## **GENERAL PUMP & EQUIPMENT CO., INC.**

MANUFACTURING QUALITY HYDROSTATIC TESTING EQUIPMENT FOR CONTRACTORS AND INDUSTRY SINCE 1969 3276 BRUENING AVENUE SW CANTON, OHIO 44706 PHONE 330-455-2100 TOLL FREE 800-594-5178

EMAIL gentest@bright.net

#### **INSTRUCTIONS FOR MODEL AR4-3000**

#### **SPECIFICATIONS:**

Output at 3 GPM at low pressure and 1.5 GPM at 3000 PSI Air required 40-60 CFM at 40-80 PSI maximum Recommended air pressure for operation is 40-80 PSI.

Your HYDRO-TEST unit, as shipped to you, is ready to operate when connected as follows:

- 1. Connect inlet water supply to the garden hose swivel fitting on the inlet side of the unit.
- 2. Connect the outlet hose to the JIC male fitting, located next to the gage.
- 3. Connect the air supply to the air-filter regulator.
- 4. Check oil level of pump (crankcase has been prefilled prior to shipping).
- 5. Install handle with bolt provided.

#### **CAUTION:** Before testing....

- A. Be sure water is on to the unit.
- B. Back sure you know the maximum set pressure of the relief valve.
- C. Have all the valves and outlet hose open.
- D. Set relief valve for maximum pressure needed.

#### TO SET MAXIMUM PRESSURE:

# The maximum pressure you can test at is determined by the maximum pressure setting on the relief valve!!!

- A. With all the hoses connected to the unit, attach a valve, with adequate pressure rating, to the end of the outlet hose.
- B. Turn the water supply to the pump ON.
- C. Loosen the locknut on the relief valve (bronze valve with black knob) and turn knob to the left until it is loose. Turn knob to the right until you feel some pressure on the spring and STOP. This will give you a minimum pressure setting.
- D. Close the valve on the outlet end of your outlet hose.
- E. Set air pressure at 40-60 PSI.
- F. Check pressure shown on the gage. If you need to increase pressure, turn black adjusting knob to the right (clockwise). Always check pressure shown on the gage as you adjust the relief valve.
- G. When you have reached the desired maximum test pressure, tighten the locknut on top of the black knob.

#### THERMAL DUMP VALVE:

Your test pump is equipped with a high temperature thermal dump valve on the by-pass loop. A small red 1/4" hose is connected to the valve. It is not necessary to do anything with the red hose. The thermal dump valve will dump only if water in the by-pass loop reaches 145°F. The red hose may be connected to another hose and run to a drain if desired. NOTE: <a href="UNDER NORMAL OPERATION THE DUMP VALVE WILL NOT DUMP!!">UNDER NORMAL OPERATION THE DUMP VALVE WILL NOT DUMP!!!</a>

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#### **LUBRICATION:**

The pump crankcase has been filled prior to shipment. Check oil level with dip-stick before operation. Use 30 Weight NON-DETERGENT oil in the crankcase.

OIL CHANGE: Change oil after initial run in period of fifty (50) working hours. Change oil every five hundred (500) working hours after this period. If the unit has not been used for a long period of time (six months or longer) it is recommended the oil be changed prior to use.

NOTE: Crankcase capacity is twenty (20) fluid ounces.

## AIR MOTOR LUBRICATION..... WARNING...WARNING...WARNING

Use detergent SAE 10 automotive engine oil. **CAUTION!!! DO NOT USE SYNTHETIC OIL!!!** Synthetic oil will damage the poly bowls on the air regulator and lubricator. Damage will occur and bowls may fatigue and explode as a result.

Set the lubricator to feed one drop of oil for every fifty(50) to seventy-five(75) CFM of air going through the motor. At 40 PSI (with approximately 100-200 PSI water pressure on the pump) the motor should be consuming approximately 35 CFM air, set to one drop oil per each 1-1/2 minutes running time.

#### TO TEST:

- 1. Connect all hoses as noted in the first section of instructions.
- 2. Be sure the water supply to the pump is ON.
- Connect the outlet hose to the item or system being tested. It is recommended that a tee
  and a valve be installed at the system where the high pressure hose is connected and
  used as a bleed down valve. Some contractors prefer to install a second gage by this tee
  as well.
- 4. With all the connections made, start the unit. Turn the air control to 20 to 40 PSI as desired. CAUTION! WHEN THE PUMP IS RUNNING AGAINST NO LOAD (LESS THAN 100 PSI WATER PRESSURE) APPROXIMATELY 20 PSI IS ALL THAT IS NEEDED TO RUN THE PUMP. EXCESSIVE PRESSURE WILL RUN THE PUMP TOO FAST AND COULD RESULT IN DAMAGE TO THE PUMP. PLEASE KEEP IN MIND, THE SPEED OF THE PUMP IS CONTROLLED BY THE AIR PRESSURE GOING TO THE AIR MOTOR.
- 5. Pressure on the system will be shown on the gage. When the test pressure needed is reached, turn off the test unit.