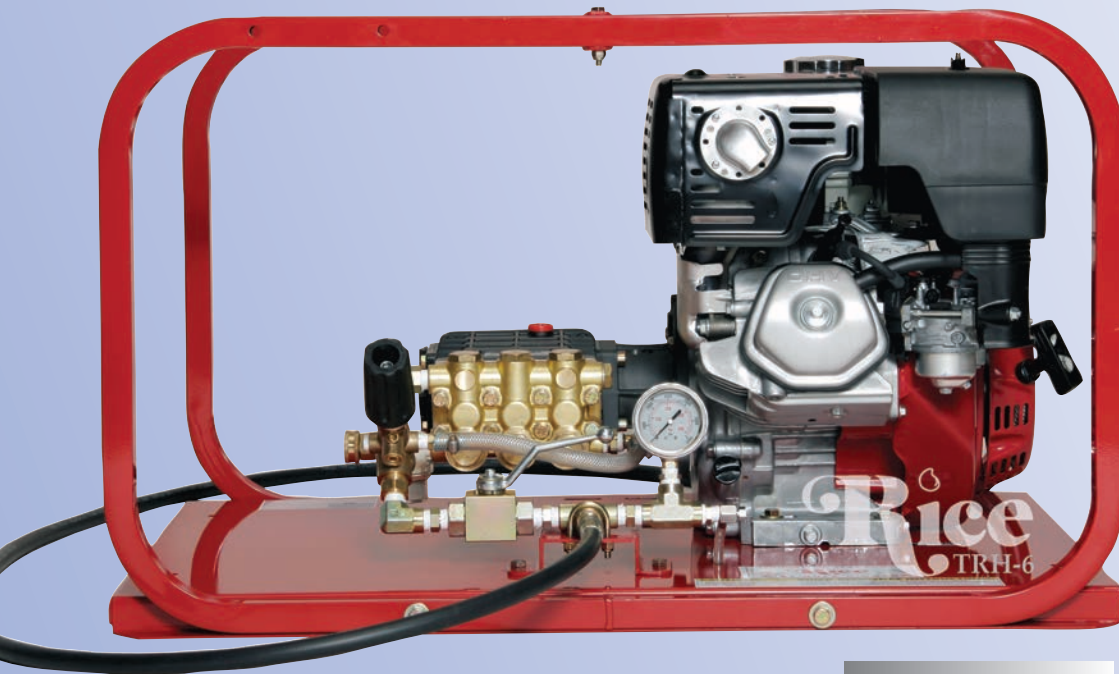


HYDROSTATIC TEST PUMPS

Model TR-Series • Up to 5.5 GPM • 5000 PSI



The TR-Series are large volume, high pressure hydrostatic pumps. Designed for testing boilers, vessels, process piping, steam and gas lines. The ceramic plunger pump, has an inner oil bath, ensuring long life and increased stability. Their high flow characteristics for pumps in this pressure range will speed testing as it quickly removes air from the test environment. There are no external moving parts for operator safety and reduced liability risks. Virtually indestructible, the TR-Series is enclosed in a rugged roll cage of welded heavy gauge steel. These units are available with gas, diesel or electric power sources. Special order options available, pumps can be built to suit.

- **Automatic Pressure Regulator with Inlet Bypass**
- **Stainless Steel Liquid-Filled Gauge Ensure Accurate Readings, with Less Flutter**
- **Enclosed in a Rugged Roll Cage & Heavy Gauge Steel Base**
- **Stainless Steel Ballvalve to Isolate Pressure**



3500 Arrowhead Drive
Carson City
Nevada
89706

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www.ricehydro.com

e-mail:
sales@ricehydro.com

Phone:
(775) 885-1280

Fax:
(800) 998-7423

T R S E R I E S						
Pump	TRH-2	TRE-6	TRH-8	TRE-8	TRH-10	TRD-8E
PSI	2000	2700	3600	3600	5000	3500
GPM	3	4	4	4	4.5	4
Inlet	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Outlet	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Motor/Engine	Honda 6.5 HP 163 CC	Baldor 7 1/2 HP 60 HZ	Honda 13 HP 389 CC	Baldor 10 HP 60 HZ	Honda 20 HP 614 CC	Diesel 7.3 KW 462 CC
Shipping Dimensions	25X21X17	35X25X19	35X25X19	35X25X19	35X25X21	35X25X21
Shipping Weight	120 LBS	255 LBS	177 LBS.	286 LBS	250 LBS	250 LBS
Options:	Engines: Briggs & Stratton, Honda or Diesel					
Motors:	Explosion proof, Variation in Hertz, Voltage and Phase					

RICE HYDRO, INC. - MANUFACTURER'S OPERATING INSTRUCTIONS
TR-SERIES MODEL TEST PUMPS
FOR WARRANTY REGISTRATION CALL: 1-800-245-4777

REMEMBER THESE CAUTIONS:

1. **Electric Models** - Power source must meet voltage, phase, hertz and amperage requirements of electric motor, as stated on label. If an extension cord is used, requires at least 12 gauge 3 wire with maximum of 25 foot length.
2. Check all fluid levels prior to operating pump.
3. Use a sound 3/4" or larger supply hose.
4. DO NOT run dry or pump chlorine through the unit.
5. Protect the pump from freezing, FLUSH with anti-freeze.

CONNECTING THE PUMP:


1. Check oil level of engine as well as the oil level of pump thru sight glass, use 10W30 non-detergent as needed. **Electric Models** - With motor switch in the off position, connect power cord of motor to a standard wall outlet. Extension cord: when needed, requires a 12 gauge 3 wire, maximum 25 foot length plugged into a 20 or larger amp breaker, depending on individual motor requirements.
2. Connect **CLEAN** pressurized water source (minimum 3/4") to the inlet of the pump. It is recommended that the unit be pressure fed. For gravity feed locate water within 8 feet and above level of unit, and then prime the pump.
3. Connect high pressure outlet hose to the pump and your test environment.

OPERATING THE PUMP:

1. Turn the outlet ballvalve to the open position, begin water flow and start the engine. The engine RPM is preset at the factory, **DO NOT ADJUST!**
2. The pressure regulator has been preset at the factory. **To change this setting you must make this adjustment while the water is flowing freely, and under NO pressure.** To adjust the pressure, first loosen the locknut. Turn the T-handle/Knob clockwise to increase and counter-clockwise to decrease the pressure. Place a ballvalve or similar open and close valve at the end of the outlet hose, open and close this valve multiple times as needed, to check pressure setting and re-adjust as necessary. It is also recommended that you open and close the hosebib located under the gauge to bleed excess air from piping and ensure accurate pressure gauge readings. Upon reaching desired pressure setting, tighten locknut and prepare to begin test.
3. With the ballvalve open begin building pressure in the test environment. Be sure to bleed the air from hosebib under gauge at least once during this process. Once test pressure has been reached, **close the ballvalve and shut-off engine.**
4. Once the outlet ballvalve is closed and your test begins, you have now isolated the test pump from the test environment, any loss of pressure is due to leaks or trapped air being compressed in the test environment.

RECOMMENDED PERIODIC MAINTENANCE PROCEDURE

1. Plunger pump - Change oil in the pump body after first 50 hours of use, and every 250 hours thereafter. Change oil in the engine after first 5 hours of use, and every 80 hours thereafter.

 **WARNING:** Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, operate and service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to: www.p65warnings.ca.gov

PARTS BREAKDOWN FOR MODEL TRD8/TRH8
RICE HYDRO, INC.

REF#	PART NUMBER..	DESCRIPTION..	QTY REQ'D
1	GP-44120641	MANIFOLD	1
2	GP-99317500	SCREW	8
3	GP-96701400	WASHER	8
4	GP-701115	O-RING	6
5	GP-36200366	VALVE SEAT *AVALIABLE KIT ONLY*	6
6	GP-36711501	VALVE	6
7	GP-94737600	SPRING	6
8	GP-36202551	VALVE CAGE	6
9	GP-701002	O-RING	6
10	GP-98222600	CAP SCREW	6
11	GP-36711501	VALVE ASSEMBLY	6
12	GP-99180700	SCREW	4
13	GP-50150074	BEARING COVER	1
14	GP-44211801	SPACER / SIGHT GLASS	1
15	GP-90409700	O-RING	1
16	GP-91832800	BALL BEARING	1
17	GP-90161400	OIL SEAL	3
18	GP-44010022	CRANKCASE	1
19	GP-98210300	OIL DIP STICK	1
22	GP-44050166	PISTON GUIDE	3
23	GP-44030022	CONNECTING ROD	3
24	GP-90392000	O-RING	1
25	GP-44160022	REAR COVER	1
26	GP-99183700	SCREW	5
27	GP-701013	O-RING	1
28	GP-98204100	CAP SCREW	1
29	GP-97734000	PISTON PIN	3
30	GP-96696700	WASHER	3
33	GP-44040266	PLUNGER, 13 MM	3
37	GP-50200074	RAIL	2
38	GP-96701600	WASHER	4
39	GP-99303700	NUT	4
40	GP-90361200	O-RING	3
41	GP-44080370	PACKING RETAINER	3
42	GP-44216270	INTERMEDIATE RING	3
43	GP-90507600	PACKING RETAINER	3
44	GP-90260200	PACKING	3
45	GP-44100251	HEAD RING	3
46	GP-98210000	CAP SCREW	1
47	GP-98217600	CAP SCREW	1
48	GP-96738000	WASHER	1
49	GP-96751400	WASHER	1
50	GP-98196600	CAP SCREW	1
51	GP-90260300	SEAL, LOW PRESSURE	1
75	GP-90063500	RETAINING RING	1
76	GP-44022165	CRANKSHAFT	1
77	GP-91856800	ROLLER BEARING	1
78	GP-90409700	O-RING	1
79	BOLT-5/16X24X1-GR8	SCREW 5/16 X 1	4
80	FLATWASHER-1/4	WASHER 8 MM	4
81	GP-10051822	GAS FLANGE	1
82	GP-90169000	OIL SEAL	1
83	GP-203510	WASHER	4
84	GP-99191200	SCREW	4

OUTLET HOSE..

HOSE-3/8-5000X8-RH	8' FOOT OUTLET HOSE - STANDARD	1
COUPLERPLUG-S-3/8	MALE PUMP OUTLET - PIPING	1
COUPLERBODY-S-3/8	FEMALE PUMP OUTLET - HOSE	1
FITTING-3/8-MPIPE	FITTING FOR HOSE - RIGID	1
FITTING-3/8-MPX	FITTING FOR HOSE - SWIVEL	1
HOSE-HYD-3/8HP	SPECIFY LENGTH OF HOSE	

PARTS BREAKDOWN FOR MODEL TRD8/TRH8
RICE HYDRO, INC.

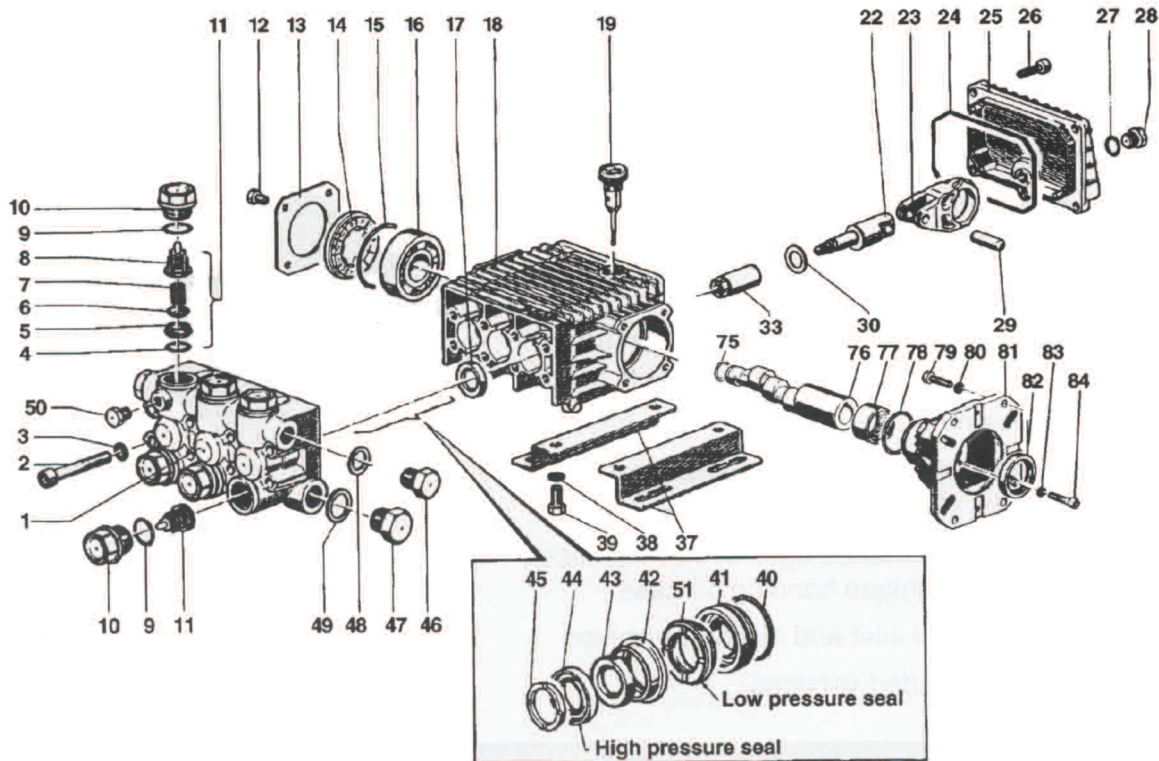
MISCELLANEOUS PARTS..

	PART NUMBER..	DESCRIPTION..	QTY REQ'D
NA	UNLOADER-500/4000PSI	PRESSURE REGULATOR	1
NA	NEEDLEVALVE-1/4	BLEED VALVE	1
NA	BALLVALVE-7250-3/8	OUTLET BALLVALVE	1
NA	GAUGE-4000	LIQUID FILLED GAUGE	1
NA	LINESTRAINER-1/2	INLET LINE STRAINER	1
NA	HONDA-GX390UT2-QA2	13 HP 383 CC HONDA ENGINE	1
NA	DIESEL-1B40-HATZ-ELS	7.3KW 462 CC HATZ ENGINE	1
NA	PUMP-4.0/40	TRIPLEX PLUNGER PUMP	1
NA	CARTON-TR6	EXTRA LARGE SHIPPING BOX	1
NA	HOSESWIVEL-1/2	HOSE SWIVEL INLET	1
NA	LABEL-KIT-TR	INSTRUCTION AND CAUTION STICKERS	1

KITS..

KITS ARE ALL INCLUSIVE

GEN-KIT-K23	OIL SEAL		
	REF. #17 OIL SEAL	QTY 3	
GEN-KIT-K123	VALVE KIT		
	REF. #4 O-RING	QTY 6	
	REF. #5 VALVE SEAT	QTY 6	
	REF. #6 VALVE	QTY 6	
	REF. #7 SPRING	QTY 6	
	REF. #8 VALVE CAGE	QTY 6	
	REF. #11 VALVE ASSEMBLY	QTY 6	
GEN-KIT-K124	VALVE CAP & ORING		
	REF. #9 O-RING	QTY 6	
	REF. #10 CAP SCREW	QTY 6	
GEN-KIT-K153	HIGH/LOW PRESSURE SEAL		
	REF. #43 PACKING	QTY 3	
	REF. #44 PACKING	QTY 3	
	REF. #51 SEAL	QTY 1	
GEN-KIT-K156	SEAL KIT		
***TO SERVICE ENTIRE PUMP MUST ORDER 3 KITS			
	REF. #40 O-RING	QTY 3	
	REF. #41 PACKING RETAINER	QTY 3	
	REF. #42 INTERMEDIATE RING	QTY 3	
	REF. #43 PACKING	QTY 3	
	REF. #44 PACKING	QTY 3	
	REF. #45 HEAD RING	QTY 3	
	REF. #51 SEAL	QTY 1	



PARTS LIST

ITEM	PART NO.	DESCRIPTION	KIT NO.	QTY.	ITEM	PART NO.	DESCRIPTION	KIT NO.	QTY.	ITEM	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	44120641	Manifold		1	23.	44030022	Connecting Rod		3	48.	96738000	Washer		1
2.	99317500	Screw		8	24.	90392000	O-ring		1	49.	96751400	Washer		1
3.	96701400	Washer		8	25.	44160022	Rear Cover		1	50.	98196600	Cap Screw		1
4.	701115	O-ring	123	6	26.	99183700	Screw		5	51.	90260300	Seal, Low Pressure	153,156	1
5.	36200366	Valve Seat	123	6	27.	701013	O-ring		1	75.	90063500	Retaining Ring		1
6.	36200176	Valve	123	6	28.	98204100	Cap Screw		1	76.	44022165	Crankshaft (EZ4040G)		1
7.	94737600	Spring	123	6	29.	97734000	Pin		3	77.	44021265	Crankshaft (EZ4035G34)		1
8.	36202551	Valve Cage	123	6	30.	96696700	Washer		3	78.	44020965	Crankshaft (EZ4030G34)		1
9.	701002	O-ring	124	6	33.	44040266	Plunger, 13 mm		3	79.	91856800	Roller Bearing		1
10.	98222600	Cap Screw	124	6	37.	50200074	Rail		2	80.	90409700	O-ring		1
11.	36711501	Valve Assembly	123	6	38.	96701600	Washer		4	79.	99275500	Screw, 5/16 x 1		4
12.	99180700	Screw		4	39.	99303700	Nut		4		99334500	Screw, 3/8 x 1		4
13.	50150074	Bearing Cover		1	40.	90361200	O-ring	156	3	80.	96702000	Washer, 8 mm		4
14.	44211801	Spacer		1	41.	44080370	Packing Retainer	156	3		96710400	Washer, 10 mm		4
15.	90409700	O-ring		1	42.	44216270	Intermediate Ring	156	3	81.	10051822	Gas Flange		1
16.	91832800	Ball Bearing		1	43.	90507600	Packing	153,156	3	82.	90169000	Oil Seal		1
17.	90161400	Oil Seal	23	3	44.	90260200	Packing	153,156	3	83.	96693800	Washer		4
18.	44010022	Crankcase		1	45.	44100251	Head Ring	156	3	84.	99191200	Screw		4
19.	98210300	Oil Dip Stick		1	46.	98210000	Cap Screw		1					
22.	44050166	Piston Guide		3	47.	98217600	Cap Screw		1					

REPAIR KITS

KIT NO.	K23	K123	K124	K153	K156
ITEM NO's INCLUDED IN KIT	17	4, 5, 6, 7, 8, (11)	9, 10	43, 44, 51	40, 41, 42, 43, 44, 45 51
NUMBER OF ASSEMBLIES IN KIT	3	6	6	3	1
NUMBER OF CYLINDERS KIT WILL SERVICE	3	3	3	3	1

TORQUE SPECS*

Pos.	Ft/lb	N-M
2	14.7	20
10	95.9	130
12	7.3	10
26	7.3	10
28	14.7	20
46	29.4	40
47	29.4	40
50	9.6	13
79	14.7	20
84	7.3	10

* Decrease torque by 20% if threads are lubricated

Ref 300071 Rev. J
05-14