

RICE HYDRO, INC.
MANUFACTURER'S OPERATING INSTRUCTIONS FOR THE
HP-Series PNEUMATIC HYDROSTATIC TEST PUMPS

FOR WARRANTY INFORMATION CALL: 1-800-245-4777

NOTE: Prior to testing any high pressure line, please check all connections, hoses, and fittings to assure that they are properly tightened and in good working order. No frays, tears, or cuts.

REQUIRED: Air Compressor capable of 100 PSI, up to 75 CFM.

CONNECTING THE PUMP:

1. Connect the high pressure hose provided, and an inlet water supply hose, unit must be fed with a pressurized water source. Position the Test Pump within 8 feet of the test environment.
2. Connect the air line from the compressor to the inlet fitting on the combination regulator/air filter.

NOTE: AIR FILTER SHOULD BE DRAINED OF ANY WATER OR DIRT PARTICLES BEFORE, AND AFTER USE. Drain valve is located on the bottom of filter body.

3. Check the in-line strainer for dirt and debris clean as necessary.

OPERATING THE PUMP:

1. Turn on the water.
2. Open the bleeder valve on the test line to bleed off excess air. NOTE: this should be done several times during the test cycle.
3. Start the compressor.
4. Once the compressor has reached operating pressure, open the outlet valve on the air compressor slowly, which will allow the air to flow to the Test Pump. Note: this outlet valve, or "shut-off valve" may come standard on your air compressor, however if it does not, a shut-off valve should be installed on your compressor for convenience & safety to the operator, prior to the testing process.
5. Set the inlet air pressure to 100 P.S.I. This will give maximum operating output pressure. To do this, adjust the air regulator, (a black knob located on the top of the inlet air filter assembly on the test pump). Pull up on the black knob and turn clockwise to increase pressure, or counter-clockwise to decrease pressure. Once the inlet air pressure is set, push down on the knob to lock it in place.
6. Start turning regulator clockwise, pressure will begin building as soon as air flows. When desired test pressure has been met, close the outlet needle valve to isolate test environment. To turn off pump while testing, turn regulator counter clockwise and decrease or stop air flow, or disconnect air compressor supply. If a pressure drop is indicated, check the following:

- a. Output hose connection at pump.
- b. Output hose connection at test line.
- c. Leaking test line or air in the test environment.

If the pressure gauge remains constant, turn off compressor and monitor gauge for your prescribed test time. When test is complete, turn off water supply, open the high pressure bleeder valve located beside the outlet port connection on the unit. Bleed off the water pressure. Repeat the above steps for multiple lines. Be sure the air pressure gauge reads zero before disconnecting the air line from pump.

TEMPERATURE CAPABILITIES - Air inlet side of pump can handle temperatures up to 140 degrees; hydraulic side of pump can handle up to 180 degrees.

CAUTION: Do not allow unit to sit with hydraulic side at or 140 degrees for a length of time that would drive air side above the 140 degree maximum.

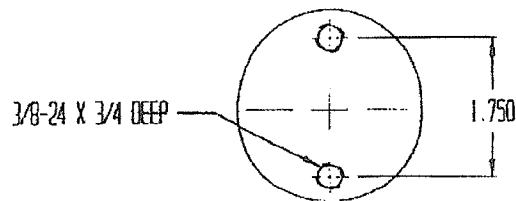
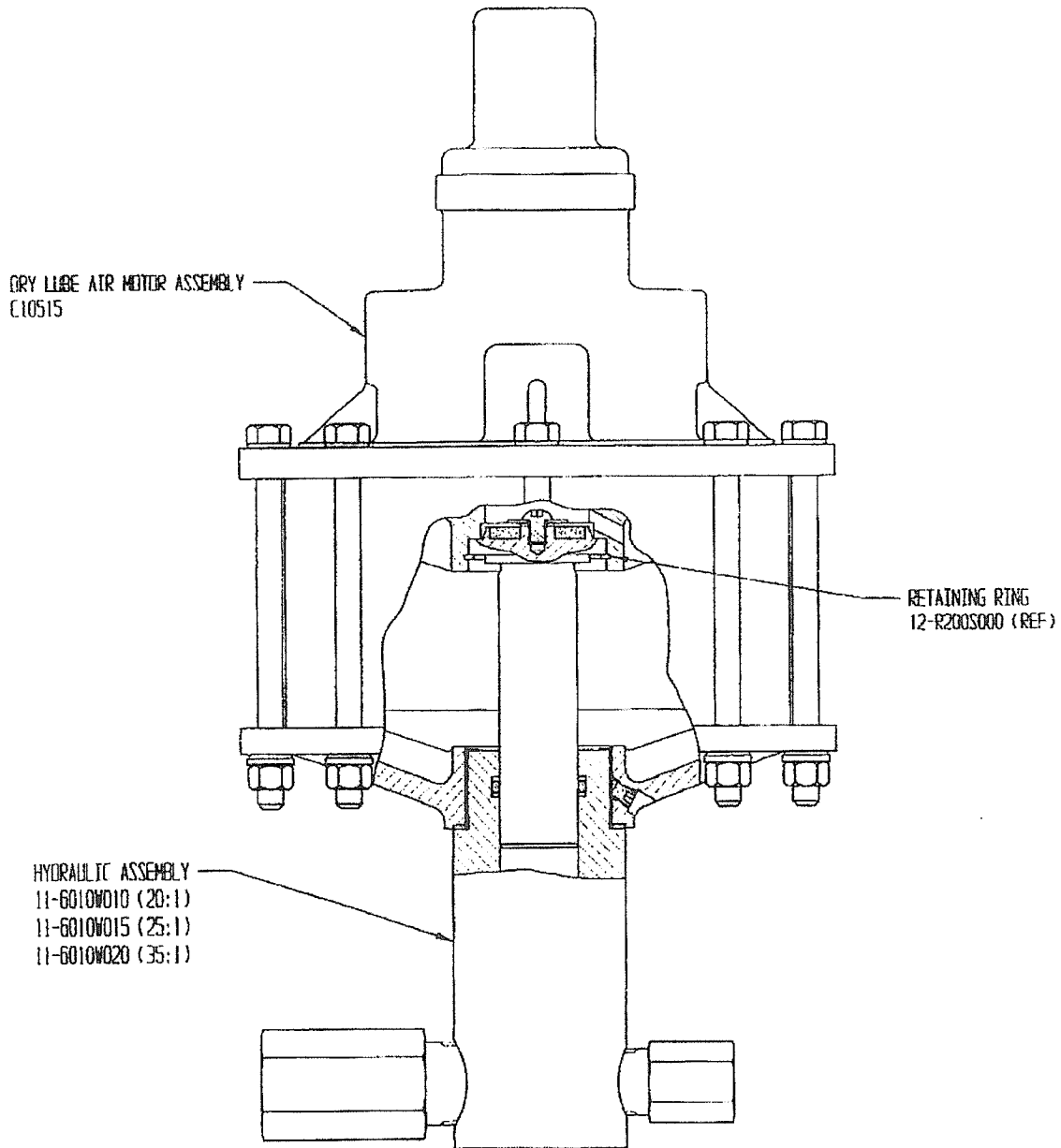


SOUTHERN CALIFORNIA HYDRAULIC ENGINEERING CORPORATION

DESIGNERS AND MANUFACTURERS OF HYDRAULIC & PNEUMATIC EQUIPMENT
1130 COLUMBIA STREET BREA, CALIFORNIA 92821 WWW.SCHYDRAULIC.COM

PUMP ASSEMBLY D6000B20 THRU B35

FORM D6000B20-35 REV 00/00/03



MOUNTING DIMENSIONS

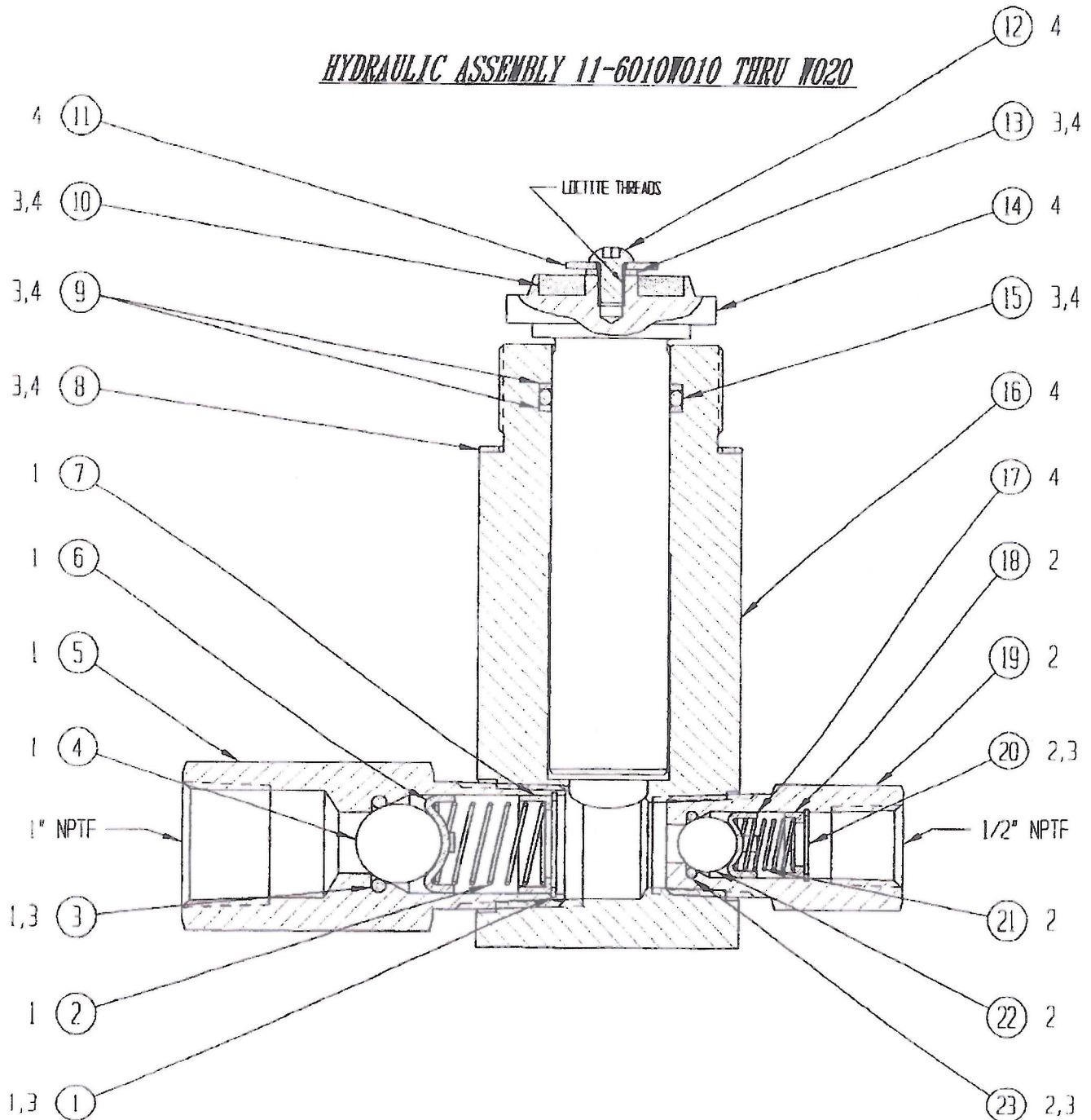


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FIG# 11-6010W010-020 REV 09/08/03
(20:1 25:1 35:1)

HYDRAULIC ASSEMBLY 11-6010W010 THRU W020



4 INCLUDED IN 11-6011WXXX* PISTON & CYLINDER ASSEMBLY

3 INCLUDED IN 11-6099NXXX* HYDRAULIC REPAIR KIT

2 INCLUDED IN 11-5023S000 INLET CHECK VALVE ASSEMBLY

1 INCLUDED IN 11-5031S000 INLET CHECK VALVE ASSEMBLY

* REPRESENTS HYDRAULIC ASSEMBLY MODEL NUMBER



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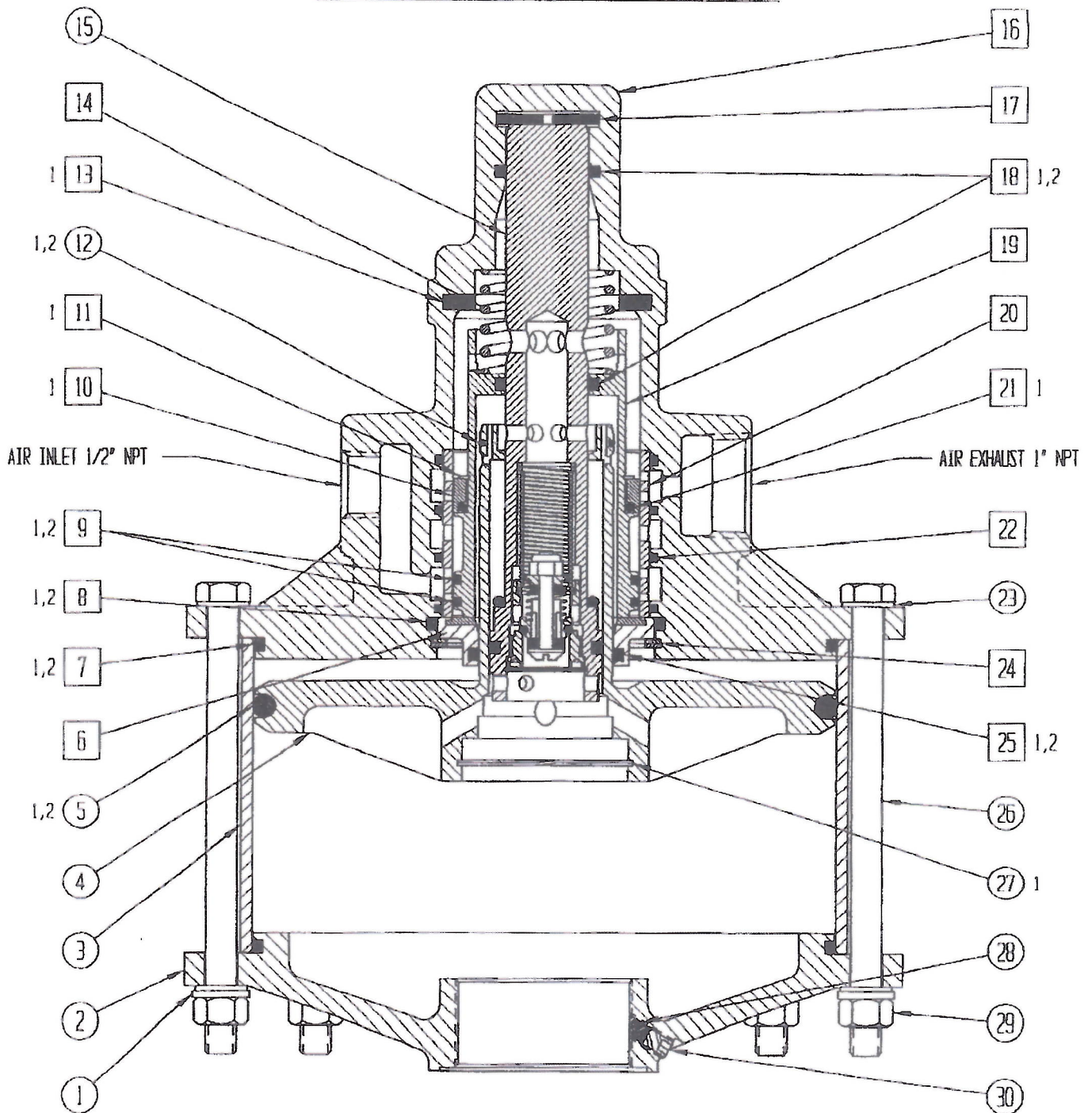
1130 CERRILITA STREET BREA, CALIFORNIA 92821 - (714) 257-4800 - FAX (714) 257-4810 WWW.SCHYDRAULIC.COM

11-6010			REVISION: 09/12/02				
BILL OF MATERIALS FILE: 10-550-010.XLS							
DRAWING NUMBER & DESCRIPTION: 11-6010W010 THRU W020 HYDRAULIC ASSEMBLY							
W010 (20:1)	W015 (25:1)	W020 (35:1)	ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
•	•	•	1	1	P10202-100	RETAINING RING	12-R100S000
•	•	•	2	1	11-5033S000	SPRING	10-450-33
•	•	•	3	1	P11003-210	O-RING	12-6227N015S
•	•	•	4	1	12-0440S812	CHECK BALL	
•	•	•	5	1	11-5035S000	SEAT-INLET	10-450-35
•	•	•	6	1	11-5034S003	BALL GUIDE	10-450-34-3
•	•	•	7	1	11-5032S000	SPRING GUIDE	10-450-32
•	•	•	8	1	11-5028N000	GASKET	10-450-28
•			9	2	P11227-221	BACK UP	12-8774T026
	•		9	2	P11227-219	BACK UP	12-8774T024
		•	9	2	P11227-216	BACK UP	12-8774T021
•	•	•	10	1	11-5051P000	PISTON BUMPER	10-450-51
•	•	•	11	1	12-25N87WF1Z	FENDER WASHER	
•	•	•	12	1	12-25F37SBC45Z	BUTTON HEAD CAP SCREW	
•	•	•	13	1	P10212-025	HELICAL SPRING LOCK WASHER	12-5001C407
•			14	1	11-6008S010 (20:1)	HYDRAULIC PISTON	10-550-8-1
	•		14	1	11-6008S015 (25:1)	HYDRAULIC PISTON	10-550-8-1.50
		•	14	1	11-6008S020 (35:1)	HYDRAULIC PISTON	10-550-8-2
•			15	1	P11000-221	O-RING	12-6227N026
	•		15	1	P11000-219	O-RING	12-6227N024
		•	15	1	P11000-216	O-RING	12-6227N021
•			16	1	11-6009B010 (20:1)	HYDRAULIC CYLINDER	10-550-9-1
	•		16	1	11-6009B015 (25:1)	HYDRAULIC CYLINDER	10-550-9-1.50
		•	16	1	11-6009B020 (35:1)	HYDRAULIC CYLINDER	10-550-9-2
•	•	•	17	1	11-5034S002	BALL GUIDE	10-450-34-2
•	•	•	18	1	11-5017S000	SPRING GUIDE	10-450-17
•	•	•	19	1	11-5020S000	SEAT-OUTLET	10-450-20
•	•	•	20	1	P10202-068	RETAINING RING	12-R068S000
•	•	•	21	1	11-5013S000	SPRING	10-450-13
•	•	•	22	1	12-0440S562	CHECK BALL	
•	•	•	23	1	P11003-112	O-RING	12-6227N010S

Where Used 10-6000W010-W020
 Pump Assemblies D6000R20-B35



D6 DRY LUBE AIR MOTOR ASSEMBLY C10515



2 INCLUDED IN R10105 AIR MOTOR PACKING SET

1 INCLUDED IN R10104 AIR MOTOR REPAIR KIT

XX INCLUDED IN C10516 HEAD ASSEMBLY



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BILL OF MATERIALS FILE: C10515.XLS

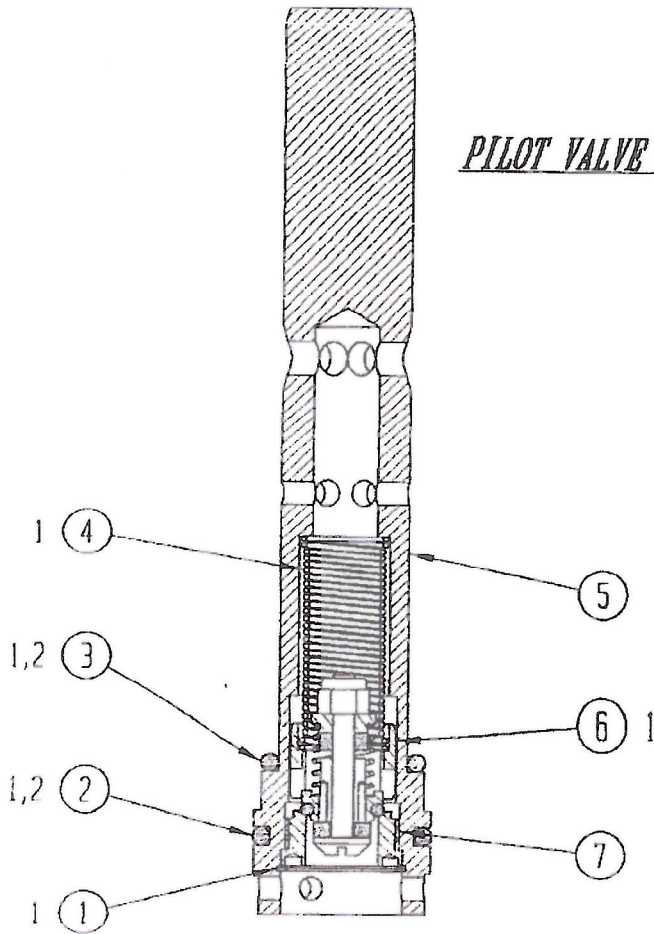
DRAWING NUMBER & DESCRIPTION: C10515 D6 DRY LUBE AIR MOTOR ASSEMBLY

REVISION: 07/24/06

ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
1	8	P10212-038	WASHER-LOCK	
2	1	11-6002A000	END	10-550-2
3	1	11-6151P000	CYLINDER-AIR	10-550-151
4	1	11-6025A000	PISTON-AIR	10-550-25
5	1	P11000-439	O-RING	12-6227N066
6	1	11-5047N000	BEARING ASSEMBLY	10-450-47
7	2	P11000-261	O-RING	12-6227N039
8	1	P11000-231	O-RING	12-6227N009
9	2	P11003-137	O-RING	
10	1	D10684	SEAL-DRY	
11	1	P10263-193	RETAINING RING	
12	1	P11000-028	O-RING	12-8775N028
13	1	11-5057P000	BUMPER	10-450-57
14	1	11-5005M002	SPRING	10-450-5-2
15	1	11-6027A000	PILOT VALVE ASSEMBLY	10-450-27
16	1	11-6092A000	HEAD	10-550-92
17	1	11-5012N000	BUMPER	10-450-12
18	2	P11000-214	O-RING	12-6227N019
19	1	D10817	PISTON-APA	
20	1	D10263	SLEEVE-APA	
21	1	P11000-135	O-RING	
22	4	P11000-144	O-RING	12-8775N144
23	16	P10214-038	WASHER-FLAT	
24	1	12-R262S000	RETAINING RING	RRT-262
25	1	P11000-223	O-RING	12-6230N001
26	8	P10230	BOLT-HEX	
27	1	12-R200S000	RETAINING RING	RRT-200
28	1	11-5172N000	PLUG	12-450-172
29	8	12-37CNFH1Z	NUT-HEX	
30	1	P10238	SET SCREW-HEX SOCKET	12-25C313CPSS



PILOT VALVE ASSEMBLY 11-6027A000

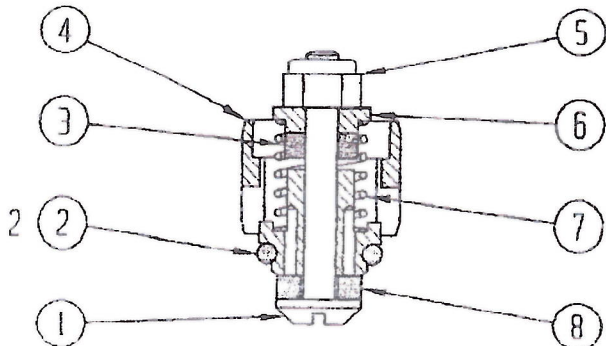


7	1	11-5024A403	SEAT	10-403-24
6	1	11-6032X403	AIR CHECK ASSY	10-403-32-1
5	1	11-6023A000	VALVE BODY	10-550-23
4	1	11-5016M001	SPRING	10-450-16-1
3	1	P11000-214	O-RING	12-6227N019
2	1	P11000-216	O-RING	12-6227N021
1	1	12-R093S000	RETAINING RING	RRT-93
ITEM NO.	QTY	PART NO.	DESCRIPTION	REF NO.

2 INCLUDED IN R10105 AIR MOTOR PACKING SET

1 INCLUDED IN R10104 AIR MOTOR REPAIR KIT

AIR CHECK ASSEMBLY 11-6032X403



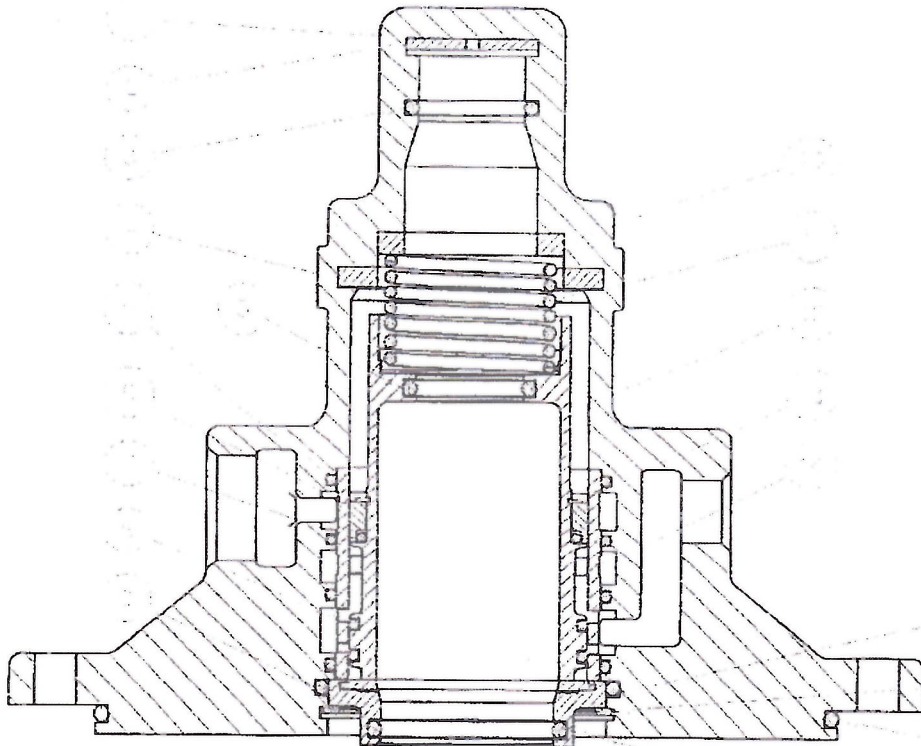
8	1	11-5025M403	WASHER	10-403-25
7	1	11-5015M000	SPRING	10-450-15
6	1	11-5039S000	RETAINER	10-450-39
5	1	12-2104A4008	NUT	
4	1	11-5171X001	VALVE BODY	10-450-171-1
3	1	11-5043N000	WASHER	10-450-43
2	1	P11000-111	O-RING	12-6227N009
1	1	11-5056A000	SCREW	10-450-56
ITEM NO.	QTY	PART NO.	DESCRIPTION	REF NO.



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HEAD ASSEMBLY (D6 DRY LUBE) - C10516

(Sheet 1 of 1) REV.14JUN02.D.MACH

HEAD ASSEMBLY - C10516, D6 DRY LUBRICATOR				
ITEM	DESCRIPTION	PART NUMBER	QTY	PACK IN SET (PART KIT)
1	HEAD	P1-8028000	1	
2	SEAL KIT	P1-8028000	1	
3	SEAL KIT	P1-8028000	1	
4	SEAL KIT	P1-8028000	1	
5	SEAL KIT	P1-8028000	1	
6	SEAL KIT	P1-8028000	1	
7	SEAL KIT	P1-8028000	1	
8	SEAL KIT	P1-8028000	1	
9	SEAL KIT	P1-8028000	1	
10	SEAL KIT	P1-8028000	1	
11	SEAL KIT	P1-8028000	1	
12	SEAL KIT	P1-8028000	1	
13	SEAL KIT	P1-8028000	1	
14	SEAL KIT	P1-8028000	1	
15	SEAL KIT	P1-8028000	1	
16	SEAL KIT	P1-8028000	1	
17	SEAL KIT	P1-8028000	1	
18	SEAL KIT	P1-8028000	1	

PARTS BREAKDOWN FOR MODEL HP35/20
RICE HYDRO, INC.

REF#..	PART NUMBER..	DESCRIPTION..	QTY...
HYDRAULIC ASSEMBLY:			
1	SC-P10202-100	RETAINING RING	1
2	SC-11-5033S000	SPRING	1
3	SC-P11003-210	O-RING	1
4	SC-12-0440S812	CHECK BALL	1
5	SC-11-5035S000	SEAT-INLET	1
6	SC-11-5034S003	BALL GUIDE	1
7	SC-11-5032S000	SPRING GUIDE	1
8	SC-11-5028N000	GASKET	1
9	SC-P11227-221	BACK UP	2
10	SC-11-5051P000	PISTON BUMPER	1
11	SC-12-25N87WF1Z	FENDER WASHER	1
12	SC-12-25F37SBC45Z	BUTTON HEAD CAP SCREW	1
13	SC-P10212-025	HELICAL SPRING LOCK WASHER	1
14	SC-11-6008S010	HYDRAULIC PISTON	1
15	SC-P11000-221	O-RING	1
16	SC-11-6009B010	HYDRAULIC CYLINDER	1
17	SC-11-5034S002	BALL GUIDE	1
18	SC-11-5017S000	SPRING GUIDE	1
19	SC-11-5020S000	SEAT-OUTLET	1
20	SC-P10202-068	RETAINING RING	1
21	SC-11-5013S000	SPRING	1
22	SC-12-0440S562	CHECK BALL	1
23	SC-P11003-112	O-RING	1

AIR MOTOR ASSEMBLY:			
1	SC-P10212-038	WASHER-LOCK	8
2	SC-11-6002A000	END	1
3	SC-11-6151P000	CYLINDER-AIR	1
4	SC-11-6025A000	PISTON-AIR	1
5	SC-P11000-439	O-RING	1
6	SC-11-5047N000	BEARING ASSEMBLY	1
7	SC-P11000-261	O-RING	2
8	SC-P11000-231	O-RING	1
9	SC-P11003-137	O-RING	2
10	SC-D10684	SEAL-DRY	1
11	SC-P10263-193	RETAINING RING	1
12	SC-P11000-028	O-RING	1
13	SC-11-5057P000	BUMPER	1
14	SC-11-5005M002	SPRING	1
15	SC-11-6027A000	PILOT VALVE ASSEMBLY	1
16	SC-11-6092A000	HEAD	1
17	SC-11-5012N000	BUMPER	1
18	SC-P11000-214	O-RING	2
19	SC-D10817	PISTON - APA	1
20	SC-D10263	SLEVE - APA	1
21	SC-P11000-135	O-RING	1
22	SC-P11000-144	O-RING	4
23	SC-P10214-038	WASHER-FLAT	16
24	SC-12-R262S000	RETAINING RING	1
25	SC-P11000-223	O-RING	1
26	SC-P10230	BOLT-HEX	8
27	SC-12-R200S000	RETAINING RING	1
28	SC-11-5172N000	PLUG	1
29	SC-12-37CNFH1Z	NUT - HEX	8
30	SC-P10238	SET SCREW-HEX SOCKET	1

PARTS BREAKDOWN FOR MODEL HP35/20

REF#..	PART NUMBER..	DESCRIPTION..	
PILOT VALVE ASSEMBLY #SC-11-6027A000			
1	SC-12-R093S000	RETAINING RING	1
2	SC-P11000-216	O-RING	1
3	SC-P11000-214	O-RING	1
4	SC-11-5016M001	SPRING	1
5	SC-11-6023A000	VALVE BODY	1
6	SC-11-6032X403	AIR CHECK ASSY	1
7	SC-11-5024A403	SEAT	1

AIR CHECK ASSEMBLY #SC11-6032X403

1	SC-11-5056A000	SCREW	1
2	SC-P11000-111	O-RING	1
3	SC-11-5043N000	WASHER	1
4	SC-11-5171X001	VALVE BODY	1
5	SC-12-2104A4D08	NUT	1
6	SC-11-5039S000	RETAINER	1
7	SC-11-5015M000	SPRING	1
8	SC-11-5025N403	WASHER	1

HEAD ASSEMBLY (D6DRY LUBE) - #C10516

1	SC-11-6092A000	HEAD	1
2	SC-11-5012N000	BUMPER	1
3	SC-P1000-214	O-RING	2
4	SC-11-5057P000	BUMPER	1
5	SC-P11000-144	O-RING	4
6	SC-D10684	SEAL - DRY	1
7	SC-P11000-135	O-RING	1
8	SC-P11000-137	O-RING	2
9	SC-P11000-231	O-RING	2
10	SC-D11062	SPACER	1
11	SC-11-5005M002	SPRING	1
12	SC-D10817	PISTON - APA	1
13	SC-P10263-193	RETAINING RING	1
14	SC-D10263	SLEEVE - APA	1
15	SC-11-5047N000	BEARING ASSEMBLY	1
16	SC-12-R262S000	RETAINING RING	1
17	SC-P11000-261	O-RING	1
18	SC-911000-223	O-RING	1

MISC SECTION:

BALLVALVE-3/8HP	3/8 BALLVALVE
LINESTRAINER-1/2	MXM 100 MESH
GAUGE-3000	3000 PSI LIQUID FILLED GAUGE
HOSE-3/8X8-RH	3/8 X 8 FT OUTLET HOSE
COUPLERBODY-BR-3/8F	FEMALE CONNECT TO OUTLET HOSE
COUPLERPLUG-3/8M	MALE PUMP OUTLET PIPING
HOSESWIVEL-1/2	1/2 X 3/4 HOSE SWIVEL
NEEDLEVALVE-1/4	BLEED VALVE
FILTER-PARKER-1/2	FILTER REGULATOR W/GAUGE
MUFFLER-HP-1"	3/4 MUFFLER
PUMP-D6000B20	PNEUMATIC PUMP