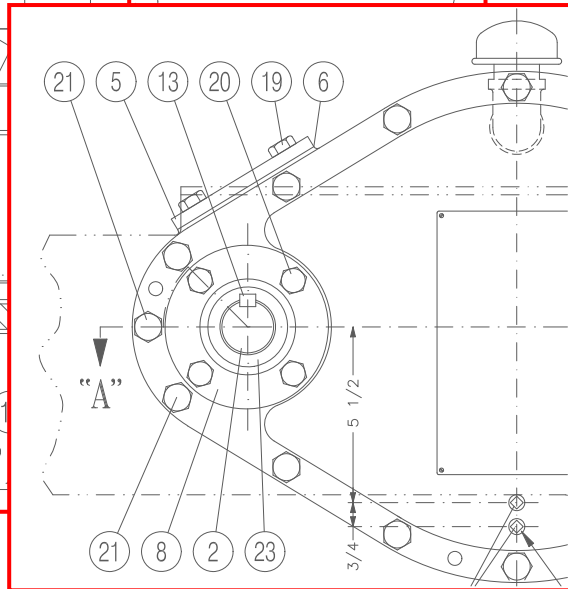
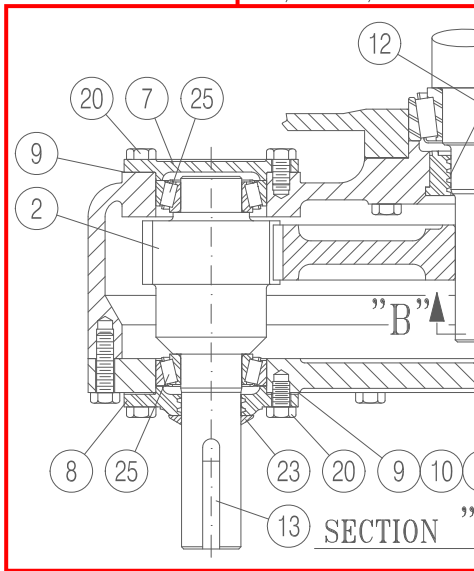
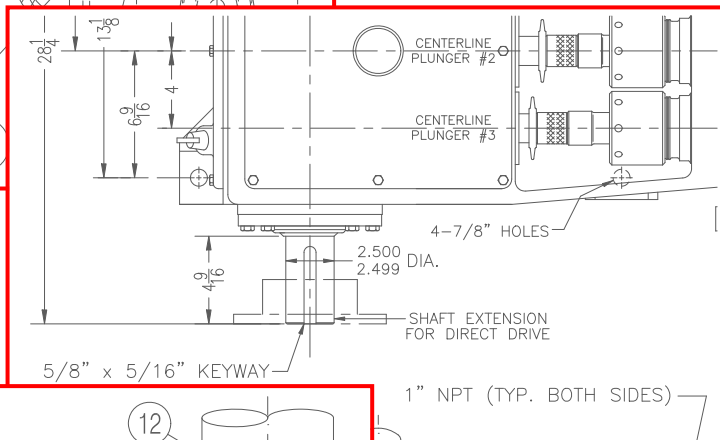
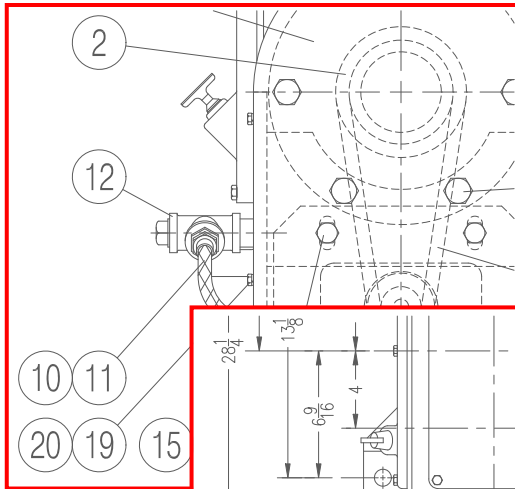
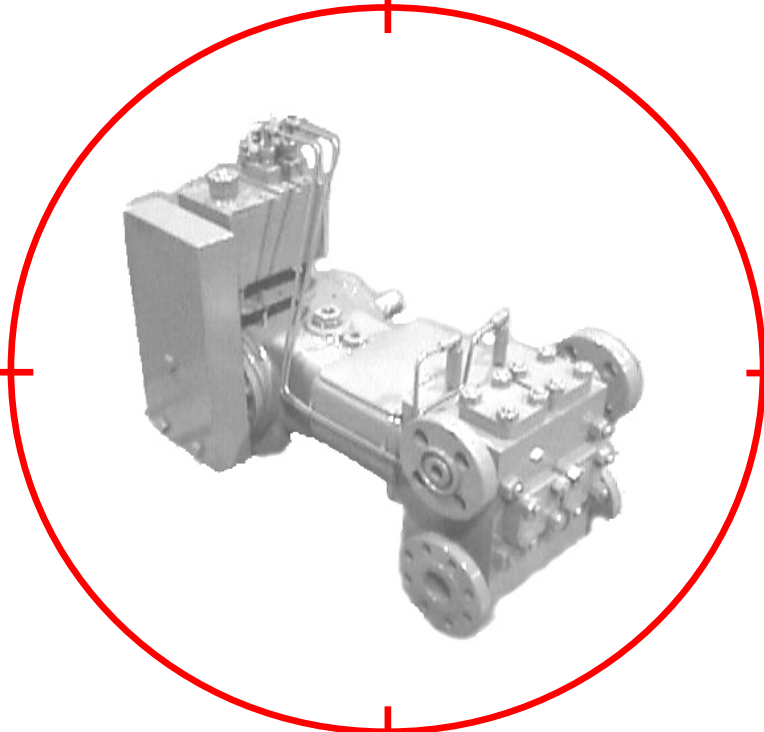


11D-2 Multiplex Plunger Pumps Parts List



**Types:
11D-2**

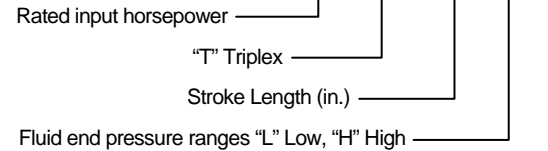
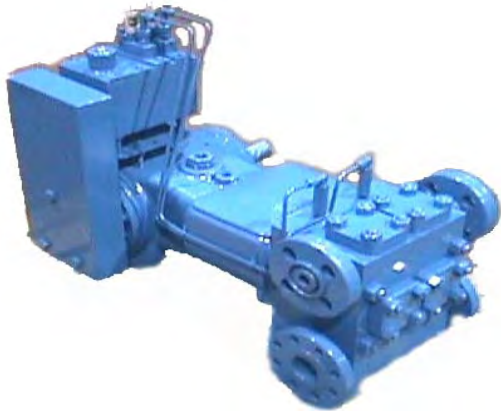
Sales / Technical Information

USA Tollfree: 1 (800) 324-4706

Phone: 1 (918) 447-4600

Fax: 1 (918) 447-4677

Internet: <http://www.nov.com>



Index and Check List:

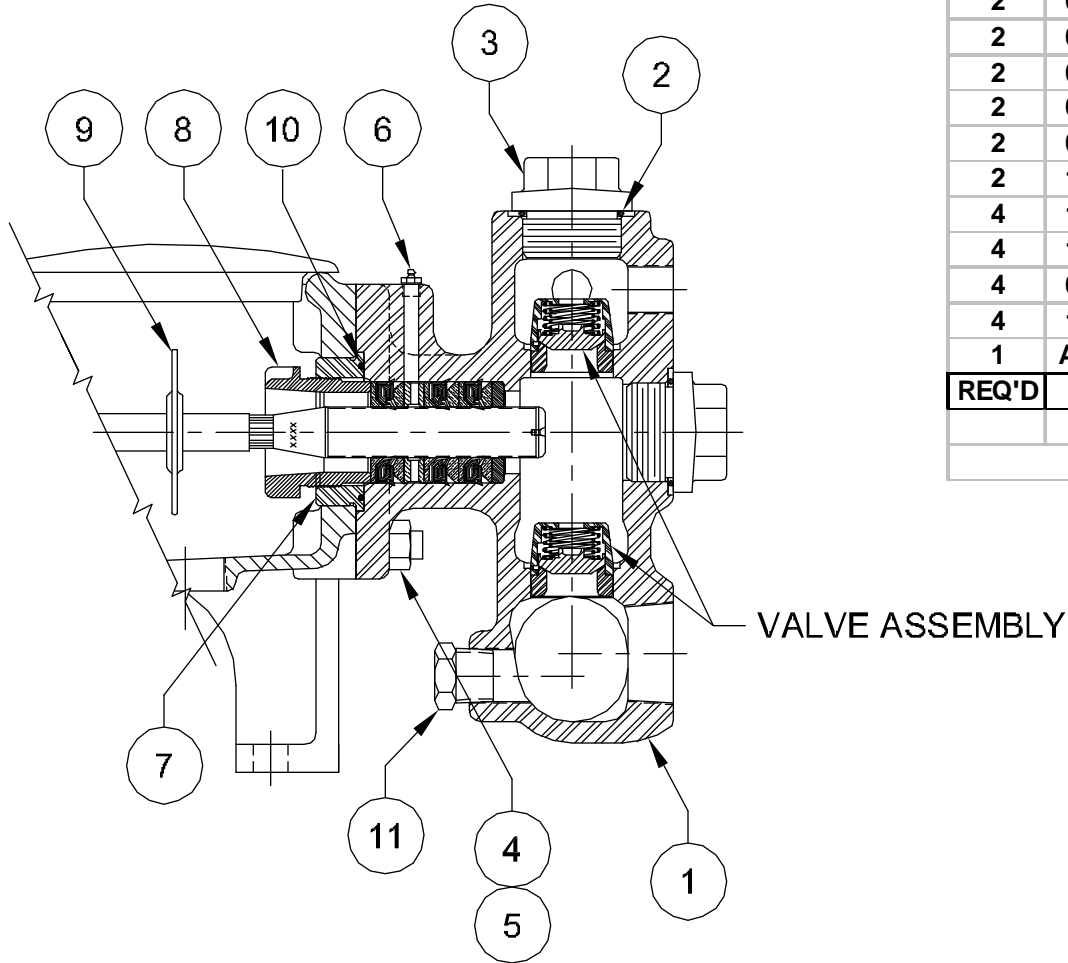
PAGE	DWG. NUMBER	DESCRIPTION	SERIES OF ISSUE	DATE OF ISSUE
1	118732	ASSY, CAST FLUID END, BRONZE - FRONT CONNECTION (L)	FIRST	04-09-07
2	118733	ASSY, CAST FLUID END, DUCTILE IRON - FRONT CONNECTION (L)	FIRST	04-09-07
3	118734	ASSY, BILLET FLUID END, STEEL (L)	FIRST	04-09-07
4	118735	ASSY, FORGED FLUID END, STAINLESS STEEL (L)	FIRST	04-09-07
5	117624	ASSY, CAST FLUID END, BRONZE - FRONT CONNECTION (M)	SECOND	04-09-07
6	117623	ASSY, CAST FLUID END, DUCTILE IRON - FRONT CONNECTION (M)	SECOND	04-09-07
7	117625	ASSY, BILLET FLUID END, STEEL (M)	SECOND	04-09-07
8	117626	ASSY, FORGED FLUID END, STAINLESS STEEL (M)	SECOND	04-09-07
9	118742	ASSY, FORGED FLUID END, STEEL (H)	FIRST	04-09-07
10	118743	ASSY, FORGED FLUID END STAINLESS STEEL (H)	FIRST	04-09-07
11	117619	ASSEMBLY, POWER END	SECOND	04-09-07
12	117622	ASSEMBLY, CRANKSHAFT POWER END	SECOND	04-09-07
13	117630	ASSEMBLY, SPHERICAL VALVE (L & M)	SECOND	04-09-07
14	118736	ASSEMBLY, SEVERE DUTY SPHERICAL VALVE (L & M)	FIRST	04-09-07
15	117629	ASSEMBLY, DISC VALVE (L & M)	THIRD	04-09-07
16	117688	ASSEMBLY, SEVERE DUTY (L & M)	THIRD	04-09-07
17	118745	ASSEMBLY, SEVERE DUTY (H)	FIRST	04-09-07
18	117618	TOOL KIT	SECOND	04-09-07
19	118737	ASSY, PLUNGER KIT 1-1/2" THRU 2", J-STYLE PACKING (L)	FIRST	04-09-07
24	118738	ASSY, PLUNGER KIT 1-1/2" THRU 2", BRAID STYLE PACKING (L)	FIRST	04-09-07
29	118739	ASSY, PLUNGER KIT 1-1/2" THRU 2" 1068-4 STYLE PACKING (L)	FIRST	04-09-07
34	117631	ASSY, PLUNGER KIT 1-1/8 THRU 1-3/4" J-STYLE PACKING (M)	SECOND	04-09-07

Index and Check List
Multiplex Plunger Pump (Continued)



PAGE	DWG. NUMBER	DESCRIPTION	SERIES OF ISSUE	DATE OF ISSUE
40	117632	ASSY, PLUNGER KIT 1-1/8 THRU 1-3/4" BRAID STYLE PACKING (M)	SECOND	04-09-07
46	117633	ASSY, PLUNGER KIT 1-1/8 THRU 1-3/4" 1068-4 STYLE PACKING (M)	SECOND	04-09-07
52	118746	ASSY, PLUNGER KIT 3/4" THRU 1" 805-4 STYLE PACKING (H)	FIRST	04-09-07
55	118740	PLUNGERS, 1-1/2" THRU 2", HARD SURFACE (L)	FIRST	04-09-07
56	118741	PLUNGERS, 1-1/2" THRU 2", CERAMIC (L)	FIRST	04-09-07
57	117634	PLUNGERS, 1-1/8" THRU 1-3/4", HARD SURFACE (M)	SECOND	04-09-07
58	117635	PLUNGERS, 1-1/8 THRU 1-3/4", CERAMIC (M)	SECOND	04-09-07
59	118747	PLUNGERS, 3/4" THRU 1", HARD SURFACE	FIRST	04-09-07
60	117627	ASSEMBLY, PACKING LUBRICATOR	SECOND	04-09-07
61	117628	ASSEMBLY, D.O.H. LUBRICATOR	SECOND	04-09-07
62	117621	GENERAL DIMENSION, RHD, CAST FLUID END, (L & M)	SECOND	04-09-07
63	117803	GENERAL DIMENSION, RHD, BILLET FLUID END, (L & M)	SECOND	04-09-07
64	117620	GENERAL DIMENSION, RHD, FORGED FLUID END, (H)	SECOND	04-09-07

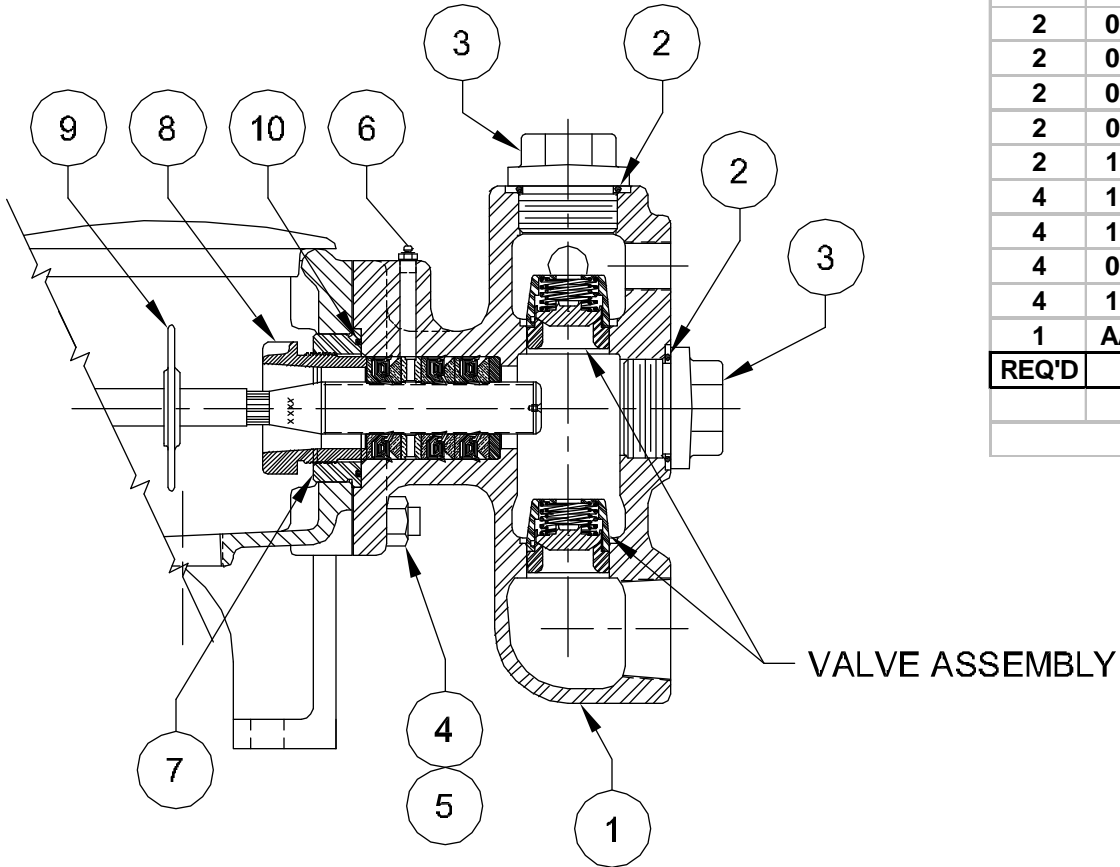
	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
<u>DRAWING No:</u>		<u>VALVE ASSEMBLY:</u>	
1	170-100002-405	PIPE PLUG	11
2	110-000234-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-000497-310	GLAND NUT 2"	
2	001-011242-310	GLAND NUT 1-7/8"	
2	001-011241-310	GLAND NUT 1-3/4"	
2	001-011240-310	GLAND NUT 1-5/8"	
2	001-011239-310	GLAND NUT 1-1/2"	8
2	001-028512-313	POWER END / FLUID END ADAPTER	7
2	180-165000-220	LUBRICATION FITTING	6
4	133-034010-286	NUT	5
4	102-034212-286	STUD	4
4	002-028954-316	CYLINDER HEAD / VALVE COVER	3
4	110-000036-201	SEAL	2
1	AAD-117983-316	FLUID END, BRONZE CAST	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



1

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, CAST FLUID END BRONZE, FRONT CONNECTION 11D-2L			
DWG No.:	118732	SCALE:	NONE
REV	A	SHT.:	1 OF 1

	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
2	110-000234-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-000497-351	GLAND NUT 2"	
2	001-011242-351	GLAND NUT 1-7/8"	
2	001-011241-351	GLAND NUT 1-3/4"	
2	001-011240-351	GLAND NUT 1-5/8"	
2	001-011239-351	GLAND NUT 1-1/2"	8
2	001-028512-236	POWER END / FLUID END ADAPTER	7
2	180-165000-220	LUBRICATION FITTING	6
4	133-034010-286	NUT	5
4	102-034212-286	STUD	4
4	002-028954-351	CYLINDER HEAD / VALVE COVER	3
4	110-000036-201	SEAL	2
1	AAD-117983-351	FLUID END, CAST DUCTILE IRON	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

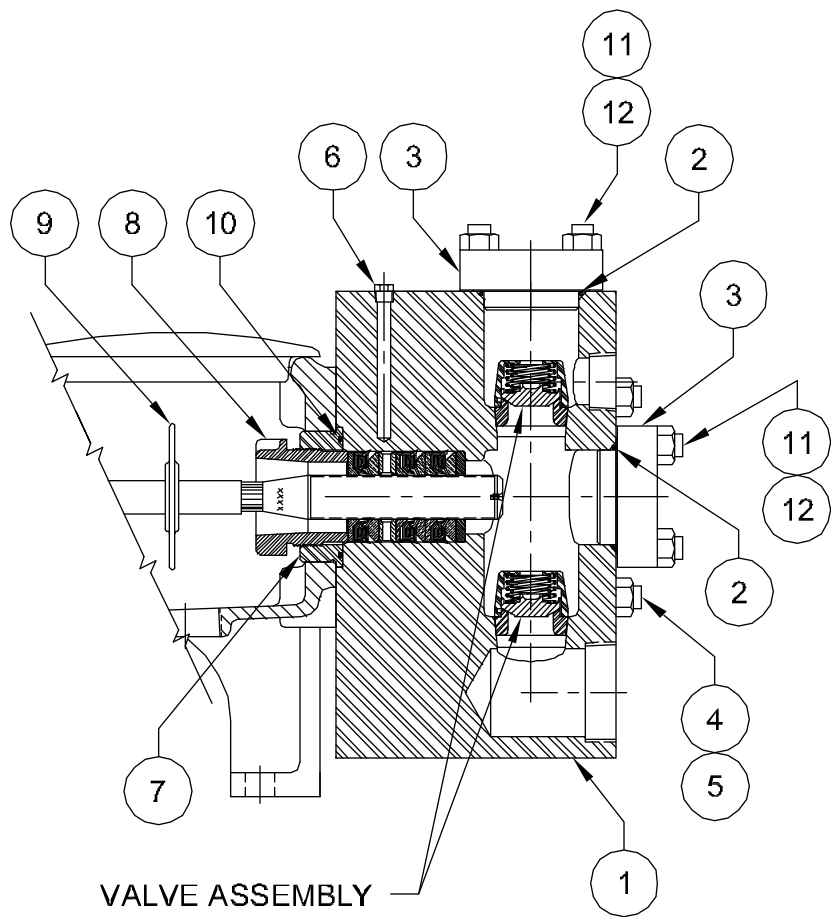


2

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, CAST FLUID END
 DUCTILE IRON, FRONT CONNECTION
 11D-2L

DWG No.: 118733	SCALE: NONE	REV A	SHT.: 1 OF 1
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	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
16	133-058011-286	NUT	12
16	102-058212-286	STUD	11
2	110-000234-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-000497-310	GLAND NUT 2"	
2	001-011242-310	GLAND NUT 1-7/8"	
2	001-011241-310	GLAND NUT 1-3/4"	
2	001-011240-310	GLAND NUT 1-5/8"	
2	001-011239-310	GLAND NUT 1-1/2"	8
2	001-028512-236	POWER END / FLUID END ADAPTER	7
2	170-018002-278	PIPE PLUG	6
4	133-034010-286	NUT	5
4	102-034834-286	STUD	4
4	AAB-030923-231	CYLINDER HEAD / VALVE COVER	3
4	110-000229-201	SEAL	2
1	AAC-118098-C06	FLUID END, STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

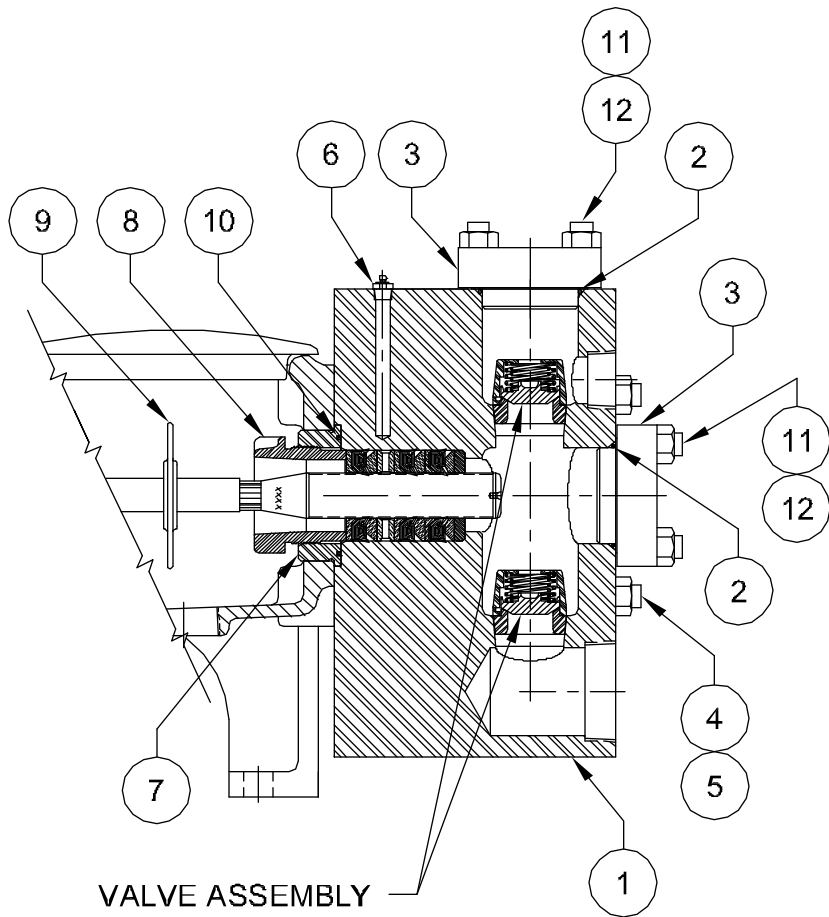
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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
**ASSEMBLY, BILLET FLUID END
 CARBON STEEL
 11D-2L**

DWG No.: 118734	SCALE: NONE	REV A	SHT.: 1 OF 1
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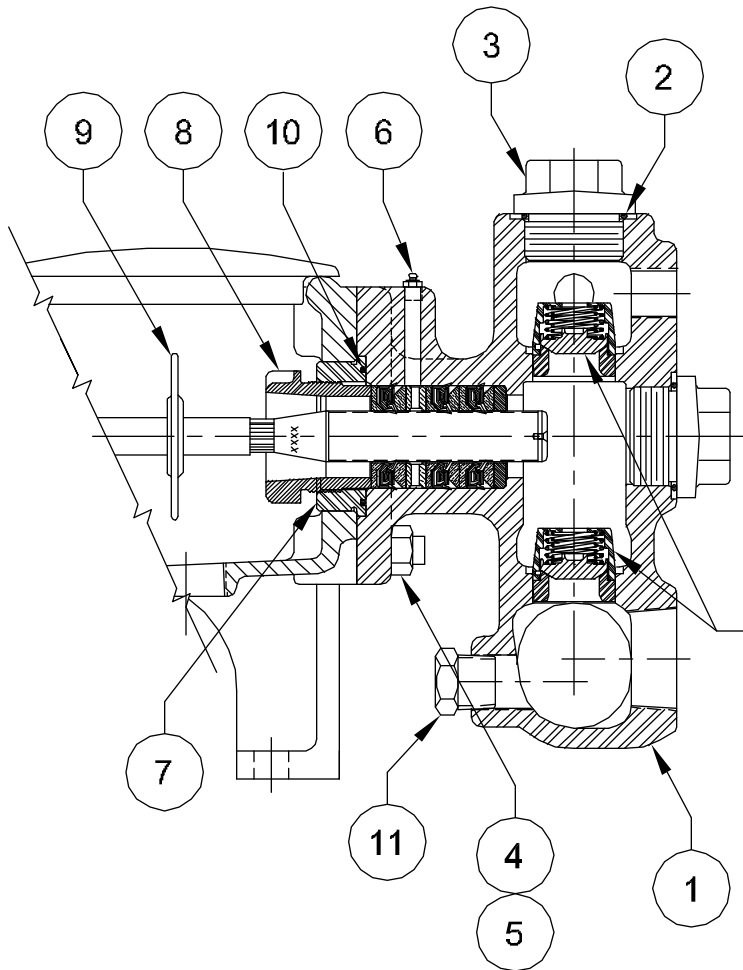
	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
16	133-058011-287	NUT	12
16	102-058212-287	STUD	11
2	110-000234-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	AAC-115784-E16	GLAND NUT 2"	
2	ABC-115784-E16	GLAND NUT 1-7/8"	
2	ACC-115784-E16	GLAND NUT 1-3/4"	
2	ADC-115784-E16	GLAND NUT 1-5/8"	
2	AEC-115784-E16	GLAND NUT 1-1/2"	8
2	001-028512-278	POWER END / FLUID END ADAPTER	7
2	170-018002-278	PIPE PLUG	6
4	133-034010-287	NUT	5
4	102-034834-287	STUD	4
4	AAB-030923-278	CYLINDER HEAD / VALVE COVER	3
4	110-000229-201	SEAL	2
1	AAC-118098-278	FLUID END, STAINLESS STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

4

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, FORGED FLUID END
 STAINLESS STEEL
 11D-2L

DWG No.: 118735	SCALE: NONE	REV: A	SHT.: 1 OF 1
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VALVE ASSEMBLY

	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	DRAWING No:	VALVE ASSEMBLY:	
1	170-100002-405	PIPE PLUG	11
2	110-000232-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-008909-304	GLAND NUT, 1-3/4"	
2	001-011231-304	GLAND NUT 1-5/8"	
2	001-011230-304	GLAND NUT 1-1/2"	
2	001-011229-304	GLAND NUT 1-3/8"	
2	001-011228-304	GLAND NUT 1-1/4"	
2	001-011227-304	GLAND NUT 1-1/8"	8
2	001-003948-316	POWER END / FLUID END ADAPTER	7
2	180-165000-220	LUBRICATION FITTING	6
4	133-034010-286	NUT	5
4	102-034212-286	STUD	4
4	002-028954-316	CYLINDER HEAD / VALVE COVER	3
4	110-000036-201	SEAL	2
1	004-003947-316	FLUID END, CAST BRONZE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

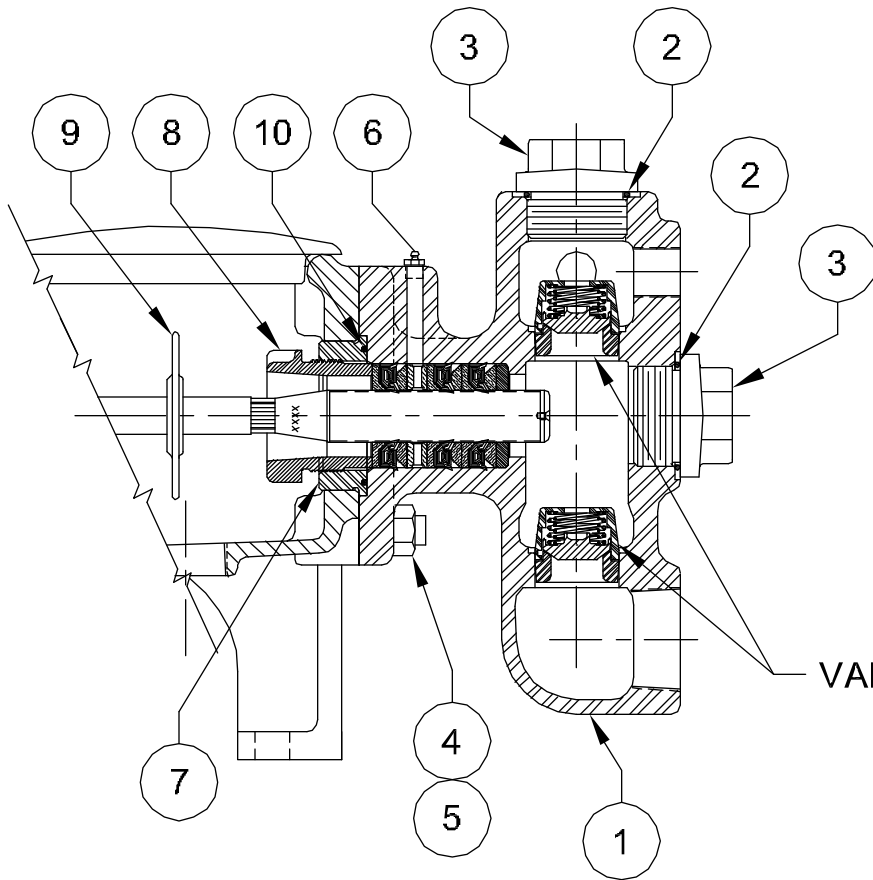
5

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
ASSEMBLY, CAST FLUID END
BRONZE, FRONT CONNECTION
11D-2M (P100A)

DWG No.: 117624	SCALE: NONE	REV B	SHT.: 1 OF 1
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VALVE ASSEMBLY

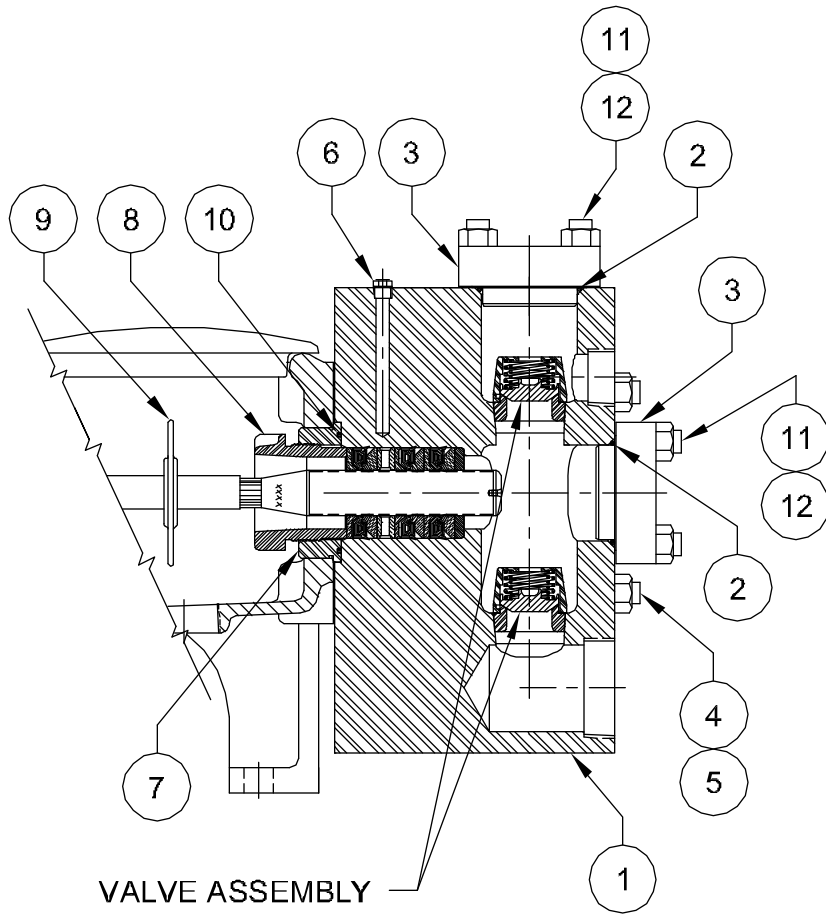
	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	DRAWING No:	VALVE ASSEMBLY:	
2	110-000232-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-008909-351	GLAND NUT 1-3/4"	
2	001-011231-351	GLAND NUT 1-5/8"	
2	001-011230-351	GLAND NUT 1-1/2"	
2	001-011229-351	GLAND NUT 1-3/8"	
2	001-011228-351	GLAND NUT 1-1/4"	
2	001-011227-351	GLAND NUT 1-1/8"	8
2	001-003948-236	POWER END / FLUID END ADAPTER	7
2	180-165000-220	LUBRICATION FITTING	6
4	133-034010-286	NUT	5
4	102-034212-286	STUD	4
4	002-028954-351	CYLINDER HEAD / VALVE COVER	3
4	110-000036-201	SEAL	2
1	004-003947-351	FLUID END, CAST DUCTILE IRON	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

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NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
**ASSEMBLY, CAST FLUID END
 DUCTILE IRON, FRONT CONNECTION
 11D-2M (P100A)**

DWG No.: 117623	SCALE: NONE	REV B	SH1.: 1 OF 1
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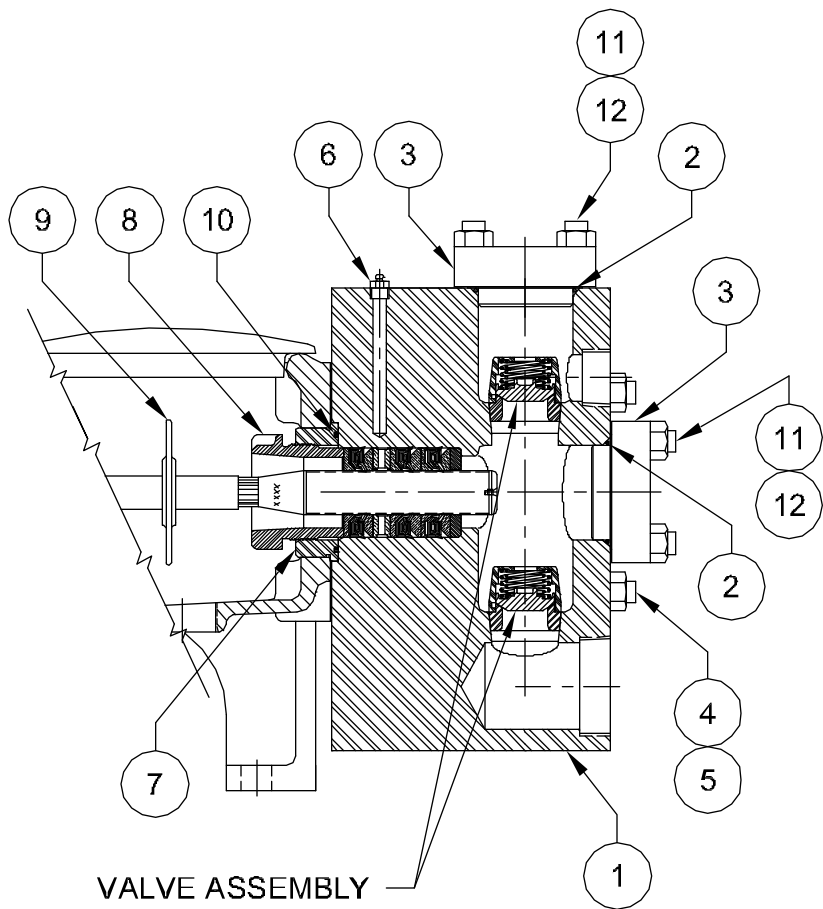
	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	DRAWING No:	VALVE ASSEMBLY:	
16	133-058011-286	NUT	12
16	102-058212-286	STUD	11
2	110-000232-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	001-008909-304	GLAND NUT 1-3/4"	
2	001-011231-304	GLAND NUT 1-5/8"	
2	001-011230-304	GLAND NUT 1-1/2"	
2	001-011229-304	GLAND NUT 1-3/8"	
2	001-011228-304	GLAND NUT 1-1/4"	
2	001-011227-304	GLAND NUT 1-1/8"	8
2	001-003948-236	POWER END / FLUID END ADAPTER	7
2	170-018002-278	PIPE PLUG	6
4	133-034010-286	NUT	5
4	102-034834-286	STUD	4
4	AAB-030923-231	CYLINDER HEAD / VALVE COVER	3
4	110-000229-201	SEAL	2
1	AAC-030925-C06	FLUID END, STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
**ASSEMBLY, BILLET FLUID END
 CARBON STEEL
 11D-2M (P100AM)**

DWG No.: 117625 SCALE: NONE REV B SHT.: 1 OF 1

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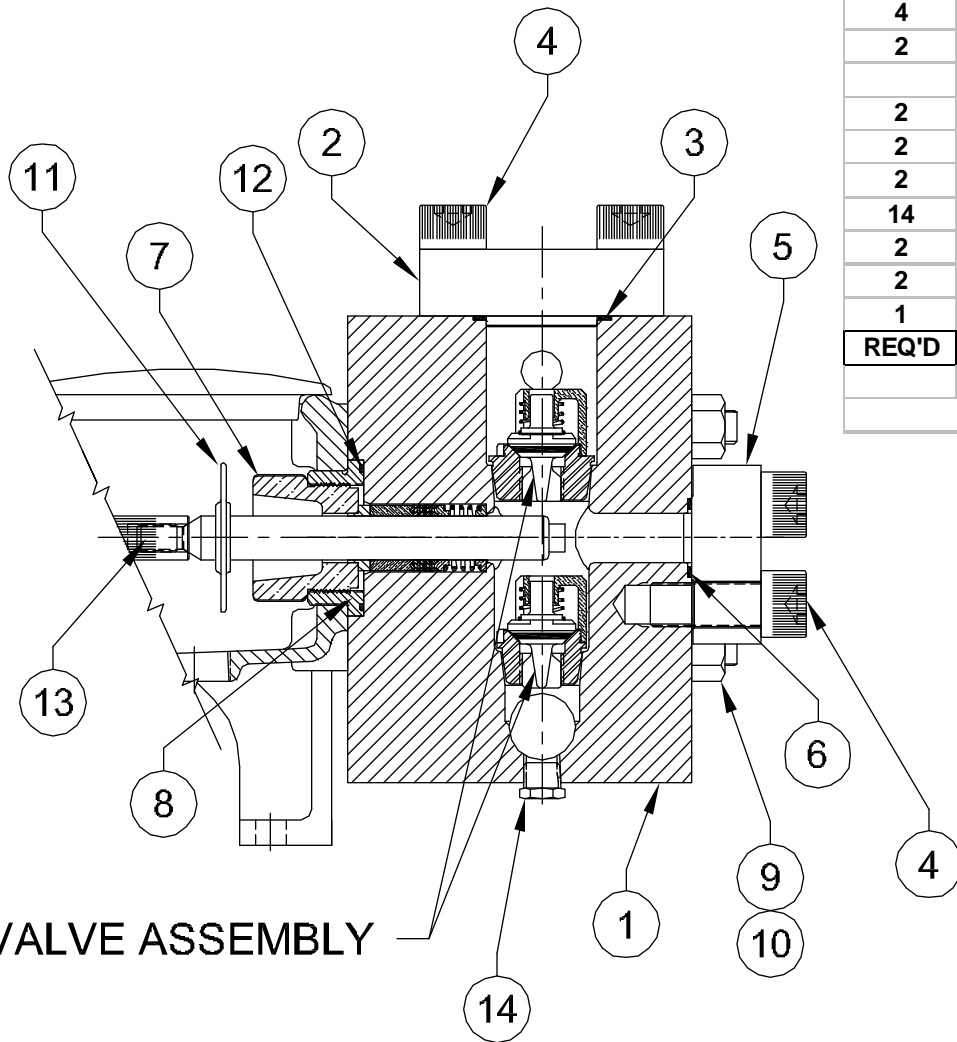
	117688	SEVERE DUTY VALVE	
	117630	SPHERICAL VALVE	
	118736	SPHERICAL VALVE - SEVERE DUTY	
	117629	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
16	133-058011-287	NUT	12
16	102-058212-287	STUD	11
2	110-000232-201	O-RING	10
2	001-008910-201	BAFFLE DISC	9
2	AAC-013800-E16	GLAND NUT 1-3/4"	
2	ABC-013800-E16	GLAND NUT 1-5/8"	
2	ACC-013800-E16	GLAND NUT 1-1/2"	
2	ADC-013800-E16	GLAND NUT 1-3/8"	
2	AEC-013800-E16	GLAND NUT 1-1/4"	
2	AFC-013800-E16	GLAND NUT 1-1/8"	8
2	001-003948-278	POWER END / FLUID END ADAPTER	7
2	170-018002-278	PIPE PLUG	6
4	133-034010-287	NUT	5
4	102-034834-287	STUD	4
4	AAB-030923-278	CYLINDER HEAD / VALVE COVER	3
4	110-000229-201	SEAL	2
1	AAC-030925-278	FLUID END, STAINLESS STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

8

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, FORGED FLUID END
 STAINLESS STEEL
 11D-2M (P100AM)

DWG No.: 117626	SCALE: NONE	REV B	SHT.: 1 OF 1
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VALVE ASSEMBLY

118745		POLYURETHANE SEAL VALVE	
DRAWING No:		VALVE ASSEMBLY:	
2	170-012002-405	PIPE PLUG	14
2	001-014266-402	PONY ROD	13
2	110-000234-201	O-RING	12
2	001-008910-201	BAFFLE DISC	11
4	133-034010-286	NUT	10
4	102-034934-286	STUD	9
2	001-014277-310	POWER END / FLUID END ADAPTER	8
	001-014278-351	GLAND NUT (DI)	
2	001-014278-304	GLAND NUT (BRZ)	7
2	110-000218-200	O-RING (CYLINDER HEAD)	6
2	AAA-115895-231	CYLINDER HEAD	5
14	271-100212-290	SOCKET HEAD CAP SCREW	4
2	110-000231-200	O-RING (VALVE COVER)	3
2	AAB-115896-231	VALVE COVER	2
1	AAD-118744-250	FLUID END, FORGED STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

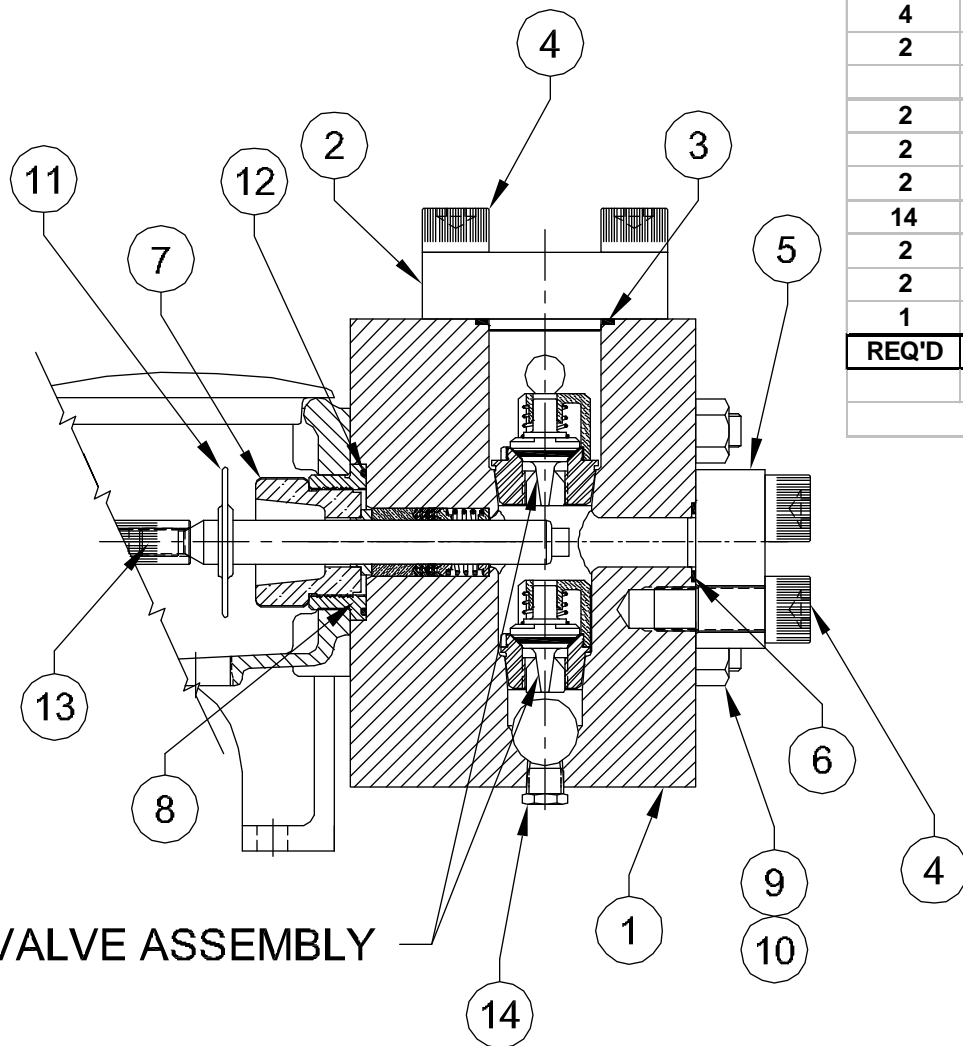
9

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY FORGED STEEL FLUID END
 3/4" THRU 1" PLUNGERS
 11D-2H

DWG No.: 118742	SCALE: NONE	REV A	SHT.: 1 OF 1
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118745		POLYURETHANE SEAL VALVE	
DRAWING No:		VALVE ASSEMBLY:	
2	170-012002-405	PIPE PLUG	14
2	001-014266-402	PONY ROD	13
2	110-000234-201	O-RING	12
2	001-008910-201	BAFFLE DISC	11
4	133-034010-287	NUT	10
4	102-034934-287	STUD	9
2	001-014277-278	POWER END / FLUID END ADAPTER	8
	001-014278-351	GLAND NUT (DI)	
2	001-014278-304	GLAND NUT (BRZ)	7
2	110-000218-200	O-RING (CYLINDER HEAD)	6
2	AAA-115895-278	CYLINDER HEAD	5
14	271-100212-287	SOCKET HEAD CAP SCREW	4
2	110-000231-200	O-RING (VALVE COVER)	3
2	AAB-115896-278	VALVE COVER	2
1	AAD-118744-276	FLUID END, FORGED STAINLESS STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



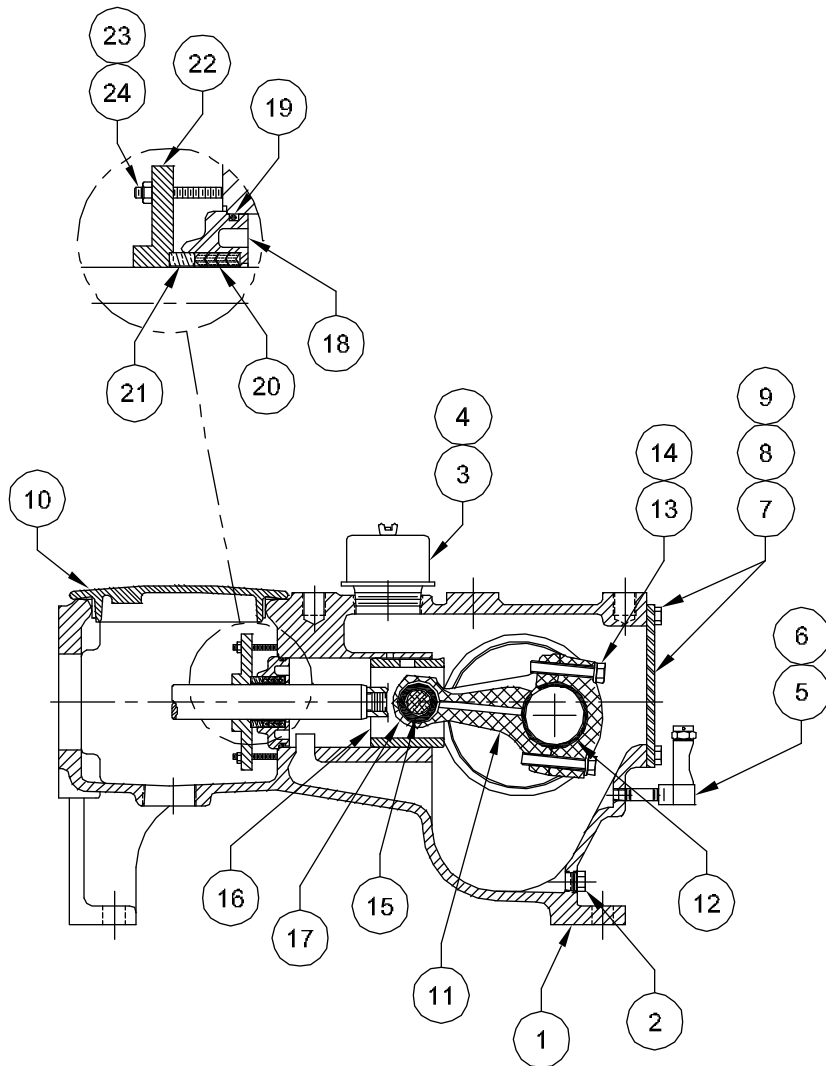
VALVE ASSEMBLY

10

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY FORGED STAINLESS STEEL
 FLUID END, 3/4" THRU 1" PLUNGERS
 11D-2H

DWG No.: 118743	SCALE: NONE	REV A	SHT.: 1 OF 1
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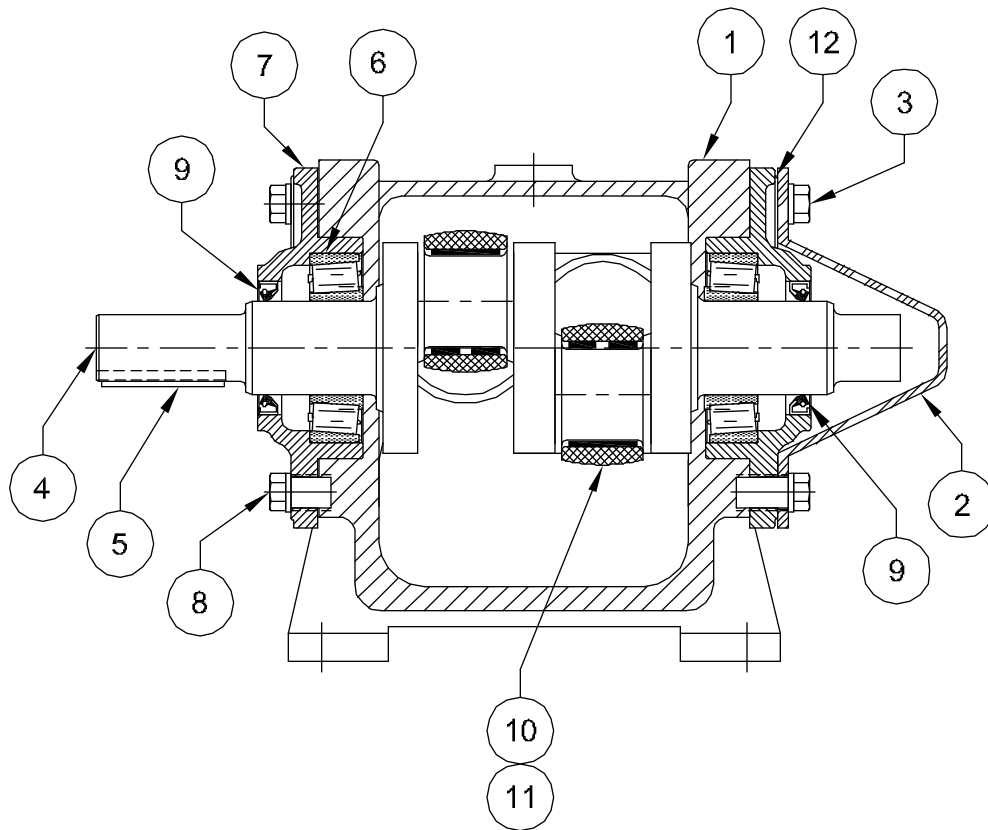


< * > NOT SHOWN ON PARTS DRAWING			
REQ'D	Part No.	DESCRIPTION	ITEM
2	170-018003-220	PLUG < * >	25
4	150-038016-306	NUT	24
4	102-038214-286	STUD	23
2	001-008906-283	GLAND	22
2	001-008916-302	FOLLOWER	21
2	001-011616-381	PACKING	20
2	110-000232-201	O-RING	19
2	002-008907-283	WIPER BOX	18
2	001-008920-236	WRIST PIN	17
2	002-008905-350	CROSSHEAD	16
2	001-008921-302	BUSHING, WRIST PIN	15
4	100-038214-290	CAP SCREW	14
4	154-038068-220	LOCK WASHER	13
2	001-001699-999	SHELL BEARING	12
2	004-026866-350	CONN. ROD & CAP	11
1	004-001883-350	BARREL COVER	10
6	100-038012-290	CAP SCREW	9
1	001-001873-204	GASKET	8
1	001-001858-231	CRANKCASE COVER	7
1	157-018112-220	PIPE NIPPLE	6
1	001-011409-999	OIL GAUGE	5
1	AAA-030436-999	AIR BREATHER	4
1	161-1112034-353	BUSHING	3
1	170-038005-353	DRAIN PLUG	2
1	004-022579-350	POWER FRAME	1
BILL OF MATERIAL			

11

(SEE DWG. No. 117622 FOR OPTIONAL KITS & PARTS)

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, POWER END 11D-2 (P100A)			
DWG No.:	117619	SCALE:	NONE
REV	B	SHT.:	1 OF 1



(**)	OMIT WHEN LUBRICATOR IS USED		
(*)	NOT SHOWN ON PARTS DRAWING		
		(WRIST PIN BUSHING INCLUDED)	
2	998-016200-012	CONNECTING ROD KIT (*)	CC
2	998-016200-013	WIPER BOX GLAND NUT KIT (*)	BB
1	998-016100-012	POWER END GASKET KIT (*)	AA
REQ'D	Part No.	DESCRIPTION	OPTION
1	998-016200-014	SHIM/GASKET KIT	12
2	001-01699-999	SHELL BEARING	11
2	004-026866-350	CONN. ROD & CAP	10
2	145-218300-999	OIL SEAL	9
8	100-058114-290	CAP SCREW	8
2	004-000085-571	BEARING HOUSING	7
2	120-218042-999	END BEARING	6
1	146-012200-236	KEY	5
1	004-003330-351	CRANKSHAFT	4
2	100-058112-290	CAP SCREW (**)	3
1	001-001982-350	EXTENSION GUARD (**)	2
1	004-022579-350	POWER FRAME	1
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

12



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CRANKSHAFT
POWER END
11D-2 (P100A)

DWG No.:

117622

SCALE:

NONE

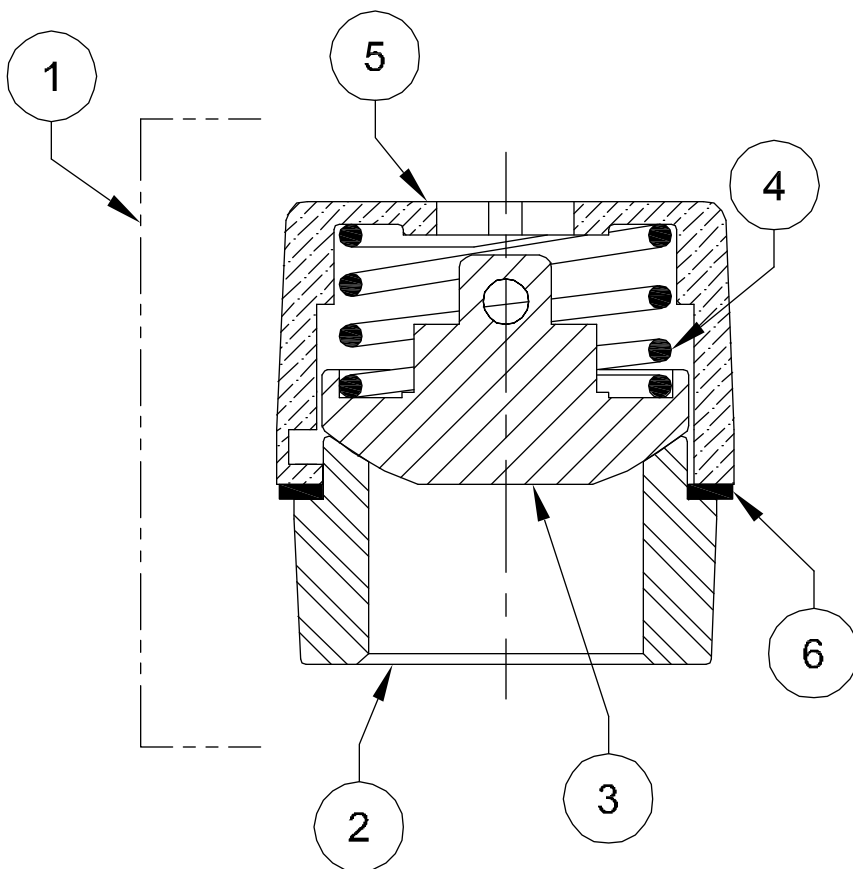
REV

B

SHT.:

1 OF 1

1	9707074	WAVE RING	6
1	17915036W	RETAINER	5
1	1791504	SPRING	4
1	179150225	BODY (VALVE)	3
1	179150125	SEAT	2
1	179150025W	ASSEMBLY, SPHERICAL VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



13

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, SPHERICAL VALVE
11D-2L & M (P100A)

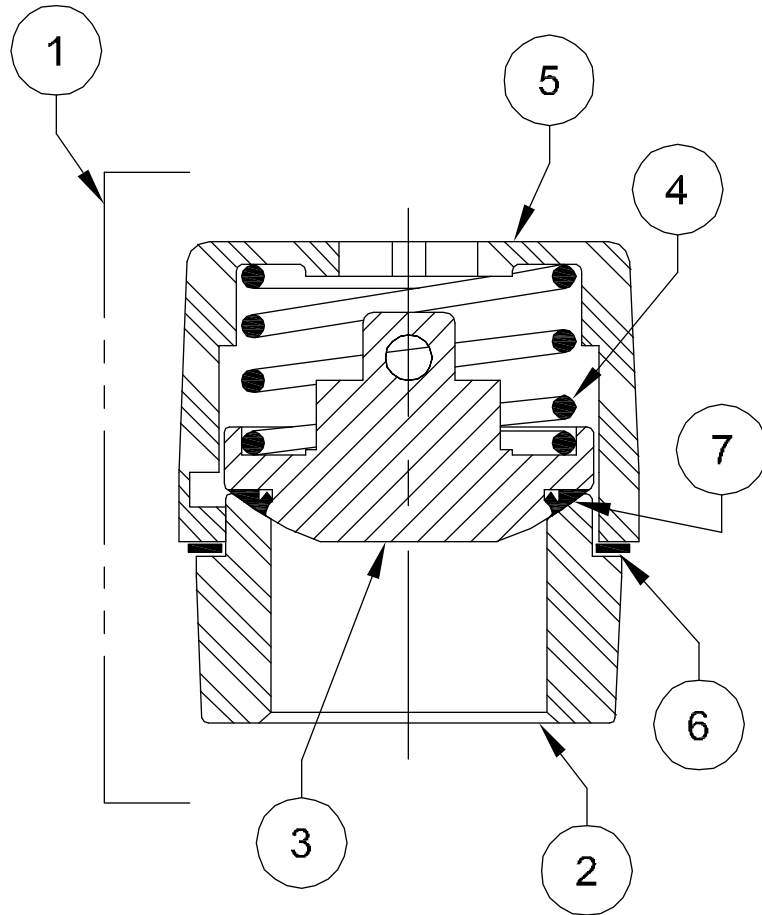
DWG No.: 117630

SCALE: NONE

REV B

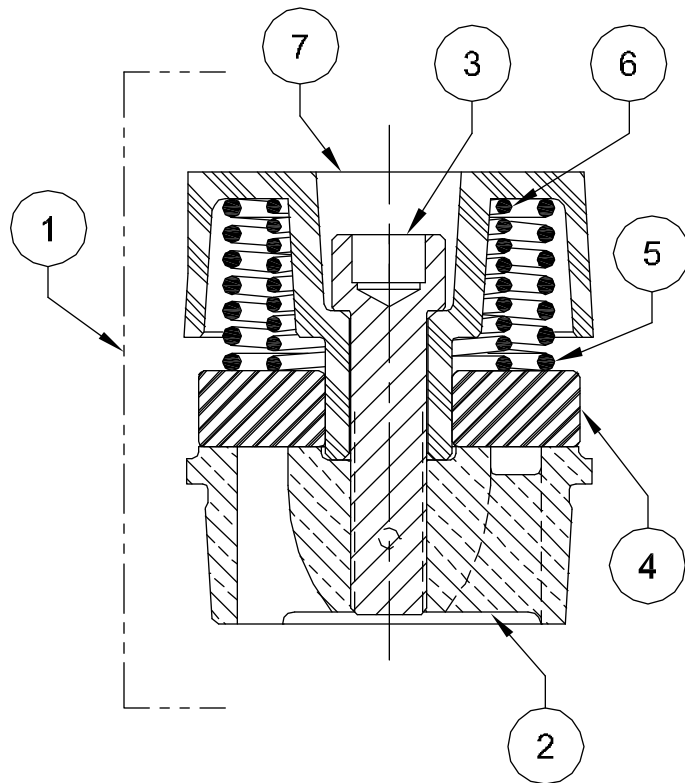
SHT.: 1 OF 1

1	9707073	VAVLE INSERT	7
1	9707074	WAVE RING	6
1	17915036W	RETAINER	5
1	1791504	SPRING, OUTER	4
1	179150225SD	BODY (VALVE)	3
1	179150125	SEAT	2
1	179150025SD	ASSEMBLY, SPHERICAL, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



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NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, SPHERICAL VALVE SEVERE DUTY 11D-2L & M (P100A)			
DWG No.:	118736	SCALE:	NONE
REV	A	SHT.:	1 OF 1



1	SR015	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	TP03	DISC (TITANIUM)	4
1	38178M	FASTENER	3
1	0010304	SEAT	2
		(TITANIUM)	
1	001TP0304	ASSEMBLY, TI/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
1	SR015	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	DP03	DISC (DELRIN)	4
1	38178M	FASTENER	3
1	0010304	SEAT	2
		(DELRIN)	
1	001DP0304	ASSEMBLY, DEL/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

15



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, DISC VALVE
11D-2L & M (P100A)

DWG No.:

117629

SCALE:

NONE

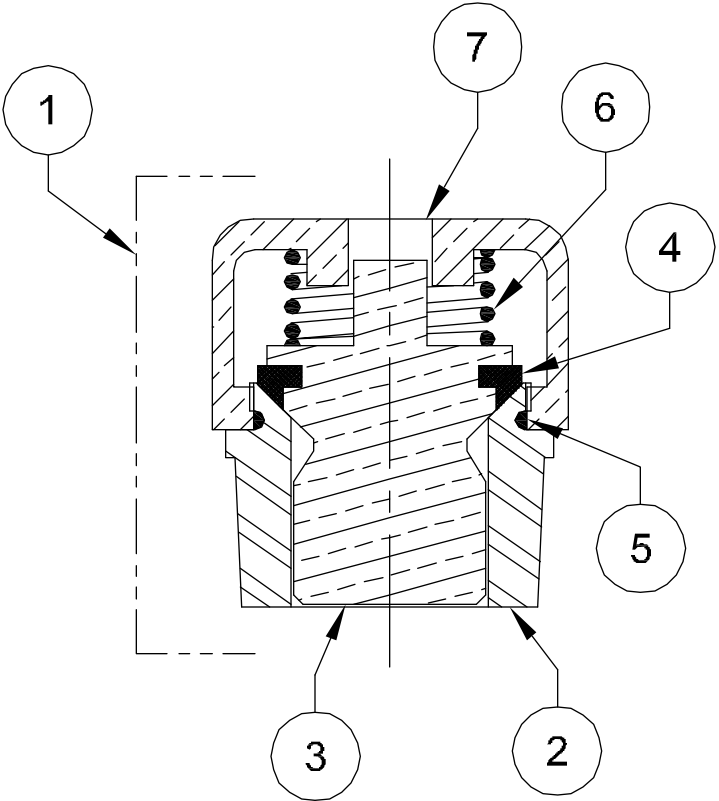
REV

C

SHT.:

1 OF 1

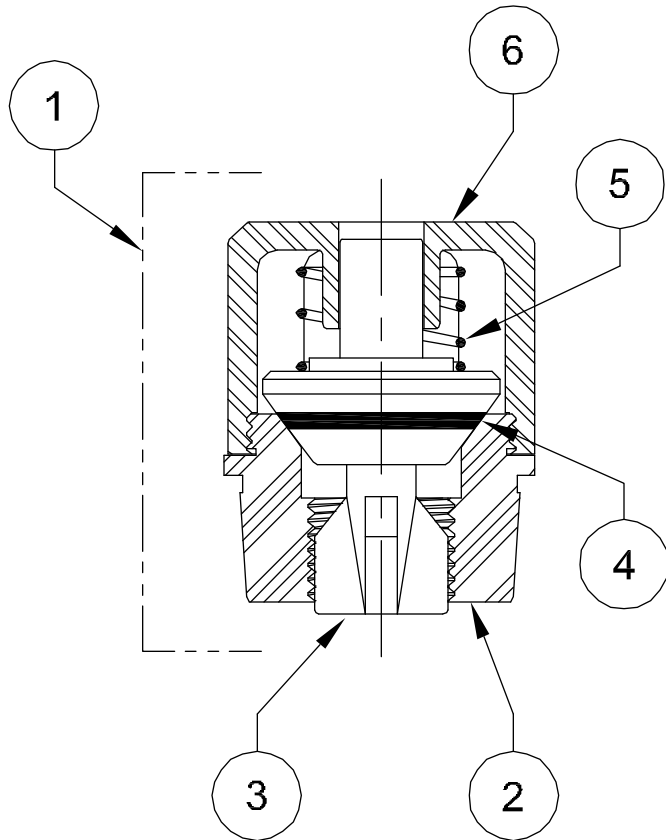
1	SDR03	RETAINER	7
1	SDS031	SPRING	6
1	SDL03	THREAD LOCK	5
1	SDI03	INSERT	4
1	SD03	VALVE L/INSERT	3
1	1000304	SEAT	2
1	100SD0304	ASSEMBLY, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



NOV NATIONAL OILWELL VARCO
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
**ASSEMBLY, SEVERE DUTY
11D-2L & M (P100A)**

DWG No.: 117688	SCALE: NONE	REV C	SHT.: 1 OF 1
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1	001-021273-402	RETAINER	6
1	001-006389-362	SPRING	5
1	110-000214-503	O-RING	4
1	002-021274-402	BODY	3
1	001-011747-402	SEAT	2
1	998-016313-028	ASSEMBLY, VALVE	1
(DISCHARGE)			
REQ'D	Part No.	DESCRIPTION	ITEM
1	001-021273-402	RETAINER	6
1	001-006389-362	SPRING	5
1	110-000214-503	O-RING	4
1	002-021274-402	BODY	3
1	001-011744-402	SEAT	2
1	998-016313-027	ASSEMBLY, VALVE	1
(SUCTION)			
REQ'D	Part No.	DESCRIPTION	ITEM

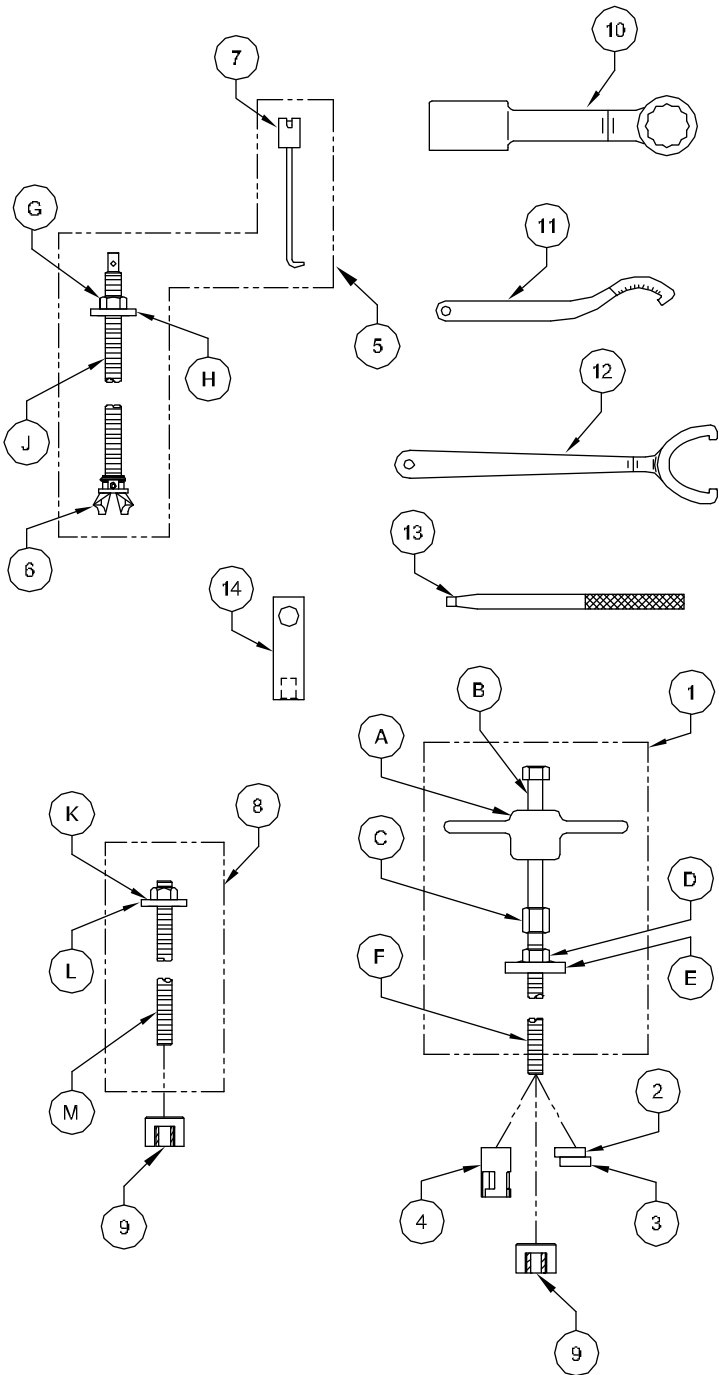
BILL OF MATERIAL

17

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, VALVE
 (POLYURETHANE SEAL)
 11D-2H

DWG No.: 118745 SCALE: NONE REV A SHT.: 1 OF 1



1	AAB-118105-263	SPHERICAL VALVE SEAT INSTALLATION TOOL	15
1	002-014417-400	PLUNGER WRENCH - (11D-2H/ P100H)	14
1	AAB-030420-274	WRENCH, GLAND NUT (STAINLESS STEEL)	13
1	002-009388-351	WRENCH, GLAND NUT (DUCTILE IRON NUT)	12
1	002-014098-352	WRENCH, GLAND NUT (BRONZE NUT)	11
1	001-027568-999	WRENCH, VALVE COVER (HAMMER WRENCH)	10
1	002-021268-400	CAGE WRENCH - (11D-2H/ P100H) OPTIONAL	9
1	008-028546-043	CAGE WRENCH - (F/ SEVER DUTY) OPTIONAL	9
1	001-022028-271	PULLER STEM	M
1	001-022029-231	STRONG BACK	L
1	133-100008-243	HOLD DOWN NUT	K
1	002-010359-220	ASSEMBLY, VALVE SEAT PULLER - (11D-2/ P100)	8
1	1790034	RETRIEVER	7
1	181259200	PULLER HEAD	6
1	20-220-329	PULLER STEM	J
1	20-220-330	STRONG BACK	H
1	75510308	HOLD DOWN NUT	G
1	181259201	ASSEMBLY, VALVE SEAT PULLER - (SPHERICAL)	5
1	001-011954-274	PULLER HEAD	4
1	008-028546-004	PULLER STEM	F
1	008-028546-034	STRONG BACK	E
1	008-028546-012	HOLD DOWN NUT	D
1	008-028546-015	ADAPTER NUT	C
1	008-028546-002	BUMPER STEM	B
1	008-028546-001	BUMPER	A
1	998-016202-092	ASSEMBLY, VALVE SEAT PULLER - (DISC VALVE)	1
1	008-028546-026	PULLER GUIDE	3
1	008-028546-018	ECCENTRIC, PULLER	2
1	008-028546-003	PULLER STEM	F
1	008-028546-034	STRONG BACK	E
1	008-028546-011	HOLD DOWN NUT	D
1	008-028546-014	ADAPTER NUT	C
1	008-028546-002	BUMPER STEM	B
1	008-028546-001	BUMPER	A
1	998-016202-091	ASSEMBLY, VALVE SEAT PULLER - (SEVERE DUTY)	1
REQ'D	Part No.	DESCRIPTION	ITEM

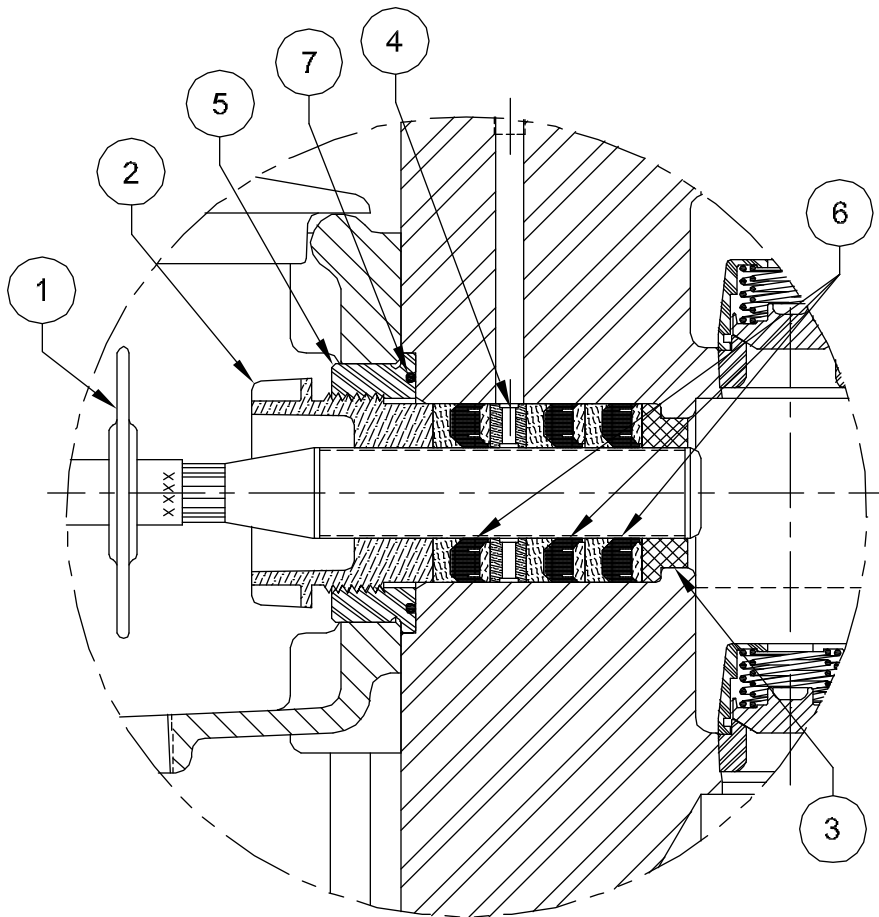
BILL OF MATERIAL



HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
TOOL KIT
11D-2 (P100A)

DWG No.: 117618	SCALE: NONE	REV B	SHT.: 1 OF 1
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2	110-000234-201	O-RING		7
	223-112214-477		858	
	223-112214-374		845	
2	223-112214-370	PACKING	838	6
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	5
	001-011264-575		(SS)	
	001-011264-235		(STL)	
2	001-011264-302	LANTERN RING	(BRZ)	4
	001-011175-575		(SS)	
	001-011175-235		(STL)	
2	001-011175-302	THROAT BUSHING	(BRZ)	3
	AEC-115784-E16		(SS)	
	001-011239-351		(DI)	
2	001-011239-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118737, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

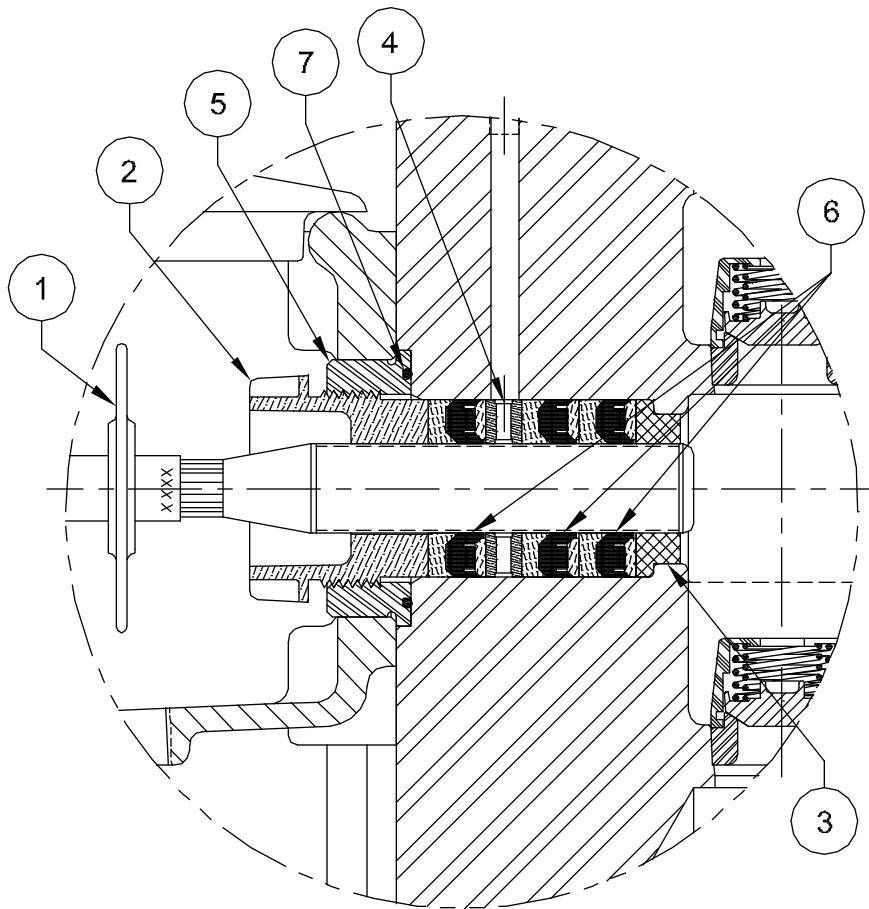
ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118737

SCALE: NONE

REV A

SHT.: 1 OF 5



2	110-000234-201	O-RING		7
	223-158214-477		858	
	223-158214-374		845	
2	223-158214-370	PACKING	838	6
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	5
	001-011265-575		(SS)	
	001-011265-235		(STL)	
2	001-011265-302	LANTERN RING	(BRZ)	4
	001-011178-575		(SS)	
	001-011178-235		(STL)	
2	001-011178-302	THROAT BUSHING	(BRZ)	3
	ADC-115784-E16		(SS)	
	001-011240-351		(DI)	
2	001-011240-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-5/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118737, SHEETS 1 THRU 5.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118737

SCALE:

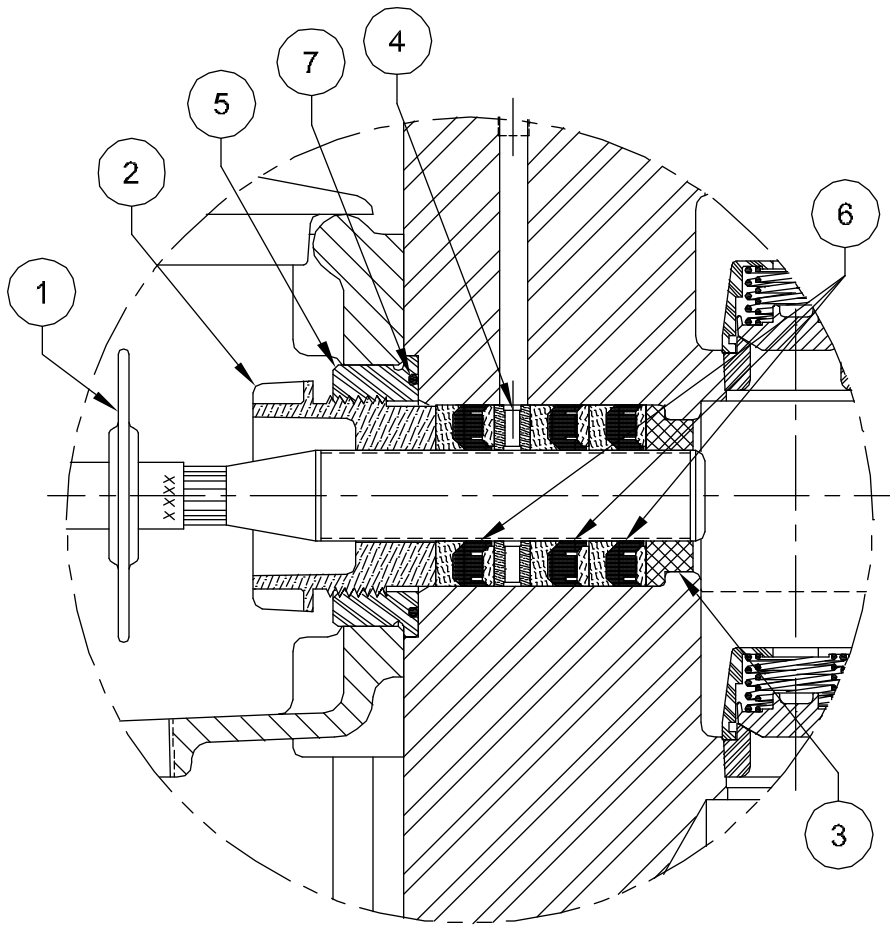
NONE

REV

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SHT.:

2 OF 5



2	110-000234-201	O-RING		7
	223-134178-477		858	
	223-134178-374		845	
2	223-134178-370	PACKING	838	6
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	5
	001-011266-575		(SS)	
	001-011266-235		(STL)	
2	001-011266-302	LANTERN RING	(BRZ)	4
	001-011180-575		(SS)	
	001-011180-235		(STL)	
2	001-011180-302	THROAT BUSHING	(BRZ)	3
	ACC-115784-E16		(SS)	
	001-011241-351		(DI)	
2	001-011241-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION	ITEM	
BILL OF MATERIAL				

NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118737, SHEETS 1 THRU 5.

21

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118737

SCALE:

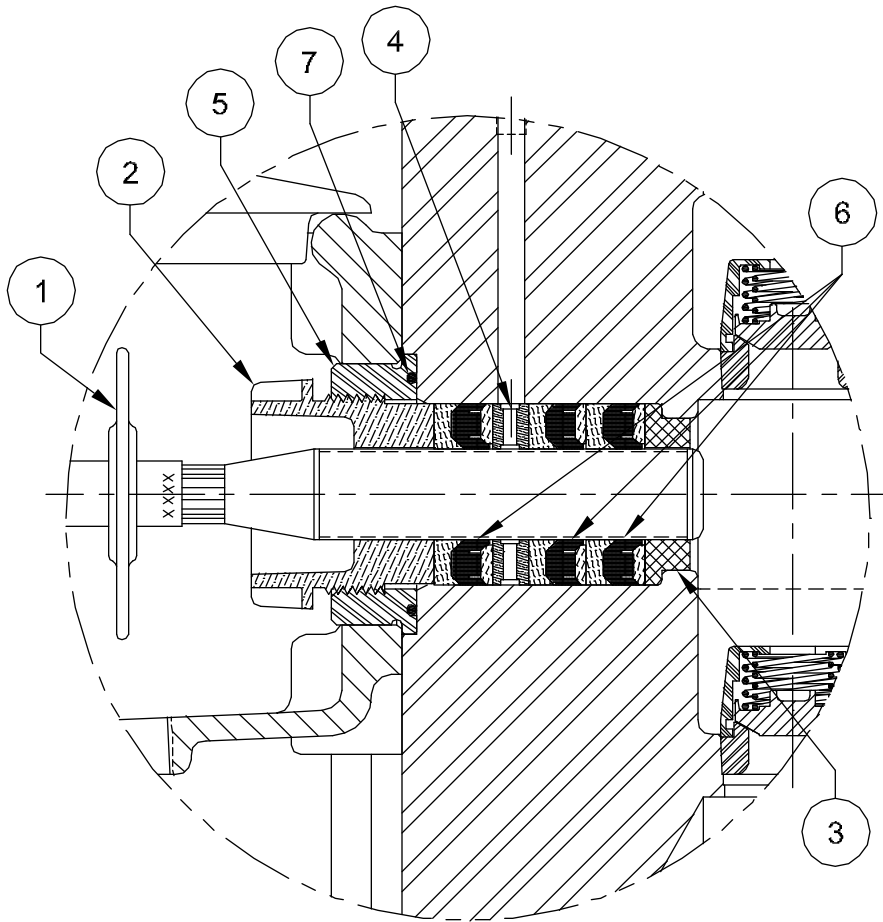
NONE

REV

A

SHT.:

3 OF 5



2	110-000234-201	O-RING		7
	223-178214-477		858	
	223-178214-374		845	
2	223-178214-370	PACKING	838	6
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	5
	001-011267-575		(SS)	
	001-011267-235		(STL)	
2	001-011267-302	LANTERN RING	(BRZ)	4
	001-011181-575		(SS)	
	001-011181-235		(STL)	
2	001-011181-302	THROAT BUSHING	(BRZ)	3
	ABC-115784-E16		(SS)	
	001-011242-351		(DI)	
2	001-011242-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(1-7/8" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118737, SHEETS 1 THRU 5.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
 "J"-STYLE PKG, 1-1/2" THRU 2" PLUNGER
 11D-2L

DWG No.:

118737

SCALE:

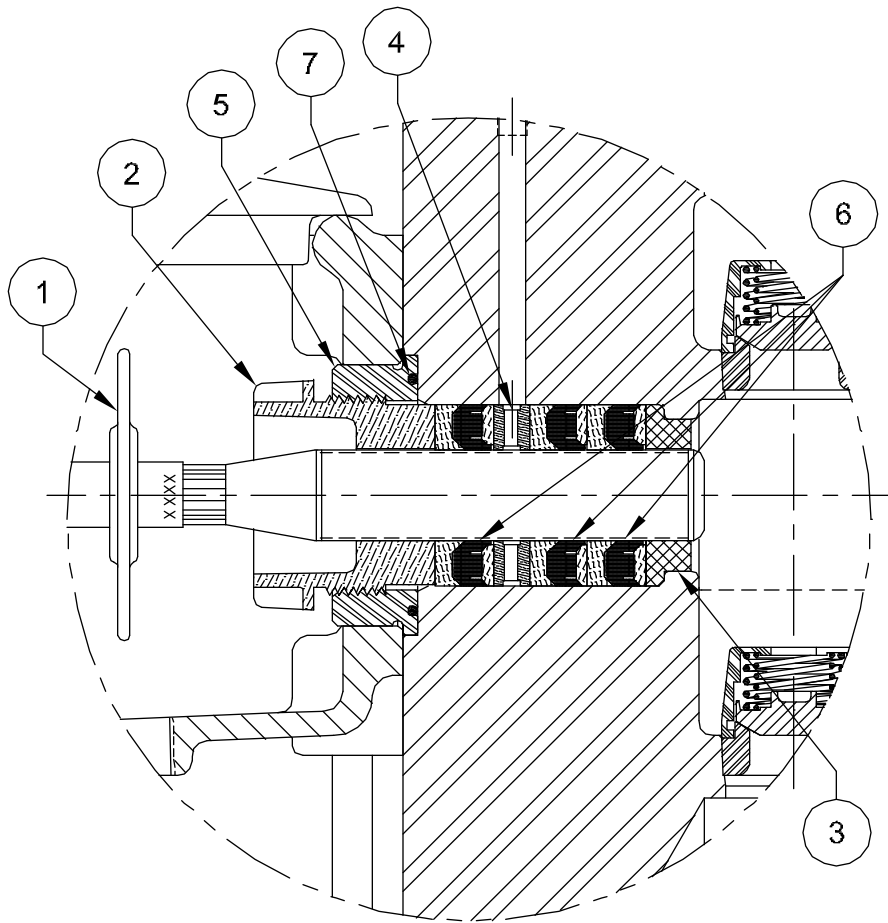
NONE

REV

A

SHT.:

4 OF 5



2	110-000234-201	O-RING		7
	223-200214-477		858	
	223-200214-374		845	
2	223-200214-370	PACKING	838	6
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	5
	001-028668-575		(SS)	
	001-028668-235		(STL)	
2	001-028668-302	LANTERN RING	(BRZ)	4
	001-028510-575		(SS)	
	001-028510-235		(STL)	
2	001-028510-302	THROAT BUSHING	(BRZ)	3
	AAC-115784-E16		(SS)	
	001-000497-351		(DI)	
2	001-000497-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

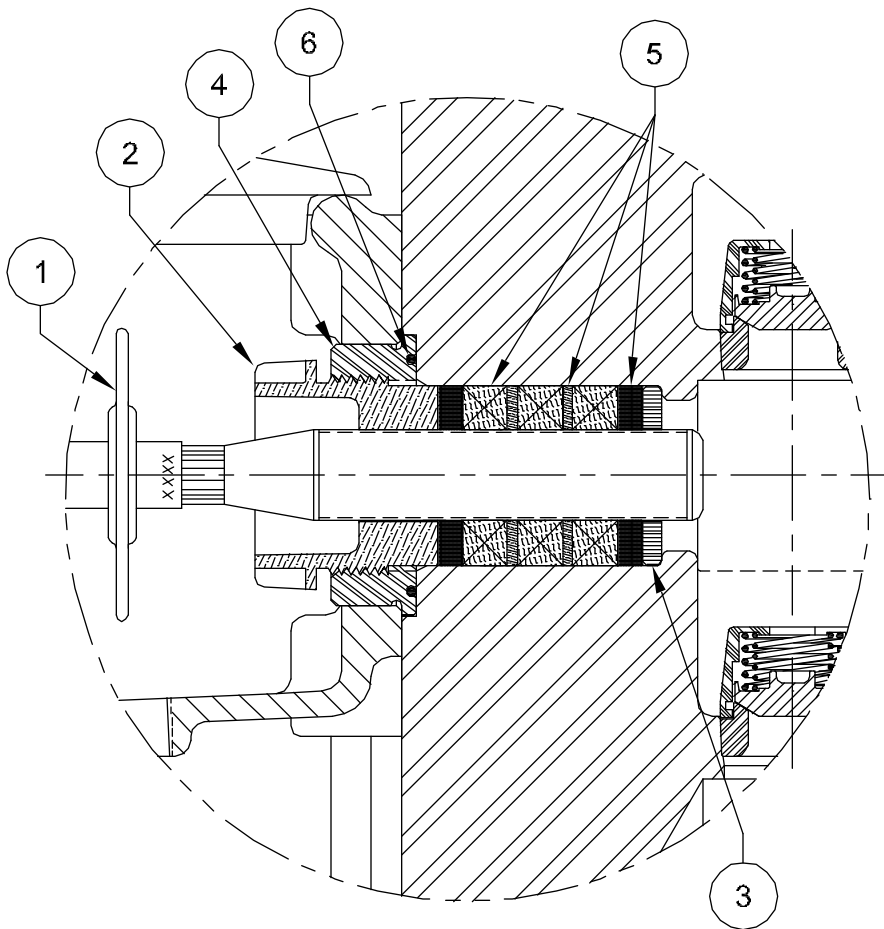
23

NOTE
 1) FOR ALL " J " STYLE PACKING SEE DRAWING 118737, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118737	SCALE: NONE	REV A	SHT.: 5 OF 5
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2	110-000234-201	O-RING		6
	453-112300-458		8921-K	
	453-112300-339		249	
	453-112300-337		241	
2	453-112300-395	PACKING	238	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011175-575		(SS)	
	001-011175-235		(STL)	
2	001-011175-302	THROAT BUSHING	(BRZ)	3
	AEC-115784-E16		(SS)	
	001-011239-351		(DI)	
2	001-011239-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
dda				

NOTE

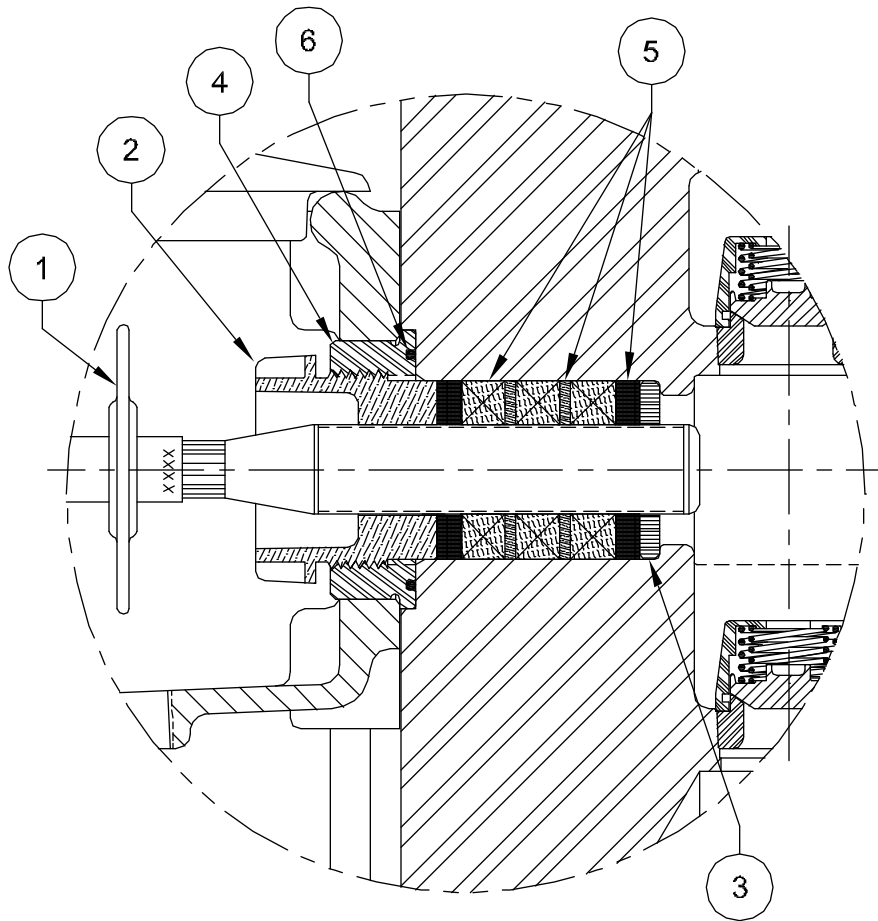
1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 118738, SHEETS 1 THRU 5.



HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, PLUNGER KIT
 BRAID STYLE PKG, 1-1/2" THRU 2" PLUNGER
 11D-2L

DWG No.:	118738	SCALE:	NONE	REV	A	SHT.:	1	OF	5
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2	110-000234-201	O-RING	6
	453-158293-458		8921-K
	453-158293-339		249
	453-158293-337		241
2	453-158293-395	PACKING	238
	001-028512-278		(SS)
	001-028512-236		(STL)
2	001-028512-313	ADAPTER	(BRZ)
	001-011178-575		(SS)
	001-011178-235		(STL)
2	001-011178-302	THROAT BUSHING	(BRZ)
	ADC-115784-E16		(SS)
	001-011240-351		(DI)
2	001-011240-310	GLAND NUT	(BRZ)
2	001-008910-201	BAFFLE DISC	1
(1-5/8" PLUNGER)			
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

NOTE

1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 118738, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118738

SCALE:

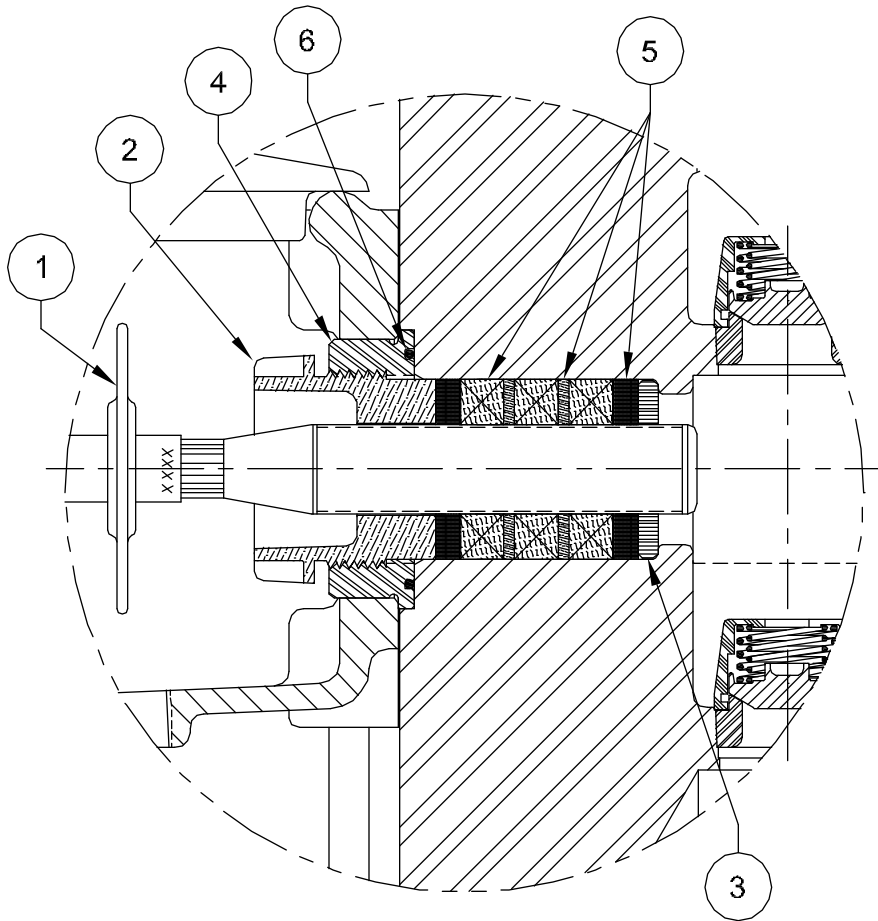
NONE

REV

A

SHT.:

2 OF 5



2	110-000234-201	O-RING		6
	453-134300-458		8921-K	
	453-134300-339		249	
	453-134300-337		241	
2	453-134300-395	PACKING	238	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011180-575		(SS)	
	001-011180-235		(STL)	
2	001-011180-302	THROAT BUSHING	(BRZ)	3
	ACC-115784-E16		(SS)	
	001-011241-351		(DI)	
2	001-011241-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 118738, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

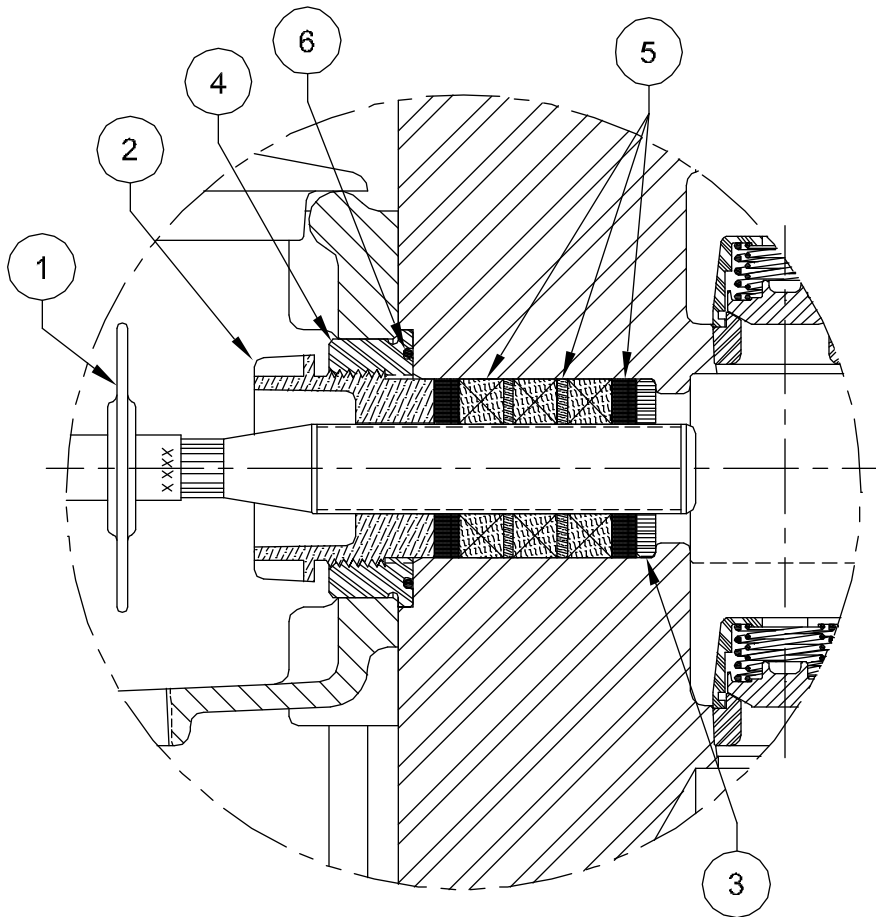
ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118738

SCALE: NONE

REV A

SHT.: 3 OF 5



2	110-000234-201	O-RING		6
	453-178293-458		8921-K	
	453-178293-339		249	
	453-178293-337		241	
2	453-178293-395	PACKING	238	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011181-575		(SS)	
	001-011181-235		(STL)	
2	001-011181-302	THROAT BUSHING	(BRZ)	3
	ABC-115784-E16		(SS)	
	001-011242-351		(DI)	
2	001-011242-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-7/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 118738, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

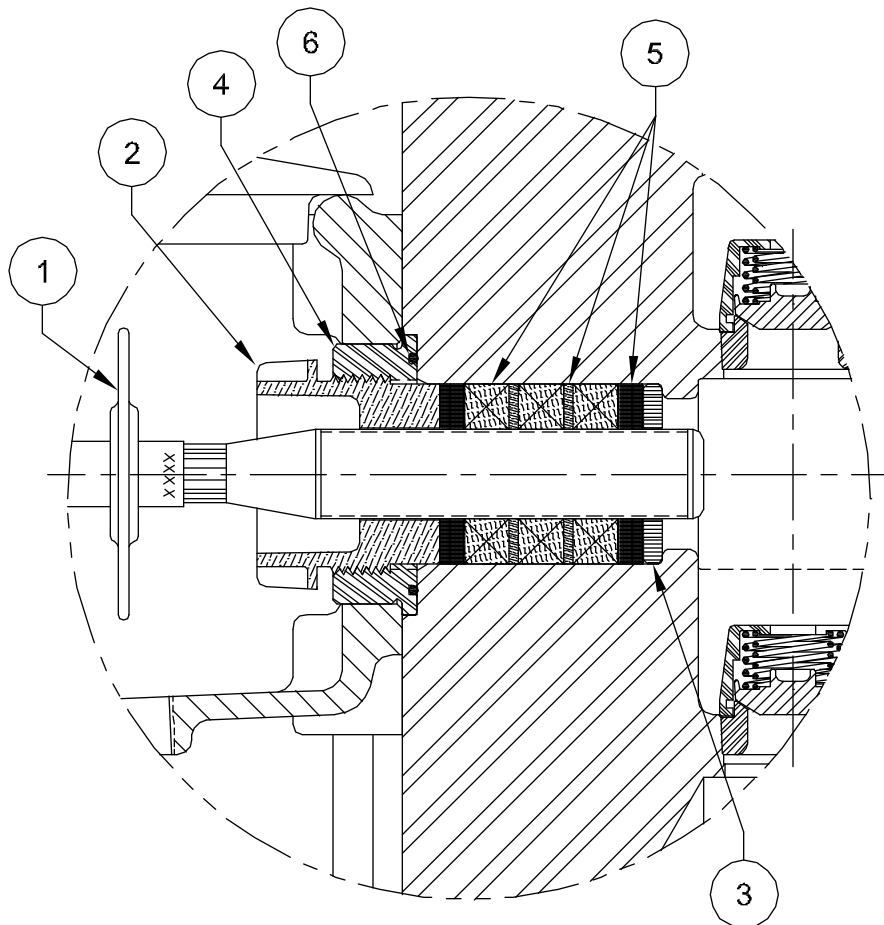
ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118738

SCALE: NONE

REV: A

SHT.: 4 OF 5



2	110-000234-201	O-RING		6
	453-200258-458		8921-K	
	453-200258-339		249	
	453-200258-337		241	
2	453-200258-395	PACKING	238	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-028510-575		(SS)	
	001-028510-235		(STL)	
2	001-028510-302	THROAT BUSHING	(BRZ)	3
	AAC-115784-E16		(SS)	
	001-000497-351		(DI)	
2	001-000497-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 118738, SHEETS 1 THRU 5.

28

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118738

SCALE:

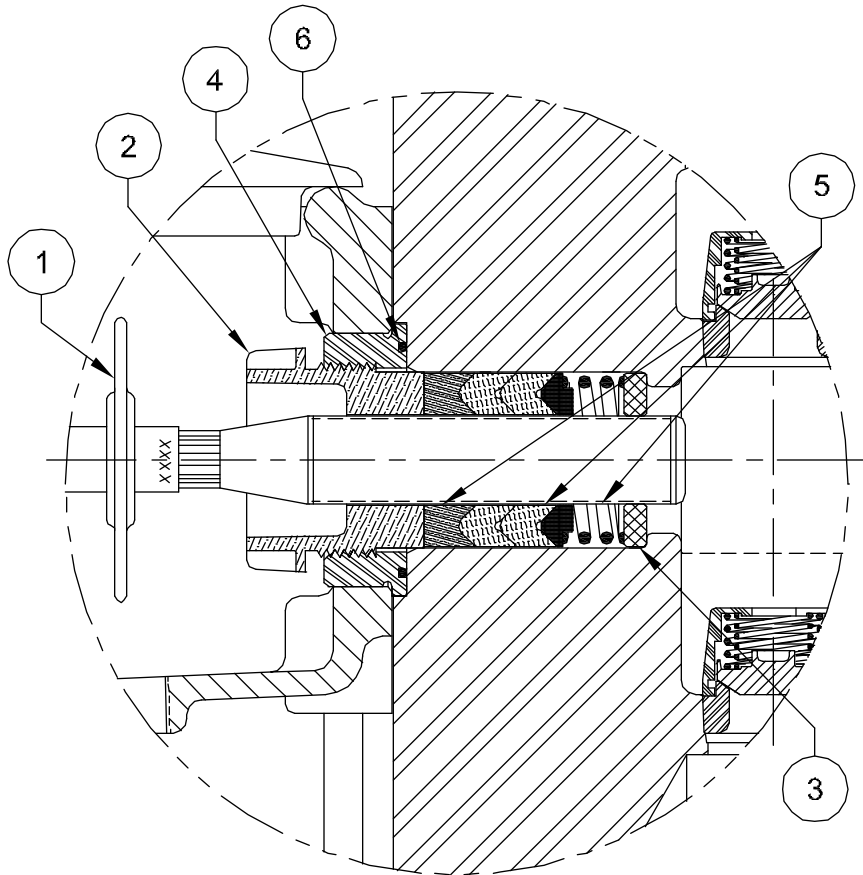
NONE

REV

A

SHT.:

5 OF 5



2	110-000234-201	O-RING		6
	222-112231-340	PACKING	1068-4	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011175-575		(SS)	
	001-011175-235		(STL)	
2	001-011175-302	THROAT BUSHING	(BRZ)	3
	AEC-115784-E16		(SS)	
	001-011239-351		(DI)	
2	001-011239-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
dda				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 118739, SHEETS 1 THRU 5.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118739

SCALE:

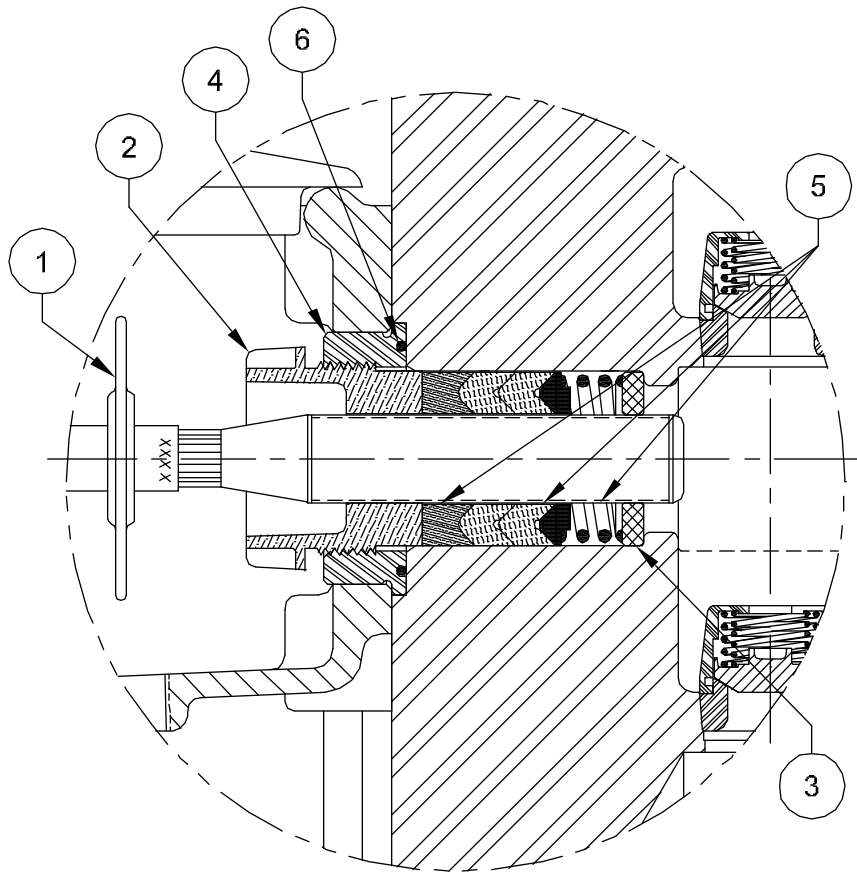
NONE

REV

A

SHT.:

1 OF 5



2	110-000234-201	O-RING		6
2	222-158231-340	PACKING	1068-4	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011178-575		(SS)	
	001-011178-235		(STL)	
2	001-011178-302	THROAT BUSHING	(BRZ)	3
	ADC-115784-E16		(SS)	
	001-011240-351		(DI)	
2	001-011240-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(1-5/8" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

NOTE

1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 118739, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

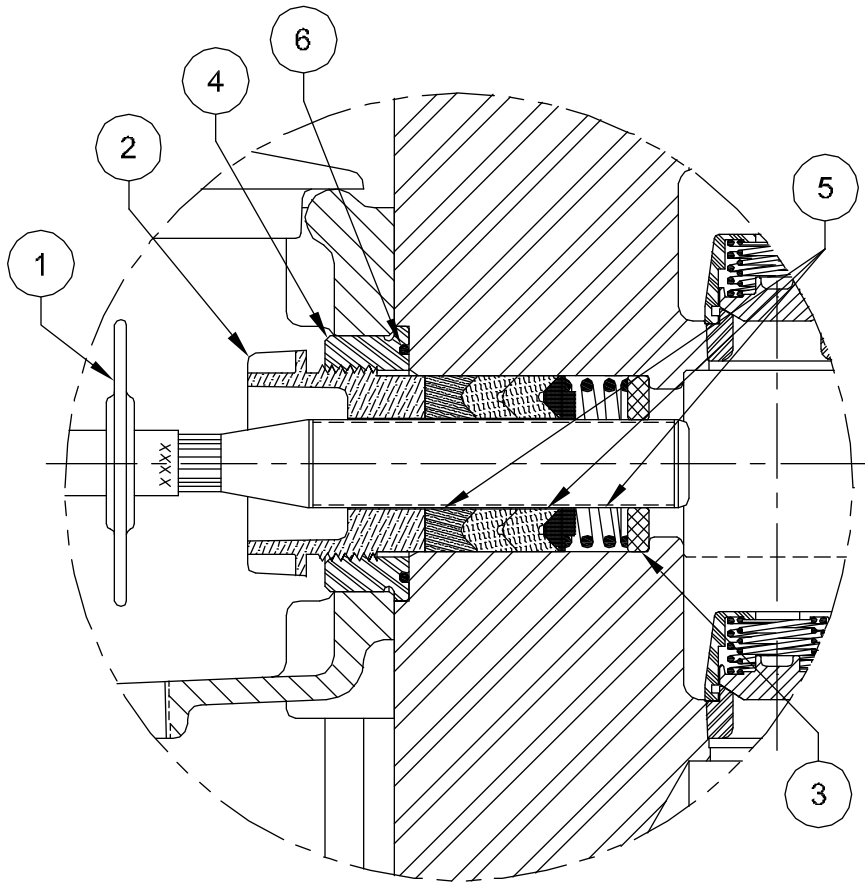
ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118739

SCALE: NONE

REV A

SHT.: 2 OF 5



2	110-000234-201	O-RING		6
2	222-134231-340	PACKING	1068-4	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011180-575		(SS)	
	001-011180-235		(STL)	
2	001-011180-302	THROAT BUSHING	(BRZ)	3
	ACC-115784-E16		(SS)	
	001-011241-351		(DI)	
2	001-011241-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 118739, SHEETS 1 THRU 5.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

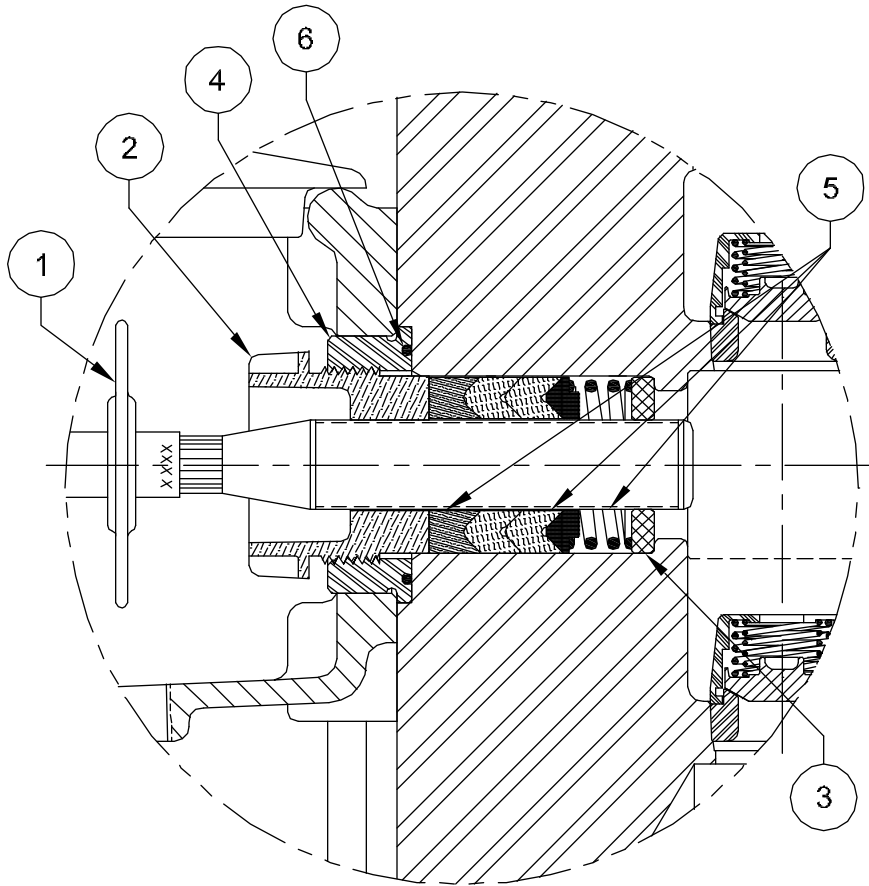
ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.: 118739

SCALE: NONE

REV A

SH1.: 3 OF 5



2	110-000234-201	O-RING		6
2	222-178231-340	PACKING	1068-4	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-011181-575		(SS)	
	001-011181-235		(STL)	
2	001-011181-302	THROAT BUSHING	(BRZ)	3
	ABC-115784-E16		(SS)	
	001-011242-351		(DI)	
2	001-011242-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(1-7/8" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 118739, SHEETS 1 THRU 5.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/2" THRU 2" PLUNGER
11D-2L

DWG No.:

118739

SCALE:

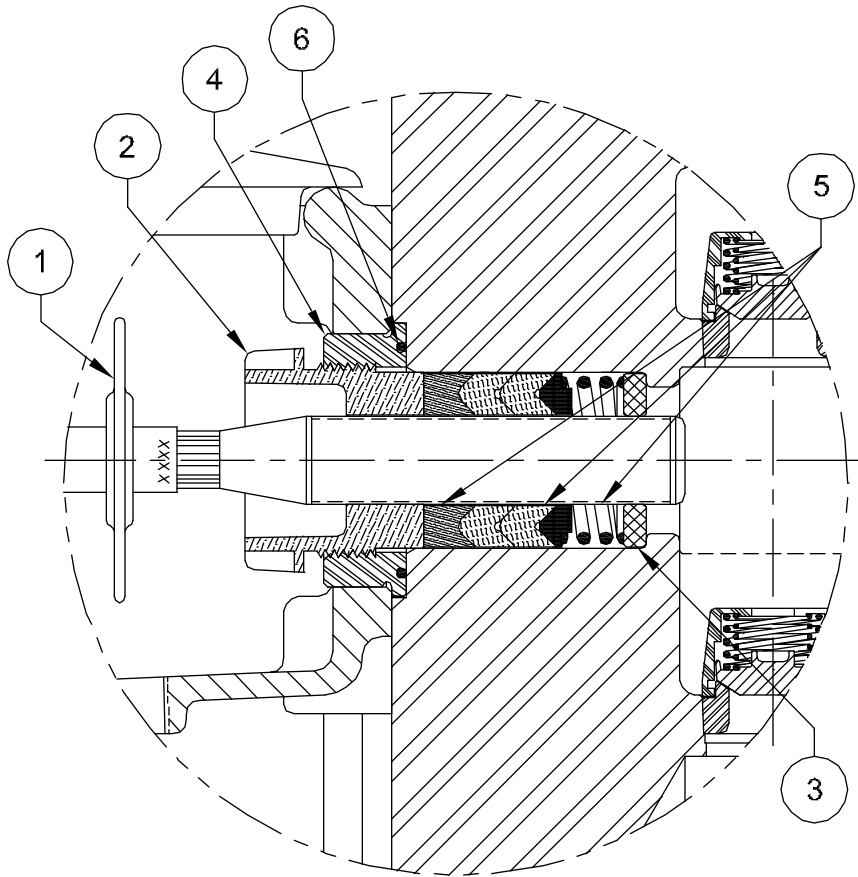
NONE

REV

A

SHT.:

4 of 5



2	110-000234-201	O-RING		6
2	222-200231-340	PACKING	1068-4	5
	001-028512-278		(SS)	
	001-028512-236		(STL)	
2	001-028512-313	ADAPTER	(BRZ)	4
	001-028510-575		(SS)	
	001-028510-235		(STL)	
2	001-028510-302	THROAT BUSHING	(BRZ)	3
	AAC-115784-E16		(SS)	
	001-000497-351		(DI)	
2	001-000497-310	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(2" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

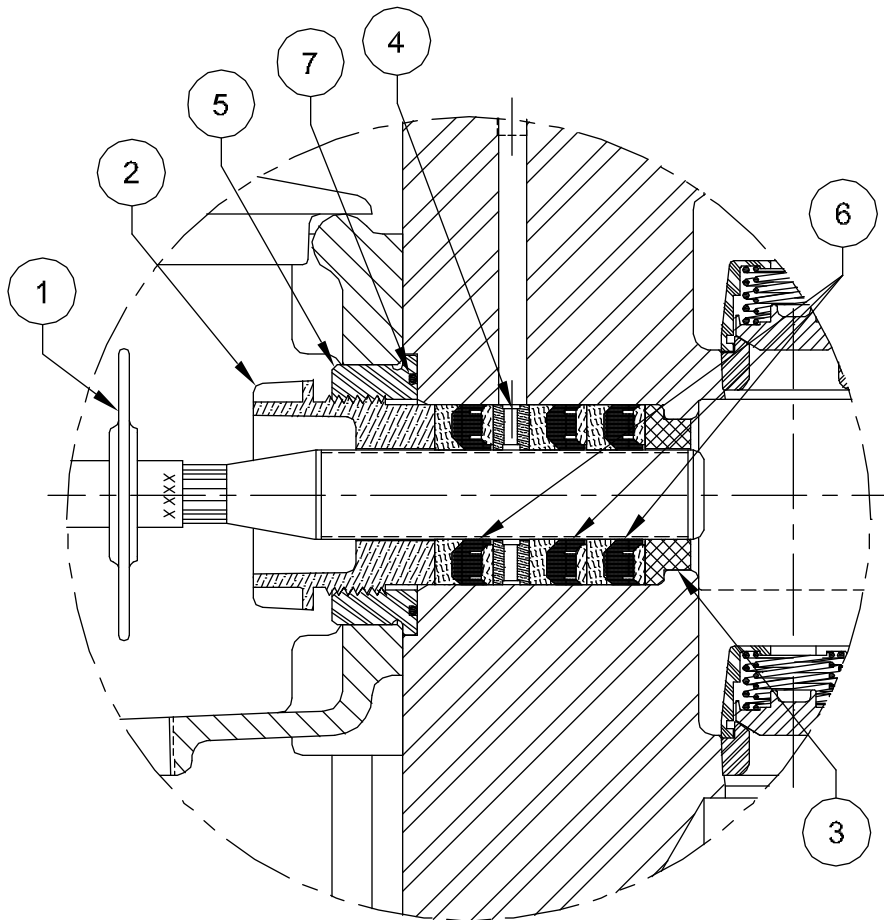
NOTE

1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 118739, SHEETS 1 THRU 5.

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, PLUNGER KIT
 1068-4 PACKING, 1-1/2" THRU 2" PLUNGER
 11D-2L

DWG No.: 118739	SCALE: NONE	REV A	SHT.: 5 OF 5
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2	110-000232-200	O-RING		7
	182-118214-477		858	
	182-118214-374		845	
2	182-118214-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-011211-278		(SS)	
	001-011211-235		(STL)	
2	001-011211-302	LANTERN RING	(BRZ)	4
	001-010961-278		(SS)	
	001-010961-235		(STL)	
2	001-010961-302	THROAT BUSHING	(BRZ)	3
	AFC-013800-E16		(ST)	
	001-011227-351		(DI)	
2	001-011227-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

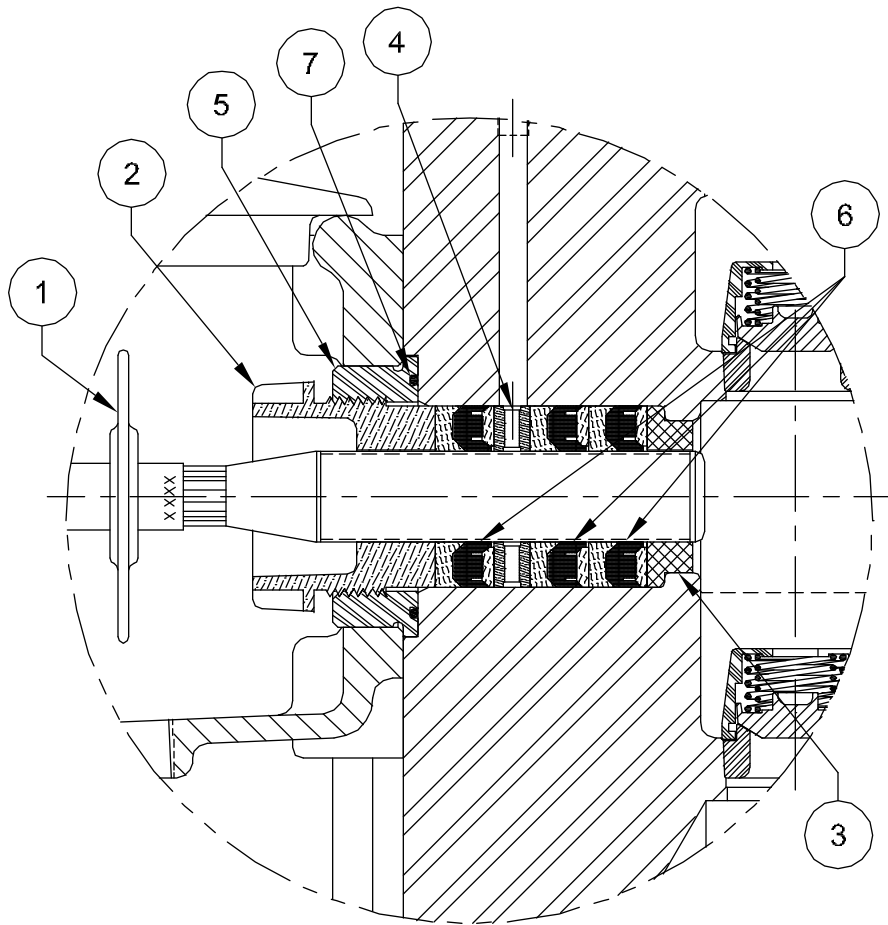
NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 ASSEMBLY, PLUNGER KIT
 "J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
 11D-2M (P100A)

DWG No.: 117631	SCALE: NONE	REV B	SHT.: 1 of 6
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2	110-000232-200	O-RING		7
	182-114214-477		858	
	182-114214-374		845	
2	182-114214-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-011212-278		(SS)	
	001-011212-235		(STL)	
2	001-011212-302	LANTERN RING	(BRZ)	4
	001-010950-278		(SS)	
	001-010950-235		(STL)	
2	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16		(SS)	
	001-011228-351		(DI)	
2	001-011228-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
 "J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
 11D-2M (P100A)

DWG No.:

117631

SCALE:

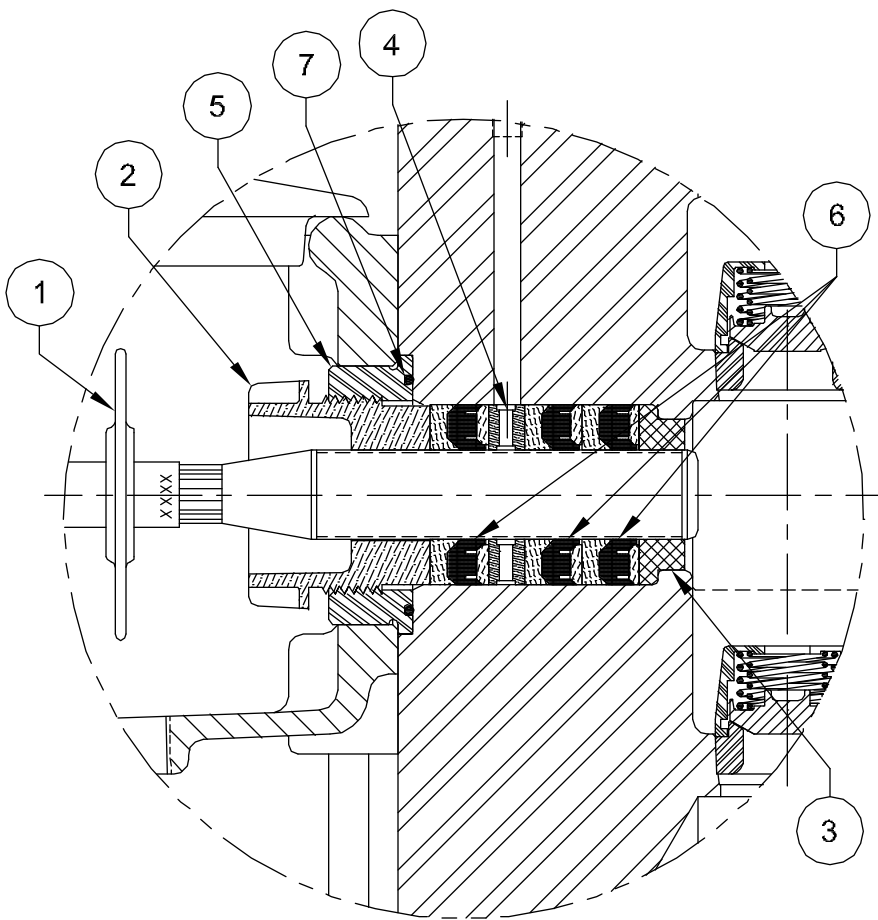
NONE

REV

B

SHT.:

2 OF 6



2	110-000232-200	O-RING		7
	182-138214-477		858	
	182-138214-374		845	
2	182-138214-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-011221-278		(SS)	
	001-011221-235		(STL)	
2	001-011221-302	LANTERN RING	(BRZ)	4
	001-008913-278		(SS)	
	001-008913-235		(STL)	
2	001-008913-302	THROAT BUSHING	(BRZ)	3
	ADC-013800-E16		(SS)	
	001-011229-351		(DI)	
2	001-011229-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
 "J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
 11D-2M (P100A)

DWG No.:

117631

SCALE:

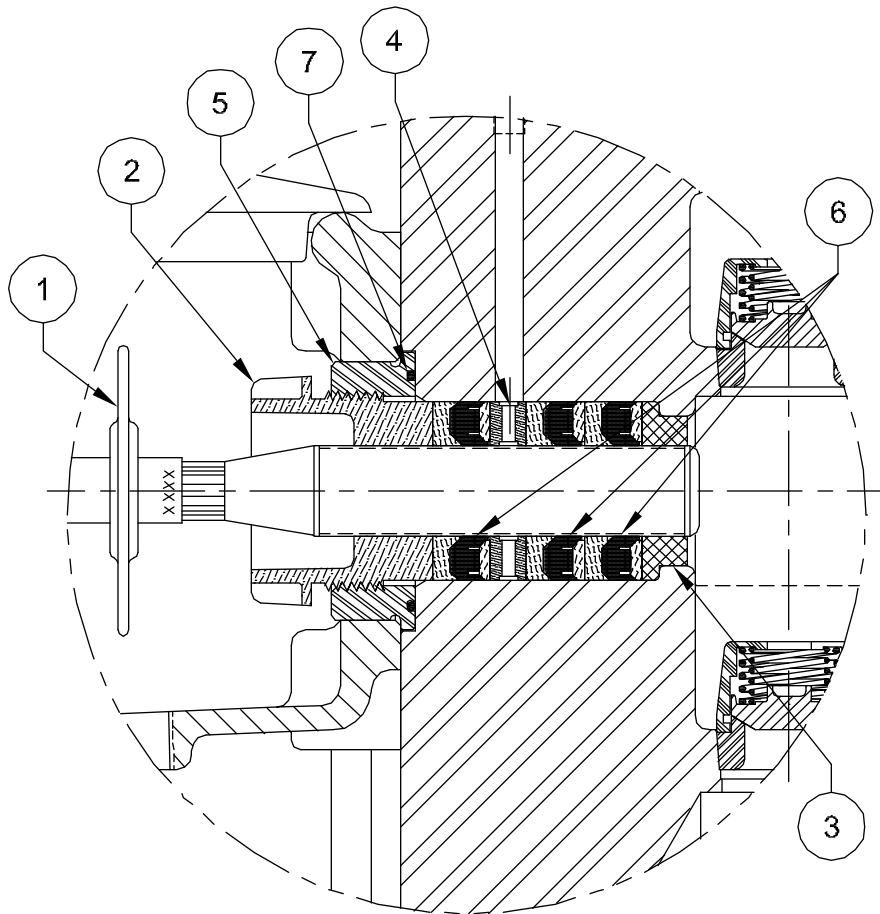
NONE

REV

B

SHT.:

3 OF 6



2	110-000232-200	O-RING		7
	182-112214-477		858	
	182-112214-374		845	
2	182-112214-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-011218-278		(SS)	
	001-011218-235		(STL)	
2	001-011218-302	LANTERN RING	(BRZ)	4
	001-010949-278		(SS)	
	001-010949-235		(STL)	
2	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16		(SS)	
	001-011230-351		(DI)	
2	001-011230-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

37

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

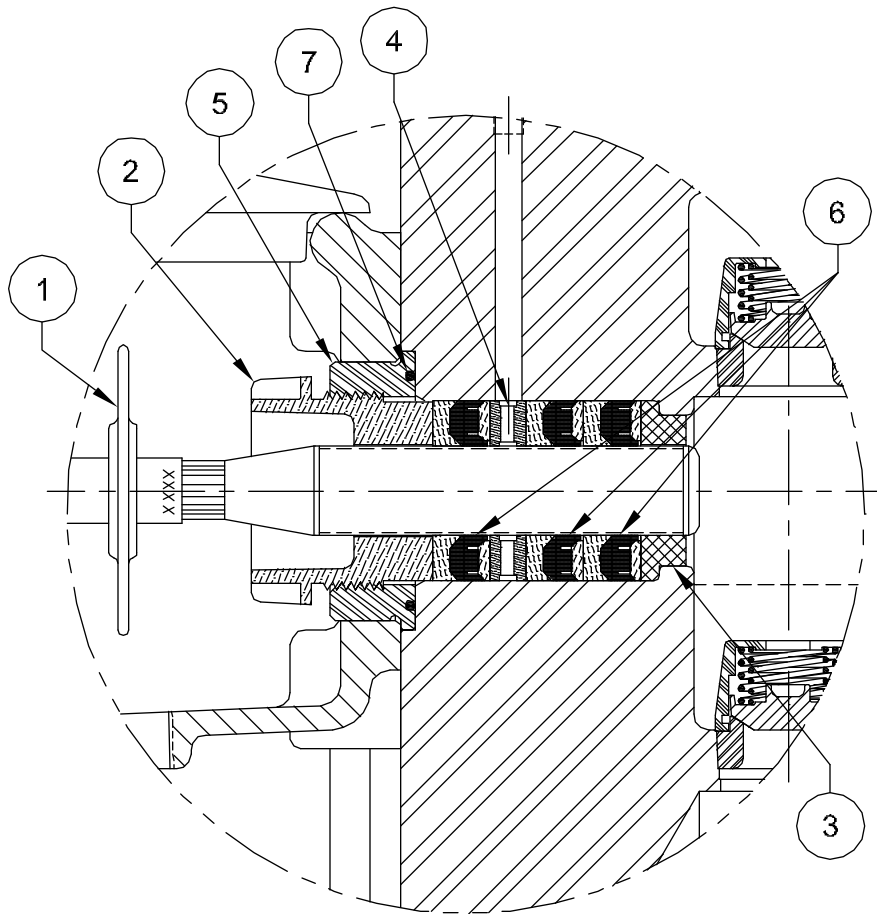
ASSEMBLY, PLUNGER KIT
 "J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
 11D-2M (P100A)

DWG No.: 117631

SCALE: NONE

REV B

SHT.: 4 of 6



2	110-000232-200	O-RING		7
	182-158214-477		858	
	182-158214-374		845	
2	182-158214-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-005305-278		(SS)	
	001-005305-235		(STL)	
2	001-005305-302	LANTERN RING	(BRZ)	4
	001-010962-278		(SS)	
	001-010962-235		(STL)	
2	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16		(ST)	
	001-011231-351		(DI)	
2	001-011231-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-5/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

38

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

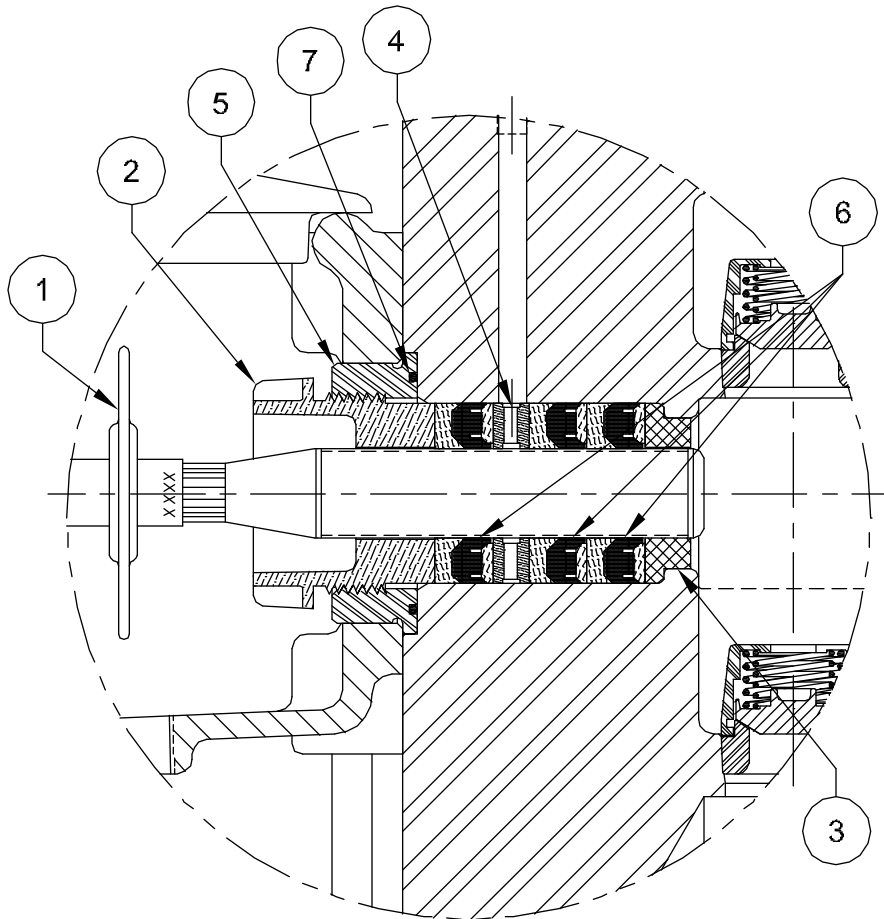
ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.: 117631

SCALE: NONE

REV B

SHT.: 5 OF 6



2	110-000232-200	O-RING		7
	182-134178-477		858	
	182-134178-374		845	
2	182-134178-370	PACKING	838	6
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	5
	001-011220-278		(SS)	
	001-011220-235		(STL)	
2	001-011220-302	LANTERN RING	(BRZ)	4
	001-010894-278		(SS)	
	001-010894-235		(STL)	
2	001-010894-302	THROAT BUSHING	(BRZ)	3
	AAC-013800-E16		(SS)	
	001-008909-351		(DI)	
2	001-008909-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

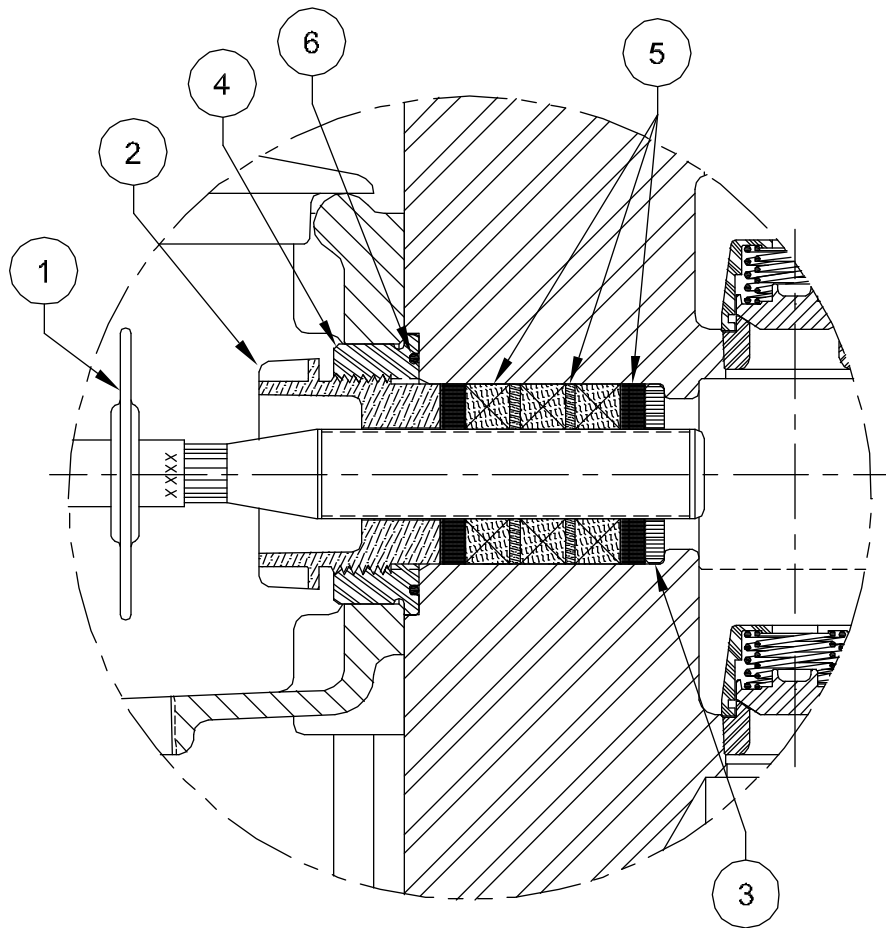
NOTE

1) FOR ALL " J " STYLE PACKING SEE DRAWING 117631, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
ASSEMBLY, PLUNGER KIT
"J"-STYLE PKG, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:	117631	SCALE:	NONE	REV:	B	SHT.:	6 of 6
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2	110-000232-200	O-RING		6
	287-118212-458		8921-K	
	287-118212-339		249	
	287-118212-337		241	
2	287-118212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011212-278		(SS)	
	001-011212-235		(STL)	
2	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16		(SS)	
	001-011228-351		(DI)	
2	001-011228-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.

40

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

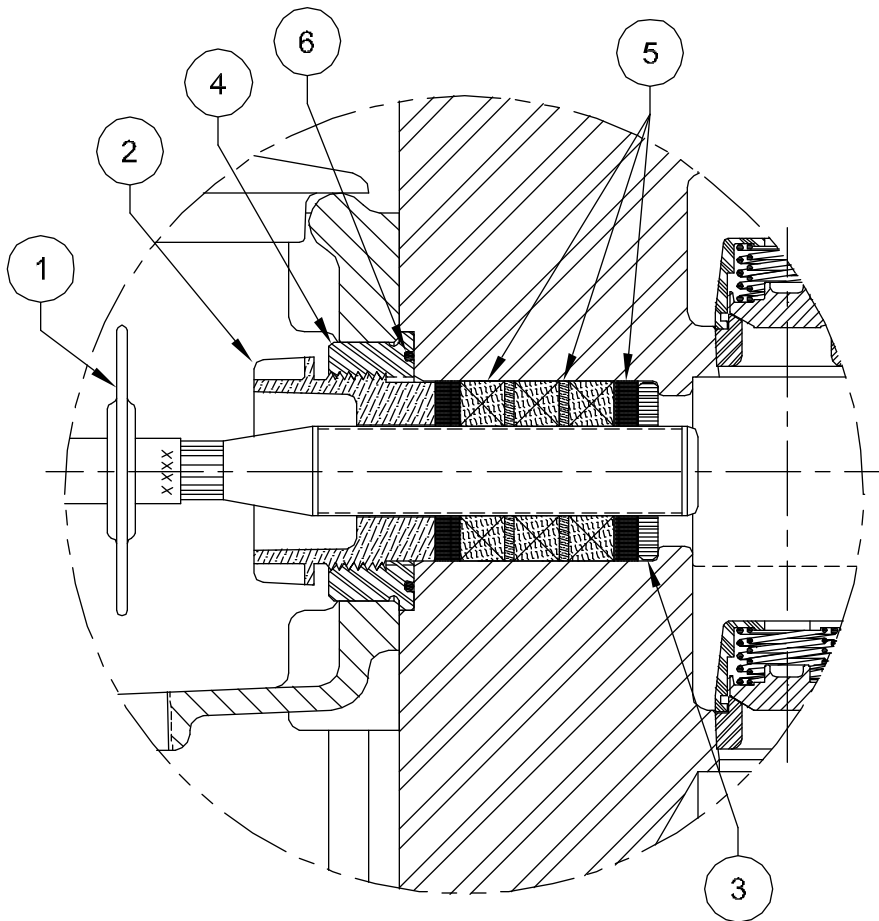
ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.: 117632

SCALE: NONE

REV B

SHT.: 1 OF 6



2	110-000232-200	O-RING		6
	287-114212-458		8921-K	
	287-114212-339		249	
	287-114212-337		241	
2	287-114212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011212-278		(SS)	
	001-011212-235		(STL)	
2	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16		(SS)	
	001-011228-351		(DI)	
2	001-011228-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:

117632

SCALE:

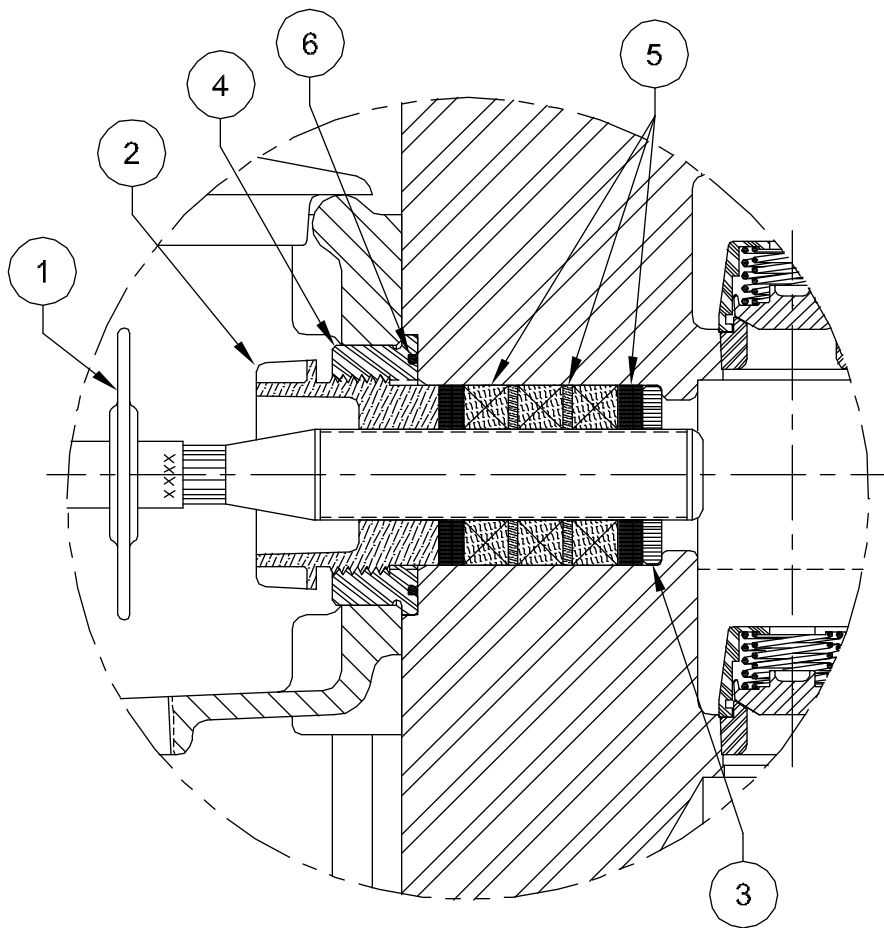
NONE

REV

B

SHT.:

2 OF 6



2	110-000232-200	O-RING		6
	287-138212-458		8921-K	
	287-138212-339		249	
	287-138212-337		241	
2	287-138212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011221-278		(SS)	
	001-011221-235		(STL)	
2	001-008913-302	THROAT BUSHING	(BRZ)	3
	ADC-013800-E16		(SS)	
	001-011229-351		(DI)	
2	001-011229-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:

117632

SCALE:

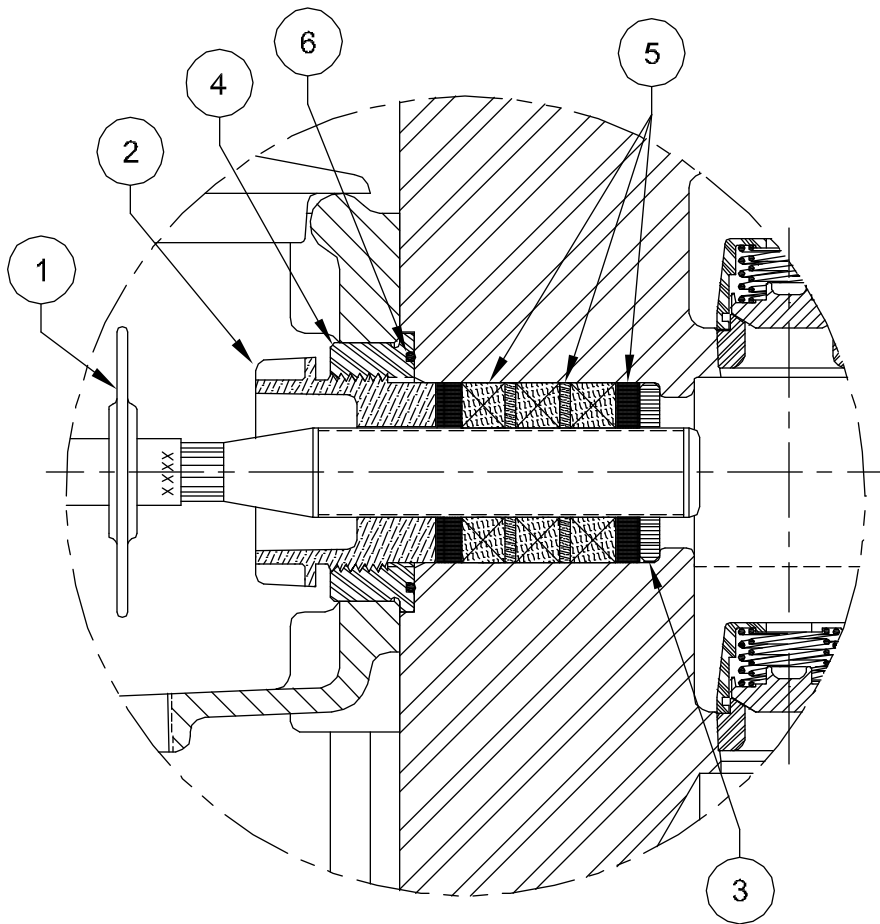
NONE

REV

B

SHT.:

3 OF 6



2	110-000232-200	O-RING		6
	287-112212-458		8921-K	
	287-112212-339		249	
	287-112212-337		241	
2	287-112212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011218-278		(SS)	
	001-011218235		(STL)	
2	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16		(SS)	
	001-011230-351		(DI)	
2	001-011230-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

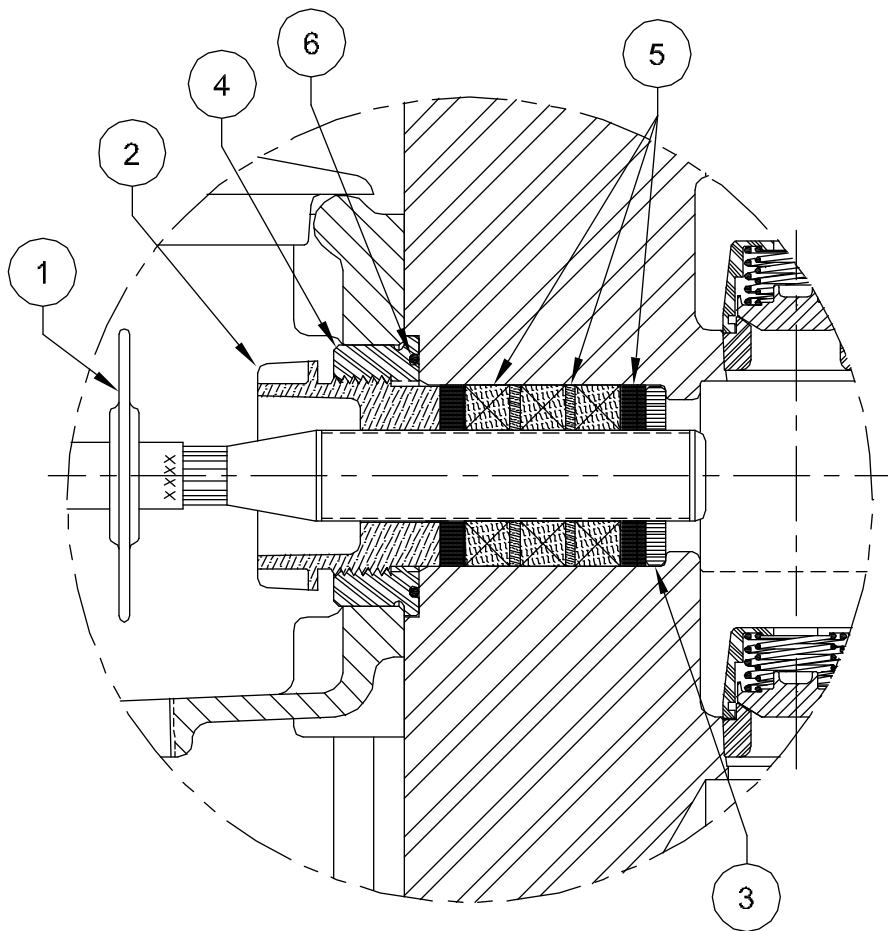
ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.: 117632

SCALE: NONE

REV B

SHT.: 4 of 6

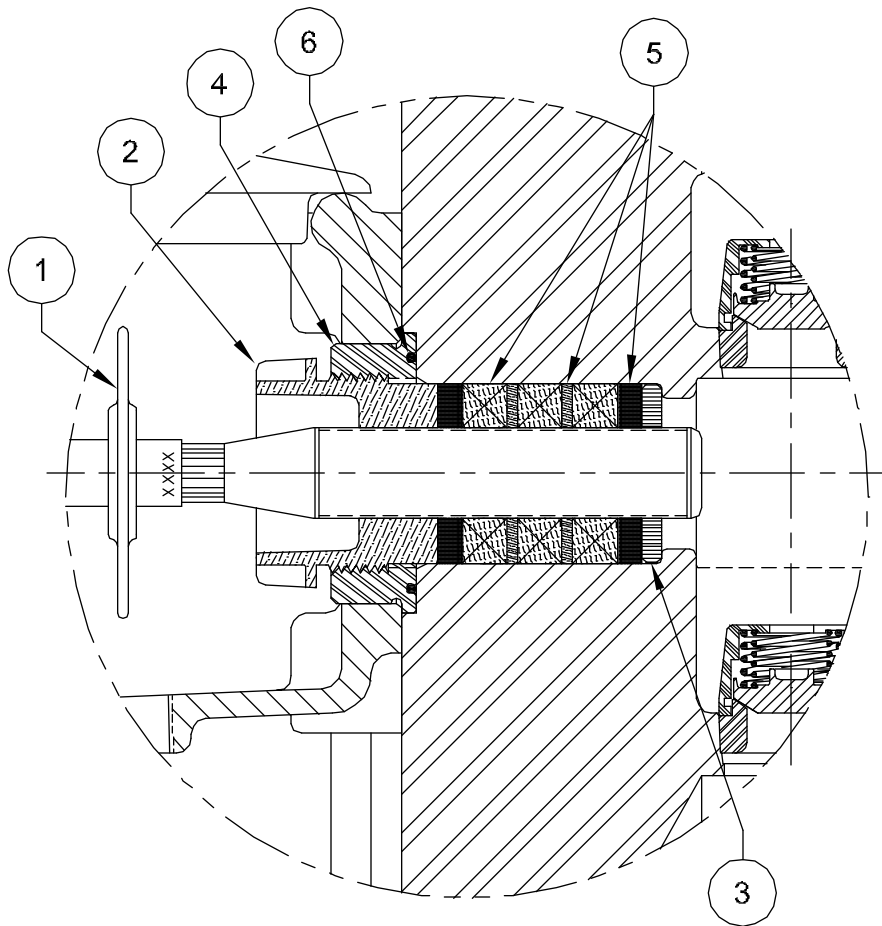


2	110-000232-200	O-RING		6
	287-158212-458		8921-K	
	287-158212-339		249	
	287-158212-337		241	
2	287-158212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-005305-278		(SS)	
	001-005305-235		(STL)	
2	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16		(SS)	
	001-011231-351		(DI)	
2	001-011231-304		(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-5/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER 11D-2M (P100A)			
DWG No.:	117632	SCALE:	NONE
REV	B	SHT.:	5 OF 6



2	110-000232-200	O-RING		6
	287-134212-458		8921-K	
	287-134212-339		249	
	287-134212-337		241	
2	287-134212-395	PACKING	238	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-024096-278		(SS)	
	001-024096-235		(STL)	
2	001-024096-302	THROAT BUSHING	(BRZ)	3
	AAC-013800-E16		(ST)	
	001-008909-351		(DI)	
2	001-008909-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION	ITEM	
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " BRAID STYLE " PACKING SEE DRAWING 117632, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

**ASSEMBLY, PLUNGER KIT
BRAID STYLE PKG, 1-1/8" THR 1-3/4" PLUNGER
11D-2M (P100A)**

DWG No.:

117632

SCALE:

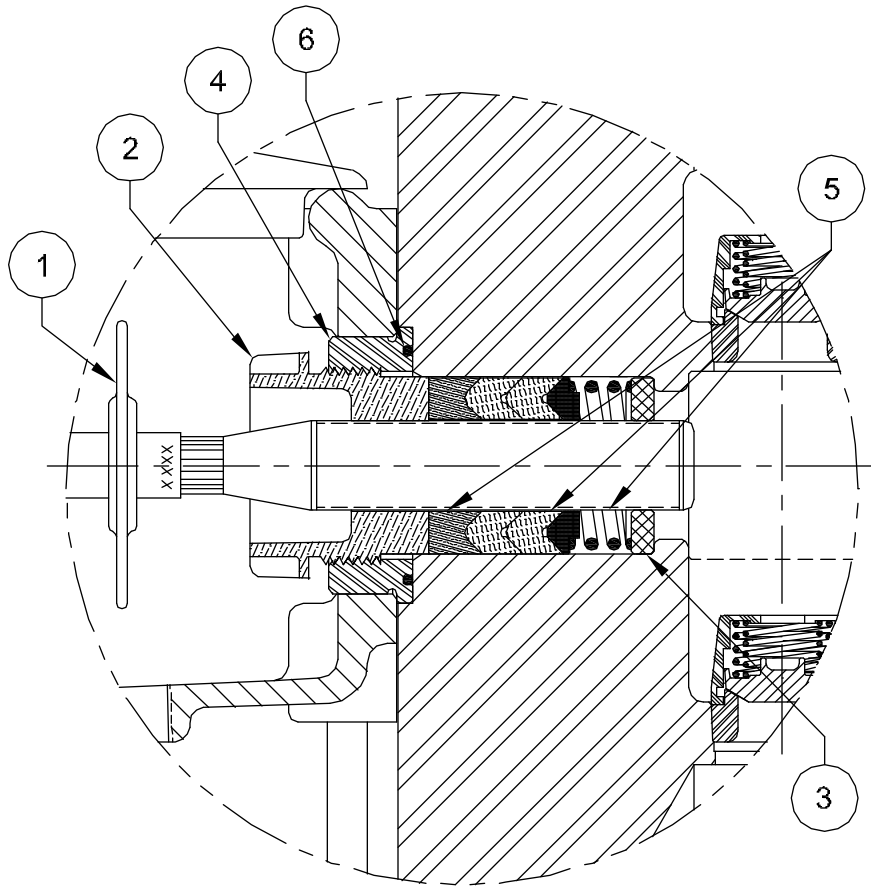
NONE

REV

B

SHT.:

6 OF 6

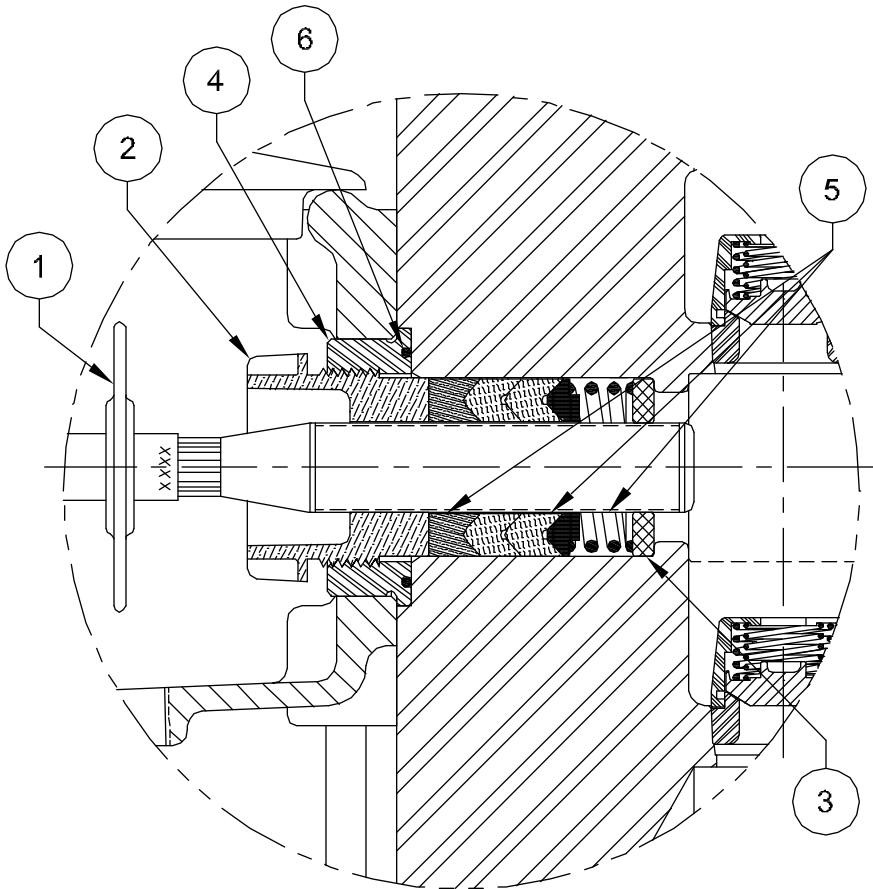


2	110-000232-200	O-RING		6
2	432-118238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011211-278		(SS)	
	001-011211-235		(STL)	
2	001-010961-302	THROAT BUSHING	(BRZ)	3
	AFC-013800-E16		(SS)	
	001-011227-351		(DI)	
2	001-011227-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT 1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER 11D-2M (P100A)			
DWG No.:	SCALE:	REV	SHT.:
117633	NONE	B	1 of 6



2	110-000232-200	O-RING		6
2	432-114238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011212-278		(SS)	
	001-011212-235		(STL)	
2	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16		(SS)	
	001-011228-351		(DI)	
2	001-011228-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/4" PLUNGER)				
REQ'D	Part No.	DESCRIPTION	ITEM	
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.



HOUSTON, TEXAS. U.S.A.

ENGINEERING. TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:

117633

SCALE:

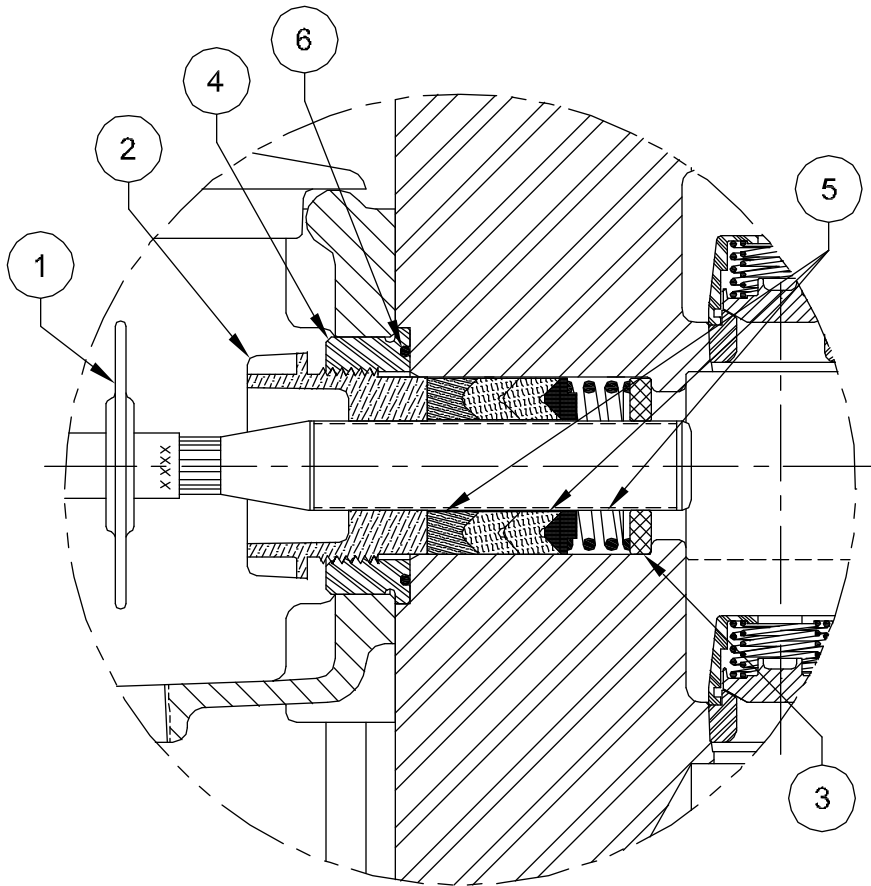
NONE

REV

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SHT.:

2 OF 6



1	110-000232-200	O-RING		6
2	432-138238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011221-278		(SS)	
	001-011221-235		(STL)	
2	001-008913-302	THROAT BUSHING	(BRZ)	3
	ADC-013800-E16		(SS)	
	001-011229-351		(DI)	
2	001-011229-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-3/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.

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NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:

117633

SCALE:

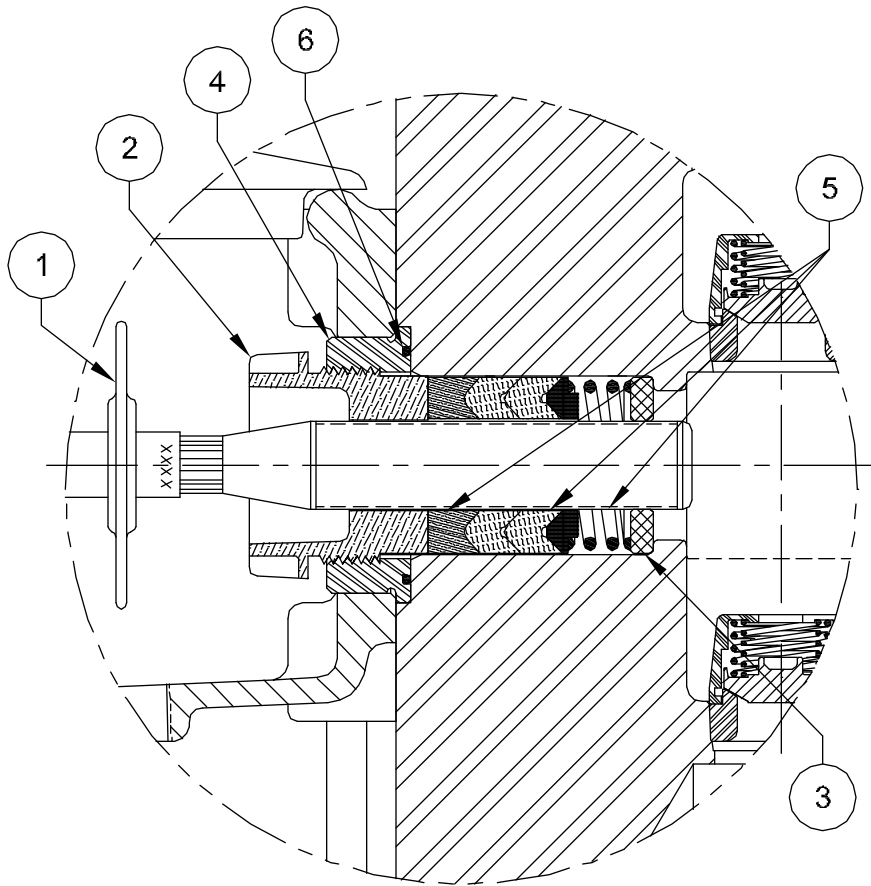
NONE

REV

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SHT.:

3 OF 6



2	110-000232-200	O-RING		6
2	432-112238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-011218-278		(SS)	
	001-011218235		(STL)	
2	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16		(SS)	
	001-011230-351		(DI)	
2	001-011230-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-1/2" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

- 1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.

49

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:

117633

SCALE:

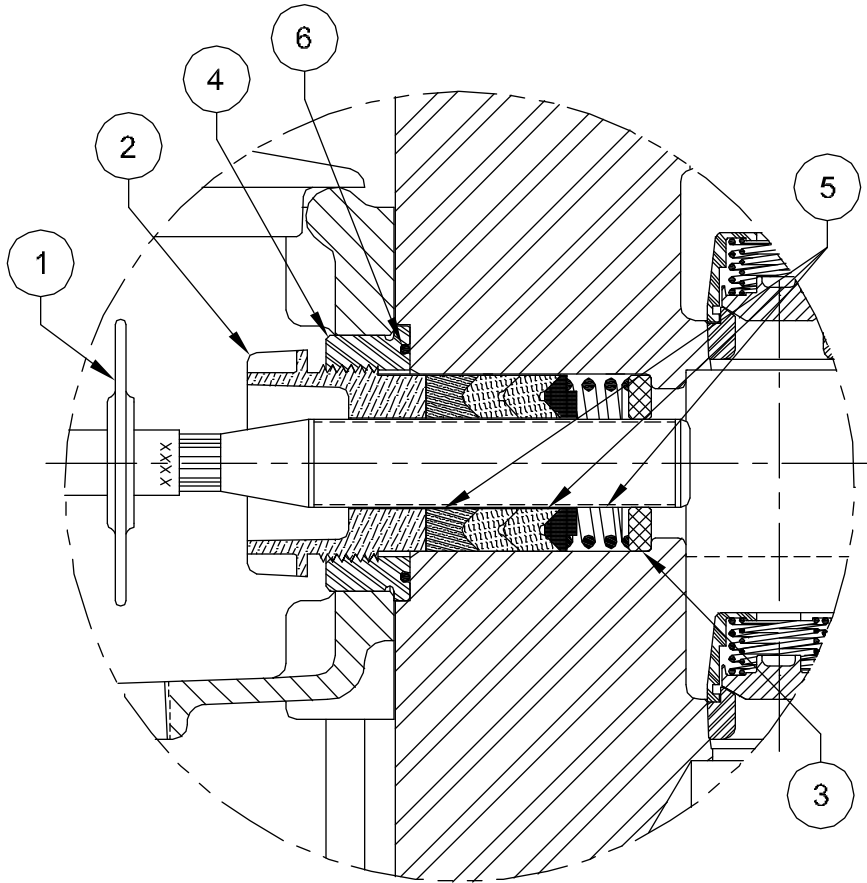
NONE

REV

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SHT.:

4 OF 6



2	110-000232-200	O-RING		6
2	432-158238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-005305-278		(SS)	
	001-005305-235		(STL)	
2	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16		(SS)	
	001-011231-351		(DI)	
2	001-011231-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1-5/8" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

50

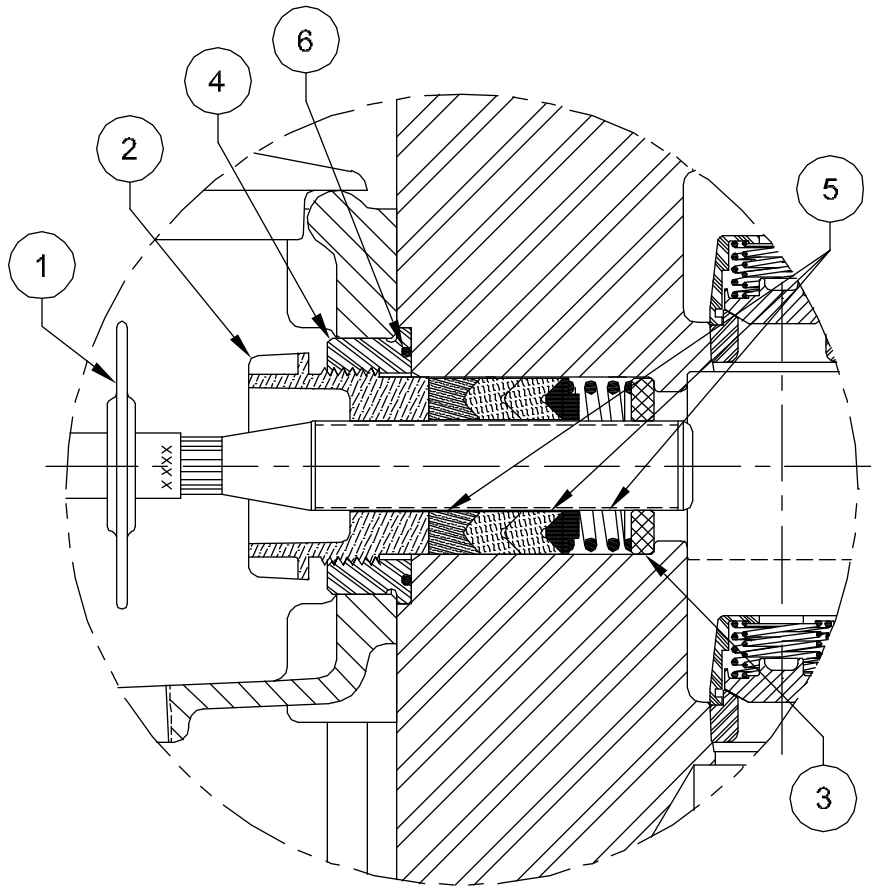
NOTE

1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.

NOV NATIONAL OILWELL VARCO
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
ASSEMBLY, PLUNGER KIT
1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER
11D-2M (P100A)

DWG No.:	117633	SCALE:	NONE	REV	B	SHT.:	5 OF 6
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2	110-000232-200	O-RING		6
2	432-134238-340	PACKING	1068-4	5
	001-003948-278		(SS)	
	001-003948-236		(STL)	
2	001-003948-316	ADAPTER	(BRZ)	4
	001-024096-278		(SS)	
	001-024096-235		(STL)	
2	001-024096-302	THROAT BUSHING	(BRZ)	3
	AAC-013800-E16		(SS)	
	001-008909-351		(DI)	
2	001-008909-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(1-3/4" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

51

NOTE

1) FOR ALL " 1068-4 STYLE " PACKING SEE DRAWING 117633, SHEETS 1 THRU 6.



HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

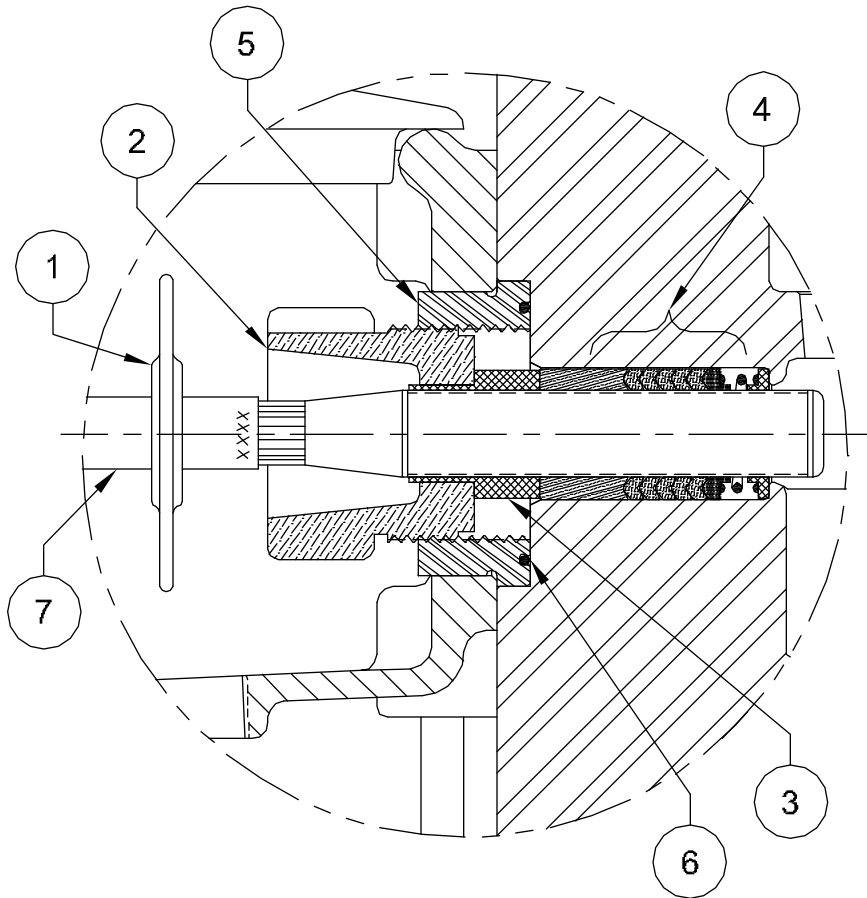
TITLE:
 ASSEMBLY, PLUNGER KIT
 1068-4 PACKING, 1-1/8" THRU 1-3/4" PLUNGER
 11D-2M (P100A)

DWG No.: 117633	SCALE: NONE	REV B	SHT.: 6 OF 6
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2	001-014266-402	PONY ROD	(SS)	7
2	110-000234-200	O-RING		6
2	001-014277-310	ADAPTER	(BRZ)	5
2	297-034258-397	PACKING	805-4	4
	001-017049-235		(STL)	
2	001-017049-302	FOLLOWER	(BRZ)	3
	001-014278-351		(DI)	
2	001-014278-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(3/4" PLUNGER)

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



NOTE

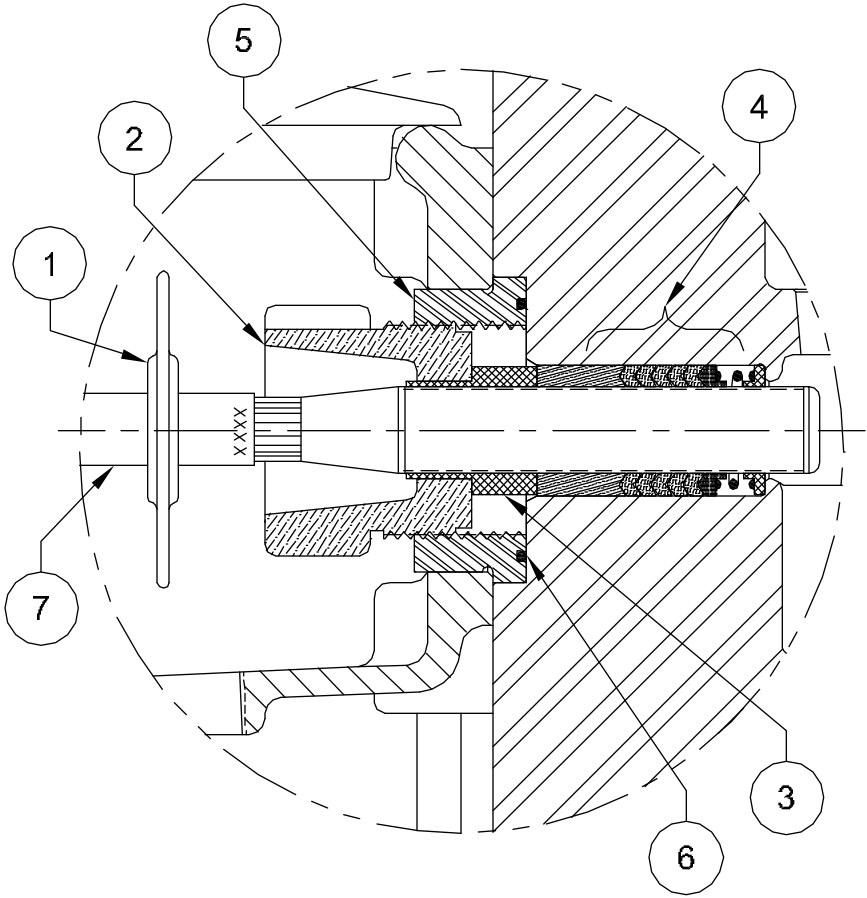
1) FOR ALL " 805-4 STYLE" PACKING SEE DRAWING 118746, SHEETS 1 THRU 3.

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT 805-4 STYLE PACKING, 3/4" THRU 1" PLUNGER 11D-2H			
DWG No.:	118746	SCALE:	NONE
REV	A	SH1.:	1 OF 3

2	001-014266-402	PONY ROD	(SS)	7
2	110-000234-200	O-RING		6
2	001-014277-310	ADAPTER	(BRZ)	5
2	297-078258-397	PACKING	805-4	4
	001-014719-235		(STL)	
2	001-014719-302	FOLLOWER	(BRZ)	3
	001-014278-351		(DI)	
2	001-014278-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1

(7/8" PLUNGER)

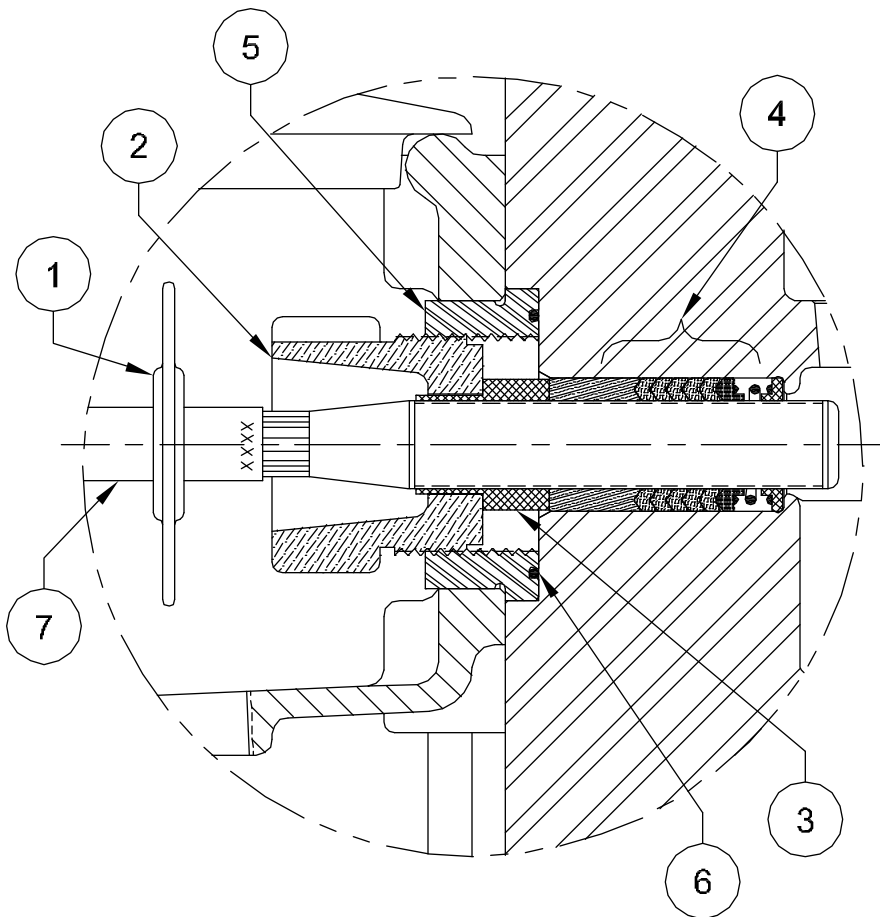
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



NOTE
 1) FOR ALL " 805-4 STYLE" PACKING SEE DRAWING 118746, SHEETS 1 THRU 3.

53

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT 805-4 STYLE PACKING, 3/4" THRU 1" PLUNGER 11D-2H			
DWG No.:	118746	SCALE:	NONE
REV	A	SHT.:	2 of 3



2	001-014266-402	PONY ROD	(SS)	7
2	110-000234-200	O-RING		6
2	001-014277-310	ADAPTER	(BRZ)	5
2	297-100258-397	PACKING	805-4	4
	001-017050-235		(STL)	
2	001-017050-302	FOLLOWER	(BRZ)	3
	001-014278-351		(DI)	
2	001-014278-304	GLAND NUT	(BRZ)	2
2	001-008910-201	BAFFLE DISC		1
(1" PLUNGER)				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

NOTE

1) FOR ALL " 805-4 STYLE" PACKING SEE DRAWING 118746, SHEETS 1 THRU 3.

54

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT
805-4 STYLE PACKING, 3/4" THRU 1" PLUNGER
11D-2H

DWG No.:

118746

SCALE:

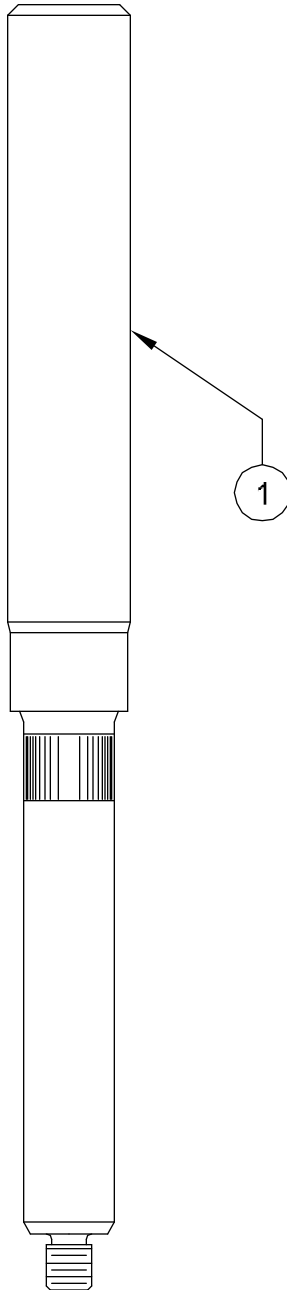
NONE

REV

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SHT.:

3 OF 3



2	AHC-115977-E24	2" DIA. PLUNGER, HARD COAT, CHROME OXIDE	
2	002-011349-E23	2" DIA. PLUNGER, HARD COAT, COBALT	
2	002-011349-E22	2" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011349-E26	2" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	AGC-115977-E24	1-7/8" DIA. PLUNGER, HARD COAT, CHROME OXIDE	
2	AGC-115977-E23	1-7/8" DIA. PLUNGER, HARD COAT, COBALT	
2	002-011348-E22	1-7/8" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011348-E26	1-7/8" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	002-025838-999	1-3/4" DIA. PLUNGER, HARD COAT, CHROME OXIDE	
2	AFC-115977-E23	1-3/4" DIA. PLUNGER, HARD COAT, COBALT	
2	002-011347-E22	1-3/4" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011347-E26	1-3/4" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	002-025372-E24	1-5/8" DIA. PLUNGER, HARD COAT, CHROME OXIDE	
2	AEC-115977-E23	1-5/8" DIA. PLUNGER, HARD COAT, COBALT	
2	002-011346-E22	1-5/8" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011346-E26	1-5/8" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	002-025694-999	1-1/2" DIA. PLUNGER, HARD COAT, CHROME OXIDE	
2	002-009539-E23	1-1/2" DIA. PLUNGER, HARD COAT, COBALT	
2	002-009539-E22	1-1/2" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-009539-E26	1-1/2" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

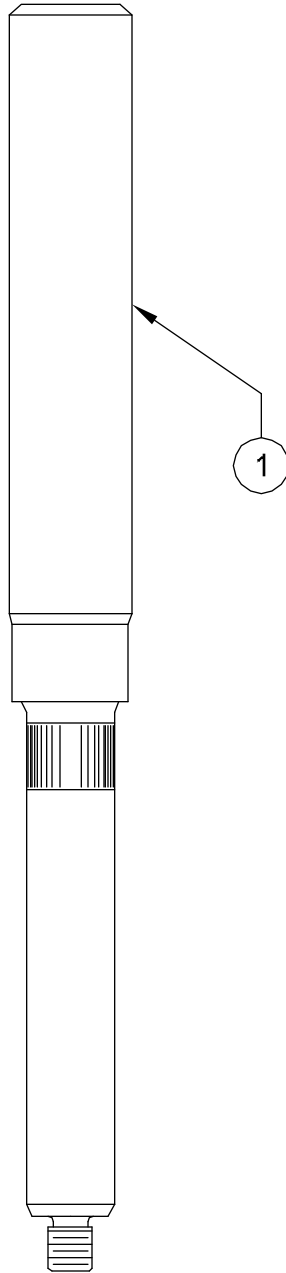
55

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
**PLUNGERS 1-1/2" THRU 2"
 HARD SURFACE
 11D-2L**

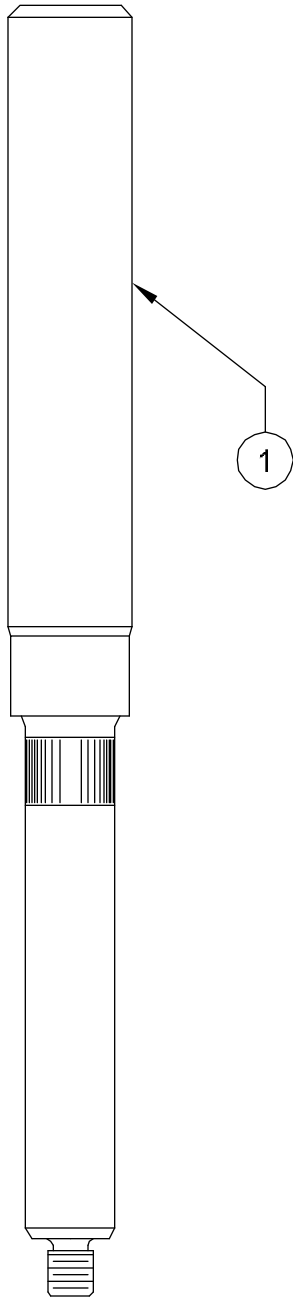
DWG No.: 118740 SCALE: NONE REV A SHT.: 1 OF 1



2	002-011368-999	2" DIA. PLUNGER, CERAMIC	1
2	002-011367-999	1-7/8" DIA. PLUNGER, CERAMIC	1
2	002-011365-999	1-3/4" DIA. PLUNGER, CERAMIC	1
2	002-011364-999	1-5/8" DIA. PLUNGER, CERAMIC	1
2	002-011363-999	1-1/2" DIA. PLUNGER, CERAMIC	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

56

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: PLUNGERS 1-1/2" THRU 2" CERAMIC 11D-2L			
DWG No.:	118741	SCALE:	NONE
REV	A	SH1.:	1 OF 1



2	002-025838-E24	PLUNGER, HARD COAT (CHROME OXIDE)	
2	AFC-115977-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-011347-E22	PLUNGER, HARD COAT (COLOMONY)	
2	002-011347-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-3/4" DIA. PLUNGERS			
2	002-025372-E24	PLUNGER, HARD COAT (CHROME OXIDE)	
2	AEC-115977-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-011346-E22	PLUNGER, HARD COAT (COLOMONY)	
2	002-011346-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-5/8" DIA. PLUNGERS			
2	002-025694-999	PLUNGER, HARD COAT (CHROME OXIDE)	
2	002-009539-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-009539-E22	PLUNGER, HARD COAT (COLOMONY)	
2	002-009539-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-1/2" DIA. PLUNGERS			
2	002-025373-999	PLUNGER, HARD COAT (CHROME OXIDE)	
2	002-011638-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-011638-999	PLUNGER, HARD COAT (COLOMONY)	
2	002-011638-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-3/8" DIA. PLUNGERS			
2	002-025847-E24	PLUNGER, HARD COAT (CHROME OXIDE)	
2	ABC-115977-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-011637-999	PLUNGER, HARD COAT (COLOMONY)	
2	002-011637-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-1/4" DIA. PLUNGERS			
2	002-025831-999	PLUNGER, HARD COAT (CHROME OXIDE)	
2	002-011636-E23	PLUNGER, HARD COAT (STELLITE 157)	
2	002-011636-E22	PLUNGER, HARD COAT (COLOMONY)	
2	002-011636-E26	PLUNGER, HARD COAT (TUNGSTEN)	1
1-1/8" DIA. PLUNGERS			
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

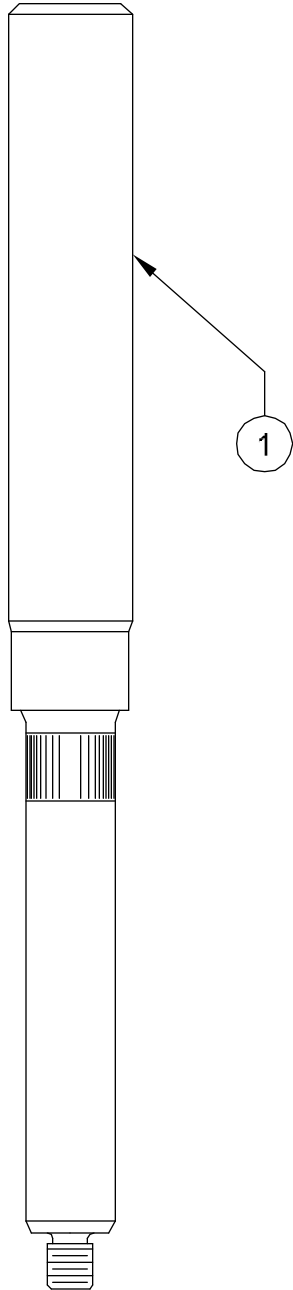
57



HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:
 PLUNGERS 1-1/8" THRU 1-3/4"
 HARD SURFACE
 11D-2M (P100A)

DWG No.: 117634	SCALE: NONE	REV B	SHT.: 1 OF 1
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2	002-011365-999	PLUNGER, CERAMIC	1
1-3/4" DIA. PLUNGERS			
2	002-011364-999	PLUNGER, CERAMIC	1
1-5/8" DIA. PLUNGERS			
2	002-011363-999	PLUNGER, CERAMIC	1
1-1/2" DIA. PLUNGERS			
2	002-011366-999	PLUNGER, CERAMIC	1
1-3/8" DIA. PLUNGERS			
2	002-011362-999	PLUNGER, CERAMIC	1
1-1/4" DIA. PLUNGERS			
2	002-001753-999	PLUNGER, CERAMIC	1
1-1/8" DIA. PLUNGERS			
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

58

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

PLUNGERS 1-1/8" THRU 1-3/4"
CERAMIC
11D-2M (P100A)

DWG No.:

117635

SCALE:

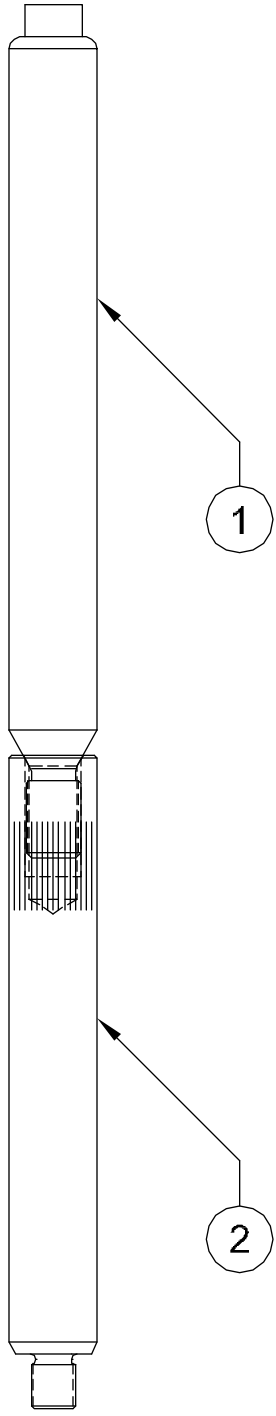
NONE

REV

B

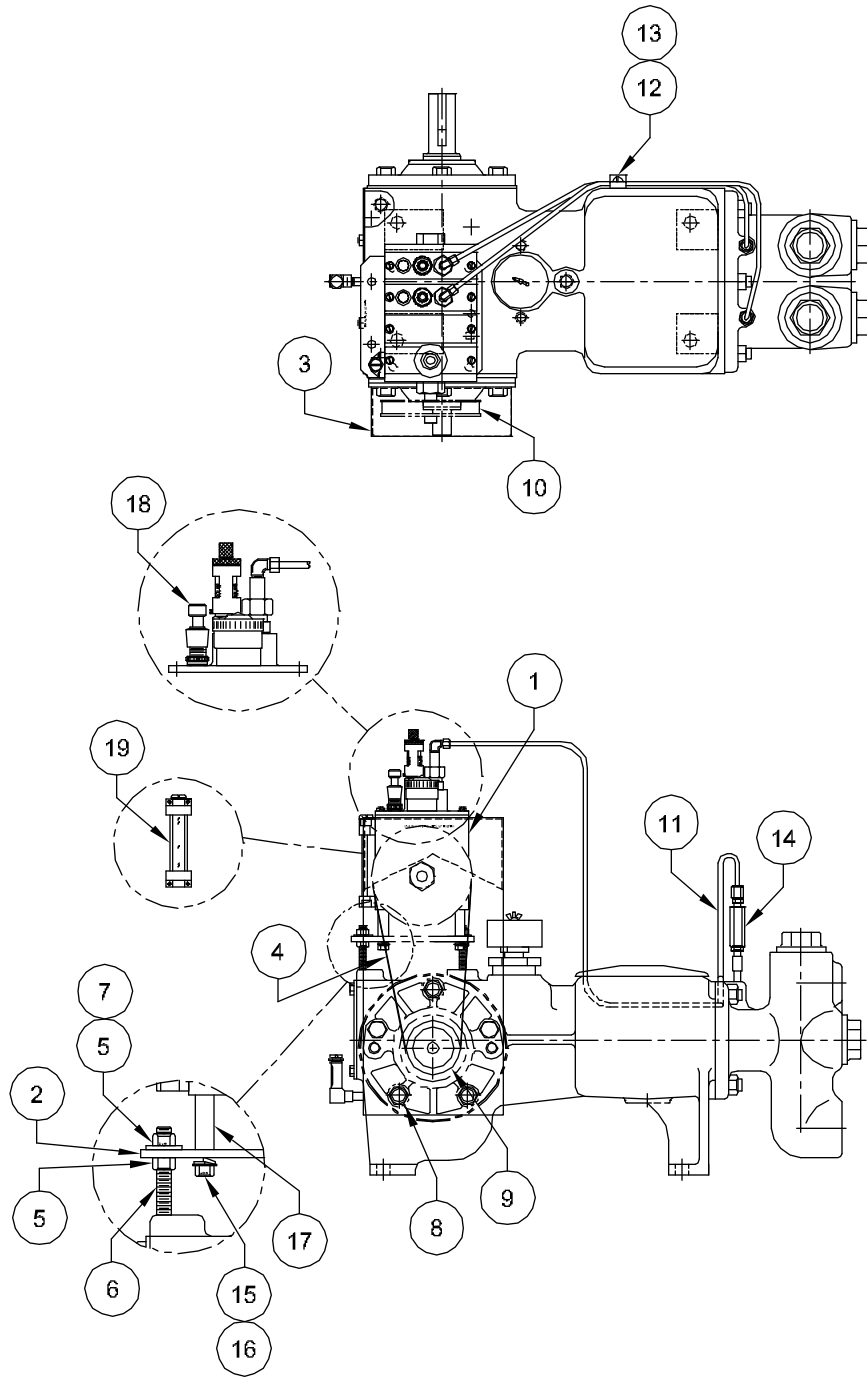
SHT.:

1 OF 1



2	001-014266-402	PONY ROD	2
	002-002252-999	1" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-002252-E26	1" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	002-011068-999	7/8" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011068-E26	7/8" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
2	002-011067-999	3/4" DIA. PLUNGER, HARD COAT, TUNGSTEN	
2	002-011067-E26	3/4" DIA. PLUNGER, HARD COAT, PREMIUM TUNGSTEN	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: PLUNGERS 3/4" THRU 1" HARD SURFACE 11D-2H			
DWG No.:	118747	SCALE:	NONE
REV	A	SHT:	1 OF 1



SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

1	GAS-105265-000	SIGHT GLASS	19
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	18
REPLACEMENT PARTS			
4	186-130112-220	SPACER	17
4	100-516212-273	CAP SCREW 5/16" x 2-1/2" LG.	16
4	154-516059-220	LOCK WASHER, 5/16"	15
2	GAS-105240-000	CHECK VALVE, 1/8" NPT	14
2	113-010038-220	MACHINE SCREW, RND HD	13
1	001-008783-405	LINE CLAMP	12
120"	330-002003-365	TUBING, 1/4"	11
1	001-011513-999	SHEAVE, LUBRICATOR DRIVER	10
1	001-011632-999	SHEAVE, PUMP DRIVER	9
3	100-058412-290	CAP SCREW, 5/8" x 4-1/2" LG.	8
3	154-038068-220	LOCK WASHER 3/8"	7
3	104-038300-286	STUD, 3/8" x 3" LG	6
6	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	001-011617-999	V-BELT	4
1	004-001977-231	BELT GUARD	3
1	001-012229-231	LUBRICATOR BRACKET LH/RH	2
1	001-013312-999	LUBRICATOR LHD, (2) FEED	
1	GAS-105216-000	LUBRICATOR RHD, (2) FEED	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

LEFT HAND DRIVE POWER PUMP (SHOWN) REQUIRES
RIGHT HAND DRIVE LUBRICATOR.

60

NOV NATIONAL OILWELL VARCO

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PACKING LUBRICATOR
(RHD OR LHD) LHD SHOWN
11D-2 (P100)

DWG No.:

117627

SCALE:

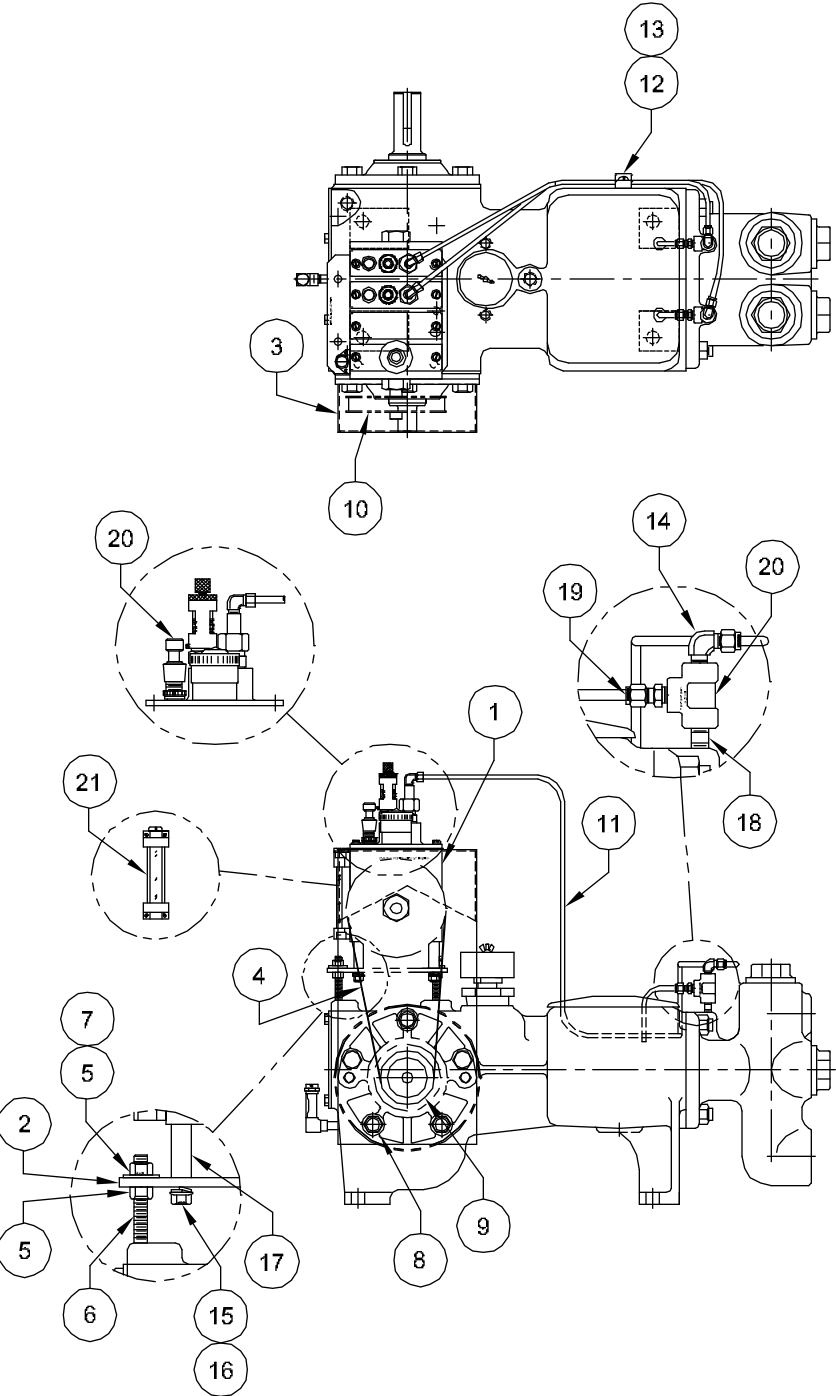
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REV

B

SHT.:

1 OF 1



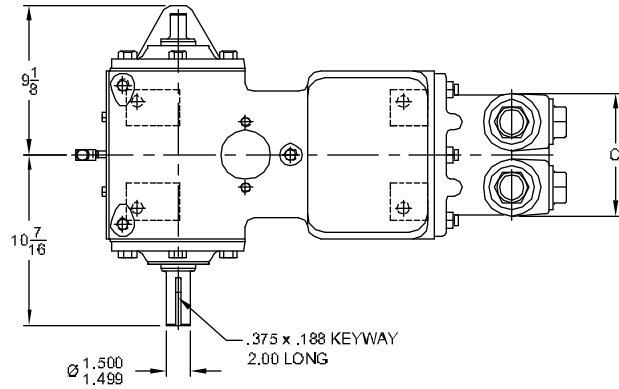
SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

1	GAS-105265-000	SIGHT GLASS	21
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	20
REPLACEMENT PARTS			
2	469-020002-278	TEE, 1/8" NPT	20
2	462-040012-278	MALE CONNECTOR, 1/4" TUBE x 1/8" NPT	19
2	157-018112-278	PIPE NIPPLE	18
4	186-130112-220	SPACER	17
4	100-516212-273	CAP SCREW 5/16" x 2-1/2" LG.	16
4	154-516059-220	LOCK WASHER, 5/16"	15
2	462-040022-278	TUBE FITTING, 90° ELBOW 1/4" TUBE x 1/8" NPT	14
2	113-010038-220	MACHINE SCREW, RND HD	13
1	001-008783-405	LINE CLAMP	12
120"	330-002003-365	TUBING, 1/4"	11
1	001-011513-999	SHEAVE, LUBRICATOR DRIVER 5/8" BORE	10
1	001-011632-999	SHEAVE, PUMP DRIVER	9
3	100-058412-290	CAP SCREW, 5/8" x 4-1/2" LG.	8
3	154-038068-220	LOCK WASHER 3/8"	7
3	104-038300-286	STUD, 3/8" x 3" LG	6
6	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	001-011617-999	V-BELT	4
1	004-001977-231	BELT GUARD	3
1	001-012229-231	LUBRICATOR BRACKET LH/RH	2
1	01-013312-999	LUBRICATOR LHD, (2) FEED	
1	GAS-105216-000	LUBRICATOR RHD, (2) FEED	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

LEFT HAND DRIVE POWER PUMP (SHOWN) REQUIRES RIGHT HAND DRIVE LUBRICATOR.

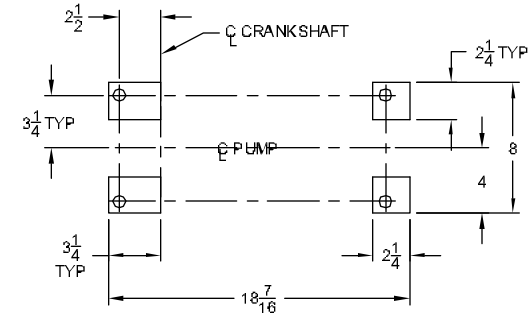
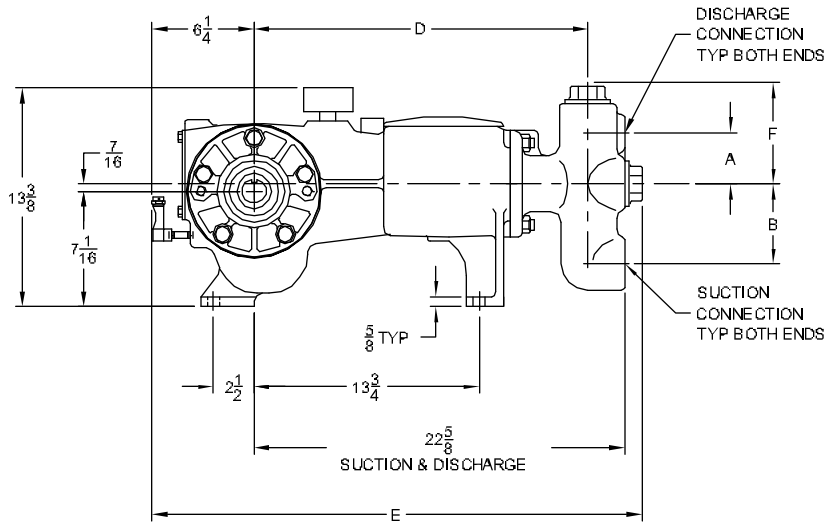
NOV NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, D.O.H. LUBRICATOR (DRIP ON HEEL) - (RHD OR LHD) LHD SHOWN, 11D-2 (P100)			
DWG No.:	SCALE:	REV	SHT.:
117628	NONE	B	1 OF 1

FIELD CONNECTIONS



PUMP TYPE	DIMENSIONS IN INCHES	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
11D-2L	1 - 1 1/2 FNPT	2 - 1 1/2 FNPT
11D-2M	1 - 1 1/2 FNPT	2 - 1 1/2 FNPT

PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
11D-2L	3-1/8	4-7/8	7-1/2	20-3/8	29-3/8	6
11D-2M	3-1/8	4-7/8	7-1/2	20-3/8	29-3/8	6



PUMP FOOTPRINT



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

GENERAL DIMENSION, RHD
CAST FLUID END
11D-2L & M (P100A)

DWG No.:

117621

SCALE:

NONE

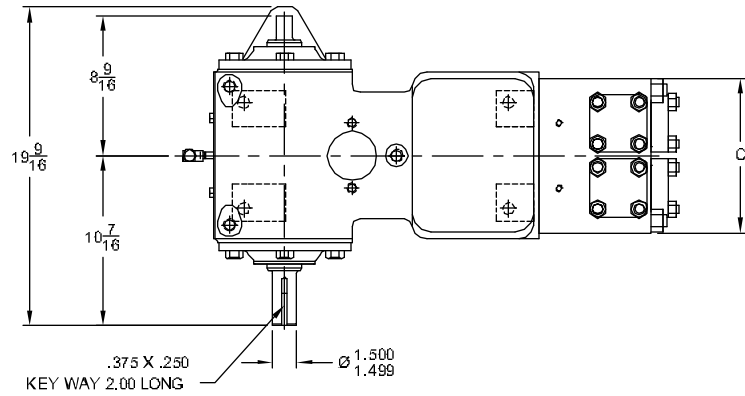
REV

B

SHT.:

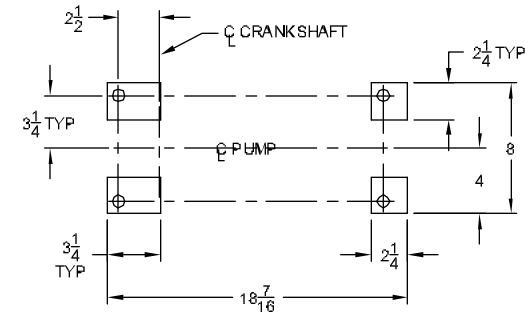
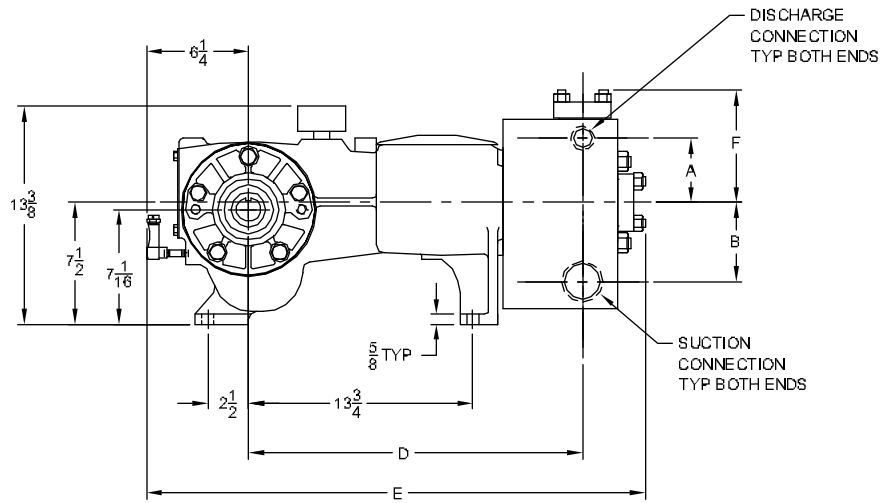
1 OF 1

FIELD CONNECTIONS



PUMP TYPE	DIMENSIONS IN INCHES	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
11D-2L	1 - 1 1/2 FNPT	2 - 1 1/2 FNPT
11D-2M	1 - 1 1/2 FNPT	2 - 1 1/2 FNPT

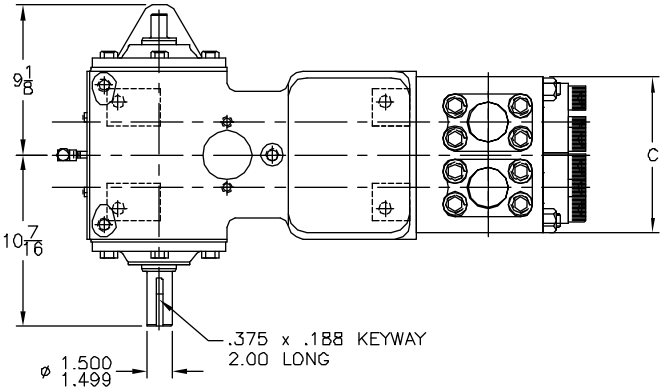
PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
11D-2L	3-15/16	4-7/8	9-1/2	20-1/2	30-1/8	6-7/8
11D-2M	3-15/16	4-7/8	9-1/2	20-1/2	30-1/8	6-7/8



PUMP FOOTPRINT

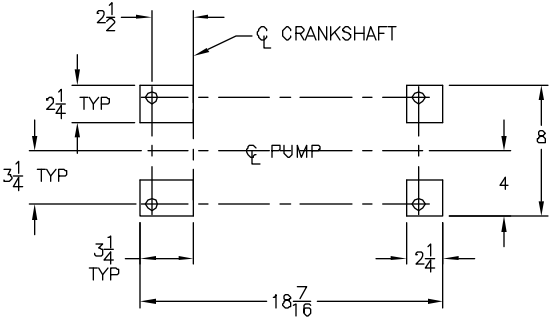
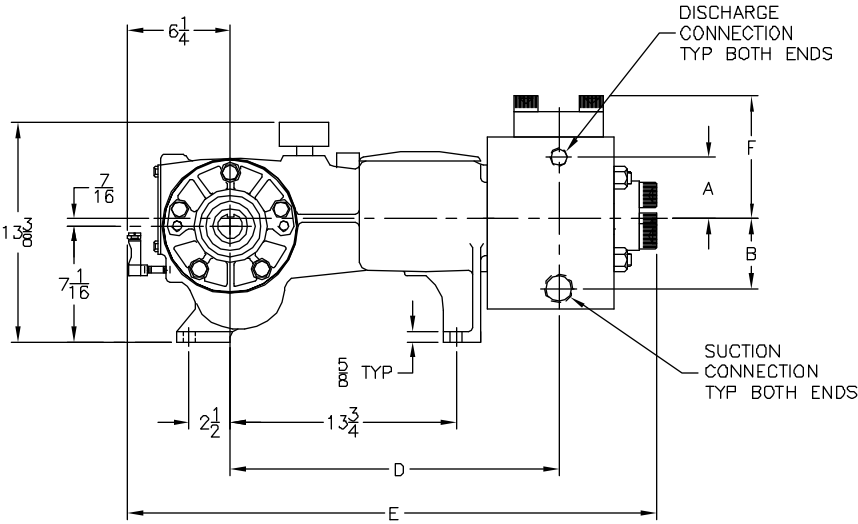
NATIONAL OILWELL VARCO			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: GENERAL DIMENSION, RHD BILLET FLUID END 11D-2L & M (P100A)			
DWG No.:	SCALE:	REV:	SHT.:
117803	NONE	B	1 OF 1

FIELD CONNECTIONS



PUMP TYPE	DIMENSIONS IN INCHES	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
11D-2H	3/4 -14 NPT	1-1/4 - 11 1/2 NPT

PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
11D-2H	3-3/4	4-1/4	9-1/2	20	32-1/8	7-1/2



PUMP FOOTPRINT

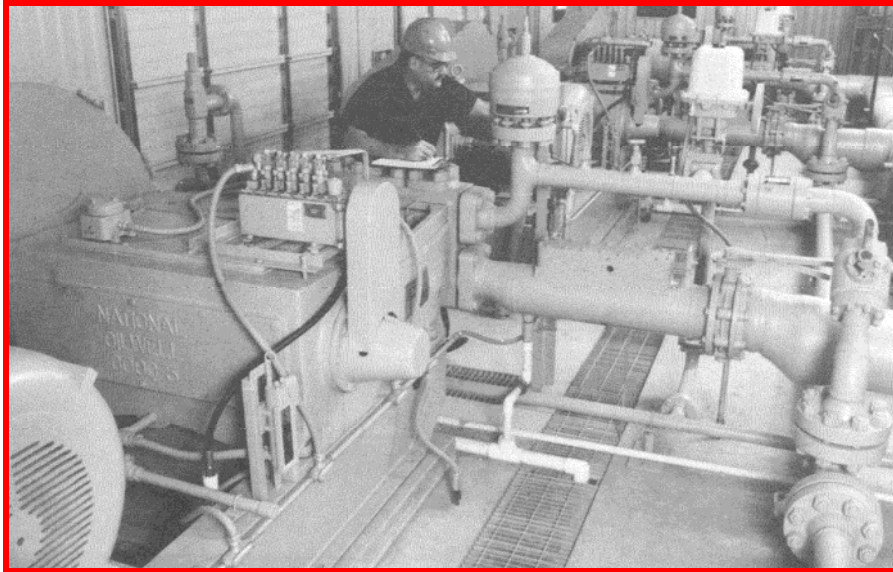


HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE: GENERAL DIMENSION, RHD BILLET FLUID END 11D-2H

DWG No:	117620	SCALE:	NONE	REV	B	SHT.:	1 OF 1
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NATIONAL OILWELL VARCO



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