Bäumr-AG®

BPX-600 Post Driver

User Manual

[Revision 2.0 August 2017]

READ THIS MANUAL CAREFULLY BEFORE USE – FAILURE TO DO SO MAY RESULT IN INJURY, PROPERTY DAMAGE AND MAY VOID WARRANTY. • KEEP THIS MANUAL FOR FUTURE REFERENCE. • Products covered by this manual may vary in appearance, assembly, inclusions, specifications, description and packaging.

The product is NOT supplied with engine oil, although traces of oil from the manufacturing process may be present. It is essential to add adequate engine oil of the correct type to the engine before use – see Checking and Changing Engine Oil. **Failure to add engine oil will void the product warranty**.

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 vapours, 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.

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 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

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 centre 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.

Post Driver Use and Care

WARNINGS

- Before use, ensure that there are no electrical cables, gas or water pipes etc or other buried or unseen hazards in the work area. Contact the applicable utility providers for assistance.
- Do not use the equipment without a piling socket installed.
- Ensure that the hammer case bolts are tight before each use. If any cracks, leaks or other damage is present, have the machine inspected and serviced by a qualified technician.
- Lift, carry or move the machine only while the engine turned off or is idling (slowest running speed). If idling, always allow the machine to slow down completely before lifting or moving it.
- Store the machine in a vertical position.

- Ensure all power sources conform to equipment voltage requirements and are disconnected before connecting equipment.

switch is dangerous and must be repaired.

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 centres 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 combustion 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 combustion 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 a combustion engine while it is running, on or hot.

Never smoke while refuelling combustion engines or handling flammable substances.

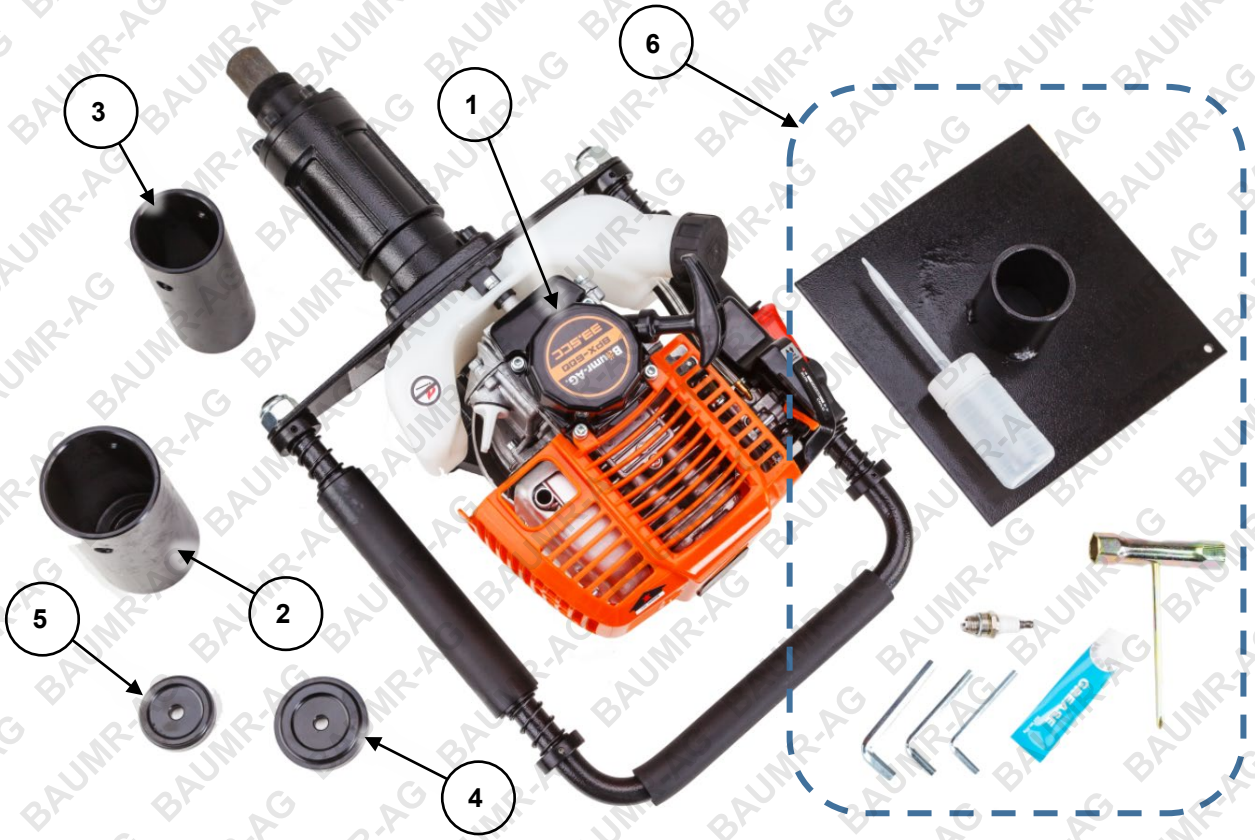
For generators, the electrical output is potentially lethal and must only be connected to a fixed electrical installation by an appropriately licensed person.

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

Handle any flammable substance with extreme caution.

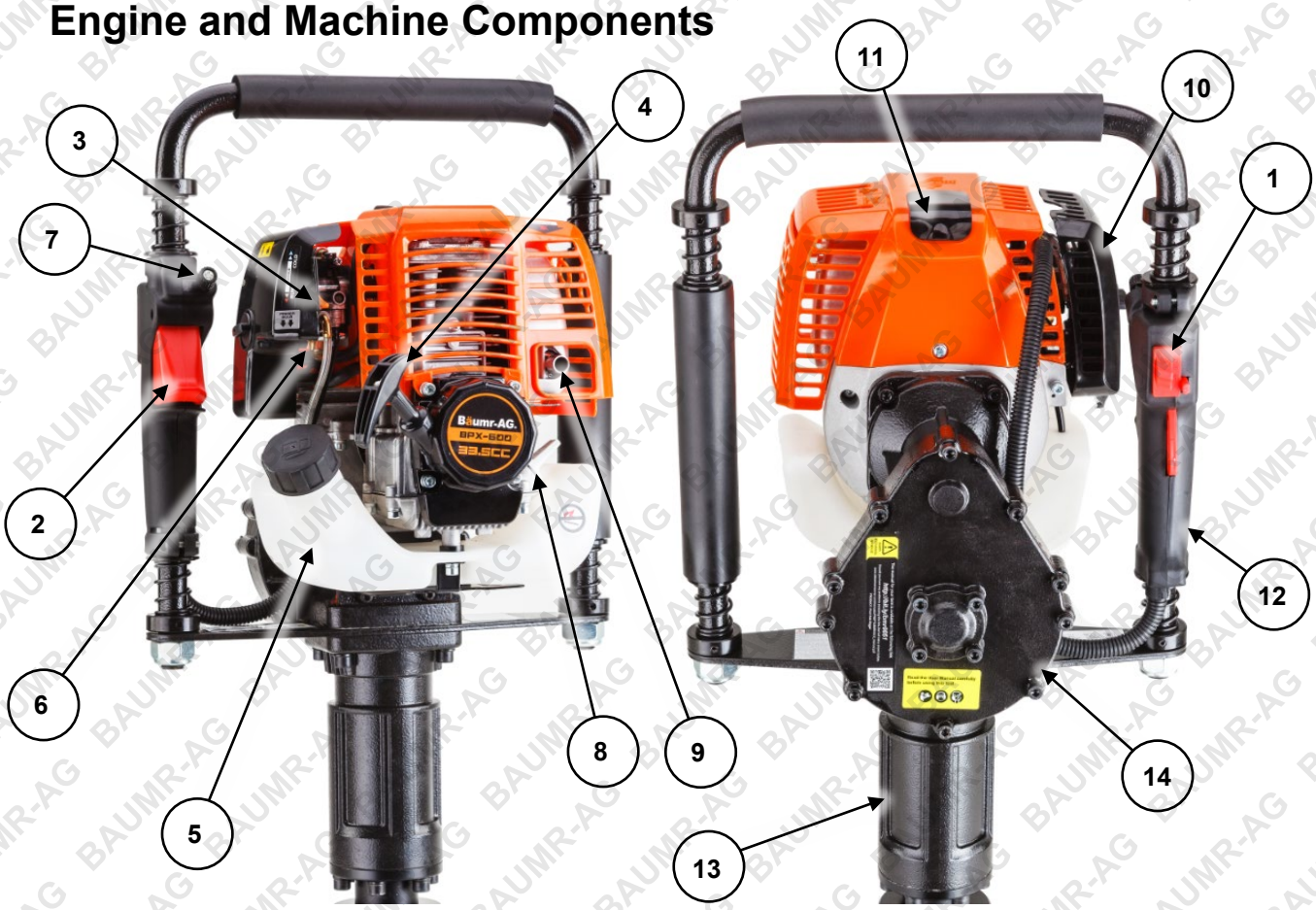
Table of Contents

Parts Identification



No.	Name	No.	Name
1	Engine / Hammer / Handle Assembly	6	Tools / Accessories: 5 / 6 / 8mm Allen Key Spark Plug Tool / Screwdriver Spark Plug (spare, may be included) Grease (for hammer pin) Oil Bottle Storage Base
2	68mm Piling Socket		
3	55mm Piling Socket		
4	65mm (2 ½") Pipe Adaptor		
5	50mm (2") Pipe Adaptor		

Engine and Machine Components



No.	Name	No.	Name
1	Engine ON / OFF Switch	8	Oil Filler Cap
2	Throttle Control	9	Exhaust
3	Choke Lever	10	Air Filter Assembly (air filter inside)
4	Starter Cord	11	Spark Plug Cover (spark plug inside)
5	Fuel Tank	12	Handle
6	Fuel Primer	13	Hammer Case
7	Throttle Limiter	14	Pinion Housing

Before Use Checklist

Ensure that you carry out all procedures below before starting the engine or operating the equipment. All procedures described are generic in nature and slight variations between different models may exist. **Failure to follow the checklist and carry out the procedures correctly may result in making the product warranty void**. The product is NOT supplied with engine oil, although traces of oil from the manufacturing process may be present. It is essential to add adequate engine oil of the correct type to the engine before use – see Checking and Changing Engine Oil. **Failure to add engine oil will void the product warranty**.

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.

- Use non-ethanol unleaded (higher RON values will provide best engine performance). Do not use old or contaminated fuel.

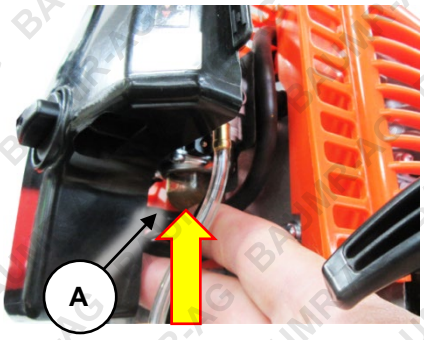
To fill or top up fuel:

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

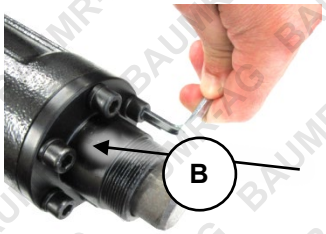
When an engine is new or has been completely run out of fuel it may be necessary to “prime” the fuel system before attempting to start the engine. This means removing any air from the fuel line. To prime:

1. Fill the fuel tank with fuel.
2. Press the fuel primer (**A**) bulb repeatedly until you feel resistance or pressure in the bulb – this indicates that it is full of fuel. Fuel will also be visible in the fuel intake tube.



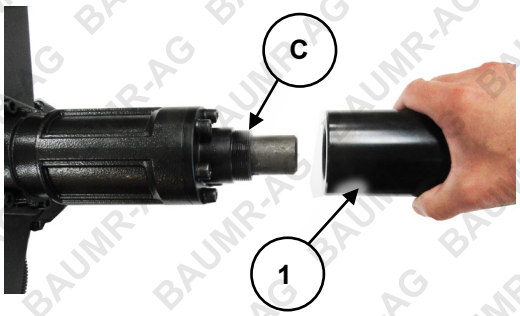
Attaching the Piling Socket

Always check that the hammer case bolts (**B**) are tight before attaching the piling socket (use 6mm Allen key). • Do not use the machine without a piling socket attached.



Screw the required piling socket (**1**) to the thread on the end of the hammer case (**C**) (rotate right). To tighten, pass the screwdriver (**D**) or suitable tool through the holes in the piling socket and use as a lever to tighten the socket.

To remove the piling socket, pass the screwdriver or suitable tool through the holes in the socket and use to loosen the socket (rotate left), then continue to unscrew until the socket can be removed.

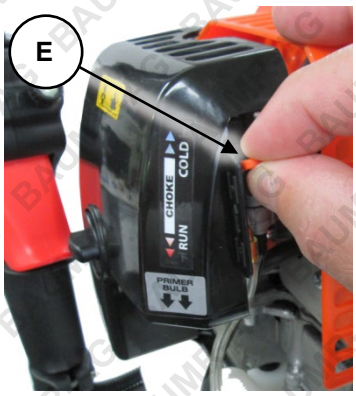


Engine Starting and Post Driver Operation

Starting the Engine

1. **PRIME** – If necessary, "prime" the fuel system.
2. **CHOKE** – If the engine is cold, place the choke (**E**) in the "COLD" position. If the engine is warm or the ambient temperature is high, place the choke in the "RUN" position.
3. **IGNITION** – Place the engine ON/OFF switch (**F**) in the "ON" ("**I**") position.
4. **START** – Slowly pull out the starter cord (**G**) until you feel it engage with the engine, then pull it out rapidly. The engine should start. Allow the starter cord to rewind slowly – do not let it "snap" back.
5. **WARM-UP** – Allow the engine to warm-up and run smoothly. If choke is being applied, gradually move the choke (**E**) to the "RUN" position.

If the engine does not start, repeat step 4 onward. If the engine fails to start after several attempts, refer to Troubleshooting.



Stopping the Engine

To stop the engine, release the throttle and place the engine ON/OFF switch in the "OFF" position.

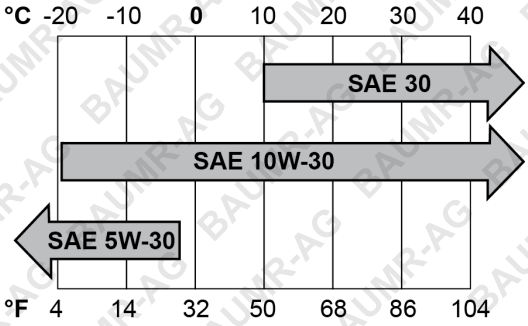
Environmental Considerations

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 centre 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

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:



Post Driver Operation

Before use, ensure that there are no electrical cables, gas or water pipes etc or other buried or unseen hazards in the work area. Contact the applicable utility providers for assistance. • The machine should be operated on ground that is suitable for driving posts. Do not attempt to drive posts into set concrete, rock, tree roots, or other extremely hard surfaces. • Do not use the machine without a piling socket attached.

The machine is used for driving "star pickets" and hollow metal posts etc into the ground. For example, to erect simple fencing etc. The machine operates by driving a “hammer” against the top of the post many times per second, effectively forcing it into the ground. The machine is designed for manual operation, where the operator both holds and controls it. Note the following:

- Place the post/star picket into the required position before driving it.
- Adjust the throttle, which controls the hammer action, only when ready to begin driving the post.
- Hold the machine as straight as possible when in use to ensure that posts are driven in vertically.

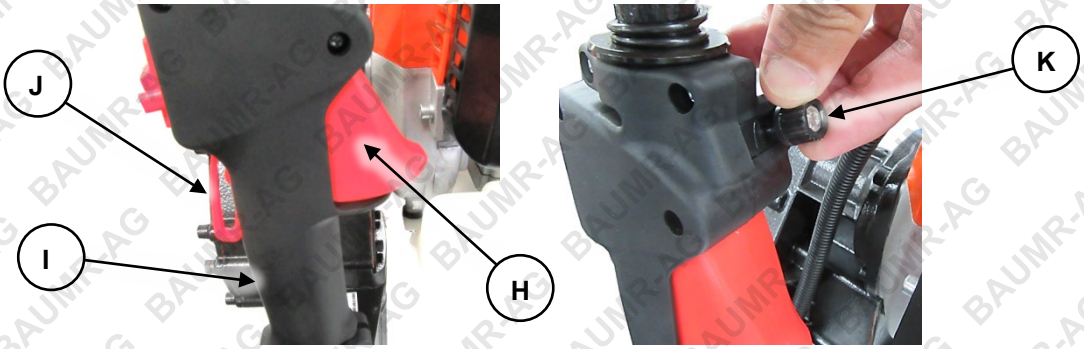
To drive a post:

1. Start the machine and allow it to warm up.
2. Position the post in the required location.
3. Place the piling socket over the post so that the machine rests on it. If the post is circular hollow pipe, place the applicable pipe adaptor on the top of the post first, with the flat face of the adaptor facing up.
4. Adjust the throttle for the desired hammering speed.
5. Drive the post into the ground as required – there is no need to push down on the machine.
6. Release the throttle – this disengages the hammer action.
7. Lift the machine from the post.

Using the Throttle and Adjusting Hammer Speed

The throttle (**H**) is used to adjust the engine speed, which in turns controls speed of the hammer action. To adjust the throttle, grip the throttle handle (**I**) so that the throttle safety switch (**J**) is pushed in – this allows the throttle to be adjusted – squeeze to increase engine speed. The throttle features a limiting screw (**K**) that stops it from being opened further. Note the following:

- The throttle safety switch must be pushed in, in order to adjust the throttle. When the throttle safety switch is released it is no longer possible to adjust the throttle.
- It is recommended to set the limiting screw when an effective engine/hammer speed is attained. Turn the screw right to reduce the throttle opening limit (slower speed). Turn the screw left to increase the throttle opening limit (faster speed). The hardness of the material that the posts are being driven into may require adjustment of engine/hammer speed for best performance.



Maintenance

Running combustion 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 combustion engine in confined areas EVEN IF windows and doors are open. ONLY run combustion engines OUTDOORS and away from doors, windows and vents. • Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • The product is NOT supplied with engine oil, although traces of oil from the manufacturing process may be present. It is essential to add adequate engine oil of the correct type to the engine before use – see Checking and Changing Engine Oil. **Failure to add engine oil will void the product warranty**. • 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 centre or qualified technician.

To keep the engine 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

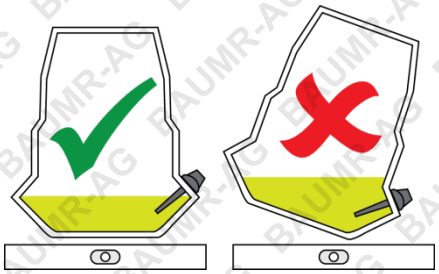
		Frequency – *Whichever Comes First*			
Component/Task	**Every Use**	**First Month or 20 Hours Use**	**Every 3 Months or 50 Hours Use**	**Every 6 Months or 100 Hours Use**	**Every Year or 300 Hours Use**
Engine Oil	Check	Replace		Replace	
Oil Leaks	Check/repair as necessary				
Air Cleaner	Check	Clean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

Checking and Changing Engine Oil

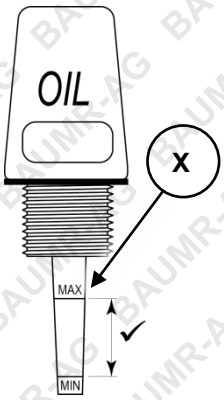
The product is NOT supplied with engine oil, although traces of oil from the manufacturing process may be present. It is essential to add adequate engine oil of the correct type to the engine before use. **Failure to add engine oil will void the product warranty**. • Always check engine oil level when 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 Specifications). • Perform the first oil change within the first 20 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. • Always check the oil level before using the machine.

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.

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.
   The oil level is determined by how far up the dipstick oil can be seen. To check:
   a. Wipe the dipstick clean with a piece of cloth or paper.
   b. Insert the dipstick into the oil filler and screw it in.
   c. Remove and inspect the dipstick – the MAX oil level is approximately the top of the patterned section (**X**).



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, re-install (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 filler so that no dirt or other material enters the engine when the cap is removed.
3. Unscrew (rotate left) and remove the oil filler.
4. Tilt the machine and drain all oil from the engine. Once drained, allow the machine to sit level again.
5. Fill the supplied oil fill bottle with approximately 0.5l of engine oil, then insert the nozzle into the oil filler and carefully add oil to the engine until the permissible maximum is reached. Double- check the oil level (described above).
6. When finished, re-install (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 reduce performance and 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 engine breather may be connected to the air intake assembly – this may lead to a build-up of oil in the air filter over extended use and is normal. 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.

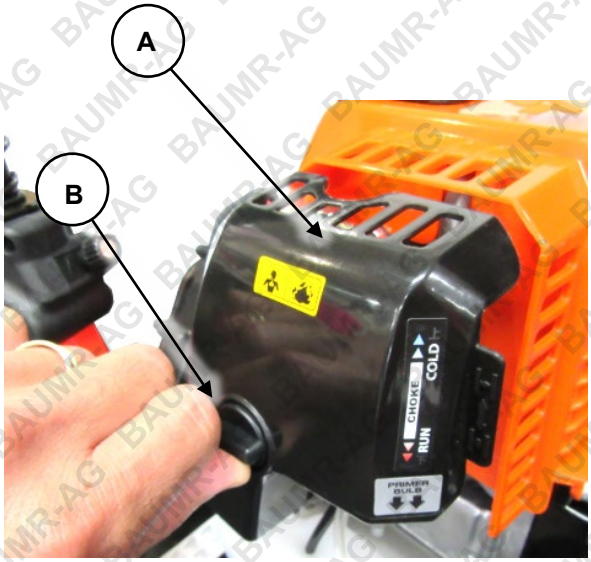
Air Filter Removal/Installation

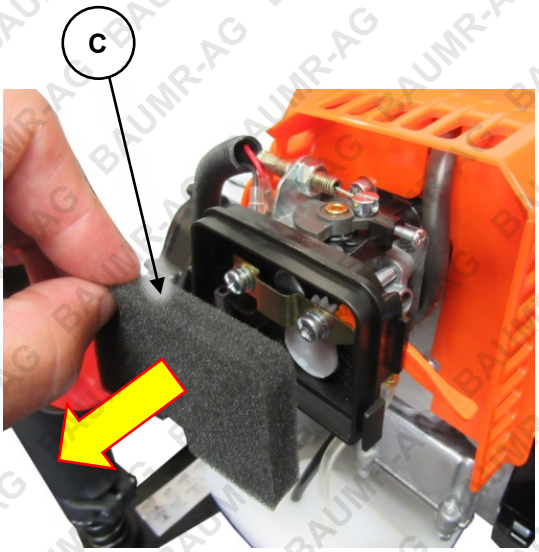
To remove the air filter:

1. Place the machine in an upright position on a flat and level surface.
2. Unscrew the air filter cover screw (**B**) (rotate left) until the air filter cover (**A**) can be removed.
3. Pull the air filter element (**C**) from the air intake assembly.

To install the air filter:

1. Insert the air filter element into the air intake assembly.
2. Re-install the air filter cover and secure it with the air filter cover screw (rotate right).





Checking, Cleaning or Replacing the Fuel Strainer

A dirty or blocked fuel strainer will restrict fuel flow, which can reduce performance and be mistaken as fuel system problems. Check the condition of the fuel strainer before adjusting engine idle speed, where applicable. • If the fuel strainer is no longer serviceable, replace it.

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

Fuel Strainer Inspection and Cleaning

Inspect the fuel strainer for dirtiness and debris etc. Clean or replace the strainer as necessary. To clean fuel strainers:

- Wash the strainer in clean solvent.
- If possible, use compressed air to assist in removing any blockages. Blow air into the strainer from where it connects to the tube.

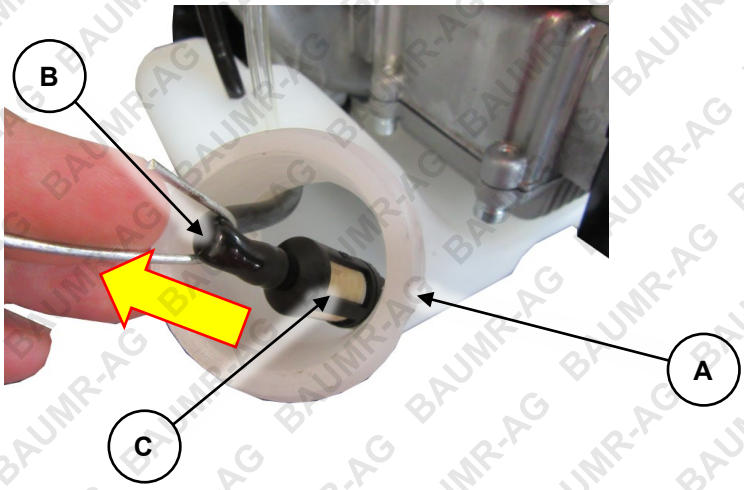
Fuel Strainer Removal/Installation

To remove the fuel strainer:

1. Place the machine in an upright position on a flat and level surface.
2. Remove the fuel tank cap (rotate left) and empty the fuel tank (**A**).
3. Use a hooked object to capture the black fuel intake tube (**B**) inside the fuel tank and gently pull it from the tank.
4. The fuel strainer (**C**) is installed on the end of the tube – to remove it, twist and pull it from the end of the tube

To install the fuel strainer:

1. Firmly push the fuel strainer onto the fuel intake tube.
2. Place the tube back inside the fuel tank – it should rest along the bottom of the fuel tank.



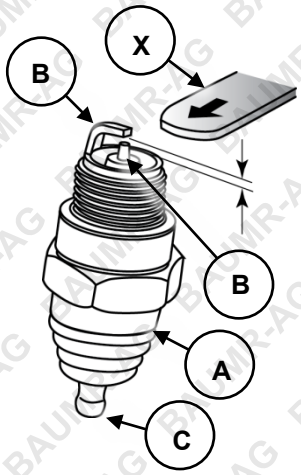
Maintaining the Spark Plug

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 Specifications.

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.



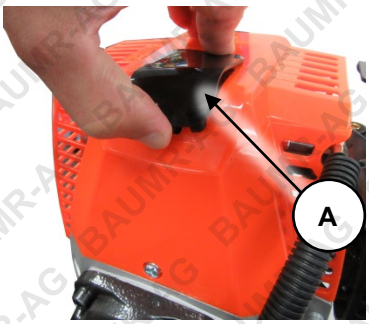
1. Remove any carbon deposits on the spark plug (**A**) electrodes (**B**) with a wire brush.
2. Clean the spark plug threads and the electrical terminal (**C**) on the top.

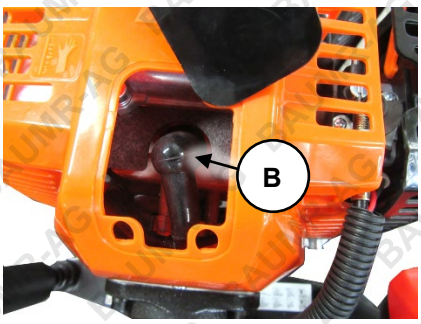
To check and adjust the spark plug “gap”:

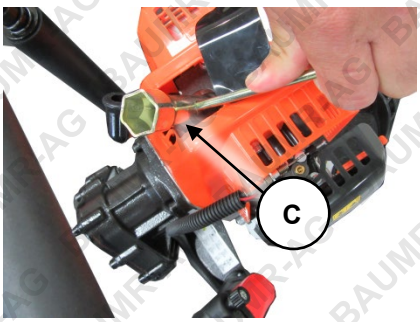
1. Use “feeler” or “thickness” gauges (**X**) to measure the existing gap. The gauge must drag a little when being slid between the electrodes (**2**) – this means the measurement is fairly accurate.
2. Adjust the gap to within specification (see Specifications). If the gap needs to be reduced, gently 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. Lift and slide the spark plug access cover (**A**) from the machine.
2. Pull the electrical lead (**B**) from the terminal on top of the spark plug.
3. If accessible, clean the area around the spark plug so that no dirt or other material can enter the engine when the spark plug is removed.
4. Use the spark plug socket (**C**) 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 socket 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.
4. Re-install the spark plug access cover.

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 engine ON/OFF switch in the “OFF” position. • Drain the fuel tank before transportation or storage.

Preparing for Transport and Storage

- Drain the fuel system by allowing the engine to run until it stops.
- Ensure the engine ON/OFF switch is in the “OFF” position.
- Avoid exposing the equipment to direct sunlight, particularly during transportation.
- Ensure the equipment is secure and upright during transport.
- 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:

- Drain the fuel system. It is advised to have the fuel tank as empty as possible before draining.
  a. Unscrew (rotate left) the carburettor drain plug. Use a suitable container to catch the draining fuel, and allow the fuel to drain. Store the drained fuel in a properly sealed container.
  b. Re-install (rotate right) the carburettor drain plug and tighten.
- Remove the spark plug and put 30ml of clean engine oil into the cylinder. Pull the starter rope slowly to distribute the oil. Re-install the spark plug.
- Cover the equipment to protect it from dirt and dust.

Troubleshooting

Running combustion 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 combustion engine in confined areas EVEN IF windows and doors are open. ONLY run combustion engines OUTDOORS and away from doors, windows and vents. • Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources. • The product is NOT supplied with engine oil, although traces of oil from the manufacturing process may be present. It is essential to add adequate engine oil of the correct type to the engine before use – see Checking and Changing Engine Oil. **Failure to add engine oil will void the product warranty**. • 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, or if problems persist after following all suggested actions, contact a service centre or qualified technician.

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

Difficulty starting the engine.

Possible Fault	Action
Lack of fuel	Check that there is fuel in the tank and prime the fuel system. • 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 choke in the "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.

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 engines, an engine oil sensor will automatically switch off the engine or prevent starting if a low engine oil level is detected.
Overheating	Allow engine to cool before restarting. If possible, improve engine cooling, such as operating in lower temperatures or in shade etc.
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 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.

Specifications

Engine Type	4-stroke, single cylinder
Fuel Type	Non-ethanol unleaded petrol
Spark Plug Type	CMR6A
Spark Plug Gap	0.5 to 0.7mm (0.020 to 0.028”)
Valve Clearance	Inlet: 0.08mm ± 0.10mm (0.003” ± 0.001”) Exhaust: 0.1mm ± 0.12mm (0.004” ± 0.005”)
Oil Type	SAE 10W-30 automotive engine oil recommended for general use

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 Strainer										
Replace Fuel Lines										
Clean Fuel Tank										
Check/Adjust Valve Clearance										
De-Coke Combustion Chamber										

	☐	Date	☐	Date	☐	Date	☐	Date	☐	Date
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Clean Fuel Tank										
Check/Adjust Valve Clearance										
De-Coke Combustion Chamber										

Some experts believe the incorrect or prolonged use of almost any product could cause serious injury or death. For information that may reduce your risk of serious injury or death, consult the points below and additionally, the information available at www.datastreamserver.com/safety

- 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.

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