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

### **OPERATING INSTRUCTIONS FOR GHT-5350-H**

#### **UNIT SPECIFICATIONS:**

10 GPM OUTPUT MAXIMUM FLOW RATE 400 PSI MAXIMUM (PRESET AT 275 PSI) 5.5 HP HONDA ENGINE ENGINE SPEED 3600 RPM MAXIMUM MAXIMUM WATER TEMPERATURE 140°F

THIS UNIT HAS BEEN DESIGNED TO USE WITH <u>CLEAN WATER ONLY</u>!!! 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 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 GHT-5350-H UNIT THE ENGINE CRANKCASE <u>MUST BE</u> FILLED WITH OIL. PLEASE REFER TO THE HONDA ENGINE INSTRUCTIONS ENCLOSED FOR OIL SPECIFICATIONS.

### TO OPERATE YOUR GHT-5350-H TEST UNIT:

- 1. CONNECT YOUR WATER SUPPLY HOSE TO THE INLET Y-STRAINER ON THE LEFT SIDE OF THE PUMP. BE SURE THE WATER SUPPLY IS ADEQUATE (10 GPM) TO SUPPLY PUMP. <u>USE SUPPLY HOSE WITH ¾ID OR LARGER!</u> USE ONLY CLEAN WATER, AS DIRTY WATER WILL CLOG THE STRAINER.
- 2. CONNECT THE OUTLET HOSE TO THE ADAPTER FITTING ON THE END OF THE OUTLET PIPING (BY THE GAGE). BEFORE CONNECTING THE OUTLET HOSE TO YOUR PIPING BEING TESTED, BE SURE THAT THERE IS FLOW THROUGH THE PUMP.
- 3. <u>CHECK OIL LEVEL</u> IN THE ENGINE PRIOR TO STARTING. MAXIMUM ENGINE SPEED IS PRESET AT THE FACTORY AND SHOULD NOT BE CHANGED. FOR SPECIFICS ON RUNNING THE ENGINE, PLEASE REFER TO THE ENCLOSED ENGINE SHEET. FOR BEST OUTPUT, RUN ENGINE ON HIGH.

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#### SETTING BY-PASS PRESSURE:

MAXIMUM PRESSURE HAS BEEN PRESET AT 275 PSI AT THE FACTORY. IF MAXIMUM PRESSURE NEEDS TO BE CHANGED, FOLLOW THE INSTRUCTIONS BELOW.

- 1. CONNECT A SHUT-OFF VALVE TO THE OUTLET END OF THE OUTLET HOSE.
- 2. WITH THE PUMP RUNNING AT MAXIMUM FLOW AND THE VALVE OPEN, SLOWLY CLOSE THE VALVE AND NOTE THE PRESSURE SHOWN ON THE GAGE.
- 3. TO ADJUST THE MAXIMUM PRESSURE YOU MUST CHANGE THE SETTINGS ON THE RELIEF VALVE. THE RELIEF VALVE IS LOCATED NEXT TO THE PULSATION DAMPENER. LOOKING AT THE RELIEF VALVE, YOU WILL SEE A T-HANDLE WITH A THREADED STEM. LOOSEN THE LOCKNUT AND TURN THE T-HANDLE TO THE RIGHT (CLOCKWISE) TO INCREASE PRESSURE. TO DECREASE PRESSURE TURN THE T-HANDLE TO THE LEFT (COUNTERCLOCKWISE). DO THIS WITH THE PUMP RUNNING AND KEEP NOTICE OF THE PRESSURE SHOWN ON THE GAGE AT ALL TIMES.
- 4. WHEN THE DESIRED PRESSURE IS REACHED, TIGHTEN THE LOCKNUT ON THE T- HANDLE.

#### LUBRICATION:

FOR LUBRICATION INSTRUCTIONS REGARDING THE ENGINE REFER TO THE HONDA ENGINE INSTRUCTIONS.

TO LUBRICATE THE PUMP, GREASE THE CAM BEARING AT THE GREASE FITTING LOCATED BEHIND THE BLACK SAFETY COVER ON THE PUMP. REMOVE THE SAFETY COVER AND GREASE WITH A LITHIUM BASE GREASE EVERY FIVE HUNDRED (500) WORKING HOURS. IF THE UNIT HAS NOT BEEN USED FOR A LONG PERIOD OF TIME, IT IS RECOMMENDED THAT THE PUMP BE GREASED PRIOR TO USE.

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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 <u>DOES NOT</u> 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.