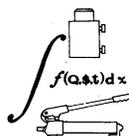


RICHARD DUDGEON, INC.

24 SWIFT PLACE.
WATERBURY, CT 06710
WWW.DUDGEONJACKS.COM
APPLICATIONS@DUDGEONJACKS.COM



Tel: 1-203-336-4459
Fax: 1-203-333-8417
Toll Free: 1-888-DUDGEON

Hydrostatic Test Pump Model 7J

APPLICATIONS

Manually operated, light but sturdy pumps providing pressures up to 12,000 PSIG with water or oil. Low cost pressure source for testing piping, boilers, tanks, fire extinguishers, pressure tanks, and laboratory equipment.

RELIABILITY

Precision engineered of long life materials. All wet parts are bronze, brass, or stainless steel. The body and fittings are machined bronze or brass. The pistons are stainless steel. Spring-loaded check valves provide snappy, trouble free action. Piston packing is Buna N O-ring with backup. (Special seals available).

RUGGED PORTABILITY

Weighs only 27 pounds on an aluminum channel base and in a shipping carton. Shipping dimensions are 24.75" x 4.5" x 5".

MECHANICAL ADVANTAGE FOR MANUAL PUMP LEVER

The lever fulcrum may be mounted in either of two positions. One delivers higher pressure per 100 pounds lever load (max. leverage). The other delivers greater displacement (output) per lever stroke (std. leverage). (See tables for data.) In addition, a handle extension is provided to increase the advantage for higher pump pressures.

STANDARD CONFIGURATION

Intake (suction) connection is a female hose swivel with screened coupling washer for attachment of standard garden hose. Output (pressure) connection is 1/4" NPT female pipe at the end of the gauge block. Four foot flexible hose with 1/4" NPT ends are included. A 2-1/2" dia. Pressure gauges are optional equipment.

ACCESSORIES (at additional cost)

Gauges: to +/- 1/4 % accuracy, 6 inch dial size. Other dial sizes, master, and certified gauges available. Fittings: special valves, hoses, and seals. Seals; O-rings for many fluids compatible with pump metals.



Shown with optional gauge

OPERATING SPECIFICATIONS

Model	Max Working Pressure, PSIG	Piston Dia, In.	Displacement Cu. In.	
			Max Leverage	Std Leverage
7J-22.1	3000	1.13	2.0	4.0
7J-55.1	6000	0.75	0.9	1.7
7J-110.1	12000	0.50	0.4	0.8

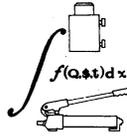
PRESSURE WITH 100 LB LEVER LOAD

Model	Max Leverage, PSIG		Std Leverage, PSIG	
	Ext Handle	Std Handle	Ext Handle	Std Handle
7J-22.1	1550	800	700	350
7J-55.1	3500	1750	1650	750
7J-110.1	7850	4000	3650	1570

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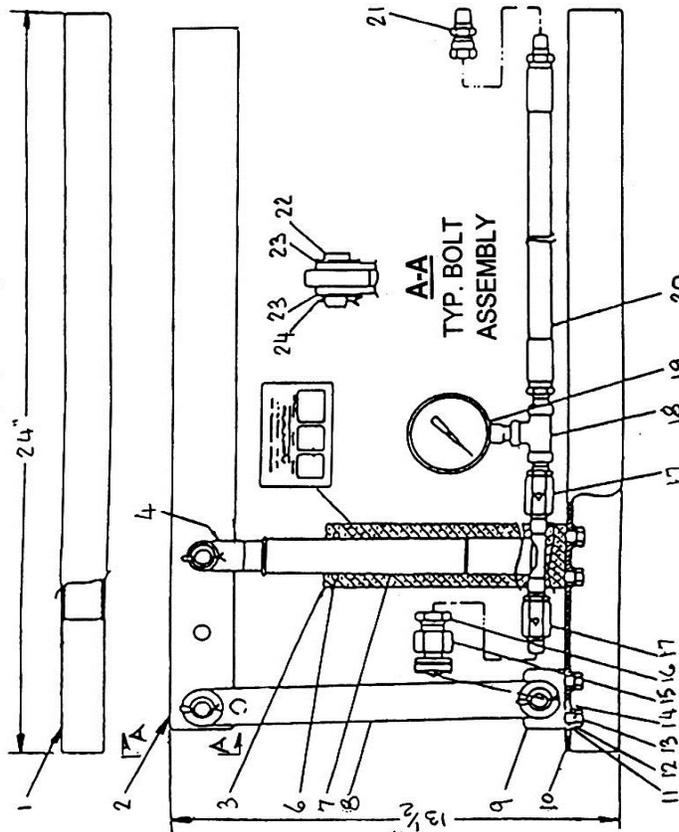
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**NOTE: GAUGES ARE NOT INCLUDED
 IN OUR STANDARD PACKAGE**

- Note 1: Buna N supplied standard. Other types available.
- Note 2: 2-1/2" Dial: 5,000, 10,000 & 15,000 psi
 4" Dial: 5,000, 10,000 & 15,000 psi
 Other capacities available, please inquire.
- Note 3: Standard hose with 1/4" Male NPT ends x 4ft long.
 7J-22.1; 3/16" ID, 12,000 psi burst pressure
 7J-55.1 & 7J-110.1; 1/4" ID, 28,000 burst pressure



No.	Name	Qty	Material	Remarks
1	Extension Lever	1	Aluminum	
2	Lever Arm	1	Forged Steel	Cadmium Plated
3	Body	1	Cast Bronze	
4	Clevis	1	Forged Steel	Cadmium Plated
5	Packing	1*	Buna N	See Note 1
7	Piston Assembly	1	Stainless Steel	
8	Link	2	Aluminum	
9	Block	1	Aluminum	
10	Base	1	Aluminum	
11	Washer	4	Steel	SAE 5/16" Cad. Plated
12	Lock Washer	4	Steel	5/16" Regular Cad. Plated
13	Hex Head Screw	4	Steel	5/16"-18 x 5/8" Cad Plated
14	Gasket/Screen	1*	Various	No. 66 Flo-Filter
15	Hose Adapter	1	Brass	No. 91 1/2" NPT x 3/4" NH
16	Bushing	1	Brass	1/2" x 1/4" NPT
17	Check Valve	2*	Brass	1/4" NPTM x 1/4" NPTM
18	Gauge Connector	1	Stainless Steel	1/4" NPTF Tee
19	Gauge	1	Various	See Note 2
20	4 ft. Hose	1	Various	See Note 3
21	Male Union	1	Steel	4M-4UFS, Cad. Plated
22	Clevis Pin	3	Steel	1/2" x 1-3/4"
23	Plate Washer	6	Steel	1/2" Cad. Plated
24	Coller Pin	3	Steel	5/32" x 3/4"

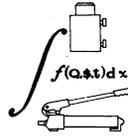
* Parts included in repair kit
 To order repair kit specify 7J-XX.1K
 To order parts specify 7J-XX.1-Part No.

MODEL 7J	
HYDROSTATIC TEST PUMP	
RICHARD DUDGEON, INC.	
1565 RAILROAD AVENUE	
BRIDGEPORT, CT 06605	
TEL: 203-336-4459 FAX: 203-333-8417	
VOLUME	620
DATE	16022-PLD
REV	B

MODEL NUMBER	PISTON DIA.	PISTON AREA SQ. IN.	STANDARD MAXIMUM WORKING PRESSURE PSI	THEORETICAL OUTPUT PER FULL STROKE WITH 100 POUNDS LEVER LOAD					
				HIGH PSI MOUNTING			LOW PSI MOUNTING		
				LONG LEVER	SHORT LEVER	LONG LEVER	SHORT LEVER	LONG LEVER	SHORT LEVER
7J-	IN.	PSI	CU. IN.	PSI	CU. IN.	PSI	CU. IN.	PSI	CU. IN.
7J-22.1	1.13	0.99	3000	2.0	1550	4.0	700	4.0	350
7J-55.1	0.75	0.44	6000	0.9	3500	1.7	1750	1.7	750
7J-110.1	0.50	0.20	12000	0.4	7650	0.4	4000	0.8	3650

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Assembly. Operating and Maintenance Instructions

For DUDGEON Models 7J-22, 55, and 110

Hand Operated Hydrostatic Test Pumps.

Drawing 16022-PLD-REV. B.

ASSEMBLY

NOTE: NPT pipe threads are made up with exactly two turns of Teflon Tape on Male threads one thread away from end.

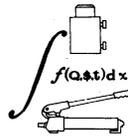
1. Secure block (PC. 9) to base (PC. 10) by using two Hexagon head screws, size 5/16-18 x 5/8" (PC. 13). Be sure and use flat washer (PC. 11) and lock washer (PC. 12).
2. Connect two steel links (PC. 8) to the block (PC. 9) using clevis pin (PC. 22), two plate washer (PC. 23) and cotter pin (PC. 24). See view A-A, typical bolt assembly.
3. Secure piston and cylinder assembly to high (two middle holes) or low (two end holes) psi position by using two hexagon head screws (PC. 13) and washers (PC'S. 11 and 12).
4. Install check valves (PC. 17) with arrows pointing toward gauge tee (PC. 18).

NOTE: Drawing shows check valves with check valve symbols. These are NOT arrows designating flow.

5. PC'S. (14), (15) & (16), gasket/screen, garden hose adapter and bushing are assembled onto inlet check valve (PC. 17) (opposite gauge tee.)
6. Install gauge tee (PC. 18) onto check valve (PC. 17).
7. Install hose (PC. 20) onto gauge tee (PC. 18).
8. Install male union (PC. 21) onto other end of hose without Teflon tape.
9. Install lever arm (PC. 2) between links (PC. 8) and piston assembly female clevis. Follow view A-A bolt assembly.
10. Install gauge (PC. 19) into gauge tee (PC. 18) using a wrench on wrench flats.
Do not twist gauge body.
11. Extension lever (PC. 1) slides onto lever arm (PC. 2) for long lever operation. The base should be bolted down for long lever use.

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OPERATION

CAUTION: All air or other gases should be bled out of any tank, piping, or vessel before hydrostatic testing.

1. Connect fluid supply to suction inlet, (garden hose coupler). A 10 psi minimum supply is necessary to obtain full efficiency of the pump.
2. Connect the discharge end of hose to device being tested. **A means of releasing the pressure after a non-destructive test must be provided.**

NOTE: Gauge damper must be provided where shock to gauge will be present.

3. Start fluid supply to pump. Water, at supply pressure, will flow thru pump, filling test specimen. When the test specimen is completely filled, operate pump until desired test pressure is reached. Large specimens should be filled by alternate means to save time.

TROUBLE SHOOTING

1. Failure to hold attained pressure indicates, (A) foreign matter preventing discharge valve from closing at end of each stroke, or (B) need for replacing discharge check valve (PC. 17).
2. Failure to build pressure with little or no resistance on pumping lever indicates that suction valve is blocked open or that supply pressure is not great enough to overcome light spring load on suction valve.
3. Failure to build pressure with lever resistance usually indicates the need for replacement of the suction check valve (PC. 17). See No. 2 above.
4. Leakage around piston indicates need for replacement of piston packing (PC. 6). To replace packing, remove lever arm from piston assembly female clevis. Remove old packing and install new one as shown below. Reverse disassembly procedure.

For Models 7J-22 & 7J-55

For Model 7J-110

