WARTON®

PROTEGE PUMPS®

Petrol/Diesel Powered Protégé and Warton Water Pumps

User Manual

[Revision 1.0 September 2016]

RETAIN THIS MANUAL FOR FUTURE REFERENCE

PLEASE READ THIS MANUAL CAREFULLY BEFORE USE

Safety

Safety messages are designed to alert you to possible dangers or hazards that could cause death, injury or equipment or property damage if not understood or followed. Safety messages have the following symbols:

 You WILL be KILLED or SERIOUSLY INJURED if you do not follow instructions.	 You CAN be KILLED or SERIOUSLY INJURED if you do not follow instructions.	 You CAN be INJURED if you do not follow instructions or equipment damage may occur.

It is important that you read and understand the instruction manual before use and keep the manual in a safe place for future reference. Safety information presented here is generic in nature – some advice may not be applicable to every piece of equipment.

All safety precautions must be observed to reduce the risk of personal injury when operating the equipment.

The term “equipment" refers to your product, be it electrical mains, battery or petrol engine powered.

IMPORTANT – Handle the equipment safely and carefully.

BEFORE USE - If you are not familiar with the safe operation/handling of this equipment, or are in any way unsure of any aspect of suitability or correct use it for your application, you should complete training conducted by a person or organization qualified in safe use and operation of this equipment, including fuel/electrical handling and safety.

WARNINGS

- Read all safety warnings and all instructions. Failure to follow warnings and instructions may result in electric shock, fire and/or serious injury.
- Never run a petrol engine in confined areas.
- Do not operate the equipment in flammable or explosive environments, such as in the presence of flammable liquids, gases or dust. Engine and equipment may create sparks or heat that may ignite vapors, dust etc
- Keep clear of moving parts.
- This equipment may be a potential source of electric shock if misused.
- Do not operate the equipment if it is damaged, malfunctioning or is in an excessively worn state.
- Do not allow others to use the equipment unless they have read this manual and are adequately trained.
- When using the equipment, basic safety precautions detailed here must always be followed to reduce the risk of fire, electric shock, personal injury and material damage.
- When wiring electrically powered equipment, follow all electrical and safety codes.
- Ensure all power sources conform to equipment voltage requirements and are disconnected before connecting equipment.

General Work Area Safety

Work areas should be clean and well it.

Do not operate the equipment if bystanders, animals etc are within operating range of the equipment or the general work area.

Personal Safety

Keep packaging away from children - risk of suffocation! Operators must use the equipment correctly. When using the equipment, consider conditions and pay due care to persons and property.

Prevent unintentional starting of the equipment - ensure equipment and power source switches are in the OFF position before connecting or moving the equipment. Do not carry equipment with hands/fingers touching any controls. Remove any tools or other items that are not a part of the equipment from it before starting or switching on.

Stay alert and use common sense when operating equipment. Do not overreach. Keep proper footing and balance at all times. Do not use equipment when tired or under the influence of drugs, alcohol or medication. This equipment is not intended for use by persons with reduced physical, sensory or mental capabilities.

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. Always wear eye protection. Protective equipment such as respirators, non-skid safety shoes, hard hat, hearing protection etc should be used for appropriate conditions. Other people nearby should also wear appropriate personal protective equipment. Do not wear loose clothing or jewellery, which can be caught in moving parts. Keep hair and clothing away from the equipment.

If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

General Equipment Use and Care

Do not force the equipment. Use the correct equipment for your application. The correct equipment will perform better and be safer within its design parameters. Do not use the equipment if the ON/OFF switch malfunctions – any equipment that cannot be controlled with the ON/OFF switch is dangerous and must be repaired.

Use the equipment and accessories etc. in accordance with these instructions, taking into account working conditions and the work to be performed. Using the equipment for operations different from those intended could result in hazardous situations.

Before use, inspect the equipment for misalignment or binding of moving parts, loose components, damage or any other condition that may affect its operation. If damaged, have the equipment repaired by an authorized service center or technician before use.

Always keep the equipment and accessories (cutting tools, nozzles, bits etc) properly maintained. Keep the equipment, controls and handles dry and free from dirt, oil and grease.

Store the equipment out of reach of children or untrained persons. To avoid burns or fire hazards, let the equipment cool completely before transporting or storing. Never place the equipment in places where there are flammable materials, combustible gases or combustible liquids etc.

The equipment is not weatherproof, and should not be stored in direct sunlight, at high ambient temperatures or locations that are damp or very humid.

Pump Use and Care

WARNINGS

- The water pump creates high pressures. Do not disconnect the pump or pipework until internal pressure has been released.
- Do not pump flammable or explosive liquids such as fuels, oil, kerosene, solvents or thinners.
- Pump only liquids compatible with pump component materials. Failure to follow to this warning can result in serious personal injury, death and/or property damage.
- Do not operate the pump without a liquid source to draw in.
- Maintain the pump and hoses in good operating condition.
- Operate the pump on solid, level surfaces only. Do not hold or suspend the pump by hoses or other unstable means.
- Improper duty cycle and/or rapid start/stop conditions caused by undersized outlets may cause internal thermal overload protection (if equipped) to trip or can cause premature motor failure due to excessive heat.

General Fuel Safety

Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources.

- Do not spill fuel. If you spill fuel, wipe it from equipment immediately – if fuel gets on your clothing, change them immediately
- Do not smoke near fuel.
- Always shut off the engine before refuelling.
- Do not refuel a hot engine.
- Open the fuel cap carefully to allow any pressure build-up in the tank to release slowly.
- Always refuel in well ventilated areas.
- Always check for fuel leakage. If fuel leakage is found, do not start or run the engine until all leaks are fixed.

General Service Information

- Have the equipment serviced or repaired at authorized service centers by qualified personnel only.
- Replacement parts must be original equipment manufacturer (OEM) to help ensure that equipment safety is maintained.
- Do not attempt any maintenance or repair work not described in this instruction manual.
- After use, the equipment and components may still be hot – allow the equipment to cool and disconnect spark plugs and/or electrical power sources and/or batteries from it before making adjustments, changing accessories or performing repair or maintenance.
- Do not make adjustments while the equipment is running.
- Perform all service related activities under suitable conditions, such as a workshop etc.
- Replace any worn, damaged or missing warning labels immediately.
- Do not clean equipment with solvents, flammable liquids or harsh abrasives.

DANGER

Running petrol engines in confined areas **CAN KILL IN MINUTES**. Engine exhaust fumes contain carbon-monoxide – a deadly gas that you cannot smell or see.

NEVER run a petrol engine in confined areas EVEN IF windows and doors are open. ONLY run petrol engines OUTDOORS and away from doors, windows and vents.

Do not operate the equipment in hazardous locations, such as where there may be a risk of fire or explosions from flammable liquids, gases or dust.

Do not operate the equipment in confined areas where exhaust gases, smoke or fumes could reach dangerous concentrations.

Do not refuel petrol engines while they are running.

Never smoke while refuelling petrol engines.

For generators, the electrical output is potentially lethal and must only be connected to a fixed electrical installation by an appropriately licensed person.

Be aware that the equipment may include hazardous components, such as blades, hot surfaces and moving parts.

Table of Contents

Applicable Models

This manual applies to the following Protégé and Warton water pumps:

PMPDSLPROAI40 / **PMPDSLWARBI40** 1.5” High Pressure Water Pump 4-Stroke Diesel with Electric Start

PMPDSLPROAI50 / **PMPDSLWARBI50** 2” Water Pump, 4-Stroke Diesel with Electric Start

PMPDSLPROAI1K 4” Water Pump, 4-Stroke Diesel with Electric Start

PMPPTLPROA02F / **PMPPTLPROB02F** 2” High Flow Water Transfer Pump, 4-Stroke

PTLPMP-225095 / **PMPPTLPROA02P** / **PMPPTLPROB02P** 2” High Pressure Water Pump, 4-Stroke

PTLPMP-308095 / **PMPPTLPROA03F** / **PMPPTLPROB03F** 3” High Flow Water Transfer Pump, 4-Stroke

PMPPTLPROA03T 3” High Flow Water Trash Pump, 4-Stroke

PMPPTLPROA15P 1.5” High Pressure Water Pump, 4-Stroke

PMPPTLPROA165 1” Water Pump, 2-Stroke

PMPPTLPROAW1K 4” Self-Priming Water Pump, 4-Stroke

PMPPTLPROAW80 / **PMPPTLPROBW80** 3” Self-Priming Water Pump, 4-Stroke

PMPPTLPROAW45 / **PMPPTLWTNAW45** 4-Outlet (2x1.5”/2x1”) Water Pump, 4-Stroke

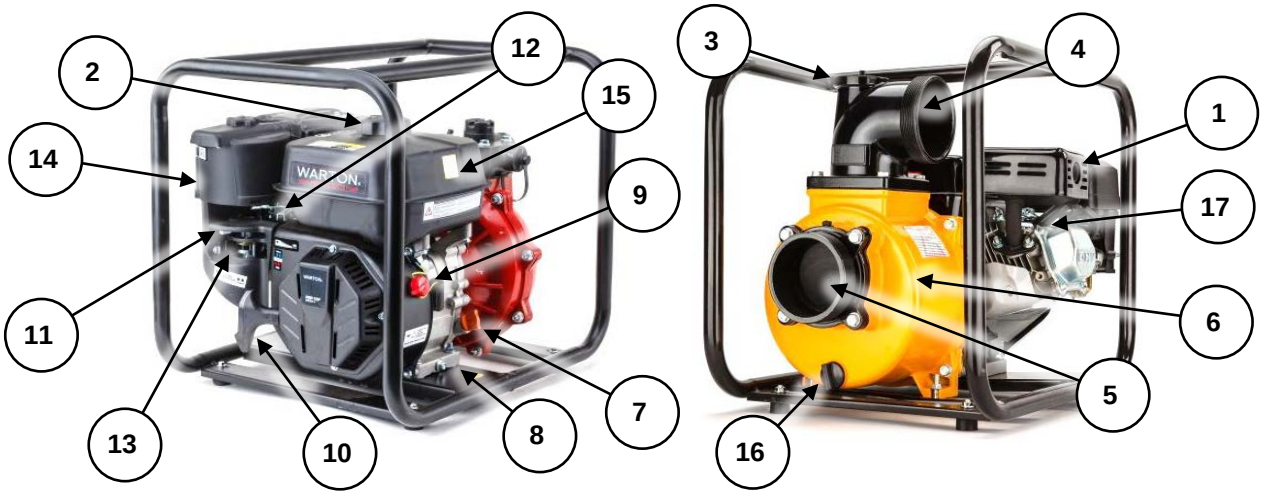
Parts Identification

All pumps include fittings as applicable for the size and number of pump connections. For example, a pump with a single 2” (50mm) inlet and 2 x 1” (25mm) outlets will include 1 x 2” hose connector, rubber seal, collar and hose clamp and 2 x 1” hose connectors, rubber seals, collars and hose clamps. Similarly, a basic hose connector, filter and hose clamp for the inlet hose is also included. A basic toolkit may also be included. The following example shows included fittings for PMPPTLPROA15P model:

It is strongly recommended that you familiarise yourself with all major components of the machine before using it or performing any maintenance tasks.

Non-Diesel 4-Stroke Engines

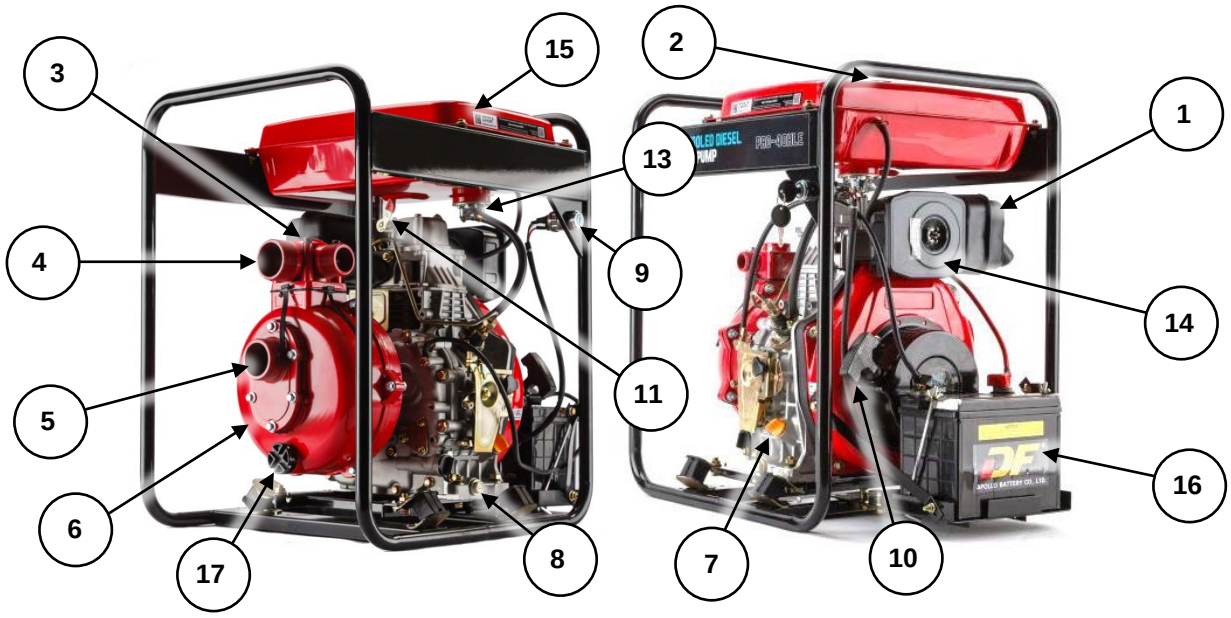
Products detailed in this manual may vary in appearance, inclusions, description and packaging from those shown or described. This section shows typical major components common to most non-diesel 4-stroke petrol powered water pumps.



No.	Name	No.	Name
1	Exhaust	**10**	Starter Cord
2	Fuel Filler	**11**	Choke
3	Pump Priming Port	**12**	Throttle
4	Pump Outlet	**13**	Fuel Tap
5	Pump Inlet	**14**	Air Intake Assembly (filter inside)
6	Pump Body	**15**	Fuel Tank
7	Oil Filler/Dipstick	**16**	Pump Drain Plug
8	Oil Drain Plug	**17**	Spark plug
9	Engine ON/OFF Switch		

Diesel 4-Stroke Engines

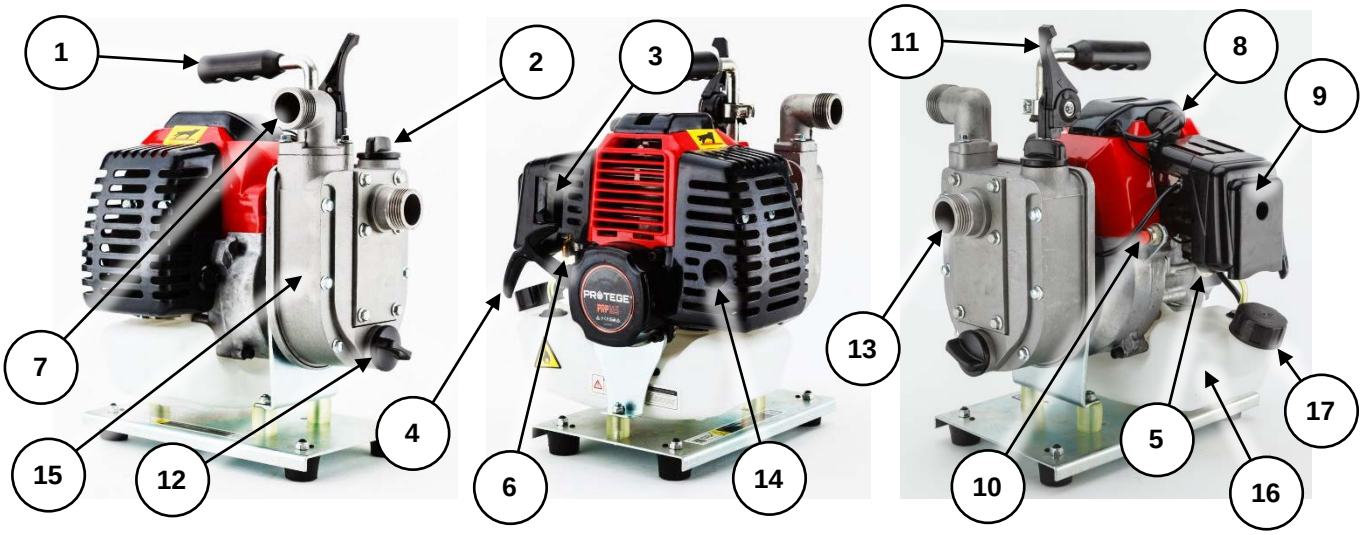
Products detailed in this manual may vary in appearance, inclusions, description and packaging from those shown or described. This section shows typical major components common to most 4-stroke diesel powered water pumps.



No.	Name	No.	Name
1	Exhaust	**10**	Starter Cord
2	Fuel Filler	**11**	Decompression Lever
3	Pump Priming Port	**12**	Throttle
4	Pump Outlet	**13**	Fuel Tap
5	Pump Inlet	**14**	Air Intake Assembly (filter inside)
6	Pump Body	**15**	Fuel Tank
7	Oil Filler/Dipstick	**16**	Battery
8	Oil Drain Plug	**17**	Pump Drain Plug
9	Engine ON/OFF Switch		

2-Stroke Engines

Products detailed in this manual may vary in appearance, inclusions, description and packaging from those shown or described. This section shows typical major components common to most 2-stroke petrol powered water pumps.



No.	Name	No.	Name
1	Carry Handle	10	Engine OFF Switch
2	Pump Priming Port	11	Throttle
3	Choke	12	Pump Drain Plug
4	Starter Cord	13	Pump Inlet
5	Fuel Primer	14	Exhaust
6	Fuel Tap	15	Pump Body
7	Pump Outlet	16	Fuel Tank
8	Spark Plug	17	Fuel Filler
9	Air Intake Assembly (filter inside)		

Before Use Checklist

Ensure that you carry out all procedures below before starting the engine or operating the water pump. **Failure to follow the checklist and carry out the procedures correctly may result in making the product warranty void**.

4-Stroke Engine Oil

Four-stroke engines require engine oil in the crankcase for lubrication of internal components. Severe or irreparable damage may occur if the engine is allowed to run without engine oil. The engine oil level requires regular maintenance. Check the engine oil level and ensure that the oil level is at or just under the maximum level indicator.

Always check the engine oil level before starting the engine. See Checking and Changing Engine Oil.

Air Filter

The air filter is used to prevent dirt and other particles from possibly entering the engine and causing internal damage to it. The air filter requires regular maintenance.

Always check the air filter before starting the engine. See Checking, Cleaning and Replacing the Air Filter.

Fuel

Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • The engine must be cool before refuelling.

Adequately fill the fuel tank with the correct fuel type.

- For 4-stroke engines, use 91 RON non-ethanol unleaded (higher RON values will provide best engine performance). Do not use old or contaminated fuel.
- For diesel engines, use commercial non-bio diesel fuel. Do not use old or contaminated fuel.
- For 2-stroke engines, use 91 RON non-ethanol unleaded mixed at a 25:1 ratio with 2-stroke engine oil (higher RON values and good quality 2-stroke oil will provide best engine performance). Do not use old or contaminated fuel/oil. Fuel/oil mix ratio examples are shown below.

Petrol (Litre)	1	2	5	10
Oil (Millilitre)	40	80	200	400

Gas (US Gal)	0.5	1	2	3
Oil (Fl. Oz)	2.56	5.12	10.24	15.36

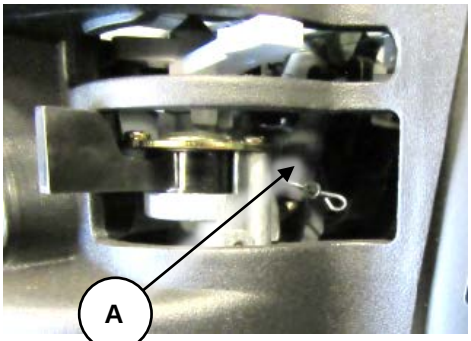
To fill or top up fuel:

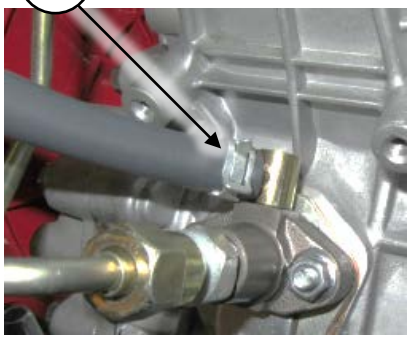
1. Place the machine in an upright position on a flat and level surface.
2. Clean the machine around the fuel filler so that no dirt or other material enters the engine when the cap is removed.
3. Remove (rotate left) the fuel filler cap.
4. Using a funnel, carefully fill the tank with fuel. Do not fill above the top of the strainer (if equipped) or otherwise overfill the tank.
5. When finished, reinstall (rotate right) the fuel filler cap until firm. Wipe away any residual fuel from the machine. If fuel has been spilt, move the pump away from the spillage before starting the engine.

Priming the Fuel System

When an engine is new or has been completely run out of fuel it may be necessary to “prime” the fuel system before attempting to start the engine. This means removing any air from the fuel line. To prime 4-stroke engines:

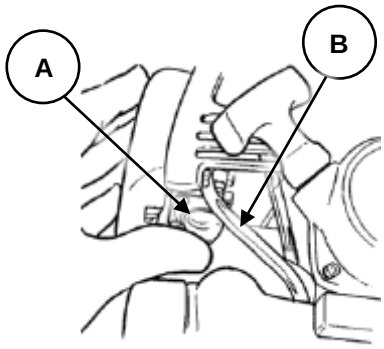
1. Fill the fuel tank with fuel.
2. Remove the fuel line (**A**) from the carburettor or fuel injector using pliers to loosen the hose-clamp. Hold a container beneath the fuel line to catch any spilt fuel.
3. Place the fuel tap in the “ON” position and allow fuel to flow out (into the container) until no air bubbles can be seen in the fuel stream.
4. Push the fuel line back onto its connection point and re-fasten the hose clamp.
5. Clean up any spilled fuel. If fuel has been spilt, move the pump away from the spillage before starting the engine.
6. Start the engine.





To prime 2-stroke engines:

1. Fill the fuel tank with fuel.
2. Place the fuel tap in the “ON” position.
3. Locate the fuel primer (**A**).
4. Press the fuel primer repeatedly until fuel can be seen in the fuel return tube (**B**).
5. Start the engine.

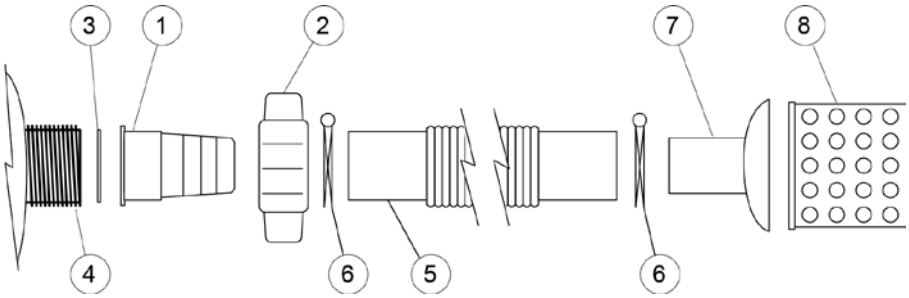


Connecting Hoses

Always use the correct diameter hose. • Ensure all hoses, joints and clamps are of adequate construction to handle the inlet suction and outlet pressure. • Hoses should be free from damage, kinking or creasing. • All hose connectors and connections must be secure and properly sealed to ensure correct and reliable pump operation. • The pump should be located no more than the maximum suction distance as per the Pump Specifications.

Inlet

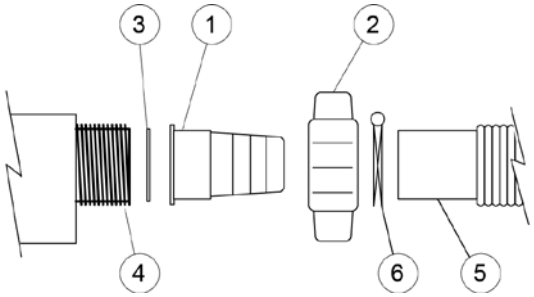
For best performance, the inlet hose should be kept as short as possible. In other words, place the pump as near the water source as safe and practical – the further the distance from the water source or longer the inlet hose, the longer it will take for the pump to initially draw. To connect the inlet hose:



1. Insert the hose connector (**1**) through the collar (**2**).
2. Insert the rubber seal (**3**) so it sits between the end of pump inlet port (**4**) and the hose connector (**1**).
3. Install the hose connector/seal/collar assembly to the pump inlet port and firmly tighten (rotate right) the collar by hand.
4. Place a hose clamp (**6**) onto the end of the inlet hose (**5**), then push the hose over the hose connector.
5. Tighten the hose clamp so the hose is securely installed on the hose connector.
6. On the other end of the inlet hose, install the filter (**7**, **8**) and secure it to the inlet hose with a hose clamp.

Outlet

For best performance, always use outlet fittings that are designed for the general water pump application; for example, high pressure, water transfer etc. Poorly matched hose sizes may affect pump efficiency by either increasing pumping resistance (hose diameter too small) or reduced outlet pressure (hose diameter too large). Some water pumps have multiple outlet ports. When multiple outlets are connected, a reduction in available pressure through each outlet should be expected. To connect the outlet hose:



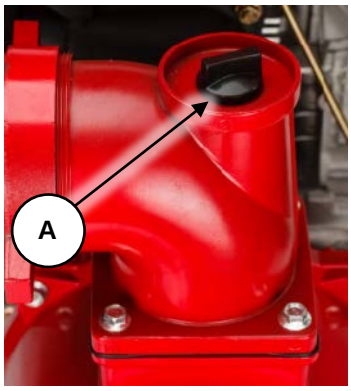
1. Insert the hose connector (**1**) through the collar (**2**).
2. Insert the rubber seal (**3**) so it sits between the end of pump outlet port (**4**) and the hose connector.
3. Install the hose connector/seal/collar assembly to the pump outlet port and firmly tighten (rotate right) the collar by hand.
4. Place a hose clamp (**6**) onto the end of the outlet hose, then push the hose over the hose connector.
5. Tighten the hose clamp so the hose is securely installed on the hose connector.
6. On the other end of the outlet hose, install the necessary fittings as required.

Water Pump Priming

Never activate the water pump without it being primed first and piped to a water source. If the pump is not primed, it will not draw water from the source, overheat and become damaged. Before priming, connect all hoses to the water pump.

Before using the machine, the pump must be “primed” with water. The priming process is basically to remove air from the pump body which allows it to begin drawing water from the water source. To prime the pump:

1. Remove (rotate left) the pump priming port cap (**A**). The priming pump is usually located at the top of the pump housing.
2. Fill the pump body and inlet hose with as much water as possible.
3. Reinstall (rotate right) the pump priming port cap.
4. Fully open any shut-off valves in the inlet/outlet hoses (nozzles etc) so that water can be pumped and any air in the system is expelled.

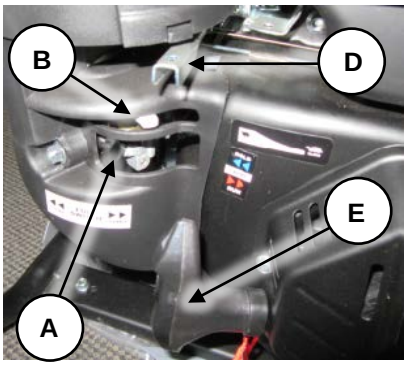


Engine Starting and Water Pump Operation

Before starting the engine, ensure that you have followed all procedures described in the Before Use Checklist. An engine should not be operated more than 4 hours continuously without being stopped to cool before being used again.

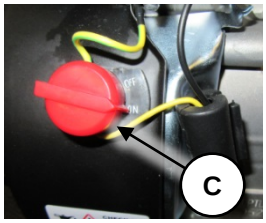
Different water pump models may feature variations in design; for example, some have different engine types, electric start options etc. The following procedures and images are typical to all models, however, the position or appearance of controls etc may vary. All major engine controls are identified on the machine by way of stickers or other markings.

Manual/Pull Starting



Non-Diesel 4-Stroke and 2-Stroke Engines

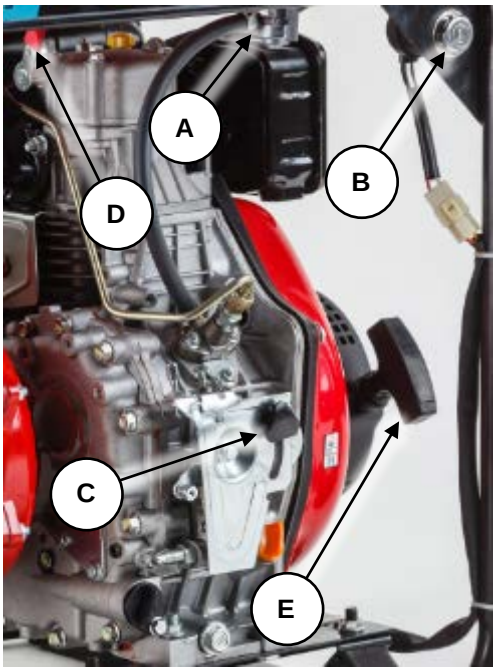
1. **PRIME** – If necessary, “prime” the fuel system.
2. **FUEL** – Place the fuel tap (**A**) in the “ON” position.
3. **CHOKE** – If the engine is cold, place the choke (**B**) in the “COLD” or “CLOSED” position. If the engine is warm or the ambient temperature is high, place the choke in the “RUN” or “OPEN” position.
4. **IGNITION** – Place the engine ON/OFF switch (**C**) or key switch (if equipped) in the “ON” (“**I**”) position. For key switches, the “OFF” position allows the key to be removed from the switch. The “ON” position is reached when the key is rotated to the right from the “OFF” position.
5. **THROTTLE** – Place the throttle control (**D**) just off the “SLOW” position.
6. **START** – Slowly pull out the starter cord (**E**) until you feel it engage with the engine, then pull it out rapidly (use both hands if necessary). The engine should start. Allow the starter cord to rewind slowly – do not let it “snap” back.



7. **WARM-UP** – Allow the engine to warm-up and run smoothly. If choke is being applied, place the choke (**B**) in the “RUN” or “OPEN” position.
8. **THROTTLE** – Adjust the throttle control (**D**) for the required engine speed and pumping requirements.

If the engine does not start, repeat step 6 onward. If the engine fails to start after several attempts, refer to Troubleshooting.

Diesel 4-Stroke Engines



1. **PRIME** – If necessary, “prime” the fuel system.
2. **FUEL** – Place the fuel tap (**A**) in the “ON” position.
3. **THROTTLE** – Place the throttle control (**C**) just off the “SLOW” position. Some models use a screw to secure the throttle in position – to adjust, loosen the screw and move it to the required position, then tighten it again.

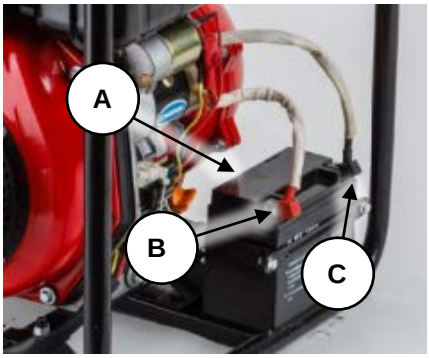
   This is not required for fuel injected models.
4. **IGNITION** – Place the engine ON/OFF switch (**B**) or key switch (if equipped) in the “ON” (“**I**”) position. For key switches, insert the key then turn it one position to the right – this is the “ON” position.
5. **DECOMPRESS** – Place the decompression lever (**D**) in the “down” position, otherwise you may not be able to start the engine. Each time you use the starter cord, place the decompression lever in the “down” position first.

6. **START** – Slowly pull out the starter cord (**E**) until you feel it engage with the engine, then pull it out rapidly (use both hands if necessary). The engine should start. Allow the starter cord to rewind slowly – do not let it "snap" back to the engine.
7. **WARM-UP** – Allow the engine to warm-up and run smoothly.
8. **THROTTLE** – Adjust the throttle control (**D**) for the required engine speed and pumping requirements. Some models use a screw to secure the throttle in position – to adjust, loosen the screw and move it to the required position, then tighten it again.

If the engine does not start, repeat step 5 onward. If the engine fails to start after several attempts, refer to Troubleshooting.

Electric Starting

For models equipped with an electric start option, charge the battery (**A**) then connect the red engine battery cable (**B**) to the battery positive ("**+**") terminal, then the black engine battery cable (**C**) to the battery negative ("**-**") terminal.



1. **PRIME** – If necessary, "prime" the fuel system.
2. **FUEL** – Place the fuel tap in the "ON" position.
3. **IGNITION** – Place the engine ON/OFF switch or key switch (if equipped) in the "ON" ("**I**") position. For key switches, insert the key then turn it one position to the right – this is the "ON" position.
4. **THROTTLE** – Place the throttle control just off the "SLOW" position. Some models use a screw to secure the throttle in position – to adjust, loosen the screw and move it to the required position, then tighten it again.

   This is not required for fuel injected models.
5. **START** – Turn the ignition key switch further to the right to engage the starter motor. The engine should start.
6. **WARM-UP** – Allow the engine to warm-up and run smoothly.
7. **THROTTLE** – Adjust the throttle control for the required engine speed and pumping requirements. Some models use a screw to secure the throttle in position – to adjust, loosen the screw and move it to the required position, then tighten it again.

If the engine does not start, repeat step 5 onward. If the engine fails to start after several attempts, refer to Troubleshooting.

Jump-Starting

If the battery does not have enough charge to sufficiently crank the engine, the engine can be jump-started. Use a fully charged battery (the "jump" battery) for this procedure and suitable jump-starting cables. To jump-start:

1. Ensure the ignition is "OFF" (for some models, this is the position that allows the key to be removed).
2. Connect the jump battery positive ("**+**") terminal to the engine battery positive ("**+**") terminal.
3. Connect the jump battery negative ("**-**") terminal to the engine battery negative ("**-**") terminal.
4. Follow the normal electric start procedure from step 2 onward.

Once the engine is running, normal battery charging will occur. The engine must run for several hours to fully charge the battery.

Stopping the Engine

Stopping in an Emergency

1. To stop the engine immediately, place the engine ON/OFF switch or key switch in the “OFF” position.

Stopping in Normal Use

1. Place the throttle control in the “SLOW” position.
2. Place the engine ON/OFF switch or key switch in the “OFF” position.
3. Place the fuel tap in the “OFF” position.

Environmental Considerations

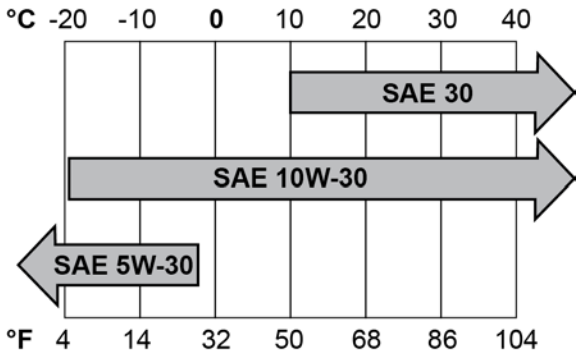
Altitude

If the engine is being used in altitudes at or above 1500m (approximately 5000’), adjustments to the carburettor may be required. This is because there is less oxygen in the air as altitude increases, which effectively “enriches” the ratio of fuel to air going into the engine and the higher the altitude, the richer the fuel mixture becomes. If the engine is being permanently operated at high altitude, it is recommended to have an authorized service center make the necessary carburettor adjustments. If the engine is used occasionally at altitude (not extreme altitudes), no adjustments should be required, however, a slight decrease in engine performance can be expected.

Temperature

The following information applies to 4-stroke engines only.

If the engine is being used in extremely cold or hot environments; for example, desert or snow conditions, the type of engine oil may need to be changed to suit environmental temperatures. Oil thickens as the temperature decreases and thins as temperature increases, which means that if the engine oil is not suited to the temperature its ability to properly lubricate the engine may be affected. Use the following chart to determine the correct engine oil:



Water Pump Operation

Be aware that once the engine is running, the pumping action of the machine activates. When the engine is idling (slowest continuous running speed), the pumping action is minimal. As you increase engine speed (use the engine throttle control), the pumping action increases. Note the following recommendations:

- Operate the engine at a sufficient speed to provide the desired pumping action (inlet suction and output pressure). This may vary on the work being performed and the fluid being pumped etc.
- Always use an inlet hose filter and do not deliberately allow excessive debris through the pump.
- After use, wash out the pump and hoses to remove corrosive substances, debris or other impurities carried by the pumped fluid; for example, sea water and waste water.

Maintenance

Running petrol engines in confined areas **CAN KILL IN MINUTES**. Engine exhaust fumes contain carbon-monoxide – a deadly gas that you cannot smell or see. NEVER run a petrol engine in confined areas EVEN IF windows and doors are open. ONLY run petrol engines OUTDOORS and away from doors, windows and vents. • Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • Do not have the engine running during inspection and maintenance unless specifically required. • The engine should be cool enough to touch before performing maintenance activities. • Some maintenance activities described may be beyond the scope of some users. For procedures that you are not comfortable with or have the tools or experience for, have the unit serviced by a service center or qualified technician.

To keep the engine and water pump performing at optimal efficiency, regular checks and maintenance is required. Proper care and maintenance ensures best performance and longest service life.

The Maintenance Schedule below specifies preventative maintenance checks and necessary maintenance tasks and how often they should be performed. The schedule applies to multiple engines; some engines may not include some components, so maintenance on those components is not applicable.

Harsh operating environments such as extreme temperatures, dust etc may necessitate more frequent maintenance. • Maintenance frequencies are based on general factors including a maximum use of approximately 300 hours per year. Apply common-sense when following the maintenance schedule based on your actual use of the product. • Keep reasonable records of maintenance activities for reference. **Failure to follow the maintenance schedule, using incorrect or non-compatible accessories or replacements parts, or general negligence may result in making the product warranty void.**

Maintenance Schedule for Non-Diesel 4-Stroke Engines

		Frequency – *Whichever Comes First*			
Component/Task	**Every Use**	**First Month or 20 Hours Use**	**Every 3 Months or 50 Hours Use**	**Every 6 Months or 100 Hours Use**	**Every Year or 300 Hours Use**
Engine Oil	Check	Replace		Replace	
Oil Leaks	Check/repair as necessary				
Air Cleaner	Check	Clean and replace as necessary			
Spark Plug			Check	Replace	
Valve Clearance					Adjust as necessary
Combustion Chamber					De-coke as necessary
Idle Speed				Check/adjust as necessary	
Fasteners	Check/tighten as necessary				
Fuel Tank					Flush and clean
Fuel Line		Replace as necessary			
Fuel Filter		Clean and replace as necessary			
Fuel Strainer	Check				

Maintenance Schedule for Diesel 4-Stroke Engines

		Frequency – *Whichever Comes First*			
Component/Task	**Every Use**	**First Month or 20 Hours Use**	**Every 3 Months or 50 Hours Use**	**Every 6 Months or 100 Hours Use**	**Every Year or 300 Hours Use**
Engine Oil	Check	Replace		Replace	
Oil Leaks	Check/repair as necessary				
Air Cleaner	Check	Clean and replace as necessary			
Valve Clearance					Adjust as necessary
Combustion Chamber					De-coke as necessary
Idle Speed				Check/adjust as necessary	
Fasteners	Check/tighten as necessary				
Fuel Tank					Flush and clean
Fuel Line		Replace as necessary			
Fuel Filter		Clean and replace as necessary			
Fuel Strainer	Check				

Maintenance Schedule for 2-Stroke Engines

		Frequency – *Whichever Comes First*			
Component/Task	**Every Use**	**First Month or 20 Hours Use**	**Every 3 Months or 50 Hours Use**	**Every 6 Months or 100 Hours Use**	**Every Year or 300 Hours Use**
Air Cleaner	Check	Clean and replace as necessary			
Spark Plug			Check	Replace	
Combustion Chamber				De-coke as necessary	
Idle Speed				Check/adjust as necessary	
Fasteners	Check/tighten as necessary				
Fuel Tank					Flush and clean
Fuel Line		Replace as necessary			
Fuel Filter		Clean and replace as necessary			
Fuel Strainer	Check				

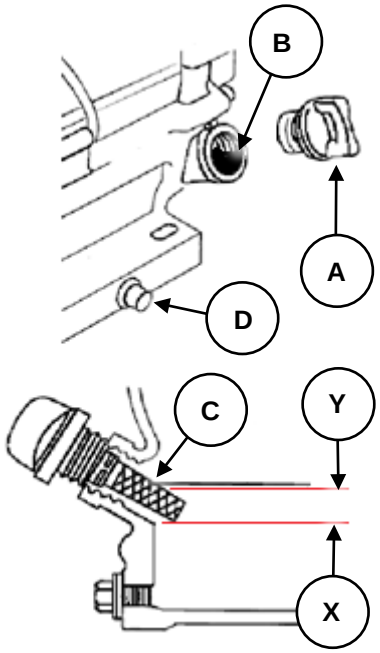
Checking and Changing Engine Oil

Always check engine oil level when the machine is in an upright position on a flat and level surface. • Do not use used or contaminated engine oils. • Use only engine oils of the correct type (see Technical Specifications). • Perform the first oil change within the first 10 hours of use. Subsequently, change the oil every 20 hours of use. • It is recommended that the engine be warm, but not hot, when performing oil changes. When the oil is warm it drains faster. • Using dirty or incorrect engine oil may cause engine damage and void any warranty • Always use suitable tools. • Always dispose of used oil in an environmentally responsible manner and according to regulations. • Engine oil maintenance is not applicable to 2-stroke engines.

Four-stroke engines require engine oil in the crankcase for lubrication of internal components. Severe or irreparable damage may occur if the engine is allowed to run without engine oil. The engine oil level requires regular maintenance as per the maintenance schedule.

NOTE: Some models may have 2 oil drain plugs and fillers on either side of the engine – it does not matter which one is used.

To check engine oil level:



1. Place the machine in an upright position on a flat and level surface.
2. Clean the machine around the oil filler cap (**A**) so that no dirt or other material enters the engine when the cap is removed.
3. Remove the oil filler cap (rotate left) until fully unscrewed. For machines without a dipstick, the oil level is determined by how close the oil is to the filler hole (**B**). The lower limit is indicated by (**X**), the upper limit by (**Y**). For machines equipped with an oil level dipstick:
   a. Wipe the dipstick (**C**) clean with a piece of cloth or paper.
   b. Insert the dipstick into the oil filler but do not screw it in.
   c. Remove and inspect the dipstick – the oil level is determined by where oil can be seen on it.
4. Ensure that the oil level is at or just under the permissible maximum. If the oil level is low, add additional oil until the correct level is reached. If the oil level is too high, drain some oil until the correct level is reached.
5. When finished, reinstall (rotate right) the oil filler cap until firm. Wipe off any residual oil from the machine.

To change the engine oil:

1. Place the machine on a suitable work surface that is flat and level and have a container ready to catch drained oil.
2. Clean the machine around the oil drain plug (**D**) and oil filler (**A**) so that no dirt or other material enters the engine when the plug or cap is removed.
3. Unscrew (rotate left) and remove the drain plug and washer.
4. Tilt the machine and drain all oil from the engine. Once drained, allow the machine to sit level again.
5. Clean the drain plug and washer and then reinstall them. Screw in fully (rotate right) and firmly tighten.
6. Remove the oil filler cap (rotate left) until fully unscrewed. Wipe the oil level indicator clean with a piece of cloth or paper.
7. Using a funnel, carefully add oil to the engine until the permissible maximum is reached. Double- check the oil level (described above).
8. When finished, reinstall (rotate right) the oil filler cap until firm. Wipe off any residual oil from the machine.

Checking, Cleaning or Replacing the Air Filter

Operating the machine without a functional air filter may cause severe engine damage and will void any warranty. • A dirty or oil saturated air filter will restrict air flow, which can be mistaken as fuel system problems. Check the condition of the air filter before adjusting engine idle speed, where applicable. • If the air filter is damaged (torn, broken, disintegrating), replace it.

The air filter is used to prevent dirt and other particles from possibly entering the engine and causing internal damage to it. The air filter requires regular maintenance as per the maintenance schedule.

Air Filter Inspection and Cleaning

Inspect the air filter for dirtiness and debris, damage etc. Clean or replace the filter element as necessary. To clean air filters:

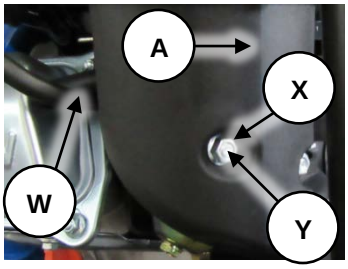
- For foam filters, wash the filter in warm water and mild detergent, then rinse and allow to dry.
- For paper filters, use compressed air to blow particles from it. The air should be blown from the engine side of the filter.
- Clean all other air filter assembly components using water and mild detergent, then dry them.
- For foam filters, place a few drops of clean engine oil on the filter then squeeze it a few times to spread the oil through the filter material and remove any excess oil.

Air Filter Removal/Installation for Non-Diesel 4-Stroke Engines

To remove the air filter:

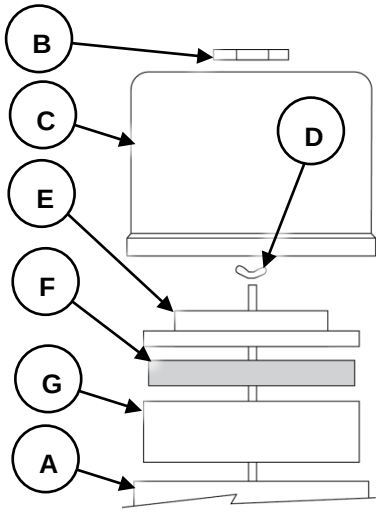
1. Unscrew (rotate left) the nut (**B**) securing the air filter cover (**C**) and remove the cover from the air intake assembly (**A**).

NOTE: For some water pump models, the machine frame may make it difficult to remove the air filter cover without further disassembly. In such cases:



a. Remove (rotate left) the nuts (**X**) from the air intake assembly (**A**) mounting studs (**Y**).
b. Disconnect the valve cover breather hose (**W**) from the air intake assembly, then gently pull the intake assembly off the mounting studs. Be careful not to damage the gasket that sits between the engine and air intake assembly. The air intake assembly does not need to be fully removed from the machine, rather, just off the studs so that it can be rotated.
c. Rotate the air intake assembly left until it is possible to remove the air filter cover.

2. Unscrew (rotate left) the wing nut (**D**) and remove the filter spacer (**E**), filter element (**F**) and filter base (**G**).



To install the air filter:

1. Assemble the air filter components to the air intake assembly, filter base first, then filter element, then filter spacer. Ensure that the filter base is correctly positioned in relation to the air intake assembly as it will seat and seal properly in one position only.
2. Reinstall (rotate right) the wing nut and tighten by hand so that all filter components are secure. Do not over-tighten.
3. Reinstall the filter cover and secure it with the nut (rotate right). Tighten the nut by hand. Do not over-tighten.

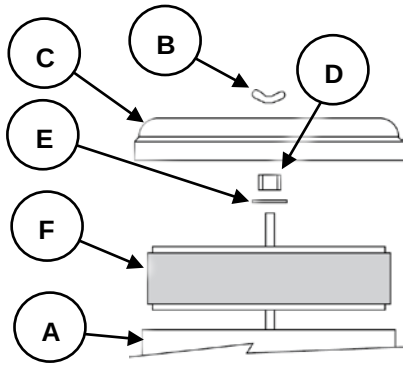
NOTE: If the air intake assembly had to be loosened:

a. Ensure that the gasket between the engine and air intake assembly is undamaged and is correctly sitting on the mounting studs. Rotate the air intake assembly (with all filter components re-attached) so that it is within the machine frame and upright.
b. Carefully move the air intake assembly onto the mounting studs and push it up against the engine.

c. Reinstall the air intake assembly nuts (rotate right) to the mounting studs and tighten.
d. Re-attach the valve cover breather hose.

Air Filter Removal/Installation for Diesel 4-Stroke Engines

Some engine may feature a 2-stage air filter, with a foam “envelope” around a paper element. Cleaning procedures are as per Air Filter Inspection and Cleaning.



To remove the air filter:

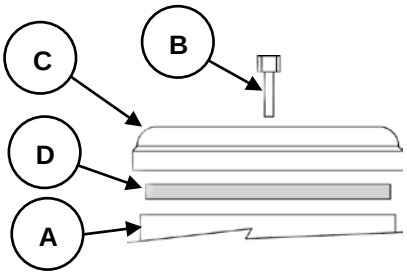
1. Unscrew (rotate left) the wing nut (**B**) securing the air filter cover (**C**) and remove the cover from the air intake assembly (**A**).
2. Unscrew (rotate left) the nut (**D**) and washer (**E**) and remove the filter element (**F**).

To install the air filter:

1. Push the filter element onto the mounting screw and secure with the washer and nut (rotate right) and tighten. Do not over-tighten.
2. Place the air filter cover in position. Reinstall the wing nut (rotate right) and tighten by hand so that all filter components are secure. Do not over-tighten.

Air Filter Removal/Installation for 2-Stroke Engines

Cleaning procedures are as per Air Filter Inspection and Cleaning.



To remove the air filter:

1. Unscrew (rotate left) the nut (**B**) securing the air filter cover (**C**) and remove the cover from the air intake assembly (**A**).
2. Remove the filter element (**D**).

To install the air filter:

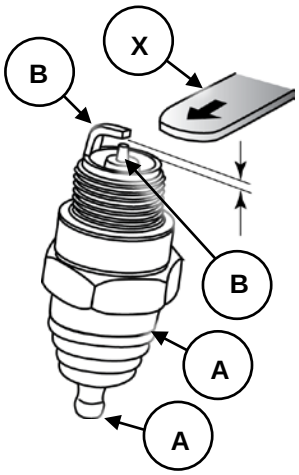
1. Push the filter element onto the mounting screw and secure with the washer and nut (rotate right) and tighten. Do not over-tighten.
2. Place the air filter cover in position. Reinstall the wing nut (rotate right) and tighten by hand so that all filter components are secure. Do not over-tighten.

Spark Plug

If the spark plug is damaged (cracked insulator, broken or eroded electrodes etc), replace it. • Always use spark plugs of the correct “heat range” - see Technical Specifications. Spark plug maintenance is not applicable to diesel engines.

The spark plug is used to ignite the air/fuel mixture inside the engine. The spark plug has electrodes on one end and an electrical terminal on the other. The spark plug requires regular maintenance.

Spark Plug Cleaning and Gap Checking



The spark plug should be checked and cleaned as per the maintenance schedule.

1. Remove any carbon deposits on the spark plug (**A**) electrodes (**B**) with a wire brush.
2. Clean the spark plug threads and the electrical terminal (**C**) on the top.

To check and adjust the spark plug “gap”:

1. Use “feeler” or “thickness” gauges (**X**) to measure the existing gap. The gauge must drag a little when being slid between the electrodes (**2**) – this means the measurement is fairly accurate.
2. Adjust the gap to within specification (see Technical Specifications). If the gap needs to be reduced, gently tap the electrode as required. If the gap needs to be increased, use pliers to gently pull the electrode as required.
3. Measure the gap again and ensure it is within the specified range before re-installing the spark plug.

Spark Plug Removal/Installation

1. Pull the electrical lead from the terminal on top of the spark plug.
2. Clean the area around the spark plug so that no dirt or other material can enter the engine when the spark plug is removed.
3. Use the spark plug tool to remove the spark plug (rotate left).

To re-install the spark plug:

1. Place the spark plug in its hole and screw it in (rotate right) until “finger tight”.
2. Use the spark plug tool to tighten the spark plug approximately one quarter turn (do not over-tighten).
3. Place the electrical lead over the spark plug terminal and push it down so that it connects firmly with the terminal

Transportation and Storage

Always ensure that the machine is cool enough to touch before transporting or storing. • Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • Always transport the machine with the fuel tap and engine ON/OFF switch in the “OFF” position. • Drain the fuel tank before transportation or storage.

Preparing for Transport and Storage

- Clean the interior of the water pump housing, hoses etc before storing them. This can quickly accomplished by connecting the pump to a clean water source and running it until the discharged water is clean.
- Drain the pump housing by unscrewing (rotate left) the drain plug and allowing all liquid to drain from the pump housing. Then, re-install the drain plug (rotate right) and tighten. Do not over-tighten.
- Drain the fuel system. It is advised to have the fuel tank as empty as possible before draining.
    a. Place the fuel tap in the “OFF” position.
    b. Unscrew (rotate left) the carburettor drain plug. Use a suitable container to catch the draining fuel.
    c. Place the fuel tap in the “ON” position and allow the fuel to drain. Store the drained gasoline in a properly sealed container.
    d. Place the fuel tap in the “OFF” position.
    e. Re-install (rotate right) the carburettor drain plug and tighten.
- Store the unit in a dry, well-ventilated area and out of the reach of children.

Long Term Storage

Follow the normal procedures for storage, then:

Remove the spark plug and put 30ml of clean engine oil into the cylinder. Pull the starter rope slowly to distribute the oil. Reinstall the spark plug.

Cover-up the water pump to protect it from dirt and dust.

Troubleshooting

Running petrol engines in confined areas **CAN KILL IN MINUTES**. Engine exhaust fumes contain carbon-monoxide – a deadly gas that you cannot smell or see. NEVER run a petrol engine in confined areas EVEN IF windows and doors are open. ONLY run petrol engines OUTDOORS and away from doors, windows and vents. • Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • Do not have the engine running during inspection and maintenance unless specifically required. • The engine should be cool enough to touch before performing maintenance activities. • Some maintenance activities described may be beyond the scope of some users. For procedures that you are not comfortable with or have the tools or experience for, have the unit serviced by a service center or qualified technician.

The following information may assist in identifying a problem and rectifying it.

> **Note**: Some procedures listed here may need to be performed by a service center or qualified technician. • If problems persist after following all suggested actions, contact a service center or qualified technician.

Difficulty starting the engine.

Possible Fault	Action
Lack of fuel	Check that there is fuel in the tank and the fuel tap is in the “ON” position. • To further check if fuel is reaching the carburettor, remove the carburettor drain plug and check if fuel drains.
Engine “OFF”	Ensure engine ON/OFF switch is in the “ON” position.
Carbon build-up on spark plug	Remove the spark plug and clean any carbon from the electrodes before re-installing it.
Spark plug faulty	Remove the spark plug, then reconnect the plug lead to it. Place fuel tap in the “OFF” position and the engine ON/OFF switch in “ON” position. Touch the spark plug electrode to a part of the engine crankcase, away from the spark plug hole, and attempt to start the engine – a spark should be visible across the electrodes as the engine is rotated. If no spark is visible, replace the spark plug.
Engine “flooded” with fuel	Place the choke in “HOT” or “RUN” position. Leave the ON/OFF switch in the “OFF” position. Pull the starter cord several times to assist clearing excess fuel from engine before attempting to start engine.
Not enough or too much engine oil	Check oil level and ensure that the level is at or just below the recommended maximum level.

Engine starts but does not idle.

Possible Fault	Action
Blocked air filter	Check and clean the air filter.
Idle speed requires adjustment	Adjust idle speed until engine runs smoothly and at a reasonable speed when idling.

Difficulty restarting the engine after use or engine stops suddenly during use.

Possible Fault	Action
No fuel or engine oil	Check fuel level and ensure adequate fuel is available. For some 4-stroke engines, an engine oil sensor will automatically switch off the engine or prevent starting if a low engine oil level is detected. For 2-stroke engines, this may also indicate incorrect fuel to oil ratio.
Overheating	Allow engine to cool before restarting. If possible, improve engine cooling, such as operating in lower temperatures. For 2-stroke engines, this may also indicate incorrect fuel to oil ratio.
Carbon build-up on spark plug	Remove the spark plug and clean any carbon from the electrodes before re-installing it.
Carburettor blocked	Clean the carburettor.

Reduced engine speed/power during use.

Possible Fault	Action
Blocked air filter	Check and clean air filter.
Carbon build-up in engine and/or entry to exhaust silencer	Remove the engine cylinder head and clean any carbon from the combustion chamber. For the exhaust silencer, remove it and clean any carbon deposits from the exhaust entry port.
Carbon build-up on spark plug	Remove the spark plug and clean any carbon from the electrodes before re-installing it.
Carburettor blocked	Clean the carburettor.

Water pump not pumping.

Possible Fault	Action
Lack of water in pump	Prime water pump.
Inlet hose blocked or not submerged	Ensure inlet hose is submerged and is inlet filter/hose is not blocked. Ensure inlet hose is not buried in mud etc. Ensure hose is not kinked or obstructed. Replace damaged hoses.
Air leaks or damaged hose	Ensure all hose clamps are tight and rubber seals at pump connections are installed and in good condition. Replace unserviceable seals and hose clamps.
Suction height between water source and pump too great	Move the pump closer to water source to reduce suction height and inlet hose length.

Technical Specifications

Non-Diesel 220cc 4-Stroke Engines

Engine Type	4-stroke, single cylinder
Engine Capacity	220cc
Fuel Type	Unleaded non-ethanol 91 RON or better
Fuel Tank Capacity	3.6l
Engine Power Output	Approximately 8HP @ 3600RPM
Spark Plug Type	F7TC, F7RTC
Spark Plug Gap	0.7 to 0.8mm (0.028 to 0.032”)
Valve Clearance	Inlet: 0.15mm ± 0.02mm (0.006” ± 0.001”) Exhaust: 0.2mm ± 0.02mm (0.008” ± 0.001”)
Engine Oil Type	SAE 10W-30 automotive engine oil recommended for general use
Engine Oil Capacity	Approximately 0.5l (always check level)

Non-Diesel 235cc 4-Stroke Engines

Engine Type	4-stroke, single cylinder
Engine Capacity	235cc
Fuel Type	Unleaded non-ethanol 91 RON or better
Fuel Tank Capacity	4.5l
Engine Power Output	Approximately 8HP @ 3600RPM
Spark Plug Type	F7TC, F7RTC
Spark Plug Gap	0.7 to 0.8mm (0.028 to 0.032”)
Valve Clearance	Inlet: 0.15mm ± 0.02mm (0.006” ± 0.001”) Exhaust: 0.2mm ± 0.02mm (0.008” ± 0.001”)
Engine Oil Type	SAE 10W-30 automotive engine oil recommended for general use
Engine Oil Capacity	Approximately 0.5l (always check level)

Diesel 4-Stroke 296cc Engines

Engine Type	4-stroke, single cylinder, diesel
Engine Capacity	296cc
Fuel Type	Unleaded non-bio diesel
Fuel Tank Capacity	12.5l
Engine Power Output	Approximately 6HP @ 3600RPM
Valve Clearance	Inlet: 0.15mm ± 0.02mm (0.006” ± 0.001”) Exhaust: 0.15mm ± 0.02mm (0.006” ± 0.001”)
Engine Oil Type	SAE 10W-30 automotive engine oil recommended for general use
Engine Oil Capacity	Approximately 1l (always check level)
Battery	6-MF-18Ah (electric start models only)

Diesel 4-Stroke 406cc Engines

Engine Type	4-stroke, single cylinder, diesel
Engine Capacity	406cc
Fuel Type	Unleaded non-bio diesel
Fuel Tank Capacity	12.5l
Engine Power Output	Approximately 13HP @ 3600RPM
Valve Clearance	Inlet: 0.15mm ± 0.02mm (0.006” ± 0.001”) Exhaust: 0.15mm ± 0.02mm (0.006” ± 0.001”)
Engine Oil Type	SAE 10W-30 automotive engine oil recommended for general use
Engine Oil Capacity	Approximately 1.2l (always check level)
Battery	6-MF-18Ah (electric start models only)

2-Stroke 65cc Engines

Engine Type	2-stroke, single cylinder
Engine Capacity	65cc
Fuel Type	Unleaded non-ethanol 91 RON or better
Fuel Tank Capacity	1.2l
Engine Power Output	Approximately 4.5HP @ 3600RPM
Spark Plug Type	L7T
Spark Plug Gap	0.7 to 0.8mm (0.028 to 0.032”)

Pump Specifications

Model	Inlet	Outlet	Capacity	Max. Lift	Max. Suction
PMPTLPROA165	25mm (1”)	25mm (1”)	12000l/hour	30m	7m
PMPPTLPROA01F	25mm (1”)	25mm (1”)	15000l/hour	30m	7m
PLTPMP-154095 / **PMPPTLWTNA15P**	40mm (1.5”)	40 (1.5”) 2 x 25mm (1”)	12000l/hour	120m	7m
PMPPTLPROAW45 / **PMPPTLWTNAW45**	40mm (1.5”)	2 x 40mm (1.5”) 2 x 25mm (1”)	12000l/hour	160m	7m
PMPDSLPROAI40 / **PMDSLWARBI40**	40mm (1.5”)	2 x 25mm (1”)	17000l/hour	55m	8m
PMPPTLPROA15P	40mm (1.5”)	40mm (1.5”) 2 x 25mm (1”)	30000l/hour	140m	7m
PTLPMP-225095 / **PMPPTLPROA02P** / **PMPPTLPROB02P**	50mm (2”)	2 x 40 (1.5”) 50mm (2”)	20000l/hour	150m	7m
PMPPTLPROB02F	50mm (2”)	50mm (2”)	30000l/hour	50m	7m
PMPPTLPROA02F / **PMPPTLPROB02F**	50mm (2”)	50mm (2”)	33000l/hour	30m	7m
PMPDSLPROAI50 / **PMPDSLWARBI50**	50mm (2”)	2 x 40mm (1.5”)	35000l/hour	85m	8m
PMPPTLPROAW80 / **PMPPTLPROBW80**	80mm (3”)	80mm (3”)	45000l/hour	30m	7m
PMPPTLPROA03T	80mm (3”)	80mm (3”)	45000l/hour	40m	7m
PTLPMP-308095 / **PMPPTLPROA03F** / **PMPPTLPROB03F**	80mm (3”)	80mm (3”)	60000l/hour	30m	7m
PMPTLPROAW1K	100mm (4”)	100mm (4”)	80000l/hour	25m	7m
PMPDSLPROAI1K	100mm (4”)	100mm (4”)	85000l/hour	50m	8m

Service and Maintenance Record

Use the following tables as a record of machine servicing and maintenance. Keeping accurate records will help ensure better machine service life and may simplify fault diagnosis and any possible warranty claims. Place a tick in the required box for either clean or replace with the date, as required.

	✓	Date	✓	Date	✓	Date	✓	Date	✓	Date
Replace Engine Oil										
Replace Spark Plug										
Replace Air Filter										
Replace Fuel Filter										
Replace Fuel Lines										
Clean Fuel Tank										
Check/Adjust Valve Clearance										
De-coke Combustion Chamber										

	✓	Date	✓	Date	✓	Date	✓	Date	✓	Date
Replace Engine Oil										
Replace Spark Plug										
Replace Air Filter										
Replace Fuel Filter										
Replace Fuel Lines										
Clean Fuel Tank										
Check/Adjust Valve Clearance										
De-coke Combustion Chamber										

- Consult all documentation, packaging and product labelling before use. Note that some products feature online documentation which should be printed and kept with the product.
- Check product for loose / broken / damaged / missing parts, wear or leaks (if applicable) before each use. Never use a product with loose / broken / damaged / missing parts, wear or leaks (if applicable).
- Products must be inspected and serviced (if applicable) by a qualified specialist every 6 months assuming average residential use by a person of average weight and strength, above average technical aptitude, on a property matching average metropolitan specification. Intended use outside these guidelines could indicate the product is not suitable for intended use or may require more regular inspection or servicing.
- Ensure all possible users of the product have completed an industry recognized training course before being given access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or your description of the application. Be sure to attain third-party approval for your application from a qualified specialist before use regardless of prior assurances by the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (take an automobile, aircraft, computer or ball point pen for example), there is always a small chance of technical issues that needs to be repaired or may require replacement of the product or a part. If the possibility of such failure and the associated time it takes to rectify could in any situation inconvenience the user, business or employee then the product is not suitable for your requirements. This product is not for use where incorrect operation or a failure of any kind, including but not limited to a condition requiring product return, replacement, service by a technician or replacement of parts could cause a financial loss, loss of employee time or an inconvenience requiring compensation.
- If this item has been purchased in error after considering the points above, simply contact the retailer directly for details of their returns policy, if required.