

TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL, DIRECT
SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL INCLUDING
REPAIR PARTS LIST**

FOR

**TESTER, HYDRAULIC
MODEL PHT-100-6-G418-1
NSN 4910-00-868-6871**

(SCHROEDER BROS. CORP.)

HEADQUARTERS DEPARTMENT OF THE ARMY

JUNE 1981



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REPORTING OF ERRORS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished direct to you.

Manufactured by: Schroeder Brothers Corp.
Nichol Avenue Box 72
McKees Rocks, PA 15136

Procured under Contract No DAAA09-79-C-4593

This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

INSTRUCTIONS FOR REQUISITIONING PARTS

NOT IDENTIFIED BY NSN

When requisitioning parts not identified by National Stock Number, it is mandatory that the following information be furnished the supply officer.

- 1 - Manufacturer's Federal Supply Code Number - 08832
- 2 - Manufacturer's Part Number exactly as listed herein.
- 3 - Nomenclature exactly as listed herein, including dimensions, if necessary.
- 4 - Manufacturer's Model Number - Model PHT-100-6-G418-1
- 5 - Manufacturer's Serial Number (End Item)
- 6 - Any other information such as Type, Frame Number, and Electrical Characteristics, if applicable.
- 7 - If DD Form 1348 is used, fill in all blocks except 4, 5, 6, and Remarks field in accordance with AR 725-50.

Complete Form as Follows:

- (a) In blocks 4, 5, 6, list manufacturer's Federal Supply Code Number - 08832 followed by a colon and manufacturer's Part Number for the repair part.
- (b) Complete Remarks field as follows:
Noun: (nomenclature of repair part)
For: NSN: 4910-00-868-6871
Manufacturer: Schroeder Brothers Corp.

Model: PHT-100-6-G418-1 Serial: (of end item)

Any other pertinent information such as Frame Number, Type, Dimensions, etc.

PORTABLE HYDRAULIC TESTER

WITH THE TESTER, MOTORS, VALVES, CYLINDERS AND OTHER HYDRAULIC EQUIPMENT CAN BE CHECKED AT RATED FLOWS AND PRESSURES.

THE TESTER MEASURES OIL FLOW, (GPM) GALLONS PER MINUTE, PRESSURE (PSI) AND TEMPERATURE (°F) DEGREES FAHRENHEIT.

OIL LEAKAGE IN HYDRAULIC MOTORS, VALVES, CYLINDERS RESULT IN A LOSS OF FLOW AND SOMETIMES A LOSS OF PRESSURE.

WITH A KNOWLEDGE OF A HYDRAULIC SYSTEM TO BE TESTED AND APPROPRIATE USE OF THE TESTER, MOST AREAS OF HYDRAULIC MALFUNCTION CAN BE PINPOINTED WITHOUT DISMANTLING OR TEARING DOWN THE SYSTEM.

THE LOADING VALVE PERMITS SIMULATION OF LOAD OR WORK.

CAUTION: LOAD VALVE LEVER IS CAPABLE OF VERY HIGH PRESSURES

- A. KEEP LOAD PRESSURE WITHIN THE TESTER AND SYSTEM RATING.
- B. DO NOT EXCEED DESIGN PRESSURE OF THE SYSTEM UNDER TEST.
- C. WHEN A HIGH PRESSURE LINE IS INCORRECTLY CONNECTED TO THE EXIT PORT (LOW PRESSURE RETURN SIDE) OF THE TESTER, BACK PRESSURE OCCURS. THE PROTECTIVE BLOWOUT PLUG RELEASES OIL IN THE TESTER CASE WHEN THE BACK PRESSURE REACHES 3000-3500 PSI.

HYDRAULIC POWER

FLOW AND PRESSURE EQUALS HYDRAULIC POWER. THE PUMP AND/OR MOTOR PRODUCES BOTH LOW AND PRESSURE.

A HYDRAULIC SYSTEM ACCOMPLISHES WORK WHEN SEALS ARE GOOD, COMPONENTS ARE NOT WORN, TOLERANCES ARE AS SPECIFIED, WHEN THE RELIEF VALVES ARE OPERATING PROPERLY AND WHEN THE EQUIPMENT IS BEING OPERATED WITHIN DESIGN CAPABILITY.

INTERNAL WEAR IN A PUMP PERMITS SLIPPAGE OR BYPASSING OF THE OIL BY THE GEARS, VANES OR PISTONS AND RESULTS IN THE INABILITY OF THE PUMP (UNDER PRESSURE) TO DELIVER THE RATED VOLUME OF OIL.

WHEN FLOW AND OR PRESSURE IS REDUCED, HYDRAULIC POWER IS REDUCED.

HYDRAULIC PUMPS AND SYSTEMS ARE PROTECTED AGAINST EXCESSIVE PRESSURE BY RELIEF VALVE

AN IMPROPER RELIEF VALVE SETTING EITHER ENDANGERS THE SYSTEM WITH TOO MUCH PRESSURE OR PERMITS RELIEF OF PRESSURE PRIOR TO DEVELOPING THE MAXIMUM SPECIFIED PRESSURE OF THE SYSTEM.

CYLINDERS AND VALVES FUNCTION WHEN FLOW AND PRESSURE IS RECEIVED. LEAKAGE IN THE CONTROL VALVE REDUCES WORKING FLOWS AND PRESSURE DELIVERED DOWN STREAM OF THE VALVE.