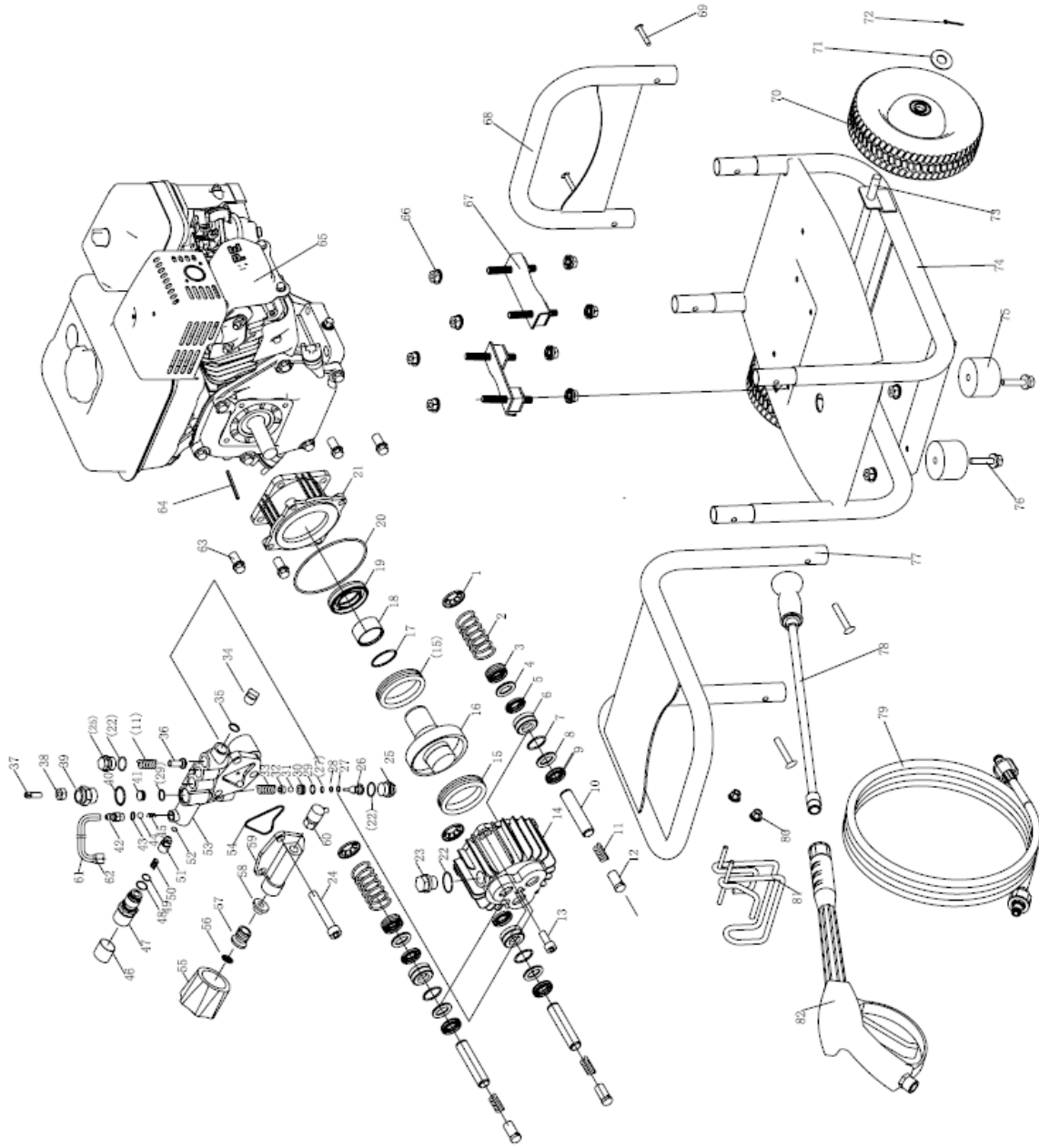
Extreme use (continuous) or hot climates (80-100°F)
NGK B8ES or equivalent

Make certain the spark plug gap is 0.7 - 0.8mm (0.028 - 0.031 in.).

Valve Clearance

Intake 0.13-0.17mm (0.005 – 0.007 in.)
Exhaust 0.18-0.22mm (0.007 – 0.009 in.)

Pressure Washer Parts Diagram



Specifications

Pressure Washer Parts List

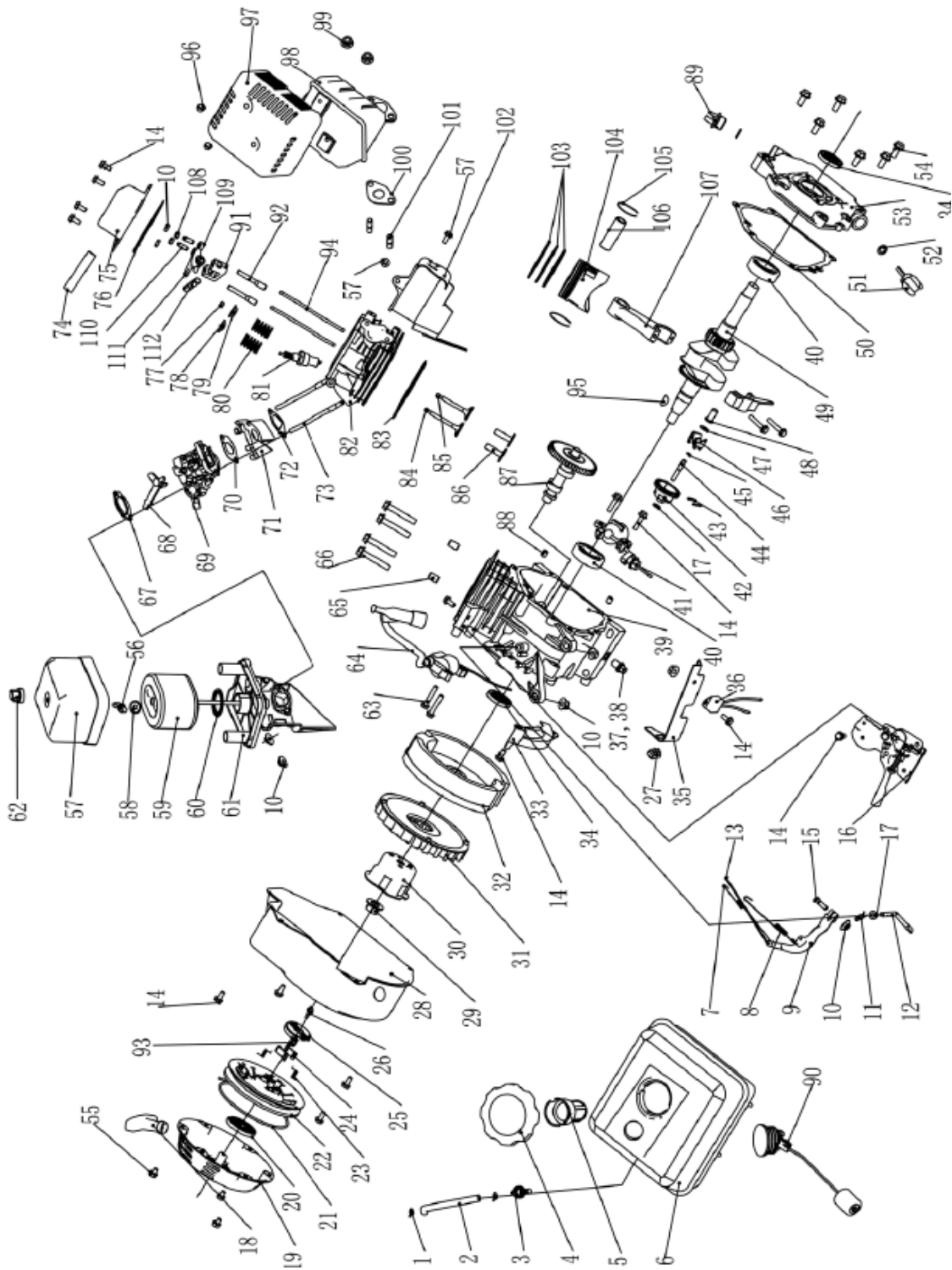
Item	Part Number	Description	Qty.
1	ST29QXG-310-0001	Spring Plate	3
2	ST29QXG-310-0002	Piston Spring	3
3	ST29QXG-310-0003	Oil Seal 15×24×6	3
4	ST29QXG-310-0004	Washer	3
5	ST29QXG-310-0005	Seal Washer	3
6	ST29QXG-310-0006	Packing Support	3
7	ST29QXG-310-0007	O-Ring 21.2×1.8	3
8	ST29QXG-310-0008	Washer	3
9	ST29QXG-310-0009	Water Seal	3
10	ST29QXG-310-0010	Plunger	3
11	ST29QXG-310-0011	Valve Spring	6
12	ST29QXG-310-0012	Inlet Valve Core	3
13	GB1667-S8-20	Screw M8×20	4
14	ST29QXG-310-0014	Back Housing	1
15	ST29QXG-310-0015	Thrust Bearing 35×37×68×21	2
16	ST29QXG-310-0016	Wobble Plate	1
17	ST29QXG-310-0017	O-Ring 30×1.8	1
18	ST29QXG-310-0018	Oil Seal Sleeve	1
19	ST29QXG-310-0019	Oil Seal B35528	1
20	ST29QXG-310-0020	O-Ring 85×2.65	1
21	ST29QXG-310-0021	Flange	1
22	ST29QXG-310-0022	O-Ring 13.2×1.8	1
23	ST29QXG-310-0023	Vent Plug	5
24	GB1667-S10-70	Screw M10×70	1
25	ST29QXG-310-0025	Plug	3
26	ST29QXG-310-0026	Unloader Piston	4
27	ST29QXG-310-0027	Backup Ring	1
28	ST29QXG-310-0028	O-Ring 6X1.8	2
29	ST29QXG-310-0029	O-Ring 9X1.8	1
30	ST29QXG-310-0030	Steel Ball Seat	2
31	ST29QXG-310-0031	Steel Ball 8mm	1
32	ST29QXG-310-0032	Steel Ball Cap	1
33	ST29QXG-310-0033	Regulating Pressure Spring	1
34	ST29QXG-310-0034	Screw Plug	1
35	ST29QXG-310-0035	Gasket 6×12×2	1
36	ST29QXG-310-0036	Outlet Valve Core	1
37	ST29QXG-310-0037	Adjustment Screw M6×20	3
38	GB41-N-6	Nut M6	1
39	ST29QXG-310-0038	Guide	1
40	ST29QXG-310-0039	O-Ring 16×1.8	1
41	ST29QXG-310-0040	Upper Piston	1
42	ST29QXG-310-0041	Fixed Injector	1
43	ST29QXG-310-0042	O-Ring 4.5×1.8	1
44	ST29QXG-310-0043	Steel Ball M5.5	1
45	ST29QXG-310-0044	Small Spring	1
46	ST29QXG-310-0045	Screw Jacket	1
47	ST29QXG-310-0046	Outlet Connector	1
48	ST29QXG-310-0047	O-Ring 15×1.8	1
49	ST29QXG-310-0048	O-Ring 12.5×1.8	1
50	ST29QXG-310-0049	Unilateral Valve Spring	1
51	ST29QXG-310-0050	Unilateral Valve Core	1

Specifications

Item	Part Number	Description	Qty.
52	ST29QXG-310-0051	O-Ring 4×2.65	1
53	ST29QXG-310-0052	Manifold	1
54	ST29QXG-310-0053	Pump Cover Seal Ring	1
55	ST29QXG-310-0054	Plastic Knob	1
56	ST29QXG-310-0055	Inlet Filter Gasket	1
57	ST29QXG-310-0056	Inlet Connector 1	1
58	ST29QXG-310-0057	Plastic Gasket	1
59	ST29QXG-310-0058	Pump Cover	1
60	ST29QXG-310-0059	Temperature Soft Plug	1
61	ST29QXG-310-0060	Chemical Hose	1
62	ST29QXG-310-0061	Chemical Filter	1
63	ST29QXG-310-0062	Bolt 5/16-22	4
64	ST29QXG-310-0063	Square Key 3/16×1.25	1
65	ST168F-2-100-0001S	6.5 HP Engine	1
66	GB41-N-8	Nut M8	10
67	ST29QXG-320-0001	Bottom Isolator	2
68	ST29QXG-320-0002	Protect Support	1
69	ST29QXG-320-0003	Pin	4
70	ST29QXG-320-0004	8" Solid Wheel	2
71	GB90-W-16	Washer ø16	2
72	GBT91-CP3.2-40	Cotter Pin 3.2×40	2
73	ST29QXG-320-0005	22" Axle	1
74	ST29QXG-320-0006	Frame	1
75	ST29QXG-320-0007	Rubber Frame Support	2
76	GB5781-B8-32	Bolt M8×32	2
77	ST29QXG-320-0008	Handle	1
78	ST29QXG-330-0001	Wand Extension	1
79	ST29QXG-330-0002	Pressure Hose	1
80	GB41-N-6	Nut M6	2
81	ST29QXG-320-0009	Hook	1
82	ST29QXG-330-0003	Gun Assembly	1

Specifications

Engine Parts Diagram



Engine Parts List

Item	Part Number	Description	Qty.
1	ST168F-107-0001	Clip	2
2	ST168F-107-0002-000001	Tube	1
3	ST168F-107-0003	Fuel Tank Joint	1
4	ST168F-107-0004	Fuel Tank Cap	1
5	ST168F-107-0005	Fuel Filter	1
6	ST168F-107-0006-000100	Fuel Tank	1
7	ST168F-111-0001	Throttle Return Spring	1
8	ST168F-111-0002	Governor Spring	1
9	ST160F-111-0003	Governor Arm	1
10	GB41-N-6	Nut M6	8
11	ST160F-111-0004	Lock Pin	1
12	ST160F-111-0005	Governor Arm Shaft	1
13	ST168F-111-0006	Governor Rod	1
14	GB5789-FB6-12	Flange Bolt M6×12	13
15	ST160F-111-0007	Governor Arm Bolt	1
16	ST168F-111-0008	Control Assembly	1
17	ST160F-111-0009	Governor Washer	2
18	ST160F-106-0001-000101	Recoil Starter Knob	1
19	ST160F-106-0002-000100	Recoil Starter Housing	1
20	ST160F-106-0003	Recoil Starter Spring	1
21	ST160F-106-0004	Recoil Starter Rope	1
22	ST160F-106-0005	Recoil Starter Reel	1
23	ST160F-106-0006	Return Spring	2
24	ST160F-106-0007	Starter Ratchet	2
25	ST160F-106-0008	Ratchet Guide	1
26	ST160F-106-0009	Setting Screw	1
27	ST168F-112-0001	Ignition Switch	1
28	ST168F-106-0010	Fan Cover	1
29	ST160F-106-0011	Nut M14	1
30	ST160F-106-0012	Start Hub	1
31	ST168F-106-0013	Cooling Fan	1
32	ST168F-112-0002	Flywheel	1
33	ST168F-103-0001	Side Place	1
34	ST168F-103-0002	Oil Seal	2
35	ST168F-112-0003	Switch Trim Plate	1
36	ST160F-112-0004	Diode	1
37	ST160F-103-0003	Drain Plug	2
38	ST160F-103-0004	Drain Bolt Washer	2
39	ST168F-2-103-0005-000100	Crankcase	1
40	GB276-BB-6205-UU	Radial Ball Bearing 6205 Unsealed	2
41	ST160F-103-0006	Oil Level Switch Assembly	1
42	ST160F-105-0001	Governor Weight Holder	1
43	ST160F-105-0002	Governor Weight Pin	2
44	ST160F-106-0003	Governor Shaft	1
45	ST160F-105-0004	Governor Holder Clip	1
46	ST160F-105-0005	Governor Weight	2
47	ST160F-105-0006	Governor Shaft Washer	1
48	ST160F-105-0007	Governor Cover	1
49	ST168F-2-105-0008-S	Crankshaft Complete	1

Specifications

Item	Part Number	Description	Qty.
50	ST168F-103-0007	Case Over Packing	1
51	ST160F-103-0008-010100	Oil Filler Cap	1
52	ST160F-103-0009	Oil Filler Cap Packing	2
53	ST168F-103-0010-000100	Crankcase Cover	1
54	GB5789-FB8-32	Flange Bolt 8×32	6
55	GB5789-FB6-8	Flange Bolt 6×8	5
56	ST160F-107-0007	Air Cleaner Cover Nut	1
57	ST168F-107-0008-000100	Air Cleaner Cover	1
58	ST168F-107-0009	Air Cleaner Element Washer	1
59	ST168F-107-0010-000101	Air Cleaner Element	1
60	ST168F-107-0011	Air Cleaner Cap Packing	1
61	ST168F-107-0012-000100	Air Cleaner Elbow Comp	1
62	ST168F-107-0013-010100	Air Cleaner Cover Nut	1
63	GB5789-B6-25	Flange bolt 6×25	3
64	ST168F-112-0005	Ignition Coil	1
65	FMD-DP10-16	Dowel pin 10×16	2
66	GB5789-FB8-55	Flange bolt 8×55	4
67	ST160F-107-0014	Carburetor Washer	1
68	ST168F-107-0015	Choke Lever	1
69	ST168F-2-1130005N	Carburetor Assembly	1
70	ST160F-107-0017	Carburetor Packing	1
71	ST168F-107-0018	Carburetor Insulator	1
72	ST168F-107-0019	Insulator Packing	1
73	ST160F-104-0001	Stud Bolt 6×113	2
74	ST160F-104-0002	Breather Tube	1
75	ST160F-104-0003-000100	Rocker Arm Cover	1
76	ST160F-104-0004	Rocker Cover Packing	1
77	ST160F-104-0005	Valve Rotator	1
78	ST160F-104-0006	Intake Valve Spring Retainer	1
79	ST160F-104-0007	Exhaust Valve Spring Retainer	1
80	ST160F-104-0008	Valve Spring	2
81	ST168F-112-0006	Spark Plug	1
82	ST168F-2-104-0009	Cylinder Head Complete	1
83	ST168F-2-104-0010	Cylinder Head Gasket	1
84	ST168F-104-0011	Intake Valve	1
85	ST168F-104-0012	Exhaust Valve	1
86	ST168F-2-103-0011	Valve Lifter	2
87	ST168F-2-105-0009	Camshaft Assembly	1
88	FMD-DP8-14	Dowel Pin 8×14	2
89	ST160F-103-0012-010100	Oil Filler Plug	1
90	ST168F-107-0020-000100	Fuel Meter Assembly	1
91	ST168F-104-0013	Pillow Block	1
92	ST168F-104-0014	Pillow Block Stud	2
93	ST160F-106-0014	Ratchet Guide Spring	1
94	ST168F-104-0015	Push Rod	2
95	ST160F-105-0010	Key	1
96	GB1667-S5-8	Screw M5×8	4
97	ST168F-110-0001	Muffler Protector	1
98	ST168F-110-0002	Muffler	1
99	GB41-N-8	Nut M8	2
100	ST160F-110-0003	Muffler Packing	1
101	ST160F-110-0004	Stud Bolt	2
102	ST168F-104-0017	Shroud	1
103A	ST168F-105-0011	First Ring (Chrome)	1

Specifications

Item	Part Number	Description	Qty.
103B	ST168F-105-0012	Second Ring (Black)	1
103C	ST168F-105-0013	Oil Ring Set	1
104	ST168F-2-105-0014	Piston	1
105	ST168F-105-0015	Piston Pin Clip	2
106	ST168F-105-0016	Piston Pin	1
107	ST168F-105-0017	Connecting Rod	1
108	ST168F-104-0018	Tappet Lock Nut	2
109	ST168F-104-0019	Exhaust Rocker Arm	1
110	ST168F-104-0020	Tappet Adjusting Bolt	2
111	ST168F-104-0021	Intake Rocker Arm	1
112	ST168F-104-0022	Rocker Arm Pin	1

Troubleshooting

Troubleshooting

Problem	Cause	Solution
Pressure washer will not start	No fuel	Add fuel
	Faulty spark plug	Replace spark plug
	Unit loaded during start up	Remove load from unit
Pressure washer will not start; Pressure washer starts but runs roughly	Low oil level	Fill crankcase to the proper level Place pressure washer on a flat, level surface
	Choke in the wrong position.	Adjust choke.
	Spark plug wire loose	Attach wire to spark plug
Pressure washer shuts down during operation	Out of fuel	Fill fuel tank
	Pressure washer not level	Place pressure washer on a flat, level surface
	Low oil level	Fill crankcase to the proper level. Place pressure washer on a flat, level surface
Pressure washer cannot supply enough power or overheating	Pressure washer is overloaded	Review load and adjust. See "Power Management"
	Insufficient ventilation	Check for air restriction. Move to a well ventilated area
Pressure washer gallops	Engine governor defective	Contact the help line
Repeated circuit breaker tripping	Overload	Review load and adjust. See "Power Management"
	Faulty cords or device	Check for damaged, bare or frayed wires. Replace defective device

Warranty

CHAMPION POWER EQUIPMENT 90 DAY LIMITED WARRANTY

Effective September 1, 2006. Replaces all undated warranties and all warranties dated before September 1, 2006.

Warranty Qualifications

Champion Power Equipment (CPE) will register this warranty upon receipt of your Warranty Registration Card and a copy of your sales receipt from one of CPE's retail locations as proof of purchase.

Please submit your warranty registration and your proof of purchase within ten (10) days of the date of purchase.

Repair/Replacement Warranty

CPE warrants to the original purchaser that the mechanical components will be free of defects in material and workmanship for a period of ninety (90) days from the original date of purchase (30 days for commercial & industrial use). Transportation charges on product submitted for repair or replacement under this warranty are the sole responsibility of the purchaser. This warranty only applies to the original purchaser and is not transferable.

Do not return the unit to the place of purchase

Contact CPE's Technical Service and CPE will troubleshoot any issue via phone or e-mail. If the problem is not corrected by this method, CPE will, at its option, authorize evaluation, repair or replacement of the defective part or component at a CPE Service Center. CPE will provide you with a case number for warranty service. Please keep it for future reference. Repairs or replacements without prior authorization, or at an unauthorized repair facility, will not be covered by this warranty.

Warranty Exclusions

This warranty does not cover the following repairs and equipment:

Normal Wear

Pressure washers need 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 as a whole.

Installation, Use and Maintenance

This warranty will not apply to parts and/or labor if this pressure washer is deemed to have been misused, neglected, involved in an accident, abused, loaded beyond the pressure washer's limits, modified, installed improperly or connected incorrectly to any water supply. Normal maintenance such as spark plugs, air filters, adjustments, fuel system cleaning and obstruction due to buildup is not covered by this warranty.

Other Exclusions

This warranty excludes:

Cosmetic defects such as paint, decals, etc.
Wear items such as filter elements, o-rings, etc.

Accessory parts such as starting batteries, and storage covers.

Failures due to acts of God and other force majeure events beyond the manufacturer's control.

Problems cause by parts that are not original Champion Power Equipment parts.

This warranty does not apply to pressure washers used for prime power in place of a utility.

Limits of Implied Warranty and Consequential Damage

Champion Power Equipment disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this pressure washer. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**

A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by

Warranty

reference to the purchase date of the original unit.

This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

Contact Information

Address

Champion Power Equipment, Inc.
Customer Service
10006 Santa Fe Springs Rd.
Santa Fe Springs, CA 90670

Customer Service

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)
Toll Free: 1-877-338-0999
Fax no.: 1-562-236-9429

Technical Service

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)
Toll Free: 1-877-338-0999
tech@championpowerequipment.com

**Champion Power Equipment, Inc (CPE),
The California Air Resources Board (CARB) and the United States Environment Protection
Agency (U.S. EPA.)
Emission Control System Warranty**

Your Champion Power Equipment (CPE) engine complies with both the U.S. EPA and state of California Air Resources Board (CARB) emission regulations.

YOUR WARRANTY RIGHTS AND OBLIGATIONS:

The California Air Resources Board, US EPA AND CPE are pleased to explain the Federal and California Emission Control Systems Warranty on your 2005 and later, small off-road engine. In California, new, small off-road engines must be designed, built and equipped to meet the State's stringent anti smog standards. In the other states, new engines must be designed, built and equipped, at the time of sale, to meet U.S. EPA regulations for small non-road engines. CPE must warrant the emission control system on your small off-road engine for the period of time listed below, provided there has been no abuse, neglect, unapproved modification, or improper maintenance of your small off-road engine.

Your emission control system may include parts such as the carburetor, fuel-injection system, the ignition system, catalytic converter and fuel lines. Also included may be hoses, belts, connectors and other emission related assemblies. Where a warrantable condition exists, CPE will repair your small off-road engine at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

This emission control system is warranted for two years, subject to provisions set forth below. If, during the warranty period, emission related part on your engine is defective in materials or workmanship, the part will be repaired or replaced by CPE.

OWNER WARRANTY RESPONSIBILITIES:

As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. CPE recommends that you retain all your receipts covering maintenance on your small off-road engine, but CPE cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small off-road engine owner, you should however be aware that CPE may deny you warranty coverage if your small, off-road engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road engine to an Authorized CPE service outlet, CPE dealer or CPE, Santa Fe Springs, Ca. as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact:

Champion Power Equipment, Inc.
Customer Service
10006 Santa Fe Springs Road
Santa Fe Springs, CA 90670
Tel: (888) 696-0668

The emission warranty is a defects warranty. Defects are judged on normal engine performance. The warranty is not related to an in-use emission test.

Warranty

EMISSION CONTROL SYSTEM WARRANTY

The following are specific provisions relative to your Emission Control System Warranty Coverage.

Emission Control System Warranty (ECS Warranty) for 1995 and later model year California small off-road engines (for other states, 1997 and later model year engines):

1. APPLICABILITY: This warranty shall apply to 1995 and later model year California small off-road engines (for other states, 1997 and later model year engines). The ECS Warranty Period shall begin on the date the new engine or equipment is delivered to its original, end-use purchaser, and shall continue for 24 consecutive months thereafter.

2. GENERAL EMISSIONS WARRANTY COVERAGE

CPE warrants to the original, end-use purchaser of the new engine or equipment and to each subsequent purchaser that each of its small off-road engines is:

- a. Designed, built and equipped so as to conform with all applicable regulations adopted by the Air Resources Board pursuant to its authority in Chapters 1 and 2, Part 5, Division 26 of the Health and Safety Code, and
- b. Free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to the part as described in the engine manufacturer's application for certification for a period of two years.

3. THE WARRANTY ON EMISSION-RELATED PARTS WILL BE INTERPRETED AS FOLLOWS:

- a. Any warranted part that is not scheduled for replacement as required maintenance in the Owners Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by CPE according to Subsection "d" below. Any such part repaired or replaced under the ECS Warranty shall be warranted for any remainder of the ECS Warranty Period.
- b. Any warranted, emissions-related part which is scheduled only for regular inspection as specified in the Owners Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary", shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
- c. Any warranted, emissions-related part which is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by CPE according to Subsection "d" below. Any such emissions-related part repaired or replaced under the ECS Warranty, shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.
- d. Repair or replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a CPE Authorized Service Outlet.
- e. The owner shall not be charged for diagnostic labor which leads to the determination that a part covered by the ECS Warranty is in fact defective, provided that such diagnostic work is performed at a CPE Authorized Service Outlet.
- f. CPE shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of an emission-related part covered by the ECS Warranty.
- g. Throughout the ECS Warranty Period, CPE shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.
- h. Any CPE Authorized and approved emission-related replacement part may be used in the performance of any ECS Warranty maintenance or repair and will be provided without charge to the owner. Such use shall not reduce CPE's warranty obligation.

Warranty

i. Unapproved add-on or modified parts may not be used to modify or repair a CPE engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. CPE shall not be liable hereunder for failures of any warranted parts of a CPE engine caused by the use of such an unapproved add-on or modified part.

EMISSION-RELATED PARTS INCLUDE THE FOLLOWING: (using those portions of the list applicable to the engine)

Systems covered by this warranty	Parts Description
Fuel Metering System	Fuel regulator, Carburetor and internal parts
Air Induction System	Air cleaner, Intake manifold
Ignition System	Spark plug and parts, Magneto ignition system
Exhaust System	Exhaust manifold, catalytic converter
Miscellaneous Parts	Tubing, Fittings, Seals, Gaskets, and Clamps associated with these listed systems.
Evaporative Emissions	Fuel Tank, Fuel Cap, Fuel Line, Fuel Line Fittings, Clamps, Pressure Relief Valves, Control Valves, Control Solenoids, Electronic Controls, Vacuum Control Diaphragms, Control Cables, Control Linkages, Purge Valves, Vapor Hoses, Liquid/Vapor Separator, Carbon Canister, Canister Mounting Brackets, Carburetor Purge Port Connector

TO OBTAIN WARRANTY SERVICE:

You must take your CPE engine or the product on which it is installed, along with your warranty registration card or other proof of original purchase date, at your expense, to any Champion Power Equipment dealer who is authorized by Champion Power Equipment, Inc. to sell and service that CPE product during his normal business hours. Claims for repair or adjustment found to be caused solely by defects in material or workmanship will not be denied because the engine was not properly maintained and used.

If you have any questions regarding your warranty rights and responsibilities, or to obtain warranty service, please write or call the Customer service of Champion Power Equipment, Inc.

**Champion Power Equipment, Inc.
10006 Santa Fe Springs Road
Santa Fe Springs, CA 90670
(888) 696-0668
Attn: Customer Service**

Notes

Notes