

GASOLINE HIGH PRESSURE WASHER

OWNERS MANUAL



CAUTION Read the instructions before using the machine.

GENERAL SAFETY INSTRUCTIONS

- Read instructions carefully before operating this product.
- Keep bystanders away.
- This product is for outdoor use only.
- Ensure the engine is stopped before carrying out adjustments, cleaning or maintenance.
- Always turn off the engine and water supply when finished.
- Do not use the product if found to be damaged.
- Only use with detergents specified by the manufacturer. Other chemicals may compromise the safety of the product.
- Do not direct the pressure jet towards mechanical parts containing lubricant grease.
- Clean vehicle tyres from a minimum of 50cm to avoid damage by the high pressure jet.
- Do not point high pressure jets at people, animals, live electrical parts or the product itself.
- Do not use accessories such as hoses and connections that are not advised by the manufacturer.
- Engage the high pressure safety catch located on the gun when not in use.
- Do not step/stand on the high pressure hose.
- Ensure the nozzle is securely attached before using the Product. High pressure can cause it to be fired from the lance with considerable force, and could cause injury damage.
- Be ready for the kick-back force and the sudden torque on the spray assembly when operating the trigger.
- A high pressure jet can remove paint and other surface finish. It can also damage tarmac and grouting.
- Switch off completely when not attended.
- The hose is designed specifically for operation with high pressures. Take care to avoid damage that may prevent correct operation of the product.
- This product is not to be used by children or anyone with reduced capabilities.
- Always completely unwind the high pressure hose prior to operation.
- Make sure that the machine is switched off before unwinding the high pressure hose, and take care not to pull the machine over.
- Do not let the high pressure hose contact the hot engine exhaust.
- Do not use this product indoors.
- Keep exhaust emissions away from air intakes.

Explanation of the symbols on the appliance!



Warning! Read the operating instructions before use!



Wear hearing protection!



Warning! Do not inhale exhaust fumes!



Wear safety goggles!



Attention! Hot surfaces! Risk of burns!



High-pressure jets can be dangerous if misused. Do not aim at people, animals, active electrical equipment or at the appliance itself.



Wear protective gloves!

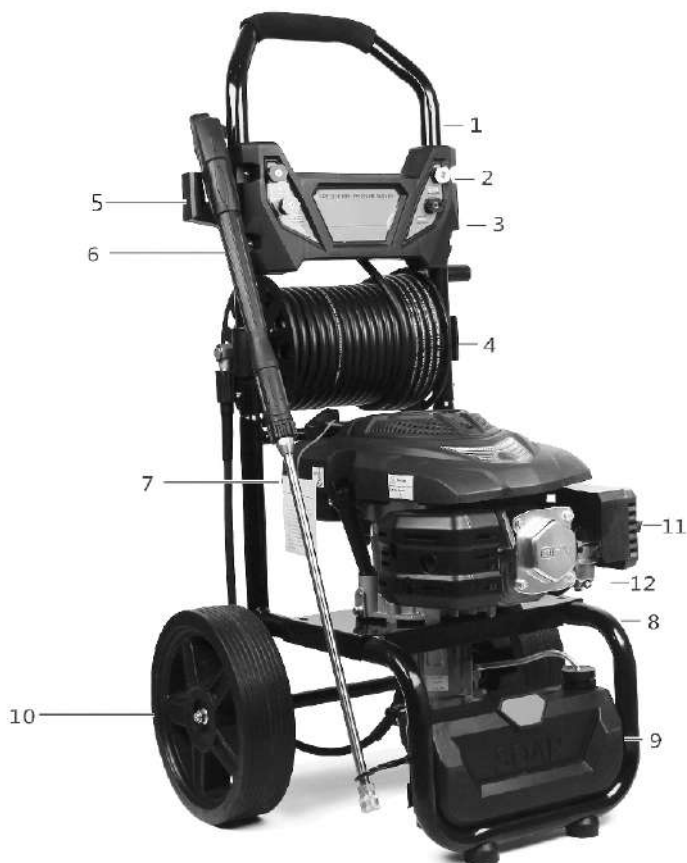


Wear safety shoes!

TECHNICAL PARAMETERS:

Model	170/180CZ	Model	170/180CZ
Permissible pressure	170/200Bar	Fuel tank	1.55L
Rated pressure	150/180Bar	Oil volume - engine	0.5L
Max flow	8.5LPM	Self-pumping start time	1min
Rated flow	8/7LPM	Suction height	1m
Rated power	7HP	Cut-out function at low oil level	Yes
Engine speed	3000RPM	Size(L*W*H)	625*585*640mm
Allowable temperature	0-60°C	Weight	approx. 30kg

GETTING TO KNOW YOUR PETROL PRESSURE WASHER



1.Hand
4.Hose
7.Lance
10.Wheel

2.Nozzle
5. Hook
8.Lower frame
11 .Air cleaner

3.Panel
6.Hand spray gun
9. Soap tank
12.Spark plug

ASSEMBLY

NOTE: Every machine is tested during production, so there may be a few drops of water inside the pump assembly.

Attach Handle



FIG. 1

Install the hook for hose



FIG. 2

Install the panel on the upper frame



FIG. 3

Press the Lock A, install the upper frame into lower frame

Connect Hose and Water Supply to Pump

IMPORTANT: To avoid pump damage, you must assemble the nozzle extension to the spray gun and attach all hoses before you start the engine.

1). Uncoil high pressure hose and attach one end of hose to base of spray gun (Figure 4). Tighten by hand.

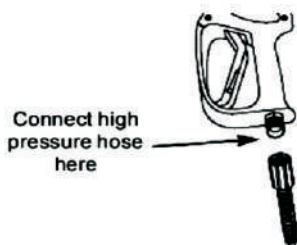


Figure 4. Connect High Pressure Hose to Spray Gun

2). Attach other end of high pressure hose to high pressure outlet on pump (Fig5). Tighten by hand.

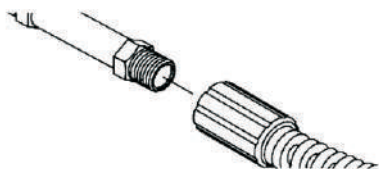


Fig 5. Connect High Pressure Hose to Pump

3). Before connecting garden hose to water inlet, inspect inlet screen. Clean screen if it contains debris or have it replaced if damaged. Refer to the section "O-Ring Maintenance" on page 11 if inlet screen is damaged. **DO NOT RUN PRESSURE WASHER IF INLET SCREEN IS DAMAGED.**

4). Run water through garden hose for 30 seconds to clean out any debris.

IMPORTANT: DO NOT siphon standing water for the water supply. Use **ONLY** cold clean water (less than 60°C).

5). Connect garden hose (not to exceed 15m in length) to water inlet. Tighten by hand (Fig 6).
Oil Dipstick



Fig 6

CAUTION! There **MUST** be at least ten feet of unrestricted garden hose between the pressure washer inlet and any flow shut off device, such as a 'Y' shut-off connector or other convenience-type water shut-off valve. Damage to pressure washer resulting from disregarding this warning will not be covered by the warranty.

6). Turn on water and squeeze trigger on gun to purge pump system of air and impurities.

ADD OIL

See the Technical data table for the oil to be used.

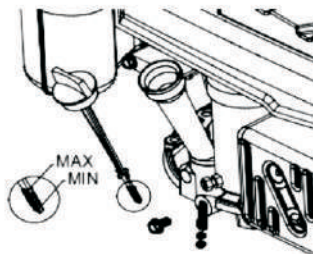
1. Place engine level.
2. Clean around oil fill.
3. Remove the filler cap, clean the tip of the dipstick, insert and tighten down.
4. Remove dipstick again and check the oil level that must be between the "MIN" and "MAX" marks.
5. If oil is required, add oil of the same kind up to the "MAX" mark, being careful not to spill any outside the oil fill.
6. Close the filler cap and wipe off any spilled oil.

ADD FUEL

See the Technical data table for the fuel characteristics. Add fuel only when the engine is cold.

1. Place the lawnmower level.
2. Clean around the filler cap
3. Remove the filler cap
4. Using a clean funnel, fill tank to approximately 5 mm below the inner edge of the fillerneck, being careful not to spill fuel.
5. Tighten the filler cap back and clean any spilled fuel.

NOTE: not on gravel or similar. Fill the tank with petrol, not oil-blended. Lead-free petrol may be used. Do not fill with petrol while the engine is running.



Operation

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 the proper level in the engine crankcase.
- 3). Add proper gasoline to fuel tank.
- 4). Check for properly tightened hose connections.
- 5). Check to make sure that there are no kinks, cuts, or damage to the high pressure hose.
- 6). Provide a proper water supply at an adequate flow.
- 7). Be sure to read "Safety Rules".

HOW TO USE 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). Place pressure washer near an outside water source capable of supplying water at a flow rate greater than 13L per minute and no less than 20 PSI at pressure washer end of garden hose.
- 2). Check that high pressure hose is tightly connected to spray gun and pump. See "Preparing Pressure Washer for Use" for illustrations.
- 3). Make sure unit is in a level position.
- 4). Connect garden hose to water inlet on pressure washer pump. Turn ON water.

CAUTION! DO NOT run the pump without the water supply connected and turned on. You must follow this caution or the pump will be damaged.

- 5). Do not connect to the nozzle when starting the engine.
- 6). Squeeze trigger on spray gun to relieve air pressure caused by turning ON water. Water will flow out of spray gun in a thin stream. Continue to hold trigger until there is a steady stream of water and no air remains in system. This will make it easier to pull start engine. Release trigger.
- 7). Engage safety latch to spray gun trigger (Fig 7).

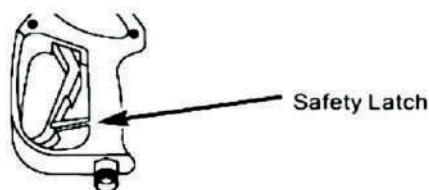


Fig 7. Spray Gun with Safety Latch Engaged

NOTE: If the recoil starter is hard to pull, squeeze the spray gun trigger to relieve internal pump pressure.

8). Starting engine:

- a). Turn the engine switch to the ON position (Fig 8).
- b). Push down the button three times (Fig 9).
- c). Then pull cord rapidly.
- d). When engine starts, release the recoil starter.

NOTE: If the engine does not start, repeat whole starting procedure.

NOTE: If the engine starts but does not keep running, repeat the whole starting.

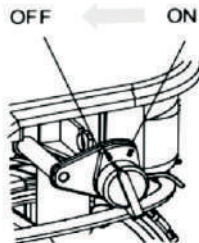


Fig 8.

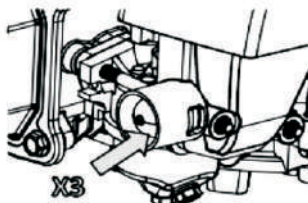


Fig 9.

USING THE DETERGENT FACILITY (Fig. 10)

Fill a suitable container with pressure water detergent. Do not use washing up liquid as it contains salt. We recommend the use of good quality pressure washer detergent for use with this pressure washer. Most automobile detergents are a combination of a detergent and a wax solution. The viscosity (thickness) of the detergent will increase in cold weather. It is recommended that this type of detergent is diluted with water before filling the container. When using combination wash and wax solutions we recommend that they are diluted before use. As a general guide we would recommend a dilution rate of 50/50. However a trial and error process would determine the ideal dilution rate for a particular detergent.

NOTES:

A thick viscous detergent would not flow freely from the detergent tank and the residue would cause a blockage flow system. After using the detergent facility it should be flushed thoroughly using copious amount of water. To activate detergent delivery, fit the Black LOW PRESSURE nozzle to the end of the lance. Submerge the end of the detergent pick up pipe into your container of pressure water detergent. Suction and mixing will occur automatically as the water flows through the pump.

FIG. 10

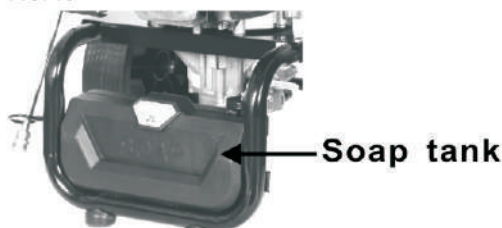


FIG. 11



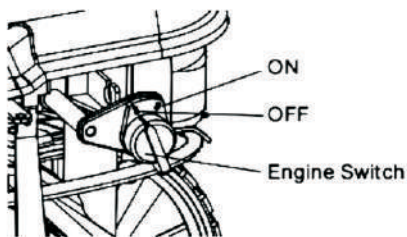
CLEARING A BLOCKAGE (Fig. 11)

If at any time the flow rate stutters or is inconsistent, release the trigger and switch OFF the machine. Squeeze the trigger to relieve any pressure and check the jet in the end of the lance for any blockage. If a blockage is suspected use some wire to clean the inside of the nozzle.

Stopping the engine

Please follow the steps below to stop the engine:

- 1). Turn the engine switch to the OFF position.
- 2). Squeeze trigger on the spray gun to relieve pressure in the hose.



NOTE: A small amount of water will squirt out when you release the pressure.

Maintenance

Maintenance Schedule

REGULAR SERVICE PERIOD		Each time	20 Hrs or first month	50 Hrs or every 3 months	100 Hrs or every 6 months	300 Hrs or every year
Engine oil	Check level	O				
	Change		O		O	
Pump Oil	Change				O	
Air cleaner element	Check	O				
	Clean			O(1)		
	Change					O*
Fuel sediment cup	Clean				O	
Spark plug	Clean				O	Change
Valve clearance	Readjust					O(2)
Fuel tank and fuel filter	Clean	Every 2 years (2)				
Fuel line	Change	Every 2 years (2) (between fuel tank and carburetor)				

*:Change paper filter element only.

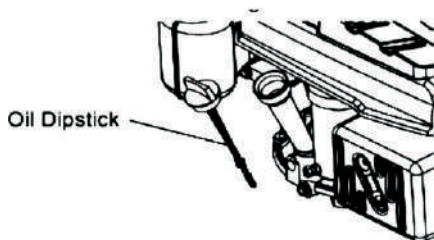
(1): Service more frequently when used in dusty areas.

(2): These items should be serviced by an authorized dealer, unless the owner has the proper tools and is mechanically proficient.

Changing engine oil

Warm up the engine and drain the oil to assure rapid and complete draining.

- 1). Remove the oil dipstick and the drain screw, then drain the oil.
- 2). Reinstall the drain screw and tighten it.



NOTE: Be sure to keep the environment clean when disposing used engine oil. We suggest you collect the waste oil in a container to be sent to a waste disposal site or a recycling service center instead of spilling it in the garbage or on the ground.

- 3). Place the engine in a level position and refill with recommended oil with capacity of **0.5L**.

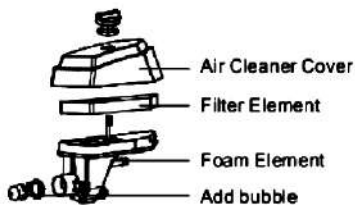
Maintaining the air cleaner

A dirty air cleaner will restrict air flow to the carburetor and result in less pump power. Service the air cleaner periodically to prevent carburetor malfunctions. More frequent maintenance will be necessary if the pump is working in an extremely dirty environment.

▲ CAUTION

Never run the pump without an air cleaner or with a damaged air cleaner. The dirt or dust if sucked into the engine may quicken engine wear.

- 1). Unscrew the wing nut and remove the air cleaner cover.
- 2). Unscrew the wing nut and remove filter element and foam element.
- 3). Separate filter element from foam element.
- 4). Replace the element if damaged. Replace the paper filter element in accordance with maintenance schedule.



Cleaning filter element:

Slightly tap the filter element a few times, then blow it with compressed air (pressure ≤ 207 KPa) from inside. Do not clean the filter element with brush, which will block the air passages of the element.

Cleaning foam filter element:

Wash the element in hot water with detergent or in a non flammable or high flash point solvent. Let it dry thoroughly and immerse it into clean oil and then squeeze out the excess oil.

- 5). Clean the lower part of air cleaner, air cleaner cover and rubber gasket.
- 6). Combine the filter element and foam filter element.
- 7). Reinstall the air cleaner element and the cover.

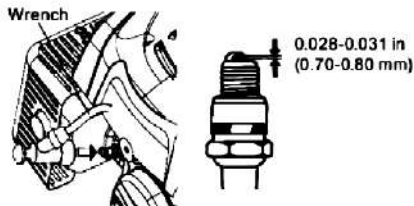
Maintaining the spark plug

The recommended type of spark plug is F7RTC

▲ CAUTION

Take care not to touch the muffler due to high temperature on it's surface when the engine is running or just stops.

- 1). Remove the plug cap.
- 2). Remove the spark plug by the wrench.
- 3). Visually check the spark plug. Discard it if the electrode or insulation ring is damaged or the insulator is broken or cracked. Check the plug gap with a feeler gauge. The gap should be 0.70 - 0.80 mm. Vary the gap by moving the side electrode if necessary.
- 4). Thread the plug in by hand to prevent cross-threading.
- 5). Tighten the spark plug with the wrench to compress the washer.
- 6). Reinstall plug cap.



Troubleshooting

The engine will not start:

1. Is there enough fuel.
2. Has the fuel reached the carburetor.

To check, remove the oil drain screw and turn the fuel valve on.

CAUTION

Should there be a spill of fuel, be sure to clean it before checking the spark plug or start the engine.

Otherwise the spilled fuel or fuel vapor may get ignited.

4. Is the engine switch ON.
5. Is there enough engine oil or does the oil exceed the upper level.
6. Is the spark plug generating sparks. Uninstall and check the spark plug, clear off the dirt from around the plug and dry it. Fit the spark plug into the plug cap. Replace the spark plug if necessary.
7. If the engine still refuses to get started, contact an authorized dealer.

The pump will not work

Problema	Causa	Solucion
Pump has following problems: failure to produce pressure, erratic pressure, chattering, loss of pressure, low water volume.	<ol style="list-style-type: none">1. Nozzle in low pressure mode.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.	<ol style="list-style-type: none">1. Pull nozzle backward for high pressure mode.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.

Storage

Let the cool down. Wait at least 30 minutes after it stops. Clean the pump and coat rust-proof grease if necessary.

CAUTION

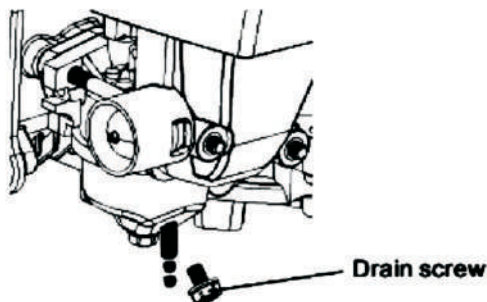
The cleaning water under pressure may go into air filter and muffler, or even go into cylinder which will result in corrosion damage.

The pump does not work

Before storing the pump for over 14 days:

- 1). Make sure the storage area is free of moisture and dust.
- 2). Drain off the fuel.
 - A. Turn off the fuel valve and remove the drain screw. Drain the fuel into a suitable container.
 - B. Turn off the fuel valve and drain the fuel into a suitable container.
 - C. Reinstall the drain screw. a. b. c

- 3). Reinstall the fuel cup and drain screw and tighten them.
- 4). Replace engine oil.
- 5). Remove the spark plug.
- 6). Pour one spoon of clean engine oil (5-10 ml) into cylinder.
- 7). Pull the starter cord to distribute the oil inside the cylinder.
- 8). Reinstall the spark plug.
- 9). Pull up the starter handle until a resistance is felt. In that case, both the inlet valve and outlet valve is closed to prevent corrosion inside the engine. Pull back the starter handle gently.



Preparing the pressure washer for storage

Water should not remain in the unit for long periods of time. Sediments or minerals can deposit on pump parts and "freeze" pump action. If you do not plan to use the pressure washer for more than 30 days, follow this procedure:

- 1). Flush chemical injection hose by placing the filter into a pail of clean water while running pressure washer in low pressure nozzle. Flush for one to two minutes.
- 2). Shut off the engine and let it cool, then remove high pressure and garden hoses. Disconnect spark plug wire from spark plug.
- 3). Empty the pump of all pumped liquids by pulling the recoil handle about 6 times. This should remove most of the liquid in the pump.
- 4). Use Pump Saver to prevent corrosion build up and freezing of pump.
- 5). Store unit in a clean, dry area.

Protecting the Pump

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

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

CAUTION! You must protect your unit from freezing temperatures. Failure to do so will permanently damage your pump and render your unit inoperable. Freeze damage is not covered under warranty.

CAUTION! Read and follow all cautions and warnings on the Pump Saver can label. Always wear eye protection when using 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.

NOTE: PumpSaver will drip from pump after treatment and will stain wood and concrete.

NOTE: If PumpSaver is not available, draw RV antifreeze (non-alcohol) into the pump by pouring the solution into a 3-foot section of garden hose connected to inlet adapter and pulling recoil handle twice.