

PARTS BREAKDOWN FOR MODEL HP-20
RICE HYDRO, INC.

REF#..	PART NUMBER..	DESCRIPTION..	QTY REQ'D
HYDRAULIC ASSEMBLY #SC-11-6165W151-HF4:			
1	SC-11-5007S407	RETAINER	1
2	SC-11-5014S000	SPRING	1
3	SC-P11003-110	O-RING	1
4	SC-12-0440S437	CHECK BALL	1
5	SC-11-5021S000	SEAT - INLET	1
6	SC-11-5034S001	BALL GUIDE	1
7	SC-P11000-113	O-RING	2
8	SC-11-6160B150	BEARING - LOWER	1
9	SC-11-5028N000	GASKET	1
10	SC-P11202-031	SEAL - ROD	1
11	SC-D10653-3	BACK UP	1
12	SC-11-6158B151	RETAINER	1
13	SC-P10212-025	HELICAL SPRING LOCK WASHER	1
14	SC-12-25F37SBC45Z	BUTTON HEAD CAP SCREW	1
15	SC-12-25N87WF1Z	FENDER WASHER	1
16	SC-11-5051P000	PISTON BUMPER	1
17	SC-11-6008S150	HYDRAULIC PISTON	1
18	SC-11-6157B151	HYDRAULIC CYLINDER	1
19	SC-P11000-010	O-RING	1
20	SC-P11000-013	O-RING	1
21	SC-11-6117S000	ADAPTER	1
22	SC-11-6016S000	SPRING	1
23	SC-12-0440S250	CHECK BALL	1
24	SC-11-6015S000	BALL GUIDE	1
25	SC-11-6116S000	SEAT - OUTLET	1

AIR MOTOR ASSEMBLY #SC-11-6094ADL0:

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-P11000-261	O-RING	2
7	SC-11-5047N000	BEARING ASSEMBLY	1
8	SC-P11000-231	O-RING	1
9	SC-11-6152ADLO	DRY LUBE APA VALVE SYSTEM	1
10	SC-P11000-028	O-RING	1
11	SC-11-5057P000	BUMPER	1
12	SC-11-5005M002	SPRING, RETURN	1
13	SC-11-6027A000	PILOT VALVE ASSEMBLY	1
14	SC-11-6092A000	HEAD	1
15	SC-11-5012N000	BUMPER	1
16	SC-P11000-214	O-RING	1
17	SC-12-R262S000	RETAINING RING	1
18	SC-P10214-038	WASHER - FLAT	16
19	SC-P11000-223	O-RING	1
20	SC-12-R200S000	RETAINING RING	1
21	SC-P10230	BOLT - HEX	8
22	SC-11-5172N000	PLUG	1
23	SC-12-37CNFH1Z	NUT - HEX	8
24	SC-P10238	SET SCREW - HEX SOCKET	1
19	SC-P11000-223	O-RING	1
20	SC-12-R200S000	RETAINING RING	1
21	SC-P10230	HEX BOLT	8
22	SC-11-5172N000	PLUG	1
23	SC-12-37CNFH1Z	HEX NUT	8
24	SC-P10238	HEX SOCKET SET SCREW	1

PARTS BREAKDOWN FOR MODEL HP-20

RICE HYDRO, INC.

REF#..	PART NUMBER..	DESCRIPTION..	QTY REQ'D
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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 ASSEMBLY	1
7	SC-11-5024A403	SEAT	1

AIR CHECK ASSEMBLY #SC-11-6032X403:

1	SC-11-5056A000	SCREW	1
2	SC-P11000-111	O-RING	1
3	SC-11-5043V000	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-11-5025V403	WASHER	1

KITS & ASSEMBLIES:

SC-11-6099N151-HF4	HYDRAULIC REPAIR KIT	1
SC-11-6100NDL0	AIR MOTOR REPAIR KIT	1
SC-11-6166W151	PISTON & CYLINDER ASSEMBLY	1
SC-11-6118S000	OUTLET CHECK VALVE ASSEMBLY	1
SC-11-5029S000	INLET CHECKVALVE ASSEMBLY	1

MISC SECTION:

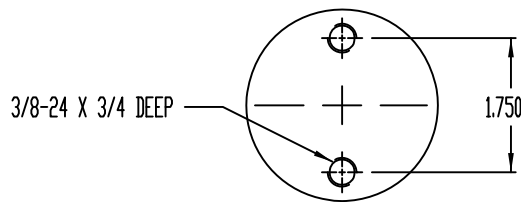
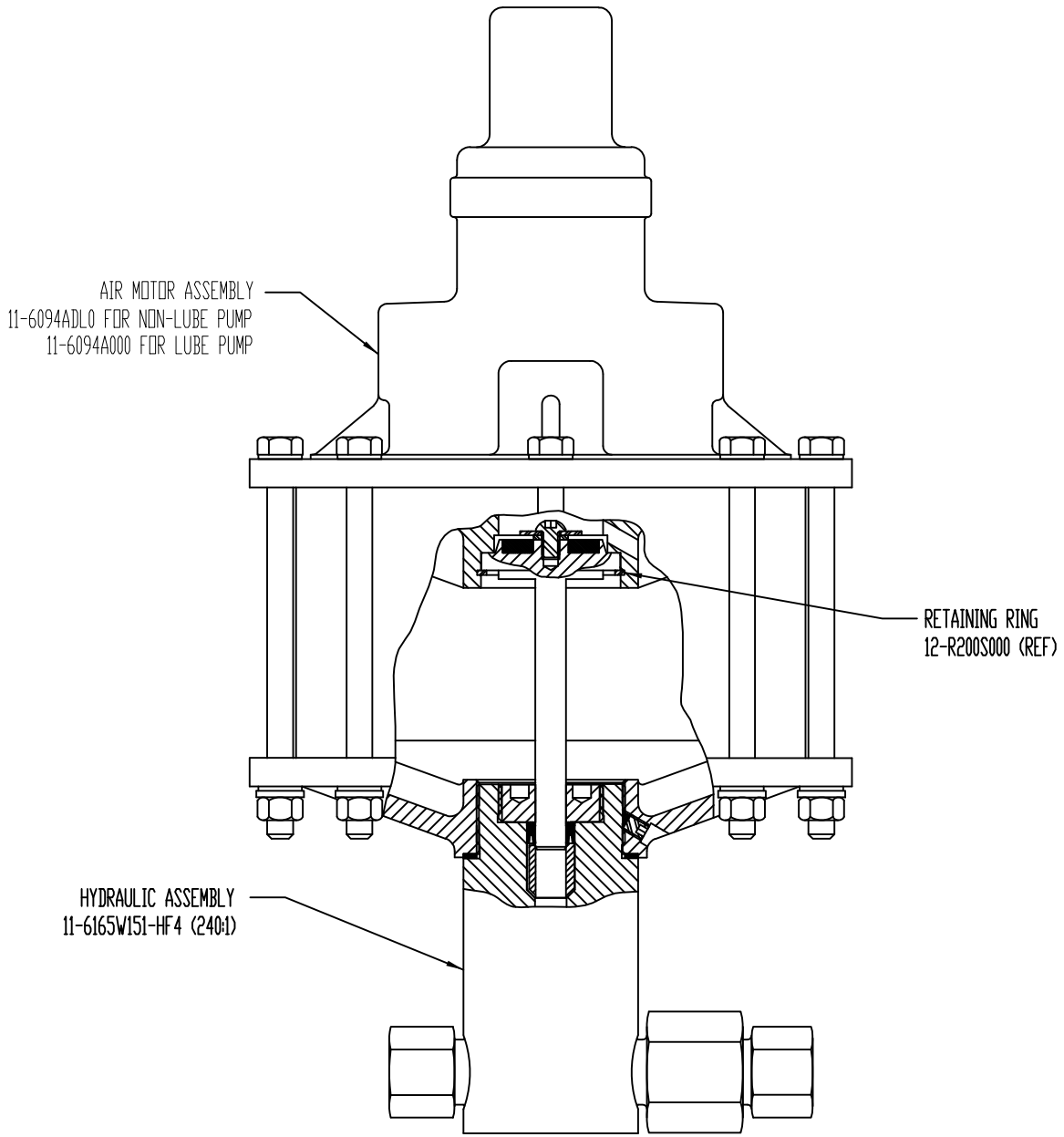
NEEDLEVALVE-20K	20,000 PSI NEEDLEVALVE	1
LINESTRAINER-1/2	MXM 100 MESH	1
GAUGE-20K	20,000PSI GAUGE	1
HOESWIVEL-1/2	INLET HOSE SWIVEL	1
HOSE-1/4X20,000 PSI	8 FOOT HIGH PRESSURE HOSE	1
FILTER-HP-1/2	FILTER REGULATOR W/GAUGE	1
MUFFLER-HP-1"	MUFFLER	1
PUMP-AIR-20,000 PSI	20,000 PSI PNEUMATIC PUMP	1
LABEL-KIT-HP	INSTRUCTION AND CAUTION STICKERS	1



NON-LUBE PUMP ASSEMBLY 10-6000W151-HF4

LUBE PUMP ASSEMBLY 10-6000W151L-HF4

(NOTE: P/N 10-6000W151-HF4 WAS D6000B240-HF4)



MOUNTING DIMENSIONS



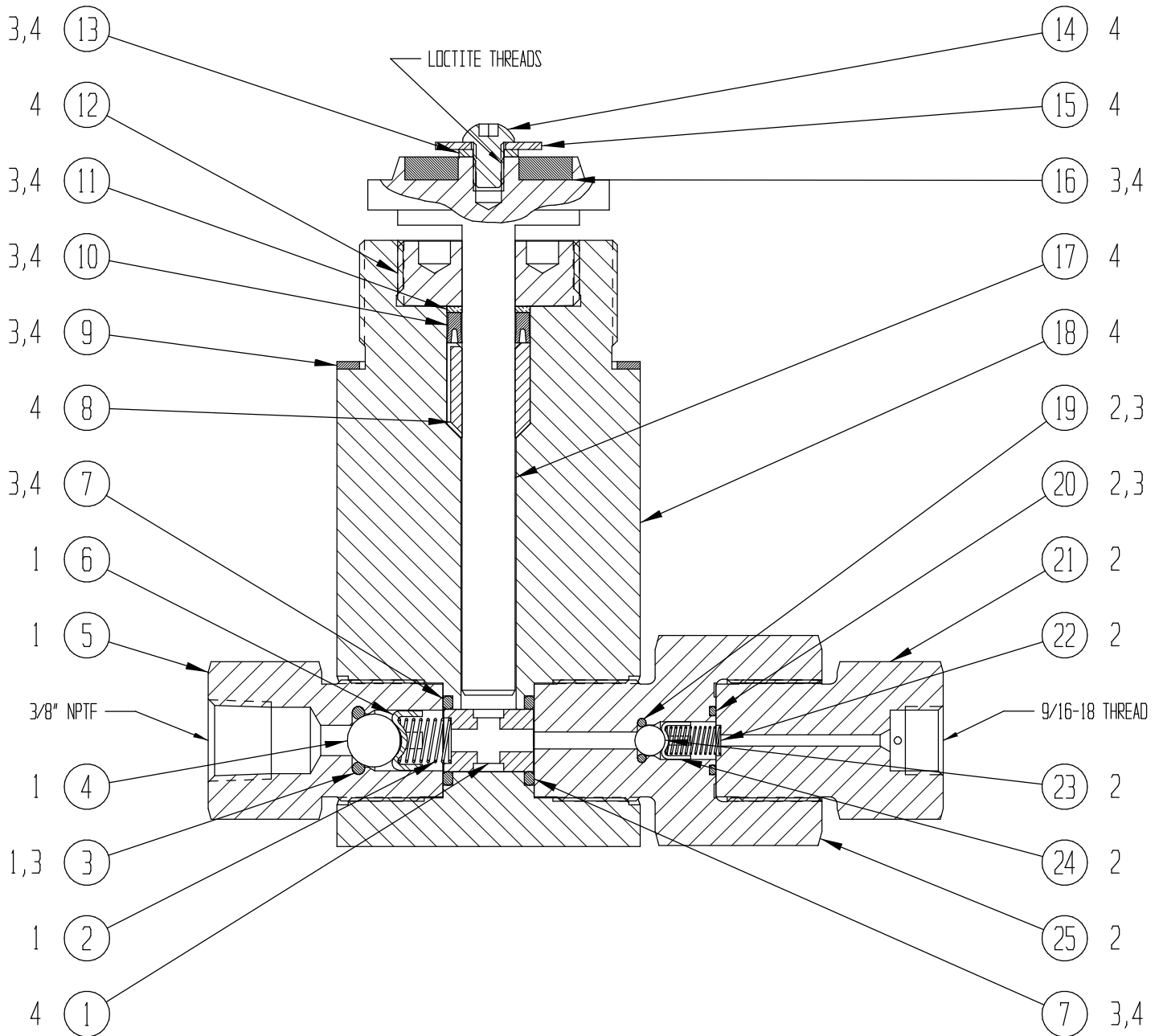
SOUTHERN CALIFORNIA HYDRAULIC ENGINEERING CORPORATION

DESIGNERS AND MANUFACTURERS OF HYDRAULIC & PNEUMATIC EQUIPMENT

FORM 11-6165W151-HF4 REV 04/09/04

1130 COLUMBIA STREET BREA, CALIFORNIA 92821

HYDRAULIC ASSEMBLY 11-6165W151-HF4



4 INCLUDED IN 11-6166W151 PISTON & CYLINDER ASSEMBLY

3 INCLUDED IN 11-6099N151-HF4 HYDRAULIC REPAIR KIT

2 INCLUDED IN 11-6118S000 OUTLET CHECK VALVE ASSEMBLY

1 INCLUDED IN 11-5029S000 INLET CHECK VALVE ASSEMBLY



SOUTHERN CALIFORNIA HYDRAULIC ENGINEERING CORPORATION

DESIGNERS AND MANUFACTURERS OF HYDRAULIC & PNEUMATIC EQUIPMENT

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

BILL OF MATERIALS FILE: 10550165.XLS				
DRAWING NUMBER & DESCRIPTION: 11-6165W151-HF4 (240:1 RATIO) HYDRAULIC ASSEMBLY				
REVISION: 04/09/04				
ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO.
1	1	11-5007S407	RETAINER	10-407-7
2	1	11-5014S000	SPRING	10-450-14
3	1	P11003-110	O-RING	12-6227N008S
4	1	12-0440S437	CHECK BALL	
5	1	11-5021S000	SEAT-INLET	10-450-21
6	1	11-5034S001	BALL GUIDE	10-450-34-1
7	2	P11000-113	O-RING	12-6227N011
8	1	11-6160B150	BEARING-LOWER	10-550-160-15
9	1	11-5028N000	GASKET	10-450-28
10	1	P11202-031	SEAL-ROD	
11	1	D10653-3	BACK UP	
12	1	11-6158B151	RETAINER	10-550-158-15
13	1	P10212-025	HELICAL SPRING LOCK WASHER	12-5001C407
14	1	12-25F37SBC45Z	BUTTON HEAD CAP SCREW	
15	1	12-25N87WF1Z	FENDER WASHER	
16	1	11-5051P000	PISTON BUMPER	10-450-51
17	1	11-6008S150	HYDRAULIC PISTON	10-550-8-15
18	1	11-6157B151	HYDRAULIC CYLINDER	10-550-157-15
19	1	P11000-010	O-RING	12-6227N005
20	1	P11000-013	O-RING	12-8775N013
21	1	11-6117S000	ADAPTER	10-550-117
22	1	11-6016S000	SPRING	10-550-16
23	1	12-0440S250	CHECK BALL	
24	1	11-6015S000	BALL GUIDE	10-550-15
25	1	11-6116S000	SEAT-OUTLET	10-550-116

Where Used 10-6000W151-HF4
Pump Assemblies D6000B240-HF4



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600 SERIES PUMP LUBRICATED AND DRY LUBE APA VALVE AIR MOTOR ASSEMBLIES

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LUBRICATED AIR MOTOR ASSEMBLY 11-6094A000 DRY LUBE AIR MOTOR ASSEMBLY 11-6094ADL0 AND C10515 (SEE PAGE 2 & 3 FOR DRY LUBE AIR MOTOR ASSEMBLY 11-6094ADL0 AND C10515)

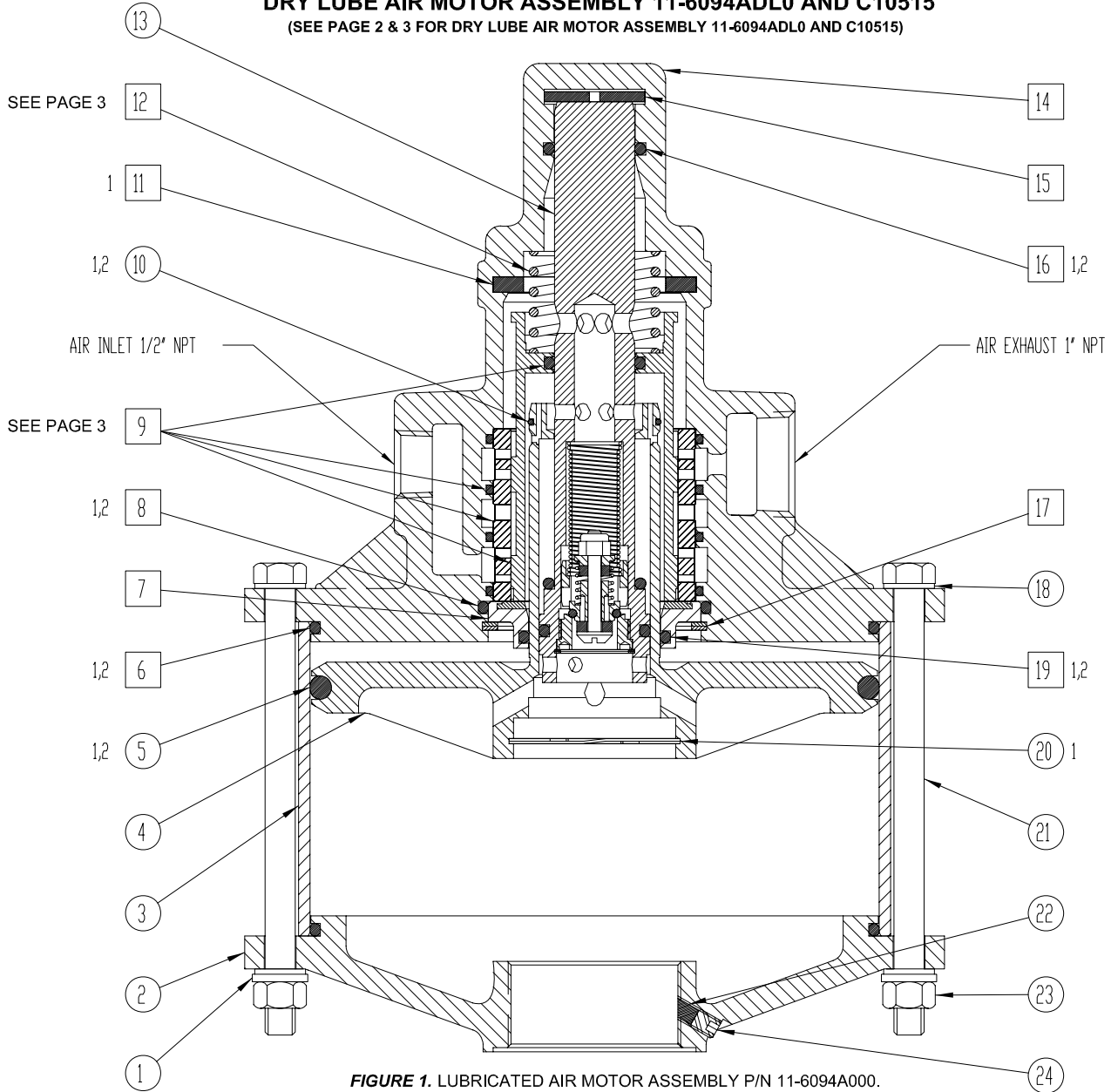


FIGURE 1. LUBRICATED AIR MOTOR ASSEMBLY P/N 11-6094A000.
SEE PAGE 2 & 3 FOR DRY LUBE AIR MOTOR ASSEMBLY P/N 11-6094ADL0 AND C10515.

- 1 INCLUDED IN 11-6100N000 AIR MOTOR REPAIR KIT
- 2 INCLUDED IN 11-6130N000 AIR MOTOR PACKING SET
- XX INCLUDED IN 11-6128A000 HEAD ASSEMBLY

- 1 INCLUDED IN R10104 AIR MOTOR REPAIR KIT
- 2 INCLUDED IN R10105 AIR MOTOR PACKING SET
- XX INCLUDED IN C10516 HEAD ASSEMBLY

NOTE: USE WITH AIR MOTOR ASSEMBLY P/N 11-6094A000.
P/N 11-6100N000 AND 11-6130N000 INCLUDE SAME PARTS
AS R10104 AND R10105 RESPECTIVELY.

NOTE: USE WITH AIR MOTOR ASSEMBLY P/N 11-6094ADL0
AND C10515. P/N 11-6100N000 AND 11-6130N000 INCLUDE
SAME PARTS AS R10104 AND R10105 RESPECTIVELY.



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600 SERIES PUMP LUBRICATED AND DRY LUBE APA VALVE AIR MOTOR ASSEMBLIES

A. LUBRICATED AIR MOTOR ASSEMBLY P/N 11-6094A000 (REFER TO ITEM 9A & 12A)

B. DRY LUBE AIR MOTOR ASSEMBLY P/N 11-6094ADL0 AND C10515 (REFER TO ITEM 9B & 12B)

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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	2	P11000-261	O-RING	12-6230N039
7	1	11-5047N000	BEARING ASSEMBLY	10-450-47
8	1	P11000-231	O-RING	12-6230N009
9A *	1	11-6152A000	LUBRICATED APA VALVE ASSEMBLY (SEE PAGE 3)	10-550-152
9B *	1	11-6152ADL0	DRY LUBE APA VALVE ASSEMBLY (SEE PAGE 3)	10-550-152DL
10	1	P11000-028	O-RING	12-8775N028
11	1	11-5057P000	BUMPER	10-450-57
12A *	1	11-5005M001	SPRING, RETURN (USE W/ITEM No. 9A, SEE PAGE 3)	10-450-5-1
12B *	1	11-5005M002	SPRING, RETURN (USE W/ITEM No. 9B, SEE PAGE 3)	10-450-5-2
13	1	11-6027A000	PILOT VALVE ASSEMBLY	10-550-27
14	1	11-6092A000	HEAD	10-550-92
15	1	11-5012N000	BUMPER	10-450-12
16	1	P11000-214	O-RING	12-6227N019
17	1	12-R262S000	RETAINING RING	RRT-262
18	16	P10214-038	WASHER-FLAT	
19	1	P11000-223	O-RING	12-6230N001
20	1	12-R200S000	RETAINING RING	RRT-200
21	8	P10230	BOLT-HEX	
22	1	11-5172N000	PLUG	10-450-172
23	8	12-37CNFH1Z	NUT-HEX	
24	1	P10238	SET SCREW-HEX SOCKET	12-25C313CPSS

* ITEM 9A - LUBRICATED APA VALVE ASSEMBLY P/N 11-6152A000. SEE PAGE 3 FOR DETAILS.

ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
9A.1	1	P11000-214	O-RING	
9A.2	1	11-6153A000	PISTON, APA	10-550-153
9A.3	1	11-6126A000	SLEEVE, APA	10-550-126
9A.4	4	P11000-144	O-RING	

* ITEM 9B - DRY LUBE APA VALVE ASSEMBLY P/N 11-6152ADL0 AND C10526. SEE PAGE 3 FOR DETAILS.

ITEM NO	QTY	PART NO	DESCRIPTION	REFERENCE NO
9B.1	1	P11000-214	O-RING	
9B.2	1	P10263-193	RETAINING RING	
9B.3	1	D10684	SEAL, DRY LUBE	
9B.4	1	P11000-135	O-RING	
9B.5	1	D10817	PISTON, APA	
9B.6	2	P11003-137	O-RING	
9B.7	1	D10263	SLEEVE, APA	
9B.8	4	P11000-144	O-RING	



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600 SERIES PUMP DRY LUBE AND LUBRICATED APA VALVE AIR MOTOR ASSEMBLIES

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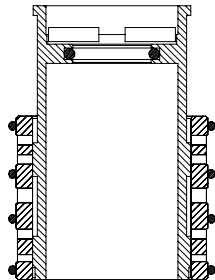


FIGURE 2. LUBRICATED APA VALVE ASSEMBLY
P/N 11-6152A000

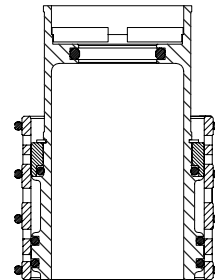


FIGURE 3. DRY LUBE APA VALVE ASSEMBLY
NEW P/N 11-6152ADL0 AND C10526

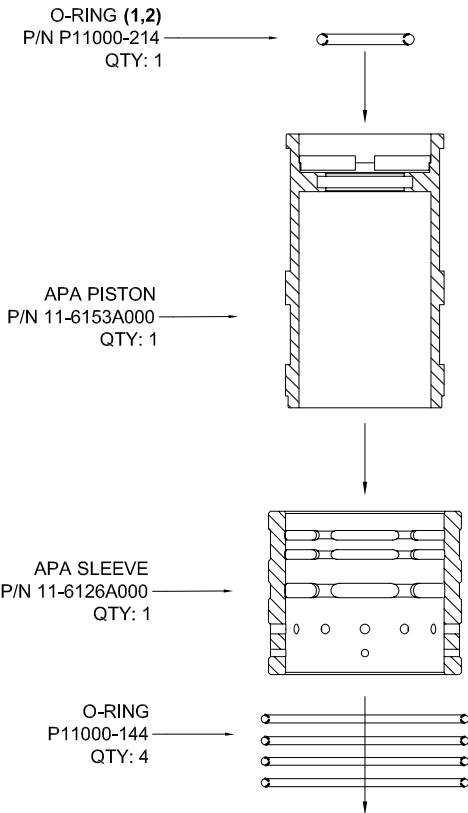


FIGURE 4. LUBRICATED APA VALVE PART CONFIGURATION.
USE APA VALVE ASSEMBLY P/N 11-6152A000.
USE APA VALVE RETURN SPRING P/N 11-5005M001.
USE AIR MOTOR P/N 11-6094A000
REFER TO ITEMS 9A AND 12A

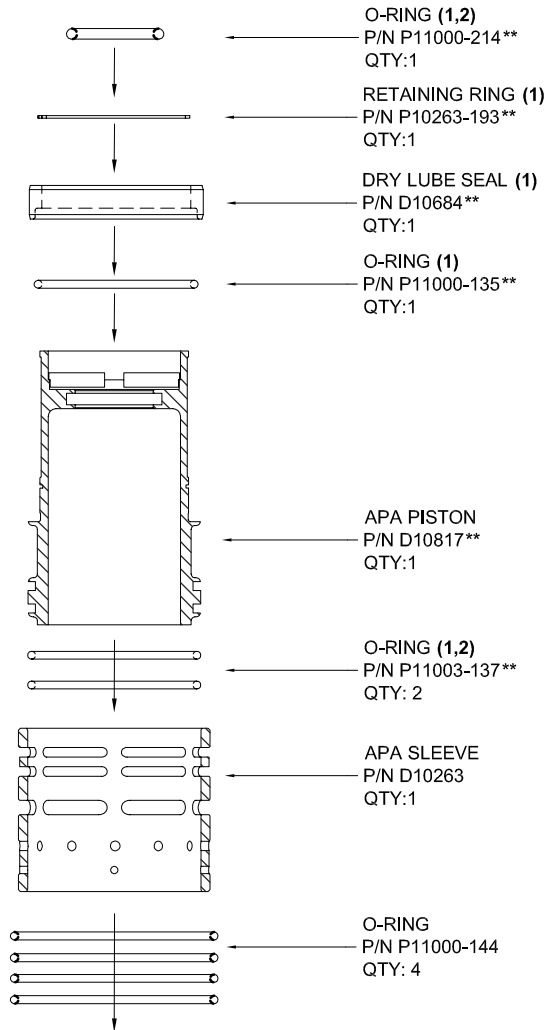


FIGURE 5. DRY LUBE APA VALVE PART CONFIGURATION.
USE APA VALVE ASSEMBLY P/N 11-6152ADL0
USE APA VALVE RETURN SPRING P/N 11-5005M002
USE AIR MOTOR ASSEMBLY P/N 11-6094ADL0 AND C10525
**PARTS INCLUDED IN APA PISTON ASSEMBLY P/N C10544
REFER TO ITEMS 9B AND 12B



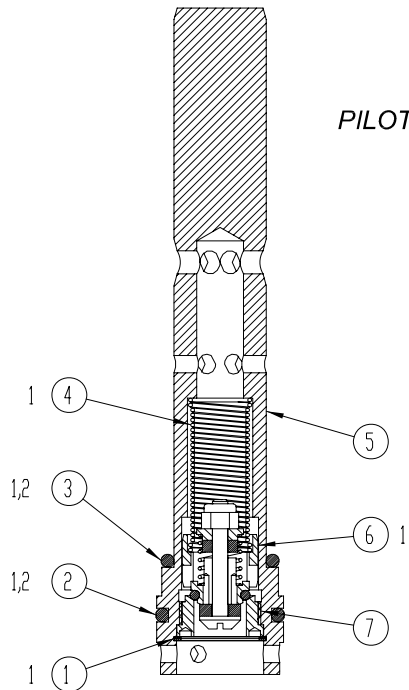
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600 SERIES PUMP LUBRICATED AND DRY LUBE APA VALVE AIR MOTOR ASSEMBLIES

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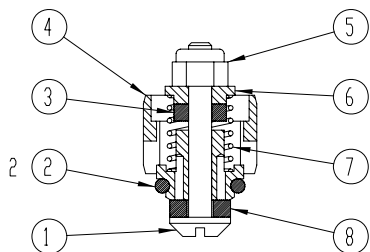
PILOT VALVE ASSEMBLY 11-6027A000

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 11-6130N000 AND R10105 AIR MOTOR PACKING SET

1 INCLUDED IN 11-6100N000 AND R10104 AIR MOTOR REPAIR KIT

AIR CHECK ASSEMBLY 11-6032X403



8	1	11-5025V403	WASHER	10-403-25V
7	1	11-5015M000	SPRING	10-450-15
6	1	11-5039S000	RETAINER	10-450-39
5	1	12-2104A4D08	NUT	
4	1	11-5171X001	VALVE BODY	10-450-171-1
3	1	11-5043V000	WASHER	10-450-43V
2	1	P11000-111	O-RING	12-6227N009
1	1	11-5056A000	SCREW	10-450-56
ITEM NO.	QTY	PART NO.	DESCRIPTION	REF NO.