RICE HYDRO, INC.
MANUFACTURER'S OPERATING INSTRUCTIONS
TEST PUMP MODEL DP(H)-2B
(WITH KAPPA-4O PUMP)

CONNECTING THE PUMP:

1. Check oil level in pump through window plug on front of pump body. Use 10w30 non-detergent oil as needed. Middle of red dot is full.
2. The accumulator head is equipped with a valve stem. Set between 90 and 120 PSI.
3. Check oil level in engine crankcase, use (10W30) as needed.
4. Check oil level in the gear reduction, use (90W) as needed. Oil should be level with side plugs of unit.
5. Use unleaded gasoline in engine.
6. Connect inlet hose assembly provided. The pump MUST either be suction fed (such as out of a barrel), or gravity fed (from a water truck). **A PRESSURIZED LINE CANNOT BE USED TO SUPPLY WATER TO THE PUMP.** Never connect this unit to a water source such as a standpipe, hosebib, tap water faucet, etc. ***unless a 2B-PRESSURED Tank is attached to the unit.***
7. Connect the supplied high-pressure outlet hose to the pump and the line to be tested.
8. Open the 1/4 turn ballvalve on the outlet side.
9. Open hosebib located directly below the gauge. Close when water flows freely after starting pump.

OPERATING THE PUMP:

1. Start the engine, RPM has been preset. **DO NOT ADJUST.**
2. The pressure regulator has been preset at the factory. ***To change this setting you must make this adjustment while the water is flowing freely through the pump.*** To adjust pressure, first loosen the locknut. Turn the T-handle clockwise to increase the pressure. Turn the T-handle counterclockwise to decrease the pressure. Adjustments to the T-handle should be in 1/2 turn increments. Re-tighten locknut after each turn to verify reached test pressure.
3. Once test pressure has been reached, ***close ballvalve and shut off engine.*** A checkvalve on the high-pressure side of the pump prevents pressure from bleeding back to the pump.
4. Check for leaks. *If pressure drops: see trouble-shooting guide.*

REMEMBER THESE CAUTIONS:

1. Check all fluid levels prior to operating pump.
2. Use a sound 1" or larger supply hose.
3. NEVER connect the pump up to a pressurized line.
4. NEVER close (“slam”) the ballvalve while the engine is running.
5. Flush system thoroughly after each use.
6. Protect the pump from freezing in cold climates, use anti-freeze.
7. NEVER ADJUST PRESSURE REGULATOR WITH UNIT UNDER PRESSURE AND/OR BALLVALVE CLOSED.

USING THE EXCLUSIVE RICE ENGINEERED FEATURE TO IDENTIFY LOSS

1. After desired test pressure is reached, close ballvalve and shut off engine.
2. Note the pressure reading on the gauge. Wait the specified time then note any pressure drop.
3. *If there is a pressure drop,* at the end of the test period open the ballvalve and re-establish original test pressure.
4. Shutoff the engine and close the ballvalve. Open the hosebib and draw out the water to duplicate the pressure drop (water lost). Collect this water in a container to be measured.

IF YOU NEED TO LEAVE THE PUMP RUNNING TO LOCATE A LEAK YOU MAY DO SO WITHOUT FEAR OF DAMAGING THE PUMP SHOULD YOUR FEED DRUM RUN DRY. ONE OF THE FEATURES OF THE DIAPHRAGM PUMP IS IT'S ABILITY TO BE RUN DRY WITHOUT RESTRICTIONS. TO DO THIS, THE INLET BALLVALVE AND OUTLET MUST NOT BE CLOSED OFF, ALLOWING AIR INSTEAD OF WATER TO BE TRANSFERRED FREELY INTO AND OUT OF THE UNIT. YOU MAY ALSO PUMP UP TO A 10% SOLUTION OF CHLORINE THROUGH THE PUMP WITH NO RESULTING DAMAGE.

RECOMMENDED PERIODIC MAINTENANCE PROCEDURE

1. Change engine oil after the first 5 hours of operation thereafter every 80 hours of use or every season.
2. Change the oil in the pump body after the first 50 hours of operation thereafter every 250 hours.
3. Change the gear lube after every 250 hours of use or every season.

COMPONENTS:

1. 5 H.P. gasoline powered, air-cooled, 4-cycle engine.
2. 500 PSI, 10 GPM positive displacement twin diaphragm pump with inner oil bath and gear reduction.
3. Manually operated pressure regulator provides variable pressure settings up to 500 PSI MAXIMUM. Bypass is directed back to the inlet side of the pump.
4. Stainless-steel liquid filled gauge for accurate readings.
5. 1/4 turn stainless-steel ballvalve with self-cleaning nylon seat to isolate output pressure.
6. 1/2” checkvalve to hold pressure after engine shutdown.
7. Inlet hose, 9 foot with mesh-strainer.
8. Hosebib for bleeding of air and loss definition.
9. 1/2' X 8 ft., high-pressure outlet hose.

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TROUBLE SHOOTING
FOR DP-2B HYDROSTATIC TEST PUMP

IF PUMP FAILS TO BUILD PRESSURE:

1. Look for leaks in water supply hose and connections.

2. Supply hose is too small, 1" or larger diameter required. Strainer may be clogged.

3. Supply hose may be kinked or collapsed. Maximum 9 feet.

4. Pump may be sucking air. Small holes in supply hose are hard to find because air is drawn inward. Replace supply hose. Loose piping or connections.

5. T-Handle pressure regulator may be set incorrectly. Re-set NO HIGHER than 500 PSI.

6. Faulty pressure gauge, replace.

7. Pump is running too slow. Advance throttle on engine.

8. Pipeline being tested may have leaks, or open valve. Isolate pump and self-test, by placing a ballvalve on the end of the outlet hose.

9. Foreign material may be lodged in a valve, preventing valve from seating properly. Remove cylinder head. Remove valve assemblies, clean and replace.

10. Airlock. With pump running, open and close bleed valves several times to remove air.

11. Diaphragms may be ruptured, oil in crankcase will be milky white. Drain oil from pump and install new diaphragms.

12. No air in accumulator head. Reset between 90-120 psi.