

GENERAL PUMP & EQUIPMENT CO., INC.

MANUFACTURING QUALITY HYDROSTATIC TESTING EQUIPMENT FOR CONTRACTORS AND INDUSTRY SINCE 1969

3276 BRUENING AVENUE SW

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OPERATING INSTRUCTIONS FOR MODEL GP350 GP350CG GP550 GP550CG HYDRO-TEST HYDROSTATIC TESTERS

UNIT SPECIFICATIONS:

MODEL GP350	3 GPM	350 PSI MAX	¾ HP	11 AMPS@ 110 V
MODEL GP350CG	3 GPM	350 PSI MAX	¾ HP	11 AMPS@ 110V
MODEL GP550	2 GPM	500 PSI MAX	¾ HP	11 AMPS@ 110 V
MODEL GP550CG	2 GPM	500 PSI MAX	¾ HP	11 AMPS@ 110V

STATEMENT OF QUALITY

Each HYDRO-TEST unit is checked for defects in workmanship or parts at least seven times before being shipped to you. A final test and setting insures that your Hydro-Test unit is ready to operate when received by you. All Hydro-Test units are made from 90 - 100 % American made parts. All units are pre-set at the specifications set forth in these instructions before being shipped.

YOUR HYDRO-TEST UNIT, AS SHIPPED TO YOU, IS READY TO OPERATE WHEN CONNECTED AS FOLLOWS:

1. Connect inlet water hose to the garden hose swivel fitting on the inlet side of the unit.
2. Connect the outlet hose to the SAE male fitting, located on the end of the outlet next to the gage.
3. Plug in the cord to a standard 110 volt receptacle with sufficient power supply. Power requirements are shown in the unit specifications above.

CAUTION....CAUTION....CAUTION WHEN USING A PORTABLE GENERATOR:

To start the Hydro-Test unit with no damage to the motor, you must have a **minimum of 3 times** the listed amperage stated above. It is recommended a portable AC generator of 5000 watts or larger be used. Be sure the generator is putting out full power before attempting to start your test unit.

EXTENSION CORDS: When using any extension cord be sure to use a cord with sufficient capacity for the amperage needed for the test unit being used. It is highly recommended that a 12 Ga. or larger wire size be used.

CAUTION: Before testing check maximum set pressure. New units maximum test pressure has been pre-set as follows.
Model GP350 ...300 PSI Factory Set **Can set relief valve from 50 to 350 PSI Max.**

SAFETY PRECAUTION: BEFORE USING YOUR HYDRO-TEST UNIT BE SURE YOU KNOW WHAT THE MAXIMUM SET TEST PRESSURE IS. IF YOU DON'T KNOW THE MAXIMUM SET PRESSURE, FOLLOW THE INSTRUCTIONS OUTLINED IN TO SET MAXIMUM PRESSURE.

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TO SET OR CHECK MAXIMUM PRESSURE:

1. With all hoses connected to the unit, attach a valve to the outlet end of the outlet hose.
2. Turn water supply to the pump ON.
3. WITH WATER ON AND OUTLET HOSE OPEN turn the unit on.
4. With the Hydro-test unit running, slowly turn the valve on the outlet hose off. **CAUTION:** When turning this valve off always watch the pressure shown on the gage. If the pressure shown is greater than the maximum pressure for your unit open the valve and reduce the pressure setting of the relief valve. When the valve is totally off, the pressure shown on the gage is the maximum PSI your test unit will produce.

TO CHANGE PRESSURE SETTING:

1. Loosen the locknut on the relief valve. This nut is located just below the T handle on top of the valve.
2. To reduce pressure turn the handle to the left (counterclockwise). Note: You may have to open and then close the outlet valve to show the new maximum pressure.
3. To increase pressure turn T handle to the right (clockwise).
4. When you reach the desired maximum test pressure tighten the locknut on the relief valve.

OIL CHANGE:

It is recommended the **first oil change after the first 50 hours**, with the **pump stopped and the oil still warm**.

After the initial oil change, the oil can then be changed every three months or three hundred hours of operation thereafter.

Please Note: If the pump works in conditions with high humidity and with sharp temperature changes, it is possible that condensation will appear inside the crankshaft, which mixing with the oil can change its properties. This is easy to see because the oil changes to a white, milky color.

If the pump does not have excessive water leaking from the packings, and the oil becomes milky, the oil has to be changed more frequently. The percentage of water in the oil must NOT exceed 20%

Oil capacity is 8.5 ounces

CHART OF COMPATIBLE OILS SAE15W40

General Pump	Series 100
BP	VISCO 2000
CASTROL	CWX
MOBIL	SUPER
SHELL	HELIX SUPER
TOTAL	QUARTZ 5000-5000

FOR MORE SPECIFIC INSTRUCTIONS REFER TO OPERATING AND SAFETY INSTRUCTIONS.

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OPERATING AND SAFETY INSTRUCTIONS

Always use clean cold water.

Units will pump other materials that are compatible with the pump. Consult factory prior to pumping any fluids other than water.

It is recommended that HYDRO-TEST units be used with standard water pressure feed. Inlet water pressure doesn't matter (can be from 5 to 105 PSI). When gravity feeding it is recommended to use our DR6334 Series units or Gasoline Series units.

Be sure water flow is on before turning tester on. **NEVER RUN THE PUMP WITHOUT WATER FOR MORE THAN 30-45 SECONDS!!!! SERIOUS DAMAGE WILL OCCUR.**

It is recommended that a tee and a valve, on the running side of the tee, be installed at that system being tested and used as a bleed down valve. A gage may also be installed at the system.

Before testing anything be sure to know what pressure the relief valve is set for. The setting of the relief valve determines that maximum pressure that the test pump can develop for a test.

Be sure that you have a good **grounded** power source with sufficient power to run the tester.

Never sit or immerse your electric HYDRO-TEST unit in water. Severe electrical shock can occur and electrocution of the operator is possible.

HYDRO-TEST hydrostatic test units are designed for use with water only. Testing with any other fluids, especially flammable ones, is strongly discouraged and is done so at the risk of the operator. **TESTING WITH FLAMMABLE FLUIDS IS VERY HAZARDOUS AND NOT RECOMMENDED!!!**

When testing a system, the time it takes to achieve a test is dependent on the amount of make-up water needed to pressurize the system. Air that is trapped in the system must be displaced by the incoming water to create pressure. The more air that is trapped in a system before testing, the longer it will take to pressurize the system and do the test.

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If it seems that it is taking an extremely long period of time to test a system, look for a leak. If the tester is operating properly the water being pumped is going somewhere. If it is not creating pressure check the following:

- The test pump.
- Any valves connecting the system being tested to a system not being tested. Water may be leaking through.
- Leaks may be going somewhere not visible.
- Any pipe or tank that may have a large amount of air trapped.

The size of the system being tested DOES NOT determine how long it will take to make a test. The amount of make-up water needed to displace the air trapped in the system will determine the time needed to do the test.

Leakback Check...If you pump a system to test pressure and cannot get pressure to hold, it may be necessary to do a leakback check as follows. Before doing this test you must have a gage, bleed down valve and shut off valve installed where the outlet hose from the tester is connected to the system being tested.

1. Close shutoff valve where the outlet hose from the tester connects to the system being tested.
2. Shut off the ball valve on the tester.
3. Bleed down all pressure between the system and the test pump.
4. Disconnect the hose from the system.

If no water is leaking from the system and pressure still drops, there is a leak in the system. If pressure holds, water was leaking back through the machine.

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SAFETY INSTRUCTIONS

It is highly recommended that anyone operating the test unit be wearing safety glasses and any other appropriate safety equipment.

The test unit must always be connected to a good grounded power source that passes all applicable codes and regulations.

NEVER SIT OR IMMERSE YOUR TEST UNIT IN WATER!!! Severe electrical shock can occur and electrocution of the operator is possible.

Always know the maximum set test pressure of the unit before attempting a test. If the maximum set pressure is too far above the needed test pressure, damage to the system being tested may occur.

Before operating the, be certain that your HYDRO-TEST unit is in good operating condition and has all necessary valves, switches and safety equipment needed for safe operation.

DO NOT OVERLOAD the test pump during operation. Overloading will cause the motor to overheat and can be a fire hazard.

When repairing or replacing any factory components on your test unit, be sure to use GENERAL PUMP factory parts or replacement parts with a pressure rating equal to or in excess of the original part used. Failure to do this may put the operator of the test unit in an unsafe situation and could result in serious injury.

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TROUBLE SHOOTING

If you know what the problem is there is no reason to test before disassembling the unit, take the unit apart. If you don't know what the problem is it is highly recommended you test the unit before disassembly, since the problem may be something minor and be repaired with a quick fix.

TO TEST UNIT

1. Check the motor and electrical system. If the motor runs okay and the switch works, connect the unit to check test pressure. **CAUTION...CAUTION...DO NOT RUN UNIT FOR MORE THAN 10-15 SECONDS WITHOUT WATER.**
2. Check pressure as follows. With all hoses connected to the unit, attach a valve to the outlet end of the outlet hose. Turn water supply on. Open outlet hose valve. Turn unit on.

With the HYDRO-TEST unit running, slowly turn the valve on the outlet hose off. CAUTION: When turning this valve off always watch the pressure shown on the gage. If pressure shown is greater than the maximum pressure for your unit, open the valve and reduce pressure setting of the relief valve. When the valve is totally off, the pressure shown on the gage is the maximum PSI your test unit will produce.

At this point, you know if your unit is making any pressure. Look for a leak from the pump or piping. Stop the unit to see if it holds pressure. You may want to adjust the pressure at the relief valve. Below is a short checklist to follow for common problems that may affect the test unit.

UNIT MAKES NO PRESSURE

1. Check ball valve on the outlet, this valve must be open.
2. Check gage to make sure it is still working.
3. Relief valve may be set for minimum or there may be something stuck under the ball inside the bottom of the valve body.
4. One or more of the check valves in the pump may be stuck open.

UNIT MAKES SOME PRESSURE

1. Pump casting may be cracked (usually due to freezing).
2. Relief valve may have been set a lower pressure for a previous test.
3. Pump may not be primed fully or siphon hose may be clogged or too long.
4. Inlet strainer may be clogged.

UNIT MAKES PRESSURE BUT WILL NOT HOLD

1. Outlet check valve may not be checking backflow.
2. May have a leak in the system or item being tested.