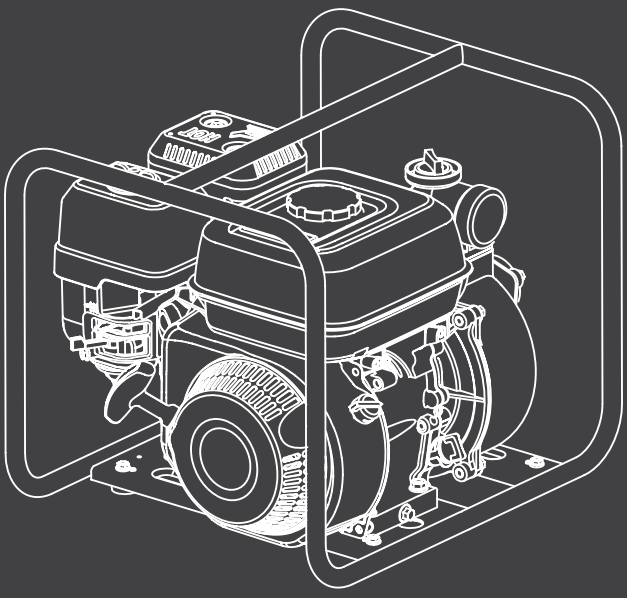
CROMTECH

3 INCH CLEAR WATER PUMP



# CTP301
# OPERATION MANUAL

Thank you for purchasing a Cromtech Pump.

This manual provides understanding of the operation and maintenance of your pump. Please read this manual carefully before operating.

For any questions regarding operation or maintenance, please consult your local service agent. Find your local service agent at www.crommelins.com.au.

**IMPORTANT ICONS**

Important information is distinguished by the notifications below. The Safety Alarm Symbol (⚠) alerts you to potential hazards. Please obey all safety information in the symbol to avoid any possible injury or even death.

⚠ **DANGER:** - Indicates a hazardous situation which, if not strictly complied with, will result in substantial property damage, serious injury or DEATH.

⚠ **WARNING:** Indicates a hazardous situation which, if not strictly complied with, may result in property damage,

⚠ **CAUTION:** Indicates a hazardous situation which, if not strictly complied with, could result in property damage or injury.

⚠ **NOTE:** Indicates important information to simplify operation and understanding.

⚠ **WARNING: PLEASE READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THE PUMP.**

⚠ **NOTE: We continually seek advancements in product design and quality. Therefore, there may be minor discrepancies in actual machine and the printed manual.**

## INDEX:


**Warranty ..... 4**
**Safety Warnings ..... 5**
**CTP301 Features ..... 7**
**Pump Specifications ..... 8**
Features ..... 8
**Connecting hoses ..... 9**
**Operating Checklist ..... 10**
Operating area ..... 10
Operating condition ..... 10
**Check engine oil ..... 11**
**Check fuel levels ..... 12**
**Priming the pump ..... 13**
**Starting the pump ..... 14**
Stopping the pump ..... 15
**Maintenance ..... 16**
Engine Maintenance ..... 16
Engine oil ..... 18
Adding oil ..... 18
Changing oil ..... 18
Air filter ..... 19
Oil bath filter ..... 19
Spark plug ..... 20
Spark arrestor ..... 21
Adjustments ..... 21
**Troubleshooting ..... 22**
**Storage and transport ..... 23**
Storage ..... 23
Long term storage ..... 23
Transport ..... 23

## WARRANTY

CROMTECH™and CROMMELINS™ are a registered trademark of The Crommelin Group. Crommelins warrants their goods against defects in materials and workmanship under normal use and service.

The Crommelin Group warranty does not cover fair wear commensurate with the age of the product, any damage caused by accident, abuse, misuse, neglect or failure to observe proper operating instructions or proper machinery maintenance as described in the instruction manual.

It is the owner's responsibility to regularly maintain a product in accordance with the owner's manual and only use the equipment for its designed purpose.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## CONSUMER ADVICE

Any claim under these warranties must be made in the warranty period from the date of purchase of the product.

There are over 185 national authorised service/repair agents available, visit www.crommelins.com.au for their details and locations.

To make a claim under the warranty, you must return the product (with proof of purchase) to the closest warranty agent or to the place of purchase.

Where a failure does not amount to a major failure, Crommelins Machinery is entitled to choose between providing you with a repair, replacement or refund. To obtain compensation, you would need to provide documentary evidence of the loss or damage suffered, and documentary evidence that such loss or damage was a reasonably foreseeable consequence of a failure by The Crommelins Group to comply with a consumer guarantee under the Australian Consumer Law.

Crommelins Operations Pty Ltd trading as The Crommelin Group, Crommelins Australia and Crommelins Machinery

**THE CROMMELIN GROUP:**
Ph: (08) 9350 5588  Fax: (08) 9451 6381
reception@crommelins.com.au
www.crommelins.com.au

PO Box 352, BENTLEY WA 6982
ABN 11 008 889 656

## SAFETY WARNINGS

**⚠ WARNING: DO NOT Operate this pump until you have read ALL safety, operation, and maintenance instructions listed in this manual.**

- Failure to follow the instructions may result in property damage, INJURY or DEATH.

**⚠ WARNING: Modifications to any part of the pump is not allowed and may void your warranty.**

**⚠ DANGER: FIRE OR EXPLOSION - Gasoline is highly flammable and extremely explosive.**

- Fire or explosion can cause severe burns or death.
- Keep flammable items away while handling gasoline.
- Fill fuel tank outdoors and in a well-ventilated area with the pump stopped.
- Always wipe off spilled fuel and wait until the fuel has dried before starting the pump.
- DO NOT operate the engine with known leaks in the fuel system.
- Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.
- Empty the fuel tank before storing or transporting the pump.
- Keep fire extinguisher handy and be prepared if a fire starts.

**⚠ DANGER: TOXIC FUMES - The exhaust of the pump engine contains carbon monoxide, an odorless, colorless, poison gas. Using engine indoors CAN KILL YOU!**

- NEVER use pump inside any building or any kind of enclosure, EVEN IF doors and windows are open.
- Place the pump in a well-ventilated area and consider wind and air currents when positioning the pump

**⚠ DANGER: MOVING PARTS - Moving parts can cause severe injury. Keep hands and feet away.**

- DO NOT operate pump with covers, shrouds, or guards removed.
- DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught. Tie up long hair and remove jewelry.
- NEVER place fingers, hands, or body near the engine when it is running.

**⚠DANGER: KICKBACK - Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let go.**

- Unintentional startup could result in an injury.

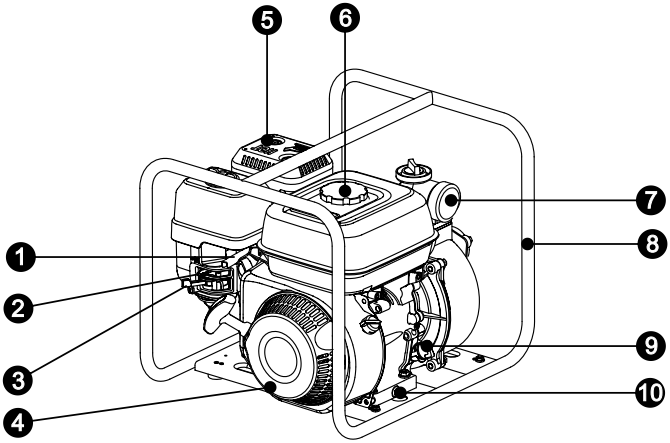
**⚠WARNING: CLEAR WATER ONLY - Do not use the pump for flammable or corrosive liquids, chemical solvents, or alkali liquids. For example; Gasoline, alcohol, seawater, oil, wine or milk.**

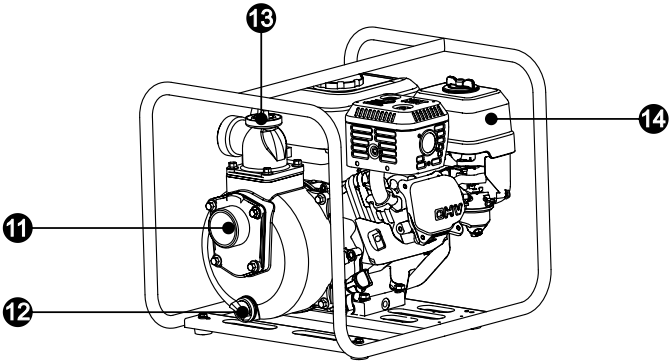
- Keep hands and body far away from discharge outlet of the pump.
- Never secure the suction hose with clamps to the pump during operation.
- Never put hand or body into an operating pump or suction hose.

**⚠WARNING: OPERATION - Operate the pump on firm dry ground and ensure it is not in mud or water, especially when used next to ponds, ditches or water source.**

- Never place hoses where they can be run over. If the hose does lay across a road, place a specially made metal plate over the hose to protect it from damage or kinks.
- Never block the inlet or outlet ports.
- Never start the pump without the filter attached to the suction hose.
- ALWAYS Prime the pump upon initial start. Keep enough water in the pump. DO NOT run pump without water in it.
- DO NOT operate pump without reading the instructions
- Children and pets must keep away from the area of operation at all times.
- DO NOT operate while intoxicated or distracted

## CTP301 FEATURES




① **Throttle control** ② **Choke lever**
③ **Fuel switch** ④ **Recoil starter**
⑤ **Muffler** ⑥ **Fuel cap**
⑦ **Outlet** ⑧ **Frame**
⑨ **Oil dipstick** ⑩ **Oil drain**
⑪ **Inlet** ⑫ **Outlet drain plug**
⑬ **Inlet water plug** ⑭ **Air filter**

## PUMP SPECIFICATIONS

| | |
|---|---|
| Model | CTP301 |
| Max. Water Flow (L/min) | 900L/min |
| Max. Total Head (m) | 30m |
| Max. Suction Depth | 7m |
| Engine | Cromtech |
| Max. Power | 4.5kW |
| Max. Speed (rpm) | 3800rpm |
| Fuel Tank | 2.6L |
| Oil Capacity | 0.6L |
| Outlet | 3” (with 2” hose tail supplied) |
| Weight (kg) | 26kg |
| Packaging (LxWxH) | 530x415x445mm |

**FEATURES**

- 3” to 2” Reduction hose tail supplied
- Mechanical seal (ceramic carbon)
- Petrol powered
- Recoil start
- 1 Year Cromtech warranty
- Emptying ponds, dams and large water tanks
- Agricultural and general purpose

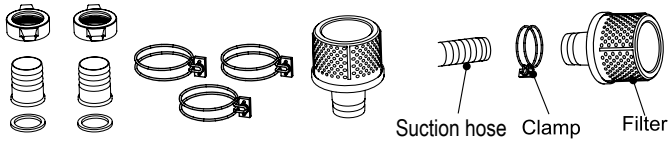
## CONNECTING THE HOSES

**⚠ NOTE: DO NOT Operate this pump until you have read ALL safety, operation, and maintenance Instructions listed in this manual.**

1. Pump connections - Check you have been provided with all the following parts (Parts may vary from different models). Connect them as follows;

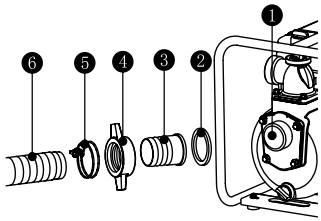
1.1 Connect the filter to the suction hose.

**⚠ CAUTION: Ensure that the filter is securely connected so it can prevent debris being passed into the pump. Keep the suction hose at least 200mm below depth ensuring it is fully submerged and there are no obstructions.**




1.2 Connect the suction hose to the inlet port

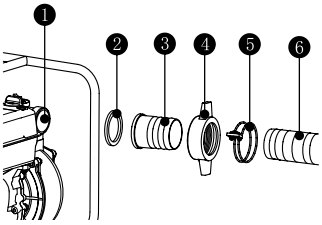
**⚠ CAUTION: It is recommended that the suction hose be made of hardened pipe and it is short in length (7m maximum based on suction depth).**




1. Inlet port
2. Rubber sealing gasket
3. Hose tail
4. Hose nut
5. Clamp
6. Suction hose

1.3 Connect the outlet hose to the outlet port

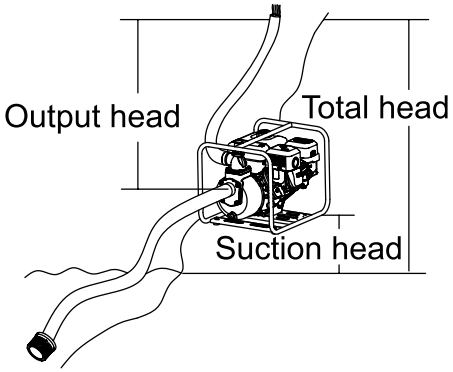
**⚠ CAUTION: The maximum water flow for the pump is based on rpm, outlet size and hose size. It is recommended to use a 3" hose for maximum water flow. Fasten all hoses to the pump so they cannot loosen under high pressure.**




1. Outlet port
2. Rubber sealing gasket
3. Hose tail
4. Hose nut
5. Clamp
6. Outlet pipe

## OPERATING CHECKLIST

1. *OPERATING AREA* - This pump is for outdoor use only. Always keep the area around the water pump clear. Place the pump in a well-vented area and carefully note the wind and air currents. Place the water pump on firm horizontal surface before running. The pump should not exceed a height more than its maximum suction depth as it may not pump or could overheat.




**⚠ DANGER: TOXIC FUMES - The exhaust of the pump engine contains carbon monoxide, an odorless, colorless, poison gas. Using pump indoors CAN KILL YOU! NEVER use inside any building or any kind of enclosure, EVEN IF doors and windows are open.**

2. *OPERATING CONDITION* - Check for loose or damaged parts, signs of oil or fuel leaks, and any other condition that may affect proper operation. Repair or replace all damaged or defective parts immediately.

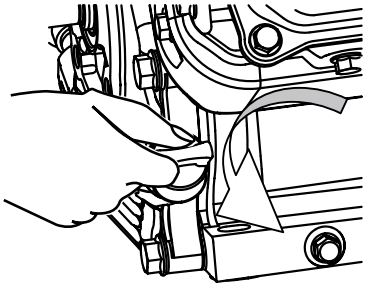
   Remove any excessive dirt or debris, especially around the muffler and recoil starter.

   **⚠ DANGER: Failing to correct problem(s) before operation could result in property damage, serious injury or DEATH.**

## CHECK ENGINE OIL

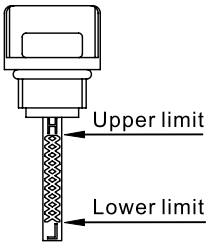
**⚠ WARNING: This engine is not filled with oil from the factory. Any attempt to crank or start the engine before it has been properly filled (with the recommended type and amount of oil) may result in engine damage and void your warranty.**

1. *ENGINE OIL* - Place the engine on a level surface with engine stopped. Remove the dipstick and wipe it clean. Reinsert dipstick into oil fill neck; wait, DO NOT thread cap into tube.



Remove dipstick

2. Remove the dipstick again and check oil level. Level should be at top of indicator on dipstick.




Oil level gauge

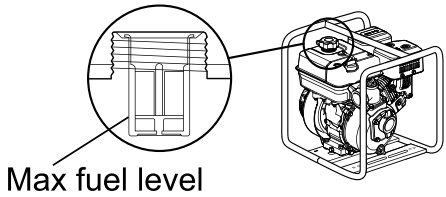
3. If lower, fill to the upper limit (marked with "H") of the dipstick with the recommended oil. Reinsert and fully tighten the dipstick.

   **⚠ WARNING: Oil is a major factor affecting performance and service life of an engine. Use 4-stroke automotive oil SAE30.**

## CHECK FUEL LEVELS

**⚠ CAUTION: Pressure can build up in the fuel tank. Allow the engine to cool for at least two minutes before removing fuel cap. Loosen the fuel cap slowly to relieve any pressure in the tank**

- *ENGINE FUEL* - With the engine stopped, check the fuel level gauge. Refill the fuel tank if necessary.
- Use clean, fresh, regular unleaded gasoline only. DO NOT mix oil with gasoline.
- Be sure not to fill above the upper limit mark, always fill to the level indicator, or fill to 25mm left from fuel tank (to allow room for fuel expansion).




**⚠ DANGER: FIRE OR EXPLOSION - Gasoline is highly flammable and extremely explosive. A fire or explosion can cause severe burns or death.**

- **Keep flammable items away while handling gasoline.**
- **Fill fuel tank outdoors and in a well-ventilated area with the engine stopped.**
- **Always wipe off spilled fuel and wait until the fuel has dried before starting the engine.**
- **DO NOT operate the engine with known leaks in the fuel system.**
- **Use proper fuel storage and handling procedures. DO NOT store fuel or other flammable materials nearby.**
- **Empty the fuel tank before storing or transporting this engine.**
- **Keep fire extinguisher handy and be prepared if a fire starts.**

NEVER use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
It is important to prevent gum deposits from forming in fuel system, such as the carburetor, fuel filter, fuel hose or tank during storage. Also, any alcohol-blended

fuels (called gasohol, ethanol or methanol) can attract moisture, which leads to separation and formation of acids during storage.

Acidic fuel can damage the fuel system of an engine while in storage. Be sure to review the Storage instructions.

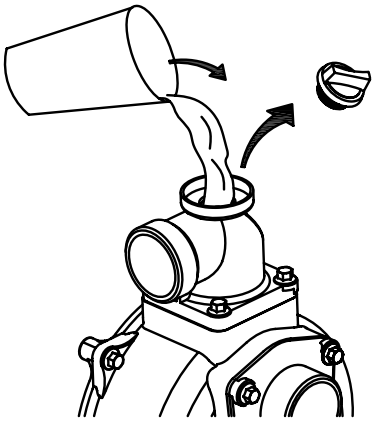
Gasoline/Alcohol Blends: up to 10% alcohol, 90% unleaded gasoline by volume is approved as a fuel. Other gasoline/alcohol blends are not approved. Effects of old, stale or contaminated fuel may void your warranty.

**⚠ CAUTION: To minimise gum deposits in your fuel system and to insure easy starting, do not use gasoline left over from the previous season.**

## PRIMING THE PUMP

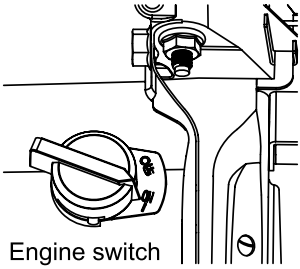
**⚠ CAUTION: Operating a pump with no water will damage the seals, which may void the warranty.**

- *PRIME THE PUMP* - Fill the pump with water before starting it. Remove the water inlet rubber plug and fill pump head with water.

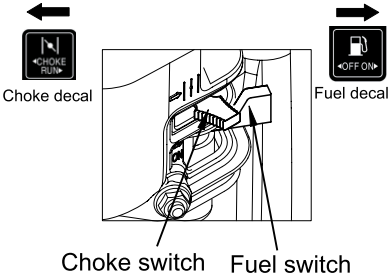


## STARTING THE PUMP

1. Check the hoses are connected and the pump is primed before operating the pump.
2. Turn the start switch to the 'ON' position



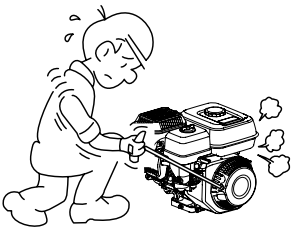

3. Turn the choke lever to the 'ON' position
4. Turn the fuel switch to 'ON' position.




5. Push the throttle lever 1/3 the way (from low speed to high speed) across.
6. RECOIL START - Pull the starter handle until feel resistance force to start the engine, and then pull more quickly to start it.

**⚠ CAUTION: Ensure that the recoil rope is not damaged and repair if required.**

**⚠ DANGER: Rapid retraction of the starter cord will pull hand and arm towards the engine faster than you can let it go. Unintentional startup could result in an injury.**



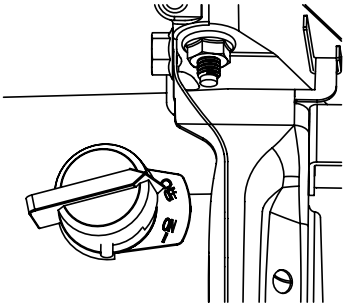
7. Switch ‘OFF’ the choke lever once the engine is started. Do not run the engine for long periods of time with choke lever in the ‘ON’ position.
8. Push the throttle lever to high speed to run the engine under its standard speed.

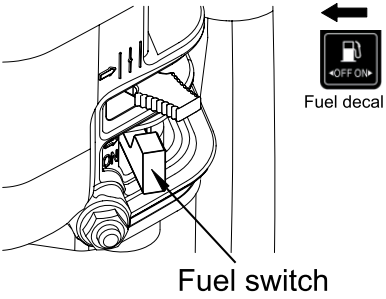


High speed Low speed

## STOPPING THE PUMP

1. Turn the throttle lever to low speed and run the engine for 1-2 minutes more.
2. Turn the switch to ‘OFF’ position to stop the pump.
3. Turn fuel switch to ‘OFF’ position.





## MAINTENANCE

**⚠ NOTE: It is owner's/operator's responsibility to complete all scheduled maintenance in a timely manner.**

- Ensure the pump is regularly checked before operating.
- Always follow the inspection and maintenance recommendations and schedule in this manual.

**⚠ DANGER: Accidental starts can cause severe injury or death. Remove and ground spark plug wire before performing any service.**

**⚠ DANGER: Improper maintenance or failure to correct a problem before operation can cause a malfunction and result in property damage, serious injury or DEATH. Improper maintenance will void your warranty.**

**⚠ CAUTION: The filter element may contain PAHs, PAHs are harmful for your health. Please wear gloves for protection during air filter maintenance.**

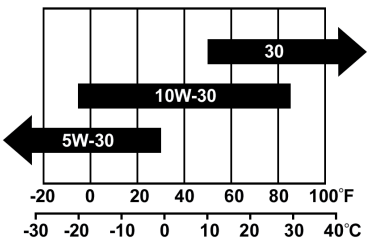
1. MAINTENANCE SCHEDULE - Service the pump in a clean, dry and flat area.

   Follow the service intervals indicated in the chart. Service your pump more frequently when operating in dusty or adverse conditions.

   Contact your local service agent for parts.

2. GENERAL MAINTENANCE - Regularly check the engine oil, air filter, spark plug and pump.

   2.1 - ENGINE OIL - SAE30 is recommended for general, all-temperature use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.



| Maintain period / Item (check as order shows) | | Each time before and after use | First month or the first 20h | Every 50h or each 3 months | Every 100h or each 6 mont-hs | Every 300h or each year |
|---|---|---|---|---|---|---|
| Fasten parts | Check | √ | | | | |
| Engine oil | Oil level check | √ | | | | |
| | Oil Change | | √ | | √ | |
| Air Filter | Check | √ | | | | |
| | Clean[Note1] | | | √ | | |
| | Change[Note1] | | | | | √ |
| Spark plug | Check and Adjust | | | | √ | |
| | Change | | | | | √ |
| Idle speed | Check and adjust[Note2] | | | | | √ |
| Valve gap | Check and adjust[Note2] | | | | | √ |
| Combustion chamber | Clean[Note1] | Clean Every 200h | | | | |
| Cooling ribs for cylinder head | Clean[Note1] | | | | √ | |
| Fuel tank | Clean[Note1] | | | | √ | |
| Fuel pipe system | Clean[Note1] | Clean Every 2 years( change new one if needed) | | | | |
| pump | Clean[Note1] | | | | | √ |
| Cooling fan | Check | | | | | √ |
| Pump water intake valve | Check | | | | | √ |

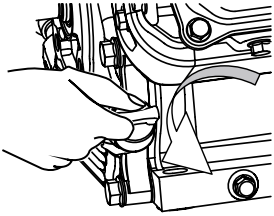
**⚠ NOTE 1: If the pump engine is running in dusty or severe environments, more frequent maintenance is required.**

**⚠ NOTE 2: All major maintenance should be completed by an authorised local service agent.**

2.2 - ADDING ENGINE OIL - Check oil levels are at the correct level.

i. Place the engine on a level surface.

ii. Remove the dipstick and wipe it clean.

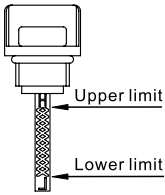


Remove dipstick

ii. Reinsert and check the dipstick for oil level.

**⚠ CAUTION: Reinstall dipstick into tube; rest on oil fill neck, DO NOT thread cap into tube.**

iv. Add the recommend oil to the upper limit of the dipstick.




Oil level gauge

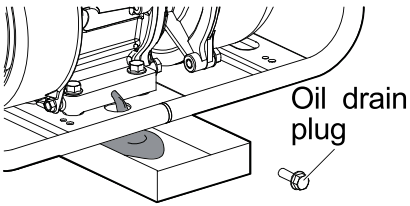
2.3 - CHANGING OIL - If the oil is dirty, replace with new oil.

**⚠ CAUTION: Change oil when the engine is warm from operation.**

i. Place the engine on a level surface.

ii. Prepare a tray to catch the oil.

iii. Remove the oil drain plug and allow the oil to drain completely.




iv. Replace and fully tighten the drain plug.

v. Add recommended oil to the upper limit.

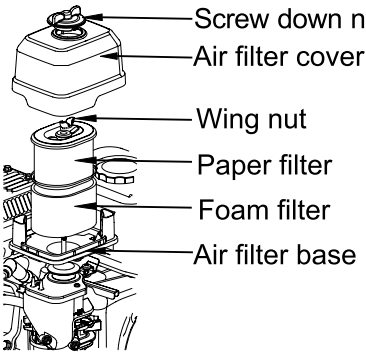
vi. Reinstall and fully tighten the dipstick.

vii. Dispose of used oil at an approved waste management facility.

2.4 - AIR FILTER - Check the air filter/s are clean and change if required.

I. Loosen the nut to remove the filter cover.

Ii. Loosen the wing nut to remove the filter.




Iii. Clean/change the filter/s.

*Foam filter:* Clean the foam filter using warm water with detergent. Dry the filter by pressing it into a clean dry towel. After drying, lightly apply clean engine oil to the filter.

*Paper filter:* Lightly tap the filter so that the dirt can fall off. Never brush the dirt, which may push the dirt into the filter. If the dust does not remove and the filter is still dirty, replace it.

Iv. Reassemble the filter back to the units.

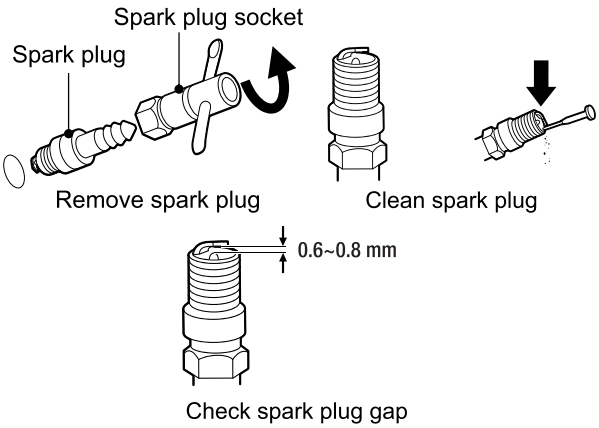
V. Fasten cover with the screw down nut.

**⚠ WARNING: DO NOT run the engine without the air filter, serious damage can result.**

2.6 - SPARK PLUG - Check the spark plug is clean and change if required.

I. Clean any dirt from the spark plug cap and spark plug base.
Ii. Remove the spark plug cap.
Iii. Using socket wrench to loose and remove the spark plug.
Iv. Inspect the spark plug and spark plug washer, if it's damaged or worn, replace with new one. Clean the spark plug with wire brush before refitting.
V. Check spark plug gap. Carefully bend side electrode to adjust the gap if necessary.

**SPARK PLUG GAP: 0.6mm to 0.8mm**
**SPARK PLUG: LG F7RTC**




Vi. Carefully thread the plug into the engine by hand.
Vii. After the spark plug seated, use spark plug wrench to tighten it. Spark Plug tighten Torque: 20-25 N.m
Viii. Attach the spark plug wire to the plug.
**Viii. Replacement spark plug: LG F7RTC**

**⚠ WARNING: Only use recommended spark plug or equivalent. DO NOT use spark plugs that have improper heat range.**

2.7 - SPARK ARRESTER - Fitted to exhaust outlet pipe

1. Allow the engine to cool completely before servicing the spark arrester.
2. Loosen the clamp that holds the spark arrester to the exhaust outlet.
3. Remove the spark arrester from the outlet.
4. Carefully clean the carbon deposits from the spark arrester screen with a wire brush.



5. Replace the spark arrester if it is damaged.
6. Reinstall the spark arrester to the exhaust outlet and attach with the clamp.

2.8 - ENGINE SPEED

⚠ **WARNING: Unapproved adjustment will damage your engine and void your warranty.**

- The speed has been set at the factory and should not require readjustment. Consult your local authorised service agent for advice.

2.9 - ADJUSTMENTS - There is no other service and/or adjustment needed for your pump.

⚠ **WARNING: Tampering with the factory set governor will damage your engine and void your warranty.**

- Unapproved adjustments or tampering can damage your generating set and your electrical devices and will void your warranty. Contact your local dealer for such needs.

## TROUBLE SHOOTING

**⚠ WARNING: Turn off the pump before starting maintenance work.**

| FAULT | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| **Engine can hardly start or cannot start /Low power** | 1. Throttle closed<br>2. Stop switch closed<br>3. Choke opened<br>4. Carbon store in spark plug<br>5. Spark plug and ignition gap large or small<br>6. Spark plug damage<br>7. Inferior oil or fuel is used.<br>8. Engine works over loaded or over heated<br>9. Insufficient oil | 1. Open the throttle governor<br>2. Turn the switch to ON position<br>3. Close the choke<br>4. Remove the carbon accumulation<br>5. Adjust the gap to standard value<br>6. Change to a new one<br>7. Change new fuel or oil<br>8. Check the engine work condition<br>9. Add oil to standard level |
| **Pump cannot work or low water flow after engine start** | 1. Impurities Filter blocked<br>2. Insufficient water in pump<br>3. Problem on water pipe like block, loosen, leak and pipe, length too long or diameter too narrow.<br>4. Input pipe is not in the water.<br>5. Input pipe leak<br>6. Pump mounting too high<br>7. Engine works low speed | 1. Check and remove the impurities<br>2. Unscrew the rubber plug to fill enough water<br>3. Check the water pipe and adjust<br>4. Check and put it into water<br>5. Check the connecting<br>6. Lower the mounting height<br>7. Turn the throttle governor to high speed |

**⚠ NOTE: If a problem is still exists, contact your local authorised service agent for advice.**

For any questions regarding operation or maintenance, please consult your local service agent. Find your local service agent at www.crommelins.com.au.

## STORAGE AND TRANSPORT

**⚠ DANGER: FIRE OR EXPLOSION - Gasoline is highly flammable and extremely explosive. Empty the fuel tank and shut off fuel valve before storing or transporting this pump.**

1. STORAGE - The pump should be started at least once every 2 weeks and allowed to run for at least 20 minutes.
2. LONG TERM STORAGE - Follow the instructions below for if the pump is not being used with in the next 2 months or longer.
   - I. Remove oil as maintenance and service chapter indicate when pump engine is hot after running.
   - Ii. Allow the pump to cool completely.
   - Iii. Drain all fuel completely from the fuel tank, fuel hose and carburetor.
   - Iv. Remove spark plug and pour about 1 oz. of engine oil into cylinder. Reinstall spark plug. Crank pump slowly to distribute oil and lubricate cylinder.
   - V. Pull the recoil till resistance is felt.
   - Vi. Remove the water outlet plug, and clean the pump with pure water, and then drain all the water before reattach the plug.
   - Vii. Clean the appearance of the pump and shield the pump in case of dusty accumulation.
   - Viii. Store the unit in a clean, dry area, and out of direct sunlight.

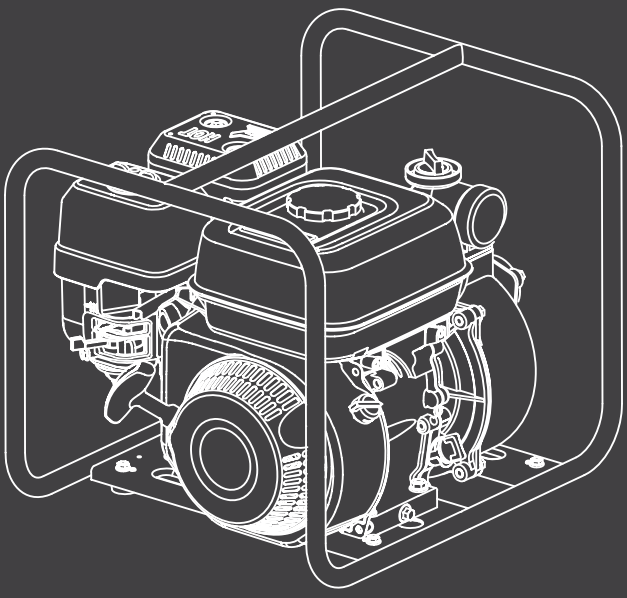
3. TRANSPORTATION - To prevent fuel spillage, when transporting or during temporary storage, the pump should be secured upright in its normal operating position, with the all switches in the OFF position.

**⚠ DANGER: When transporting: Do not over fill the tank. Avoid a place exposed to direct sunlight when putting the pump on a vehicle. If the pump is left in an enclosed vehicle for many hours, high temperature inside the vehicle could cause fuel to vaporize resulting in a possible explosion.**

**⚠ CAUTION: Do not drive on a rough road for an extended period with the engine on board. If you must transport the engine on a rough road, drain the fuel from the engine beforehand.**

CROMTECH

3 INCH CLEAR WATER PUMP



# CTP301
# OPERATION MANUAL