

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

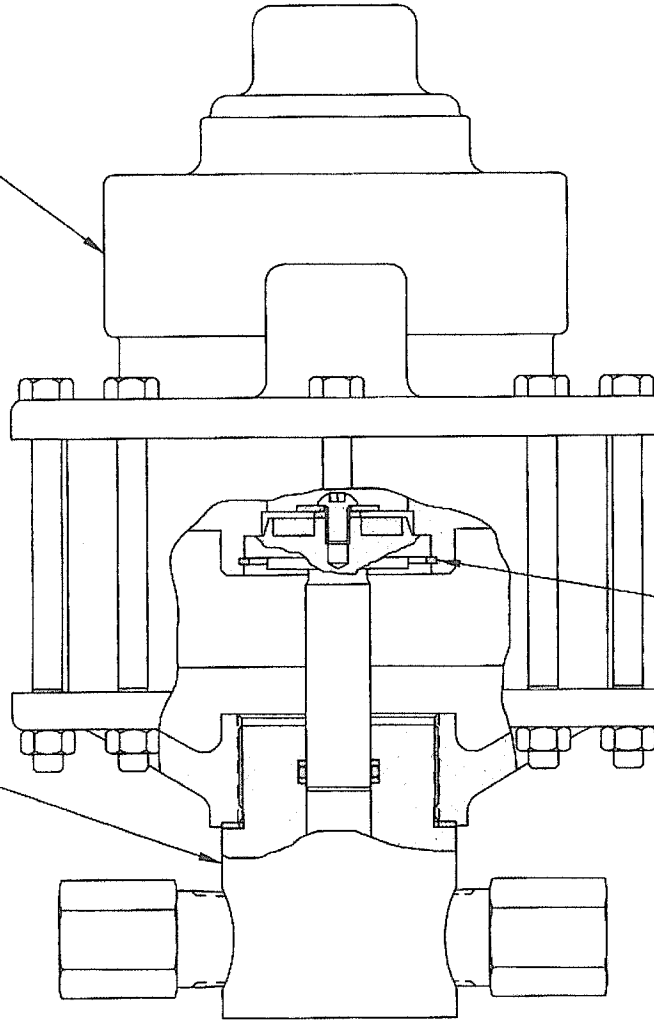
DESIGNERS AND MANUFACTURERS OF HYDRAULIC & PNEUMATIC EQUIPMENT

1130 COLUMBIA STREET BREA, CALIFORNIA 92821 WWW.SCHYDRAULIC.COM

PUMP ASSEMBLY D5000B25 THRU B105

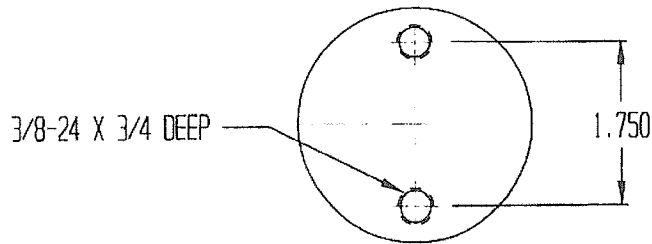
FORM 05000B25-105 REV 06/14/02

DRY LUBE AIR MOTOR ASSEMBLY
C10521



RETAINING RING
12-R200S000 (REF)

HYDRAULIC ASSEMBLY
11-5026W015-(25:1)
11-5026W018-(30:1)
11-5026W020-(35:1)
11-5026W030-(55:1)
11-5026W040-(70:1)
11-5026W045-(85:1)
11-5026W060-(105:1)



MOUNTING DIMENSIONS

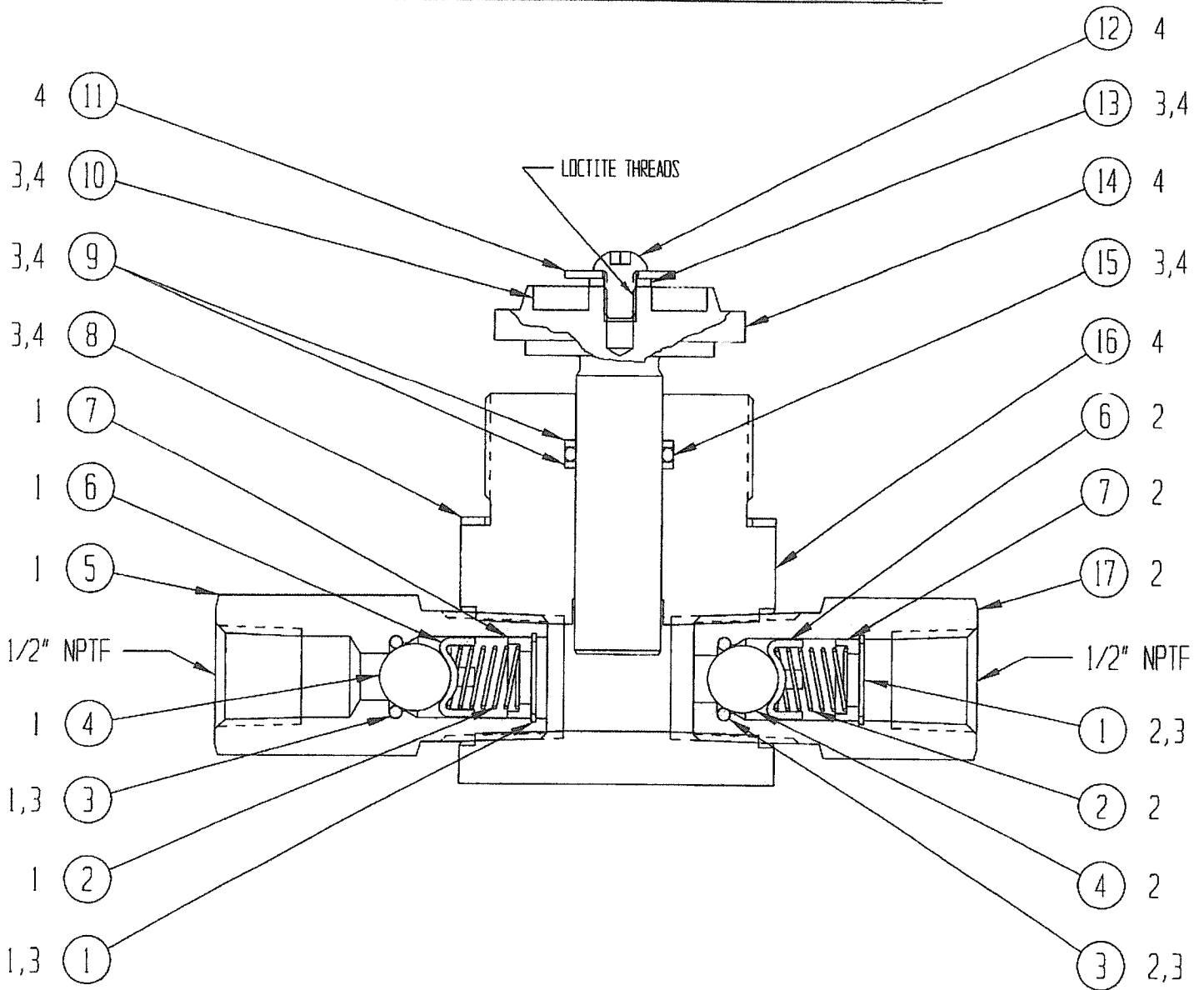


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FORM 11-5026W015-060 REV 07/09/01
25 30 35 55 70 85 105

HYDRAULIC ASSEMBLY 11-5026W015 THRU W060



4 INCLUDED IN 11-5027WXXX^{*} PISTON & CYLINDER ASSEMBLY

* REPRESENTS PUMP ASSEMBLY RATIO NUMBER

3 INCLUDED IN 11-5148NXXX^{*} HYDRAULIC REPAIR KIT

2 INCLUDED IN 11-5023S000 OUTLET CHECK VALVE ASSEMBLY

1 INCLUDED IN 11-5024S000 INLET CHECK VALVE ASSEMBLY



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1130 COLUMBIA STREET BREA, CALIFORNIA 92821 - (714) 257-4800 - FAX (714) 257-4810 WWW.SC-HYDRAULIC.COM

BILL OF MATERIALS FILE: 10-450-026.XLS

DRAWING NUMBER & DESCRIPTION: 11-5026W015 THRU W060 HYDRAULIC ASSEMBLY

11-5026

REVISION: 09/08/03

W015 (25:1)	W018 (30:1)	W020 (35:1)	W030 (55:1)	W040 (70:1)	W045 (85:1)	W060 (105:1)	ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
•	•	•	•	•	•	•	1	2	P10202-068	RETAINING RING	12-R068S000
•	•	•	•	•	•	•	2	2	11-5013S000	SPRING	10-450-13
•	•	•	•	•	•	•	3	2	P11003-112	O-RING	12-6227N010S
•	•	•	•	•	•	•	4	2	12-0440S562	CHECK BALL	
•	•	•	•	•	•	•	5	1	11-5019S000	SEAT-INLET	10-450-19
•	•	•	•	•	•	•	6	2	11-5034S002	BALL GUIDE	10-450-34
•	•	•	•	•	•	•	7	2	11-5017S000	SPRING GUIDE	10-450-17
•	•	•	•	•	•	•	8	1	11-5028N000	GASKET	10-450-28
•							9	2	P11227-214	BACK UP	12-8774T019
	•						9	2	P11227-213	BACK UP	12-8774T018
		•					9	2	P11227-212	BACK UP	12-8774T017
			•				9	2	P11227-115	BACK UP	12-8774T013
				•			9	2	P11227-114	BACK UP	12-8774T012
					•		9	2	P11227-113	BACK UP	12-8774T011
						•	9	2	P11227-112	BACK UP	12-8774T010
•	•	•	•	•	•	•	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	12-5001C407	HELICAL SPRING LOCK WASHER	
•							14	1	11-5010S015 (25:1)	HYDRAULIC PISTON	10-450-10-1.5
	•						14	1	11-5010S018 (30:1)	HYDRAULIC PISTON	10-450-10-1.75
		•					14	1	11-5010S020 (35:1)	HYDRAULIC PISTON	10-450-10-2
			•				14	1	11-5010S030 (55:1)	HYDRAULIC PISTON	10-450-10-3
				•			14	1	11-5010S040 (70:1)	HYDRAULIC PISTON	10-450-10-4
					•		14	1	11-5010S045 (85:1)	HYDRAULIC PISTON	10-450-10-4.5
						•	14	1	11-5010S060 (105:1)	HYDRAULIC PISTON	10-450-10-6
•							15	1	P11000-214	O-RING	12-6227N019
	•						15	1	P11000-213	O-RING	12-6227N018
		•					15	1	P11000-212	O-RING	12-6227N017
			•				15	1	P11000-115	O-RING	12-6227N013
				•			15	1	P11000-114	O-RING	12-6227N012
					•		15	1	P11000-113	O-RING	12-6227N011
						•	15	1	P11000-112	O-RING	12-6227N010
•							16	1	11-5011B015 (25:1)	HYDRAULIC CYLINDER	10-450-11-1.5
	•						16	1	11-5011B018 (30:1)	HYDRAULIC CYLINDER	10-450-11-1.75
		•					16	1	11-5011B020 (35:1)	HYDRAULIC CYLINDER	10-450-11-2
			•				16	1	11-5011B030 (55:1)	HYDRAULIC CYLINDER	10-450-11-3
				•			16	1	11-5011B040 (70:1)	HYDRAULIC CYLINDER	10-450-11-4
					•		16	1	11-5011B045 (85:1)	HYDRAULIC CYLINDER	10-450-11-4.5
						•	16	1	11-5011B060 (105:1)	HYDRAULIC CYLINDER	10-450-11-6
•	•	•	•	•	•	•	17	1	11-5020S000	SEAT-OUTLET	10-450-11-20

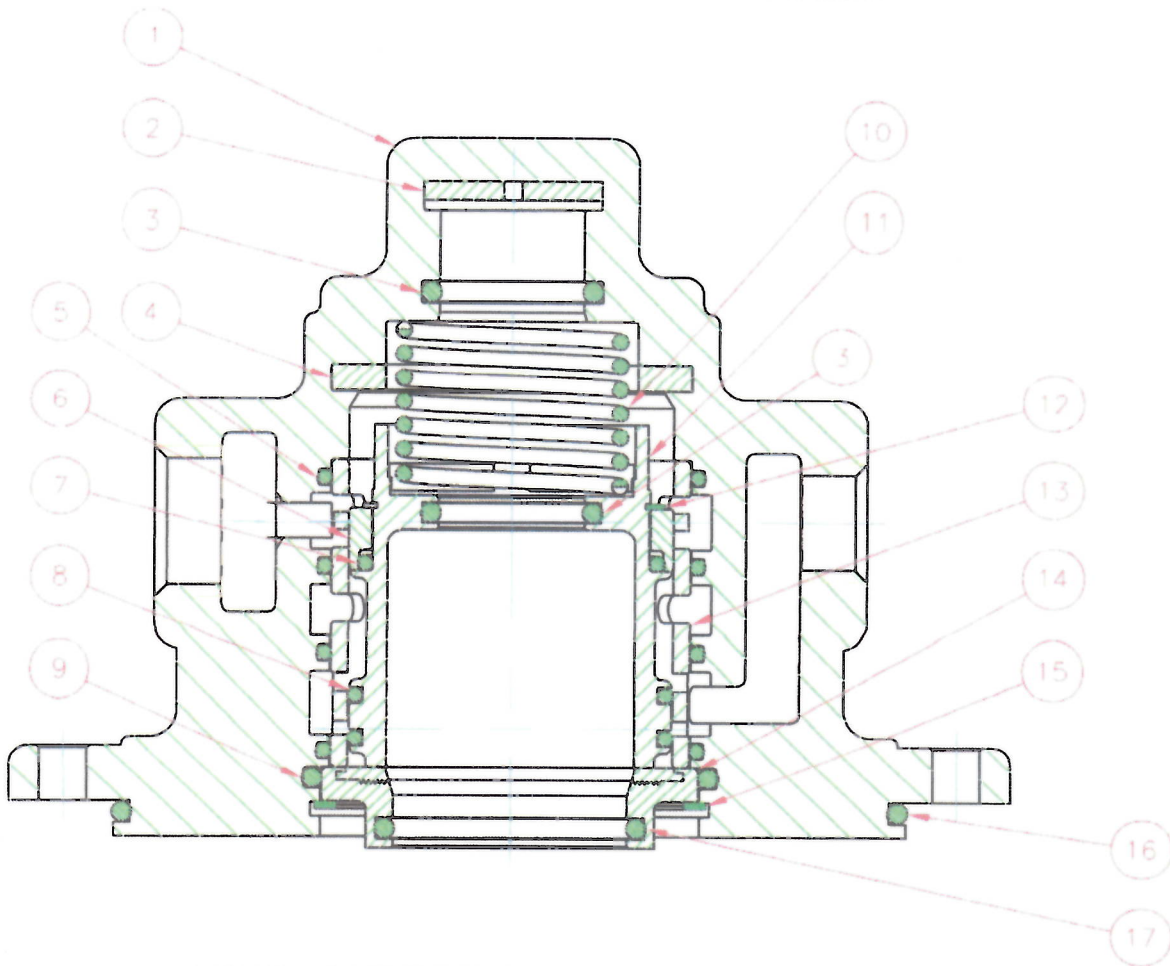
Where used: 10-5000W015-W060
 D5000B25-B105
 D5000B25-SPO-B105-SPO



SOUTHERN CALIFORNIA HYDRAULIC ENGINEERING CORPORATION

Designer and Manufacturers of Hydraulic & Pneumatic Equipment

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HEAD ASSEMBLY (D5-DRY LUBE) - C10522

(Sheet 1 of 1) REV. A 09/15/04, C. MONTAGUE

ITEM	DESCRIPTION	PART NUMBER	QTY	PACKING SET	REPAIR KIT
1	HEAD	11-5112A000	1		
2	BUMPER	11-5012N000	1		
3	O-RING	P11000-214	2	X	X
4	BUMPER	11-5057P000	1		X
5	O-RING	P11000-144	4		
6	SEAL - DRY	D10684	1		X
7	O-RING	P11000-135	1	X	X
8	O-RING	P11003-137	2	X	X
9	O-RING	P11000-137	2	X	X
10	SPRING	11-5005001	1		
11	PISTON - APA	D01818	1		
12	RETAINING RING	P10263-193	1		X
13	SLEEVE - APA	D10264	1		
14	BEARING ASSEMBLY	11-5047N000	1		
15	RETAINING RING	12-R262S000	1		
16	O-RING	P11000-252	1	X	X
17	O-RING	P11000-223	1	X	X



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1130 COLUMBIA STREET, BREA, CALIFORNIA 92821 - (714) 257-4800 - FAX (714) 257-4810

BILL OF MATERIALS FILE: C10521.XLS

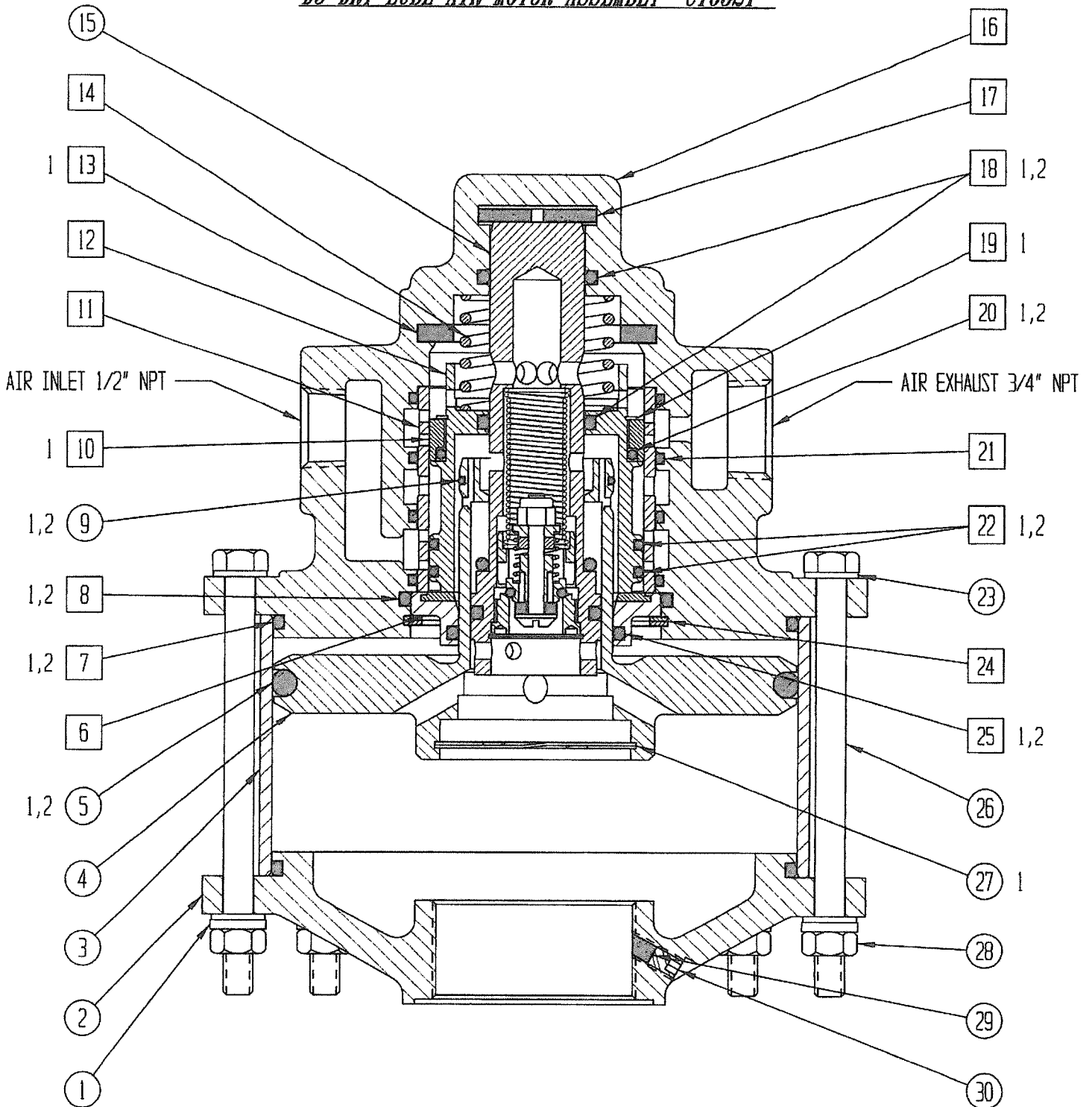
DRAWING NUMBER & DESCRIPTION: C10521 D5 DRY LUBE AIR MOTOR ASSEMBLY

REVISION: 07/24/06

ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
1	8	P10212-031	WASHER-LOCK	
2	1	11-5007A000	END	10-450-7
3	1	11-5181P000	CYLINDER-AIR	10-450-181
4	1	11-5048A000	PISTON-AIR	10-450-48
5	1	P11000-429	O-RING	12-6227N056
6	1	11-5047N000	BEARING ASSEMBLY	10-450-47
7	2	P11000-252	O-RING	12-6230N030
8	1	P11000-231	O-RING	12-6230N009
9	1	P11000-028	O-RING	12-8775N028
10	1	D10684	SEAL-DRY	
11	1	D10264	SLEEVE-APA	
12	1	D10818	PISTON-APA	
13	1	11-5057P000	BUMPER	10-450-57
14	1	11-5005M001	SPRING	10-450-5-1
15	1	11-5060A000	PILOT VALVE ASSEMBLY	10-450-60
16	1	11-5112A000	HEAD	10-450-112
17	1	11-5012N000	BUMPER	10-450-12
18	2	P11000-214	O-RING	12-6227N019
19	1	P10263-193	RETAINING RING	
20	1	P11000-135	O-RING	
21	4	P11000-144	O-RING	12-8775N144
22	2	P11003-137	O-RING	
23	16	P10214-031	WASHER-FLAT	
24	1	12-R262S000	RETAINING RING	RRT-262
25	1	P11000-223	O-RING	12-6230N001
26	8	P10231	BOLT-HEX	
27	1	12-R200S000	RETAINING RING	RRT-200
28	8	12-31CNFH1Z	NUT-HEX	
29	1	11-5172N000	PLUG	10-450-172
30	1	P10238	SET SCREW-HEX SOCKET	12-25C313CPSS



D5 DRY LUBE AIR MOTOR ASSEMBLY C10521



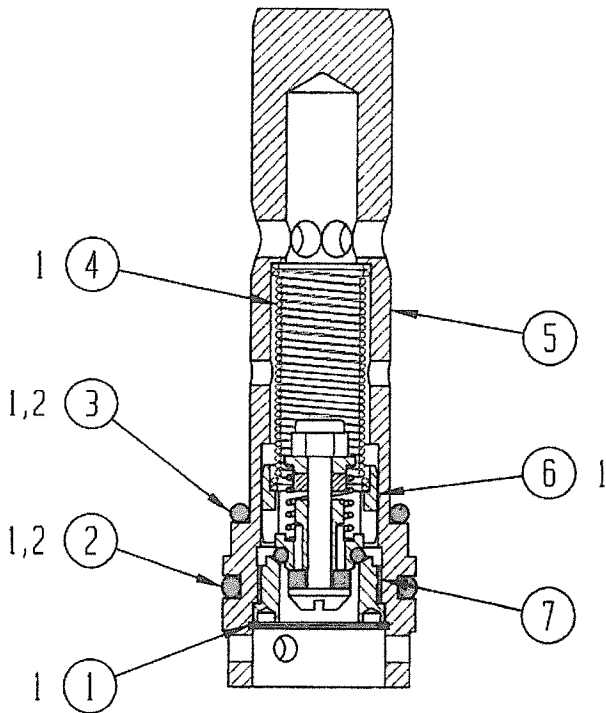
2 INCLUDED IN R10103 AIR MOTOR PACKING SET

1 INCLUDED IN R10102 AIR MOTOR REPAIR KIT

XX INCLUDED IN C10522 HEAD ASSEMBLY



PILOT VALVE ASSEMBLY 11-5060A000

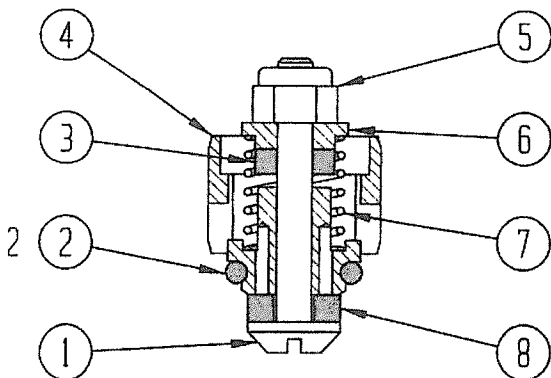


7	1	11-5024A403	SEAT	10-403-24
6	1	11-5032X403	AIR CHECK ASSY	10-403-32
5	1	11-5049A000	VALVE BODY	10-450-49
4	1	11-5016M000	SPRING	10-450-16
3	1	P11000-214	O-RING	12-6227N019
2	1	P11000-216	O-RING	12-6227N021
1	1	12-R093S000	RETAINING RING	RRT-93
ITEM NO.	QTY	PART NO.	DESCRIPTION	REF NO.

2 INCLUDED IN R10103 AIR MOTOR PACKING SET

1 INCLUDED IN R10102 AIR MOTOR REPAIR KIT

AIR CHECK ASSEMBLY 11-5032X403



8	1	11-5025N403	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	11-5171X000	VALVE BODY	10-450-171
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.

PARTS BREAKDOWN FOR MODEL HP-10
RICE HYDRO, INC. (SC PUMP)

REF#..	PART NUMBER..	DESCRIPTION..	QTY
<u>HYDRAULIC ASSEMBLY:</u>			
1	SC-P10202-068	RETAINING RING	2
2	SC-11-5013S000	SPRING	2
3	SC-P11003-112	O-RING	2
4	SC-12-0440S562	CHECK BALL	1
5	SC-11-5019S000	SEAT-INLET	2
6	SC-11-5034S002	BALL GUIDE	2
7	SC-11-5017S000	SPRING GUIDE	1
8	SC-11-5028N000	GASKET	2
9	SC-P11227-112	BACK UP	1
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-12-5001C407	HELICAL SPRING LOCK WASHER	1
14	SC-11-5010S060	HYDRAULIC PISTON	1
15	SC-P11000-112	O-RING	1
16	SC-11-5011B060	HYDRAULIC CYLINDER	1
17	SC-11-5020S000	SEAT OUTLET	1
<u>AIR MOTOR ASSEMBLY:</u>			
1	SC-P10212-031	WASHER-LOCK	8
2	SC-11-5007A000	END	1
3	SC-11-5181P000	CYLINDER-AIR	1
4	SC-11-5048A000	PISTON-AIR	1
5	SC-P11000-429	O-RING	1
6	SC-11-5047N000	BEARING ASSEMBLY	1
7	SC-P11000-252	O-RING	2
8	SC-P11000-231	O-RING	1
9	SC-P11000-028	O-RING	1
10	SC-D10684	SEAL-DRY	1
11	SC-D10264	SLEEVE-APA	1
12	SC-D10818	PISTON-APA	1
13	SC-11-5057P000	BUMPER	1
14	SC-11-5005M001	SPRING	1
15	SC-11-5060A000	PILOT VALVE ASSEMBLY	1
16	SC-11-5112A000	HEAD	1
17	SC-11-5012N000	BUMPER	1
18	SC-P11000-214	O-RING	2
19	SC-P10263-193	RETAINING RING	1
20	SC-P11000-135	O-RING	1
21	SC-P11000-144	O-RING	4
22	SC-P11003-137	O-RING	2
23	SC-P10214-031	WASHER-FLAT	16
24	SC-12-R262S000	RETAINING RING	1
25	SC-P11000-223	O-RING	1
26	SC-P10231	BOLT-HEX	8
27	SC-12-R200S000	RETAINING RING	1
28	SC-12-31CNFH1Z	NUT-HEX	8
29	SC-11-5172N000	PLUG	1
30	SC-P10238	SET SCREW-HEX SOCKET	1
<u>PILOT VALVE ASSEMBLY #SC-11-5060A000</u>			
1	SC-12-R093S000	RETAINING RING	1
2	SC-P11000-216	O-RING	1
3	SC-P11000-214	O-RING	1
4	SC-11-5016M000	SPRING	1
5	SC-11-5049A000	VALVE BODY	1
6	SC-11-5032X403	AIR CHECK ASSY	1
7	SC-11-5024A403	SEAT	1

PARTS BREAKDOWN FOR MODEL HP-10
RICE HYDRO, INC. (SC PUMP)

REF#..	PART NUMBER..	DESCRIPTION..	QTY
<u>AIR CHECK ASSEMBLY #SC11-5032X403</u>			
1	SC-11-5056A000	SCREW	1
2	SC-P11000-111	O-RING	1
3	SC-11-5043N000	WASHER	1
4	SC-11-5171X000	VALVE BODY	1
5	SC-12-2104A4D08	NUT	1
6	SC-11-5039S000	RETAINER	1
7	SC-1-5015M000	SPRING	1
8	SC-11-5025N403	WASHER	1
<u>HEAD ASSEMBLY (D5 DRY LUBE) - #C10522</u>			
1	SC-11-5112A000	HEAD	1
2	SC-11-5012N000	BUMPER	1
3	SC-P11000-214	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-P11003-137	O-RING	2
9	SC-P11000-137	O-RING	2
10	SC-11-5005001	SPRING	1
11	SC-D01818	PISTON - APA	1
12	SC-P10263-193	RETAINING RING	1
13	SC-D10264	SLEEVE - APA	1
14	SC-11-5047N000	BEARING ASSEMBLY	1
15	SC-12-R262S000	RETAINING RING	1
16	SC-P11000-252	O-RING	1
17	SC-P11000-223	O-RING	1
<u>KITS & ASSEMBLIES:</u>			
	SC-11-5142NDLO	AIR MOTOR REPAIR KIT D5	1
	SC-11-5148N060	HYDRAULIC REPAIR KIT	1
	SC-11-5024S000	INLET CHECKVALVE ASSY	1
	SC-11-5023S000	OUTLET CHECKVALVE ASSY	1
<u>MISC SECTION:</u>			
	NEEDLEVALVE-1/4	BLEEDVALVE	1
	LINESTRAINER-1/2	MXM 100 MESH	1
	GAUGE-10,000	2 1/2" SS LIQUID FILLED	1
	NEEDLEVALVE-10,000	HIGH PRESSURE VALVE/BLACK HANDLE	1
	NEEDLEVALVE-10K	HIGH PRESSURE VALVE/SILVER HANDLE	1
	HOSE-3/8X8'10000	8 FOOT HIGH PRESSURE HOSE	1
	FILTER-HP-3/8	FILTER REGULATOR W/GAUGE	1
	MUFFLER-HP10-3/4	3/4 MUFFLER	1
	PUMP-D5000B105	10,000 PSI PNEUMATIC PUMP	1

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

REV. DATE 10/14/14

PAGE 2 OF 2