

# 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](mailto:gentest@bright.net)

## OPERATING INSTRUCTIONS FOR GHT500H

### UNIT SPECIFICATIONS:

3 GPM OUTPUT MAXIMUM FLOW RATE

500 PSI MAXIMUM (PRESET AT 400 PSI)

4.8 HP HONDA ENGINE

ENGINE SPEED 1800 RPM MAXIMUM

MAXIMUM WATER TEMPERATURE 140°F

THIS UNIT HAS BEEN DESIGNED TO USE WITH CLEAN WATER ONLY!!! FOR USE WITH ANY OTHER FLUIDS CONTACT FACTORY PRIOR TO USE.

**WARNING: THIS UNIT IS POWERED BY AN INTERNAL COMBUSTION ENGINE AND PRODUCES CARBON MONOXIDE GAS. CARBON MONOXIDE GAS IS POISONOUS AND IF INHALED COULD CAUSE ILLNESS AND POSSIBLY DEATH. THIS UNIT IS NOT INTENDED TO BE USED IN AN ENCLOSED AREA WITH NO VENTILATION AS CARBON MONOXIDE POISONING MAY OCCUR.**

### NOTICE TO RESIDENTS OF CALIFORNIA...CALIFORNIA PROPOSITION 65 WARNING

**ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

**CAUTION: PRIOR TO USING YOUR GHT500H UNIT THE ENGINE CRANKCASE MUST BE FILLED WITH OIL. PLEASE REFER TO THE HONDA ENGINE INSTRUCTIONS ENCLOSED FOR OIL SPECIFICATIONS.**

### TO OPERATE YOUR GHT500H TEST UNIT:

1. REFER TO YOUR MANUFACTURER'S INSTRUCTIONS FOR MAINTENANCE OF THE HONDA ENGINE ON YOUR GHT SERIES UNIT.
2. USE ONLY CLEAN COLD WATER FOR YOUR TESTER.
3. THE SUPPLY HOSE THAT COMES WITH YOUR GHT500H UNIT SHOULD BE PERMANENTLY ATTACHED TO THE ½" BRAS Y-STRAINER ON THE BOTTOM OF THE PUMP. THIS SHOULD BE THE ONLY HOSE USED WHEN DRAFTING FROM A BARREL OR TANK. FOR BEST RESULTS WHEN DRAFTING, YOUR HYDRO-TEST UNIT SHOULD BE AT A HEIGHT EQUAL TO THE HEIGHT OF THE WATER SUPPLY BEING TESTED. THE GHT500H HYDRO-TEST UNIT WORKS BEST WHEN SUPPLIED WITH STANDARD WATER PRESSURE.
4. THE GHT500H HYDRO-TEST UNIT IS PRESET AT THE FACTORY WITH A MAXIMUM PRESSURE OF 400 PSI. THIS PRESSURE CAN BE ADJUSTED UP OR DOWN BY TURNING THE T-HANDLE FOUND ON TOP OF THE RELIEF VALVE. TURN THE HANDLE CLOCKWISE TO INCREASE THE PRESSURE, AND COUNTERCLOCKWISE TO DECREASE PRESSURE. TO ADJUST PRESSURE, SEE SETTING MAXIMUM PRESSURE SECTION OF INSTRUCTIONS.
5. THE ENGINE IS PRESET AT THE FACTORY AT 1800 RPM. THE RPM MUST NOT BE EXCEEDED OR DAMAGE TO THE PUMP WILL OCCUR.

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## TO OPERATE YOUR GHT500H TEST UNIT:

6. ONLY ONE PART OF THE PUMP IN YOUR HYDRO-TEST UNIT NEEDS REGULAR LUBRICATION, THE GREASE FITTING. THE GREASE FITTING IS LOCATED ON THE FRONT OF THE PUMP BEHIND THE WHITE SAFETY COVER. TO ACCESS THE GREASE FITTING, REMOVE THE SAFETY COVER. FOR EVERY ONE HUNDRED (100) WORKING HOURS, OR IF THE PUMP IS USED INFREQUENTLY, THE PUMP SHOULD BE GREASED WITH A LITHIUM TYPE AUTOMOTIVE CHASSIS GREASE.

## SETTING BY-PASS PRESSURE:

THE MAXIMUM PRESSURE OF YOUR HYDRO-TEST UNIT IS DETERMINED BY THE MAXIMUM SETTING OF THE RELIEF VALVE. THE RELIEF VALVE IS THE BRASS VALVE WITH THE T-HANDLE. THIS VALVE IS LOCATED ON THE RIGHT SIDE OF THE OUTLET PIPING.

## TO SET MAXIMUM PRESSURE:

1. WITH ALL HOSES CONNECTED TO THE UNIT, ATTACH A VALVE TO THE OUTLET END OF THE OUTLET HOSE.
2. TURN THE WATER SUPPLY TO THE PUMP ON.
3. WITH THE WATER PRESSURE ON AND THE OUTLET HOSE **OPEN** START YOUR HYDRO-TEST UNIT.
4. WHILE YOUR HYDRO-TEST UNIT IS RUNNING, **SLOWLY TURN** THE VALVE ON THE OUTLET HOSE OFF. **CAUTION:** WHILE TURNING THIS VALVE OFF, ALWAYS WATCH THE PRESSURE SHOWN ON THE GAGE ON THE OUTLET OF THE UNIT.
5. LOOSEN THE LOCKNUT ON THE RELIEF VALVE (LARGE BRONZE VALVE WITH A T-HANDLE ON THE TOP). THIS NUT IS LOCATED JUST BELOW THE T-HANDLE ON TOP OF THE VALVE.
6. TO REDUCE PRESSURE, TURN THE HANDLE TO THE LEFT. NOTE: YOU MAY HAVE TO OPEN AND THEN CLOSE THE OUTLET VALVE TO SHOW THE NEW MAXIMUM SET PRESSURE. TO INCREASE THE PRESSURE, TURN THE HANDLE TO THE RIGHT. **CAUTION!!!! DO NOT INCREASE THE SET PRESSURE ABOVE THE MAXIMUM RATED PRESSURE.**
7. WHEN YOU HAVE REACHED THE DESIRED MAXIMUM TEST PRESSURE SET, TIGHTEN THE LOCKNUT ON THE RELIEF VALVE.

## ENGINE LUBRICATION:

FOR LUBRICATION INSTRUCTIONS REGARDING THE ENGINE REFER TO THE HONDA ENGINE 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 BEFORE PUMPING ANY FLUID OTHER THAN WATER.

IT IS RECOMMENDED THAT HYDRO-TEST UNITS BE USED WITH STANDARD WATER PRESSURE FEED. INLET WATER PRESSURE DOES NOT MATTER (CAN BE FROM 5 PSI TO 105 PSI). GASOLINE POWERED UNITS ARE RECOMMENDED WHEN IT IS NECESSARY TO USE DRAFTING OR GRAVITY FEED.

**BE SURE WATER FLOW IS ON BEFORE TURNING TESTER ON. NEVER RUN THE TEST PUMP WITHOUT WATER FOR MORE THAN 30-45 SECONDS!!! SERIOUS DAMAGE WILL OCCUR.**

IT IS RECOMMENDED THAT A TEE AND VALVE, ON THE RUNNING SIDE OF THE TEE, BE INSTALLED AT THE SYSTEM BEING TESTED AND USED A BLEED DOWN VALVE. A GAGE MAY ALSO BE INSTALLED AT THE SYSTEM.

BEFORE TESTING ANYTHING BE SURE YOU KNOW WHAT PRESSURE THE RELIEF VALVE IS SET FOR. THE SETTING OF THE RELIEF VALVE DETERMINES THE MAXIMUM PRESSURE THAT THE TEST PUMP CAN DEVELOP FOR A TEST.

HYDRO-TEST HYDROSTATIC TEST PUMPS 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 DONE SO AT THE RISK OF THE OPERATOR.**

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 THE SYSTEM, THE LONGER IT WILL TAKE TO PRESSURIZE THE SYSTEM AND DO THE TEST.

IF IT SEEMS THAT IT IS TAKING AN EXTREMELY LONG PERIOD OF TIME TO TEST A SYSTEM, LOOK FOR A LEAK. IF THE UNIT IS OPERATING PROPERLY THE WATER BEING PUMPED IS GOING SOMEWHERE. IF IT NOT CREATING PRESSURE ON THE SYSTEM CHECK THE FOLLOWING.

1. THE TEST PUMP
2. ANY VALVES CONNECTING THE SYSTEM BEING TESTED TO A SYSTEM NOT BEING TESTED (WATER MAY BE LEAKING THROUGH).
3. LEAKS THAT MAY BE GOING SOMEWHERE NOT VISIBLE.
4. 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 MAKEUP WATER NEEDED TO DISPLACE THE AIR TRAPPED IN THE SYSTEM WILL DETERMINE THE TIME NEEDED TO DO THE TEST.

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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 THE 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 THE PRESSURE STILL DROPS, THERE IS A LEAK IN THE SYSTEM. IF PRESSURE HOLDS WATER WAS LEAKING THROUGH THE MACHINE.

## **SAFETY INSTRUCTIONS**

IT IS HIGHLY RECOMMENDED THAT ANYONE OPERATING THE TEST UNIT BE WEARING SAFETY GLASSES AND OTHER APPROPRIATE SAFETY EQUIPMENT.

**NEVER SIT OR IMMERSE THE TEST UNIT IN WATER!!!!**

ALWAYS KNOW THE MAXIMUM SET PRESSURE OF THE UNIT BEFORE ATTEMPTING A TEST. IF MAXIMUM SET PRESSURE IS TOO FAR ABOVE THE NEEDED PRESSURE, DAMAGE TO THE SYSTEM BEING TESTED MAY OCCUR.

BEFORE OPERATING, BE CERTAIN YOUR HYDRO-TEST UNIT IS IN GOOD OPERATING CONDITION AND HAS ALL NECESSARY VALVES, SWITCHES AND SAFETY EQUIPMENT NECESSARY FOR SAFE OPERATION.

WHEN REPAIRING OR REPLACING ANY COMPONENTS ON YOUR UNIT, BE SURE TO USE HYDRO-TEST 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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## **DRAFTING A GHT500H OR GHT1000H UNIT:**

### **WHEN DRAFTING FROM A BARREL TANK, PLEASE NOTE THE FOLLOWING INSTRUCTIONS!!!**

1. THE INLET SUPPLIED WITH YOUR HYDRO-TEST UNIT SHOULD BE USED A SIPHON HOSE WHEN DRAFTING.
2. WHEN DRAFTING, YOUR GHT HYDRO-TEST UNIT SHOULD BE LEVEL WITH OR ABOVE (BUT NOT MORE THAN FIVE (5) FEET) THE HEIGHT OF THE WATER SUPPLY BEING USED.
3. DO NOT USE A HOSE SMALLER THAN ½" I.D. OR LONGER THAN THE HOSE SUPPLIED WITH YOUR UNIT.
4. WHEN FIRST PRIMING THE PUMP, TURN THE OUTLET BALL VALVE ON AND OFF A FEW TIMES UNTIL A STEADY STREAM OF WATER FLOWS FROM THE OUTLET HOSE.

### **IF YOU FIND IT DIFFICULT TO PRIME THE PUMP, CHECK THE FOLLOWING:**

1. THE STRAINER MUST BE CLEAN.
2. MAKE SURE THERE ARE NO KINKS IN THE SIPHON HOSE.
3. CHECK THE OUTLET VALVE.
4. THE BELT MUST BE TIGHT.