



NWCG High Pressure Portable Pump Instructions



1 SET UP

1. Find flat ground or create flat ground. Keep suction lift as low as possible.
2. Unfold berms and ensure sides are fully extended.
3. Place absorbent pads in berms. In rough/rocky terrain, use two pads in pump berm.
4. Place high pressure pump in one containment berm and the fuel can(s) in the other berm.
5. Locate fuel cans as far away from hot engine parts as possible; orient pump so exhaust does not vent directly on fuel can.
6. Secure pump and fuel can if necessary to prevent creep and to maintain position.
7. Connect suction hose to foot valve and pump (wrench-tight).
8. Place foot valve at least one foot under water. Do not place foot valve directly on sandy or muddy (stream/lake) beds.
9. Prime the pump head by either using the hand primer or filling with pail. Fill to the brim of prime port and wrench tighten cap.
10. Connect hose curl (pigtail) to discharge side of pump and to check and bleeder valve.
11. Utilize 1" port on check and bleeder valve to re-circulate water back to the water source.



2 FUEL MIXING AND REFUELING

↓ **Ensure All Fuel Is Mixed Properly Before Using Pump**

1. If fuel is pre-mixed (red or greenish colored), then no mixing is required. (Alaska and other areas provide pre-mixed fuel.)
2. If fuel is straw or clear colored, then mix fuel using JASO FD and API service classification TC (API-TC) 2-cycle oil at 50:1 mix ratio (for every 5 gallons of gas, add 12.8 oz of oil).
3. Pour approximately one gallon of gas into pump-adapted can.
4. Add appropriate amount of 2 cycle oil to gas then shake can vigorously.
5. Add remainder of gas and shake can again.
6. Label fuel mixture on tag and attach to pump-adapted can.
7. Attach fuel line to pump-adapted can.



When refueling:

- ALWAYS wear eye protection and gloves. ALWAYS shut the pump down first.
- Do not operate a radio or any other portable electronic device such as a cell phone.
- Replace gas absorbent pads as needed by placing them in garbage bags and dispose per local protocol.
- If a spill occurs or gas enters the natural water source, notify supervisor immediately. Spill containment kits are available at local units and Incident Command Posts (ICPs).
- The Resource Advisor (READ) must be notified immediately.

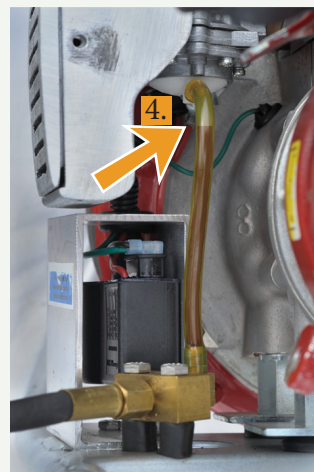


3 START UP

1. Open air vent in fuel tank.
2. If engine is cold, move choke lever to start position. If engine is warm, move choke to run position.
3. Move throttle lever to start/warm up position.

↓ **Caution: Follow this step carefully to avoid flooding the engine.**

4. Slowly pump fuel bulb until fuel mixture (in clear fuel tube) is just touching bottom of carburetor.
5. If pump is equipped with an on/off switch, turn switch on.
6. On Mark III pump, ensure over-speed reset rod is pushed in.



7. Pull starter rope with short quick pulls (typically 2 to 4 pulls) until engine pops.
8. Immediately set choke lever to run position.

↓ **Caution: Any consecutive pulls of rope with choke in start position after engine pops will flood the engine.**

9. Pull starter rope approximately 1 to 3 more times and engine should start.
10. Allow engine 2 minutes to warm up (throttle lever should still be at start/warm up position) before moving throttle to run.

4 OPERATE

1. Water must always be flowing through the pump head. Crack nozzle or open check and bleeder valve.
2. Grease pump head with one squirt of grease once a shift (or every 8 hours) at grease/zerk fitting.



5 SHUT DOWN

1. Allow engine to idle for one minute.
2. Move the throttle to the stop position.
3. At end of shift remove male end of fuel line quick connect from base of fuel can; allow engine to run out of gas.

Troubleshooting: If pump will not start or run, follow steps 1-6.

1. On the Mark III, check the overspeed reset rod. If rod is pushed in, move on to step 2. If rod is out, the pump has lost its prime. Do not attempt to restart pump until the problem is located and corrected; check for these problems:

- Suction hose connections are leaking.
- Suction hose is defective.
- Priming cap is loose.
- Foot valve not fully submerged in water source (1 foot minimum).

2. Check the spark plug by removing it from the engine. If the spark plug electrode is dry, move on to step 3.

If spark plug is wet with fuel, the engine could be flooded. Follow these steps:

2.1 Place spark plug on top of cylinder head with spark plug wire attached (spark plug is now grounded).



**WARNING:
FIRE/EXPLOSION
HAZARD**



2.2 Remove fuel supply line from engine.



2.3 Remove crankcase drain plug and copper gasket from engine block to drain excess fuel.



2.4 With choke and throttle in full open (run/run) position, pull starter cord several times until fuel is exhausted. Reinstall crankcase plug with copper gasket attached.



2.5 Reinstall clean, dry, or new spark plug.



3. If the spark plug looks normal, move on to step 4. If the spark plug has an excess of carbon on the electrode, replace the spark plug and try to start.

4. Check for ignition spark:

- Ensure spark plug is grounded.
- Crank engine and look for spark across spark plug gap.

The plastic cover of the IRPG is approximately .020" thick and can be used to check the spark plug gap if feeler gauge is not available. Do not use a dime to check the plug gap.

If there is an ignition spark, move on to step 5. If there is no spark, pump will need to be repaired.

5. Check fuel system for these problems:

- Loose connections; fuel leaking.
- Fuel can is not vented.
- Fuel supply line defective.
- Water or dirt in the fuel system.

6. Use flagging to identify any mechanical problems with pump.

Protection of Endangered Species

A 100 GPM Fish Strainer can be used for protection of anadromous fish fry and debris avoidance. Not all water sources will require a fish strainer; validate with local READs.

Correct Placement:

Insert the foot valve and suction hose into the fish strainer until it contacts the bottom plate.



Secure the Fish Strainer:

Use the adjustable strap to secure the fish strainer to the suction hose by tightening the adjustable strap and locking it in place with the cam locking mechanism.



Storage:

The adjustable strap and cam locking mechanism can be used to compress the fish strainer for storage.

