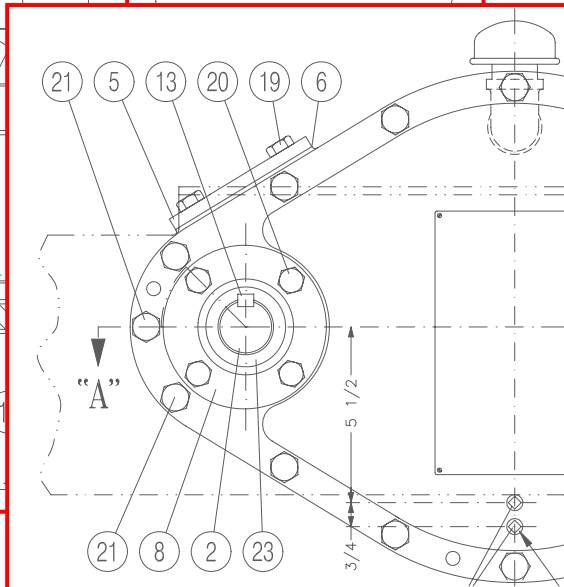
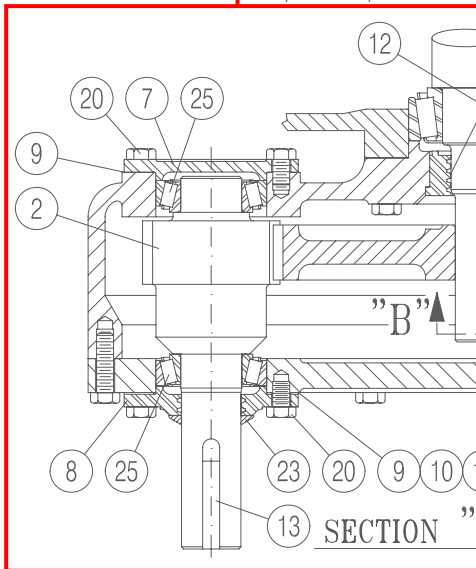
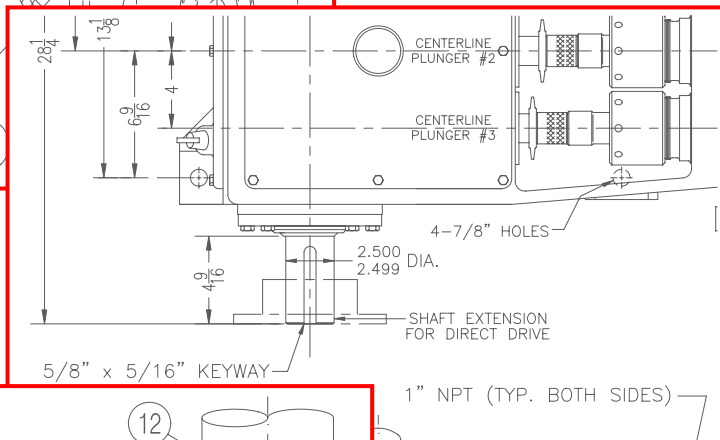
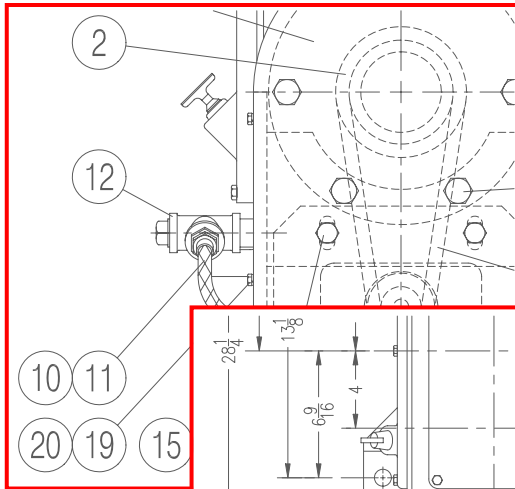
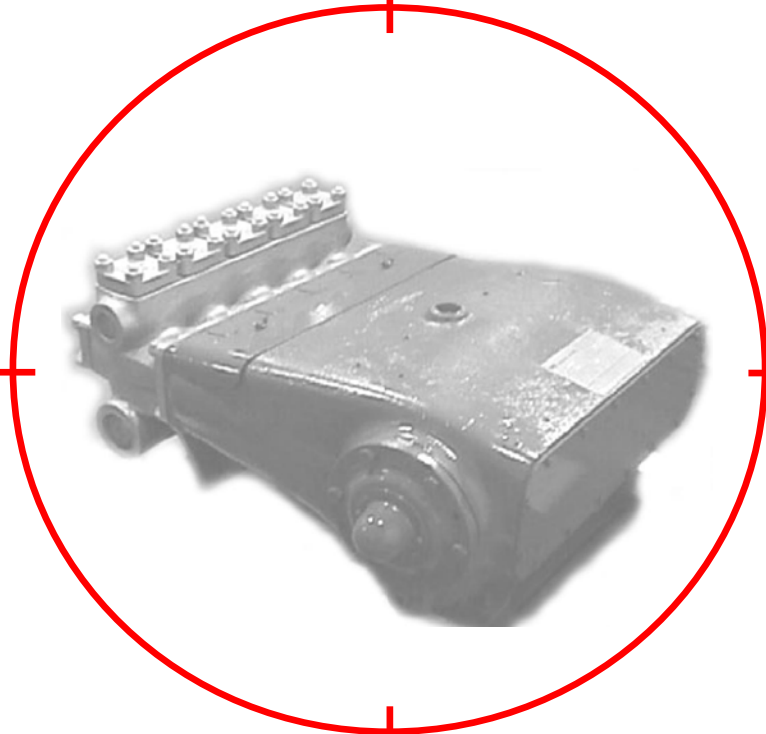


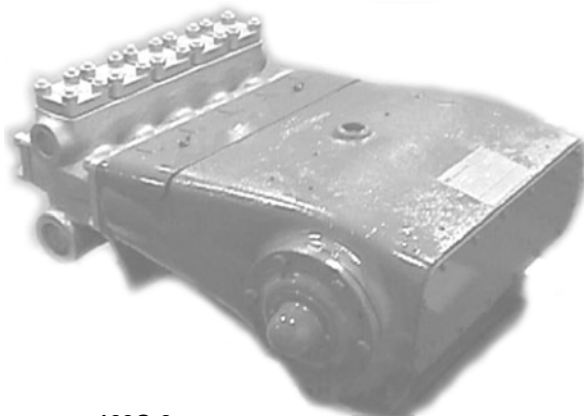
# 103Q-3 & 110Q-3 Multiplex Plunger Pumps Parts List



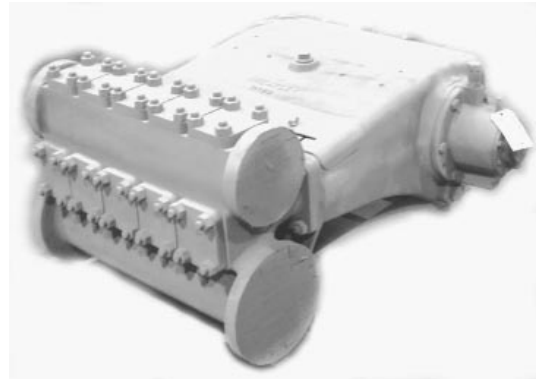
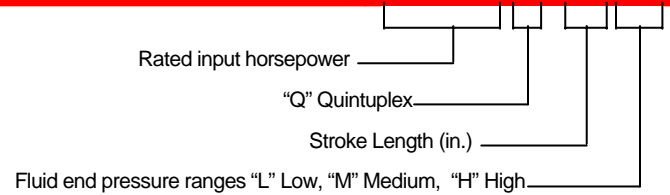
- Types:**  
**103Q-3L**  
**103Q-3M**  
**103Q-3H**  
**103Q-3MC**  
**103Q-3MSC**  
**110Q-3L**  
**110Q-3M**  
**110Q-3H**  
**110Q-3MC**  
**110Q-3MSC**

**Sales / Technical Information**

**USA Tollfree:** 1 (800) 324-4706  
**Phone:** 1 (918) 447-4600  
**Fax:** 1 (918) 447-4677  
**Internet:** <http://www.nov.com>



103Q-3



110Q-3

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3	118049	ASSY, CAST FLUID END, DUCTILE IRON (L)	FIRST	09-16-05
4	118050	ASSY, STEEL BILLET FLUID END (L)	FIRST	09-16-05
5	117953	ASSY, CAST FLUID END, BRONZE (M) THRD. CONN	FIRST	09-16-05
7	117956	ASSY, CAST FLUID END, DUCTILE IRON (M) THRD. CONN.	FIRST	09-16-05
9	117955	ASSY, CAST FLUID END, STAINLESS STEEL (M) THRD. CONN.	FIRST	09-16-05
11	118051	ASSY, CAST FLUID END, BRONZE (M) FLANGED CONN.	FIRST	09-16-05
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19	118041	ASSEMBLY, POWER END, 103Q-3	FIRST	09-16-05
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21	118044	ASSEMBLY, POWER END, 110Q-3	FIRST	09-16-05
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23	118043	ASSEMBLY, GEAR REDUCER UNIT, 103Q-3	FIRST	09-16-05
24	118046	ASSEMBLY, GEAR REDUCER UNIT, 110Q-3	FIRST	09-16-05
25	118055	ASSEMBLY, DISC VALVE (L)	FIRST	09-16-05
26	118056	ASSEMBLY, SPHERICAL VALVE (L)	FIRST	09-16-05
27	118225	ASSEMBLY, SPHERICAL VALVE, SEVERE DUTY (L)	FIRST	09-16-05
28	118057	ASSEMBLY, SEVERE DUTY VALVE (L)	FIRST	09-16-05
29	118058	ASSEMBLY, DISC VALVE (M)	FIRST	09-16-05
30	118059	ASSEMBLY, SPHERICAL VALVE (M)	FIRST	09-16-05
31	118226	ASSEMBLY, SPHERICAL VALVE, SEVERE DUTY (M)	FIRST	09-16-05
32	118060	ASSEMBLY, SEVERE DUTY (M)	FIRST	09-16-05
33	118061	ASSEMBLY, DISC VALVE (MSC)	FIRST	09-16-05

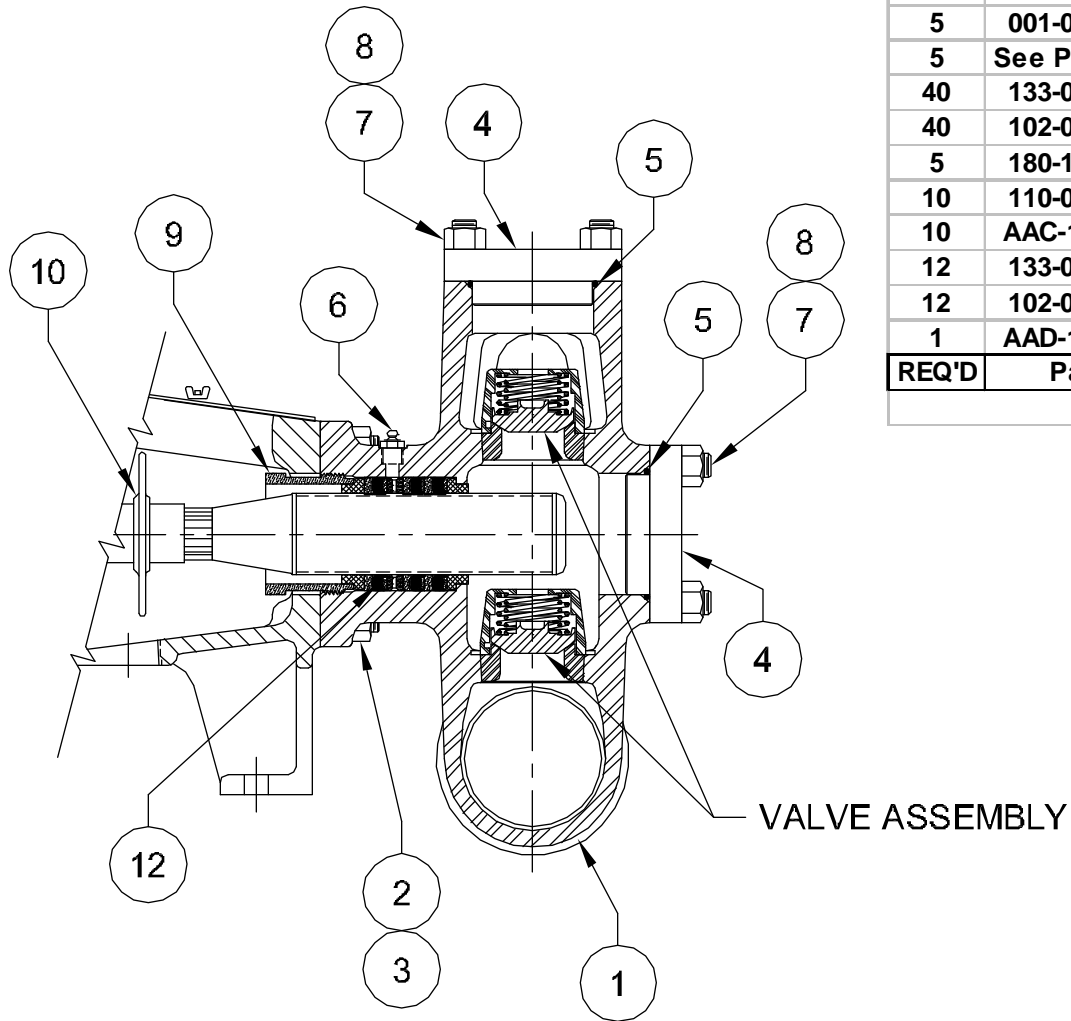
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35	118227	ASSEMBLY, SPHERICAL VALVE, SEVERE DUTY (MSC)	FIRST	09-16-05
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38	118065	ASSEMBLY, SEVERE DUTY, DISCHARGE VALVE (H)	FIRST	09-16-05
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40	118067	TOOL KIT, (M) CLASS FLUID END	FIRST	09-16-05
41	118068	TOOL KIT, (MS) CLASS FLUID END	FIRST	09-16-05
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43	118070	ASSY, PLUNGER KIT 2-1/4" – 3" J-STYLE PACKING	FIRST	09-16-05
49	118071	ASSY, PLUNGER KIT 2-1/4" – 3" BRAID STYLE PACKING	FIRST	09-16-05
56	118072	ASSY, PLUNGER KIT 2-1/4" – 3" SSF-4 STYLE PACKING	FIRST	09-16-05
63	118073	ASSY, PLUNGER KIT 1-1/2" – 2-1/2" J-STYLE PACKING	FIRST	09-16-05
72	118074	ASSY, PLUNGER KIT 1-1/2" – 1-1/2" BRAID STYLE PACKING	FIRST	09-16-05
81	118075	ASSY, PLUNGER KIT 1-1/2" – 2-1/2" SSF-4 STYLE PACKING	FIRST	09-16-05
90	118076	ASSY, PLUNGER KIT 1-1/8" – 1-3/8" J- STYLE PACKING	FIRST	09-16-05
93	118077	ASSY, PLUNGER KIT 1-1/8" – 1-3/8" SSF-4 STYLE PACKING	FIRST	09-16-05
96	118260	ASSY, PLUNGER KIT 1-1/2" – 2-1/2" J-STYLE PACKING, "MC" STYLE FLUID END	FIRST	09-16-05
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114	118262	ASSY, PLUNGER KIT 1-1/2" – 2-1/2" SSF-4 STYLE PACKING, "MC" STYLE FLUID END	FIRST	09-16-05
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126	118079	PLUNGERS, 2-1/4" THRU 3" CERAMIC	FIRST	09-16-05
127	118080	PLUNGERS, 2-1/4" THRU 3" HARD SURFACE	FIRST	09-16-05
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129	118082	PLUNGERS, 1-3/4" THRU 2-1/2" HARD SURFACE	FIRST	09-16-05
130	118083	PLUNGERS, 1-1/8" THRU 1-5/8" CERAMIC	FIRST	09-16-05
131	118084	PLUNGERS, 1-1/8" THRU 1-5/8" HARD SURFACE	FIRST	09-16-05
132	118085	PLUNGERS, 3/4" THRU 1" HARD SURFACE	FIRST	09-16-05
133	118163	ASSEMBLY, PACKING LUBRICATOR, 103Q-3	FIRST	09-16-05
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135	118181	ASSEMBLY, PACKING LUBRICATOR, 110Q-3	FIRST	09-16-05
136	118182	ASSEMBLY, D.O.H. LUBRICATOR, 110Q-3	FIRST	09-16-05
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138	118166	GENERAL DIMENSION, RHD, 103Q-3M	FIRST	09-16-05
139	118167	GENERAL DIMENSION, RHD, 103Q-3MSC	FIRST	09-16-05
140	118168	GENERAL DIMENSION, RHD, 103Q-3H	FIRST	09-16-05
141	118169	GENERAL DIMENSION, RHD, 110Q-3L	FIRST	09-16-05

142	118170	GENERAL DIMENSION, RHD, 110Q-3M	FIRST	09-16-05
143	118171	GENERAL DIMENSION, RHD, 110Q-3MSC	FIRST	09-16-05
144	118172	GENERAL DIMENSION, RHD, 110Q-3H	FIRST	09-16-05

	118057	SEVERE DUTY VALVE	
	118225	SPHERICAL VALVE-SEVERE DUTY	
	118056	SPHERICAL VALVE	
	118055	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
5	See Plunger Kits	PACKING	12
2	147-038034-220	DOWEL PIN FE/PE ALIGNMENT <*>	11
5	001-007986-201	BAFFLE DISC	10
5	See Plunger Kits	GLAND NUT 2-1/4" THRU 3"	9
40	133-034010-286	NUT ( VALVE COVER / CYLINDER HEAD )	8
40	102-034300-286	STUD ( VALVE COVER / CYLINDER HEAD	7
5	180-165000-220	LUBE FITTING	6
10	110-000342-200	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAC-115855-316	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	AAD-115856-316	FLUID END, CAST BRONZE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



< \* > NOT SHOWN

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CAST FLUID END  
BRONZE, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)

DWG No.:

118047

SCALE:

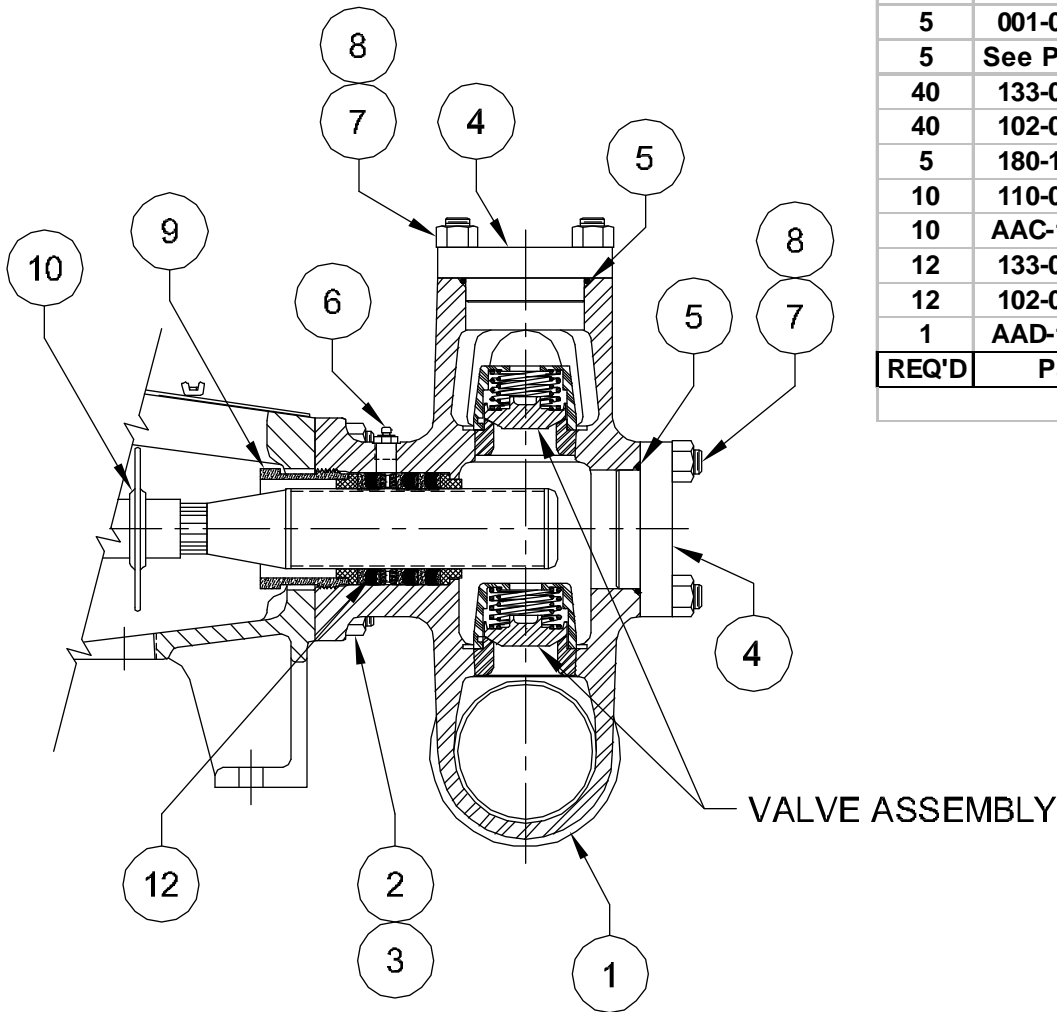
NONE

REV

A

SHT.:

1 OF 1



	118057	SEVERE DUTY VALVE	
	118225	SPHERICAL VALVE-SEVERE DUTY	
	118056	SPHERICAL VALVE	
	118055	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	12
2	147-038034-220	DOWEL PIN FE/PE ALIGNMENT <*>	11
5	001-007986-201	BAFFLE DISC	10
5	See Plunger Kits	GLAND NUT 2-1/4" THRU 3"	9
40	133-034010-287	NUT ( VALVE COVER / CYLINDER HEAD )	8
40	102-034300-287	STUD ( VALVE COVER / CYLINDER HEAD	7
5	180-165000-220	LUBE FITTING	6
10	110-000342-200	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAC-115855-594	CYLINDER HEAD / VALVE COVER	4
12	133-034010-287	NUT	3
12	102-034234-287	STUD	2
1	AAD-115856-594	FLUID END, STAINLESS STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

<\*> NOT SHOWN

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CAST FLUID END  
STAINLESS STEEL, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)

DWG No.:

118048

SCALE:

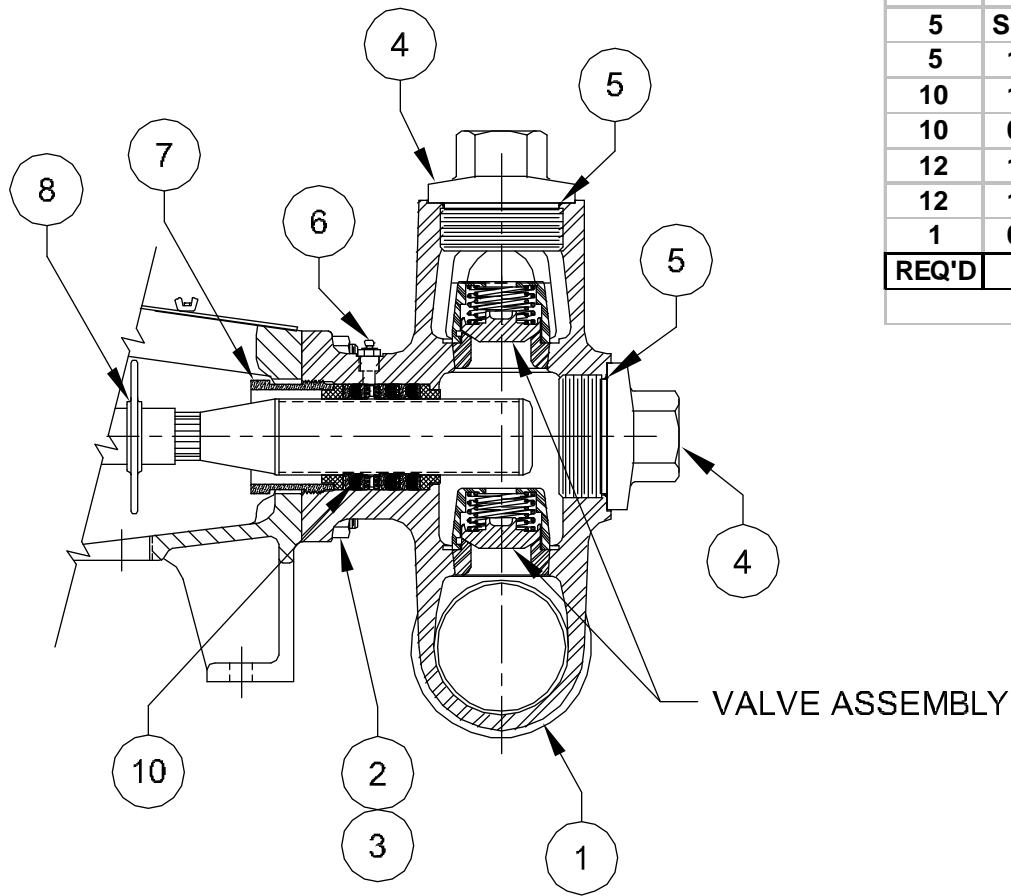
NONE

REV

A

SHT.:

1 OF 1



	118057	SEVERE DUTY VALVE	
	118225	SPHERICAL VALVE-SEVERE DUTY	
	118056	SPHERICAL VALVE	
	118055	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	10
2	147-038034-220	DOWEL PIN FE/PE ALIGNMENT <*>	9
5	001-007986-201	BAFFLE DISC	8
5	See Plunger Kits	GLAND NUT 2-1/4" THRU 3"	7
5	180-165000-220	LUBE FITTING	6
10	110-000243-201	O-RING ( VALVE COVER / CYLINDER HEAD)	5
10	002-029497-351	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	008-013023-351	FLUID END, DUCTILE IRON	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

<\*> NOT SHOWN

3

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CAST FLUID END  
 DUCTILE IRON, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)

DWG No.:

118049

SCALE:

NONE

REV

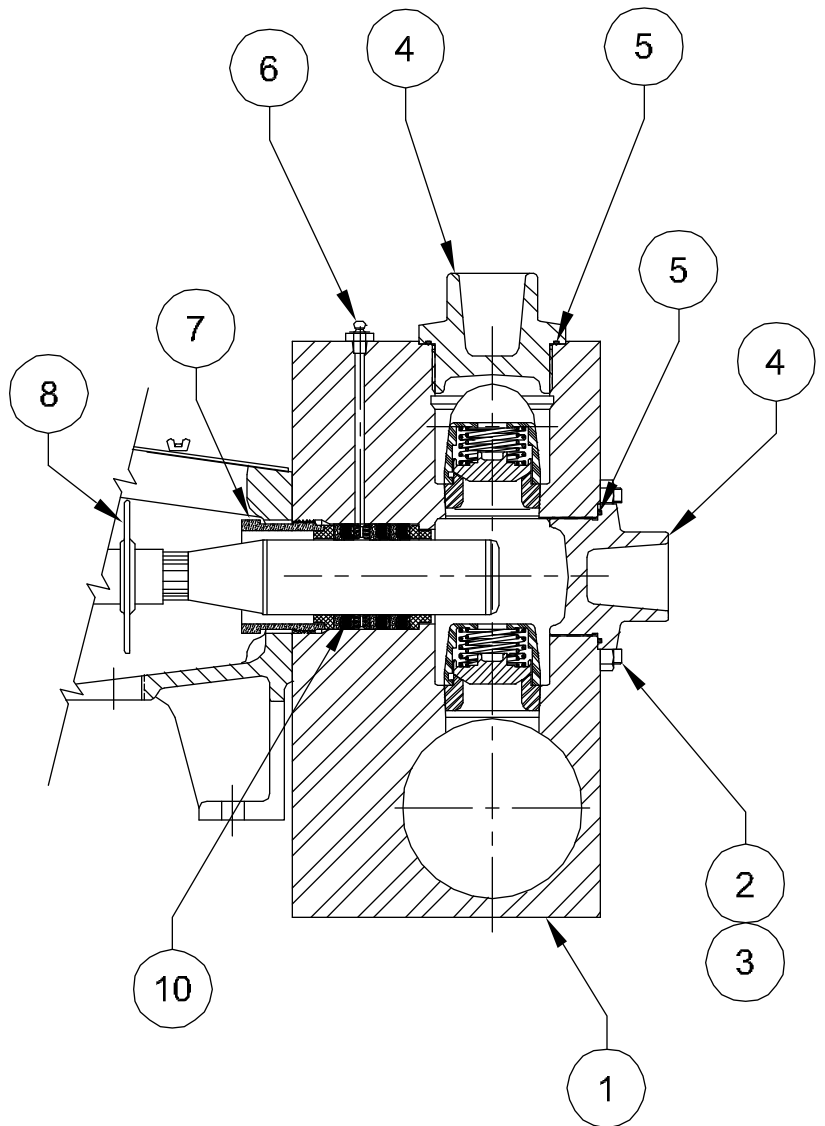
A

SHT.:

1 OF 1

	118057	SEVERE DUTY VALVE	
	118225	SPHERICAL VALVE-SEVERE DUTY	
	118056	SPHERICAL VALVE	
	118055	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
5	See Plunger Kits	PACKING	10
2	147-038034-220	DOWEL PIN <*>	9
5	001-007986-201	BAFFLE DISC	8
5	See Plunger Kits	GLAND NUT 2-1/4" THRU 3"	7
5	180-165000-220	LUBE FITTING	6
10	110-000243-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	002-029497-351	CYLINDER HEAD / VALVE COVER	4
12	133-012013-286	NUT	3
12	AAA-012801-286	STUD	2
1	AAC-030464-H02	FLUID END, STEEL	1
REQ'D	Part No.	DESCRIPTION	ITEM

**BILL OF MATERIAL**



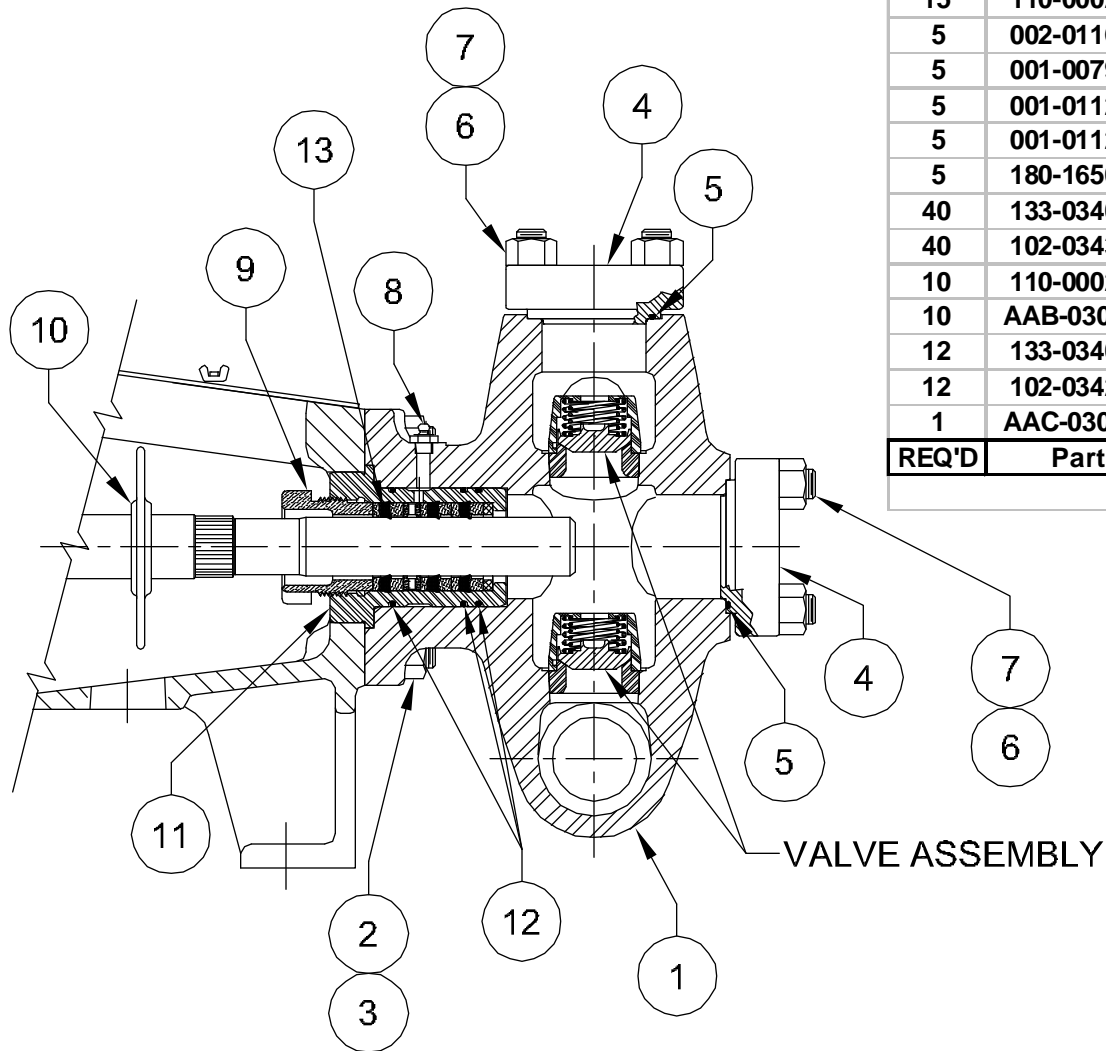
< \* > NOT SHOWN

4

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, BILLET FLUID END STEEL, 2-1/4" thru 3" PLUNGER 103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)			
DWG No.:	118050	SCALE:	NONE
REV	A	SHT.:	1 OF 1



	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	13
15	110-000232-201	SEAL ( STUFFING BOX )	12
5	002-011673-316	STUFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	001-011231-304	GLAND NUT 1-5/8"	
5	001-011230-304	GLAND NUT 1-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-286	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-286	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-261	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	AAC-030729-316	FLUID END, CAST BRONZE	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			



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HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CAST FLUID END  
BRONZE, 1-1/2" & 1-5/8" PLUNGER  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

117953

SCALE:

NONE

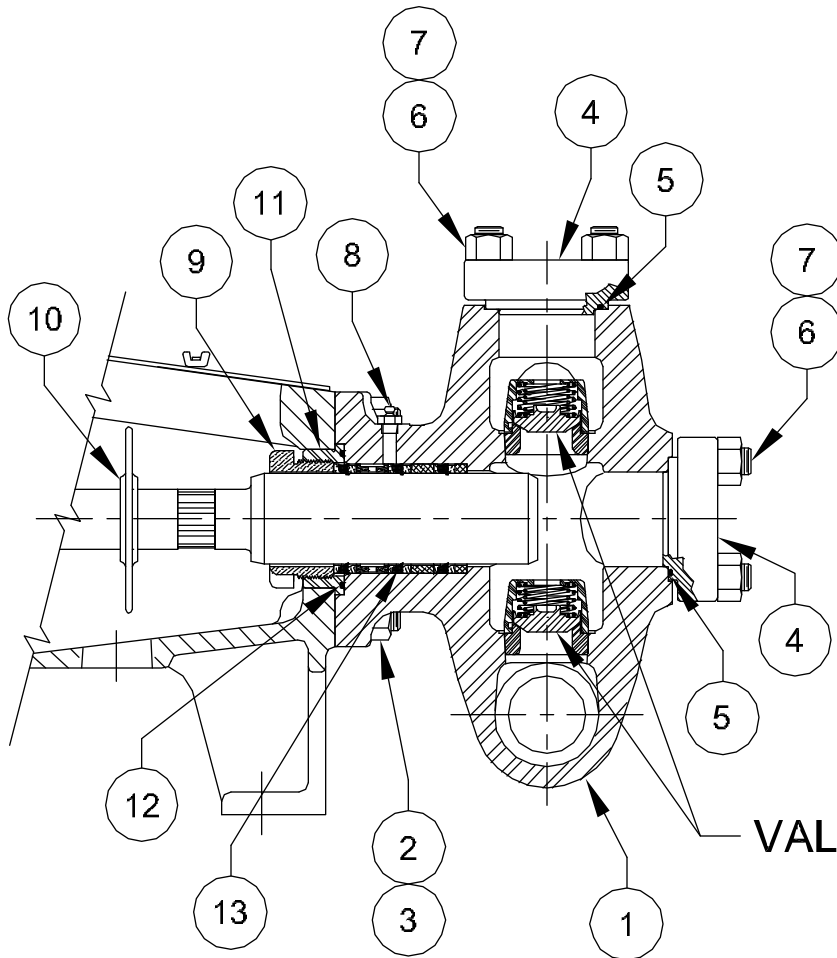
REV

A

SHT.:

1 OF 2

118060	SEVERE DUTY VALVE		
118226	SPHERICAL VALVE-SEVERE DUTY		
118059	SPHERICAL VALVE		
118058	DISC VALVE		
<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>		
5	See Plunger Kits	PACKING	13
5	110-000238-201	SEAL ( ADAPTER )	12
5	001-010258-313	ADAPTER	11
5	001-007986-201	BAFFLE DISC	10
5	002-007977-261	GLAND NUT 1-3/4" THRU 2-1/2" PLUNGER	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-286	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-286	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-261	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	AAC-030729-316	FLUID END, CAST BRONZE	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			



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**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CAST FLUID END  
BRONZE, 1-3/4" THRU 2-1/2" PLUNGER  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

117953

SCALE:

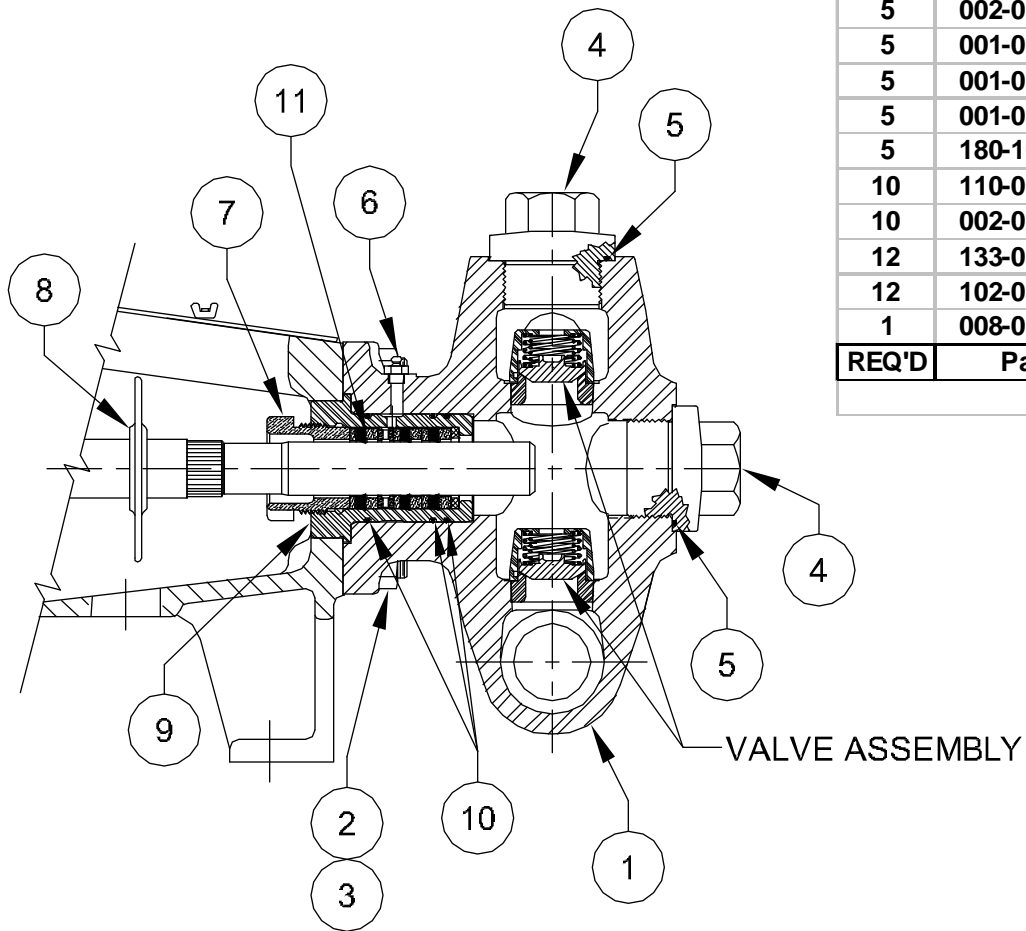
NONE

REV

A

SHT.:

2 OF 2



	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
5	See Plunger Kits	PACKING	11
15	110-000232-200	SEAL ( STUFFING BOX )	10
5	002-011673-237	STUFING BOX	9
5	001-007986-201	BAFFLE DISC	8
5	001-011231-351	GLAND NUT 1-5/8"	
5	001-011230-351	GLAND NUT 1-1/2"	7
5	180-165000-220	LUBE FITTING	6
10	110-000232-200	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	002-027613-351	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	008-010313-351	FLUID END, CAST DUCTILE IRON	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

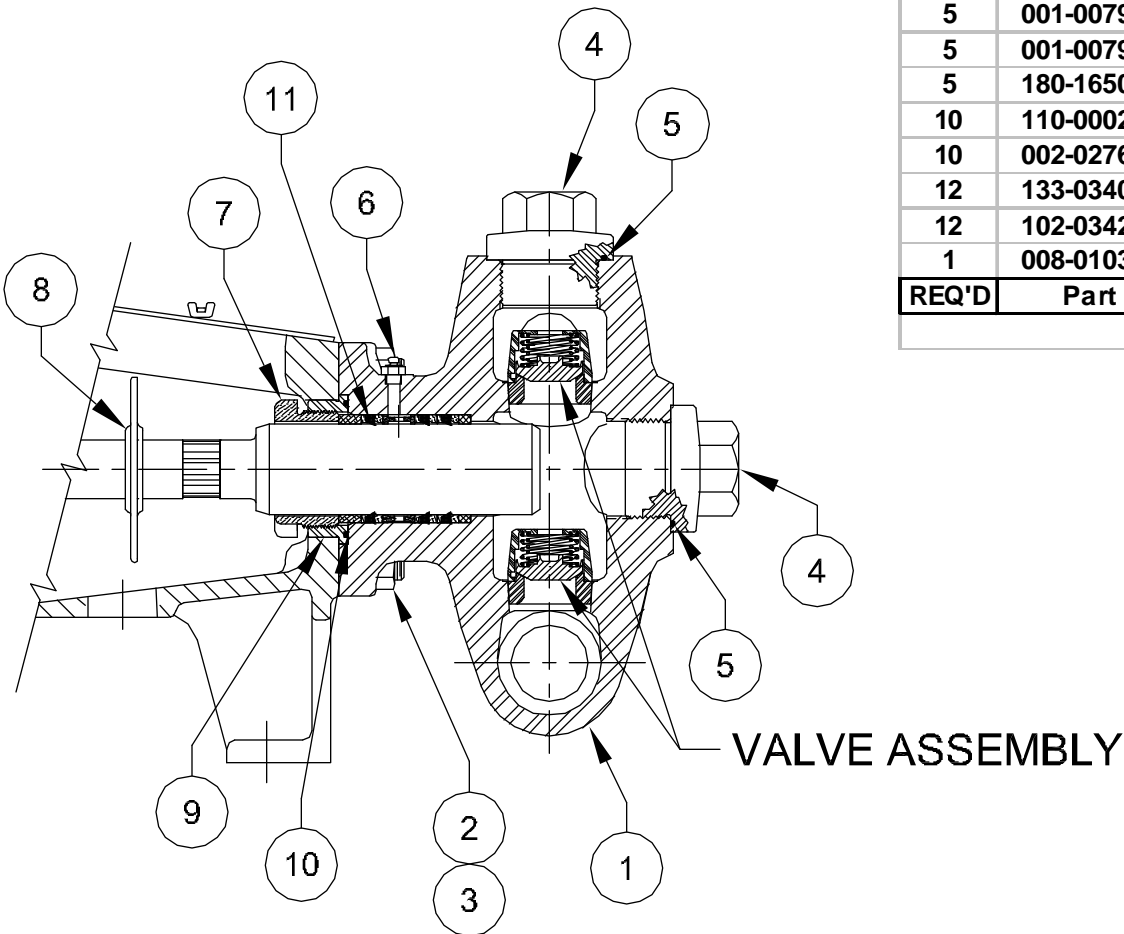
7

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

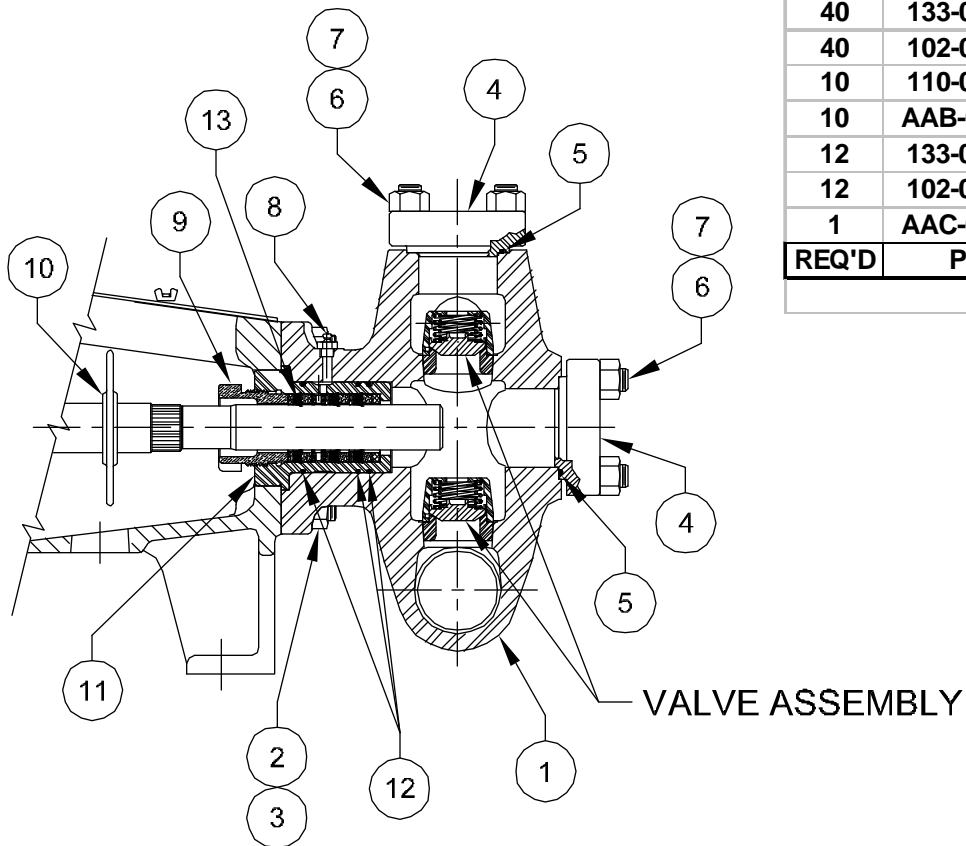
TITLE:  
 ASSEMBLY, CAST FLUID END  
 DUCTILE IRON, 1-1/2" & 1-5/8" PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 117956 SCALE: NONE REV A SHT.: 1 of 2

	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	11
5	110-000238-200	SEAL ( ADAPTER )	10
5	001-010258-236	ADAPTER	9
5	001-007986-201	BAFFLE DISC	8
5	001-007977-351	GLAND NUT 1-3/4" THRU 2-1/2"	7
5	180-165000-220	LUBE FITTING	6
10	110-000232-200	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	002-027613-351	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	008-010313-351	FLUID END, CAST DUCTILE IRON	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>



<b>NOV NATIONAL OILWELL VARCO</b>	
HOUSTON, TEXAS, U.S.A.	ENGINEERING, TULSA, OKLAHOMA
TITLE: ASSEMBLY, CAST FLUID END DUCTILE IRON, 1-3/4" THRU 2-1/2" PLUNGER 103Q-3M, 110Q-3M, (Q3115AM, HP125AM)	
DWG No.: 117956	SCALE: NONE
REV A	SHT.: 2 OF 2



118060	SEVERE DUTY VALVE		
118226	SPHERICAL VALVE-SEVERE DUTY		
118059	SPHERICAL VALVE		
118058	DISC VALVE		
<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>		
5	See Plunger Kits	PACKING	13
15	110-000232-200	SEAL ( STUFFING BOX )	12
5	002-011673-278	STUFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	ABC-013800-E16	GLAND NUT 1-5/8"	
5	ACC-013800-E16	GLAND NUT 1-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-287	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-287	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-200	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-596	CYLINDER HEAD / VALVE COVER	4
12	133-034010-287	NUT	3
12	102-034234-287	STUD	2
1	AAC-030729-594	FLUID END, CAST STAINLESS 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, CAST STAINLESS STEEL  
 THREAD CONNECTION, 1-1/2" & 1-5/8" PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

117955

SCALE:

NONE

REV

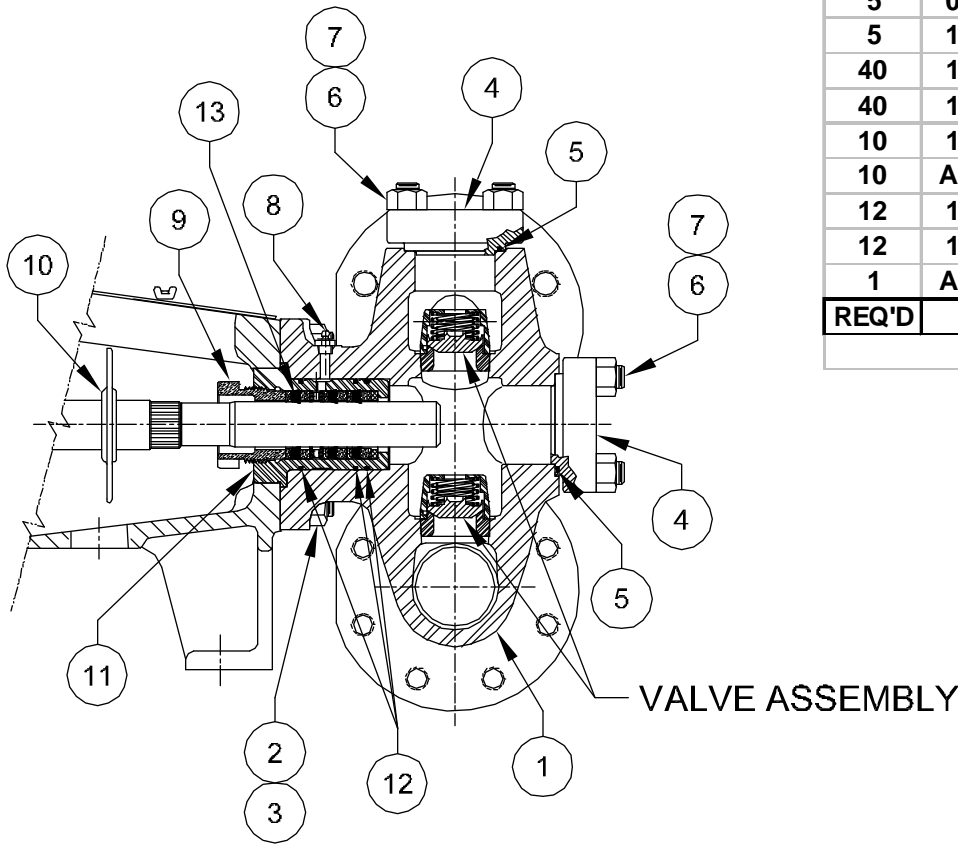
A

SHT.:

1 of 2

9





	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
5	See Plunger Kits	PACKING	13
15	110-000232-200	SEAL ( STUFFING BOX )	12
5	002-011673-316	STUFFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	001-011231-304	GLAND NUT 1-5/8"	
5	001-011230-304	GLAND NUT 1-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-286	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-286	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-261	CYLINDER HEAD / VALVE COVER	4
12	133-034010-286	NUT	3
12	102-034234-286	STUD	2
1	AAC-030777-316	FLUID END, CAST BRONZE-FLANGED	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

11

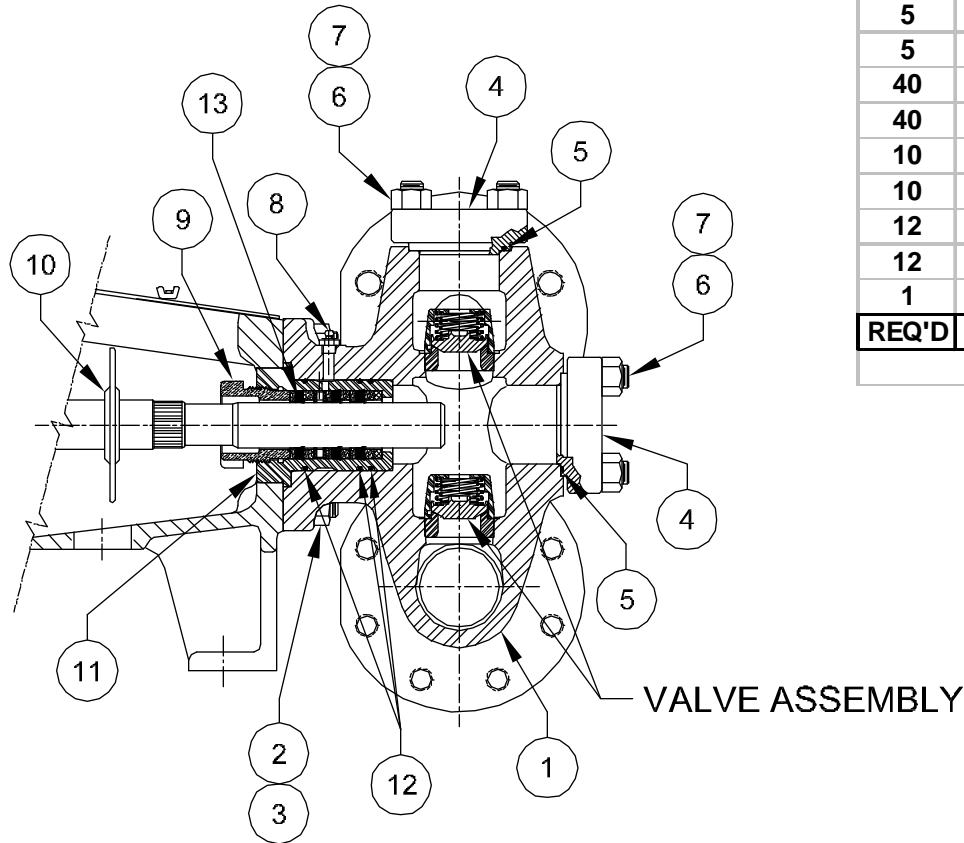
**NOV NATIONAL OILWELL VARCO**  
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
 ASSEMBLY, CAST BRONZE, FLANGED CONNECTION, 1-1/2" & 1-5/8" PLUNGER 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:	118051	SCALE:	NONE	REV	A	SHT.:	1 OF 2
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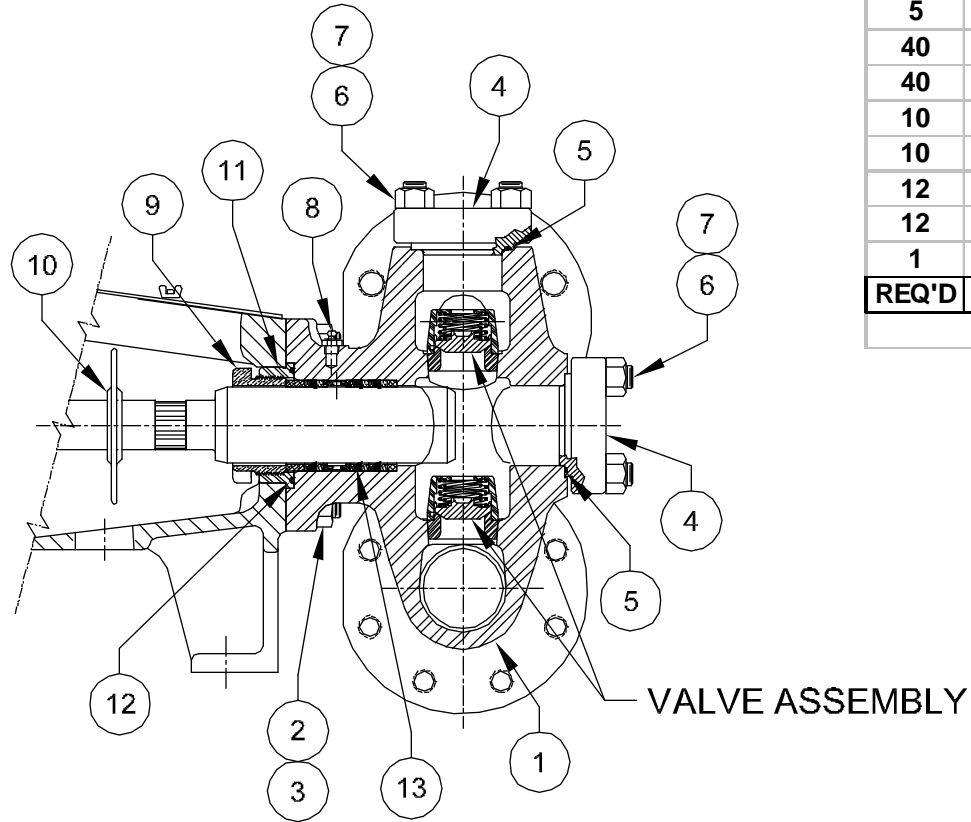
	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	13
15	110-000232-200	SEAL ( STUFFING BOX )	12
5	002-011673-278	STUFFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	ABC-013800-E16	GLAND NUT 1-5/8"	
5	ACC-013800-E16	GLAND NUT 1-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-287	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-287	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-596	CYLINDER HEAD / VALVE COVER	4
12	133-034010-287	NUT	3
12	102-034234-287	STUD	2
1	AAC-030777-594	FLUID END, CAST STAIN. STEEL-FLANGED	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

**NOV NATIONAL OILWELL VARCO**

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

TITLE:  
**ASSEMBLY, CAST STAINLESS STEEL  
 FLANGED CONNECTION, 1-1/2" & 1-5/8" PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)**

DWG No.:	SCALE:	REV	SHT.:
118052	NONE	A	1 OF 2



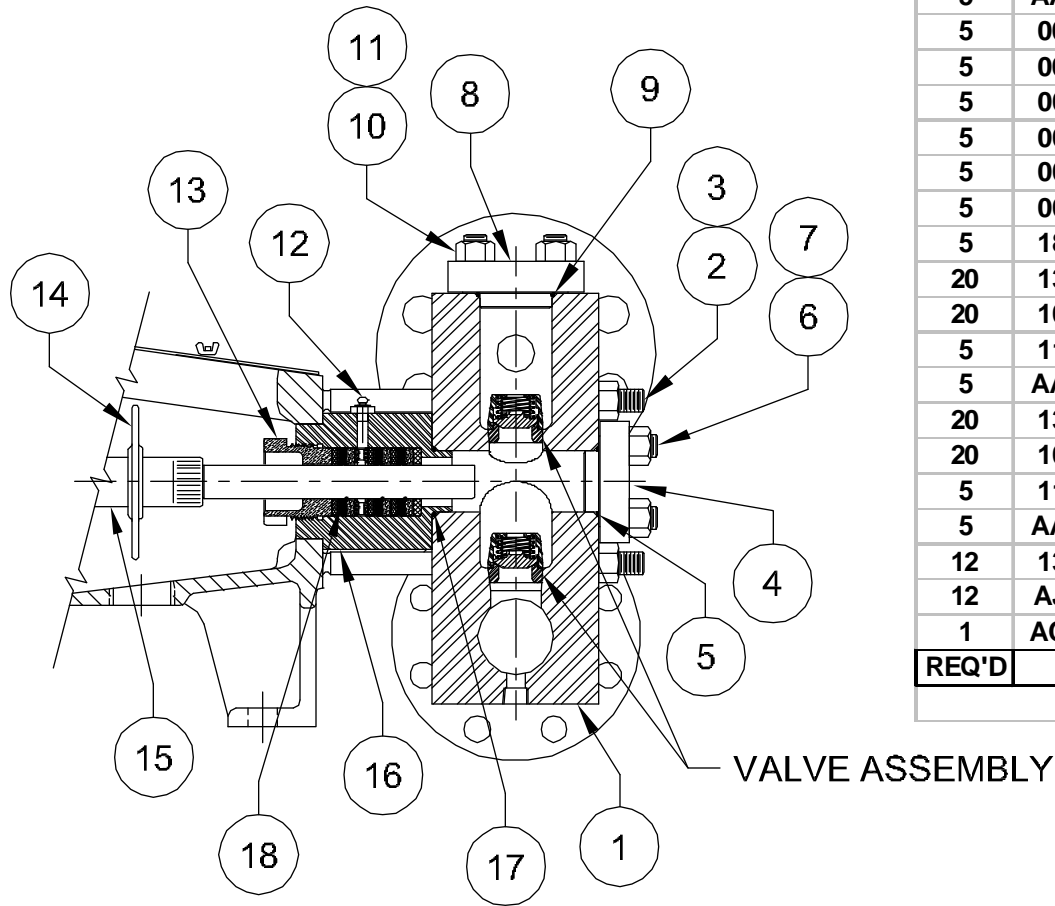
	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	13
5	110-000238-200	SEAL ( ADAPTER )	12
5	001-010258-278	ADAPTER	11
5	001-007986-201	BAFFLE DISC	10
5	002-007977-E16	GLAND NUT 1-3/4" THRU 2-1/2" PLUNGER	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-287	NUT ( VALVE COVER / CYLINDER HEAD )	7
40	102-034314-287	STUD ( VALVE COVER / CYLINDER HEAD	6
10	110-000232-201	SEAL ( VALVE COVER / CYLINDER HEAD	5
10	AAB-030700-596	CYLINDER HEAD / VALVE COVER	4
12	133-034010-287	NUT	3
12	102-034234-287	STUD	2
1	AAC-030777-594	FLUID END, CAST STAIN. STEEL-FLANGED	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

**NOV NATIONAL OILWELL VARCO**

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

TITLE:  
 ASSEMBLY, CAST STAINLESS STEEL  
 FLANGED CONNECTION, 1-3/4" THRU 2-1/2"  
 PLGR., 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No:	118052	SCALE:	NONE	REV	A	SHT.:	2 OF 2
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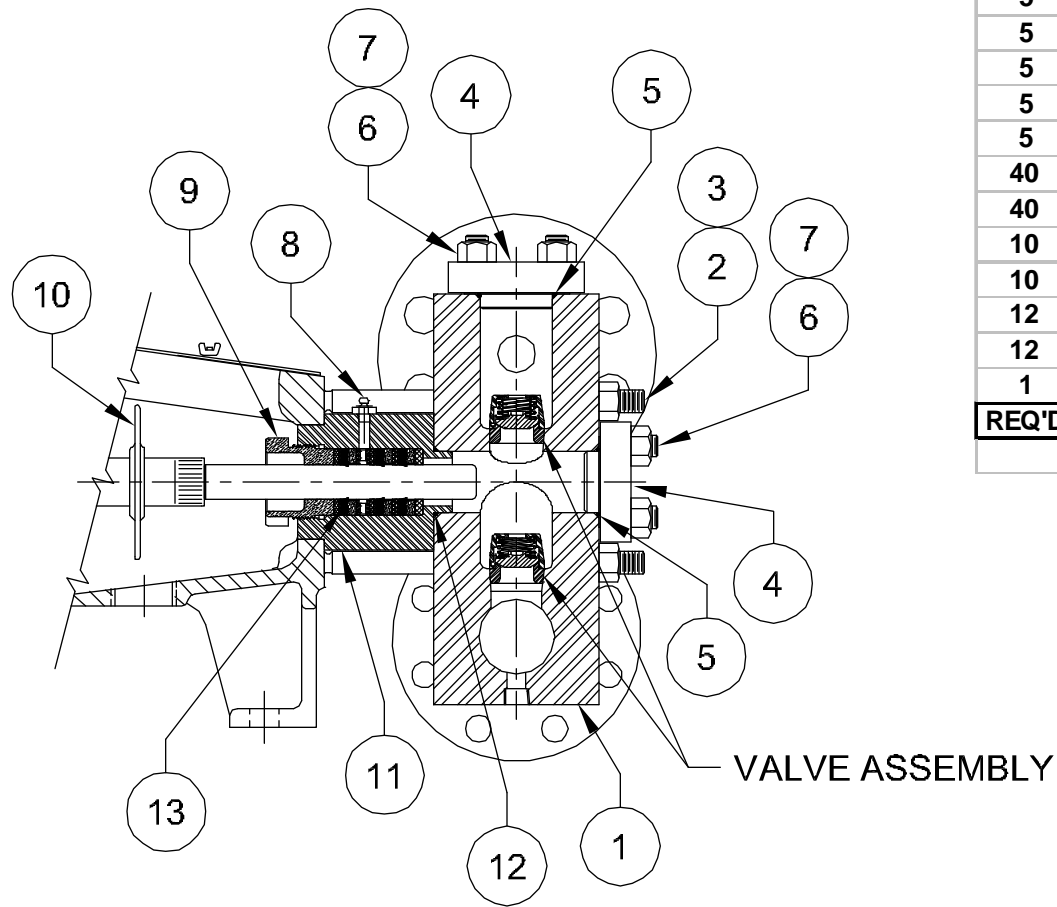
	118063	SEVERE DUTY VALVE	
	118227	SPHERICAL VALVE-SEVERE DUTY	
	118062	SPHERICAL VALVE	
	118061	DISC VALVE	
	<u>DRAWING No:</u>	<u>VALVE ASSEMBLY:</u>	
5	See Plunger Kits	PACKING	18
5	110-000226-200	SEAL - STUFFING BOX	17
5	AAC-117585-270	STUFFING BOX	16
5	001-010260-402	ADAPTER ROD, (1-1/4 & 1-3/8 PLGR)	
5	001-009090-402	ADAPTER ROD (1-1/8 PLGR)	15
5	001-007986-201	BAFFLE DISC	14
5	001-011229-351	GLAND NUT 1-3/8"	
5	001-011228-351	GLAND NUT 1-1/4"	
5	001-011227-351	GLAND NUT 1-1/8"	13
5	180-165000-220	LUBE FITTING	12
20	133-034010-286	NUT	11
20	102-034300-286	STUD	10
5	110-000229-200	SEAL ( VALVE COVER )	9
5	AAC-117375-231	VALVE COVER	8
20	133-034010-286	NUT	7
20	102-034300-286	STUD	6
5	110-000226-200	SEAL ( CYLINDER HEAD )	5
5	AAC-117502-231	CYLINDER HEAD	4
12	133-034010-286	NUT	3
12	AJB-030410-286	STUD	2
1	ACC-118134-H02	FLUID END, STEEL	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

**NOV NATIONAL OILWELL VARCO**

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

TITLE:  
**ASSEMBLY, FLUID END**  
**STEEL FLANGED, 1-1/8" THRU 1-3/8" PLGR.**  
**103Q-3MSC, 110Q-3MSC (Q150-2)**

DWG No.: 118053	SCALE: NONE	REV A	SHT.: 1 of 3
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	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	13
5	110-000337-200	SEAL - STUFFING BOX	12
5	AAC-030944-270	STUFFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	001-011231-351	GLAND NUT 1-5/8"	
5	001-011230-351	GLAND NUT 1-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-286	NUT	7
40	102-034300-286	STUD	6
10	110-000337-200	SEAL (CYL HEAD/VALVE COVER )	5
10	AAB-030939-231	CYLINDER HEAD/VALVE COVER	4
12	133-034010-286	NUT	3
12	AJB-030410-286	STUD	2
1	AAC-117053-H02	FLUID END, STEEL	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

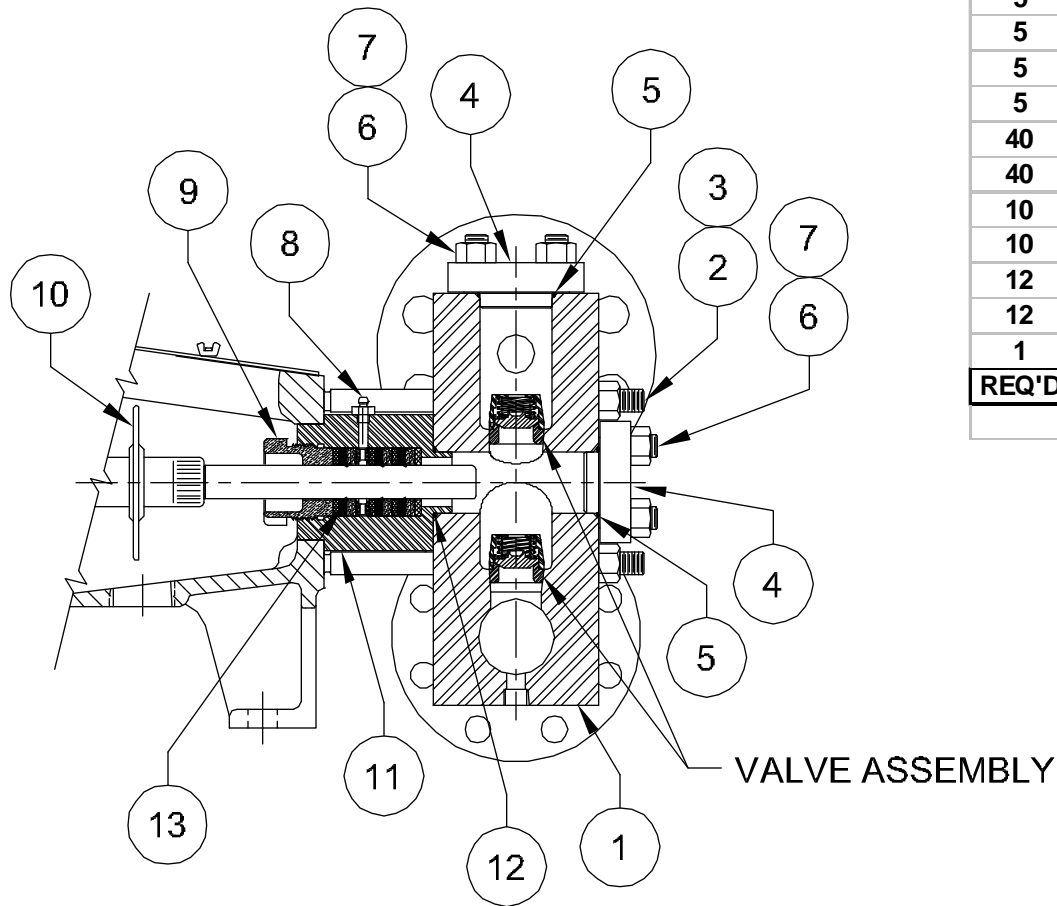
16

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

TITLE:  
**ASSEMBLY, FLUID END**  
**STEEL FLANGED, 1-1/2" THRU 1-5/8" PLGR.**  
**103Q-3MC, 110Q-3MC (Q150-3)**

DWG No.:	118053	SCALE:	NONE	REV	A	SHT.:	2 OF 3
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	118060	SEVERE DUTY VALVE	
	118226	SPHERICAL VALVE-SEVERE DUTY	
	118059	SPHERICAL VALVE	
	118058	DISC VALVE	
	<b>DRAWING No:</b>	<b>VALVE ASSEMBLY:</b>	
5	See Plunger Kits	PACKING	13
5	110-000337-200	SEAL - STUFFING BOX	12
5	AAC-030940-270	STUFFING BOX	11
5	001-007986-201	BAFFLE DISC	10
5	002-007977-261	GLAND NUT 1-3/4" THRU 2-1/2"	9
5	180-165000-220	LUBE FITTING	8
40	133-034010-286	NUT	7
40	102-034300-286	STUD	6
10	110-000337-200	SEAL (CYL HEAD/VALVE COVER)	5
10	AAB-030939-231	CYLINDER HEAD/VALVE COVER	4
12	133-034010-286	NUT	3
12	AJB-030410-286	STUD	2
1	AAC-117053-H02	FLUID END, STEEL	1
<b>REQ'D</b>		<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			



17

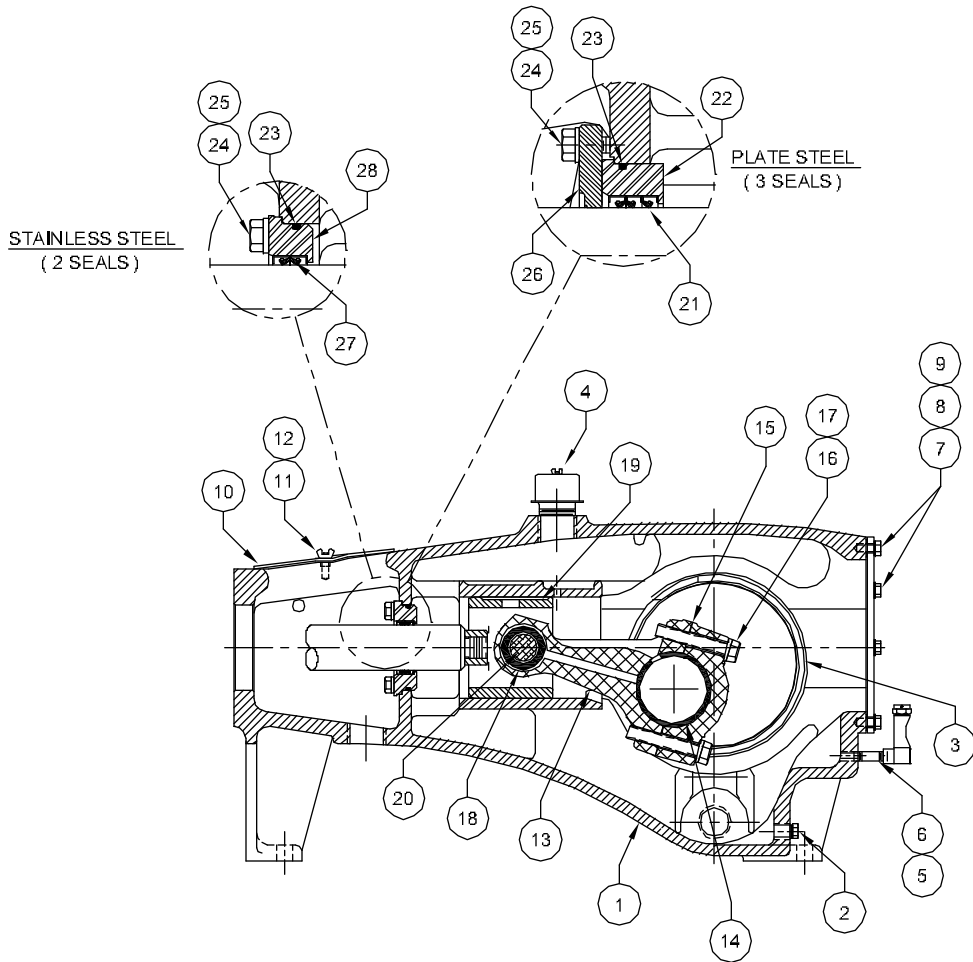
**NOV NATIONAL OILWELL VARCO**

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

TITLE:  
**ASSEMBLY, FLUID END**  
**STEEL FLANGED, 1-3/4" THRU 2-1/2" PLGR.**  
**103Q-3MC, 110Q-3MC (Q150-3)**

DWG No.:	SCALE:	REV	SHT.:
118053	NONE	A	3 OF 3





REQ'D	Part No.	DESCRIPTION	ITEM
		< * > NOT SHOWN ON PARTS DRAWING	
4	170-014003-220	PLUG < * >	29
5	002-027668-261	WIPER BOX (2 SEAL)	28
10	145-158238-999	OIL SEAL (2 SEAL)	27
5	001-007968-350	GLAND	26
10	150-038016-306	NUT	25
10	104-038114-286	STUD	24
5	110-000238-201	O-RING	23
5	001-007963-237	WIPER BOX (3 SEAL)	22
15	145-158238-999	OIL SEAL (3 SEAL)	21
5	001-007954-236	WRIST PIN	20
5	002-007957-350	CROSSHEAD	19
5	001-007953-302	BUSHING	18
10	100-012234-290	CAP SCREW	17
10	154-012087-220	LOCK WASHER	16
10	001-007959-999	SHIM SET, CONNECTING ROD	15
5	002-001292-999	SHELL BEARING	14
5	998-016300-035	CONNECTING ROD (COMPLETE) - SEE NOTE BELOW	13
2	187-038016-286	WING NUT (CRADLE COVER)	12
2	104-038100-286	STUD (CRADLE COVER)	11
1	001-011298-231	CRADLE COVER	10
16	100-038034-290	CAP SCREW (CRANKCASE COVER)	9
1	001-011251-204	GASKET (CRANKCASE COVER)	8
1	001-011253-231	CRANKCASE COVER	7
1	157-018112-220	PIPE NIPPLE	6
1	001-010803-999	OIL SITE GAUGE	5
1	ABB-113766-000	AIR BREATHER	4
2	002-010516-999	CENTER MAIN BEARINGS	3
1	170-012005-353	DRAIN PLUG	2
1	008-011160-356	POWER FRAME	1
BILL OF MATERIAL			

NOTE: INCLUDES ITEMS, 16, 17, & 18

19



**NATIONAL OILWELL**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

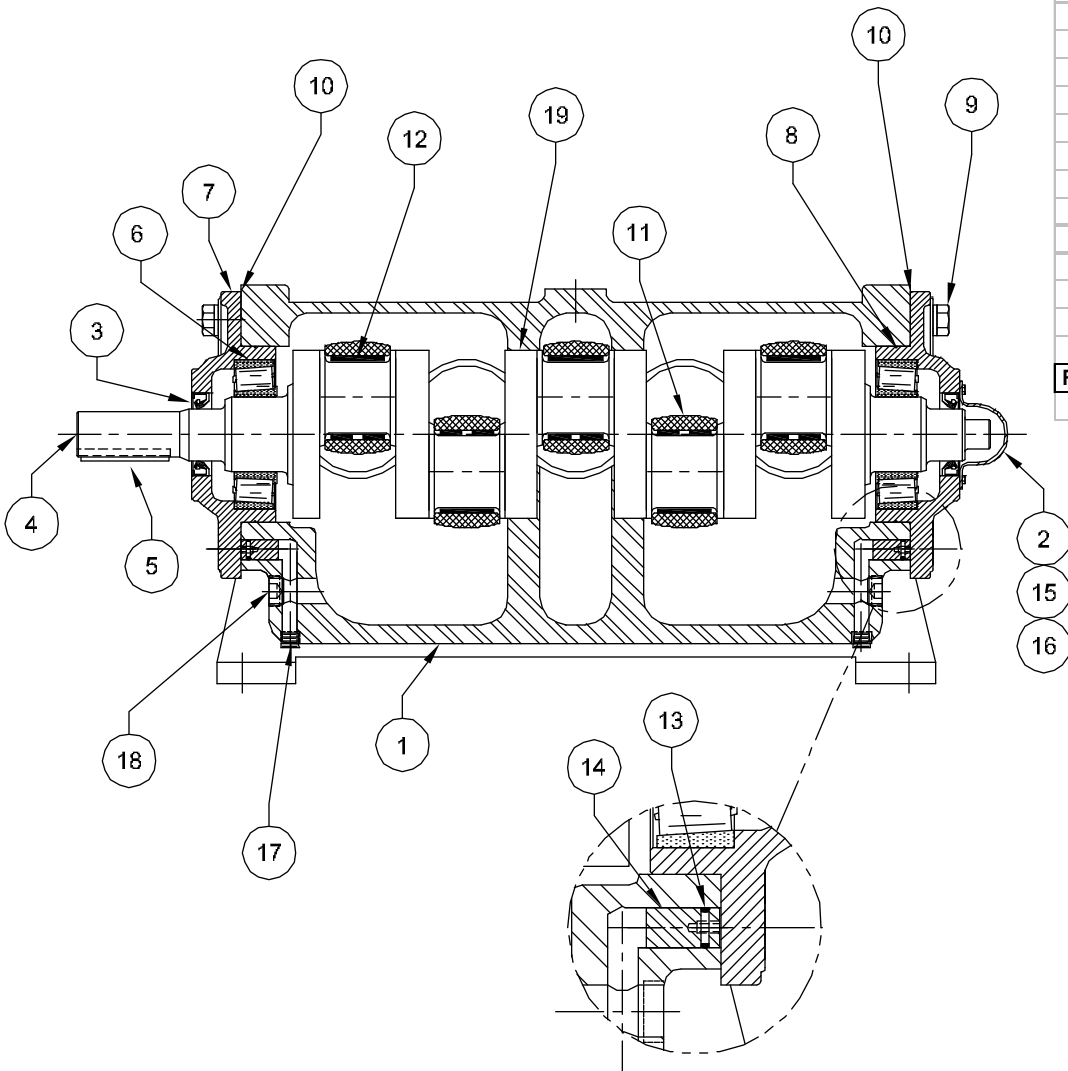
ASSEMBLY, POWER END  
103Q-3 ( Q3115 )

DWG No.: 118041

SCALE: NONE

REV A

SHT.: 1 OF 1



1	998-016300-034	CONNECTING ROD w/ NDL BEARING ( * )	DD
1	998-016300-036	WIPER BOX GLAND NUT KIT ( * )	BB
1	998-516300-011	POWER END GASKET KIT ( * )	AA
REQ'D	Part No.	DESCRIPTION	OPTION
OPTIONAL PARTS AND KITS			
2	002-010516-999	CENTER MAIN BEARINGS	19
2	170-114003-220	PIPE PLUG	18
2	170-034003-220	PIPE PLUG	17
2	154-014049-220	LOCK WASHER	16
2	113-014038-220	MACH SCREW	15
2	001-016981-237	PLUG	14
2	110-000210-201	O-RING	13
5	002-001292-999	SHELL BEARING	12
5	998-016300-035	CONN. ROD (COMPELTE)	11
1	998-016300-037	SHIM GASKET KIT	10
12	100-058112-290	CAP SCREW ( BEARING HOUSING )	9
2	110-000264-201	O-RING	8
2	002-007961-350	BEARING HOUSING	7
2	120-256053-999	END BEARING	6
1	146-058358-236	KEY	5
1	008-028829-348	CRANKSHAFT	4
2	145-212312-999	OIL SEAL	3
1	001-007971-282	EXTENSION GUARD ( ** )	2
1	008-011160-356	POWER FRAME	1
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

\* NOT SHOWN ON PARTS DRAWING  
 \*\* OMIT WHEN LUBRICATOR IS USED

20



**NATIONAL OILWELL**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CRANKSHAFT  
 POWER END  
 103Q-3 ( Q3115 )

DWG No.:

118042

SCALE:

NONE

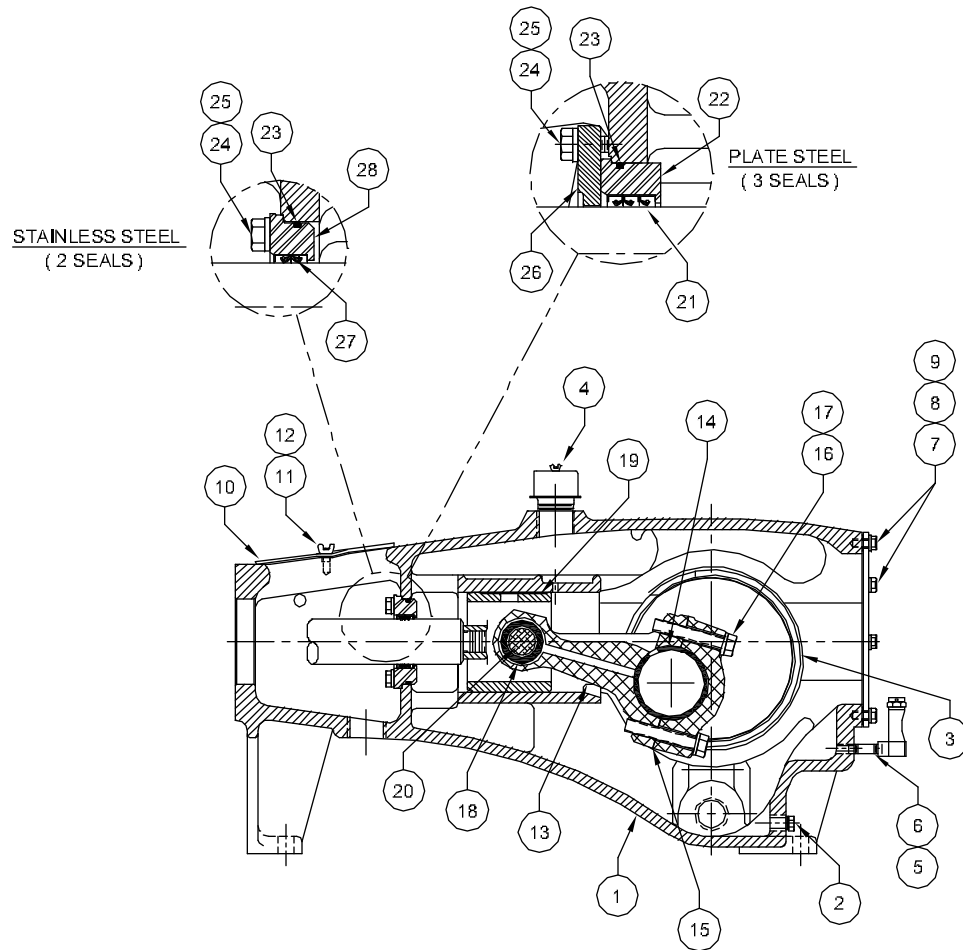
REV

A

SHT.:

1 OF 1





REQ'D	Part No.	DESCRIPTION	ITEM
		< * > NOT SHOWN ON PARTS DRAWING	
4	170-014003-220	PLUG < * >	29
5	002-027668-261	WIPER BOX (2 SEAL)	28
10	145-158238-999	OIL SEAL (2 SEAL)	27
5	001-007968-350	GLAND	26
10	150-038016-306	NUT	25
10	104-038114-286	STUD	24
5	110-000238-201	O-RING	23
5	001-007963-237	WIPER BOX (3 SEAL)	22
15	145-158238-999	OIL SEAL (3 SEAL)	21
5	001-007954-236	WRIST PIN	20
5	002-007957-350	CROSSHEAD	19
5	001-007953-302	BUSHING	18
10	100-012234-290	CAP SCREW	17
10	154-012087-220	LOCK WASHER	16
10	001-011677-999	SHIM SET, CONNECTING ROD	15
5	002-001292-999	SHELL BEARING	14
5	998-812500-005	CONNECTING ROD (COMPLETE) - SEE NOTE BELOW	13
2	187-038016-286	WING NUT (CRADLE COVER)	12
2	104-038100-286	STUD (CRADLE COVER)	11
1	001-011298-231	CRADLE COVER	10
16	100-038034-290	CAP SCREW (CRANKCASE COVER)	9
1	001-011251-204	GASKET (CRANKCASE COVER)	8
1	001-011253-231	CRANKCASE COVER	7
1	157-018112-220	PIPE NIPPLE	6
1	001-010803-999	OIL SITE GAUGE	5
1	ABB-113766-000	AIR BREATHER	4
2	002-010516-999	CENTER MAIN BEARINGS	3
1	170-012005-353	DRAIN PLUG	2
1	008-011160-356	POWER FRAME	1
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

NOTE: INCLUDES ITEMS 16, 17, & 18

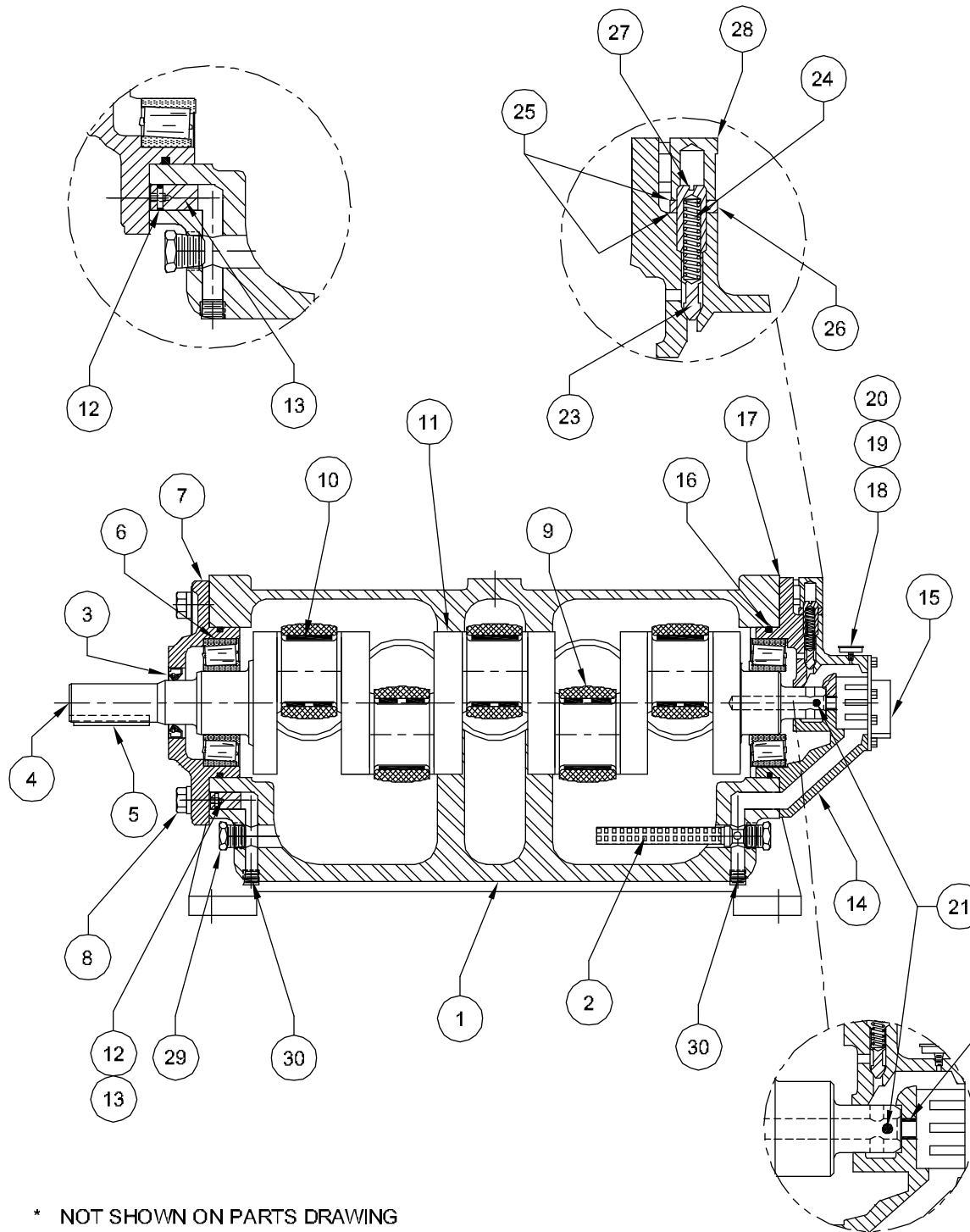
21



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

TITLE:  
**ASSEMBLY, POWER END**  
**110Q-3 (HP125)**

DWG No.:	118044	SCALE:	NONE	REV:	A	SHT.:	1 OF 1
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\* NOT SHOWN ON PARTS DRAWING

REQ'D	Part No.	DESCRIPTION	OPTION
1	998-812500-013	CONNECTING ROD w/ NDL BEARING (*)	CC
1	998-016300-036	WIPER BOX GLAND NUT KIT (*)	BB
1	998-812500-007	POWER END GASKET KIT (*)	AA
<b>OPTIONAL PARTS AND KITS</b>			
2	170-034003-220	PIPE PLUG	30
1	170-114003-220	PIPE PLUG	29
1	001-014243-271	CAP	28
1	001-014242-271	PRESSURE ADJUSTING SCREW	27
1	130-078014-243	JAM NUT	26
2	001-014251-206	GASKET/WASHER	25
1	001-014241-363	SPRING, RELIEF VALVE	24
1	001-014244-278	RELIEF VALVE BODY	23
1	001-011122-999	OIL PUMP BUSHING	22
1	001-014240-220	DRIVE PIN	21
1	227-014018-405	PIPE BUSHING, HEX	20
1	469-080202-305	ADAPTER, 1/8" FNPT x 1/8" MNPT	19
1	AAA-030205-999	PRESSURE GAGE	18
1	998-812500-006	SHIM GASKET KIT	17
2	110-000264-201	O-RING	16
1	001-012157-999	LUBE PUMP (TUTHILL)	15
1	008-015833-350	BEARING HSG, LUBE SIDE <SEE NOTE>	14
1	001-016981-237	PLUG	13
1	110-000210-201	O-RING	12
2	002-010516-999	CENTER MAIN BEARING	11
5	002-001292-999	SHELL BEARING	10
5	998-812500-005	CONN. ROD COMPLETE	9
12	100-058112-290	CAP SCREW ( BEARING HOUSING )	8
1	002-011283-350	BEARING HOUSING, SHAFT SIDE	7
2	120-325066-999	END BEARING	6
1	146-034500-236	KEY	5
1	008-011333-348	CRANKSHAFT	4
1	145-318418-999	OIL SEAL	3
1	002-016950-220	LUBE OIL FILTER	2
1	008-011160-356	POWER FRAME	1
REQ'D	Part No.	DESCRIPTION	ITEM

**BILL OF MATERIAL**

NOTE: INCLUDES ITEM 22.

22

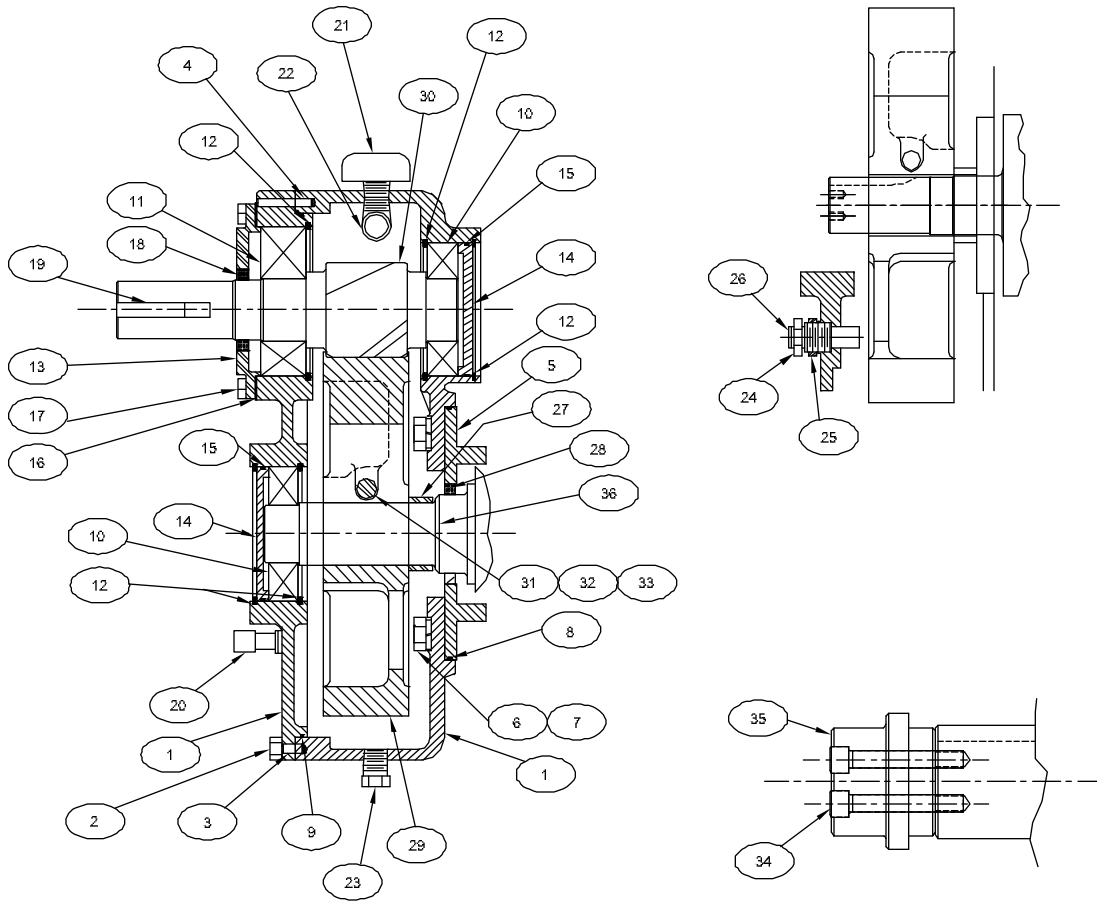


HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, CRANKSHAFT  
POWER END  
110Q-3 (HP125)

DWG No.: 118045 SCALE: NONE REV A SHT.: 1 OF 1



1	ADC-017602-348	CRANKSHAFT FOR GEAR REDUCER (**)	36
1	001-017601-236	ADAPTER, OUTBOARD BEARING	35
4	105-038134-273	SOCKET CAP SCREW, 3/8	34
1	154-034127-220	LOCK WASHER, 3/4	33
1	133-034010-243	NUT, 3/4	32
1	100-034400-273	CAP SCREW, 3/4	31
1	SEE CHART	PINION GEAR	30
1	SEE CHART	BULL GEAR	29
1	145-212356-999	OIL SEAL	28
1	001-014109-236	SPACER, BULL GEAR	27
1	170-012002-220	PIPE PLUG, 1/2	26
1	001-012117-999	THREAD SEAL	25
1	001-012104-305	OIL SCOOP	24
1	170-034005-220	PIPE PLUG, 3/4	23
1	167-034015-353	STREET ELBOW	22
1	001-011039-999	AIR BREATHER	21
1	001-010803-999	OIL LEVEL GAUGE	20
1	146-012300-236	KEY	19
1	145-214338-999	OIL SEAL	18
6	100-012114-290	CAP SCREW	17
1	001-012103-204	GASKET	16
2	110-000248-201	O-RING	15
2	001-012052-350	RETAINER	14
1	002-012038-350	BEARING HOUSING, PINION SHAFT	13
5	177-000500-999	SNAP RING	12
1	255-236051-999	BEARING, SPHERICAL	11
2	121-236051-999	BEARING, CYLINDRICAL	10
1	254-200034-201	O-RING	9
1	110-000273-201	O-RING	8
6	154-058108-220	LOCK WASHER	7
6	100-058214-290	CAP SCREW	6
1	002-014108-350	BEARING HOUSING, F/GEAR REDUCER	5
1	147-038200-220	DOWELL PIN	4
1	147-038100-220	DOWELL PIN	3
12	100-012114-290	CAP SCREW	2
1	008-012023-350	GEAR CASE ASSEMBLY (*)	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

23

GEAR RATIO	NO. TEETH	BULL/MAIN GEAR		PINION GEAR		DRIVE
		PART NO.	NO. TEETH	PART NO.		
5.17:1	124	008-014110-355	24	004-013022-274	LH	
4.93:1	123	008-012054-355	25	004-012057-274	LH	
4.69:1	122	008-018210-355	26	004-012551-274	LH	
4.48:1	121	008-020356-355	27	004-012795-274	LH	
4.29:1	120	AAD-118014-355	28	AAC-117965-274	LH	
4.11:1	119	008-021457-355	29	004-012813-274	LH	
3.94:1	118	SEE ENGINEERING	30	SEE ENGINEERING	LH	
3.78:1	117	008-014353-355	31	004-014352-274	LH	
3.62:1	116	008-025036-355	32	004-025037-274	LH	
3.49:1	115	008-018349-355	33	004-012595-274	LH	
3.36:1	114	SEE ENGINEERING	34	SEE ENGINEERING	LH	
3.23:1	113	SEE ENGINEERING	35	SEE ENGINEERING	LH	
3.12:1	112	SEE ENGINEERING	36	SEE ENGINEERING	LH	
3.00:1	111	008-027593-355	37	004-021725-274	LH	

**BULL GEAR & PINION SHAFT SELECTION CHART**

**NOTES:**

\*1. GEAR CASE ASSY INCLUDES ITEMS 2 THRU 4.

\*\*2. NOT PART OF GEAR REDUCER ASSEMBLY.

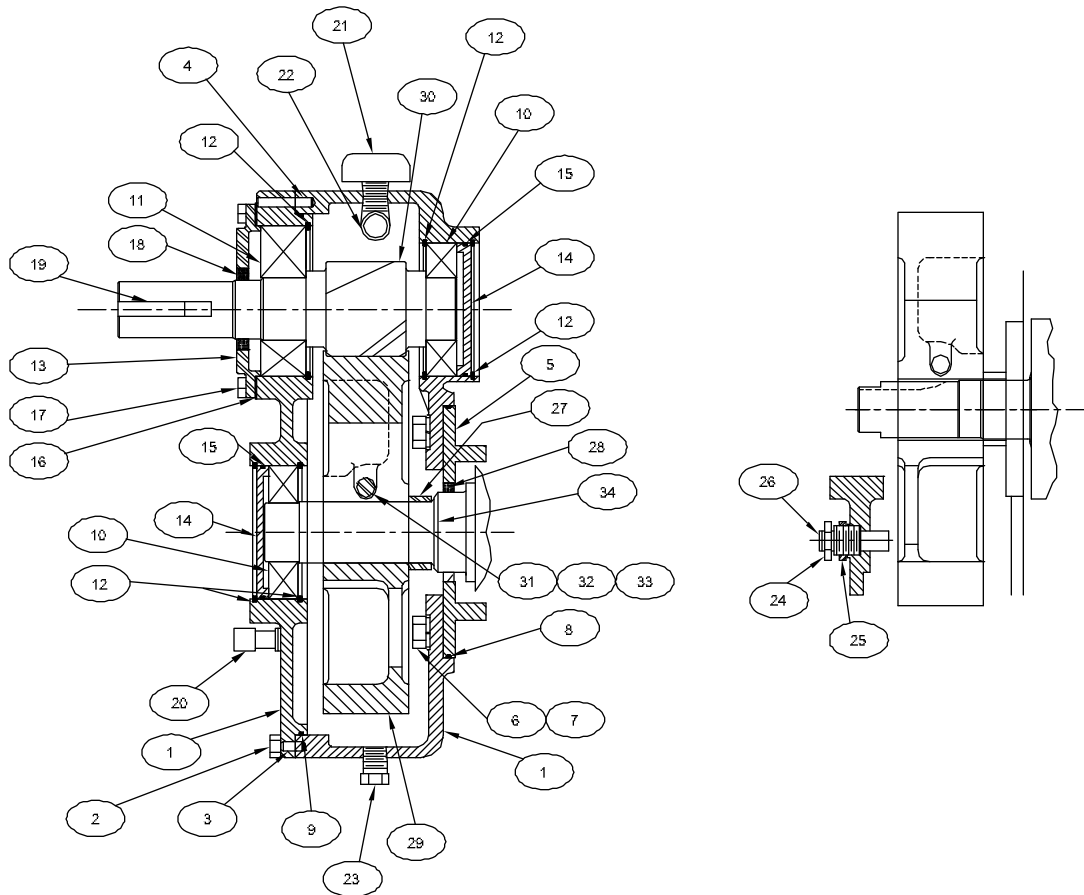


HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:

GEAR REDUCER UNIT  
POWER END  
103Q-3 (Q3115)

DWG No.: 118043	SCALE: NONE	REV A	SHT.: 1 OF 1
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1	008-017596-348	CRANKSHAFT FOR GEAR REDUCER (**)	34
1	154-034127-220	LOCK WASHER, 3/4	33
1	133-034010-243	NUT, 3/4	32
1	100-034400-273	CAP SCREW, 3/4	31
1	SEE CHART	PINION GEAR	30
1	SEE CHART	BULL GEAR	29
1	145-318418-999	OIL SEAL	28
1	001-012105-220	SPACER, BULL GEAR	27
1	170-012002-220	PIPE PLUG, 1/2	26
1	001-012117-999	THREAD SEAL	25
1	001-012104-305	OIL SCOOP	24
1	170-034005-220	PIPE PLUG, 3/4	23
1	167-034015-353	STREET ELBOW	22
1	001-011039-999	AIR BREATHER	21
1	001-010803-999	OIL LEVEL GAUGE	20
1	146-012300-236	KEY	19
1	145-214338-999	OIL SEAL	18
6	100-012114-290	CAP SCREW	17
1	001-012103-204	GASKET	16
2	110-000248-201	O-RING	15
2	001-012052-350	RETAINER	14
1	002-012038-350	BEARING HOUSING, PINION SHAFT	13
5	177-000500-999	SNAP RING	12
1	255-236051-999	BEARING, SPHERICAL	11
2	121-236051-999	BEARING, CYLINDRICAL	10
1	254-200034-201	O-RING	9
1	110-000273-201	O-RING	8
6	154-058108-220	LOCK WASHER	7
6	100-058214-290	CAP SCREW	6
1	002-012102-350	BEARING HOUSING, F/GEAR REDUCER	5
1	147-038200-220	DOWELL PIN	4
1	147-038100-220	DOWELL PIN	3
12	100-012114-273	CAP SCREW	2
1	008-012023-350	GEAR CASE ASSEMBLY (*)	1

REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

24

GEAR RATIO	NO. TEETH	BULL/MAIN GEAR		PINION GEAR		DRIVE
		PART NO.	NO. TEETH	PART NO.	NO. TEETH	
5.17:1	124	008-013021-355	24	004-013022-274		LH
4.93:1	123	008-012062-355	25	004-012057-274		LH
4.69:1	122	008-012550-355	26	004-012551-274		LH
4.48:1	121	008-012794-355	27	004-012795-274		LH
4.29:1	120	AAD-118013-355	28	AAC-117965-274		LH
4.11:1	119	008-012812-355	29	004-012813-274		LH
3.94:1	118	SEE ENGINEERING	30	SEE ENGINEERING		LH
3.78:1	117	008-015785-355	31	004-014352-274		LH
3.62:1	116	008-025036-355	32	004-025037-274		LH
3.49:1	115	008-012596-355	33	004-012595-274		LH
3.36:1	114	SEE ENGINEERING	34	SEE ENGINEERING		LH
3.23:1	113	SEE ENGINEERING	35	SEE ENGINEERING		LH
3.12:1	112	008-015400-355	36	004-015339-274		LH
3.00:1	111	008-021726-355	37	004-021725-274		LH

BULL GEAR & PINION SHAFT SELECTION CHART

NOTES:

\*1. GEAR CASE ASSY INCLUDES ITEMS 2 THRU 4.

\*\*2. NOT PART OF GEAR REDUCER ASSEMBLY.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

GEAR REDUCER UNIT  
POWER END  
110Q-3 (HP125)

DWG No.:

118046

SCALE:

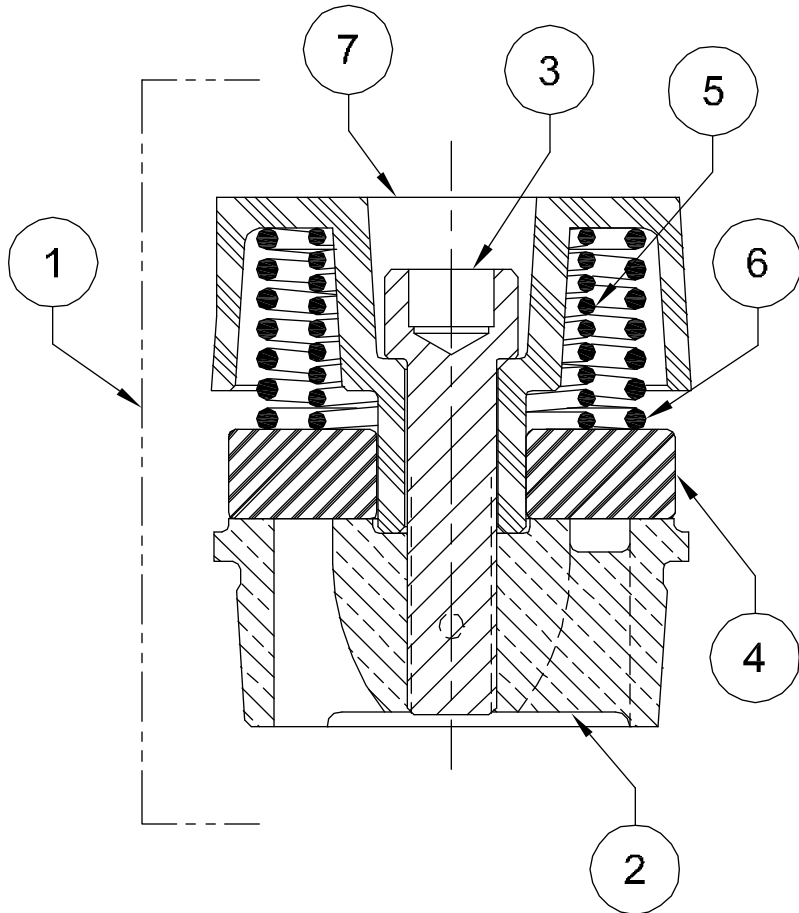
NONE

REV

A

SHT.:

1 OF 1



1	SR01S	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	TP05	DISC ( TITANIUM )	4
1	38178M	FASTENER	3
1	0010809	SEAT	2
		( TITANIUM )	
1	001TP0809	ASSEMBLY, TI/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
1	SR01S	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	DP08	DISC ( DELRIN )	4
1	38178M	FASTENER	3
1	0010809	SEAT	2
		( DELRIN )	
1	001DP0809	ASSEMBLY, DEL/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

25

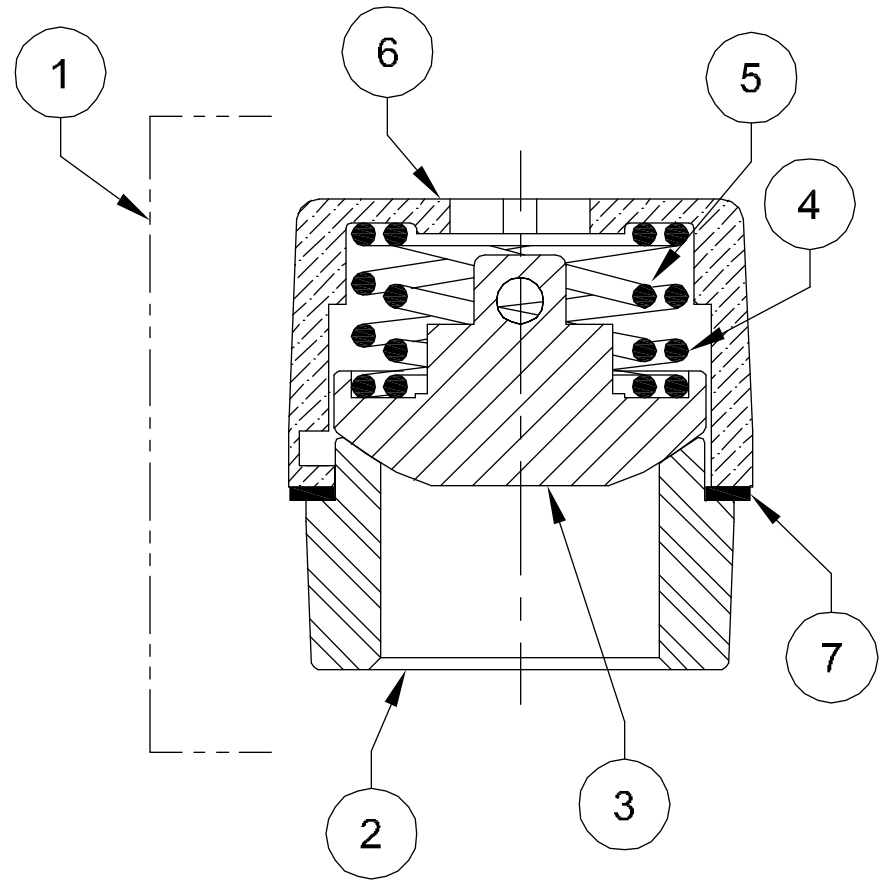
**NOV NATIONAL OILWELL VARCO**  
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
 ASSEMBLY, DISC VALVE  
 103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)

DWG No.:	SCALE:	REV	SHT.:
118055	NONE	A	1 OF 1

1	9707082	WAVE RING	7
1	17930246WX	RETAINER	6
1	1793026	SPRING - INNER	5
1	1793025	SPRING - OUTER	4
1	179302725	BODY ( VALVE ) <*>	3
1	179303725	SEAT <*>	2
1	179303625W	ASSEMBLY, SPHERICAL VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

<\*> NOT SOLD SEPERATELY



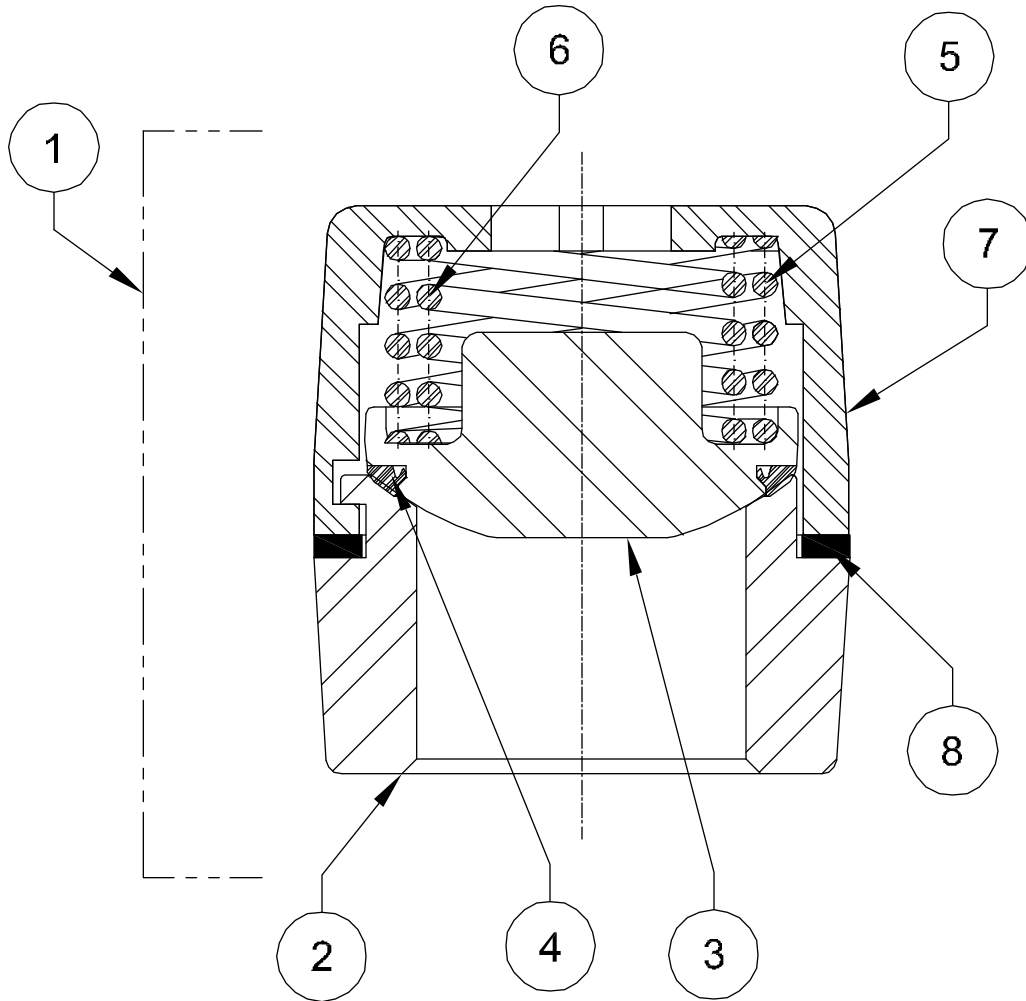
**NOV NATIONAL OILWELL VARCO**  
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
ASSEMBLY, SPHERICAL VALVE  
103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)

DWG No.:	SCALE:	REV	SHT.:
118056	NONE	A	1 OF 1

1	9707082	WAVE RING	8
1	17930246WX	RETAINER	7
1	1793026	SPRING - INNER	6
1	1793025	SPRING - OUTER	5
1	9707086	VALVE INSERT	4
1	179302725SD	BODY ( VALVE ) <*>	3
1	179303725	SEAT <*>	2
1	179303625SD	ASSEMBLY, SPHERICAL, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

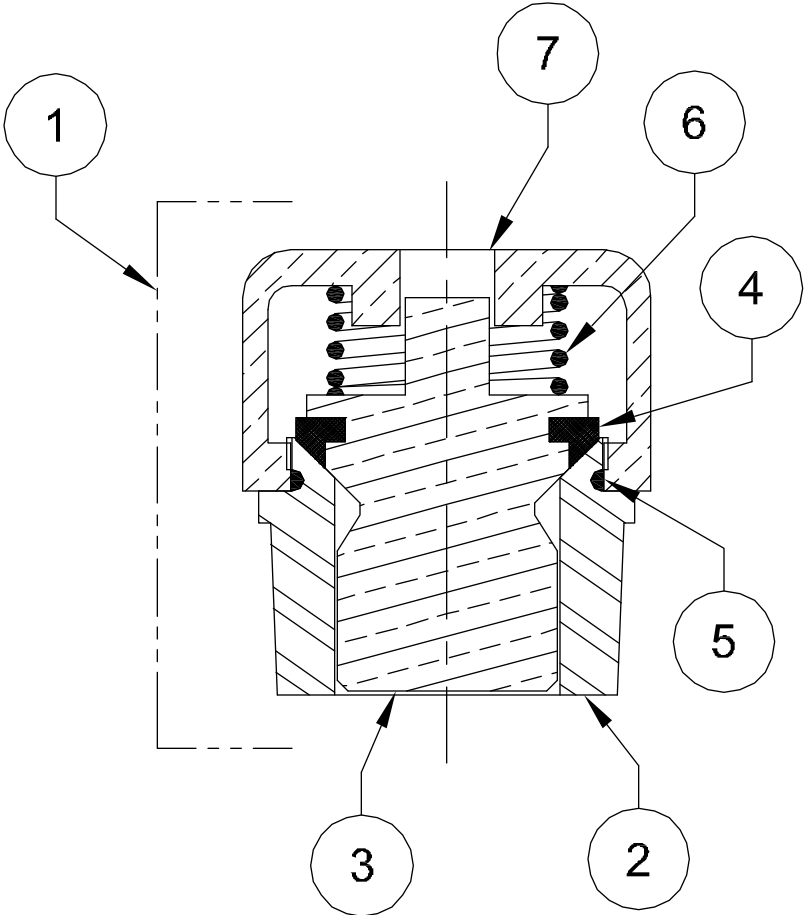
<\*> NOT SOLD SEPERATELY



27

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, SPHERICAL VALVE "SEVERE DUTY" 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118225	NONE	A	1 OF 1

1	SDR08	RETAINER	7
1	IS011	SPRING	6
1	SDL09	THREAD LOCK	5
1	SDI08	INSERT	4
1	SD08	VALVE L/INSERT	3
1	1000809	SEAT	2
1	100SD0809	ASSEMBLY, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM
<b>BILL OF MATERIAL</b>			

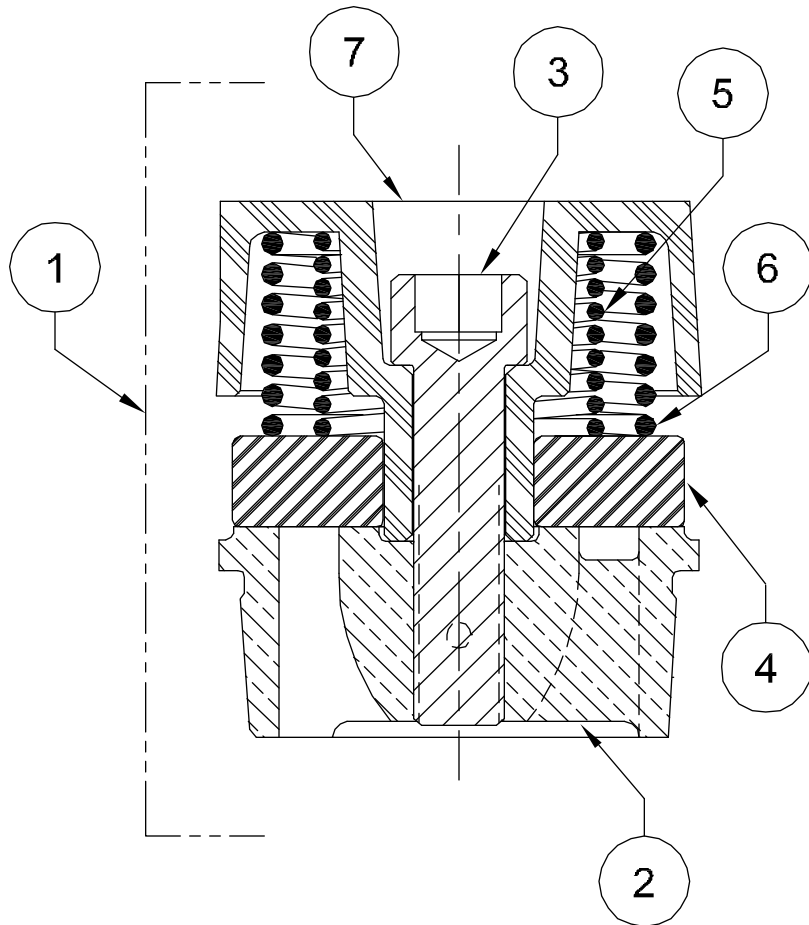


**NOV NATIONAL OILWELL VARCO**  
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
**ASSEMBLY, SEVERE DUTY**  
**103Q-3L, 110Q-3L (Q3115-AL, HP125-AL)**

DWG No.: 118057	SCALE: NONE	REV A	SHT.: 1 OF 1
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1	SR01S	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	TP05	DISC ( TITANIUM )	4
1	38178M	FASTENER	3
1	0010513	SEAT	2
		( TITANIUM )	
1	001TP0513	ASSEMBLY, TI/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
1	SR01S	RETAINER	7
1	IS011	SPRING, OUTER	6
1	IS022	SPRING, INNER	5
1	DP05	DISC ( DELRIN )	4
1	38178M	FASTENER	3
1	0010513	SEAT	2
		( DELRIN )	
1	001DP0513	ASSEMBLY, DEL/CF8M DISC VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

29



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, DISC VALVE  
103Q-3M, 110Q-3M (Q3115-AM, HP125-AM)

DWG No.:

118058

SCALE:

NONE

REV

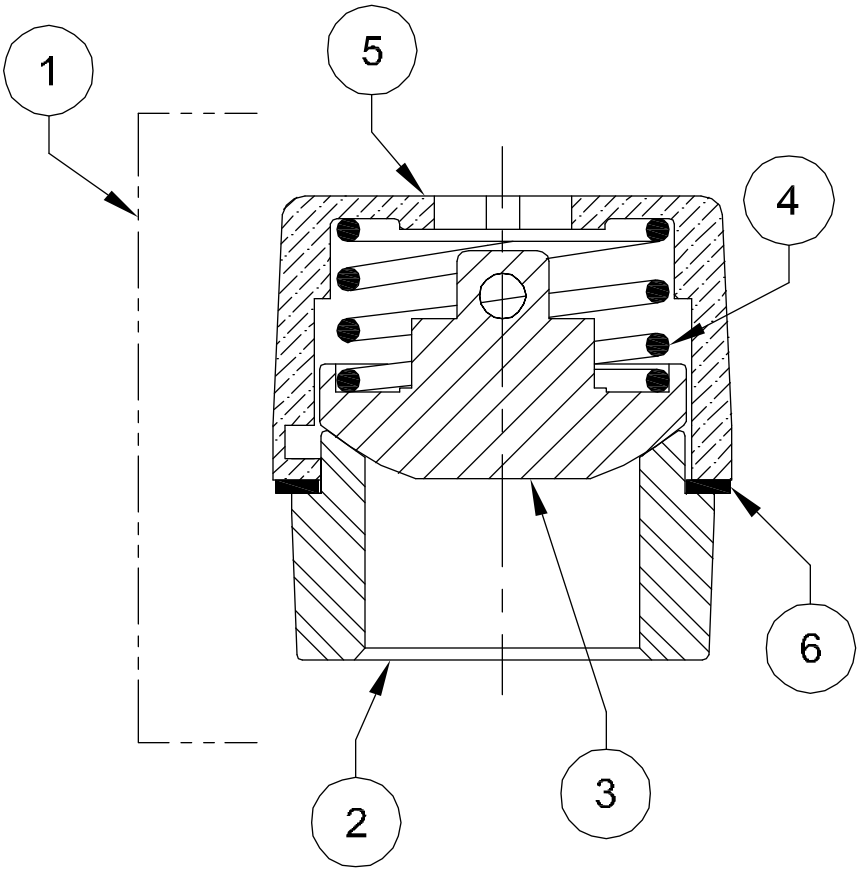
A

SHT.:

1 OF 1

1	9707072	WAVE RING	6
1	17910036W	RETAINER	5
1	1792525	SPRING	4
1	179100225	BODY ( VALVE ) <*>	3
1	179100125	SEAT <*>	2
1	179100025W	ASSEMBLY, SPHERICAL VALVE	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

<\*> NOT SOLD SEPERATELY



**NOV NATIONAL OILWELL VARCO**

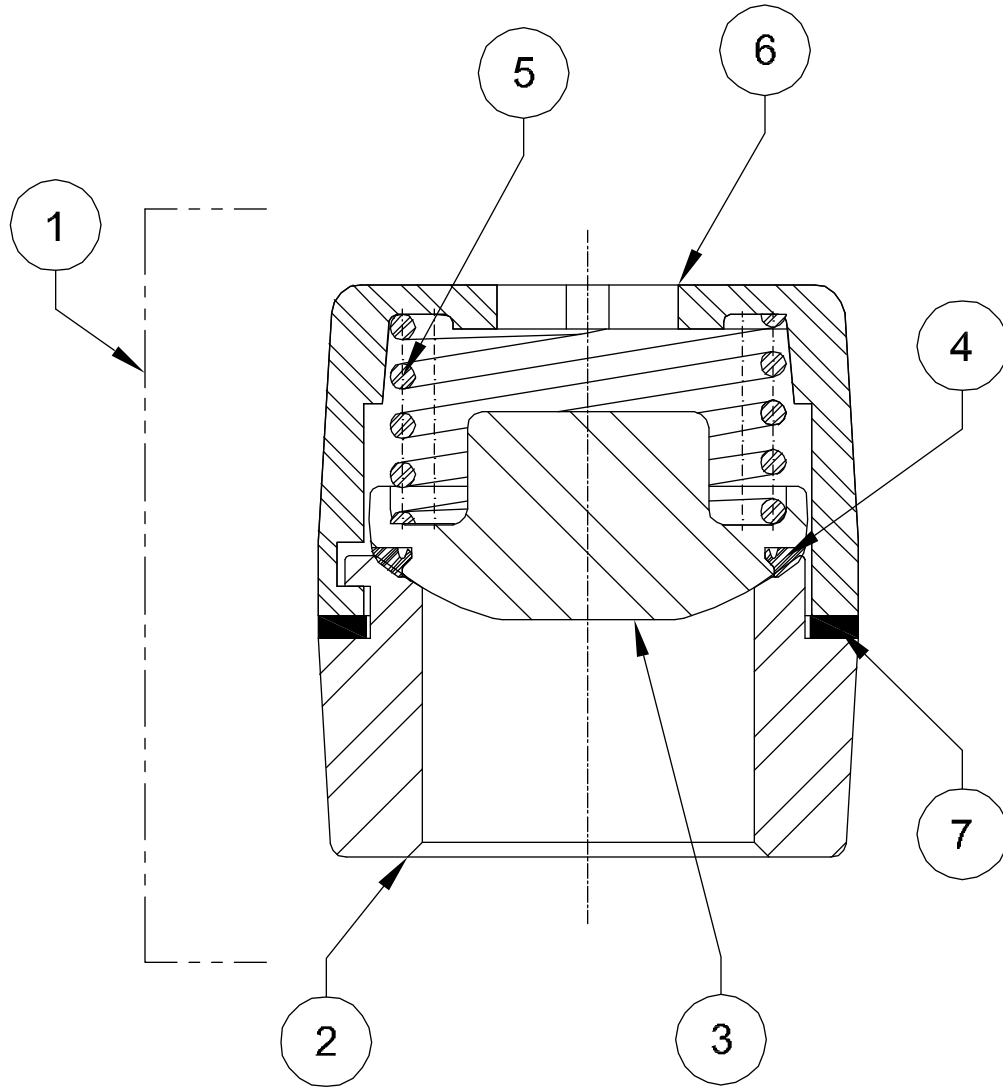
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
ASSEMBLY, SPHERICAL VALVE  
103Q-3M, 110Q-3M (Q3115-AM, HP125-AM)

DWG No.: 118059	SCALE: NONE	REV A	SHT.: 1 OF 1
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1	9707072	WAVE RING	7
1	17910036W	RETAINER	6
1	1792525	SPRING	5
1	9707071	VALVE INSERT	4
1	179100225SD	BODY ( VALVE ) <*>	3
1	179100125	SEAT <*>	2
1	179100025SD	ASSEMBLY, SPHERICAL, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

<\*> NOT SOLD SEPERATELY

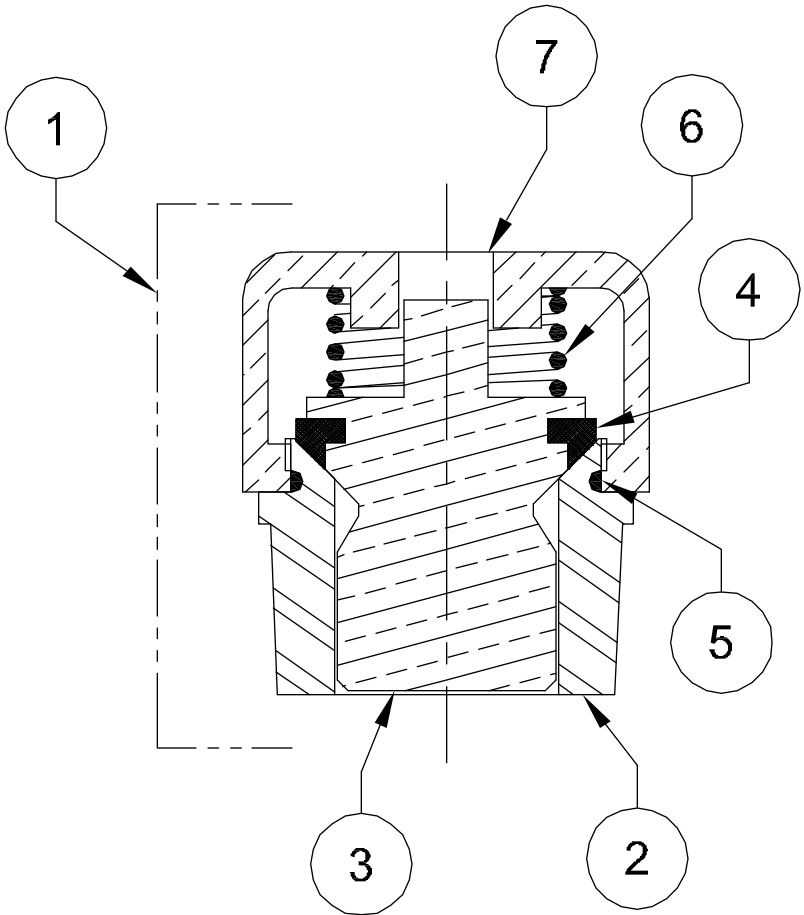


31

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, SPHERICAL VALVE "SEVERE DUTY" 103Q-3M, 110Q-3M (Q3115AM, HP125AM)			
DWG No.:	SCALE:	REV:	SHT.:
118226	NONE	A	1 OF 1

1	SDR05	RETAINER	7
1	SD051	SPRING	6
1	SDL05	THREAD LOCK	5
1	SDI05	INSERT	4
1	SD051	VALVE L/INSERT	3
1	1000513	SEAT	2
1	100SD0513	ASSEMBLY, SEVERE DUTY	1
REQ'D	Part No.	DESCRIPTION	ITEM

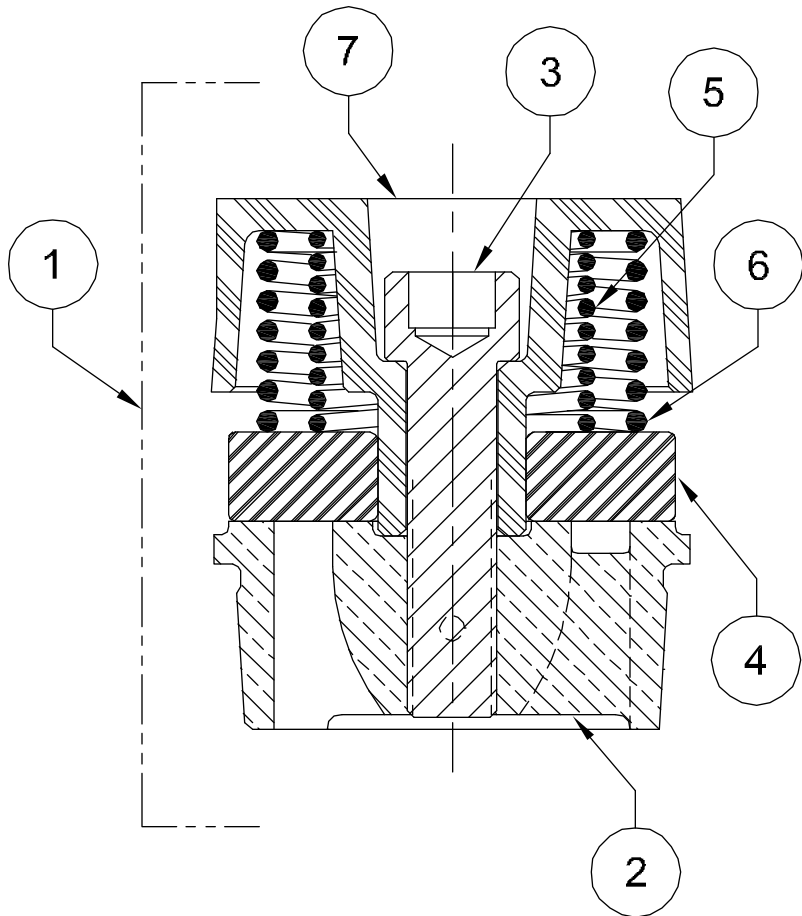
BILL OF MATERIAL



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

TITLE:  
**ASSEMBLY, SEVERE DUTY**  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 118060	SCALE: NONE	REV A	SHT.: 1 OF 1
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1	SR01S	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	SR01S	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

33

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, DISC VALVE  
1-1/8 THRU 1-3/8 PLUNGERS  
103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118061

SCALE:

NONE

REV

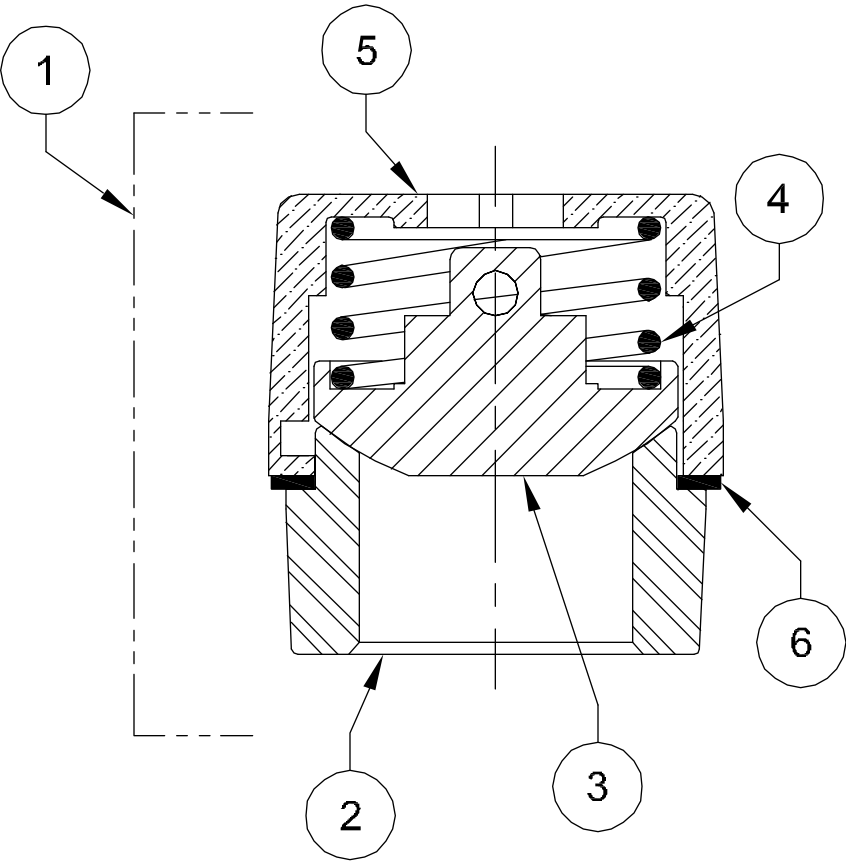
A

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			

<\*> NOT SOLD SEPERATELY



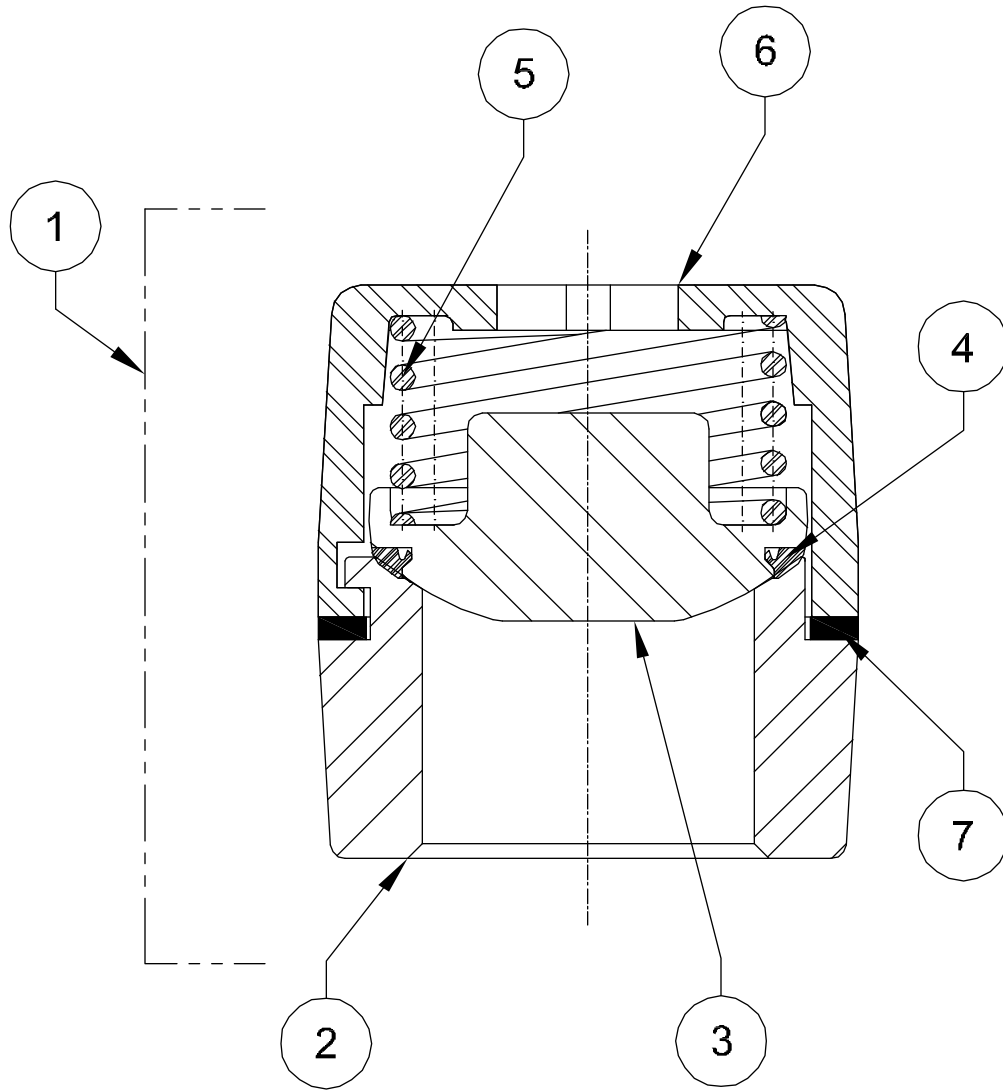
**NOV NATIONAL OILWELL VARCO**  
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
ASSEMBLY, SPHERICAL VALVE  
1-1/8 THRU 1-3/8 PLUNGER  
103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.: 118062	SCALE: NONE	REV A	SHT.: 1 of 1
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1	9707074	WAVE RING	7
1	17915036W	RETAINER	6
1	1791504	SPRING	5
1	9707073	VALVE INSERT	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			

<\*> NOT SOLD SEPERATELY



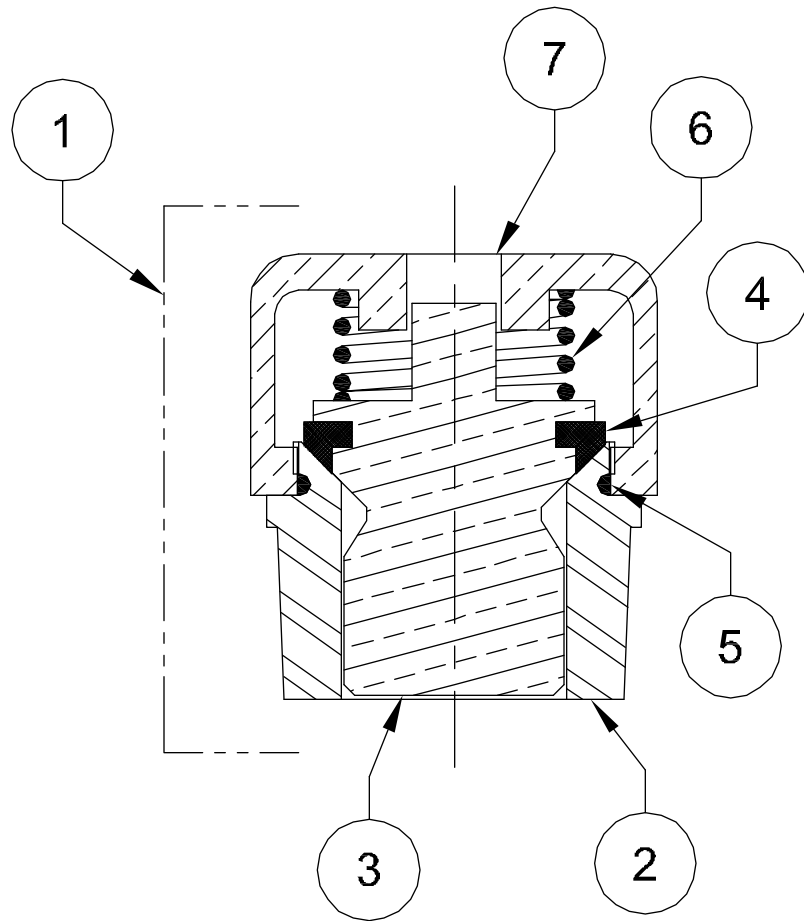
35

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

TITLE:  
ASSEMBLY, SPHERICAL VALVE  
"SEVERE DUTY"  
103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:	SCALE:	REV	SHT.:
118227	NONE	A	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			



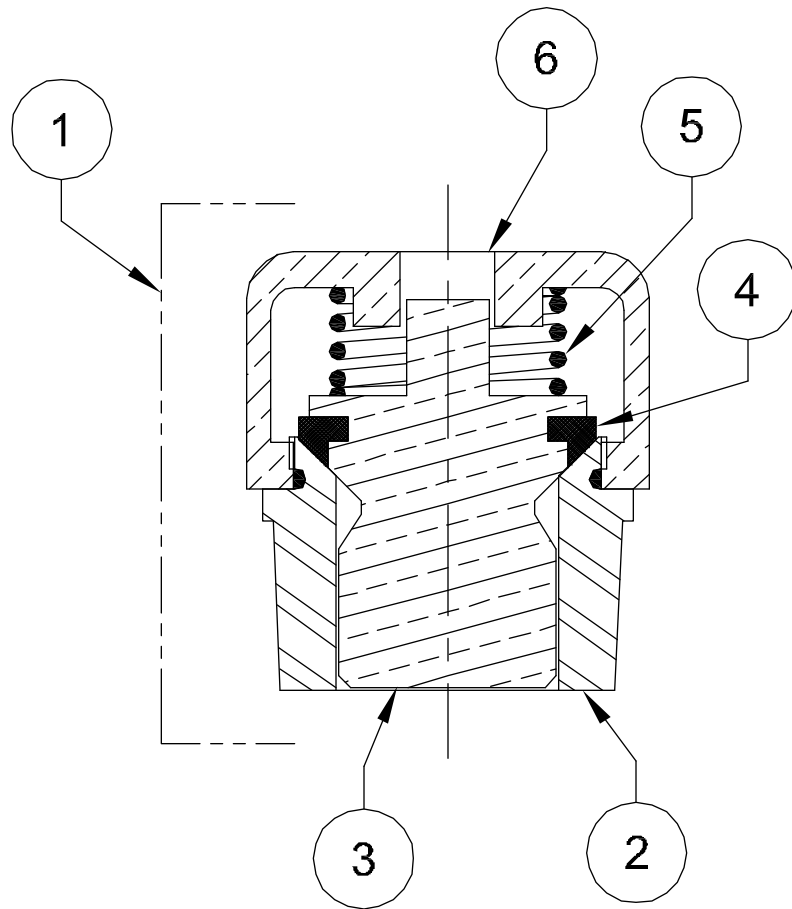
36

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, SEVERE DUTY 1-1/8 THRU 1-3/8 PLUNGERS 103Q-3MSC, 110Q-3MSC (Q150-2)			
DWG No.:	SCALE:	REV	SHT.:
118063	NONE	A	1 OF 1



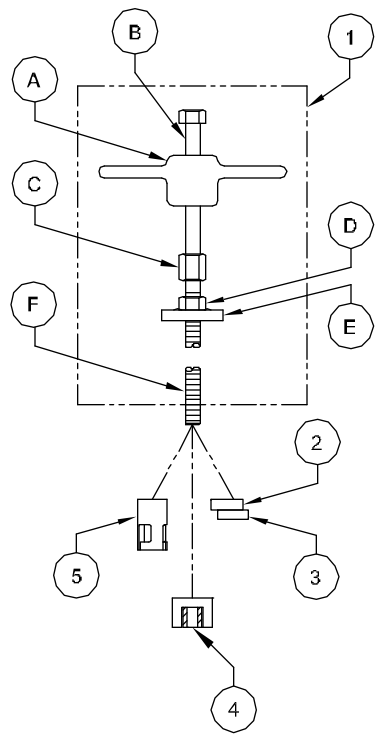
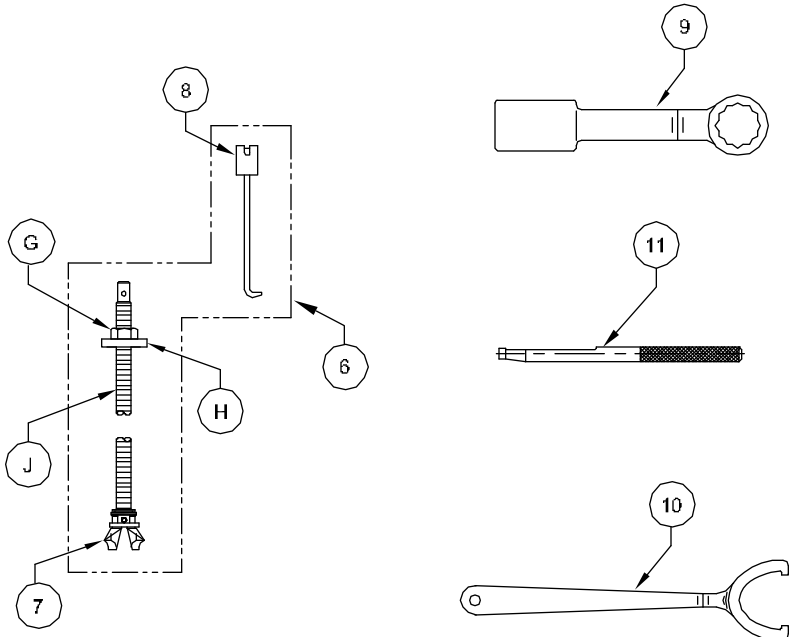


1	001-021273-402	RETAINER	6
1	001-006389-362	SPRING	5
1	110-000214-503	INSERT	4
1	002-021274-402	VALVE L/INSERT	3
1	001-011747-402	SEAT	2
1	998-016313-028	ASSEMBLY, SEVERE DUTY	1
REQ'D		DESCRIPTION	ITEM
BILL OF MATERIAL			



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<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, SEVERE DUTY DISCHARGE VALVE 103Q-3H, 110Q-3H (Q3115H, HP125H)			
DWG No.:	SCALE:	REV	SHT.:
118065	NONE	A	1 OF 1



1	ACB-030945-274	WRENCH, GLAND NUT ( PIN TYPE )	11
1	002-017850-351	WRENCH, GLAND NUT ( DUCTILE IRON )	10
1	001-027585-999	WRENCH, VALVE COVER ( HAMMER WRENCH )	9
1	1790034	RETRIEVER	8
1	181259300	PULLER HEAD	7
1	20220159	PULLER STEM	J
1	20220194	STRONG BACK	H
1	75518308	HOLD DOWN NUT	G
1	180104127	ASSEMBLY, VALVE SEAT PULLER - ( SPHERICAL )	6
1	AAC-011956-275	PULLER HEAD	5
1	008-028546-005	PULLER STEM	F
1	008-028546-035	STRONG BACK	E
1	008-028546-013	HOLD DOWN NUT	D
1	008-028546-016	ADAPTER NUT	C
1	008-028546-002	BUMPER STEM	B
1	008-028546-001	BUMPER	A
1	998-Q4240L-092	ASSEMBLY, VALVE SEAT PULLER - ( DISC VALVE )	1
1	008-028546-044	CAGE TOOL	4
1	008-028546-030	PULLER GUIDE	3
1	008-028546-022	ECCENTRIC, PULLER	2
1	008-028546-005	PULLER STEM	F
1	008-028546-035	STRONG BACK	E
1	008-028546-013	HOLD DOWN NUT	D
1	008-028546-016	ADAPTER NUT	C
1	008-028546-002	BUMPER STEM	B
1	008-028546-001	BUMPER	A
1	998-Q4240L-091	ASSEMBLY, VALVE SEAT PULLER - ( SEVERE DUTY )	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

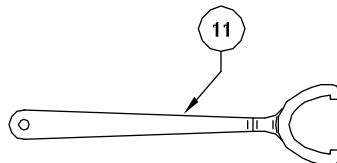
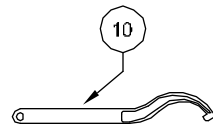
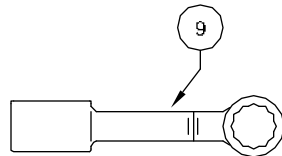
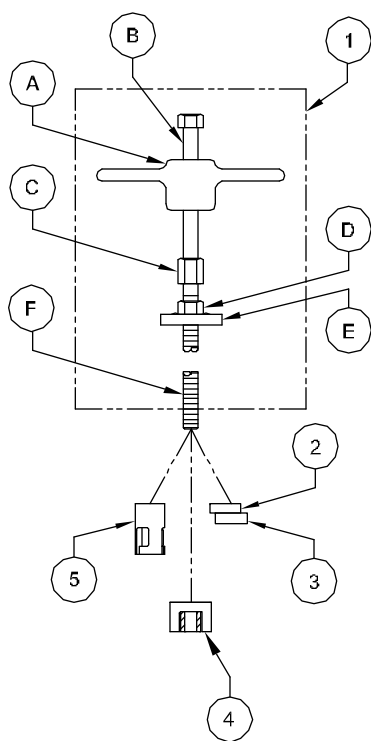
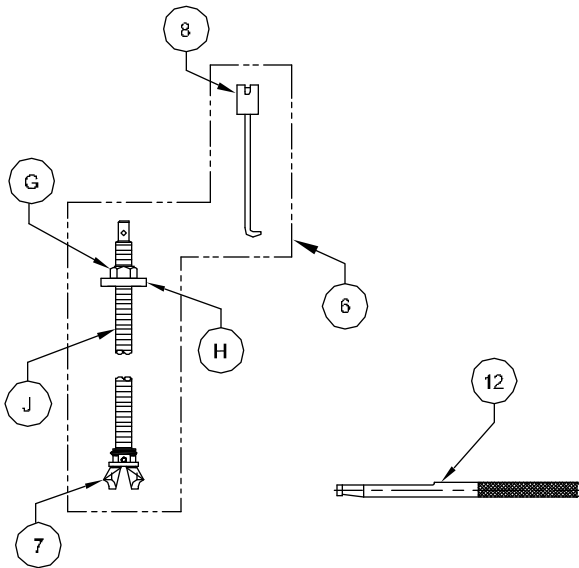
39



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

TITLE:  
**TOOL SERVICE KIT**  
**"L" CLASS FLUID ENDS**  
**103Q-3L, 110Q-3L (Q3115AL, HP125AL)**

DWG No.:	SCALE:	REV	SHT.:
118066	NONE	A	1 of 1



1	ABB-030945-274	WRENCH, GLAND NUT, PIN TYPE (1-3/4" TO 2-1/2")	12
1	002-027780-351	WRENCH, GLAND NUT (1-1/4" TO 1-5/8")	11
1	002-014098-352	WRENCH, GLAND NUT ( BRONZE GLAND NUT )	11
1	002-009388-351	WRENCH, GLAND NUT ( DUCTILE IRON GLAND NUT )	10
1	001-027569-999	WRENCH, VALVE COVER ( HAMMER WRENCH )	9
1	1790034	RETRIEVER	8
1	181259225	PULLER HEAD	7
1	20220331	PULLER STEM	J
1	20220332	STRONG BACK	H
1	75510312	HOLD DOWN NUT	G
1	181259226	ASSEMBLY, VALVE SEAT PULLER - ( SPHERICAL )	6
1	001-019433-274	PULLER HEAD	5
1	008-028546-004	PULLER STEM	F
1	008-028546-035	STRONG BACK	E
1	008-028546-013	HOLD DOWN NUT	D
1	008-028546-016	ADAPTER NUT	C
1	008-028546-002	BUMPER STEM	B
1	008-028546-001	BUMPER	A
1	998-Q3150M-092	ASSEMBLY, VALVE SEAT PULLER - ( DISC VALVE )	1
1	008-028546-043	CAGE TOOL	4
1	008-028546-028	PULLER GUIDE	3
1	008-028546-020	ECCENTRIC, PULLER	2
1	008-028546-004	PULLER STEM	F
1	008-028546-035	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-Q3150M-091	ASSEMBLY, VALVE SEAT PULLER - ( 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:

TOOL SERVICE KIT  
'M' CLASS FLUID ENDS  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118067

SCALE:

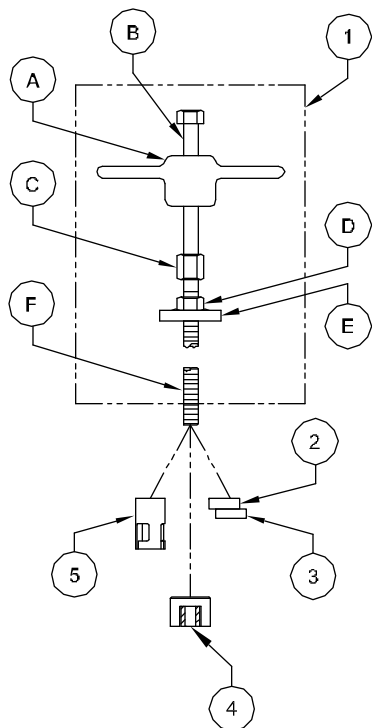
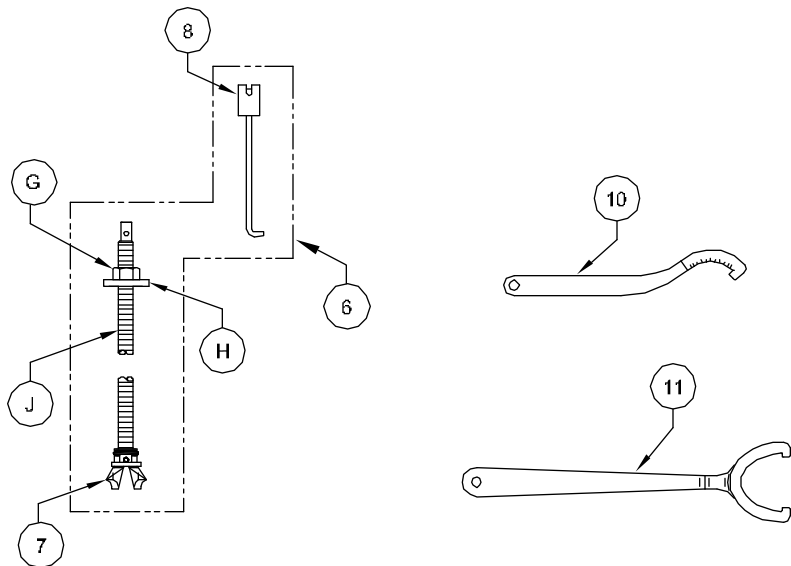
NONE

REV

A

SHT.:

1 OF 1



1	002-014098-352	WRENCH, GLAND NUT ( BRONZE GLAND NUT )	11
1	002-009388-351	WRENCH, GLAND NUT ( DUCTILE IRON GLAND NUT)	10
1	1790034	RETRIEVER	8
1	181259200	PULLER HEAD	7
1	20220329	PULLER STEM	J
1	20220330	STRONG BACK	H
1	75510308	HOLD DOWN NUT	G
1	181259201	ASSEMBLY, VALVE SEAT PULLER - ( SPHERICAL )	6
1	001-011954-274	PULLER HEAD	5
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	008-028546-043	CAGE TOOL	4
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

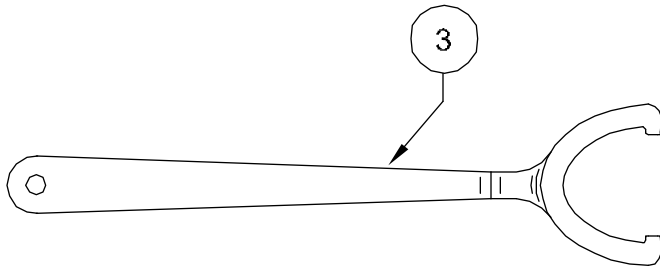
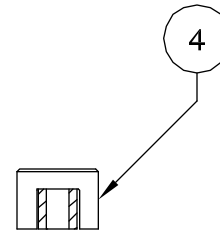
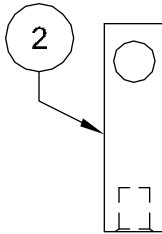
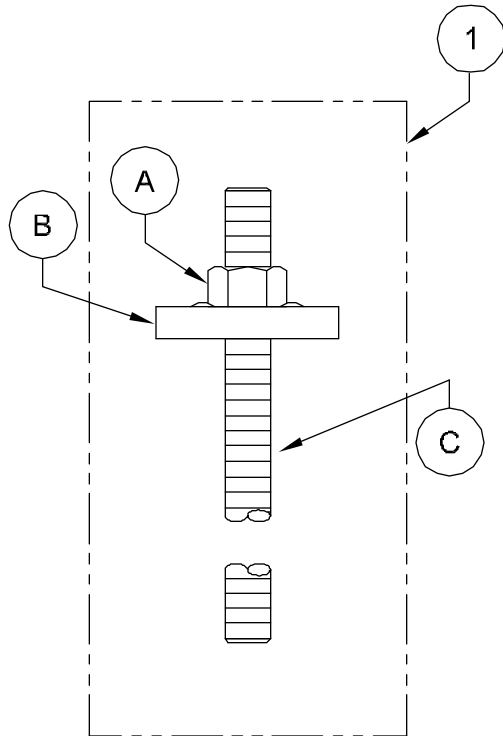
**NOV NATIONAL OILWELL VARCO**

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

TITLE: TOOL SERVICE KIT  
"MS" CLASS FLUID END  
103Q-3MSC, 110Q-3MSC (Q150-2)

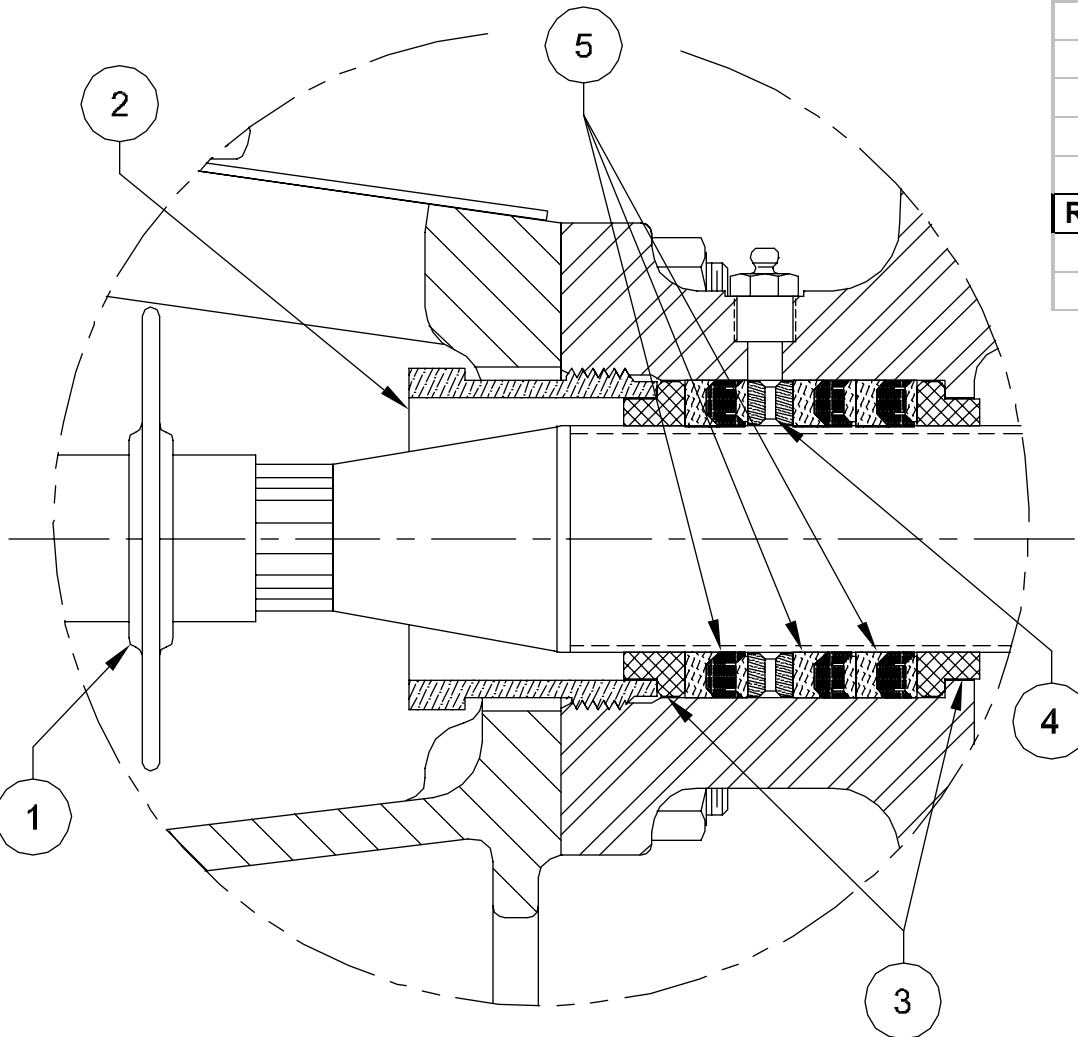
DWG No.: 118068 SCALE: NONE REV A SHT.: 1 OF 1

1	002-021268-400	CAGE WRENCH (1-3/4" TO 2-1/2")	4
1	002-027780-351	WRENCH, GLAND NUT ( DUCTILE IRON )	3
1	002-014417-400	WRENCH, PLUNGER	2
1	001-022028-271	PULLER STEM	C
1	001-022029-231	STRONG BACK	B
1	133-100008-243	HOLD DOWN NUT	A
1	002-010359-220	ASSEMBLY, VALVE SEAT PULLER	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			



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<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: TOOL SERVICE KIT "H" CLASS FLUID END 103Q-3H, 110Q-3H (Q3115H, HP125H)			
DWG No.:	118069	SCALE:	NONE
REV	A	SHT.:	1 OF 1



5	214-214206-477		858	
5	214-214206-386		842	
5	214-214206-374		845	
5	214-214206-370	PACKING	838	5
5	001-012843-235		(STL)	
5	001-012843-302	LANTERN RING	(BRZ)	4
10	001-012921-235		(STL)	
10	001-012921-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

43

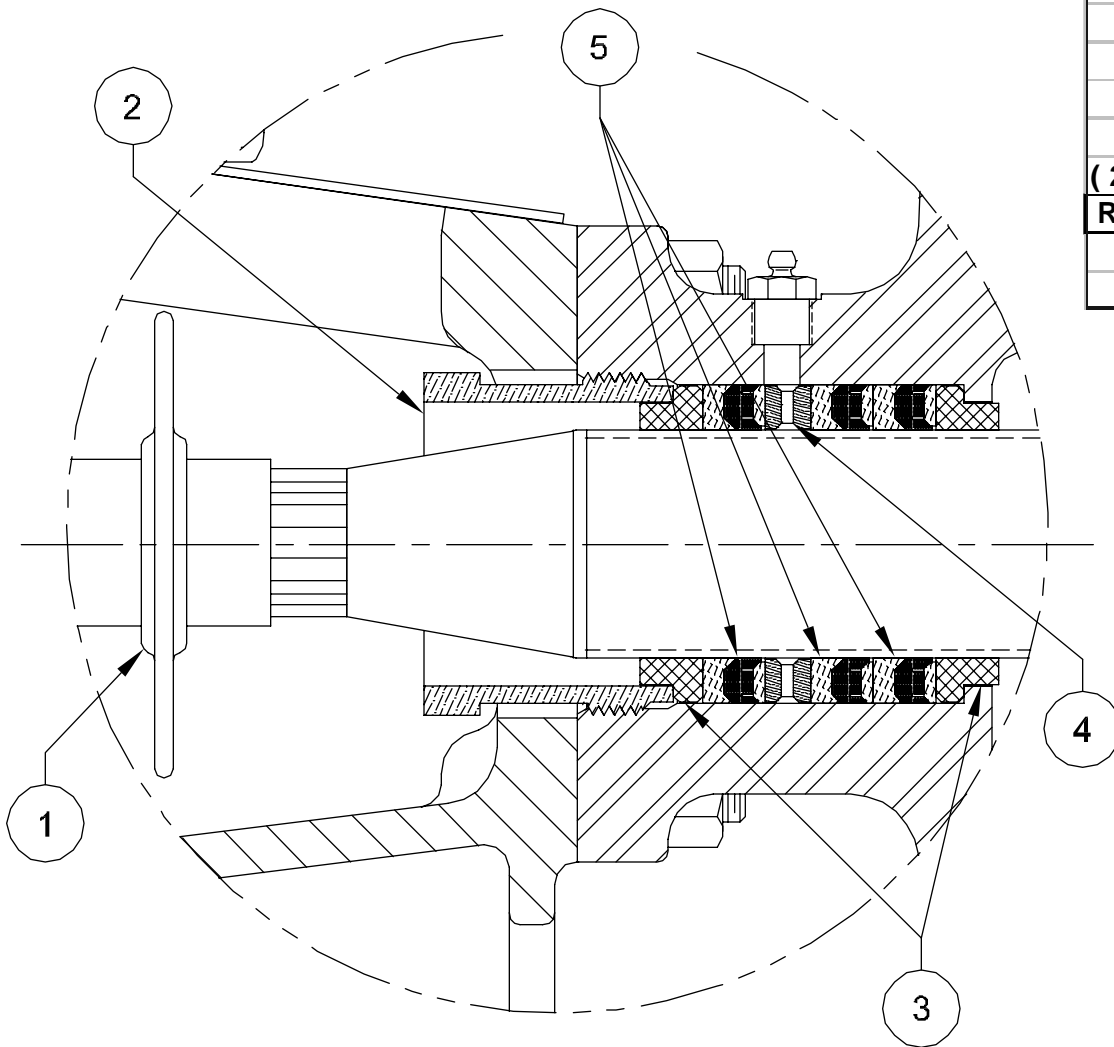
**NOTE**

1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "J" - STYLE PKG, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.: 118070	SCALE: NONE	REV A	SHT.: 1 of 6
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5	214-238214-477		858	
5	214-238214-386		842	
5	214-238214-374		845	
5	214-238214-370	PACKING	838	5
5	AAB-116317-235		(STL)	
5	AAB-116317-302	LANTERN RING	(BRZ)	4
10	001-029502-235		(STL)	
10	001-029502-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

44

**NOTE**

1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" - STYLE PKG, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:

118070

SCALE:

NONE

REV

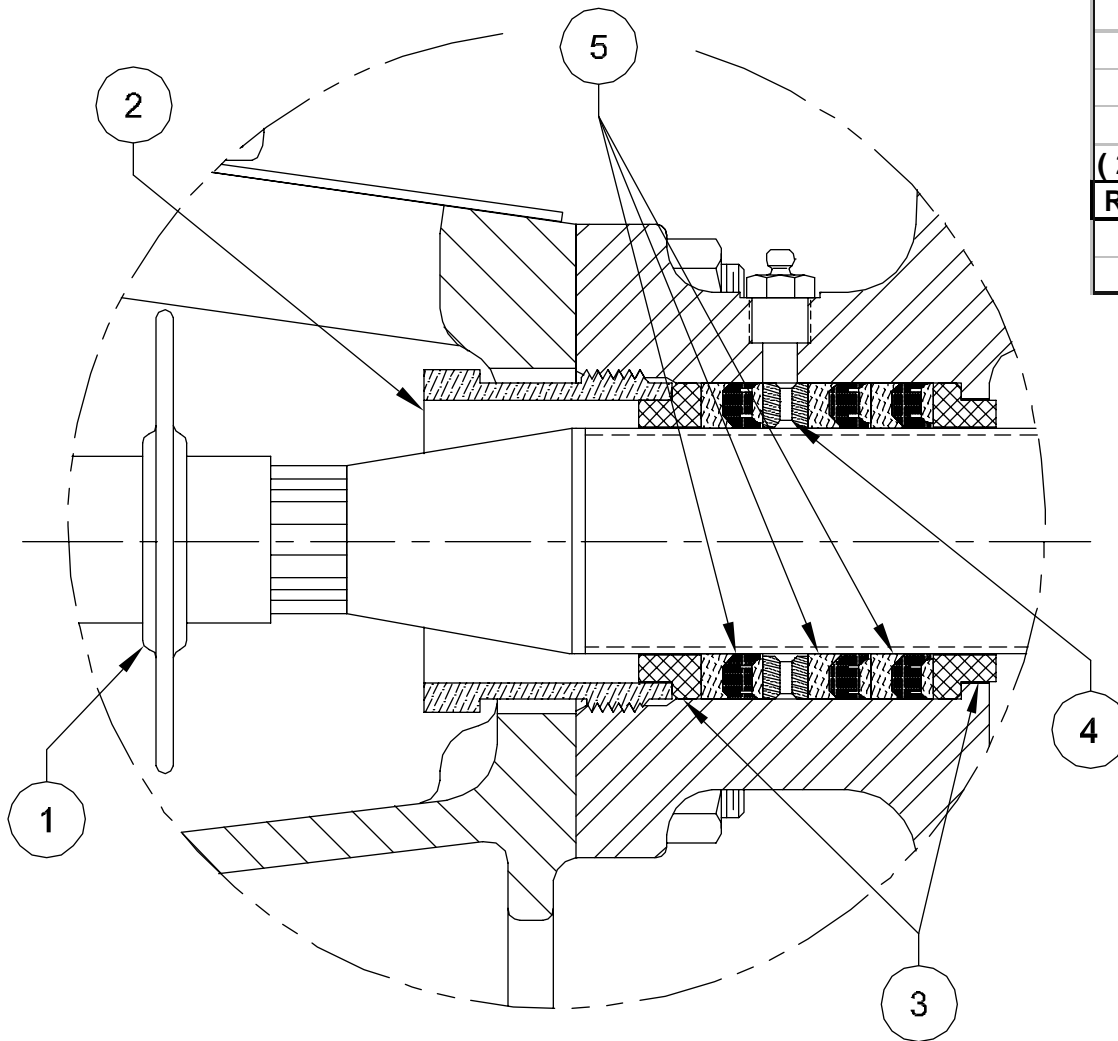
A

SHT.:

2 OF 6



5	214-212206-477		858	
5	214-212206-386		842	
5	214-212206-374		845	
5	214-212206-370	PACKING	838	5
5	001-012844-235		(STL)	
5	001-012844-302	LANTERN RING	(BRZ)	4
10	001-007783-235		(STL)	
10	001-007783-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				



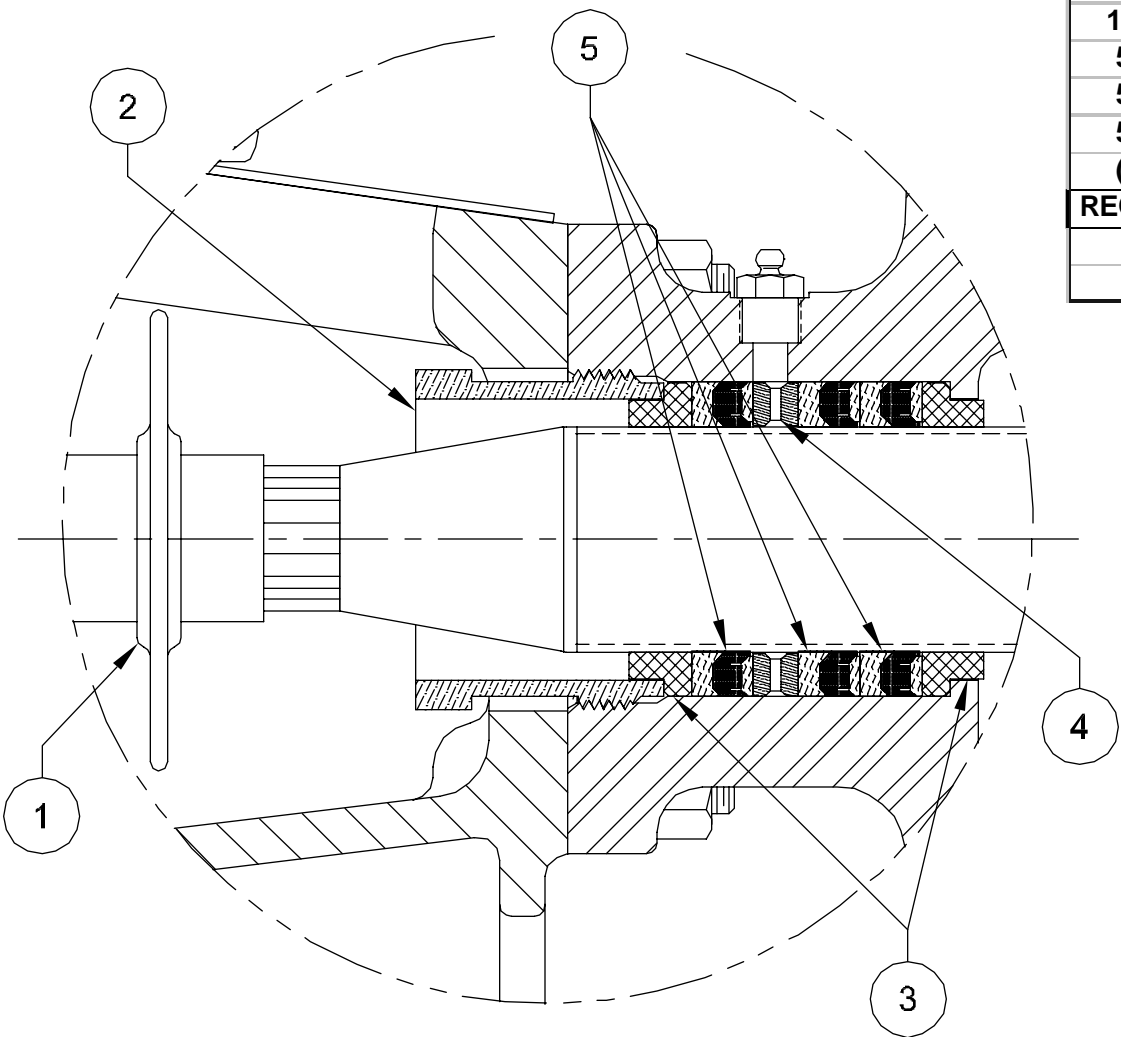
**NOTE**

- 1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.: 118070	SCALE: NONE	REV A	SHT.: 3 OF 6
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**NOTE**

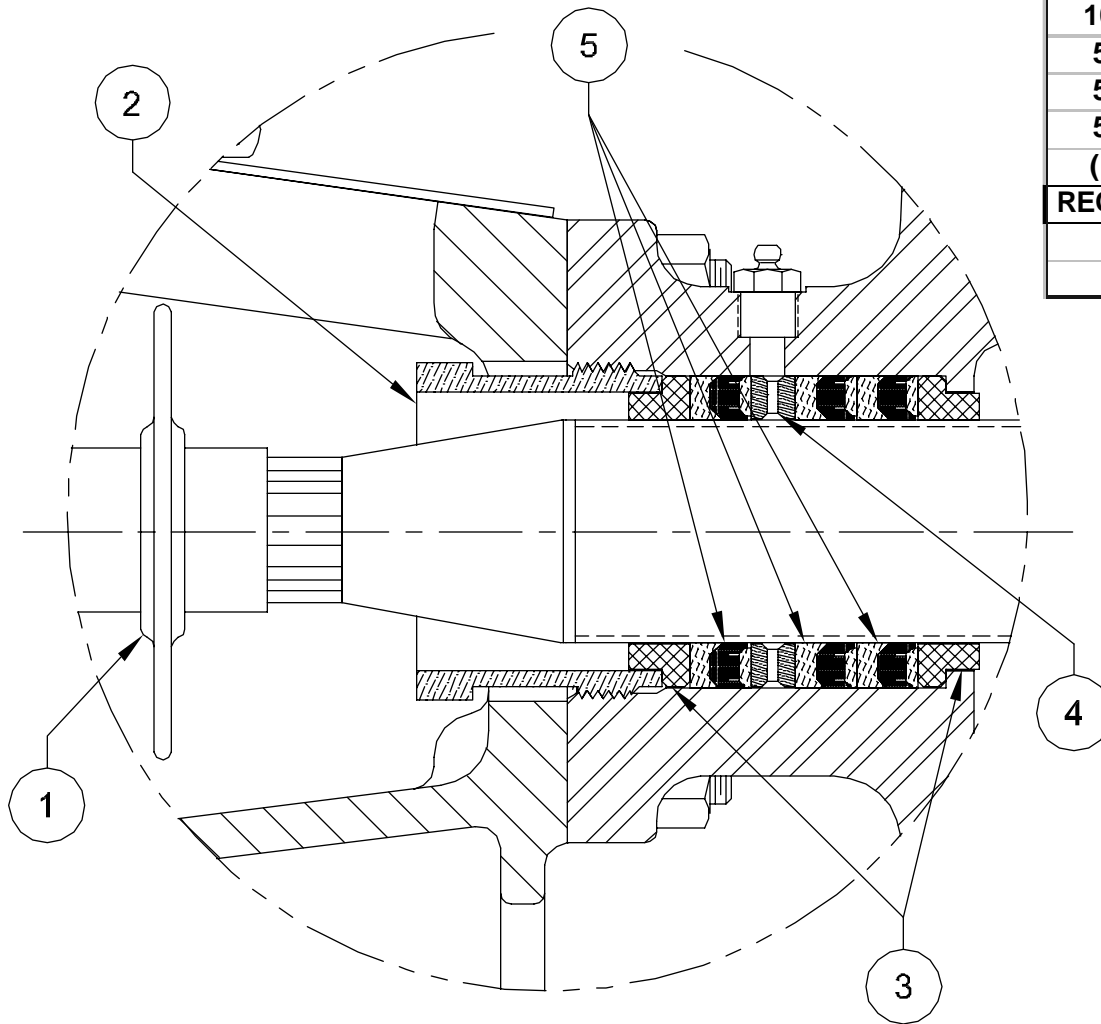
1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.

5	214-258206-477		858	
5	214-258206-386		842	
5	214-258206-374		845	
5	214-258206-370	PACKING	838	5
5	ADB-116317-235		(STL)	
5	ADB-116317-302	LANTERN RING	(BRZ)	4
10	HTC-103259-235		(STL)	
10	HTC-103259-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

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

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
**"J" STYLE PKG, 2-1/4" THRU 3" PLUNGER**  
**103Q-3L, 110Q-3L (Q3115AL, HP125AL)**

DWG No.: 118070	SCALE: NONE	REV A	SHT.: 4 of 6
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5	214-234214-477		858	
5	214-234214-386		842	
5	214-234214-374		845	
5	214-234214-370	PACKING	838	5
5	001-011062-235		(STL)	
5	001-011062-302	LANTERN RING	(BRZ)	4
10	001-011061-235		(STL)	
10	001-011061-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

47

**NOTE**

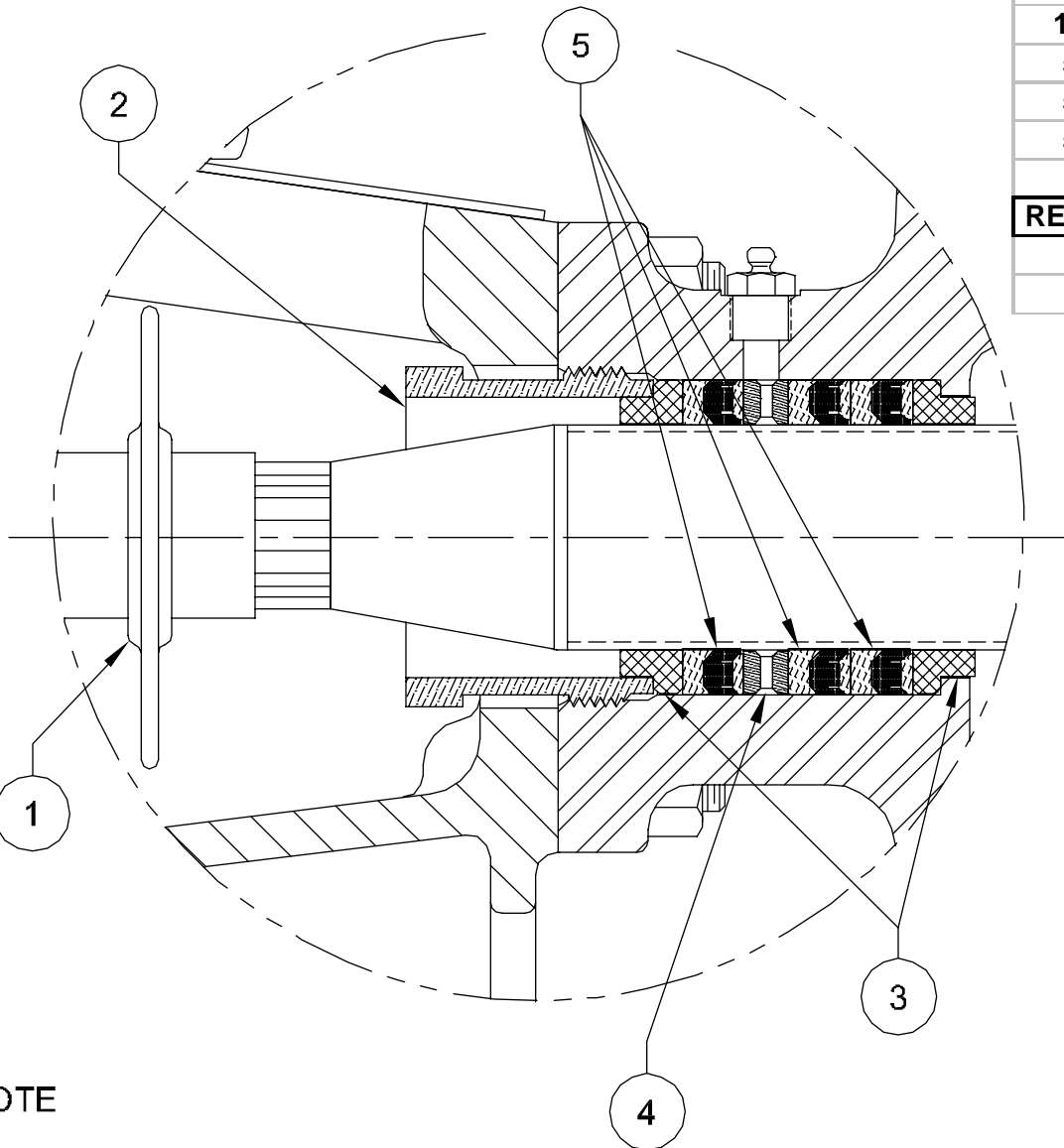
1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.



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

TITLE: ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWC No.: 118070	SCALE: NONE	REV A	SHT.: 5 of 6
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**NOTE**

1) FOR ALL " J " - STYLE PACKING SEE DRAWING 118070, SHEETS 1 THRU 6.

5	214-300214-477		858	
5	214-300214-286		842	
5	214-300214-374		845	
5	214-300214-370	PACKING	838	5
5	001-004947-235		(STL)	
5	001-004947-302	LANTERN RING	(BRZ)	4
10	001-003819-235		(STL)	
10	001-003819-302	THROAT BUSHING	(BRZ)	3
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 3" PLUNGER )				

REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

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

TITLE: ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 2-1/4" THRU 3" PLUNGER  
 103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.: 118070	SCALE: NONE	REV A	SHT.: 6 OF 6
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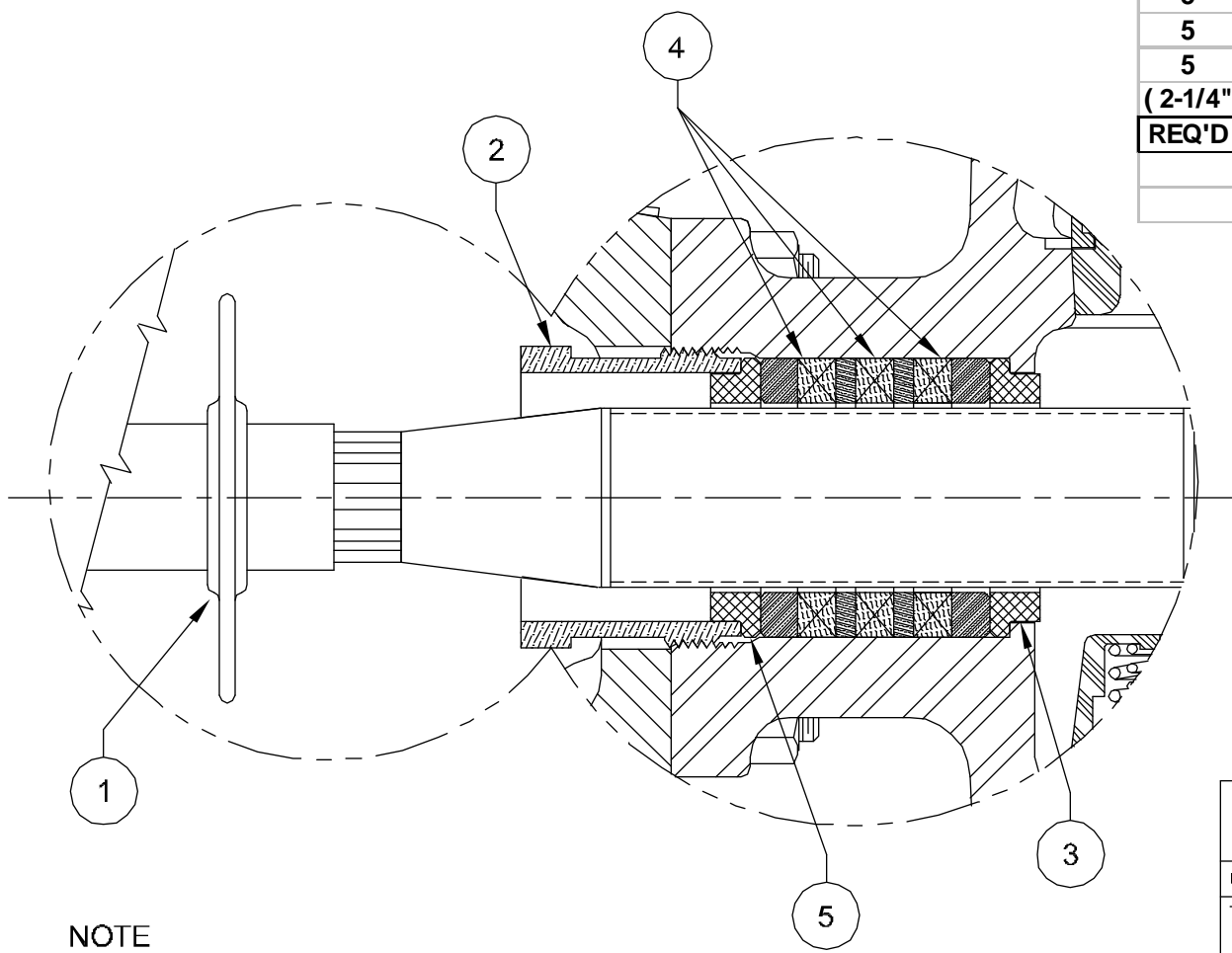
5	001-024049-278		(SS)	
5	001-024049-235		(STL)	
5	001-024049-302	FOLLOWER	(BRZ)	5
5	309-214214-458		8921-K	
5	309-214214-339		249	
5	309-214214-337		241	
5	309-214214-395	PACKING	238	4
5	001-012921-278		(SS)	
5	001-012921-235		(STL)	
5	001-012921-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1

( 2-1/4" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM
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BILL OF MATERIAL

<\*> COATED STAINLESS STEEL



NOTE

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

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

TITLE: ASSEMBLY, PLUNGER KIT  
BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

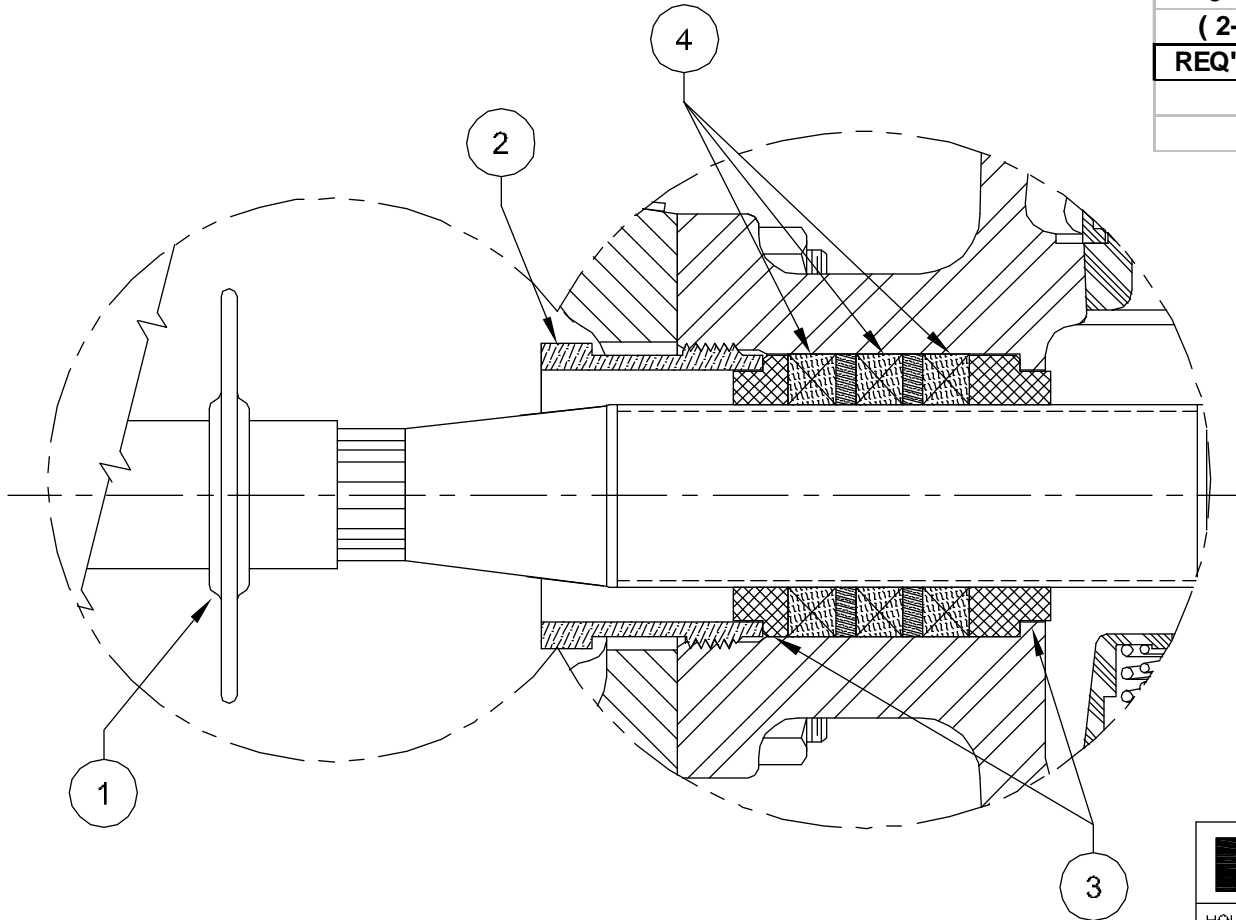
DWG No.: 118071	SCALE: NONE	REV: A	SHT.: 1 of 7
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5	309-238288-458		8921-K	
5	309-238288-339		249	
5	309-238288-337		241	
5	309-238288-395	PACKING	238	4
10	001-029502-278		(SS)	
10	001-029502-235		(STL)	
10	001-029502-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

50



**NOTE**

- 1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:

118071

SCALE:

NONE

REV

A

SHT.:

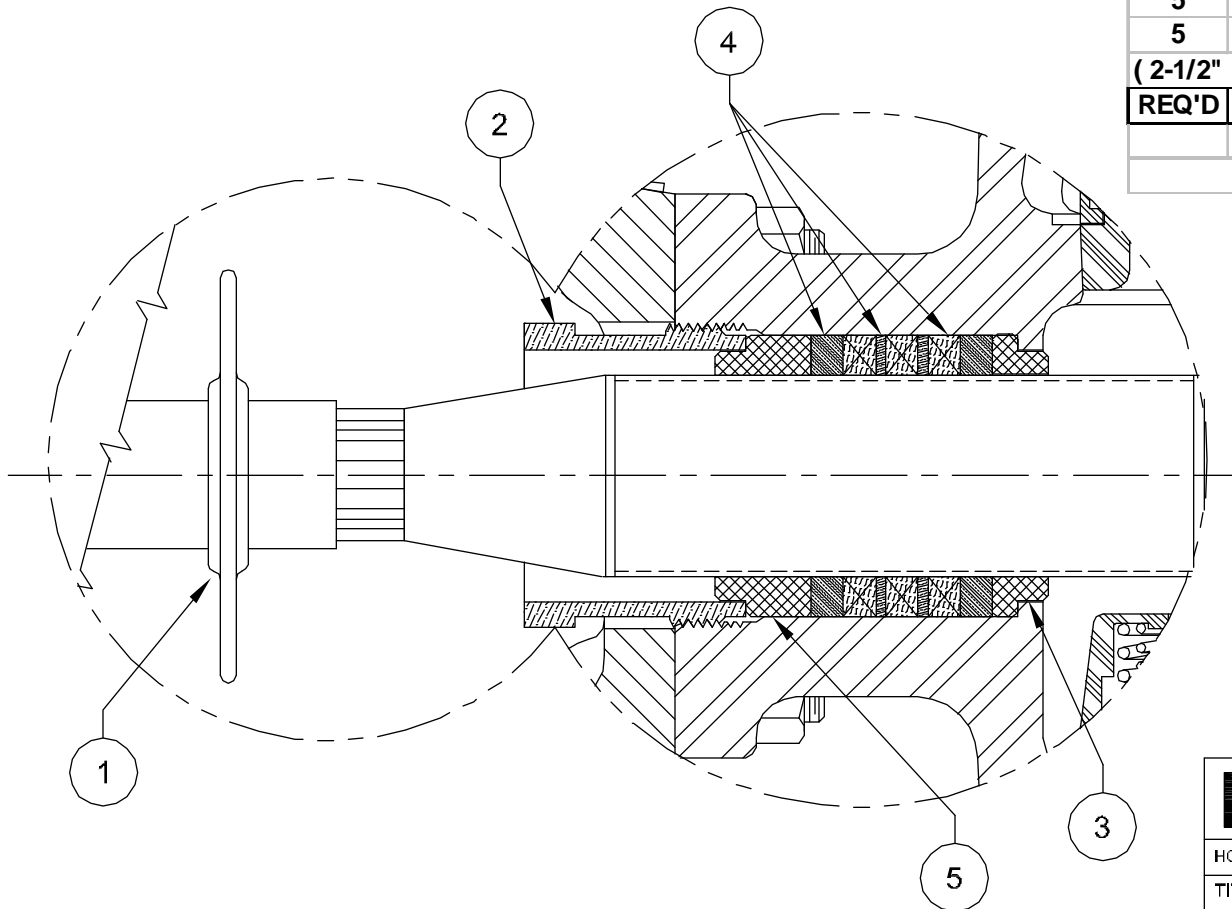
2 OF 7

5	001-010298-278		(SS)	
5	001-012098-235		(STL)	
5	001-024050-302	FOLLOWER	(BRZ)	5
5	309-212238-458		8921-K	
5	309-212238-339		249	
5	309-212238-337		241	
5	309-212238-395	PACKING	238	4
5	001-007783-278		(SS)	
5	001-007783-235		(STL)	
5	001-007783-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1

( 2-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL



NOTE

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:

118071

SCALE:

NONE

REV

A

SHT.:

3 OF 7

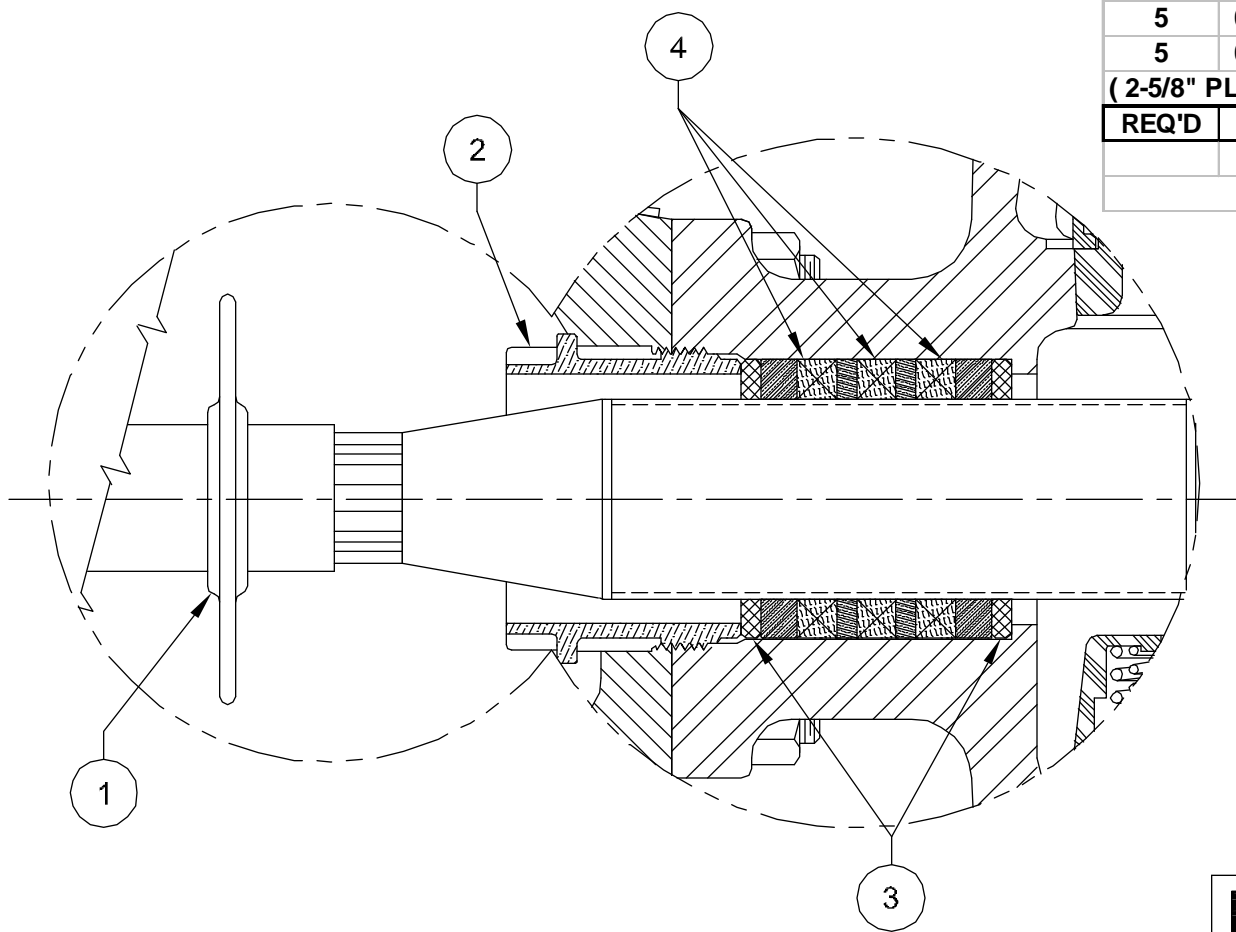
5	309-258231-458		8921-K	
5	309-258231-339		249	
5	309-258231-337		241	
5	309-258231-395	PACKING	238	4
10	AGA-029617-278	THROAT BUSHING	(SS)	
10	AGA-029617-235	THROAT BUSHING	(STL)	
10	AGA-029617-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1

( 2-5/8" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL



**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118071	NONE	A	4 OF 7



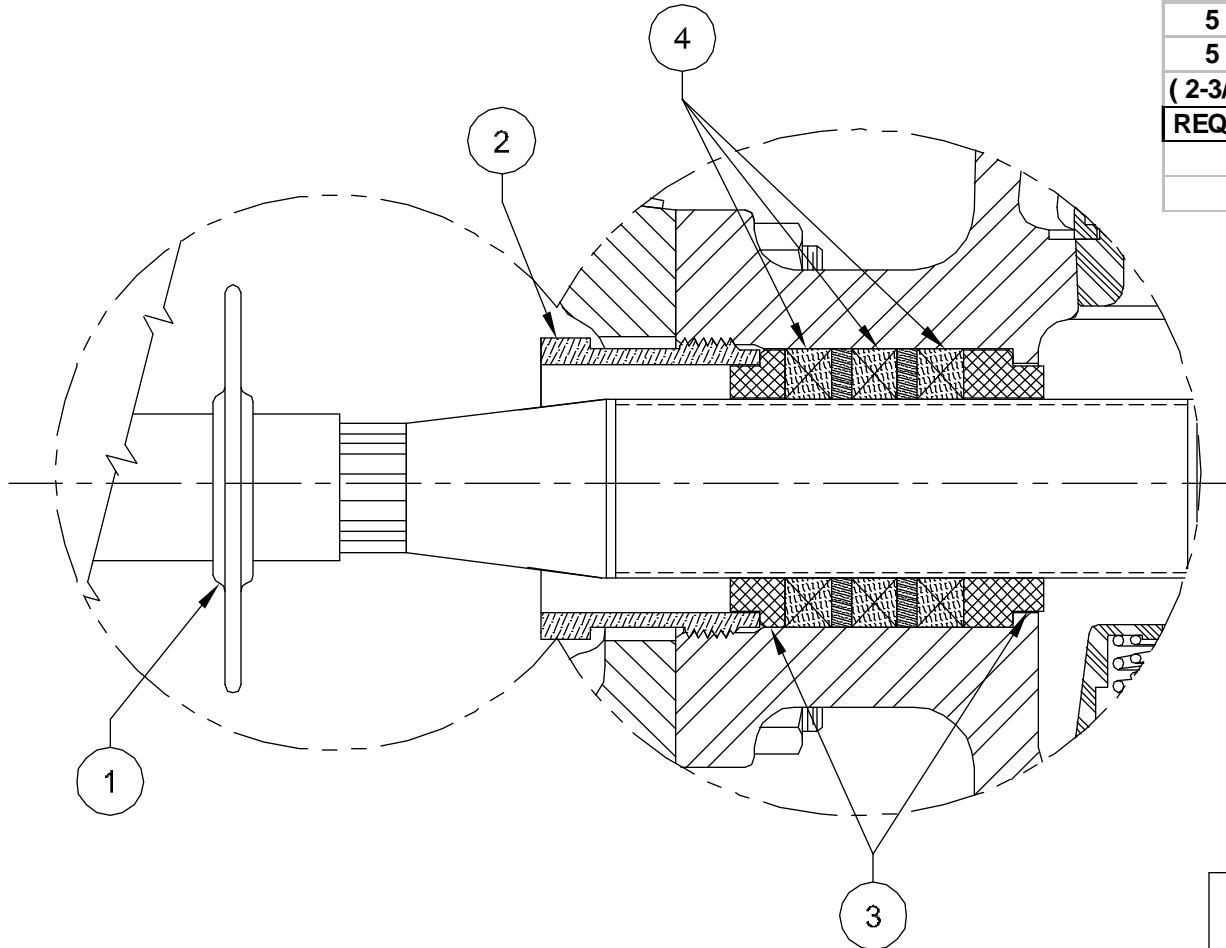
5	309-234238-458		8921-K	
5	309-234238-339		249	
5	309-234238-337		241	
5	309-234238-395	PACKING	238	4
10	001-011061-278		(SS)	
10	001-011061-235		(STL)	
10	001-011061-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1

( 2-3/4" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL



**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118071	NONE	A	5 OF 7

5	309-278258-458		8921-K	
5	309-278258-339		249	
5	309-278258-337		241	
5	309-278258-395	PACKING	238	4
10	ACC-030416-278		(SS)	
10	ACC-030416-235		(STL)	
10	ACC-030416-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1

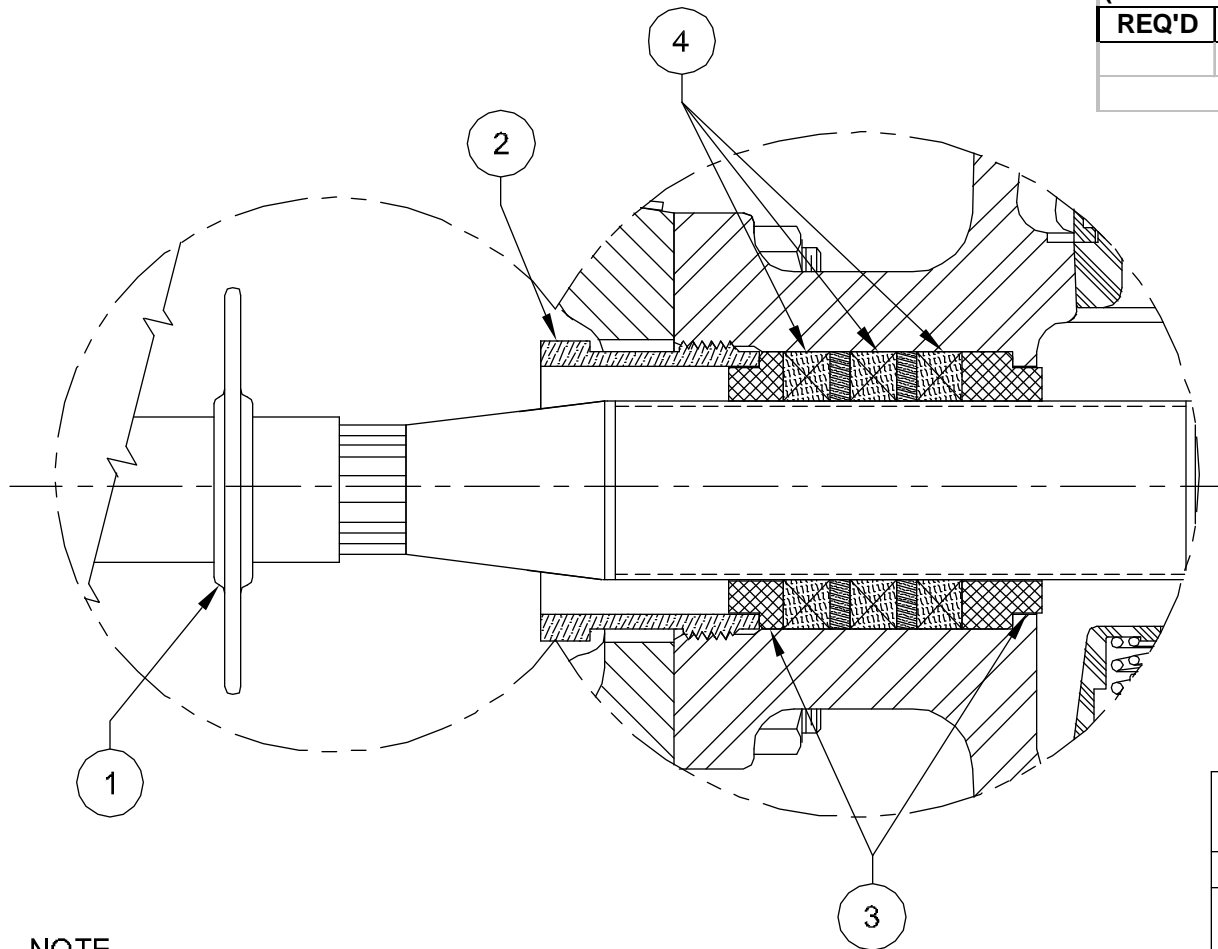
( 2-7/8" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

54



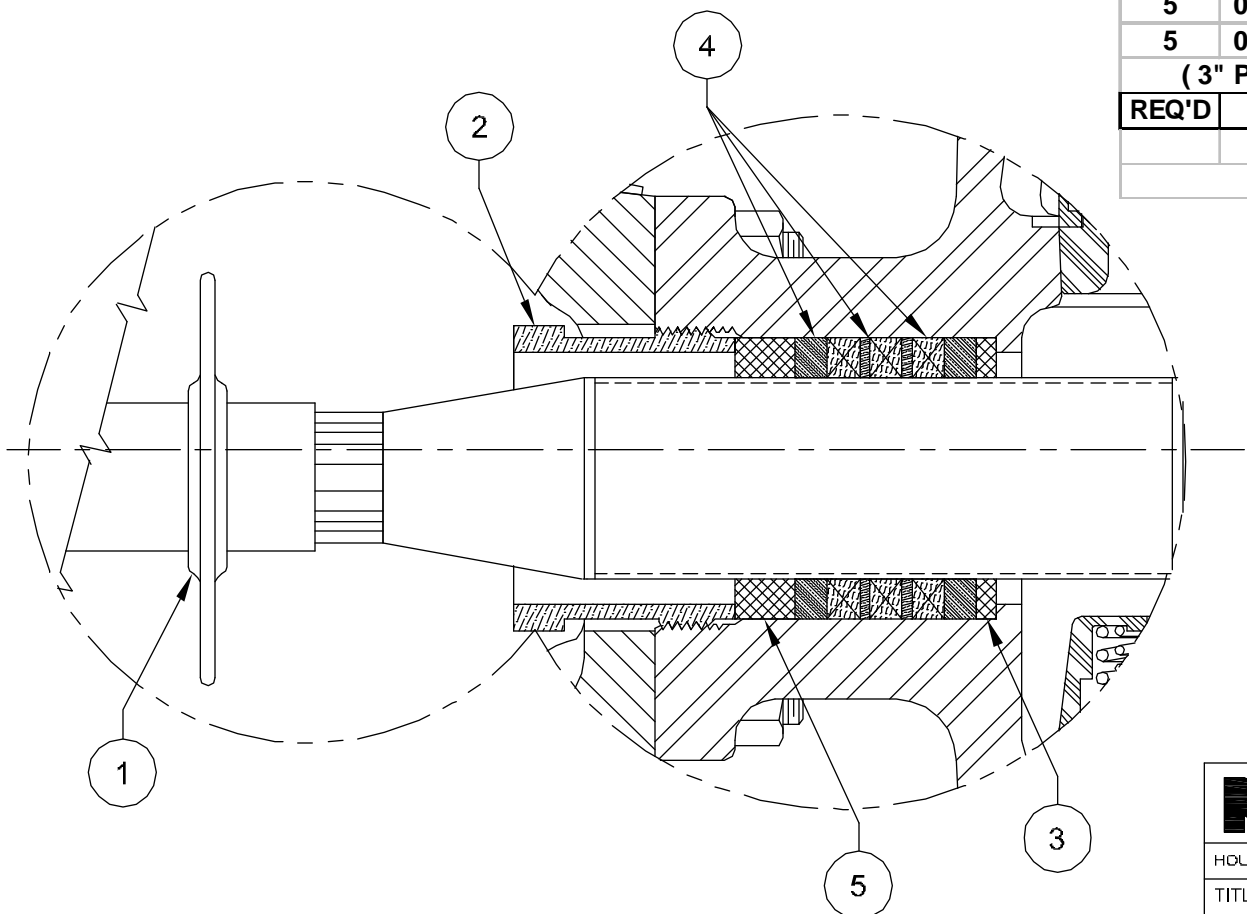
**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWC No.:	SCALE:	REV	SHT.:
118071	NONE	A	6 OF 7

5	001-024051-278		(SS)	
5	001-024051-235		(STL)	
5	001-024051-302	FOLLOWER	(BRZ)	
5	309-300212-458		8921-K	5
5	309-300212-339		249	
5	309-300212-337		241	
5	309-300212-395	PACKING	238	4
5	001-003819-278		(SS)	
5	001-003819-235		(STL)	
5	001-003819-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-003497-351		(DI)	
5	001-003497-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 3" PLUNGER )				

REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				



**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118071, SHEETS 1 THRU 7.

<\*> COATED STAINLESS STEEL

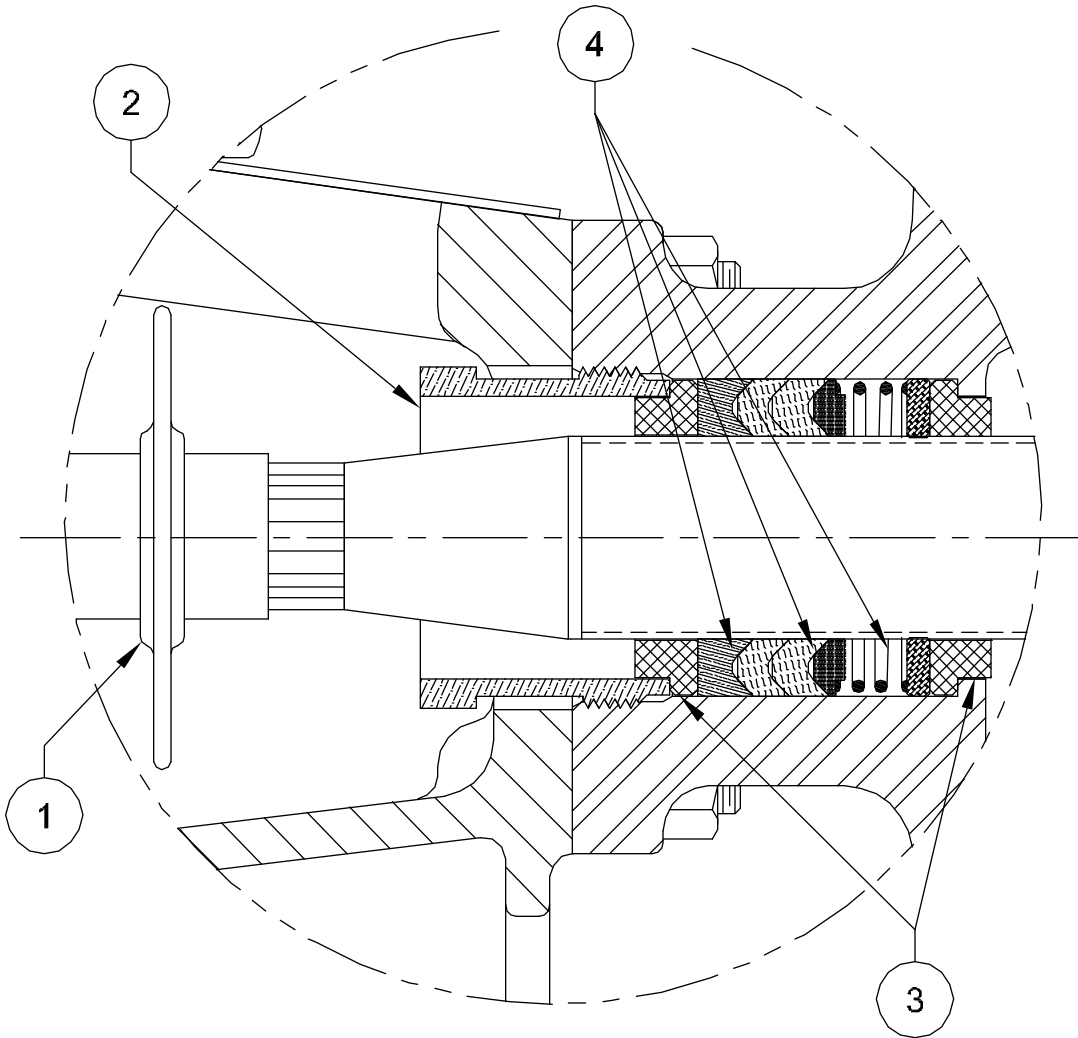
**NOV NATIONAL OILWELL VARCO**  
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
**BRAID STYLE PKG, 2-1/4" THRU 3" PLUNGER**  
**103Q-3L, 110Q-3L (Q3115AL, HP125AL)**

DWG No.: 118071	SCALE: NONE	REV A	SHT.: 7 OF 7
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5	429-214244-342	PACKING W/SS ADPTR	1068-4	
5	429-214244-340	PACKING W/BRZ ADPTR	1068-4	4
10	001-012921-575		(SS)	
10	001-012921-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



**NOTE**

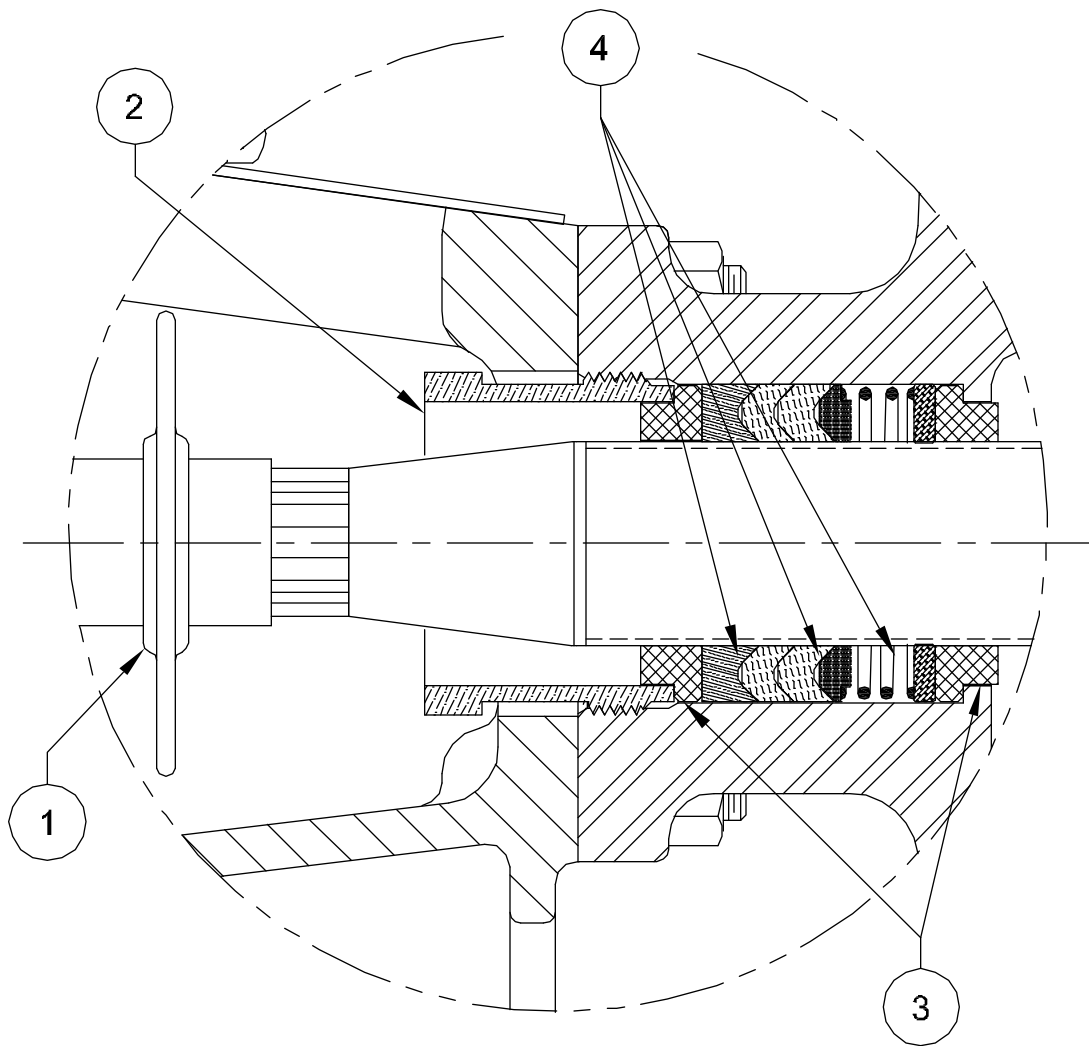
1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG., 118072, SHEETS 1 THRU 7.

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<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, PLUNGER KIT			
"SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER			
103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	1 OF 7

5	429-238244-342	PACKING W/SS ADPTR	1068-4	
5	429-238244-340	PACKING W/BRZ ADPTR	1068-4	4
10	001-029502-575		(SS)	
10	001-029502-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



**NOTE**

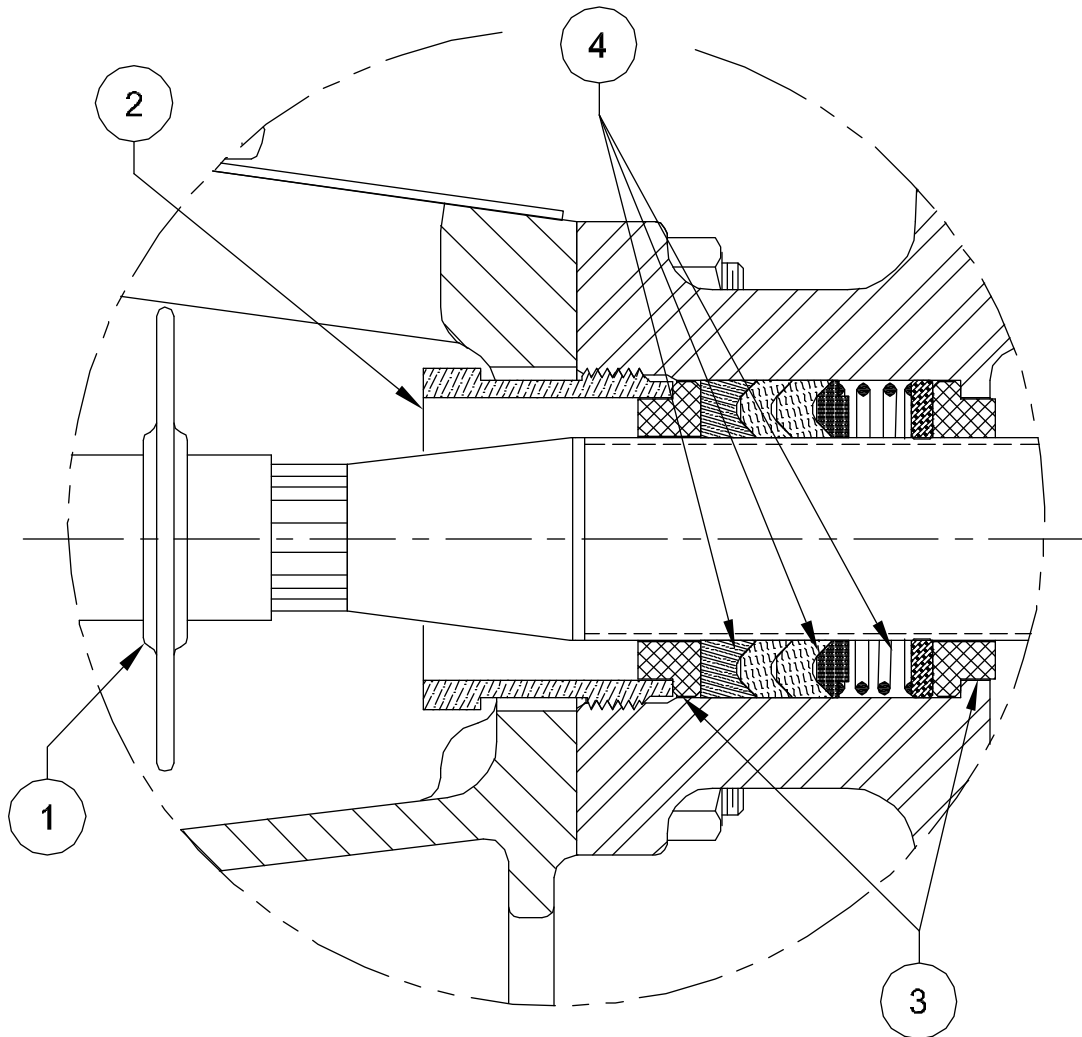
1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG.,  
118072, SHEETS 1 THRU 7.

57

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT "SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	2 OF 7

5	429-212244-342	PACKING W/SS ADPTR	1068-4	
5	429-212244-340	PACKING W/BRZ ADPTR	1068-4	4
10	001-007783-575		(SS)	
10	001-007783-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
	( 2-1/2" PLUNGER )			
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



58

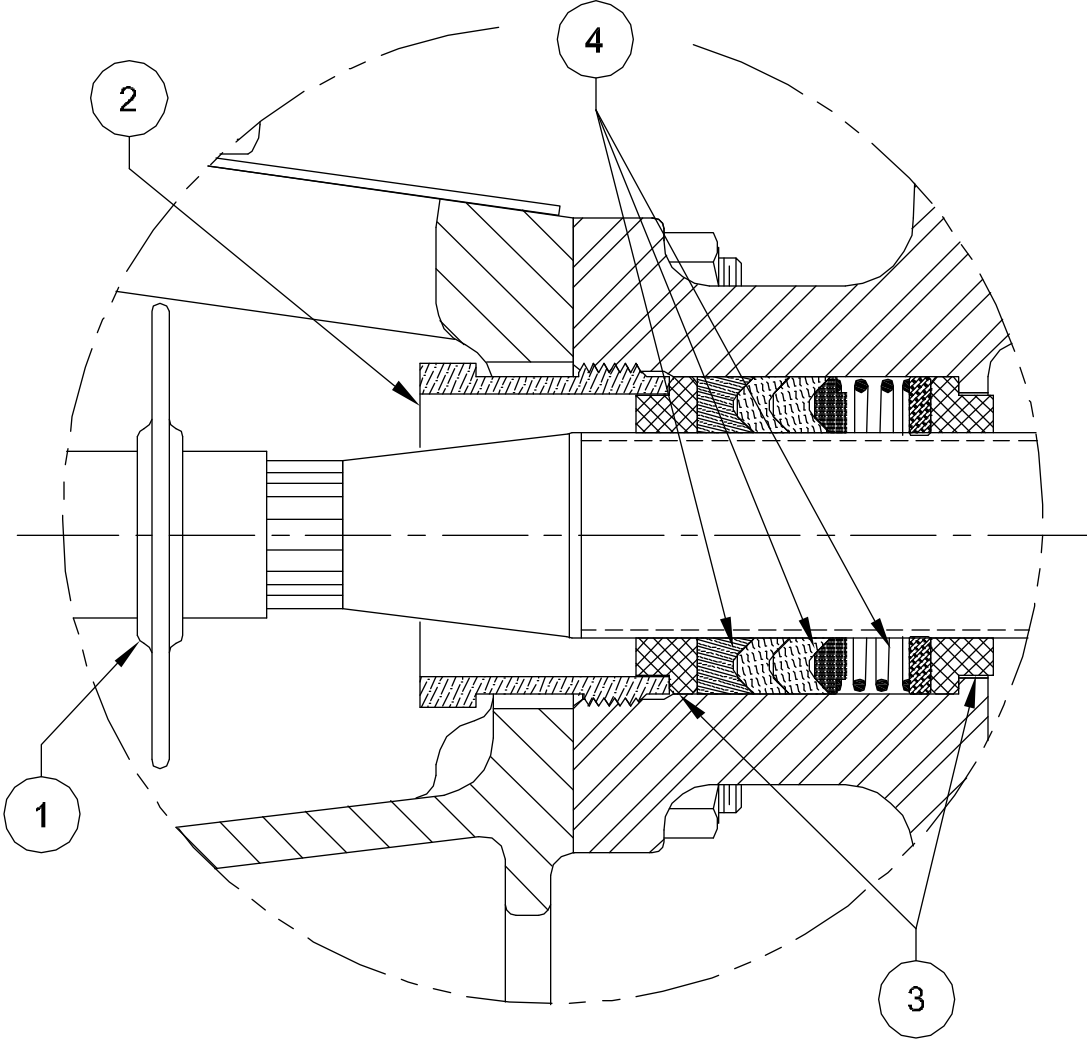
**NOTE**

1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG.,  
118072, SHEETS 1 THRU 7.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, PLUNGER KIT "SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	3 OF 7

5	429-258256-342	PACKING W/SS ADPTR	1068-4	
5	429-258256-340	PACKING W/BRZ ADPTR	1068-4	4
10	AGA-029617-575		(SS)	
10	AGA-029617-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



59

**NOTE**

1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG., 118072, SHEETS 1 THRU 7.



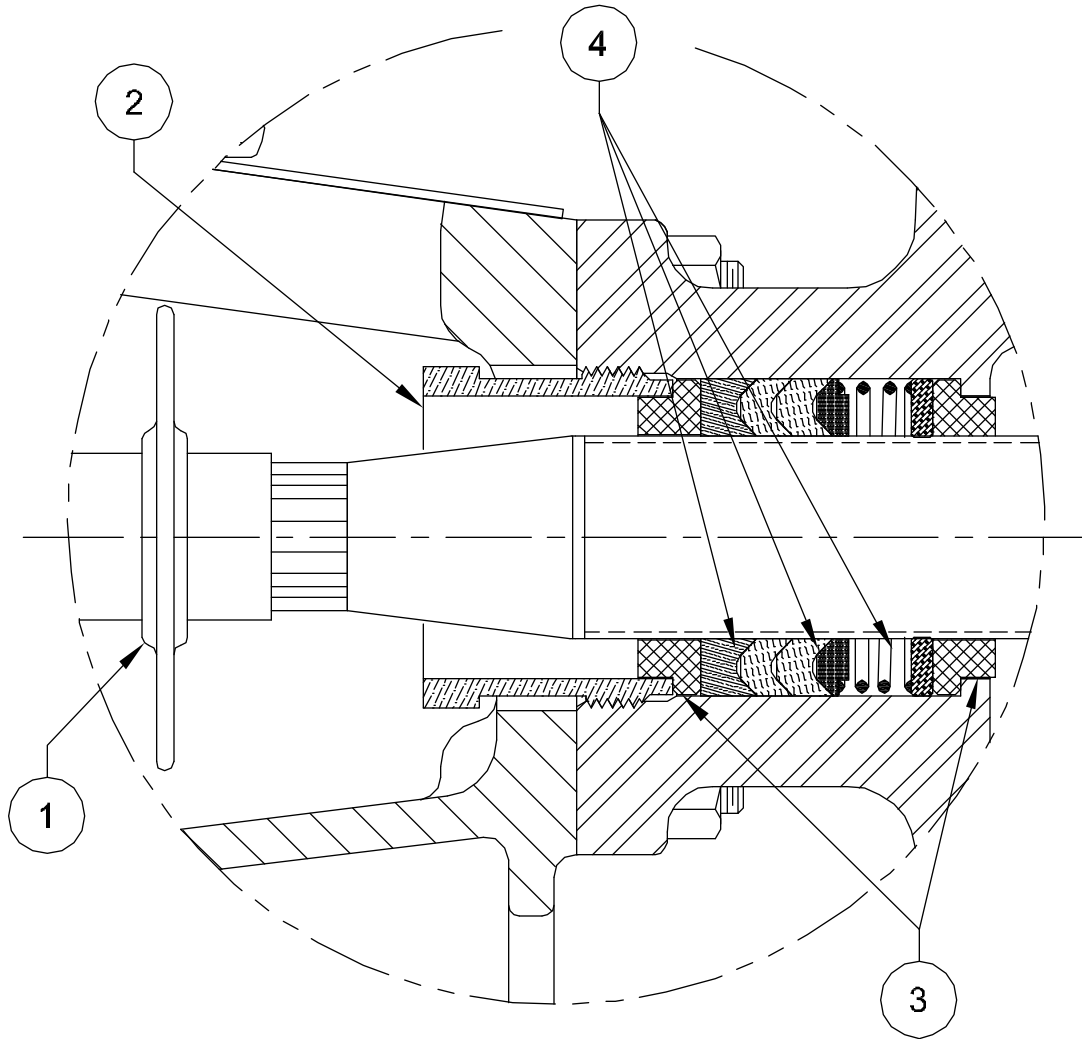
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
**"SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER**  
**103Q-3L, 110Q-3L (Q3115AL, HP125AL)**

DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	4 OF 7

5	429-234256-342	PACKING W/SS ADPTR	1068-4	
5	429-234256-340	PACKING W/BRZ ADPTR	1068-4	4
10	001-011061-575		(SS)	
10	001-011061-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



NOTE

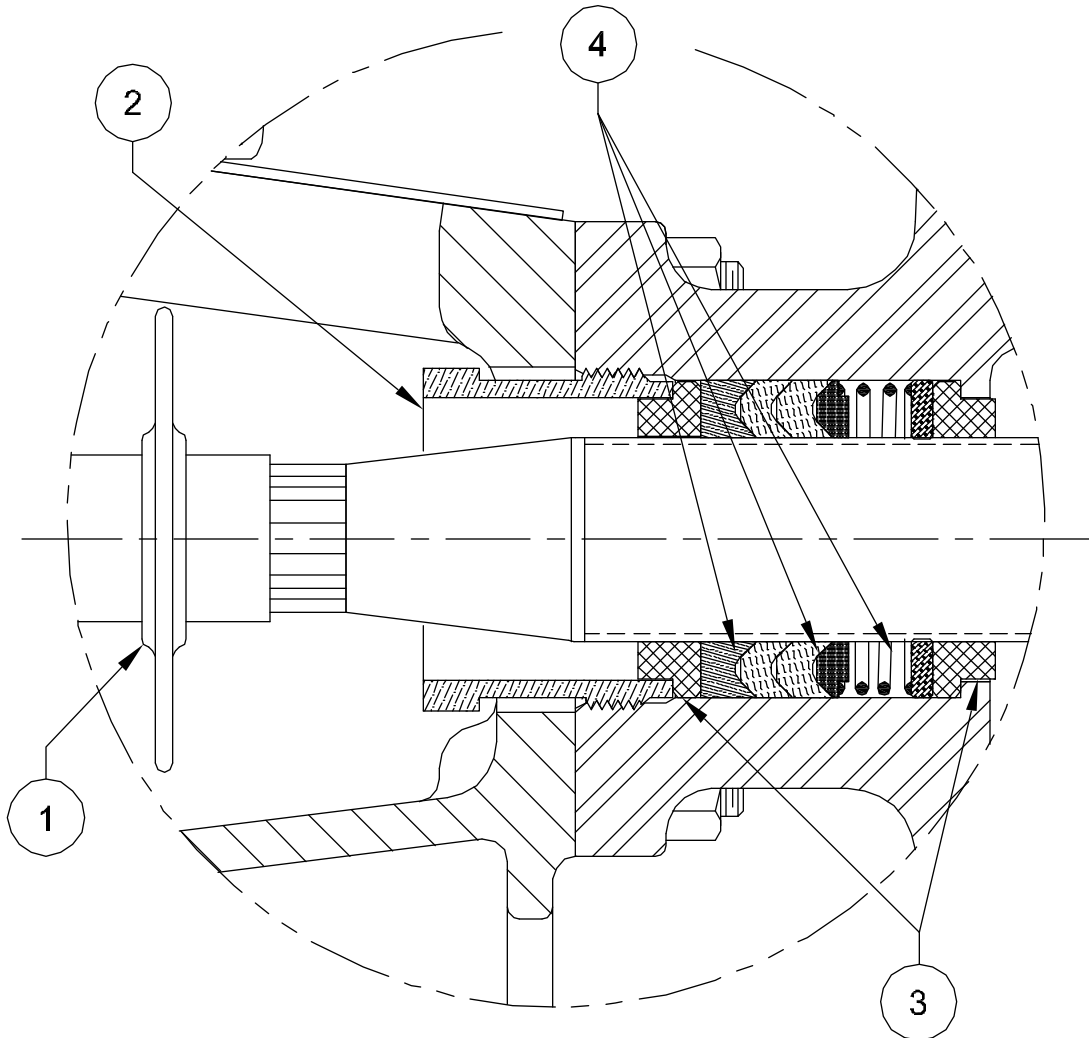
1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG.,  
118072, SHEETS 1 THRU 7.

60

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT "SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER 103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	5 OF 7



5	429-278256-342	PACKING W/SS ADPTR	1068-4	
5	429-278256-340	PACKING W/BRZ ADPTR	1068-4	4
10	ACC-030416-575		(SS)	
10	ACC-030416-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 2-7/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				



<\*> COATED STAINLESS STEEL

61

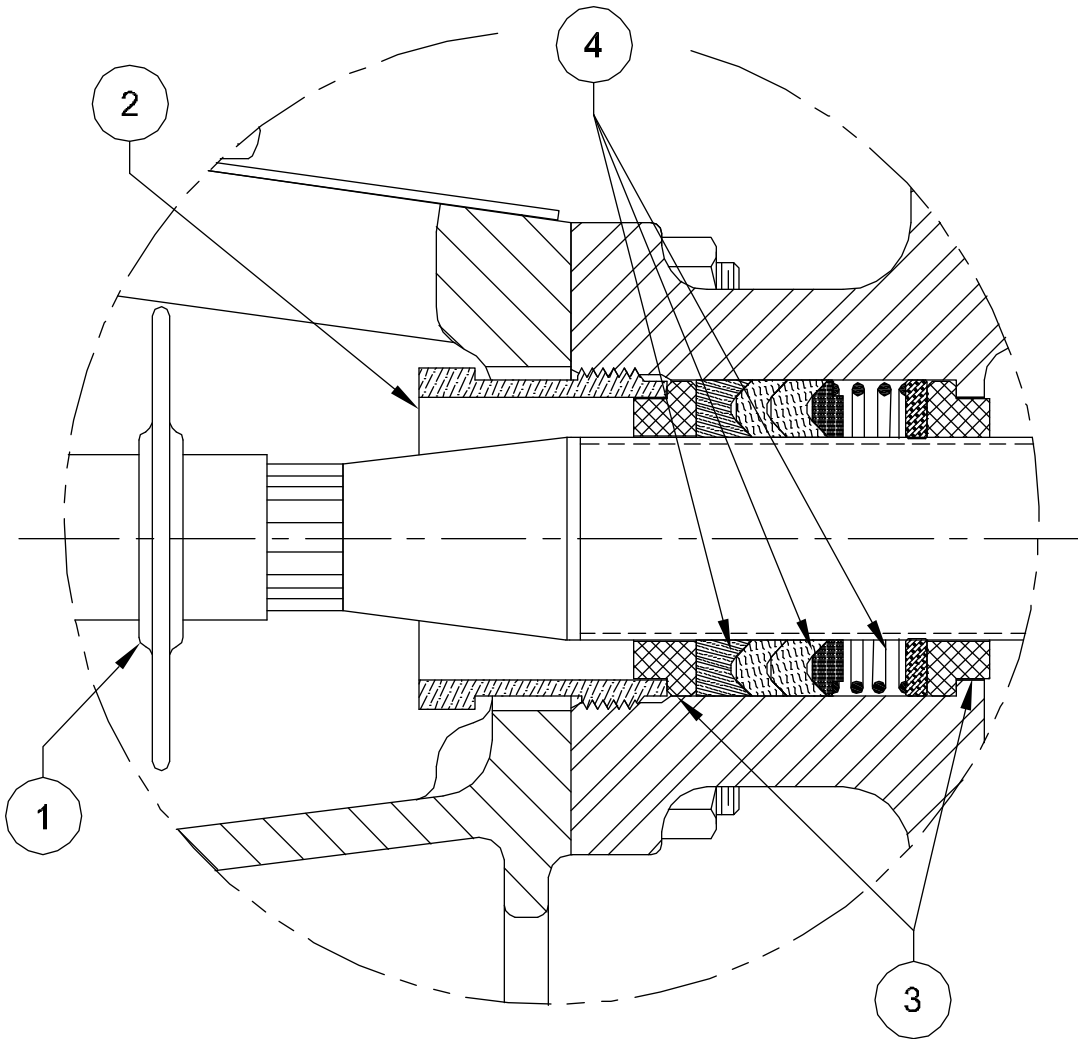
**NOTE**

1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG., 118072, SHEETS 1 THRU 7.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, PLUNGER KIT			
"SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER			
103Q-3L, 110Q-3L (Q3115AL, HP125AL)			
DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	6 OF 7

5	429-300256-342	PACKING W/SS ADPTR	1068-4	
5	429-300256-340	PACKING W/BRZ ADPTR	1068-4	4
10	001-003819-575		(SS)	
10	001-003819-302	THROAT BUSHING	(BRZ)	3
5	AAB-029711-E16	<*>	(XSS)	
5	001-023942-310	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 3" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



62

NOTE

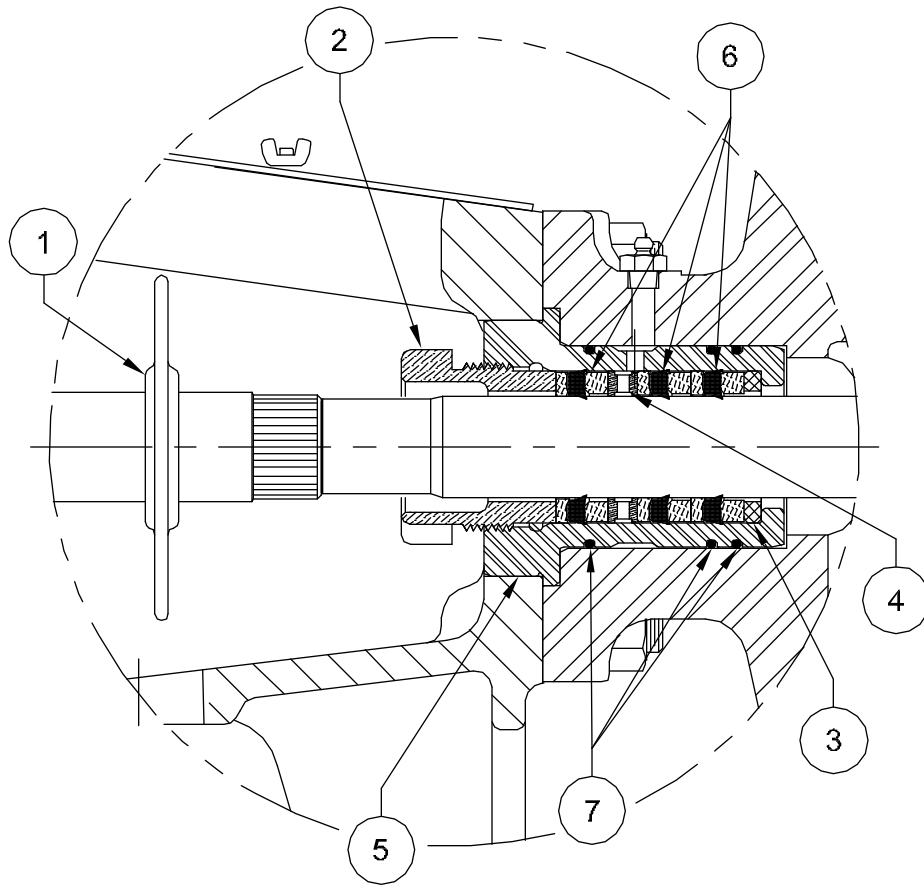
1) FOR ALL " 1068-4 " STYLE PACKING SEE DWG.,  
118072, SHEETS 1 THRU 7.



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

TITLE:  
ASSEMBLY, PLUNGER KIT  
"SSF-4" STYLE PKG, 2-1/4" THRU 3" PLUNGER  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:	SCALE:	REV	SHT.:
118072	NONE	A	7 OF 7



15	110-000232-200	O-RING		7
	182-112214-477		858	
	182-112214-386		842	
	182-112214-374		845	
5	182-112214-370	PACKING	838	6
	002-011673-278		(SS)	
	002-011673-237		(STL)	
5	002-011673-316	STUFFING BOX	(BRZ)	5
	001-011218-278		(SS)	
	001-011218-235		(STL)	
5	011-011218-302	LANTERN RING	(BRZ)	4
	001-010949-278		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-1/2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOTE**

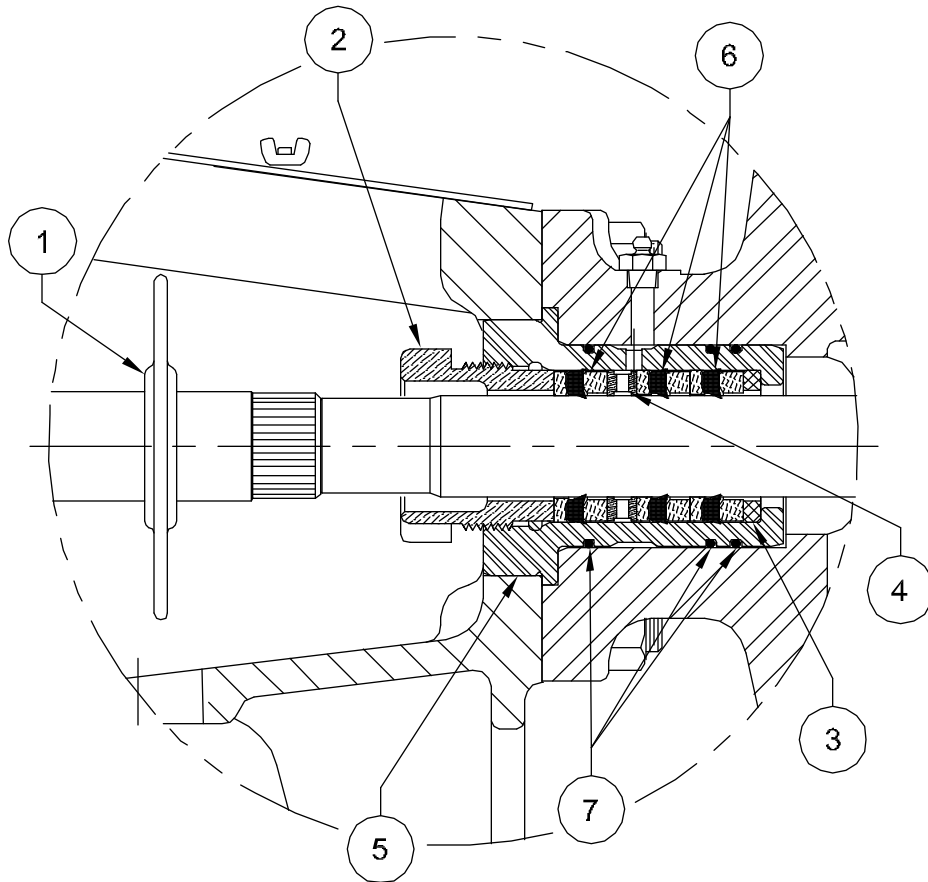
1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073, SHEETS 1 THRU 9.



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

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
**"J"-STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER**  
**103Q-3M, 110Q-3M (Q3115AM, HP125AM)**

DWG No.: 118073	SCALE: NONE	REV A	SHT.: 1 OF 9
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**NOTE**

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073, SHEETS 1 THRU 9.

15	110-000232-200	O-RING		7
	182-158214-477		858	
	182-158214-386		842	
	182-158214-374		845	
5	182-158214-370	PACKING	838	6
	002-011673-278		(SS)	
	002-011673-237		(STL)	
5	002-011673-316	STUFFING BOX	(BRZ)	5
	001-005305-278		(SS)	
	001-005305-235		(STL)	
5	001-005305-302	LANTERN RING	(BRZ)	4
	001-010962-278		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

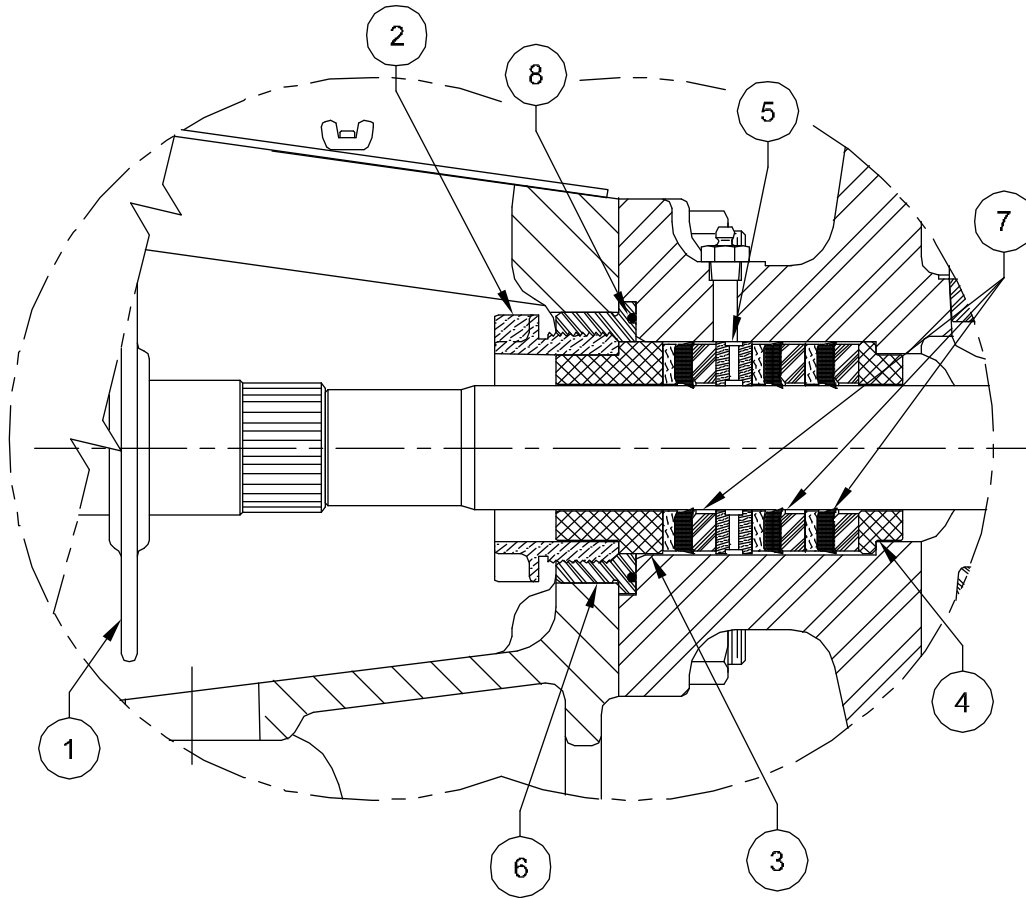
NONE

REV

A

SHT.:

2 OF 9



**NOTE**

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-134244-477		858	
	181-134244-286		842	
	181-134244-374		845	
5	181-134244-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-010990-278		(SS)	
	001-010990-235		(STL)	
5	001-010990-302	LANTERN RING	(BRZ)	5
	001-010897-278		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	4
	001-010933-278		(SS)	
	001-010933-235		(STL)	
	001-010933-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

65



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

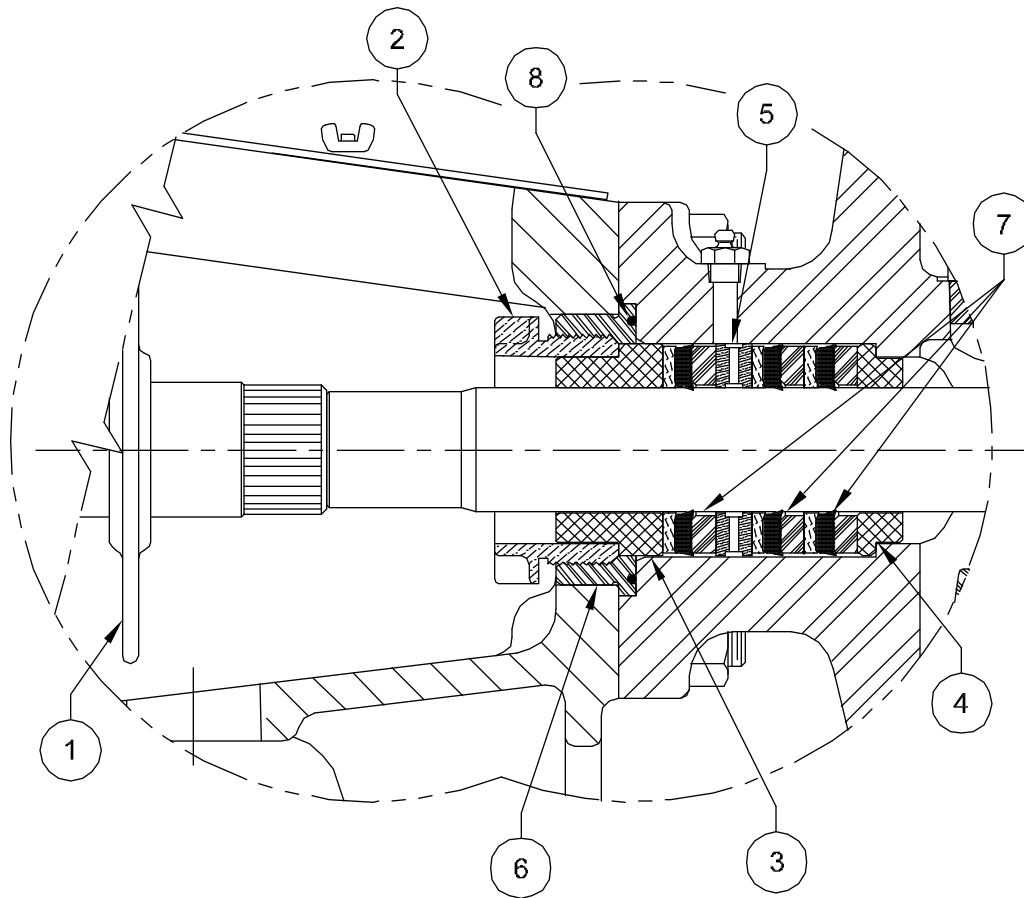
NONE

REV

A

SHT.:

3 OF 9



**NOTE**

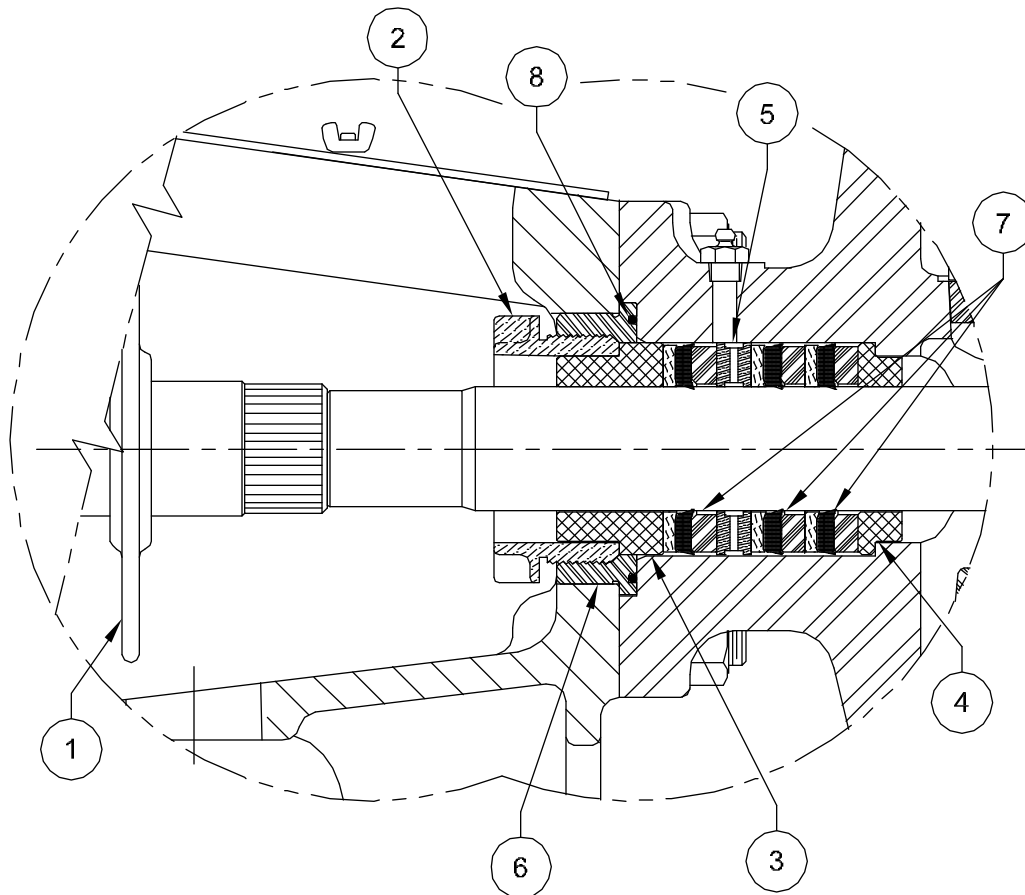
1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-178244-477		858	
	181-178244-386		842	
	181-178244-374		845	
5	181-178244-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-014457-278		(SS)	
	001-014457-235		(STL)	
5	001-014457-302	LANTERN RING	(BRZ)	5
	001-010899-278		(SS)	
	001-010899-235		(STL)	
5	001-010899-302	THROAT BUSHING	(BRZ)	4
	001-014459-278		(SS)	
	001-014459-235		(STL)	
	001-014459-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-7/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

66

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT "J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER 103Q-3M, 110Q-3M (Q3115AM, HP125AM)			
DWG No.:	SCALE:	REV:	SHT.:
118073	NONE	A	4 OF 9



NOTE  
 1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-200214-477		858	
	181-200214-386		842	
	181-200214-374		845	
5	181-200214-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-010991-278		(SS)	
	001-010991-235		(STL)	
5	001-010991-302	LANTERN RING	(BRZ)	5
	001-010901-278		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	4
	001-010931-278		(SS)	
	001-010931-235		(STL)	
	001-010931-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

67

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

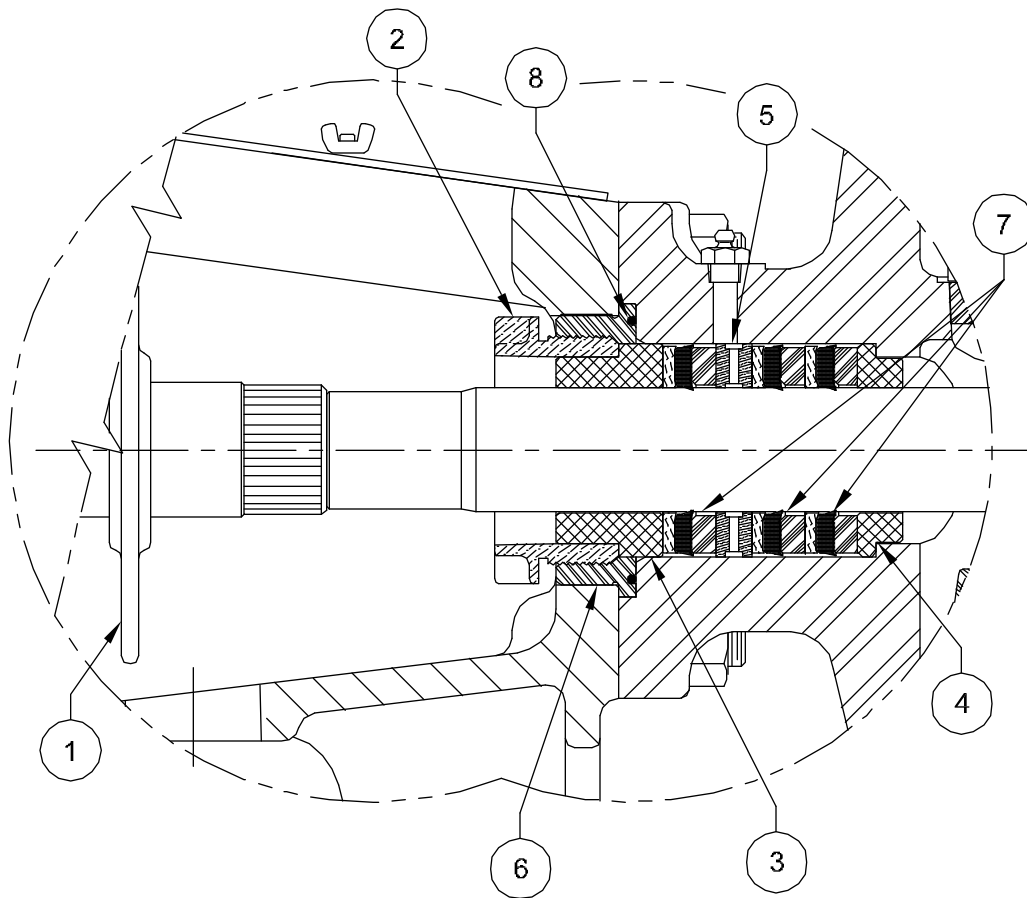
NONE

REV

A

SHT.:

5 OF 9



**NOTE**

1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-218214-477		858	
	181-218214-386		842	
	181-218214-374		845	
5	181-218214-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-014456-278		(SS)	
	001-014456-235		(STL)	
5	001-014456-302	LANTERN RING	(BRZ)	5
	001-010902-278		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	4
	001-014458-278		(SS)	
	001-014458-235		(STL)	
	001-014458-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

NONE

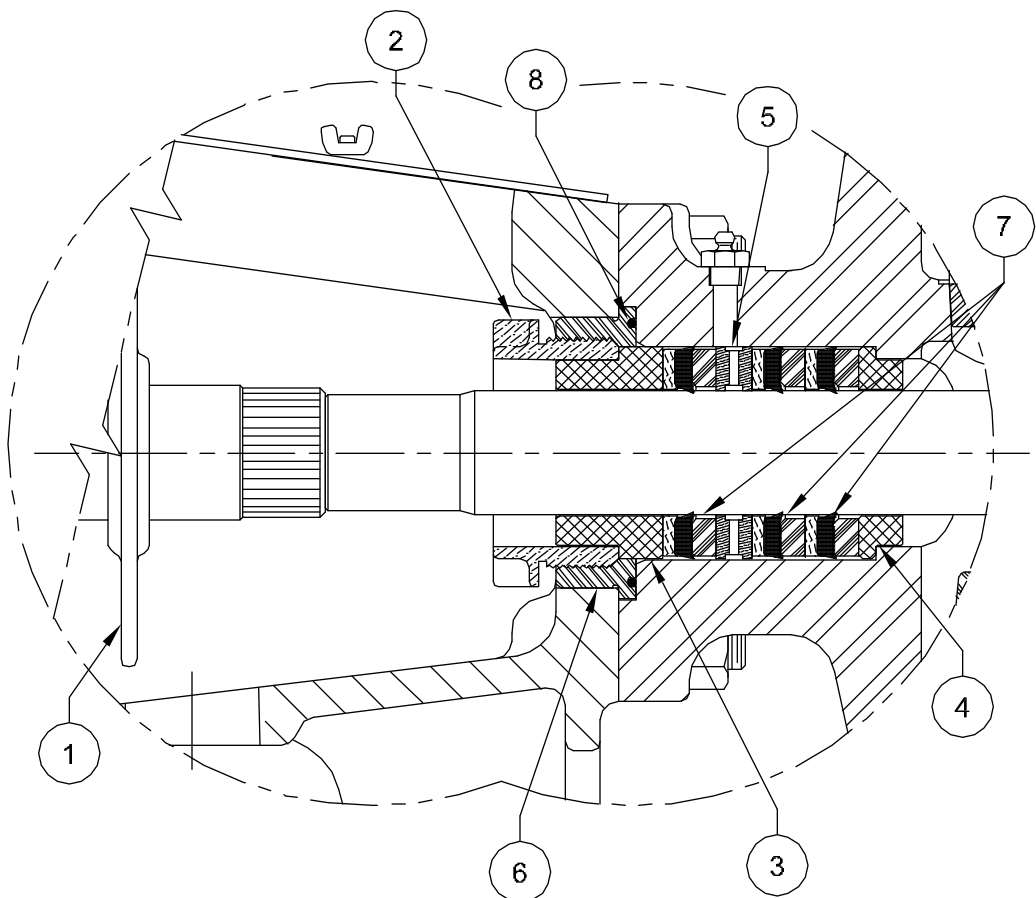
REV

A

SHT.:

6 OF 9





NOTE  
 1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-214214-477		858	
	181-214214-386		842	
	181-214214-374		845	
5	181-214214-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-010266-278		(SS)	
	001-010266-235		(STL)	
5	001-010266-302	LANTERN RING	(BRZ)	5
	001-007979-278		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	4
	001-007983-278		(SS)	
	001-007983-235		(STL)	
	001-007983-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

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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 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

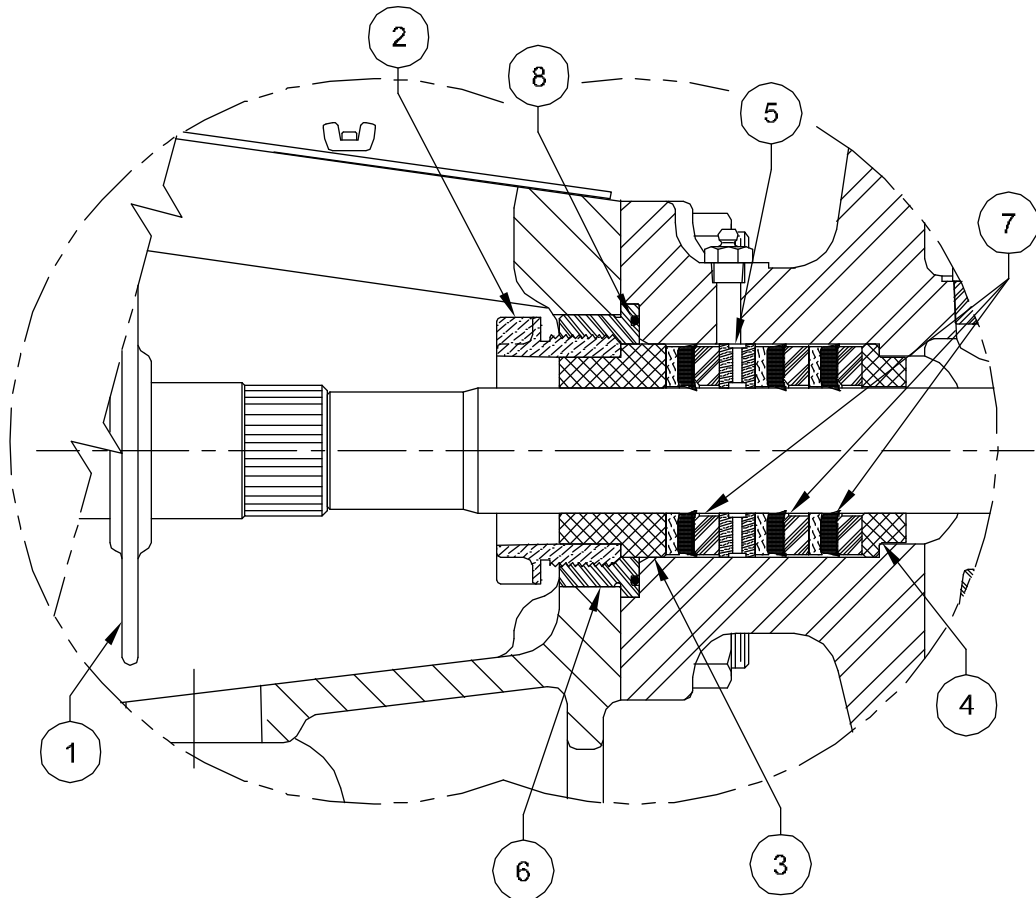
NONE

REV

A

SHT.:

7 OF 9



NOTE  
 1) FOR ALL " J " STYLE PACKING SEE DRAWING 118073,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-238244-477		858	
	181-238244-386		842	
	181-238244-374		845	
5	181-238244-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-028072-278		(SS)	
	001-028072-235		(STL)	
5	001-028072-302	LANTERN RING	(BRZ)	5
	001-024394-278		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	4
	001-024393-278		(SS)	
	001-024393-235		(STL)	
	001-024393-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

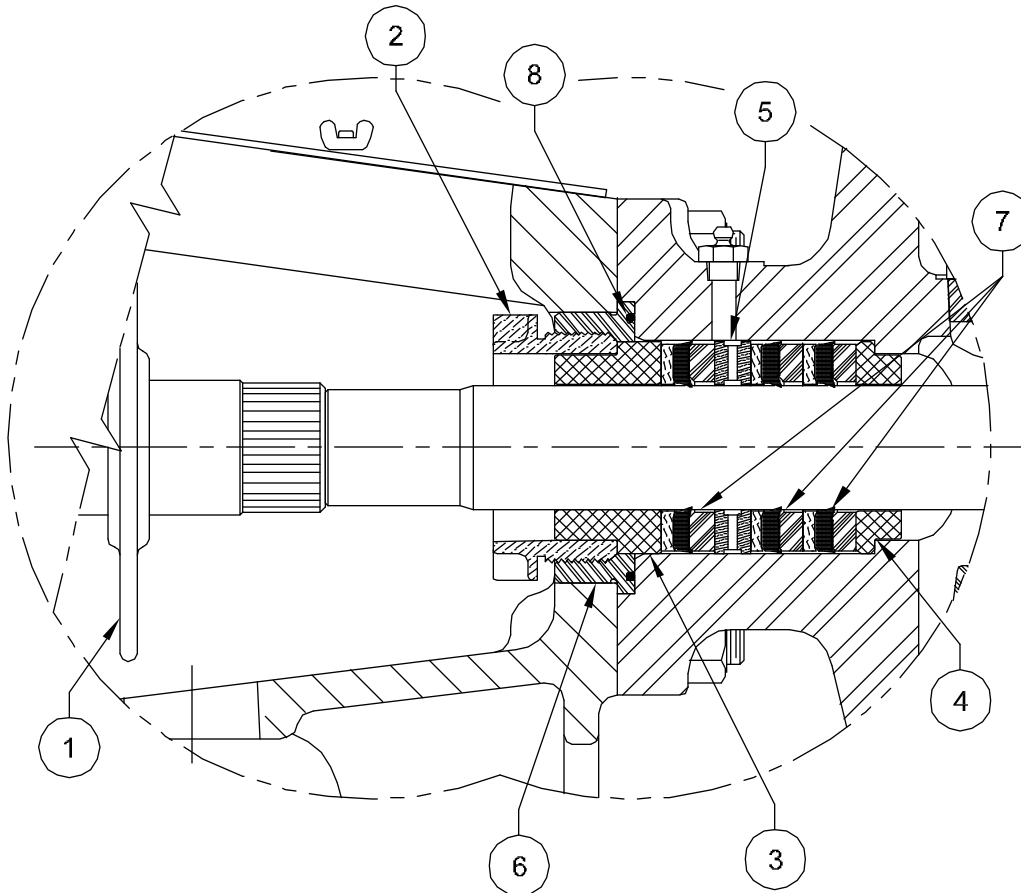
70

**NOV NATIONAL OILWELL VARCO**

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

TITLE: ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2 THRU 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 118073	SCALE: NONE	REV: A	SHT.: 8 OF 9
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NOTE  
 1) FOR ALL "J" STYLE PACKING SEE DRAWING 118073,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	181-212178-477		858	
	181-212178-386		842	
	181-212178-374		845	
5	181-212178-370	PACKING	838	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	001-010904-278		(SS)	
	001-010904-235		(STL)	
5	001-010904-302	LANTERN RING	(BRZ)	5
	001-025918-278		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	4
	001-008745-278		(SS)	
	001-008745-235		(STL)	
	001-008745-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

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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 2-1/2 PLUNGER  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118073

SCALE:

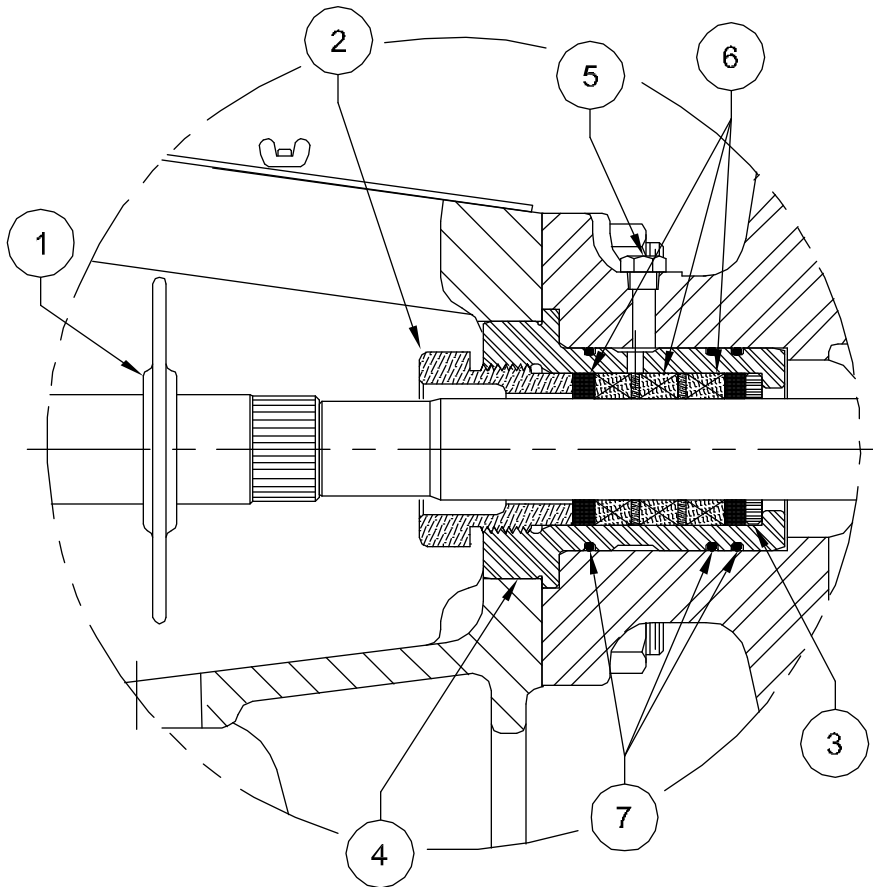
NONE

REV

A

SHT.:

9 OF 9



**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074, SHEETS 1 THRU 9.

15	110-000232-200	O-RING		7
	287-112234-458		8921-K	
	287-112234-339		249	
	287-112234-337		241	
5	287-112234-395	PACKING	238	6
5	170-018002-278	PIPE PLUG	(SS)	5
	002-029316-278		(SS)	
	002-029316-237		(STL)	
5	002-029316-316	STUFFING BOX	(BRZ)	4
	001-010949-278		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-1/2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

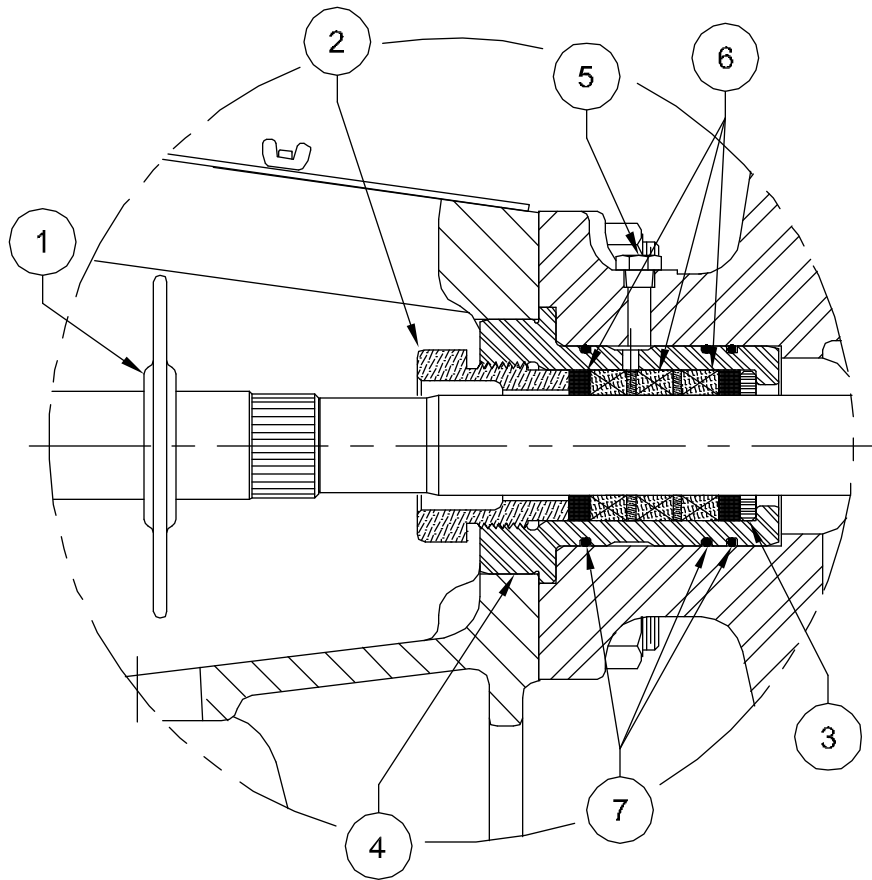
ASSEMBLY, PLUNGER KIT  
BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 118074

SCALE: NONE

REV A

SHT.: 1 OF 9



NOTE  
 1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074,  
 SHEETS 1 THRU 9.

15	110-000232-200	O-RING		7
	287-158234-458		8921-K	
	287-158234-339		249	
	287-158234-337		241	
5	287-158234-395	PACKING	238	6
5	170-018002-278	PIPE PLUG	(SS)	5
	002-029316-278		(SS)	
	002-029316-237		(STL)	
5	002-029316-316	STUFFING BOX	(BRZ)	4
	001-010962-278		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

73

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

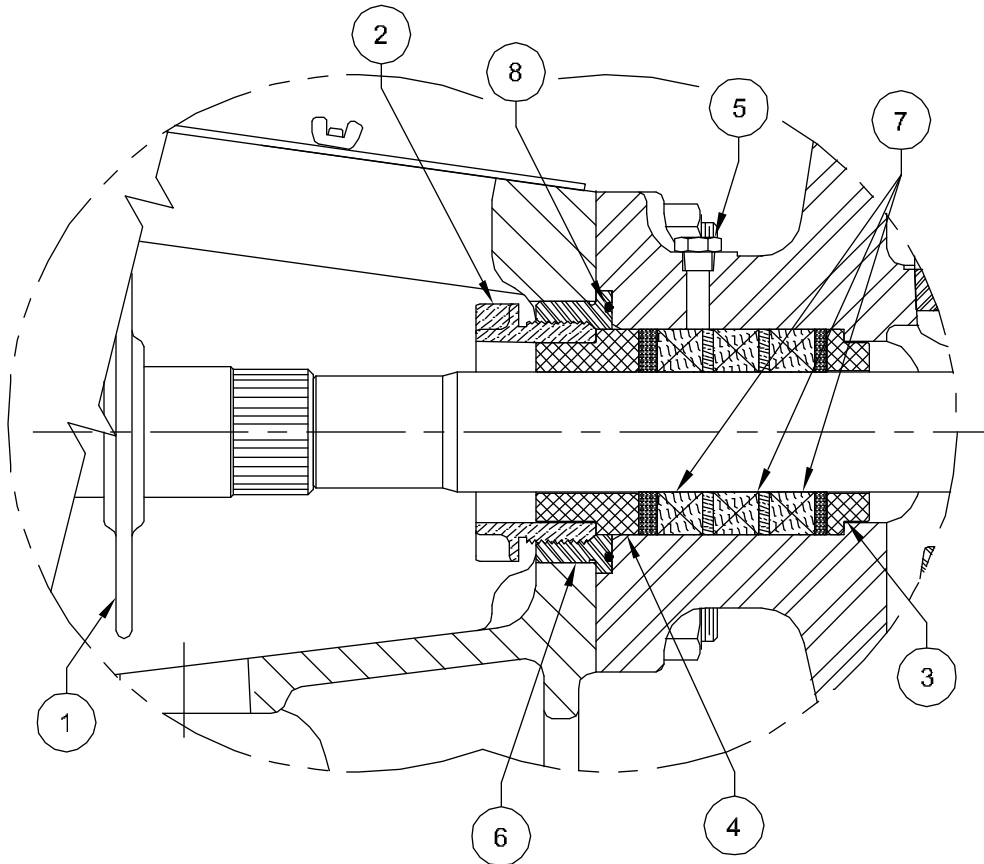
ASSEMBLY, PLUNGER KIT  
 BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 118074

SCALE: NONE

REV A

SHT: 2 OF 9



**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	288-134234-458		8921-K	
	288-134234-339		249	
	288-134234-337		241	
5	288-134234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010933-278		(SS)	
	001-010933-235		(STL)	
5	001-010933-302	FOLLOWER	(BRZ)	4
	001-010897-278		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-3/4 PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>	
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118074

SCALE:

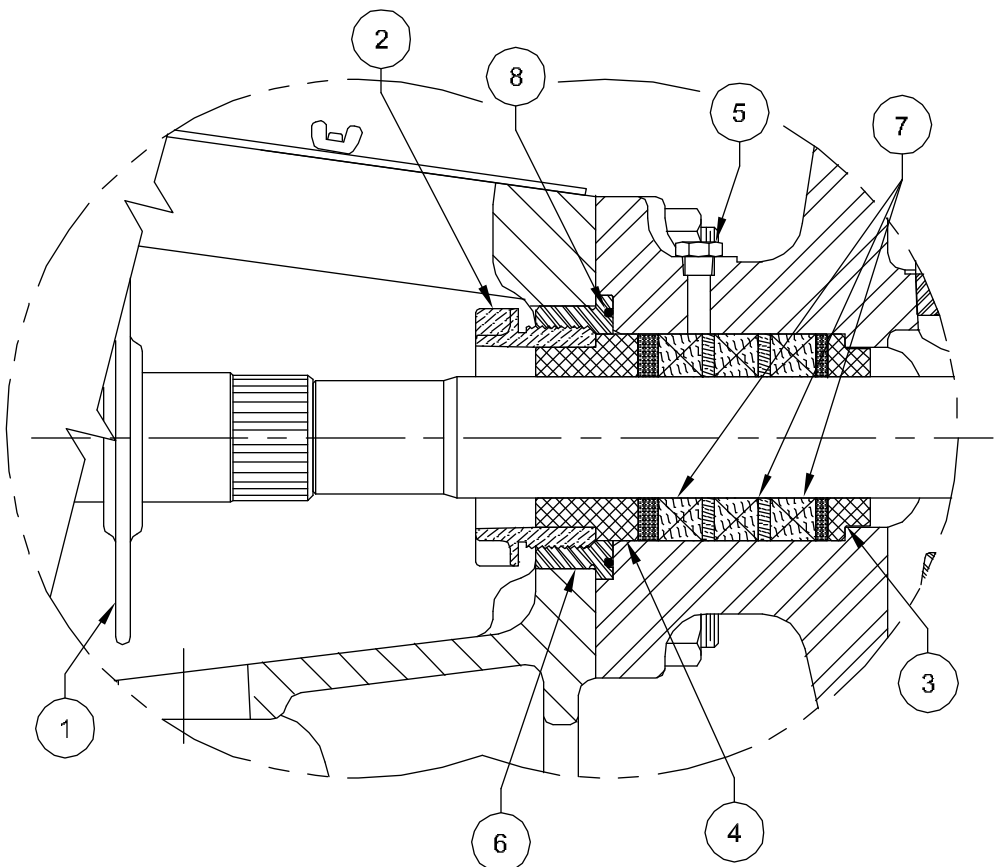
NONE

REV

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SHT.:

3 OF 9



5	110-000238-200	O-RING		8
	288-178234-458		8921-K	
	288-178234-339		249	
	288-178234-337		241	
5	288-178234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014459-278		(SS)	
	001-014459-235		(STL)	
5	001-014459-302	FOLLOWER	(BRZ)	4
	001-010899-278		(SS)	
	001-010899-235		(STL)	
5	001-010899-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-7/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

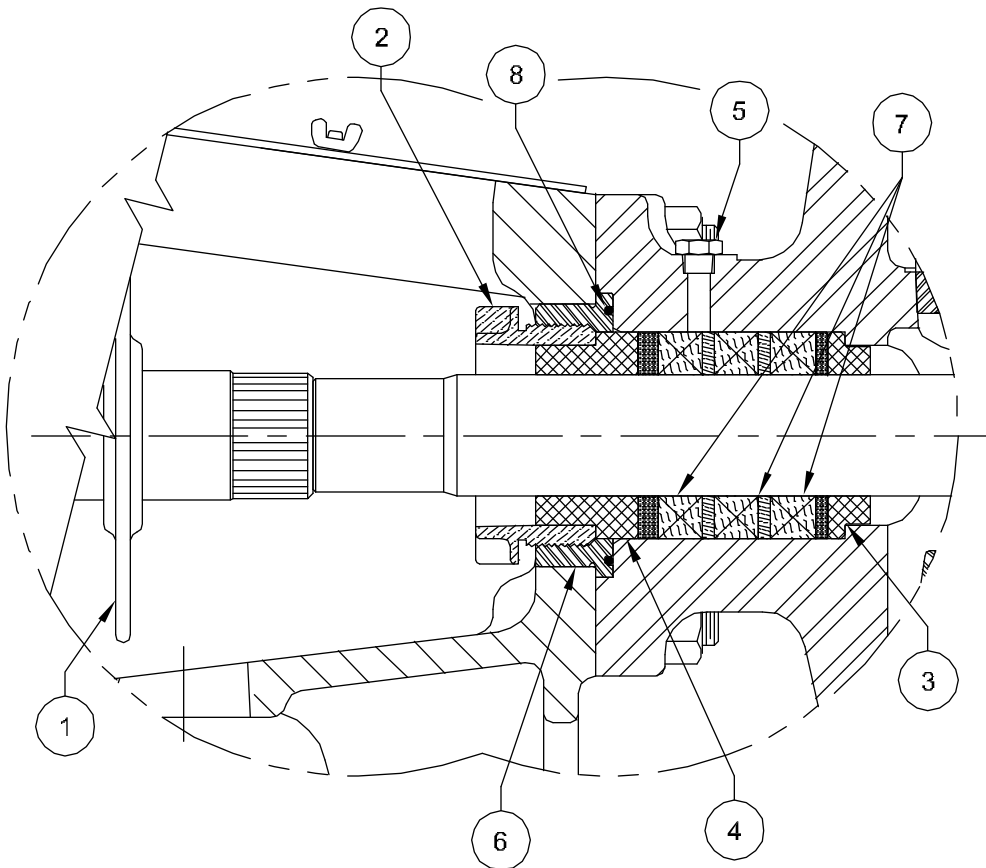
<\*> COATED STAINLESS STEEL

NOTE  
 1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074,  
 SHEETS 1 THRU 9.

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.: 118074	SCALE: NONE	REV A	SHT.: 4 OF 9
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NOTE  
 1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	288-200258-458		8921-K	
	288-200258-339		249	
	288-200258-337		241	
5	288-200258-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010931-278		(SS)	
	001-010931-235		(STL)	
5	001-010931-302	FOLLOWER	(BRZ)	4
	001-010901-278		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<=>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>

**BILL OF MATERIAL**

<=> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118074

SCALE:

NONE

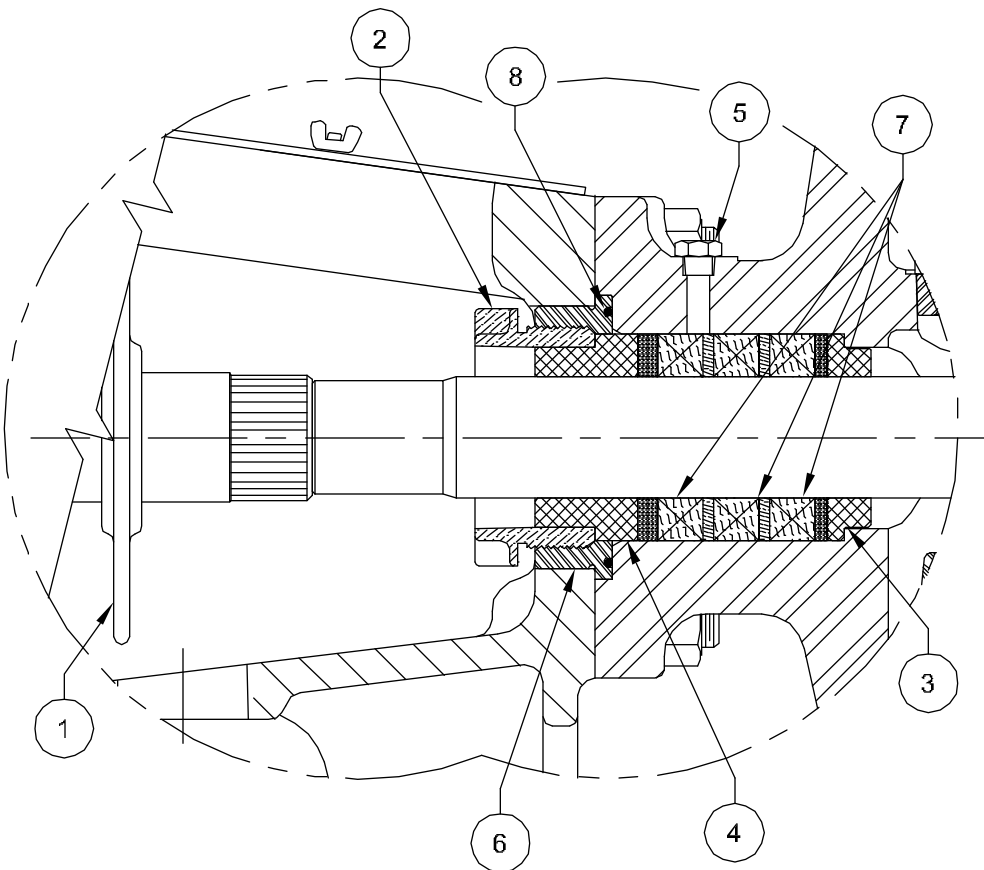
REV

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SHT.:

5 OF 9





**NOTE**

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	288-218234-458		8921-K	
	288-218234-339		249	
	288-218234-337		241	
5	288-218234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014458-278		(SS)	
	001-014458-235		(STL)	
5	001-014458-302	FOLLOWER	(BRZ)	4
	001-010902-278		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118074

SCALE:

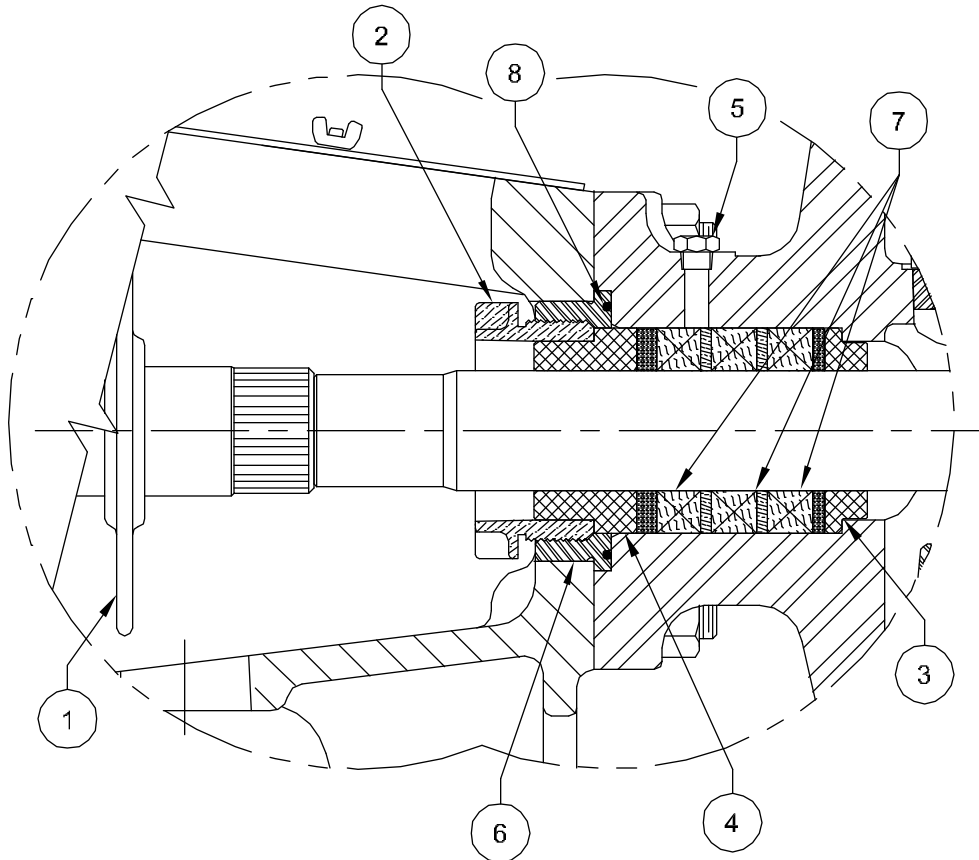
NONE

REV

A

SHT.:

6 of 9



5	110-000238-200	O-RING		8
	288-214234-458		8921-K	
	288-214234-339		249	
	288-214234-337		241	
5	288-214234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-007983-278		(SS)	
	001-007983-235		(STL)	
5	001-007983-302	FOLLOWER	(BRZ)	4
	001-007979-278		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

NOTE

1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118074

SCALE:

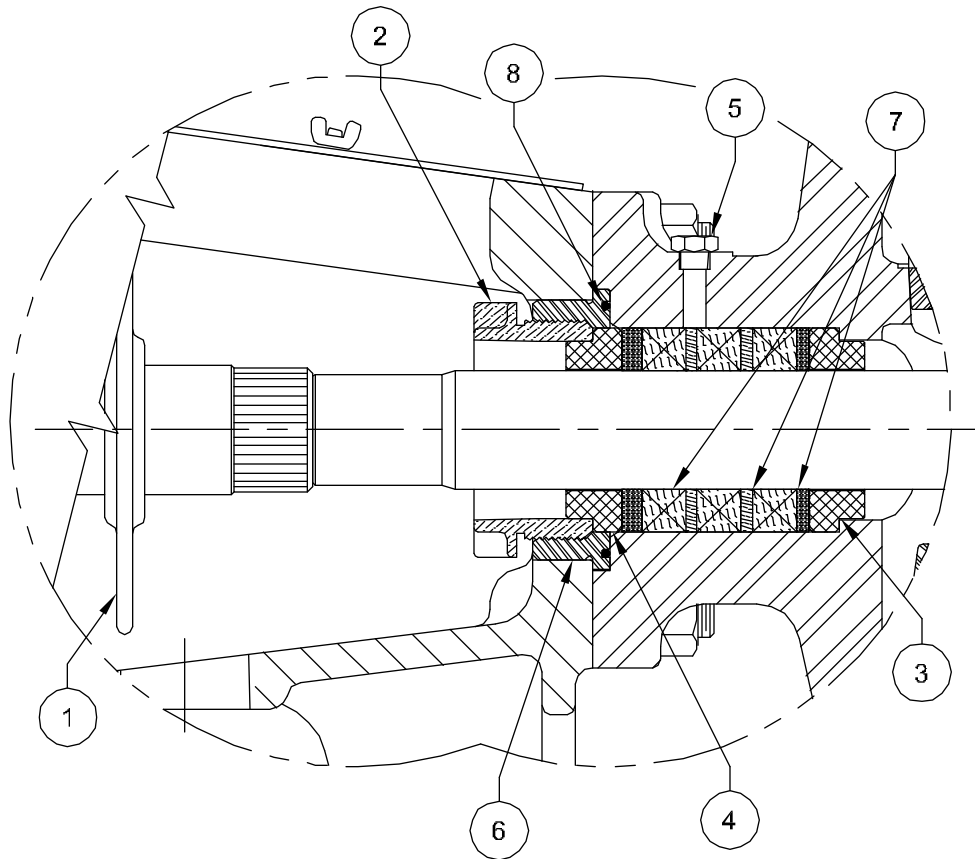
NONE

REV

A

SHT.:

7 OF 9



**NOTE**

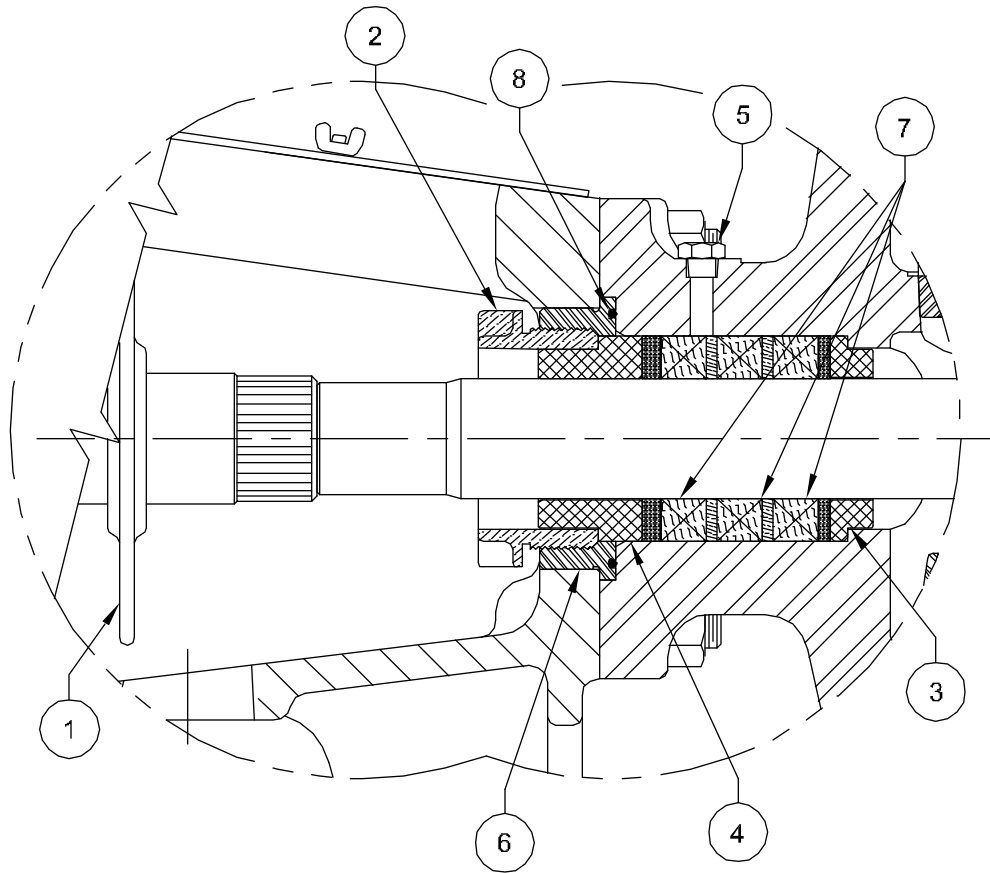
1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	288-238234-458		8921-K	
	288-238234-339		249	
	288-238234-337		241	
5	288-238234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-024393-278		(SS)	
	001-024393-235		(STL)	
5	001-024393-302	FOLLOWER	(BRZ)	4
	001-024394-278		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-3/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

79

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
ASSEMBLY, PLUNGER KIT BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR 103Q-3M, 110Q-3M (Q3115AM, HP125AM)			
DWG No.:	SCALE:	REV:	SHT.:
118074	NONE	A	8 OF 9



NOTE  
 1) FOR ALL " BRAID " STYLE PACKING SEE DRAWING 118074,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	288-212234-458		8921-K	
	288-212234-339		249	
	288-212234-337		241	
5	288-212234-395	PACKING	238	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-008745-278		(SS)	
	001-008745-235		(STL)	
5	001-008745-302	FOLLOWER	(BRZ)	4
	001-025918-278		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/2 PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL

80

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 BRAID - STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118074

SCALE:

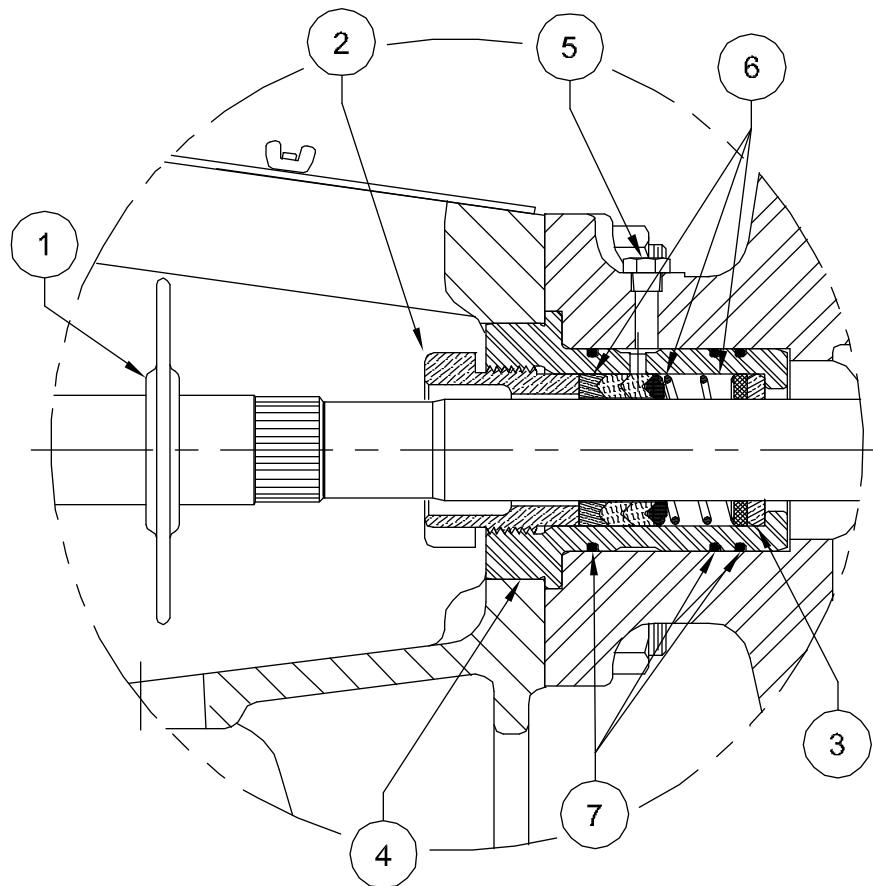
NONE

REV

A

SHT.:

9 OF 9



NOTE  
 1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075,  
 SHEETS 1 THRU 9.

15	110-000232-200	O-RING		7
	432-112238-473		1043-4	
5	432-112238-340	PACKING	1068-4	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	002-029316-278		(SS)	
	002-029316-237		(STL)	
5	002-029316-316	STUFFING BOX	(BRZ)	4
	001-010949-575		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

NONE

REV

A

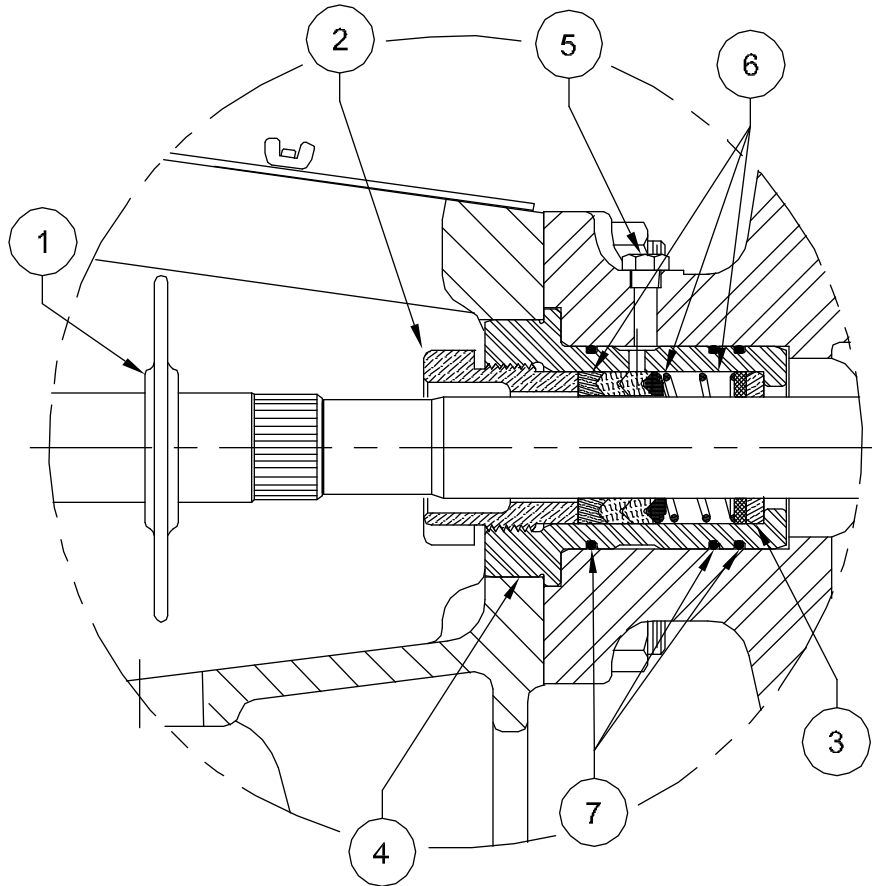
SHT.:

1 OF 9

15	110-000232-200	O-RING		7
	432-158238-473		1043-4	
5	432-158238-340	PACKING	1068-4	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	002-029316-278		(SS)	
	002-029316-237		(STL)	
5	002-029316-316	STUFFING BOX	(BRZ)	4
	001-010962-575		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL



NOTE

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
"SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

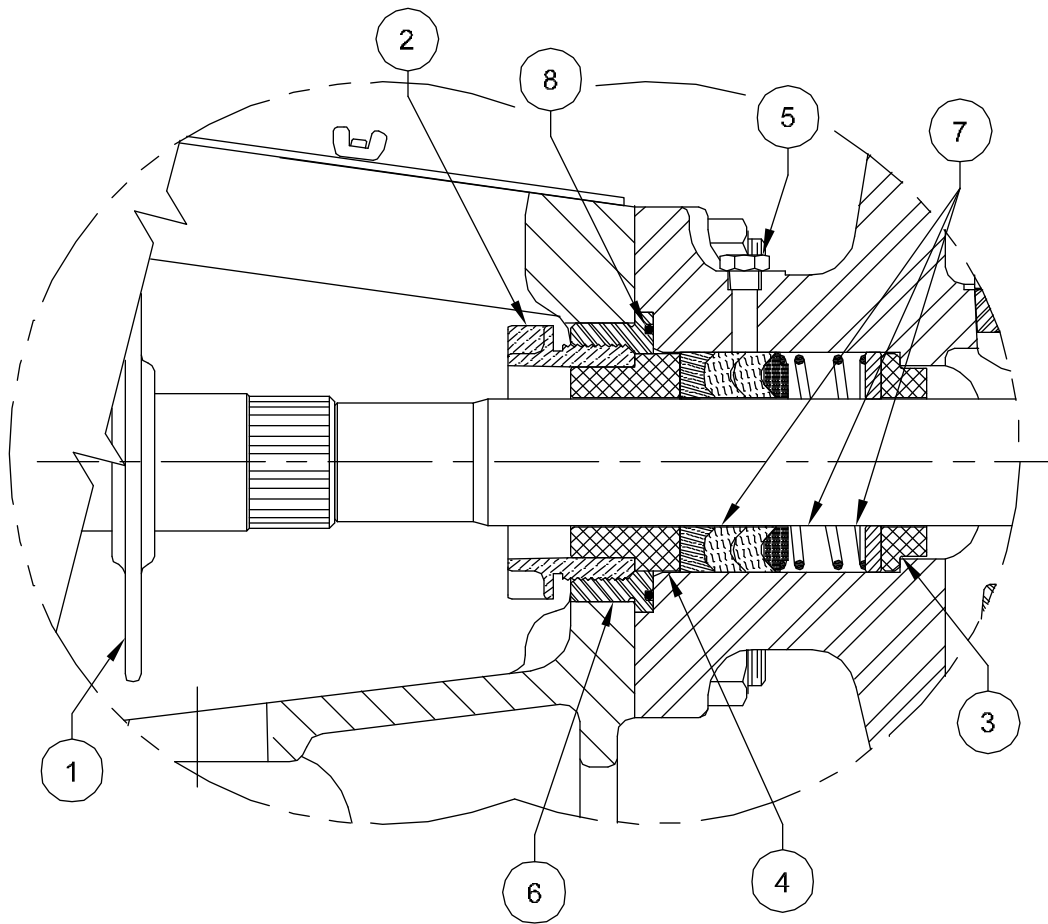
NONE

REV

A

SHT.:

2 OF 9



5	110-000238-200	O-RING		8
	428-134212-473		1043-4	
5	428-134212-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010933-575		(SS)	
	001-010933-235		(STL)	
5	001-010933-302	FOLLOWER	(BRZ)	4
	001-010897-575		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

**NOTE**

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

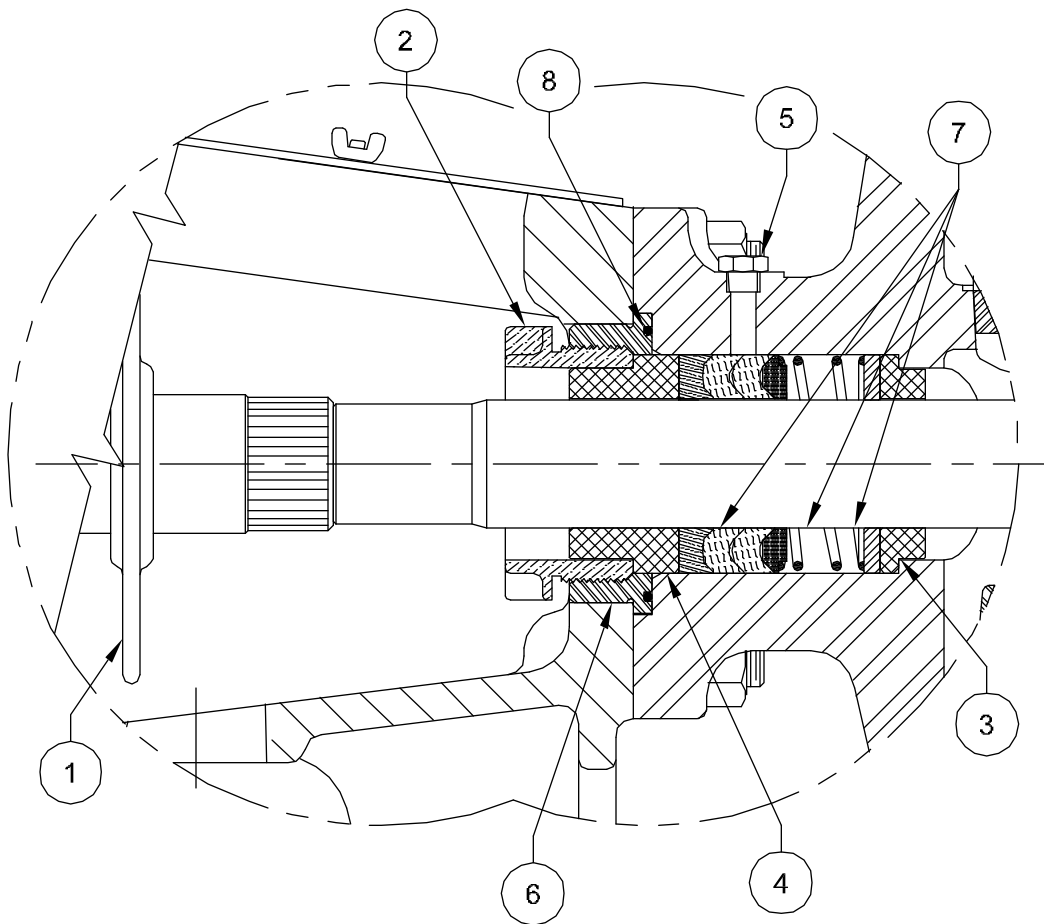
NONE

REV

A

SHT.:

3 OF 9



5	110-000238-200	O-RING		8
	428-178212-473		1043-4	
5	428-178212-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014459-575		(SS)	
	001-014459-235		(STL)	
5	001-014459-302	FOLLOWER	(BRZ)	4
	001-010899-575		(SS)	
	001-010899-235		(STL)	
5	001-010899-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1

( 1-7/8" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM
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**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

**NOTE**

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.

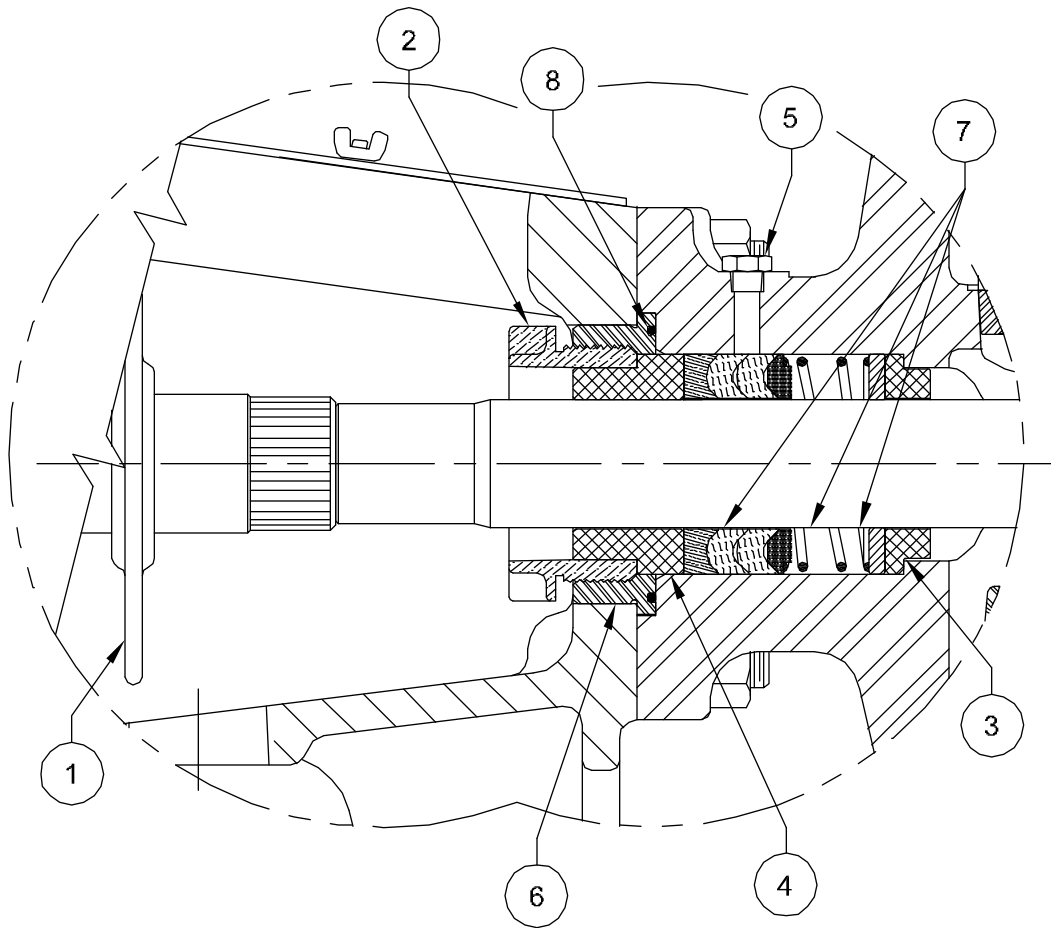


HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
 "SSF-4" PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:	118075	SCALE:	NONE	REV:	A	SHT.:	4 OF 9
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NOTE  
 1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	428-200238-473		1043-4	
5	428-200238-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010931-575		(SS)	
	001-010931-235		(STL)	
5	001-010931-302	FOLLOWER	(BRZ)	4
	001-010901-575		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1

( 2" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM
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BILL OF MATERIAL

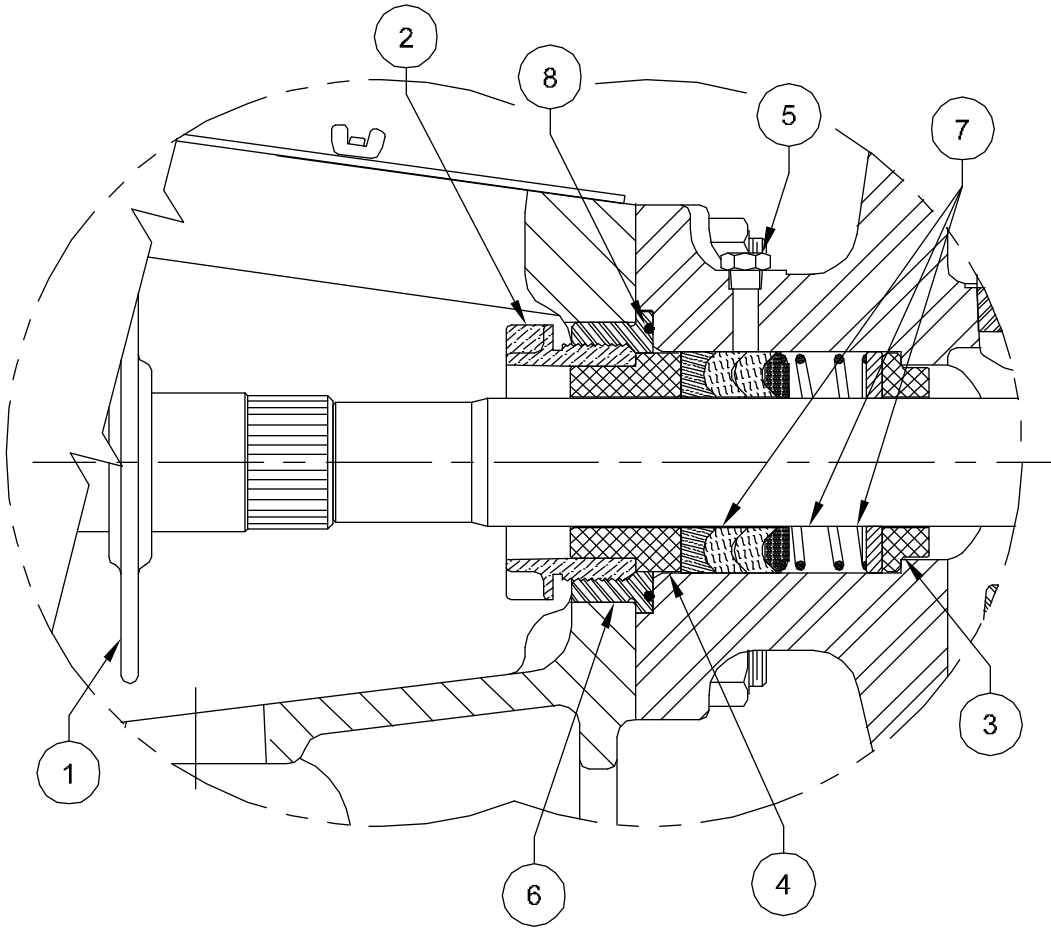
<\*> COATED STAINLESS STEEL



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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:	SCALE:	REV	SHT.:
118075	NONE	A	5 OF 9



NOTE  
 1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075,  
 SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	428-218212-473		1043-4	
5	428-218212-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-278		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014458-575		(SS)	
	001-014458-235		(STL)	
5	001-014458-302	FOLLOWER	(BRZ)	4
	001-010902-575		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

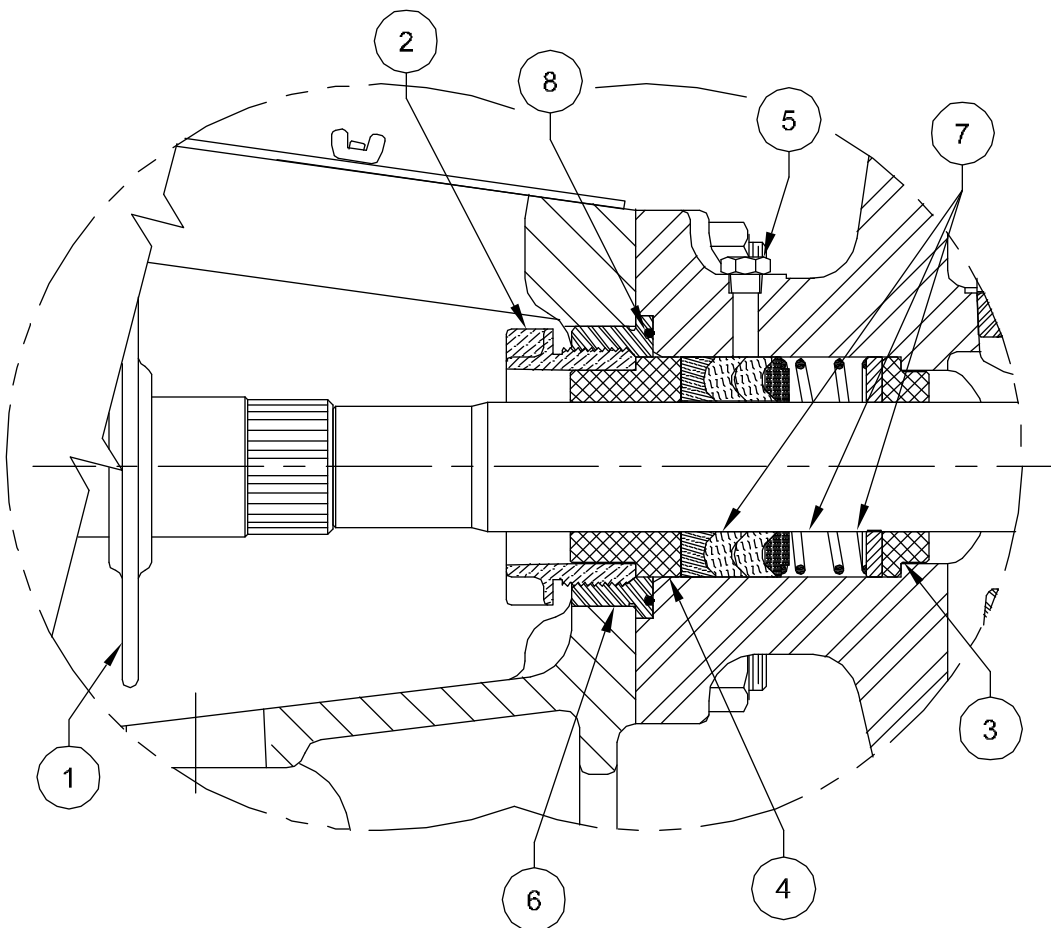
NONE

REV

A

SHT.:

6 OF 9



**NOTE**

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	428-214212-473		1043-4	
5	428-214212-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-405	PIPE PLUG	(BRZ)	5
	001-007983-575		(SS)	
	001-007983-235		(STL)	
5	001-007983-302	FOLLOWER	(BRZ)	4
	001-007979-575		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1

( 2-1/4" PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM
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**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

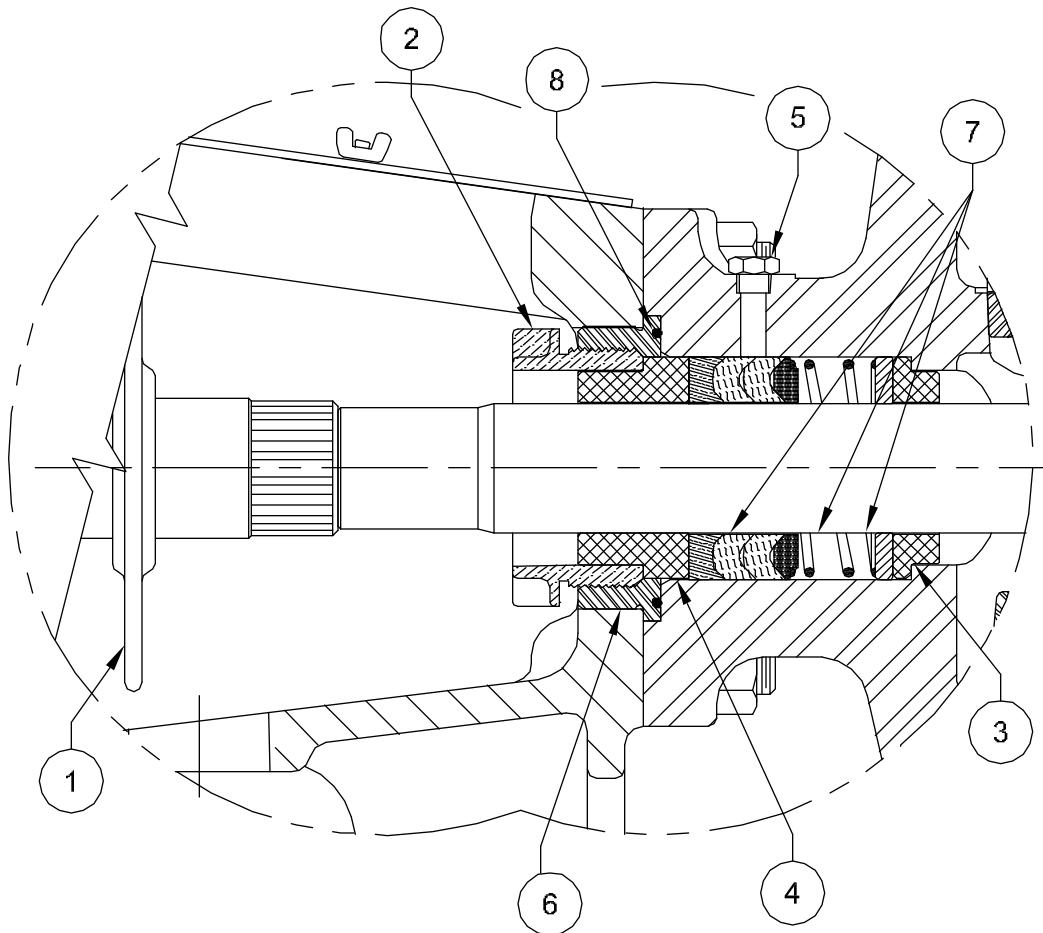
NONE

REV

A

SHT.:

7 of 9



**NOTE**

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	428-238212-473		1043-4	
5	428-238212-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-024393-575		(SS)	
	001-024393-235		(STL)	
5	001-024393-302	FOLLOWER	(BRZ)	4
	001-024394-575		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1

( 2-3/8 PLUNGER )

REQ'D	Part No.	DESCRIPTION	ITEM
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**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
 103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

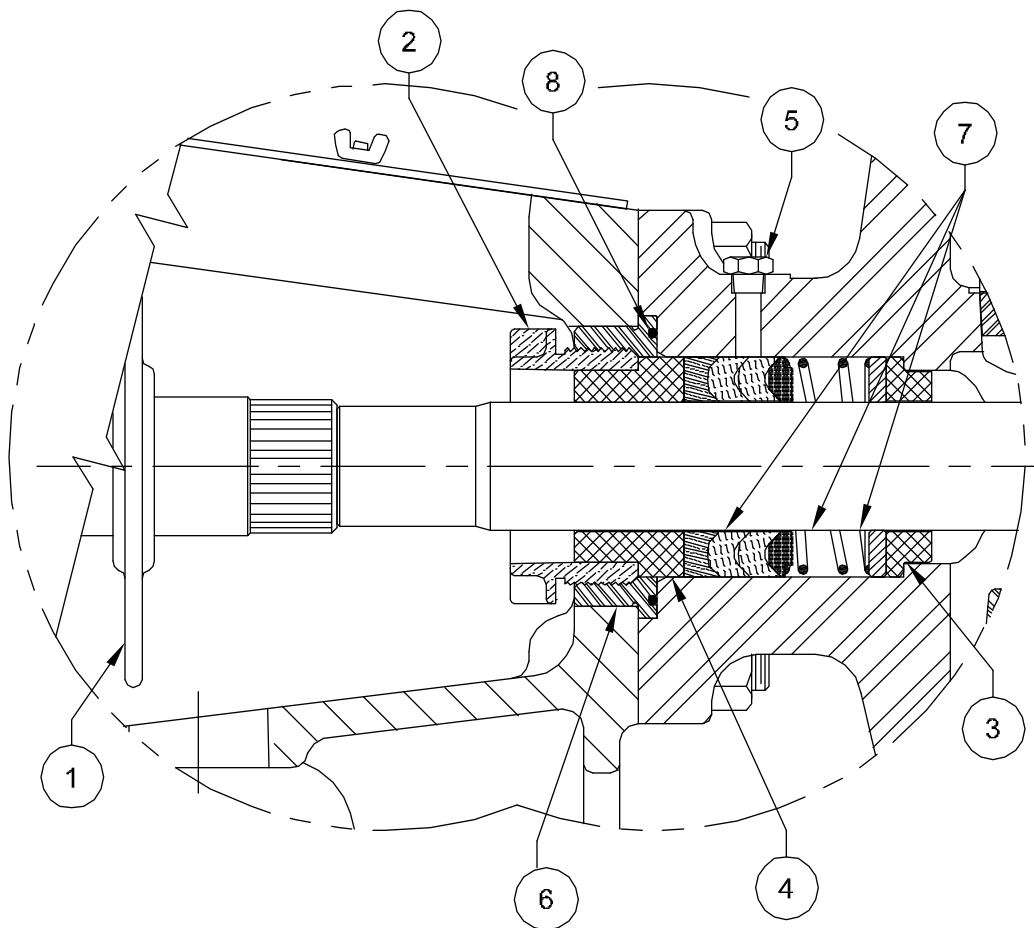
NONE

REV

A

SHT.:

8 OF 9



**NOTE**

1) FOR ALL " SSF-4 " STYLE PACKING SEE DRAWING 118075, SHEETS 1 THRU 9.

5	110-000238-200	O-RING		8
	428-212244-473		1043-4	
5	428-212244-340	PACKING	1068-4	7
	001-010258-278		(SS)	
	001-010258-236		(STL)	
5	001-010258-313	ADAPTER	(BRZ)	6
	170-018002-220		(STL)	
5	170-018002-278	PIPE PLUG	(SS)	5
	001-008745-575		(SS)	
	001-008745-235		(STL)	
5	001-008745-302	FOLLOWER	(BRZ)	4
	001-025918-575		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/2 PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>	
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2 THRU 2-1/2 PLGR  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118075

SCALE:

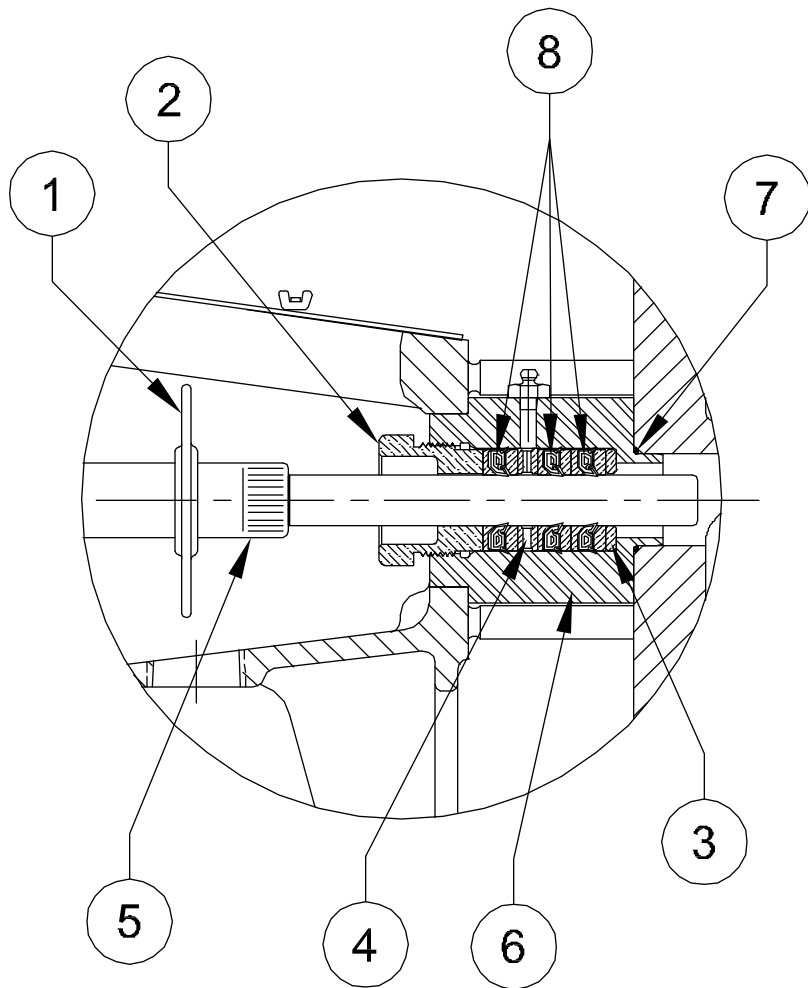
NONE

REV

A

SHT.:

9 of 9



**NOTE**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118076 SHEETS 1 THRU 3.

	182-118214-477		858	
	182-118214-374		845	
5	182-118214-370	PACKING	838	8
5	110-000226-200	O-RING		7
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	6
5	001-009090-402	ADAPTER ROD	(SS)	5
	001-011211-278		(SS)	
	001-011211-235		(STL)	
5	001-011211-302	LANTERN RING	(BRZ)	4
	001-010961-278		(SS)	
	001-010961-235		(STL)	
5	001-010961-302	THROAT BUSHING	(BRZ)	3
	AFC-013800-E16	<*>	(XSS)	
	001-011227-351		(DI)	
5	001-011227-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

90

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/8 THRU 1-3/8 PLUNGER  
 103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118076

SCALE:

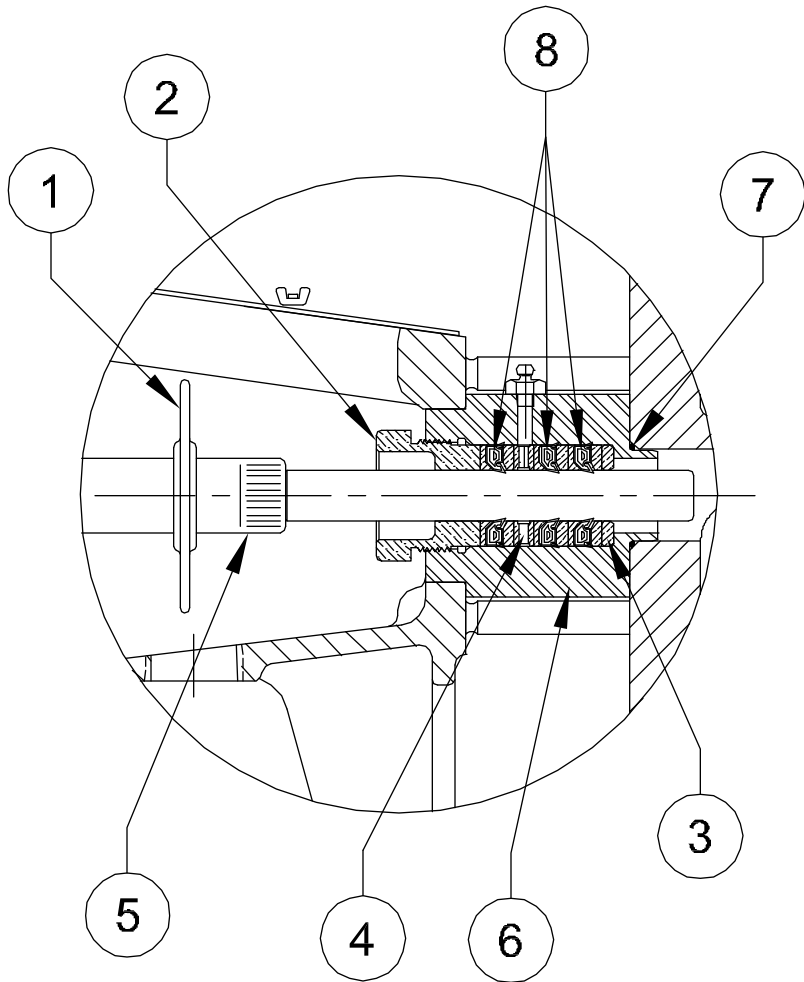
NONE

REV

A

SHT.:

1 OF 3



**NOTE**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118076 SHEETS 1 THRU 3.

	182-114214-477		858	
	182-114214-374		845	
5	182-114214-370	PACKING	838	8
5	110-000226-200	O-RING		7
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	6
5	001-010260-402	ADAPTER ROD	(SS)	5
	001-011212-278		(SS)	
	001-011212-235		(STL)	
5	001-011212-302	LANTERN RING	(BRZ)	4
	001-010950-278		(SS)	
	001-010950-235		(STL)	
5	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16	<*>	(XSS)	
	001-011228-351		(DI)	
5	001-011228-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/8 THRU 1-3/8 PLUNGER  
 103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118076

SCALE:

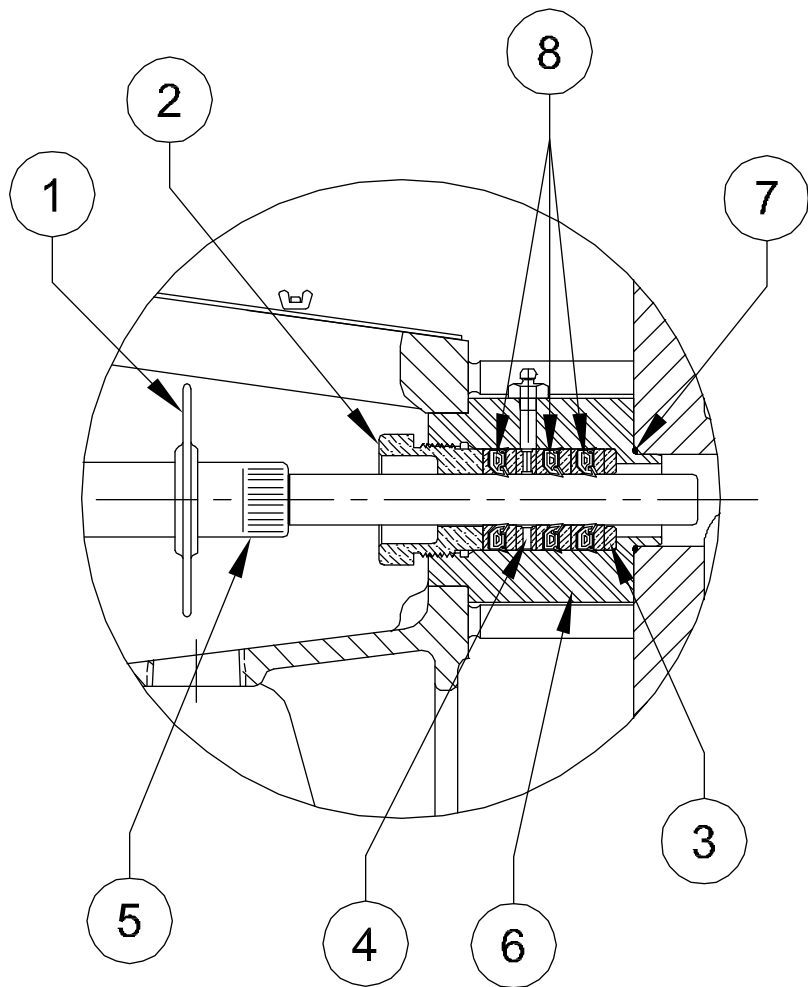
NONE

REV

A

SHT.:

2 OF 3



**NOTE**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118076 SHEETS 1 THRU 3.

	182-138214-477		858	
	182-138214-374		845	
5	182-138214-370	PACKING	838	8
5	110-000226-200	O-RING		7
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	6
5	001-010260-402	ADAPTER ROD	(SS)	5
	001-011221-278		(SS)	
	001-011221-235		(STL)	
5	001-011221-302	LANTERN RING	(BRZ)	4
	001-008913-278		(SS)	
	001-008913-235		(STL)	
5	001-008913-302	THROAT BUSHING	(BRZ)	3
	ADC-013800-E16	<*>	(XSS)	
	001-011229-351		(DI)	
5	001-011229-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION	ITEM	
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"J" STYLE PKG, 1-1/8 THRU 1-3/8 PLUNGER

103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118076

SCALE:

NONE

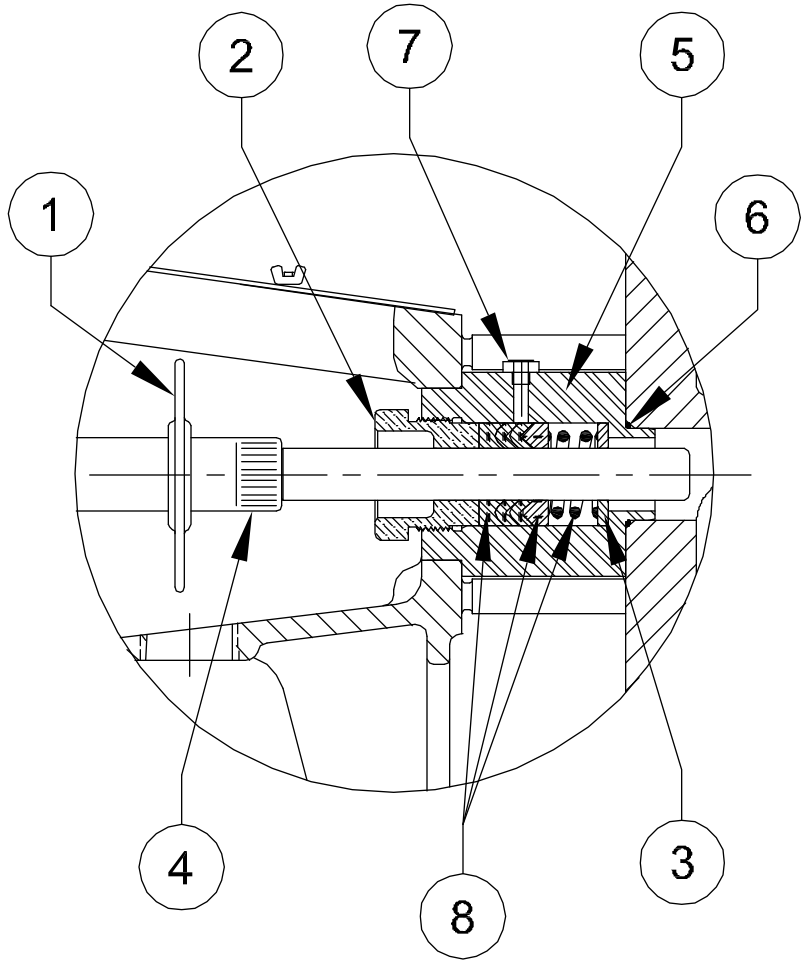
REV

A

SHT.:

3 of 3





	432-118238-473		1043-4	
5	432-118238-340	PACKING	1068-4	8
5	170-018002-278	PIPE PLUG	(SS)	7
5	110-000226-200	O-RING		6
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	5
5	001-009090-402	ADAPTER ROD	(SS)	4
	001-010961-278		(SS)	
	001-010961-235		(STL)	
5	001-010961-302	THROAT BUSHING	(BRZ)	3
	AFC-013800-E16	<*>	(XSS)	
	001-011227-351		(DI)	
5	001-011227-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-1/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

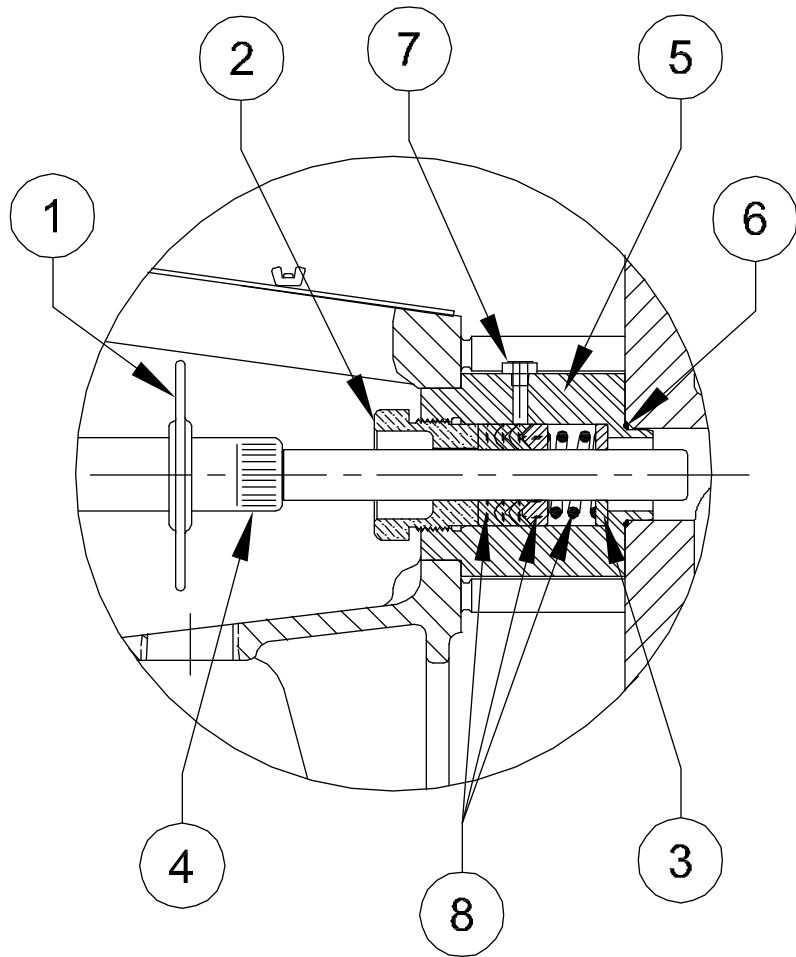
<\*> COATED STAINLESS STEEL

NOTE  
 1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118077 SHEETS 1 THRU 3.

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/8 THRU 1-3/8 PLGR  
 103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.: 118077	SCALE: NONE	REV A	SHT.: 1 OF 3
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	432-114238-473		1043-4	
5	432-114238-340	PACKING	1068-4	8
5	170-018002-278	PIPE PLUG	(SS)	7
5	110-000226-200	O-RING		6
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	5
5	001-010260-402	ADAPTER ROD	(SS)	4
	001-010950-278		(SS)	
	001-010950-235		(STL)	
5	001-010950-302	THROAT BUSHING	(BRZ)	3
	AEC-013800-E16	<*>	(XSS)	
	001-011228-351		(DI)	
5	001-011228-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

**NOTE**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118077 SHEETS 1 THRU 3.



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/8 THRU 1-3/8 PLGR  
 103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118077

SCALE:

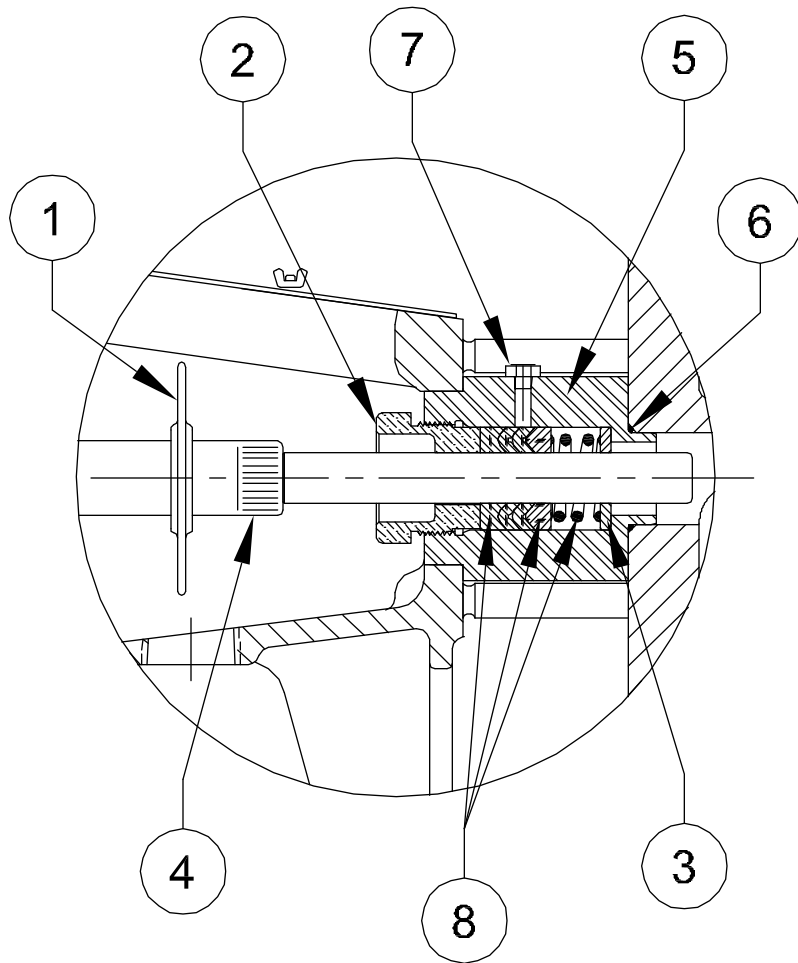
NONE

REV

A

SHT.:

2 OF 3



	432-138238-473		1043-4	
5	432-138238-340	PACKING	1068-4	8
5	170-018002-278	PIPE PLUG	(SS)	7
5	110-000226-200	O-RING		6
	AAC-117585-402		(SS)	
5	AAC-117585-270	STUFFING BOX	(STL)	5
5	001-010260-402	ADAPTER ROD	(SS)	4
	001-008913-278		(SS)	
	001-008913-235		(STL)	
5	001-008913-302	THROAT BUSHING	(BRZ)	3
	ADC-013800-E16	<*>	(XSS)	
	001-011229-351		(DI)	
5	001-011229-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-3/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

95

**NOTE**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118077 SHEETS 1 THRU 3.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/8 THRU 1-3/8 PLGR  
 103Q-3MSC, 110Q-3MSC (Q150-2)

DWG No.:

118077

SCALE:

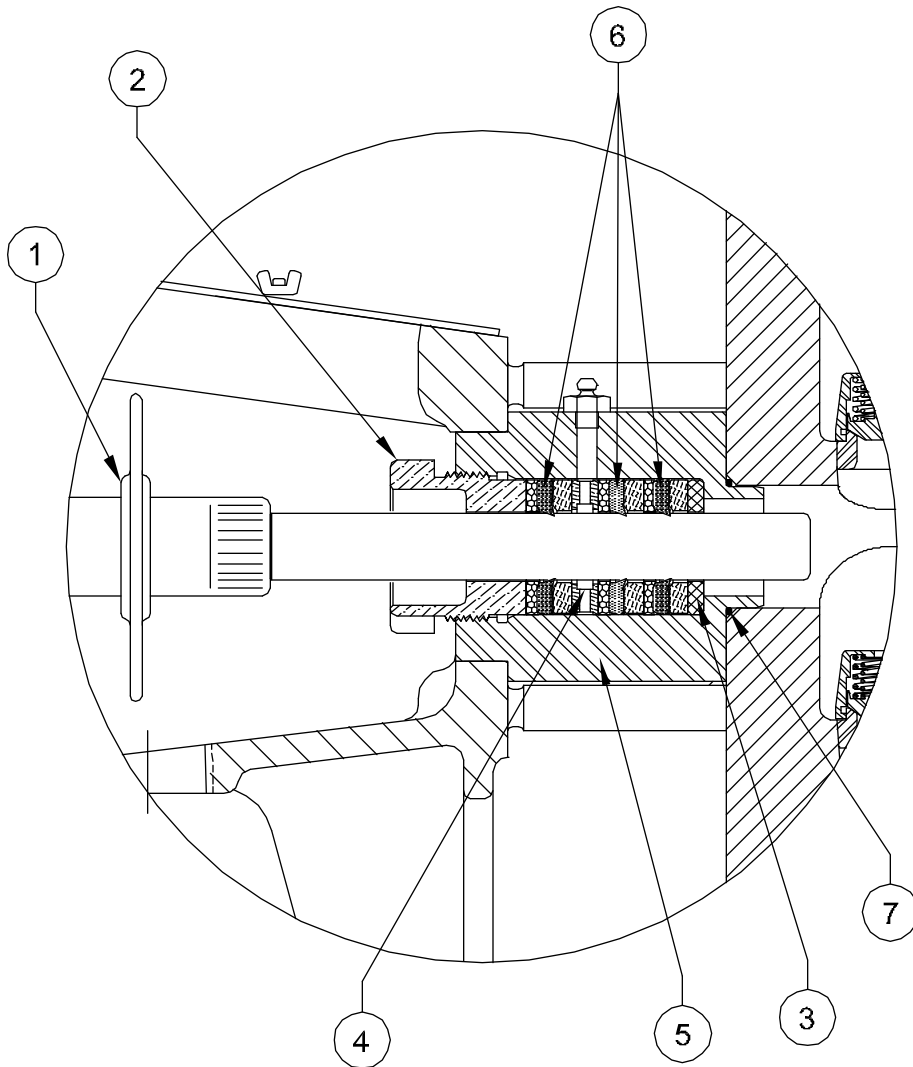
NONE

REV

A

SHT.:

3 OF 3



**NOTE:**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		7
	182-112214-477		858	
	182-112214-386		842	
	182-112214-374		845	
5	182-112214-370	PACKING	838	6
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	5
	001-011218-278		(SS)	
	001-011218-235		(STL)	
5	011-011218-302	LANTERN RING	(BRZ)	4
	001-010949-278		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

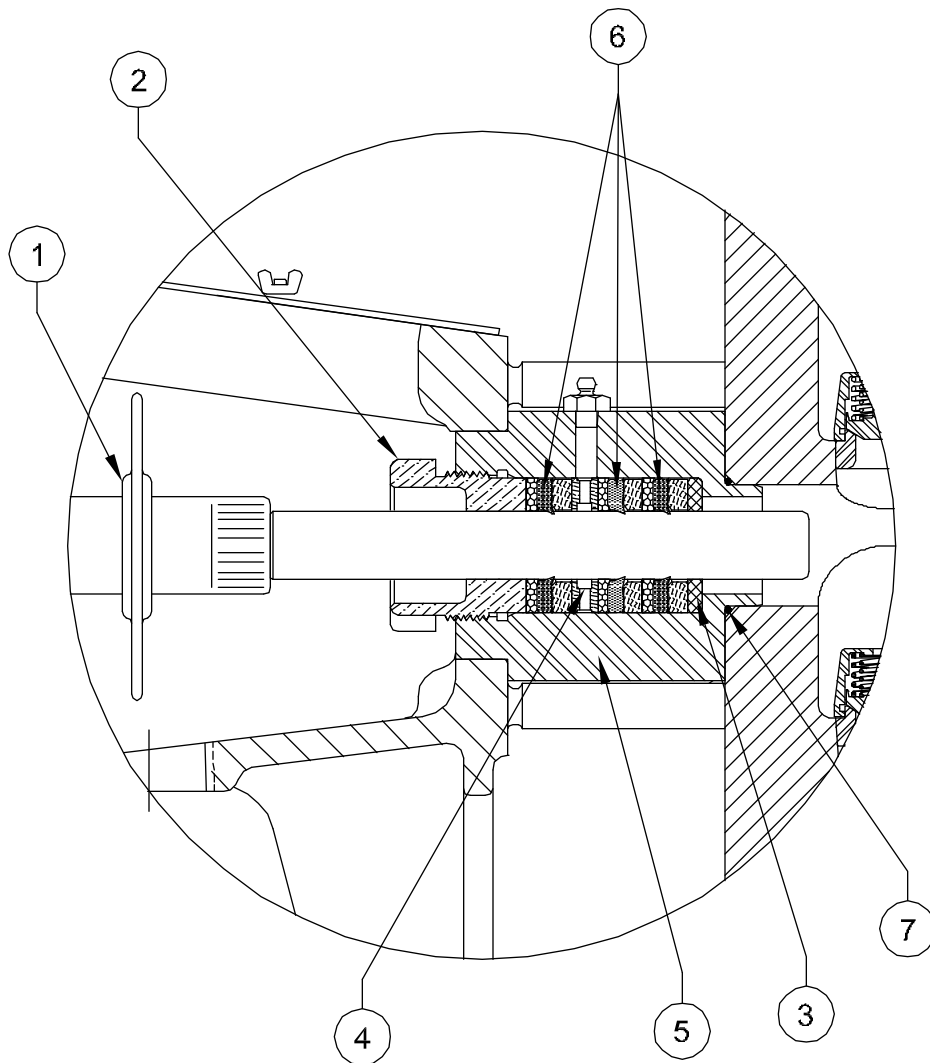
NONE

REV

A

SHT.:

1 of 9



**NOTE:**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		7
	182-158214-477		858	
	182-158214-386		842	
	182-158214-374		845	
5	182-158214-370	PACKING	838	6
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	5
	001-005305-278		(SS)	
	001-005305-235		(STL)	
5	001-005305-302	LANTERN RING	(BRZ)	4
	001-010962-278		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-5/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

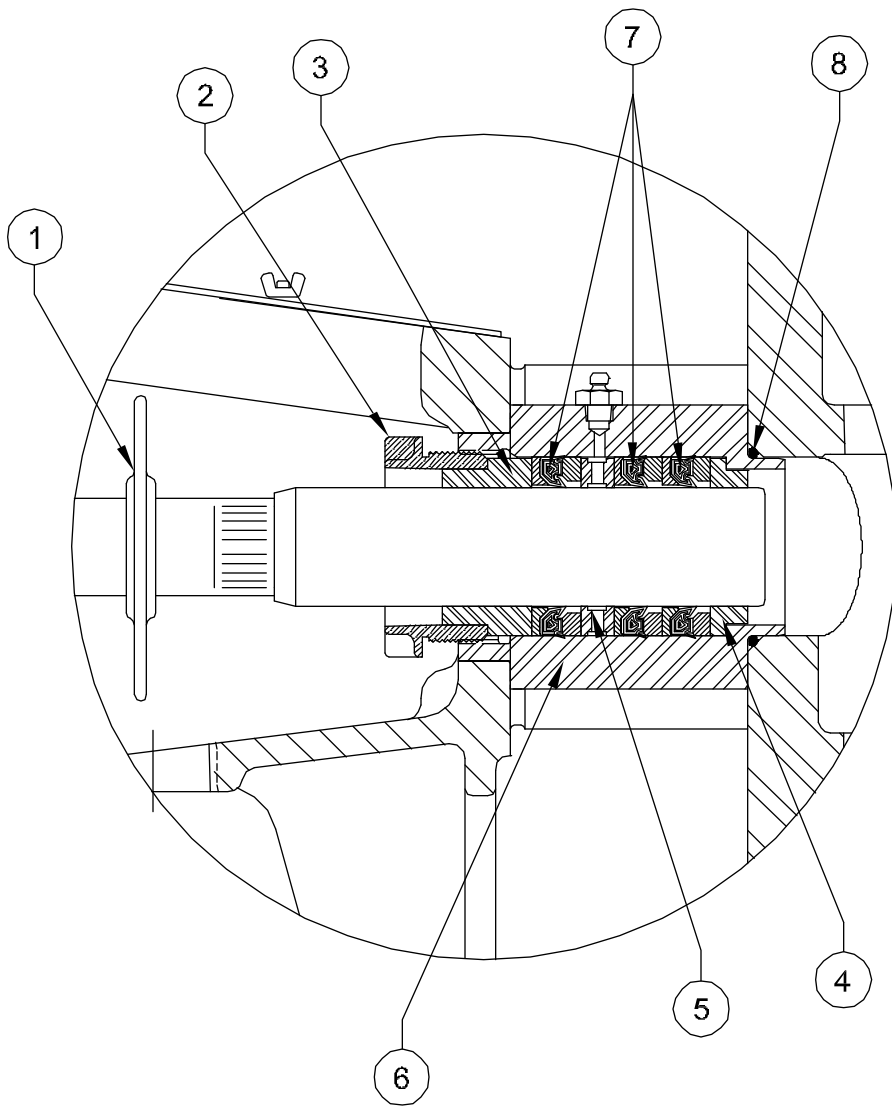
NONE

REV

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SHT.:

2 OF 9



5	110-000337-200	O-RING		8
	181-134244-477		858	
	181-134244-286		842	
	181-134244-374		845	
5	181-134244-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-010990-278		(SS)	
	001-010990-235		(STL)	
5	001-010990-302	LANTERN RING	(BRZ)	5
	001-010897-278		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	4
	001-010933-278		(SS)	
	001-010933-235		(STL)	
	001-010933-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

NOTE:

- 1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

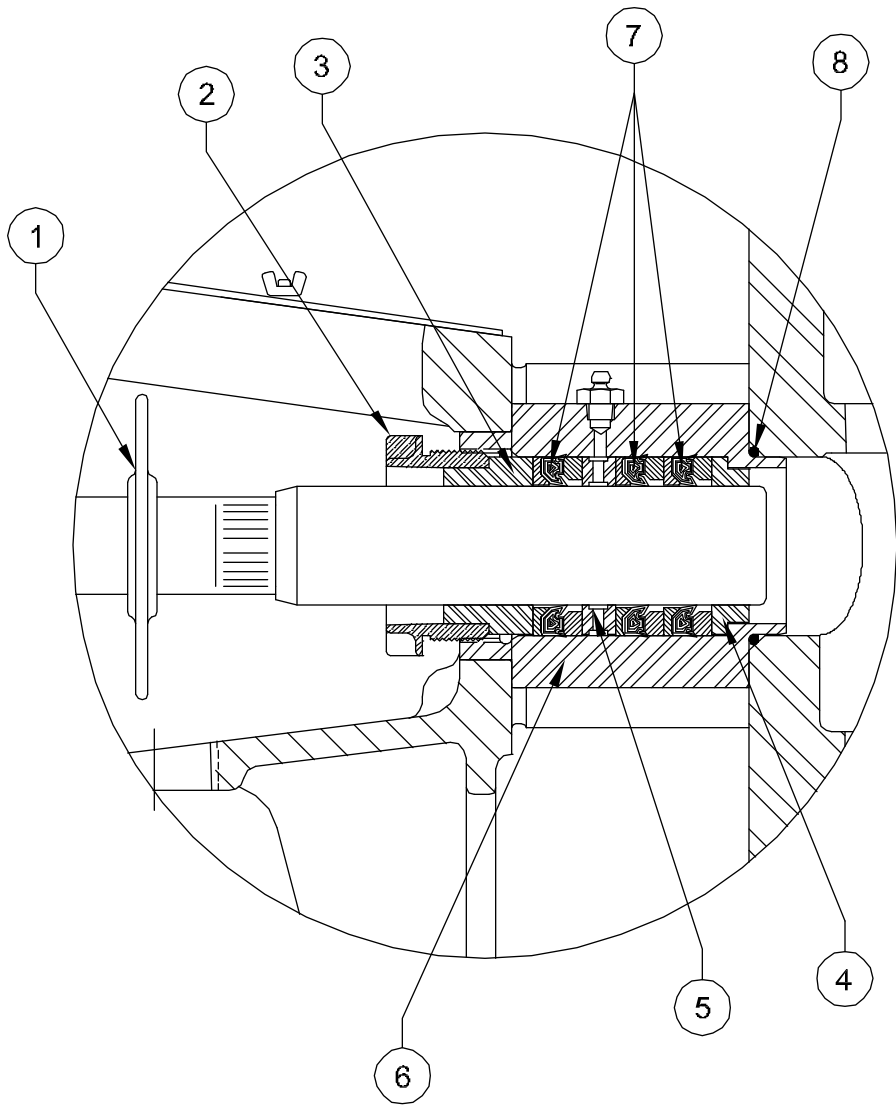
NONE

REV

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SHT.:

3 OF 9



5	110-000337-200	O-RING		8
	181-178244-477		858	
	181-178244-386		842	
	181-178244-374		845	
5	181-178244-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-014457-278		(SS)	
	001-014457-235		(STL)	
5	001-014457-302	LANTERN RING	(BRZ)	5
	001-010899-278		(SS)	
	001-010899-235		(STL)	
5	001-010899-302	THROAT BUSHING	(BRZ)	4
	001-014459-278		(SS)	
	001-014459-235		(STL)	
	001-014459-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-7/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

**NOTE:**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

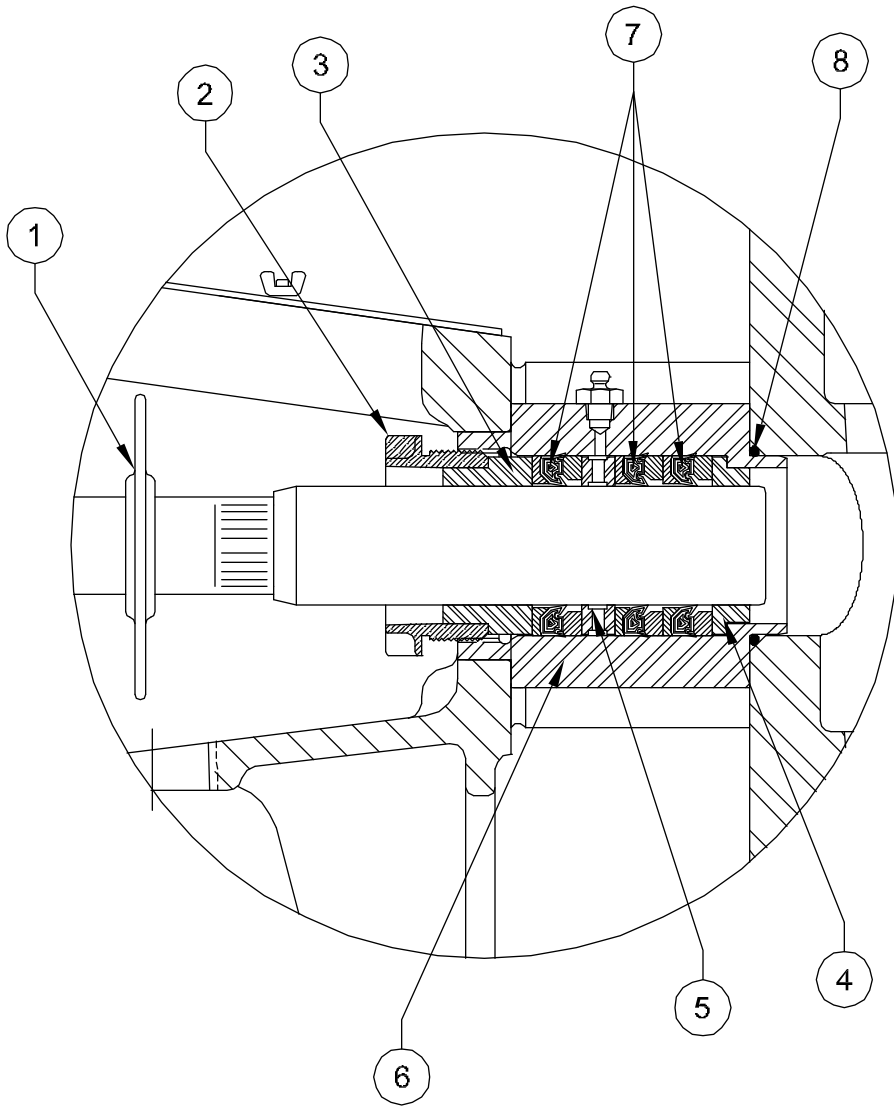
NONE

REV

A

SHT.:

4 OF 9



5	110-000337-200	O-RING		8
	181-200214-477		858	
	181-200214-386		842	
	181-200214-374		845	
5	181-200214-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-010991-278		(SS)	
	001-010991-235		(STL)	
5	001-010991-302	LANTERN RING	(BRZ)	5
	001-010901-278		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	4
	001-010931-278		(SS)	
	001-010931-235		(STL)	
	001-010931-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL

100

NOTE:

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

NONE

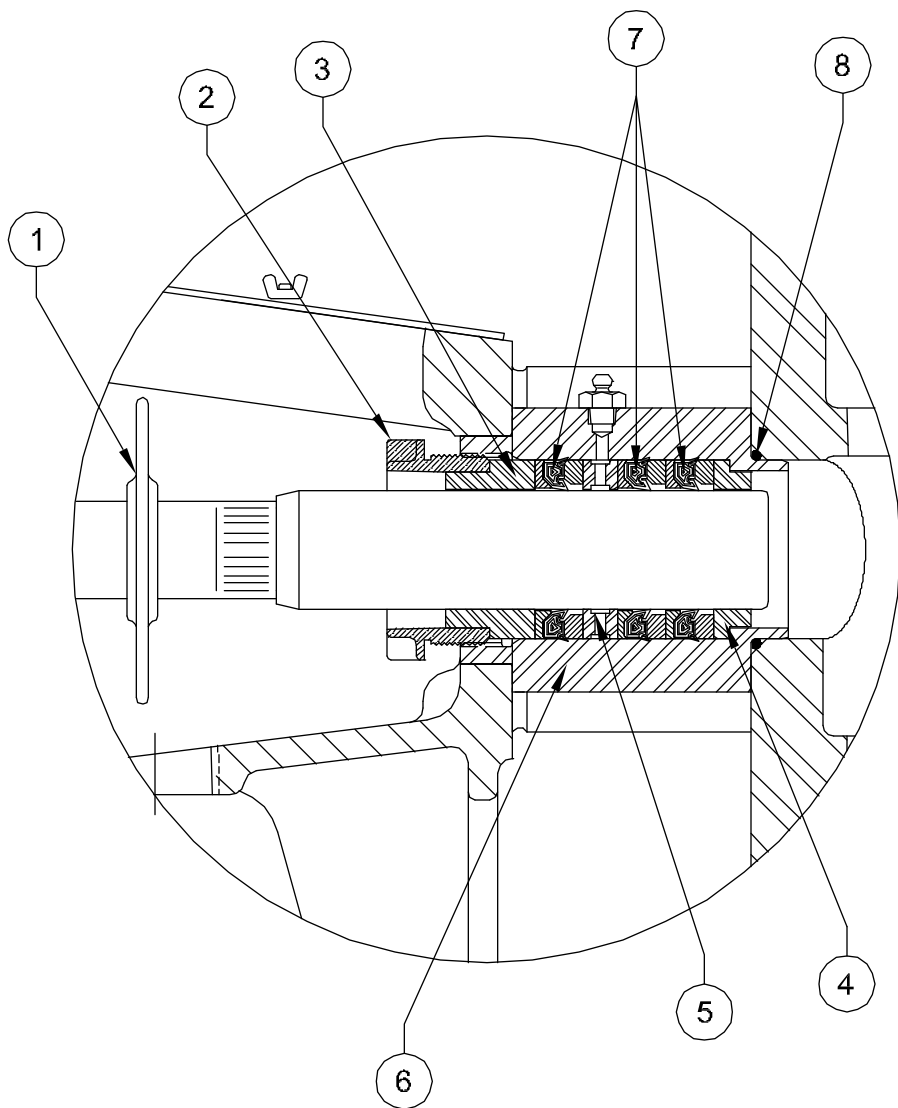
REV

A

SHT.:

5 OF 9





**NOTE:**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	181-218214-477		858	
	181-218214-386		842	
	181-218214-374		845	
5	181-218214-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-014456-278		(SS)	
	001-014456-235		(STL)	
5	001-014456-302	LANTERN RING	(BRZ)	5
	001-010902-278		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	4
	001-014458-278		(SS)	
	001-014458-235		(STL)	
	001-014458-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

101

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWVG No.:

118260

SCALE:

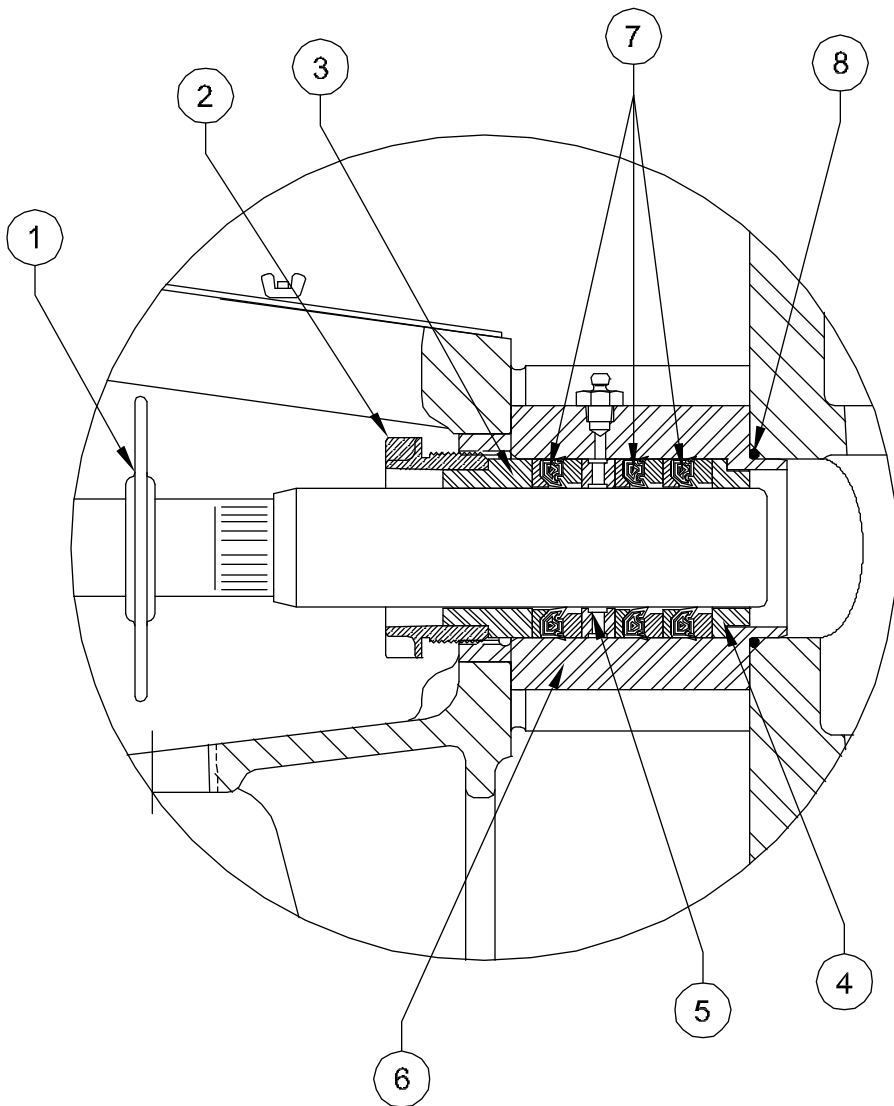
NONE

REV

A

SHT.:

6 OF 9



5	110-000337-200	O-RING		8
	181-214214-477		858	
	181-214214-386		842	
	181-214214-374		845	
5	181-214214-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-010266-278		(SS)	
	001-010266-235		(STL)	
5	001-010266-302	LANTERN RING	(BRZ)	5
	001-007979-278		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	4
	001-007983-278		(SS)	
	001-007983-235		(STL)	
	001-007983-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

NOTE:

- 1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

102

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

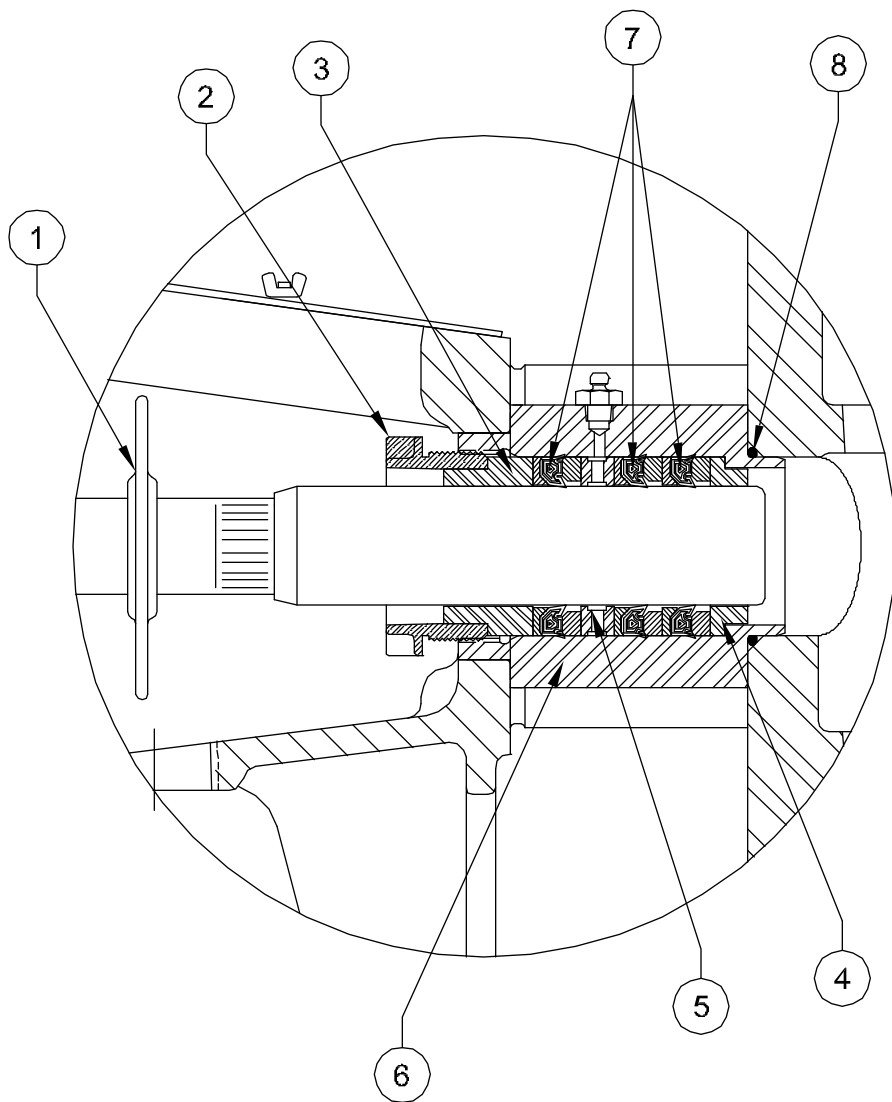
ASSEMBLY, PLUNGER KIT  
"J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.: 118260

SCALE: NONE

REV A

SHT.: 7 OF 9



**NOTE:**

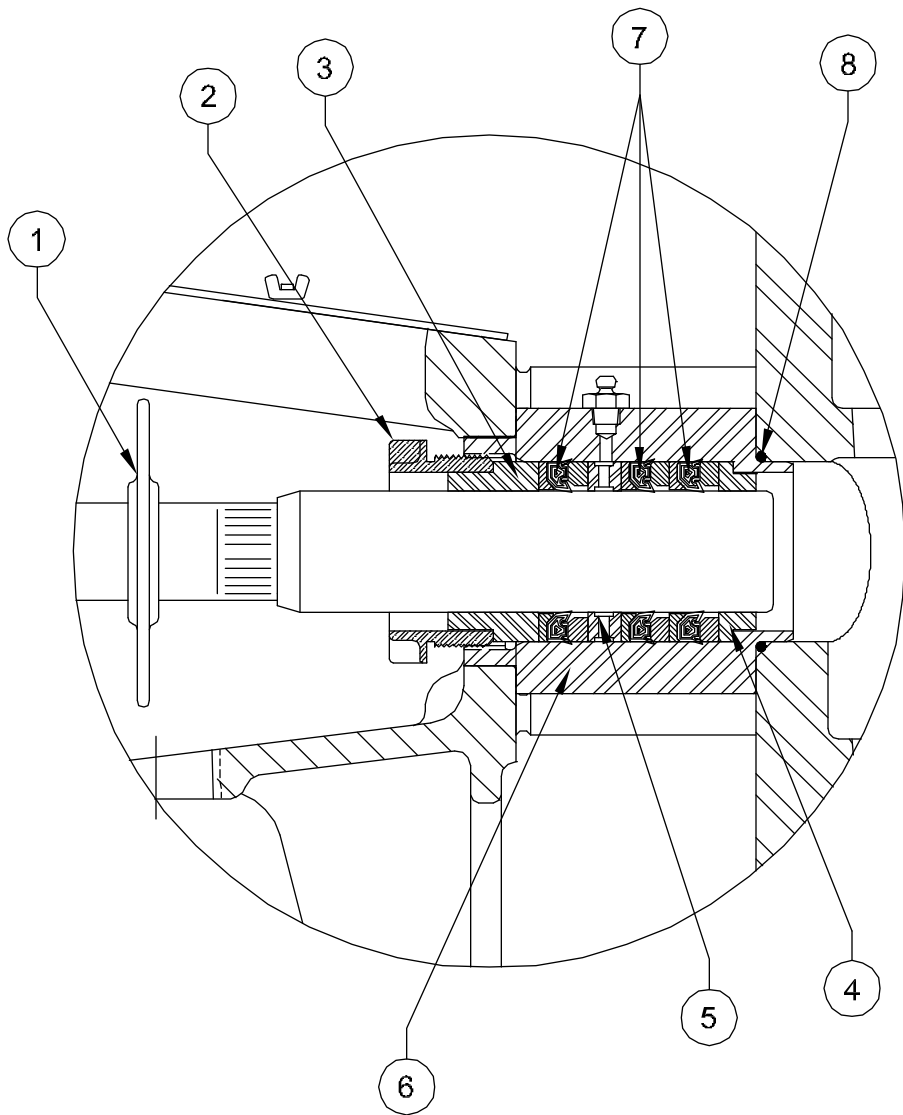
1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	181-238244-477		858	
	181-238244-386		842	
	181-238244-374		845	
5	181-238244-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-028072-278		(SS)	
	001-028072-235		(STL)	
5	001-028072-302	LANTERN RING	(BRZ)	5
	001-024394-278		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	4
	001-024393-278		(SS)	
	001-024393-235		(STL)	
	001-024393-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-3/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

103

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)			
DWG No.:	SCALE:	REV	SHT.:
118260	NONE	A	8 OF 9



**NOTE:**

1) FOR ALL "J" STYLE PACKING SEE DRAWING 118260, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	181-212178-477		858	
	181-212178-386		842	
	181-212178-374		845	
5	181-212178-370	PACKING	838	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
	001-010904-278		(SS)	
	001-010904-235		(STL)	
5	001-010904-302	LANTERN RING	(BRZ)	5
	001-025918-278		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	4
	001-008745-278		(SS)	
	001-008745-235		(STL)	
	001-008745-302	FOLLOWER	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "J" STYLE PKG, 1-1/2" THRU 2-1/2" PLUNGER  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118260

SCALE:

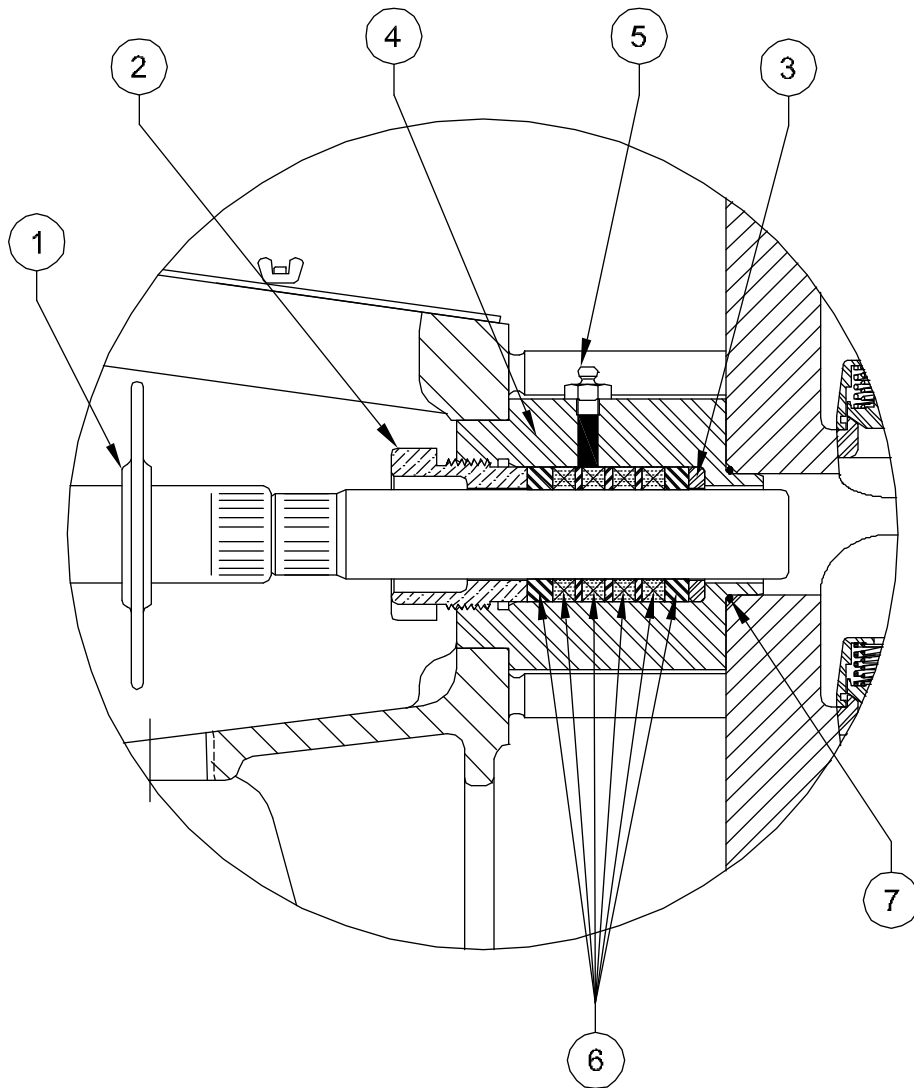
NONE

REV

A

SHT.:

9 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		7
	287-112234-458		8921-K	
	287-112234-339		249	
	287-112234-337		241	
5	287-112234-395	PACKING	238	6
5	170-018002-278	PIPE PLUG	(SS)	5
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	4
	001-010949-278		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-1/2" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
BRAID-STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

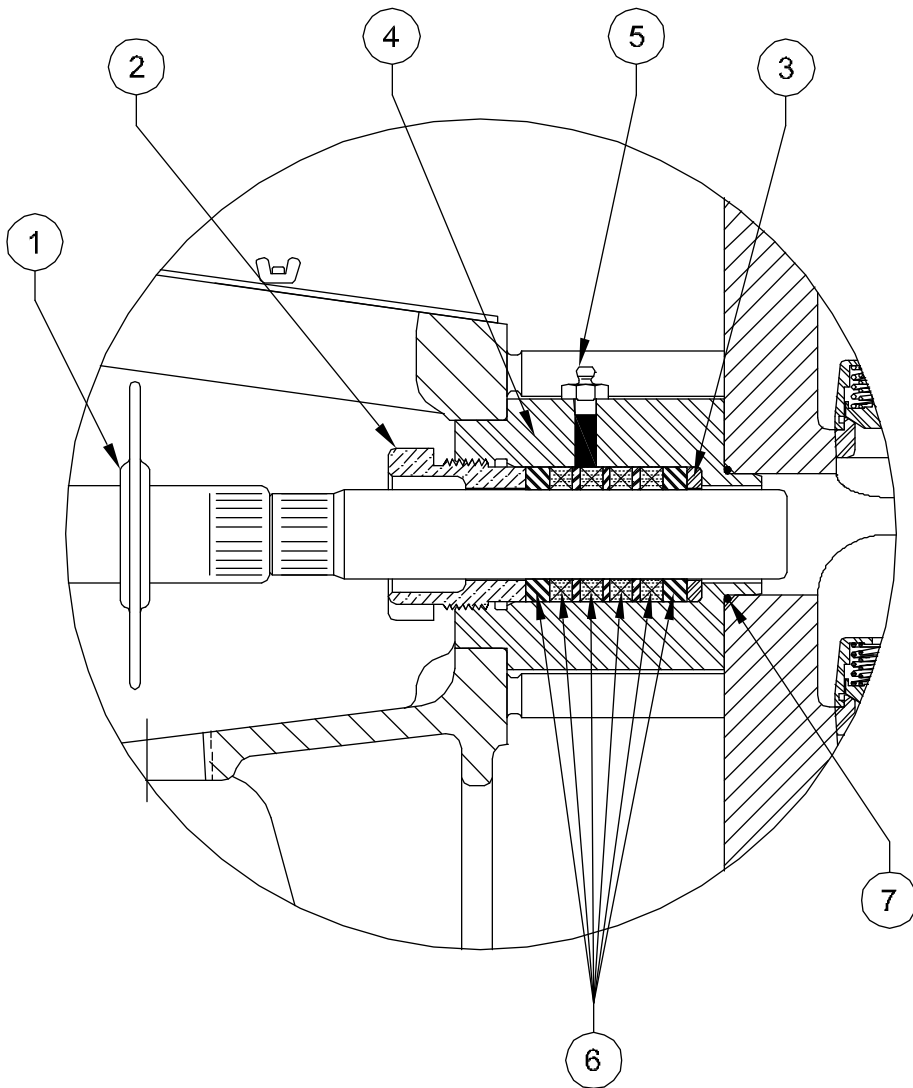
NONE

REV

A

SHT.:

1 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		7
	287-158234-458		8921-K	
	287-158234-339		249	
	287-158234-337		241	
5	287-158234-395	PACKING	238	6
5	170-018002-278	PIPE PLUG	(SS)	5
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	4
	001-010962-278		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-5/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

BRAID-STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

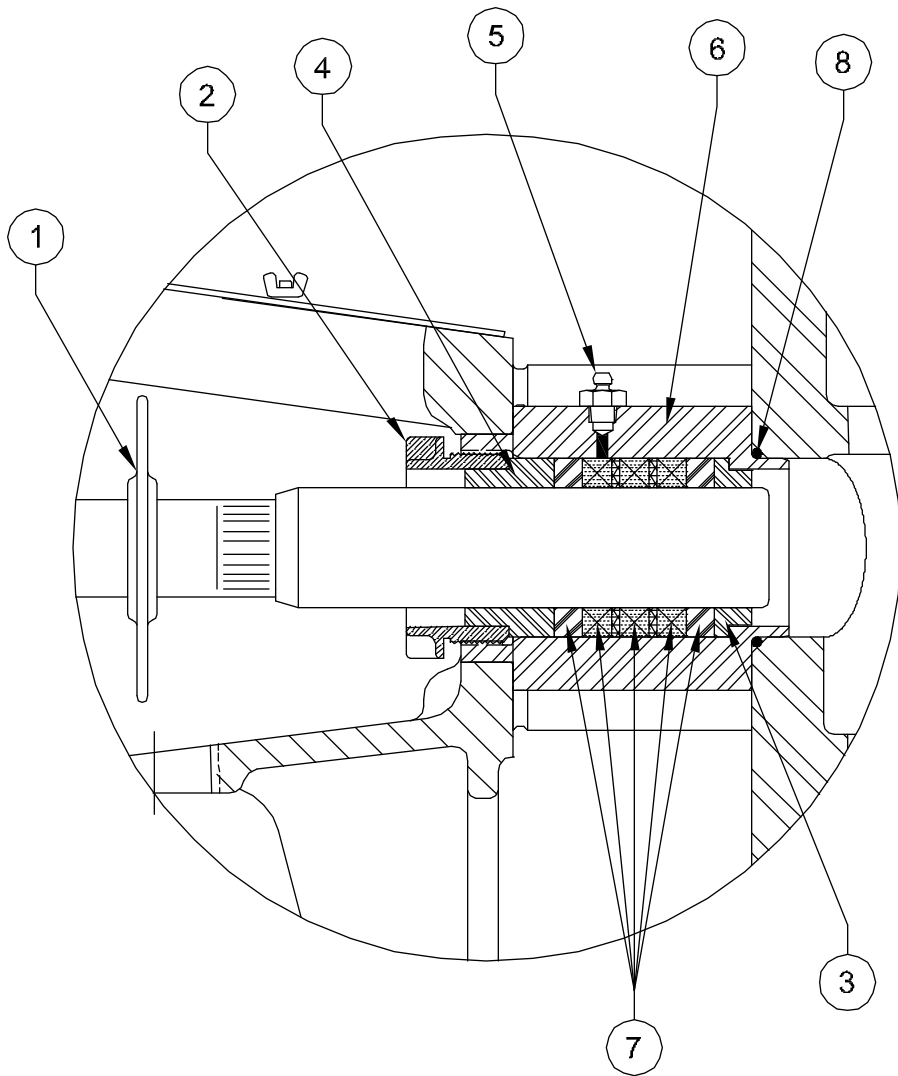
NONE

REV

A

SHT.:

2 OF 9



5	110-000337-200	O-RING		8
	288-134234-458		8921-K	
	288-134234-339		249	
	288-134234-337		241	
5	288-134234-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010933-278		(SS)	
	001-010933-235		(STL)	
5	001-010933-302	FOLLOWER	(BRZ)	4
	001-010897-278		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 1-3/4 PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL

NOTE:

- 1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

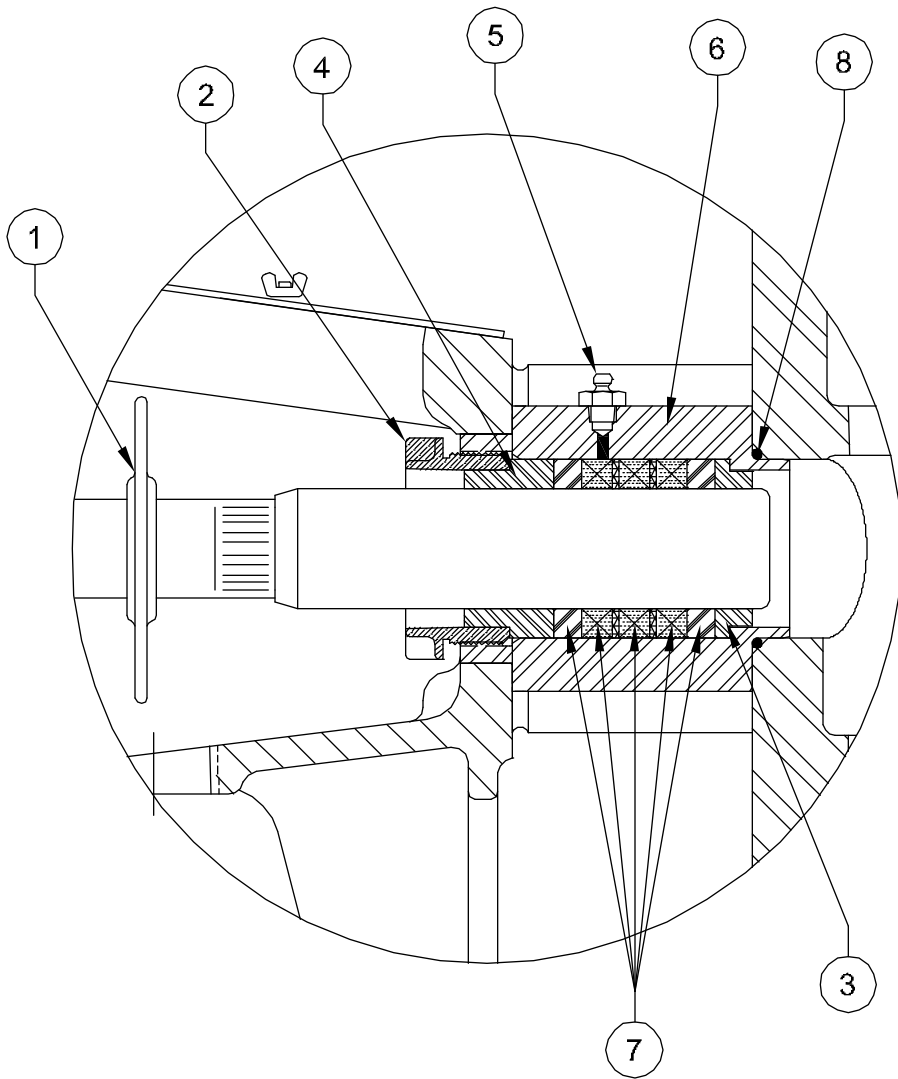
NONE

REV

A

SHT.:

3 OF 9



5	110-000337-200	O-RING	8
	288-178234-458		8921-K
	288-178234-339		249
	288-178234-337		241
5	288-178234-395	PACKING	238
	AAC-030940-278		(SS)
5	AAC-030940-270	STUFFING BOX	(STL)
5	170-018002-278	PIPE PLUG	(SS)
	001-014459-278		(SS)
	001-014459-235		(STL)
5	001-014459-302	FOLLOWER	(BRZ)
	001-010899-278		(SS)
	001-010899-235		(STL)
5	001-010899-302	THROAT BUSHING	(BRZ)
	002-007977-E16	<*>	(XSS)
	001-007977-351		(DI)
5	002-007977-261	GLAND NUT	(SS)
5	001-007986-201	BAFFLE DISC	1
( 1-7/8" PLUNGER )			
REQ'D	Part No.	DESCRIPTION	ITEM

BILL OF MATERIAL

<\*> COATED STAINLESS STEEL

NOTE:

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
"BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

NONE

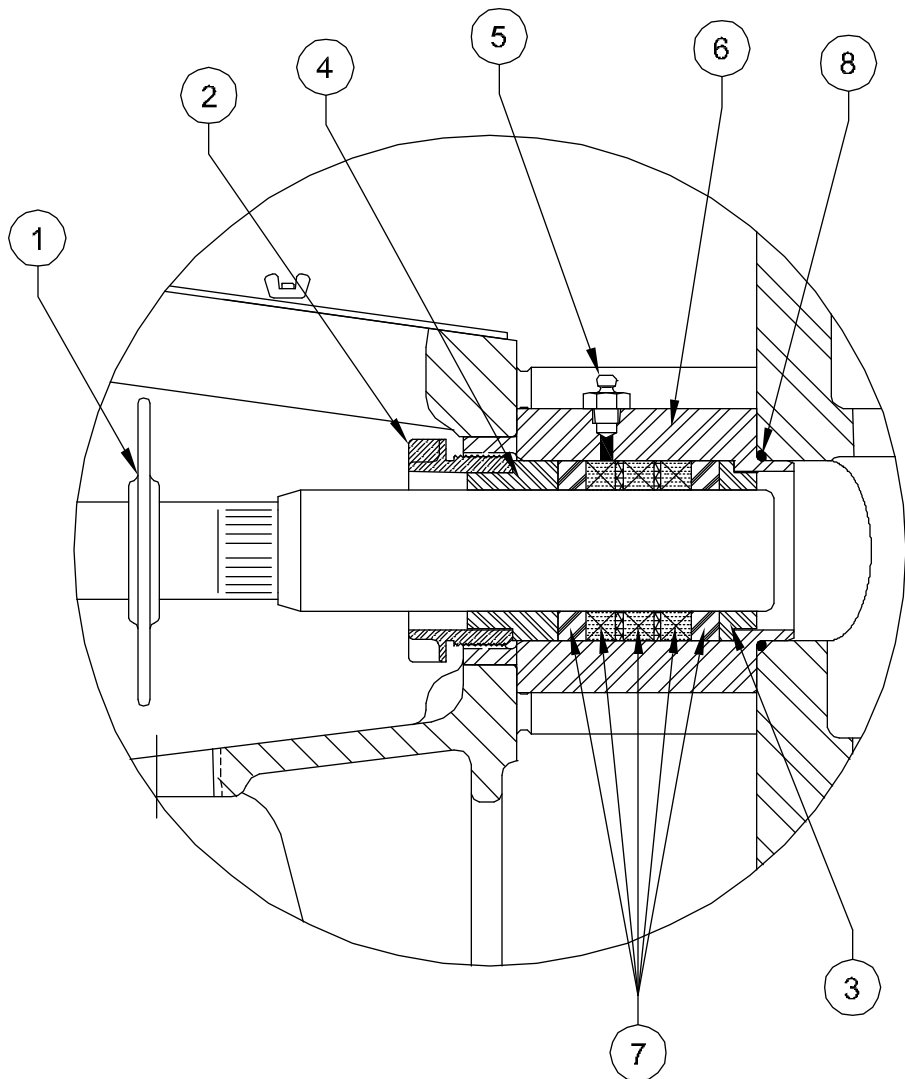
REV

A

SHT.:

4 OF 9





**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	288-200258-458		8921-K	
	288-200258-339		249	
	288-200258-337		241	
5	288-200258-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010931-278		(SS)	
	001-010931-235		(STL)	
5	001-010931-302	FOLLOWER	(BRZ)	4
	001-010901-278		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

109



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

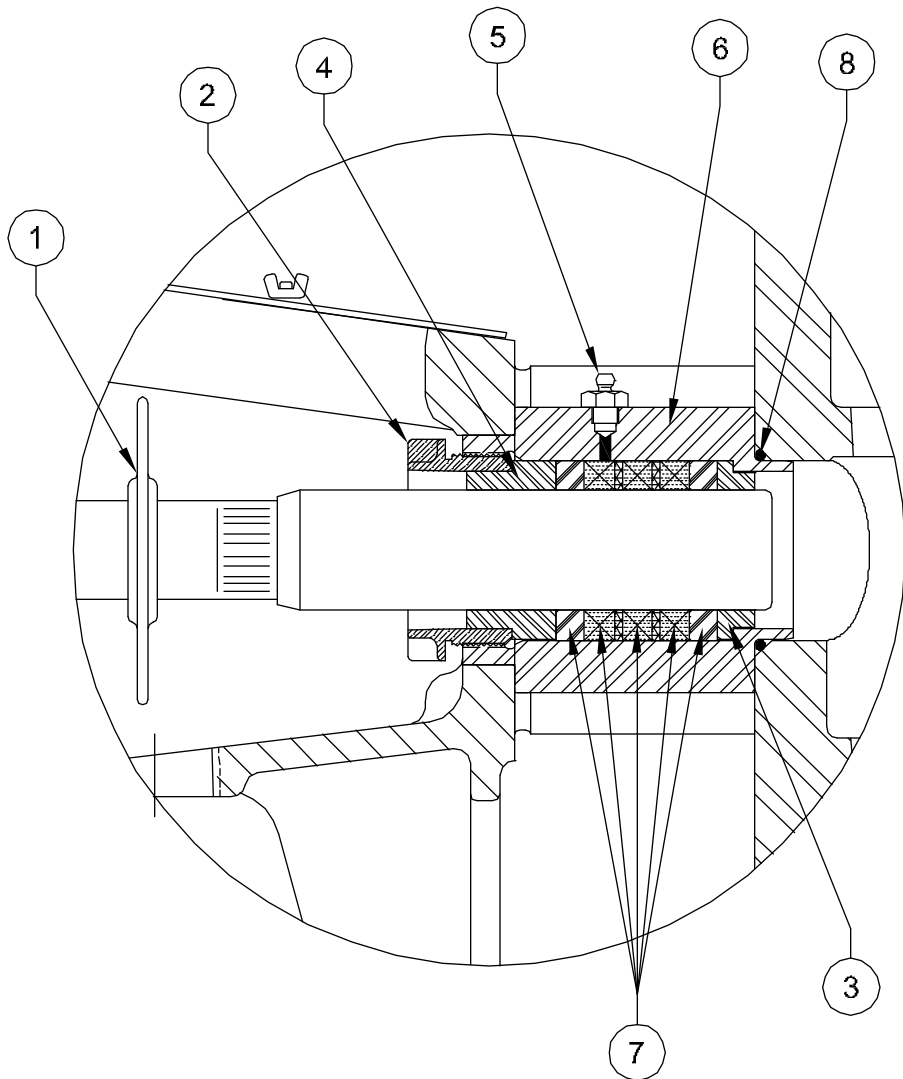
NONE

REV

A

SHT.:

5 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	288-218234-458		8921-K	
	288-218234-339		249	
	288-218234-337		241	
5	288-218234-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014458-278		(SS)	
	001-014458-235		(STL)	
5	001-014458-302	FOLLOWER	(BRZ)	4
	001-010902-278		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<+>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<+> COATED STAINLESS STEEL

110

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

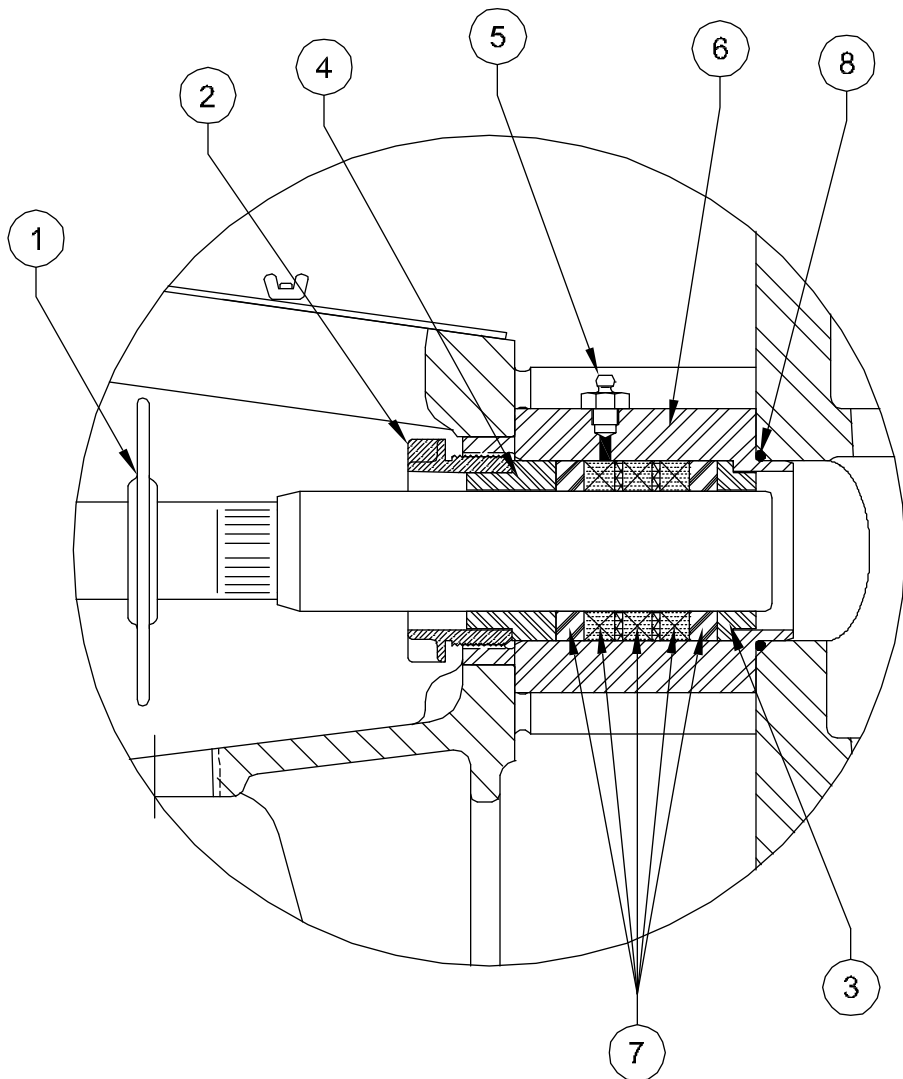
NONE

REV

A

SHT.:

6 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	288-214234-458		8921-K	
	288-214234-339		249	
	288-214234-337		241	
5	288-214234-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-007983-278		(SS)	
	001-007983-235		(STL)	
5	001-007983-302	FOLLOWER	(BRZ)	4
	001-007979-278		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<->	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<-> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
"BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

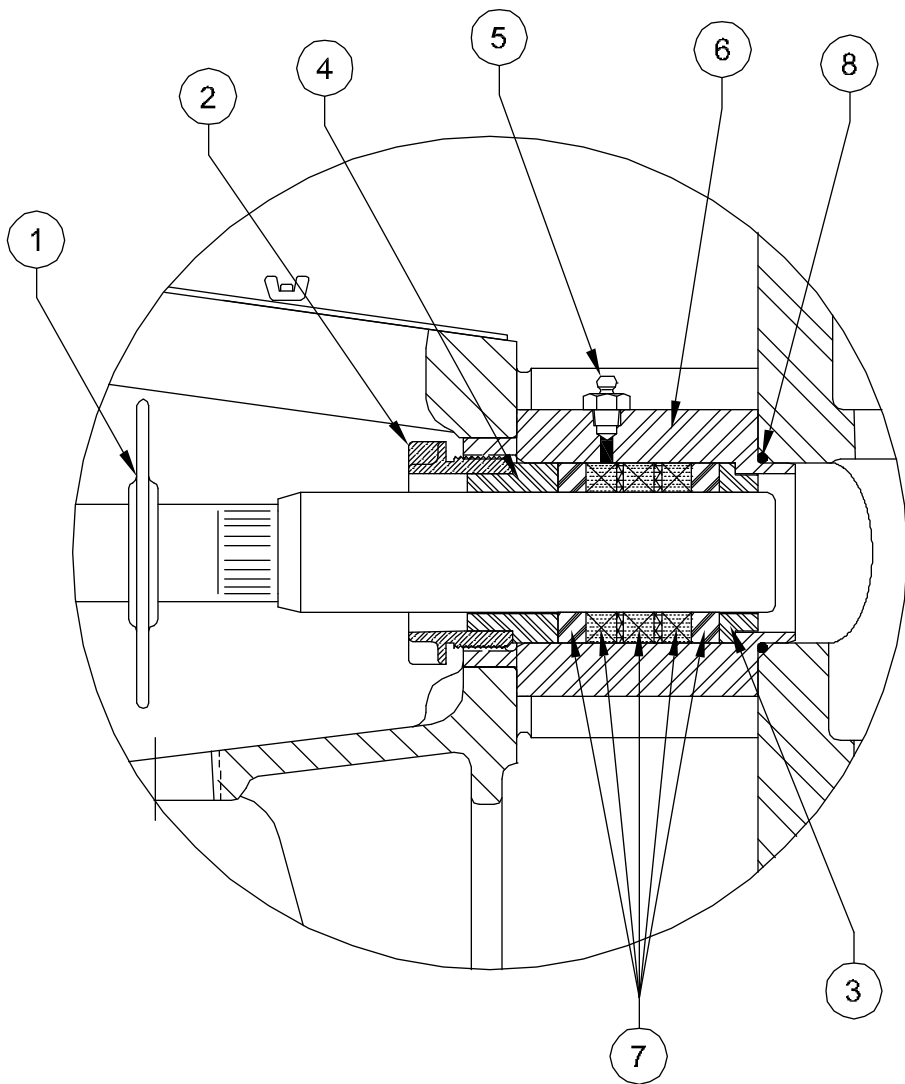
NONE

REV

A

SHT.:

7 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	288-238234-458		8921-K	
	288-238234-339		249	
	288-238234-337		241	
5	288-238234-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-024393-278		(SS)	
	001-024393-235		(STL)	
5	001-024393-302	FOLLOWER	(BRZ)	4
	001-024394-278		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-3/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

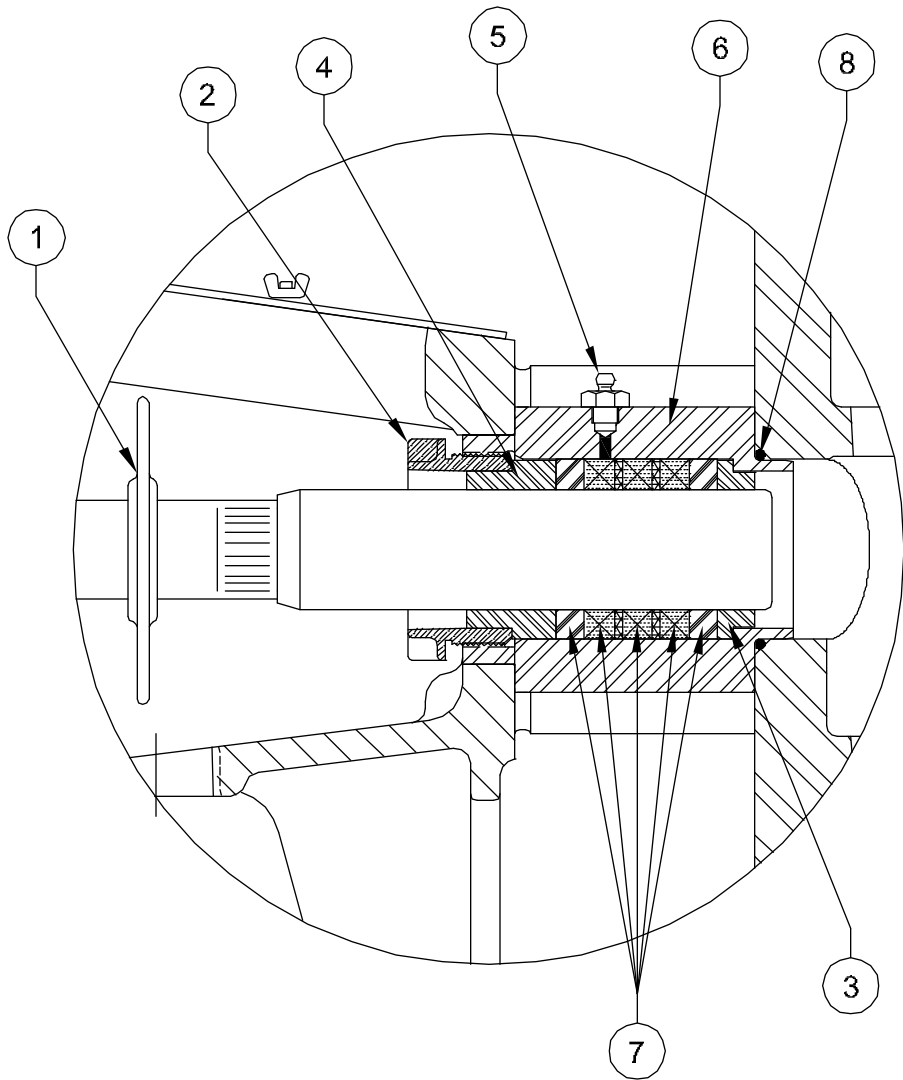
NONE

REV

A

SHT.:

8 OF 9



**NOTE:**

1) FOR ALL "BRAID" STYLE PACKING SEE DRAWING 118261, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	288-212234-458		8921-K	
	288-212234-339		249	
	288-212234-337		241	
5	288-212234-395	PACKING	238	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-008745-278		(SS)	
	001-008745-235		(STL)	
5	001-008745-302	FOLLOWER	(BRZ)	4
	001-025918-278		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
( 2-1/2 PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "BRAID" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118261

SCALE:

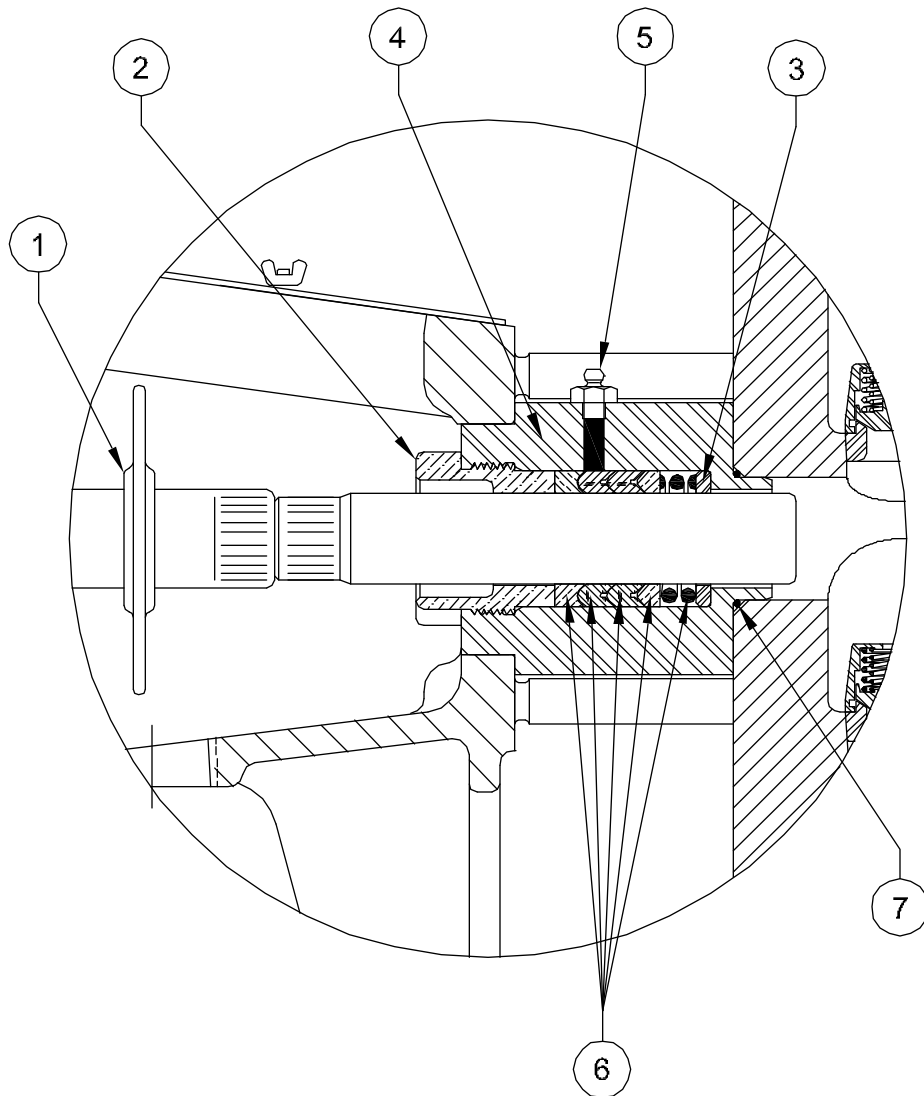
NONE

REV

A

SHT.:

9 OF 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		7
	432-112238-473		1043-4	
5	432-112238-340	PACKING	1068-4	6
5	170-018002-278	PIPE PLUG	(SS)	5
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	4
	001-010949-575		(SS)	
	001-010949-235		(STL)	
5	001-010949-302	THROAT BUSHING	(BRZ)	3
	ACC-013800-E16	<*>	(XSS)	
	001-011230-351		(DI)	
5	001-011230-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-1/2" PLUNGER )</b>				
REQ'D	Part No.	DESCRIPTION		ITEM
<b>BILL OF MATERIAL</b>				

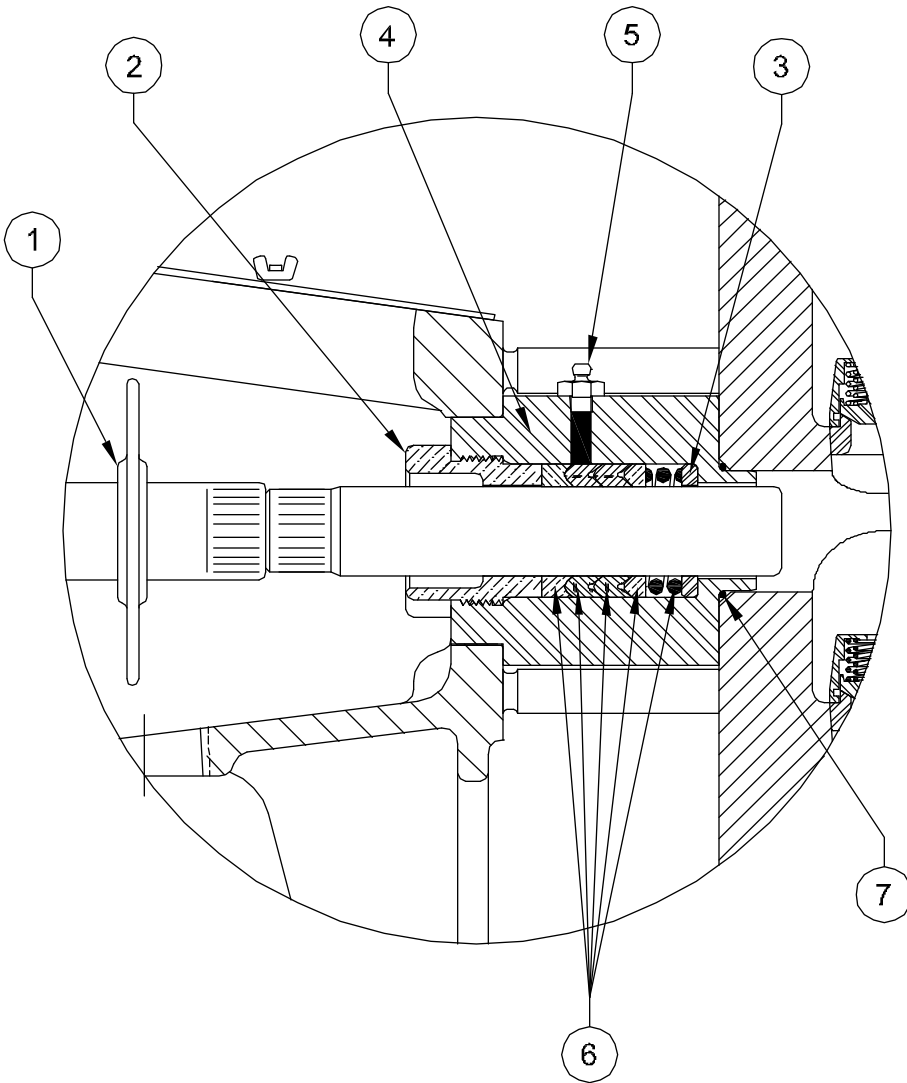
<\*> COATED STAINLESS STEEL



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

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
 "SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:	SCALE:	REV	SHT.:
118262	NONE	A	1 of 9



5	110-000337-200	O-RING		7
	432-158238-473		1043-4	
5	432-158238-340	PACKING	1068-4	6
5	170-018002-278	PIPE PLUG	(SS)	5
	AAC-030944-278		(SS)	
5	AAC-030944-270	STUFFING BOX	(STL)	4
	001-010962-575		(SS)	
	001-010962-235		(STL)	
5	001-010962-302	THROAT BUSHING	(BRZ)	3
	ABC-013800-E16	<*>	(XSS)	
	001-011231-351		(DI)	
5	001-011231-304	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 1-5/8" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

<\*> COATED STAINLESS STEEL

115

NOTE:

- 1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

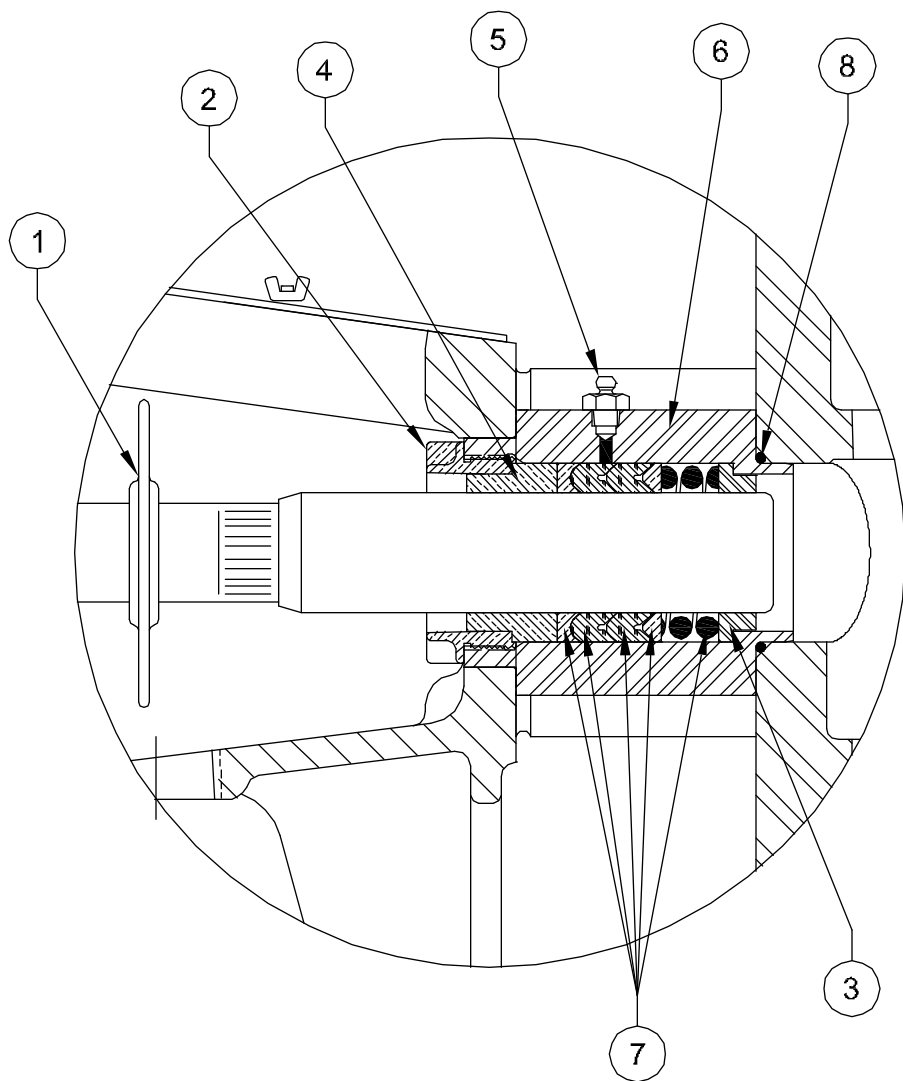
NONE

REV

A

SHT.:

2 OF 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-134212-473		1043-4	
5	428-134212-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010933-575		(SS)	
	001-010933-235		(STL)	
5	001-010933-302	FOLLOWER	(BRZ)	4
	001-010897-575		(SS)	
	001-010897-235		(STL)	
5	001-010897-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
	( 1-3/4" PLUNGER )			
REQ'D	Part No.	DESCRIPTION		ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

116



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

NONE

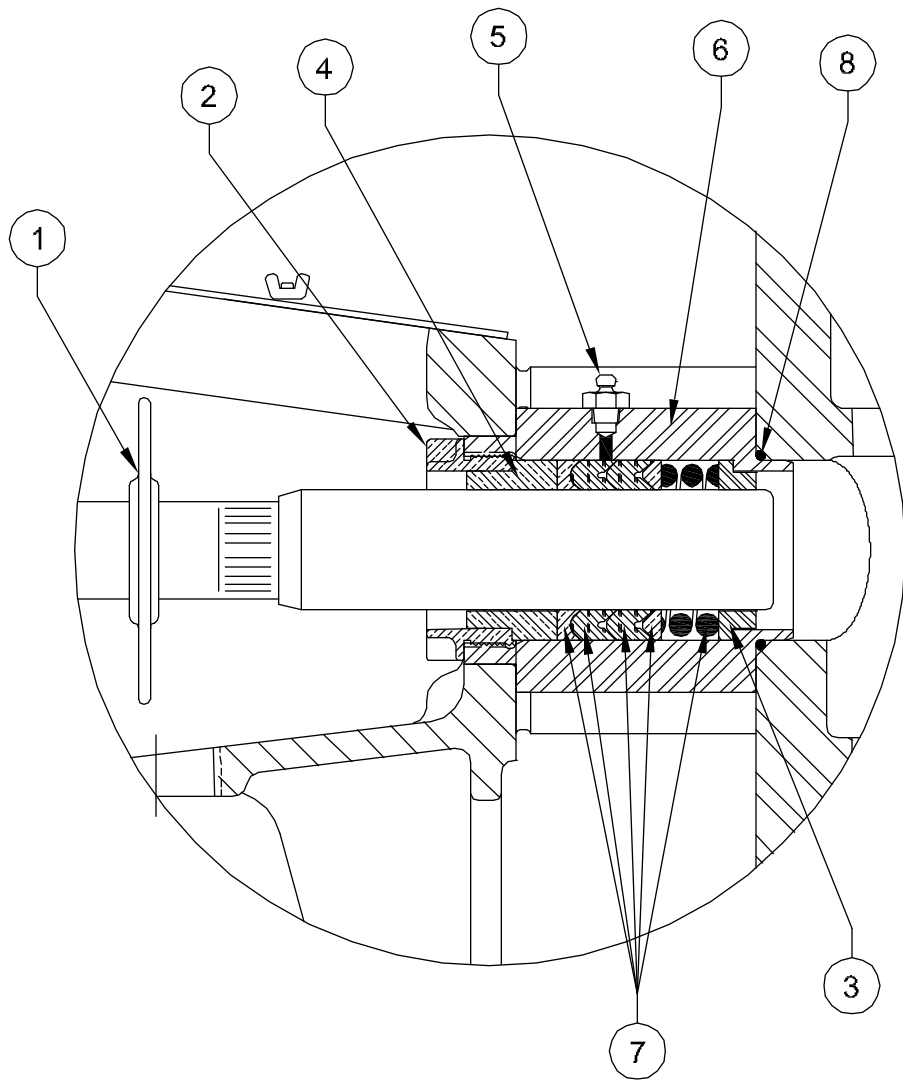
REV

A

SHT.:

3 of 9





**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-178212-473		1043-4	
5	428-178212-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014459-575		(SS)	
	001-014459-235		(STL)	
5	001-014459-302	FOLLOWER	(BRZ)	4
	001-010899-575		(SS)	
	001-010899-235		(STL)	
5	001-010899-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1-7/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

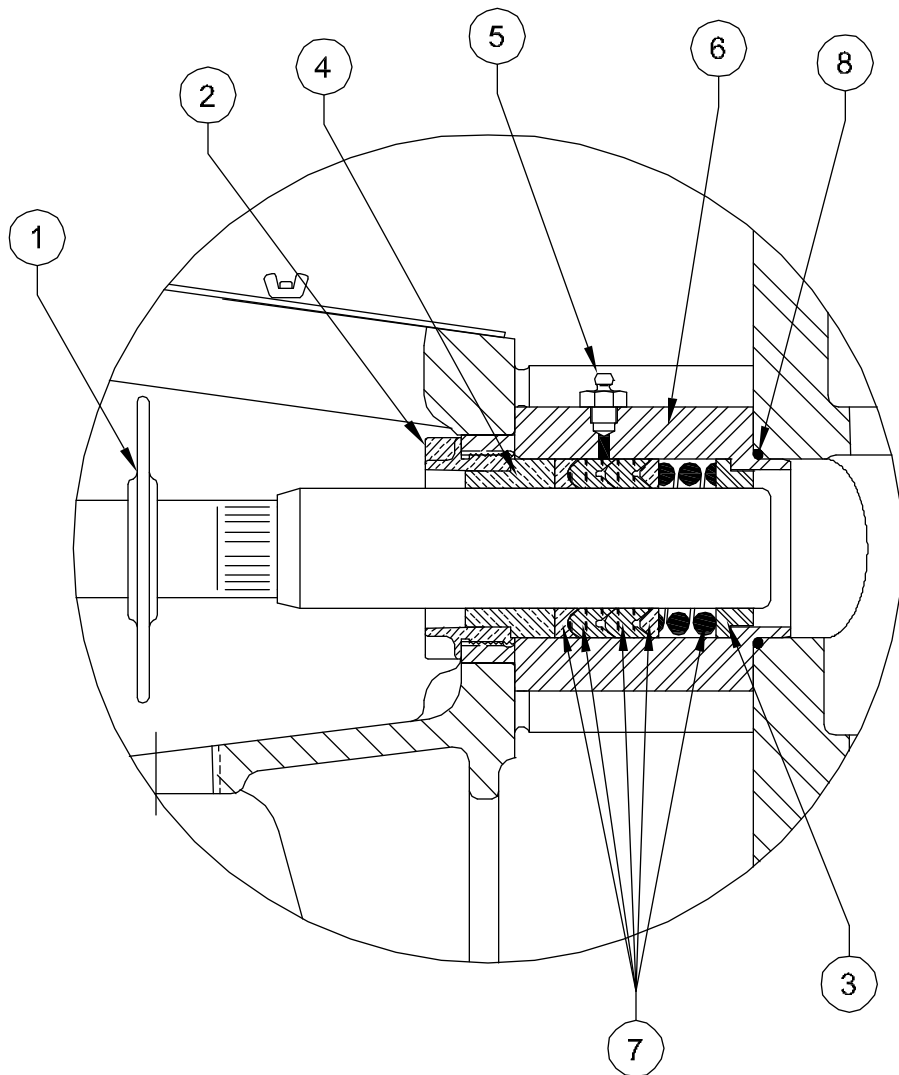
NONE

REV

A

SHT.:

4 OF 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-200238-473		1043-4	
5	428-200238-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-010931-575		(SS)	
	001-010931-235		(STL)	
5	001-010931-302	FOLLOWER	(BRZ)	4
	001-010901-575		(SS)	
	001-010901-235		(STL)	
5	001-010901-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

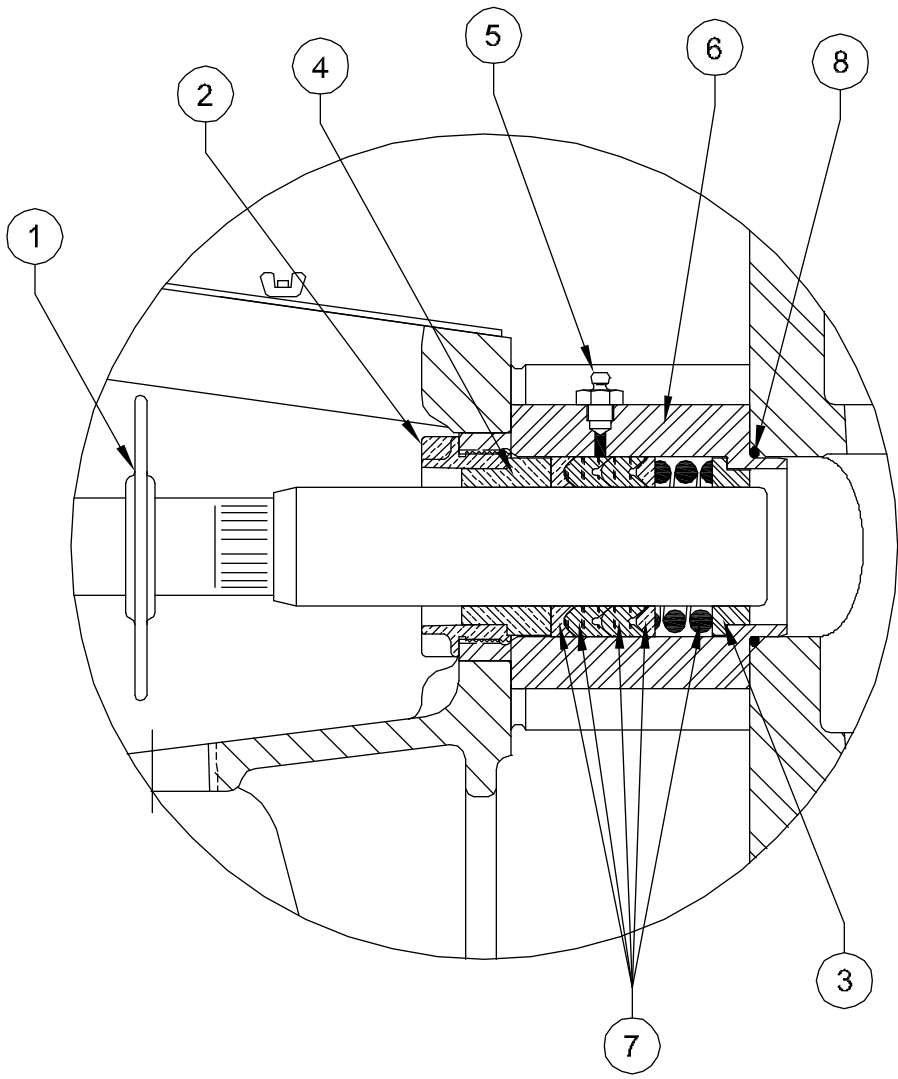
NONE

REV

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SH1.:

5 OF 9

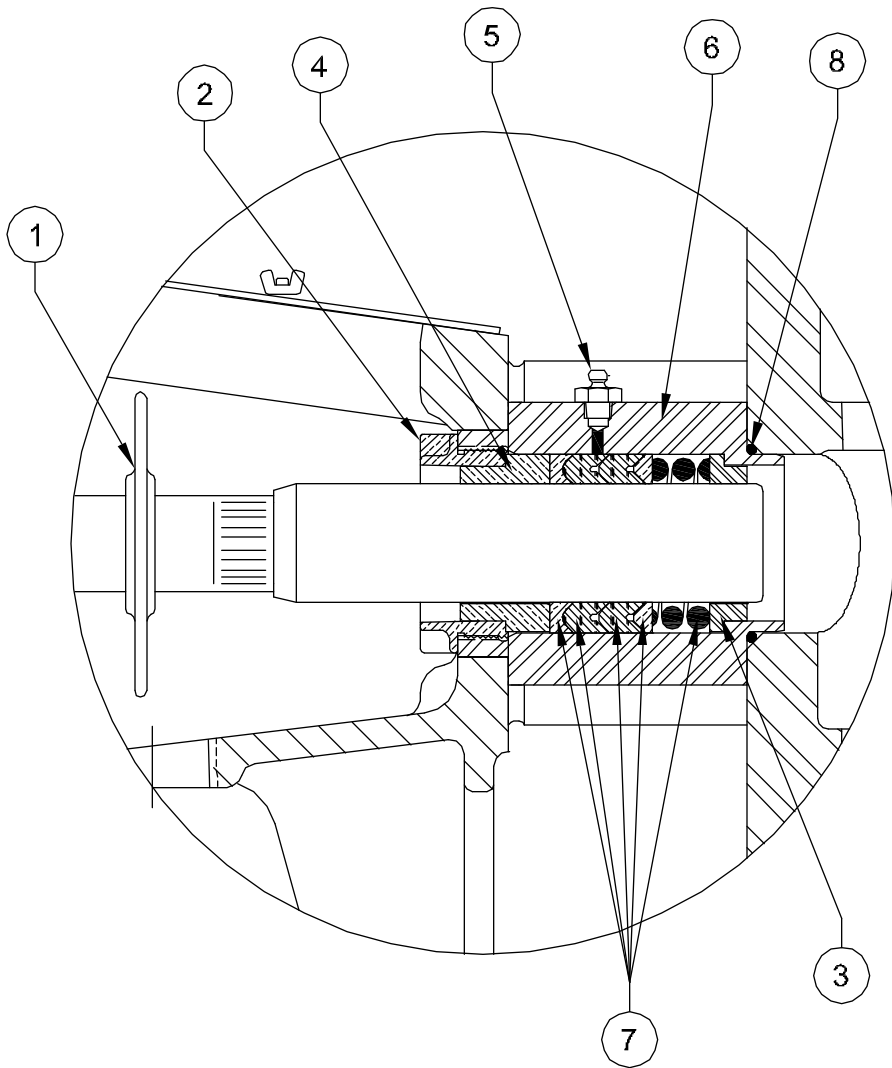


5	110-000337-200	O-RING		8
	428-218212-473		1043-4	
5	428-218212-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-014458-575		(SS)	
	001-014458-235		(STL)	
5	001-014458-302	FOLLOWER	(BRZ)	4
	001-010902-575		(SS)	
	001-010902-235		(STL)	
5	001-010902-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

NOTE:  
 1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

<b>NOV NATIONAL OILWELL VARCO</b>			
HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE: ASSEMBLY, PLUNGER KIT "SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)			
DWG No.:	SCALE:	REV	SHT.:
118262	NONE	A	6 OF 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-214212-473		1043-4	
5	428-214212-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-007983-575		(SS)	
	001-007983-235		(STL)	
5	001-007983-302	FOLLOWER	(BRZ)	4
	001-007979-575		(SS)	
	001-007979-235		(STL)	
5	001-007979-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/4" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

120

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

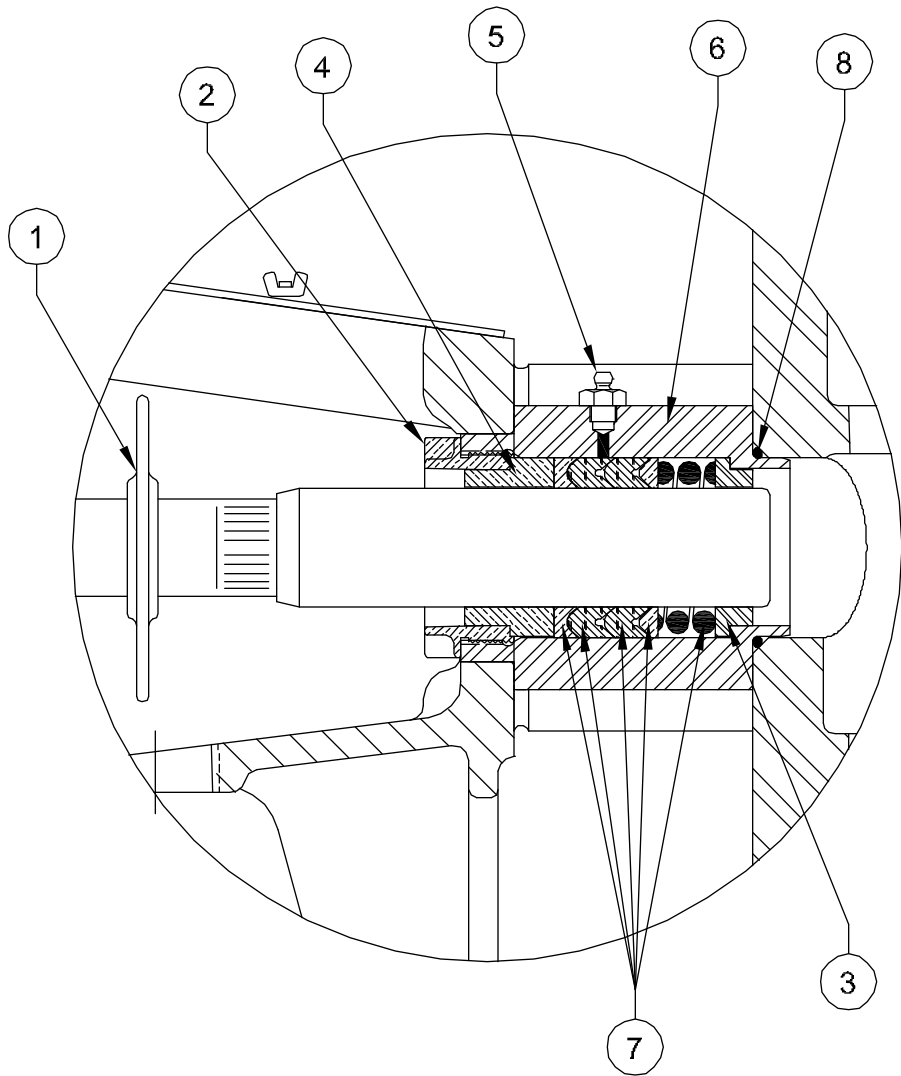
NONE

REV

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SHT.:

7 of 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-238212-473		1043-4	
5	428-238212-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-024393-575		(SS)	
	001-024393-235		(STL)	
5	001-024393-302	FOLLOWER	(BRZ)	4
	001-024394-575		(SS)	
	001-024394-235		(STL)	
5	001-024394-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-3/8 PLUNGER )</b>				
REQ'D	Part No.	DESCRIPTION		ITEM

**BILL OF MATERIAL**

<\*> COATED STAINLESS STEEL

121

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT  
 "SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
 103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

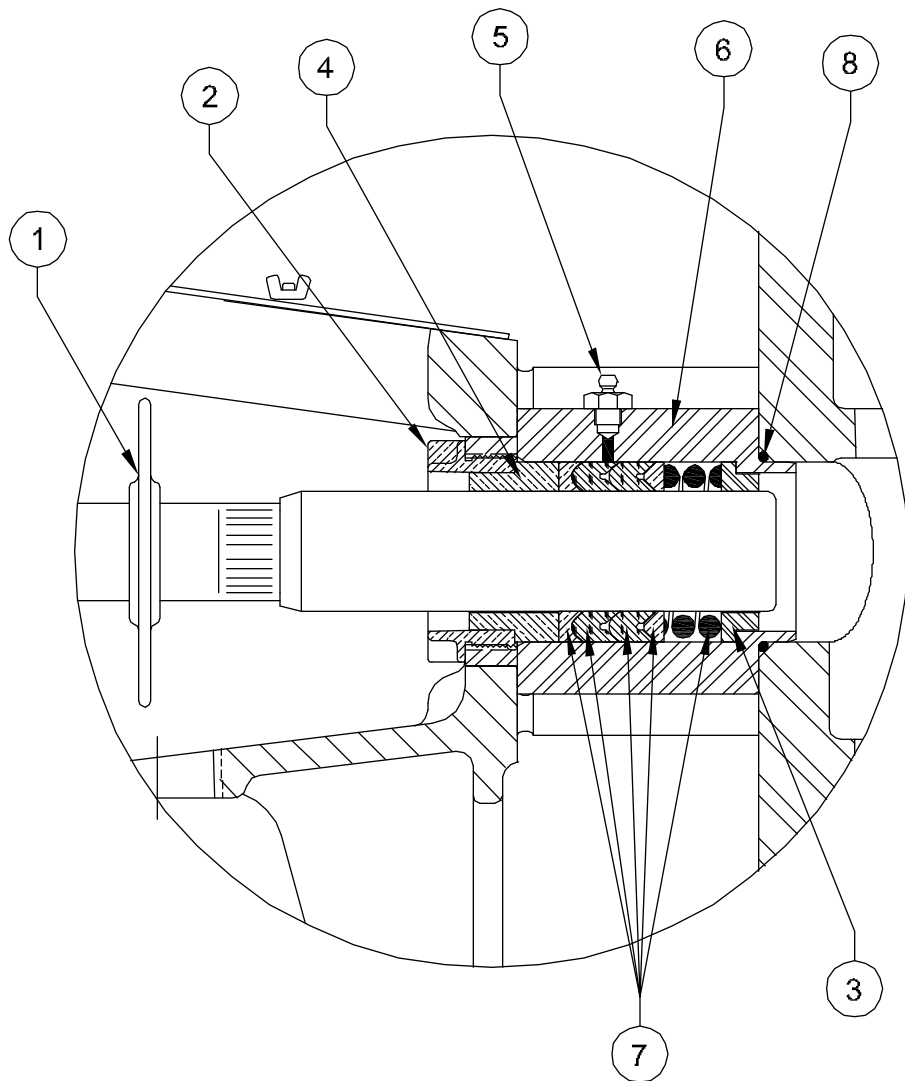
NONE

REV

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SHT:

8 OF 9



**NOTE:**

1) FOR ALL "SSF-4" STYLE PACKING SEE DRAWING 118262, SHEETS 1 THRU 9.

5	110-000337-200	O-RING		8
	428-212244-473		1043-4	
5	428-212244-340	PACKING	1068-4	7
	AAC-030940-278		(SS)	
5	AAC-030940-270	STUFFING BOX	(STL)	6
5	170-018002-278	PIPE PLUG	(SS)	5
	001-008745-575		(SS)	
	001-008745-235		(STL)	
5	001-008745-302	FOLLOWER	(BRZ)	4
	001-025918-575		(SS)	
	001-025918-235		(STL)	
5	001-025918-302	THROAT BUSHING	(BRZ)	3
	002-007977-E16	<*>	(XSS)	
	001-007977-351		(DI)	
5	002-007977-261	GLAND NUT	(SS)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 2-1/2 PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

<\*> COATED STAINLESS STEEL

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PLUNGER KIT

"SSF-4" STYLE PKG, 1-1/2" THRU 2-1/2" PLGR  
103Q-3MC, 110Q-3MC (Q3115AMC, HP125AMC)

DWG No.:

118262

SCALE:

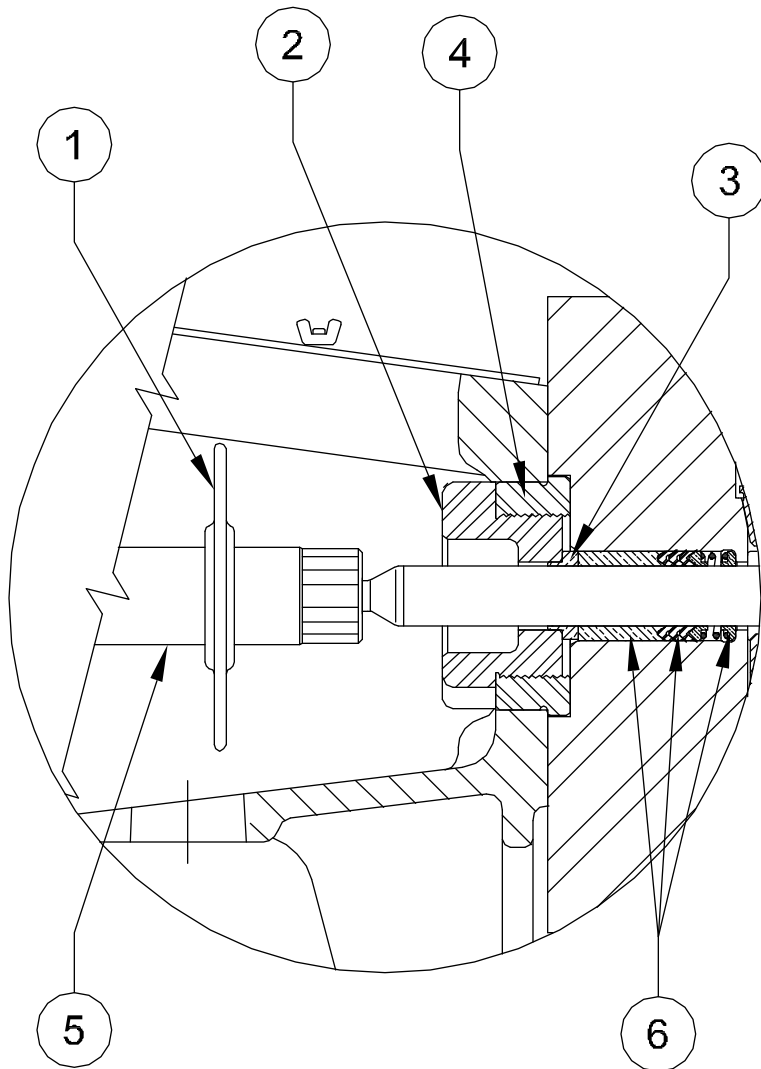
NONE

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SHT.:

9 OF 9



**NOTE**

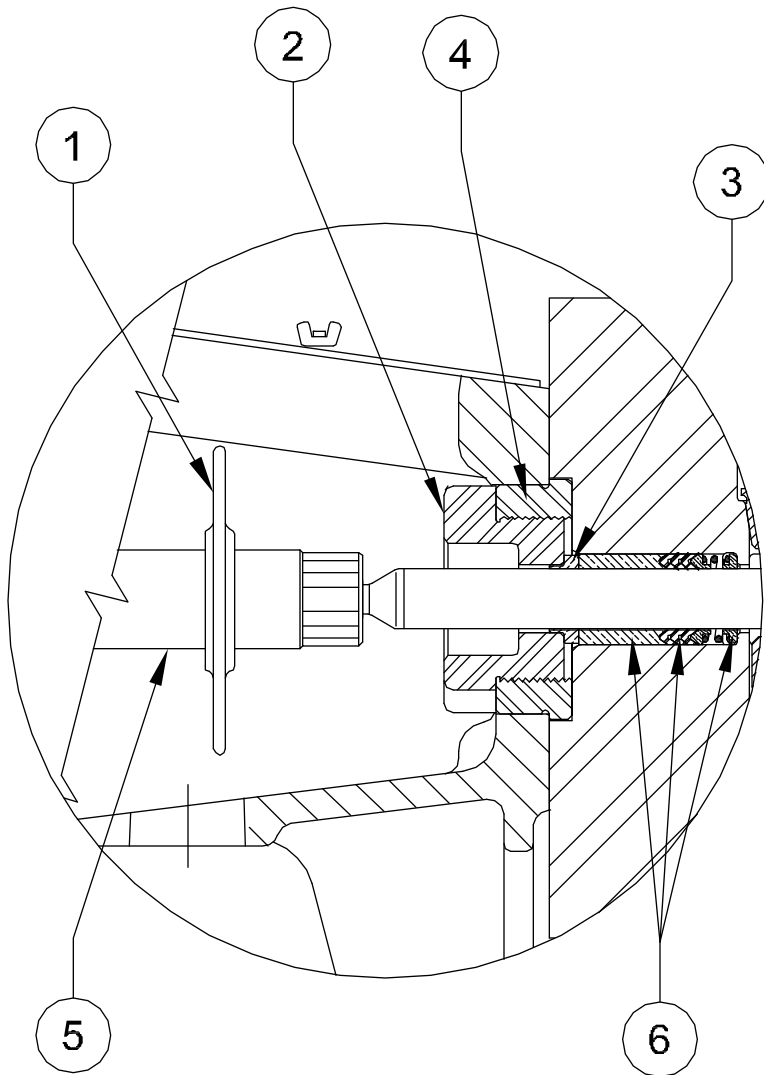
1) FOR ALL "SF-4" STYLE PACKING SEE DRAWING  
118078 SHEETS 1 THRU 3

	297-034258-484		6625-4	
5	297-034258-397	PACKING	805-4	6
5	001-009090-402	ADAPTER ROD	(SS)	5
5	001-009075-310	ADAPTER PE/FE	(BRZ)	4
	001-017049-575		(SS)	
	001-017049-235		(STL)	
5	001-017049-302	FOLLOWER	(BRZ)	3
	001-009071-351		(DI)	
5	001-009071-301	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
( 3/4" PLUNGER )				
REQ'D	Part No.	DESCRIPTION		ITEM
BILL OF MATERIAL				

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

TITLE:  
**ASSEMBLY, PLUNGER KIT**  
**"SF-4" STYLE PKG, 3/4 THRU 1 PLUNGER**  
**103Q-3H, 110Q-3H (Q3115H, HP125H)**

DWG No.:	118078	SCALE:	NONE	REV	A	SHT.:	1 of 3
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	297-078258-484		6625-4	
5	297-078258-397	PACKING	805-4	6
5	001-009090-402	ADAPTER ROD	(SS)	5
5	001-009075-310	ADAPTER PE/FE	(BRZ)	4
	001-014719-575		(SS)	
	001-014719-235		(STL)	
5	001-014719-302	FOLLOWER	(BRZ)	3
	001-009071-351		(DI)	
5	001-009071-301	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 7/8" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

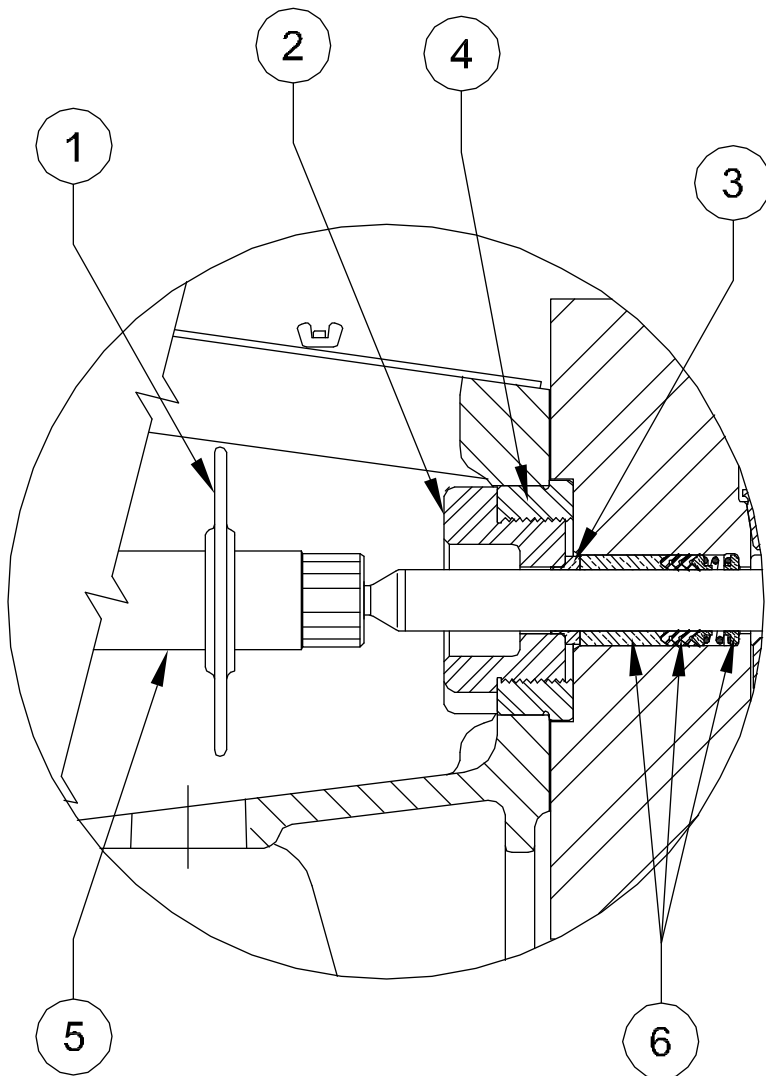
NOTE  
 1) FOR ALL "SF-4" STYLE PACKING SEE DRAWING  
 118078 SHEETS 1 THRU 3

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "SF-4" STYLE PKG, 3/4 THRU 1 PLUNGER  
 103Q-3H, 110Q-3H (Q3115H, HP125H)

DWG No.: 118078	SCALE: NONE	REV A	SHT.: 2 OF 3
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	297-100258-484		6625-4	
5	297-100258-397	PACKING	805-4	6
5	001-009090-402	ADAPTER ROD	(SS)	5
5	001-009075-310	ADAPTER PE/FE	(BRZ)	4
	001-017050-575		(SS)	
	001-017050-235		(STL)	
5	001-017050-302	FOLLOWER	(BRZ)	3
	001-009071-351		(DI)	
5	001-009071-301	GLAND NUT	(BRZ)	2
5	001-007986-201	BAFFLE DISC		1
<b>( 1" PLUNGER )</b>				
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>		<b>ITEM</b>
<b>BILL OF MATERIAL</b>				

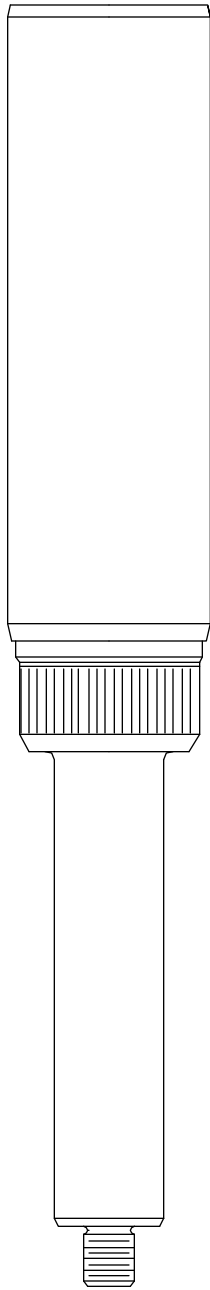
125

NOTE  
 1) FOR ALL "SF-4" STYLE PACKING SEE DRAWING  
 118078 SHEETS 1 THRU 3

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

TITLE:  
 ASSEMBLY, PLUNGER KIT  
 "SF-4" STYLE PKG, 3/4 THRU 1 PLUNGER  
 103Q-3H, 110Q-3H (Q3115H, HP125H)

DWG No.:	118078	SCALE:	NONE	REV	A	SHT.:	3 OF 3
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← PLUNGER DIA.  
( REF.)

5	002-010553-999	3" DIA. PLUNGER, CERAMIC	1
5	AAB-028529-999	2-7/8" DIA. PLUNGER, CERAMIC	1
5	002-010552-999	2-3/4" DIA. PLUNGER, CERAMIC	1
5	ADC-116190-E33	2-5/8" DIA. PLUNGER, CERAMIC	1
5	002-027480-999	2-1/2" DIA. PLUNGER, CERAMIC	1
5	ADC-009810-E33	2-3/8" DIA. PLUNGER, CERAMIC	1
5	002-027479-999	2-1/4" DIA. PLUNGER, CERAMIC	1
REQ'D	Part No.	DESCRIPTION	ITEM
BILL OF MATERIAL			

126

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

PLUNGERS, 2-1/4" THRU 3"  
CERAMIC  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:

118079

SCALE:

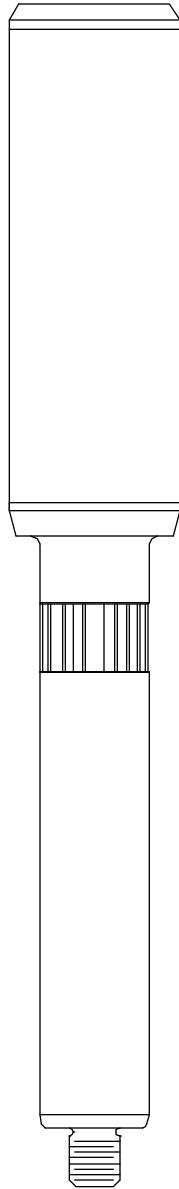
NONE

REV

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SHT.:

1 OF 1



← PLUNGER DIA.  
( REF.)

5	AAC-116316-E24	3" DIA. PLUNGER, CHROME OXIDE	
5	AAC-116316-E23	3" DIA. PLUNGER FOR AMINE SERVICE	
5	002-003807-999	3" DIA. PLUNGER, TUNGSTEN	
5	002-003807-E26	3" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	ABC-116316-E22	2-7/8" DIA. PLUNGER, CHROME OXIDE	
5	ABC-116316-E23	2-7/8" DIA. PLUNGER FOR AMINE SERVICE	
5	ABC-116316-E22	2-7/8" DIA. PLUNGER, TUNGSTEN	
5	ABC-116316-E26	2-7/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	ACC-116316-E24	2-3/4" DIA. PLUNGER, CHROME OXIDE	
5	ACC-116316-E23	2-3/4" DIA. PLUNGER FOR AMINE SERVICE	
5	002-011065-999	2-3/4" DIA. PLUNGER, TUNGSTEN	
5	002-011065-E26	2-3/4" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	ADC-116316-E24	2-5/8" DIA. PLUNGER, CHROME OXIDE	
5	ADC-116316-E23	2-5/8" DIA. PLUNGER FOR AMINE SERVICE	
5	ADC-116316-E22	2-5/8" DIA. PLUNGER, TUNGSTEN	
5	ADC-116316-E26	2-5/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	AEC-116316-E24	2-1/2" DIA. PLUNGER, CHROME OXIDE	
5	AEC-116316-E23	2-1/2" DIA. PLUNGER FOR AMINE SERVICE	
5	002-027482-999	2-1/2" DIA. PLUNGER, TUNGSTEN	
5	002-027482-E26	2-1/2" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	AFC-116316-E24	2-3/8" DIA. PLUNGER, CHROME OXIDE	
5	AFC-116316-E23	2-3/8" DIA. PLUNGER FOR AMINE SERVICE	
5	AAB-029495-E22	2-3/8" DIA. PLUNGER, TUNGSTEN	
5	AAB-029495-E26	2-3/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	AGC-116316-E24	2-1/4" DIA. PLUNGER, CHROME OXIDE	
5	AGC-116316-E23	2-1/4" DIA. PLUNGER FOR AMINE SERVICE	
5	002-027481-999	2-1/4" DIA. PLUNGER, TUNGSTEN	
5	002-027481-E26	2-1/4" DIA. PLUNGER, PREMIUM TUNGSTEN	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:

PLUNGERS 2-1/4" THRU 3"  
HARD SURFACE  
103Q-3L, 110Q-3L (Q3115AL, HP125AL)

DWG No.:

118080

SCALE:

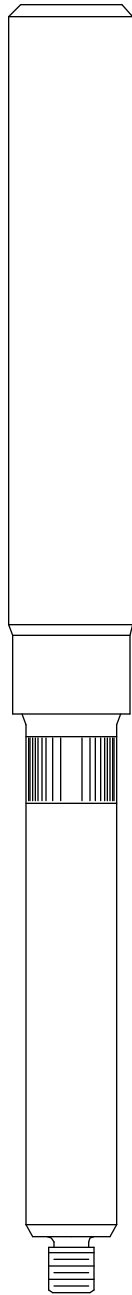
NONE

REV

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1 OF 1



← PLUNGER DIA.  
( REF.)

5	002-009810-999	2-1/2" DIA. PLUNGER, CERAMIC	1
5	ADC-009810-E33	2-3/8" DIA. PLUNGER, CERAMIC	1
5	002-009765-999	2-1/4" DIA. PLUNGER, CERAMIC	1
5	002-017145-999	2-1/8" DIA. PLUNGER, CERAMIC	1
5	002-009769-999	2" DIA. PLUNGER, CERAMIC	1
5	002-018146-999	1-7/8" DIA. PLUNGER, CERAMIC	1
5	002-009766-999	1-3/4" DIA. PLUNGER, CERAMIC	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:

PLUNGERS, 1-3/4" THRU 2-1/2"

CERAMIC

103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118081

SCALE:

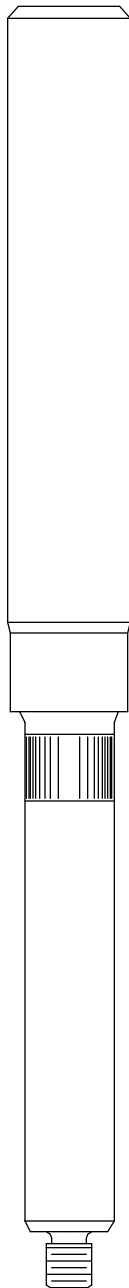
NONE

REV

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1 OF 1



PLUNGER DIA.  
( REF.)

5	AAC-115980-E24	2-1/2" DIA. PLUNGER, CHROME OXIDE	
5	002-009529-E23	2-1/2" DIA. PLUNGER FOR AMINE SERVICE	
5	002-009529-999	2-1/2" DIA. PLUNGER, TUNGSTEN	
5	002-009529-E26	2-1/2" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	ABC-115980-E24	2-3/8" DIA. PLUNGER, CHROME OXIDE	
5	ABC-115980-E23	2-3/8" DIA. PLUNGER FOR AMINE SERVICE	
5	ABC-115980-E22	2-3/8" DIA. PLUNGER, TUNGSTEN	
5	ABC-115980-E26	2-3/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	ACC-115980-E24	2-1/4" DIA. PLUNGER, CHROME OXIDE	
5	002-010869-E23	2-1/4" DIA. PLUNGER, FOR AMINE SERVICE	
5	002-010869-999	2-1/4" DIA. PLUNGER, TUNGSTEN	
5	002-010869-000	2-1/4" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	002-014460-E24	2-1/8" DIA. PLUNGER, CHROME OXIDE	
5	002-014460-E23	2-1/8" DIA. PLUNGER FOR AMINE SERVICE	
5	002-014460-999	2-1/8" DIA. PLUNGER, TUNGSTEN	
5	002-014460-E26	2-1/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	002-010862-E24	2" DIA. PLUNGER, CHROME OXIDE	
5	002-010862-E23	2" DIA. PLUNGER FOR AMINE SERVICE	
5	002-010862-999	2" DIA. PLUNGER, TUNGSTEN	
5	002-010862-E26	2" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	AFC-115980-E24	1-7/8" DIA. PLUNGER, CHROME OXIDE	
5	AFC-115980-E23	1-7/8" DIA. PLUNGER FOR AMINE SERVICE	
5	002-014461-999	1-7/8" DIA. PLUNGER, TUNGSTEN	
5	002-014461-E26	1-7/8" DIA. PLUNGER, PREMIUM TUNGSTEN	1
5	AGC-115980-E24	1-3/4" DIA. PLUNGER, CHROME OXIDE	
5	002-010861-E23	1-3/4" DIA. PLUNGER FOR AMINE SERVICE	
5	002-010861-999	1-3/4" PLUNGER, TUNGSTEN	
5	002-010861-E26	1-3/4" DIA. PLUNGER, 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, 1-3/4" THRU 2-1/2"  
HARD SURFACE  
103Q-3M, 110Q-3M (Q3115AM, HP125AM)

DWG No.:

118082

SCALE:

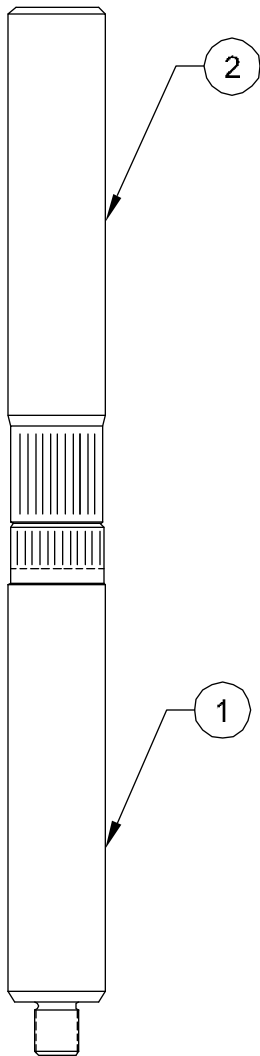
NONE

REV

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1 OF 1

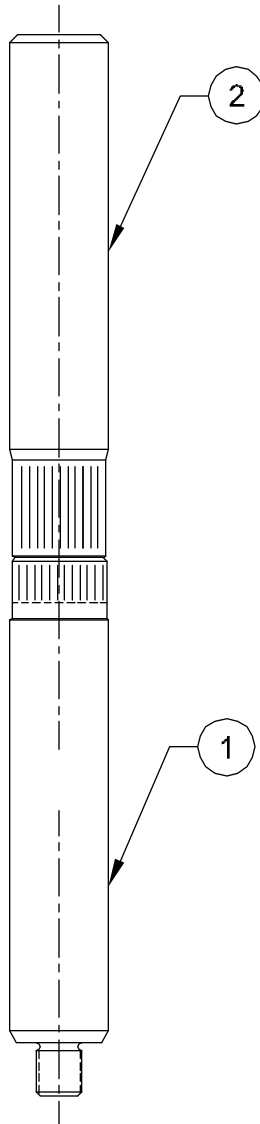


5	002-012171-999	1-5/8" DIA. PLUNGER, CERAMIC	2
5	001-010260-402	ADAPTER ROD	1
5	002-010484-999	1-1/2" DIA. PLUNGER, CERAMIC	2
5	001-010260-402	ADAPTER ROD	1
5	002-012160-999	1-3/8" DIA. PLUNGER, CERAMIC	2
5	001-010260-402	ADAPTER ROD	1
5	002-010483-999	1-1/4" DIA. PLUNGER, CERAMIC	2
5	001-010260-402	ADAPTER ROD	1
5	NOT AVAILABLE	1-1/8" DIA. PLUNGER, CERAMIC	2
5	001-009090-402	ADAPTER ROD	1

REQ'D	Part No.	DESCRIPTION	ITEM
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**BILL OF MATERIAL**

HOUSTON, TEXAS, U.S.A.		ENGINEERING, TULSA, OKLAHOMA	
TITLE:			
PLUNGERS 1-1/8" TO 1-5/8", CERAMIC 103Q-3M & MSC, 110Q-3M & MSC (Q3115M & MS, HP125M & MS)			
DWG No.:	118083	SCALE:	NONE
REV:	A	SHT.:	1 OF 1



5	002-029348-E24	1-5/8" DIA. PLUNGER, CHROME OXIDE	
5	002-029348-999	1-5/8" DIA. PLUNGER FOR AMINE SERVICE	
5	002-029348-999	1-5/8" DIA. PLUNGER, TUNGSTEN	
5	002-029348-E26	1-5/8" DIA. PLUNGER, PREMIUM TUNGSTEN	2
5	001-010260-402	ADAPTER ROD	1
5	002-010482-E24	1-1/2" DIA. PLUNGER, CHROME OXIDE	
5	002-010482-E23	1-1/2" DIA. PLUNGER FOR AMINE SERVICE	
5	002-010482-999	1-1/2" DIA. PLUNGER, TUNGSTEN	
5	002-010482-E26	1-1/2" DIA. PLUNGER, PREMIUM TUNGSTEN	2
5	001-010260-402	ADAPTER ROD	1
5	002-011052-E24	1-3/8" DIA. PLUNGER, CHROME OXIDE	
5	002-011052-E23	1-3/8" DIA. PLUNGER FOR AMINE SERVICE	
5	002-011052-999	1-3/8" DIA. PLUNGER, TUNGSTEN	
5	002-011052-000	1-3/8" DIA. PLUNGER, PREIMIUM TUNGSTEN	2
5	001-010260-402	ADAPTER ROD	1
5	002-011041-E24	1-1/4" DIA. PLUNGER, CHROME OXIDE	
5	002-011041-E23	1-1/4" DIA. PLUNGER FOR AMINE SERVICE	
5	002-011041-999	1-1/4" DIA. PLUNGER, TUNGSTEN	
5	002-011041-E26	1-1/4" DIA. PLUNGER, PREMIUM TUNGSTEN	2
5	001-010260-402	ADAPTER ROD	1
5	002-017131-E24	1-1/8" DIA. PLUNGER, CHROME OXIDE	
5	002-017131-E23	1-1/8" DIA. PLUNGER FOR AMINE SERVICE	
5	002-017131-999	1-1/8" DIA. PLUNGER, TUNGSTEN	
5	002-017131-E26	1-1/8" DIA. PLUNGER, PREMIUM TUNGSTEN	2
5	001-009090-402	ADAPTER ROD	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>

**BILL OF MATERIAL**

131

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

PLUNGERS 1-1/8 TO 1-5/8, HARD SURFACE  
103Q-3M & MSC, 110Q-3M & MSC  
(Q3115M & MS, HP125M & MS)

DWG No.:

118084

SCALE:

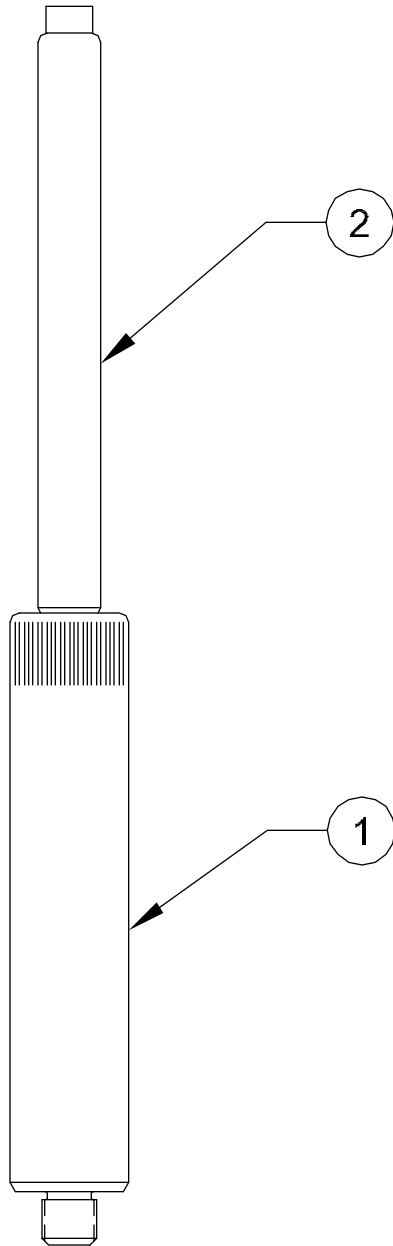
NONE

REV

A

SHT.:

1 of 1



5	022-002252-E26	1" DIA. PLUNGER, PREMIUM TUNGSTEN	
5	022-002252-999	1" DIA. PLUNGER, TUNGSTEN	2
5	001-009090-402	ADAPTER ROD	1
5	002-011068-E26	7/8" DIA. PLUNGER, PREMIUM TUNGSTEN	
5	002-011068-999	7/8" DIA. PLUNGER, TUNGSTEN	2
5	001-009090-402	ADAPTER ROD	1
5	002-011067-E26	3/4" DIA. PLUNGER, PREMIUM TUNGSTEN	
5	002-011067-999	3/4" DIA. PLUNGER, TUNGSTEN	2
5	001-009090-402	ADAPTER ROD	1
REQ'D	Part No.	DESCRIPTION	ITEM
<b>BILL OF MATERIAL</b>			

132

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

PLUNGERS 3/4" THRU 1"  
HARD SURFACE  
103Q-3H, 110Q-3H (Q3115H, HP125H)

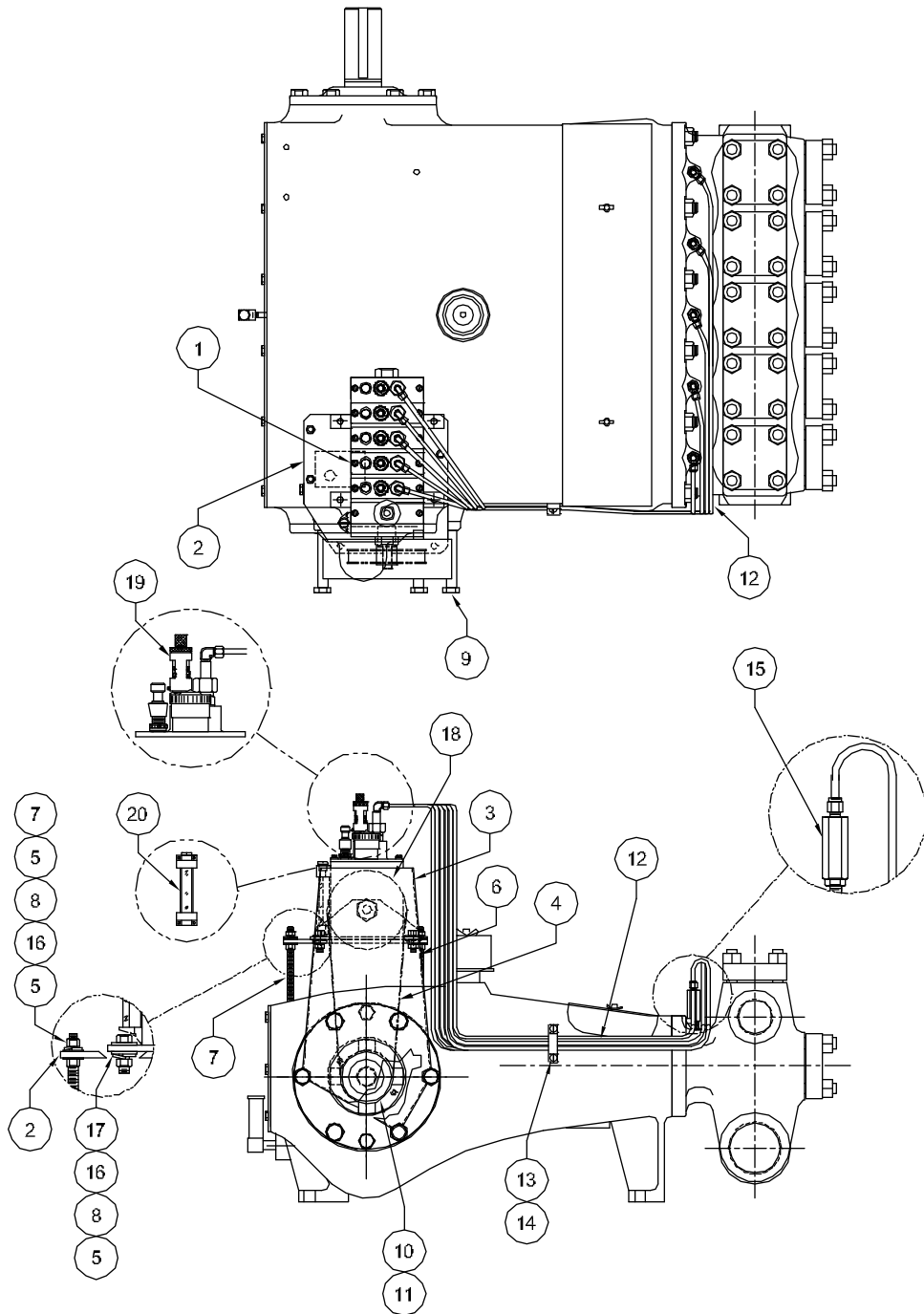
DWG No.: 118085

SCALE: NONE

REV A

SHT.: 1 OF 1





SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

1	GAS-105265-000	SIGHT GLASS	20
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	19
<b>REPLACEMENT PARTS</b>			
1	001-011513-999	DRIVEN SHEAVE	18
4	100-038114-290	CAP SCREW 3/8" x 1-1/4" LG.	17
10	155-038100-286	WASHER, 3/8"	16
5	GAS-105240-000	CHECK VALVE, 1/8" NPT	15
4	113-010038-405	MACHINE SCREW, RND HD	14
2	001-025128-405	LINE CLAMP	13
360"	330-002003-365	TUBING, 1/4"	12
1	419-101032-999	SHEAVE, LUBRICATOR DRIVER 3.2" DD	11
1	420-011900-000	HUB, PUMP DRIVER 1-7/16" BORE	10
3	100-058434-290	CAP SCREW, 5/8" x 4-3/4" LG.	9
7	154-038068-286	LOCK WASHER 3/8"	8
2	104-038500-286	STUD, 3/8" x 5" LG	7
1	104-038400-286	STUD, 3/8" x 4" LG	6
10	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	421-100350-001	V-BELT	4
1	004-008091-231	BELT GUARD	3
1	001-001718-231	LUBRICATOR BRACKET LH/RH	2
1	GAS-105239-000	LUBRICATOR, RHD, (5) FEED	
1	001-011154-999	LUBRICATOR, LHD, (5) FEED	1
<b>REQ'D</b>	<b>Part No.</b>	<b>DESCRIPTION</b>	<b>ITEM</b>
<b>BILL OF MATERIAL</b>			

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

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**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, PACKING LUBRICATOR  
(RHD OR LHD) LHD SHOWN  
103Q-3

DWG No.:

118163

SCALE:

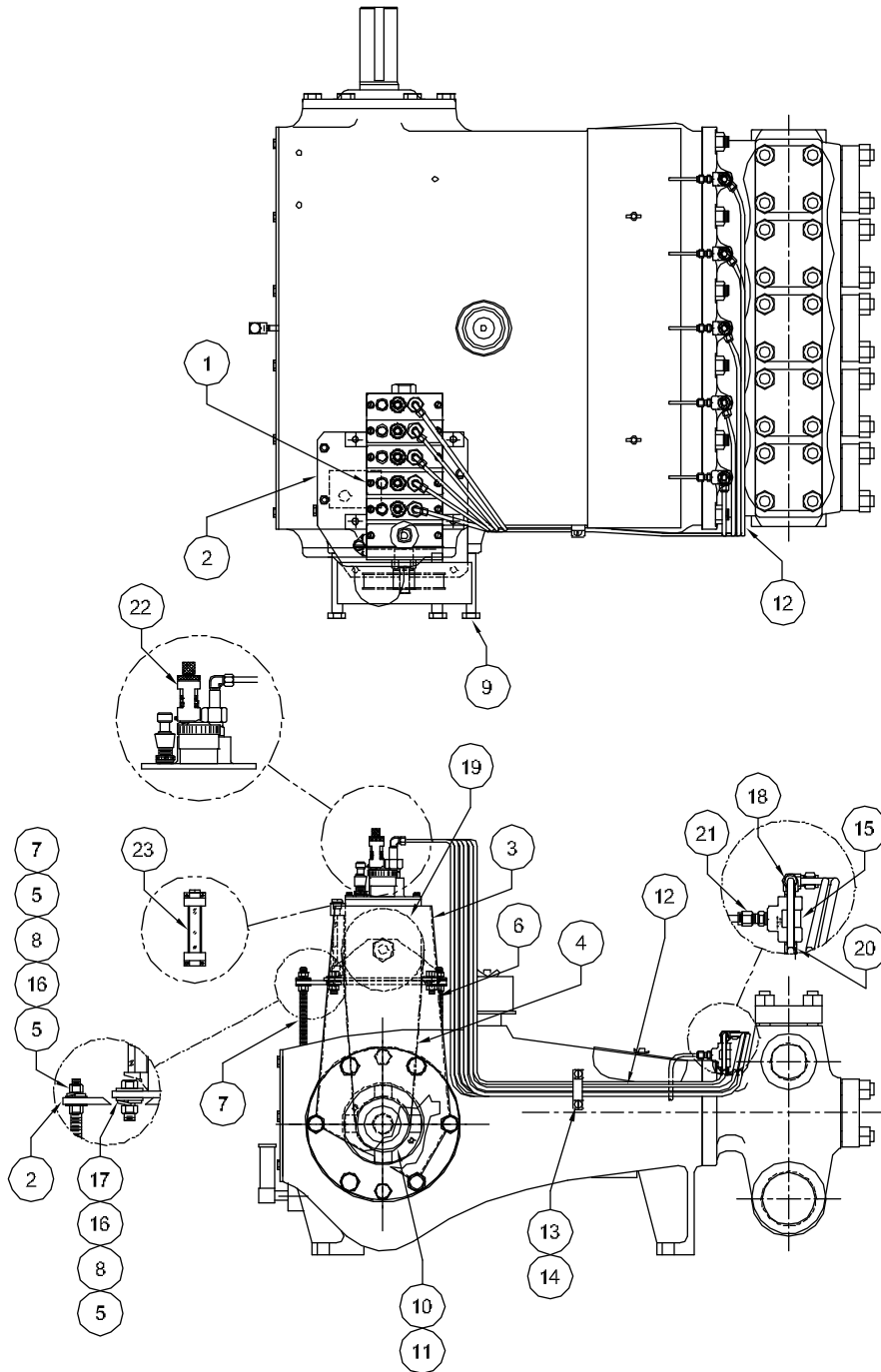
NONE

REV

A

SHT.:

1 OF 1



SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

1	GAS-105265-000	SIGHT GLASS	23
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	22
<b>REPLACEMENT PARTS</b>			
5	462-040012-278	MALE CONN., STR., 1/4" TUBE x 1/8" NPT	21
5	157-018112-278	PIPE NIPPLE:	20
1	001-011513-999	DRIVEN SHEAVE	19
5	462-040022-278	MALE CONN., 90 DEG 1/4" TUBE x 1/8" NPT	18
4	100-038114-290	CAP SCREW 3/8" x 1-1/4" LG.	17
10	155-038100-286	WASHER, 3/8"	16
5	469-020002-278	TEE: 1/8" NPT	15
4	113-010038-405	MACHINE SCREW, RND HD	14
2	001-008783-405	LINE CLAMP	13
360"	330-002003-365	TUBING, 1/4"	12
1	419-101032-999	SHEAVE, LUBRICATOR DRIVER 3.2" DD	11
1	420-011900-000	HUB, PUMP DRIVER 1-7/16" BORE	10
3	100-058434-290	CAP SCREW, 5/8" x 4-3/4" LG.	9
7	154-038068-286	LOCK WASHER 3/8"	8
2	104-038500-286	STUD, 3/8" x 5" LG	7
1	104-038400-286	STUD, 3/8" x 4" LG	6
10	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	421-100350-001	V-BELT	4
1	004-008091-231	BELT GUARD	3
1	001-001718-231	LUBRICATOR BRACKET LH/RH	2
1	GAS-105239-000	LUBRICATOR, RHD, (5) FEED	
1	001-011154-999	LUBRICATOR, LHD, (5) 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 THE HEEL) - (RHD OR LHD)  
LHD SHOWN, 103Q-3

DWG No.:

118164

SCALE:

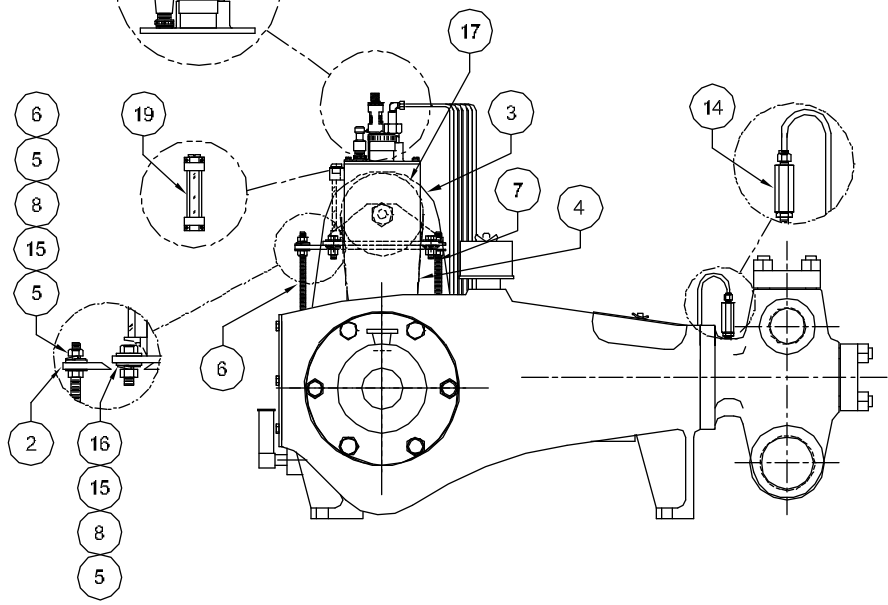
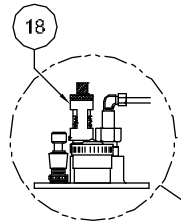
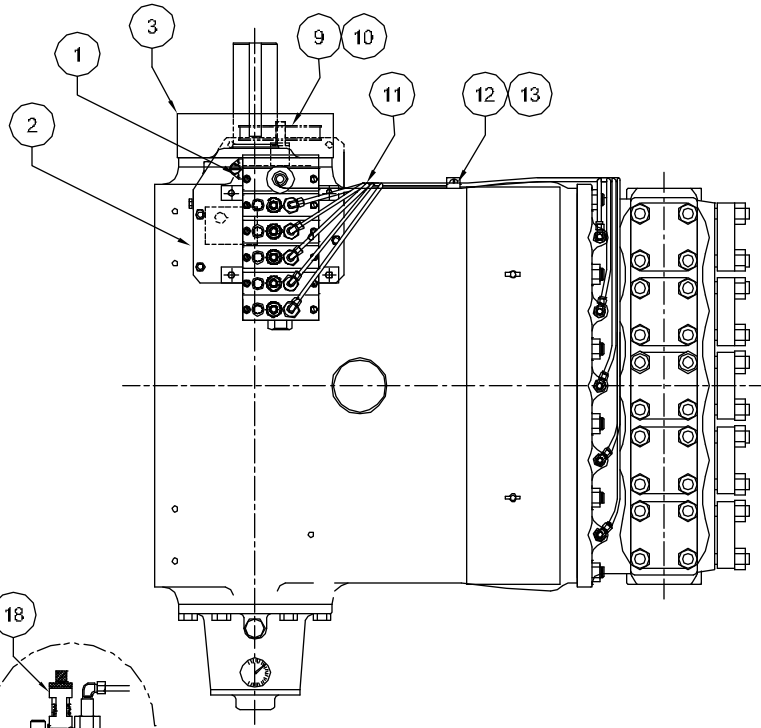
NONE

REV

A

SHT.:

1 OF 1



SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

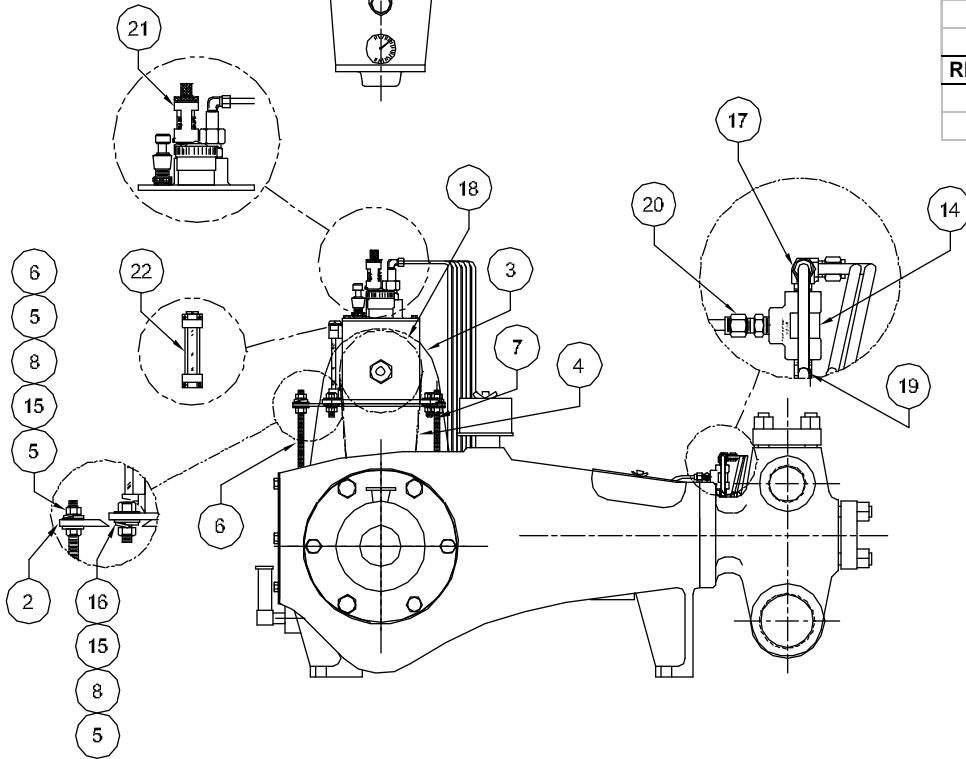
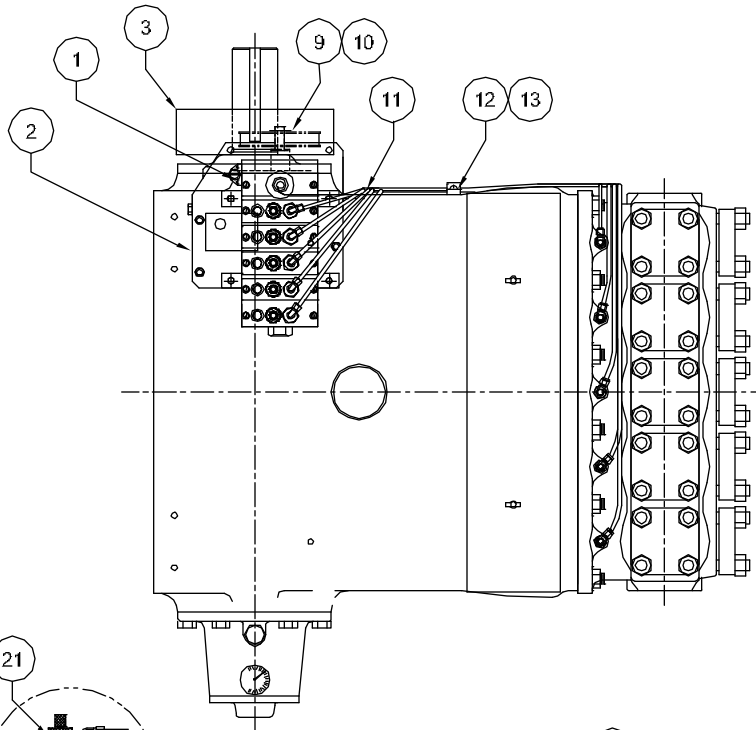
1	GAS-105265-000	SIGHT GLASS	19
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	18
<b>REPLACEMENT PARTS</b>			
1	001-011513-999	DRIVEN SHEAVE	17
4	100-038114-290	CAP SCREW 3/8" x 1-1/4" LG.	16
10	155-038100-286	WASHER, 3/8"	15
5	GAS-105240-000	CHECK VALVE, 1/8" NPT	14
4	113-010038-405	MACHINE SCREW, RND HD	13
2	001-025128-405	LINE CLAMP	12
360"	330-002003-365	TUBING, 1/4"	11
1	001-011854-231	SHEAVE, LUBRICATOR DRIVER	10
2	119-038012-405	SET SCREW	9
7	154-038068-286	LOCK WASHER 3/8"	8
1	104-038312-286	STUD, 3/8" x 3-1/2" LG	7
2	104-038400-286	STUD, 3/8" x 4" LG	6
10	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	421-100350-001	V-BELT	4
1	AAC-118239-C02	GUARD	3
1	001-014672-231	LUBRICATOR BRACKET LH/RH	2
1	GAS-105239-000	LUBRICATOR, RHD, (5) FEED	
1	001-011154-999	LUBRICATOR, LHD, (5) FEED	1
REQ'D	Part No.	DESCRIPTION	ITEM
<b>BILL OF MATERIAL</b>			

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

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

TITLE:  
**ASSEMBLY, PACKING LUBRICATOR  
 (RHD OR LHD) LHD SHOWN  
 110Q-3**

DWG No.: 118181 SCALE: NONE REV A SHT.: 1 OF 1



SAME PLUMBING FOR CASTINGS AND BILLETS (CASTING SHOWN).

1	GAS-105265-000	SIGHT GLASS	22
1	GAS-105264-000	PUMP ASSEMBLY w/ GASKET	21
<b>REPLACEMENT PARTS</b>			
5	462-040012-278	MALE CONN., STR., 1/4" TUBE x 1/8" NPT	20
5	157-018112-278	PIPE NIPPLE:	19
1	001-011513-999	DRIVEN SHEAVE	18
5	462-040022-278	MALE CONN., 90 DEG 1/4" TUBE x 1/8" NPT	17
4	100-038114-290	CAP SCREW 3/8" x 1-1/4" LG.	16
10	155-038100-286	WASHER, 3/8"	15
5	469-020002-278	TEE: 1/8" NPT	14
4	113-010038-405	MACHINE SCREW, RND HD	13
2	001-025128-405	LINE CLAMP	12
360"	330-002003-365	TUBING, 1/4"	11
1	001-011854-231	SHEAVE, LUBRICATOR DRIVER	10
2	119-038012-405	SET SCREW	9
7	154-038068-286	LOCK WASHER 3/8"	8
1	104-038312-286	STUD, 3/8" x 3-1/2" LG	7
2	104-038400-286	STUD, 3/8" x 4" LG	6
10	133-038016-286	NUT, ZINC PLATED 3/8"	5
1	421-100350-001	V-BELT	4
1	AAC-118239-C02	GUARD	3
1	001-014672-231	LUBRICATOR BRACKET LH/RH	2
1	GAS-105239-000	LUBRICATOR, RHD, (5) FEED	
1	001-011154-000	LUBRICATOR, LHD, (5) FEED	1
REQ'D	Part No.	DESCRIPTION	ITEM
<b>BILL OF MATERIAL</b>			

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

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**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

ASSEMBLY, D.O.H. LUBRICATOR  
(DRIP ON THE HEEL) - (RHD OR LHD)  
110Q-3

DWG No.:

118182

SCALE:

NONE

REV

A

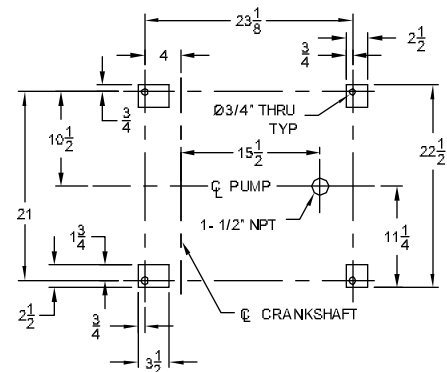
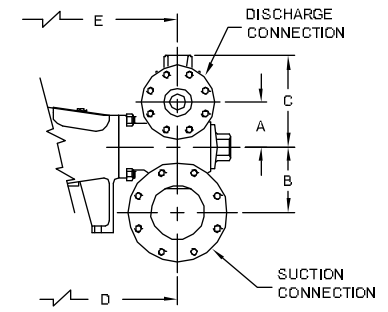
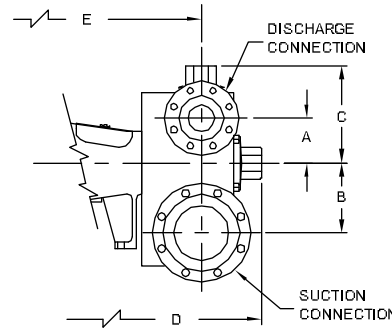
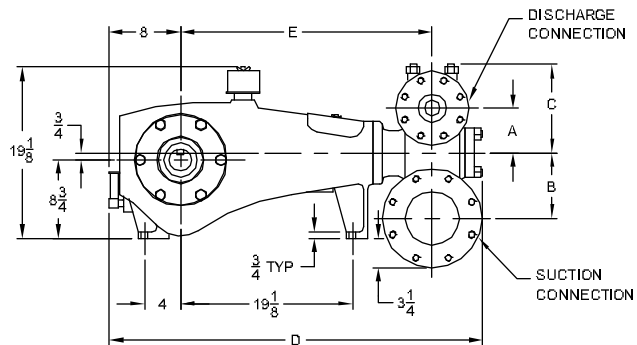
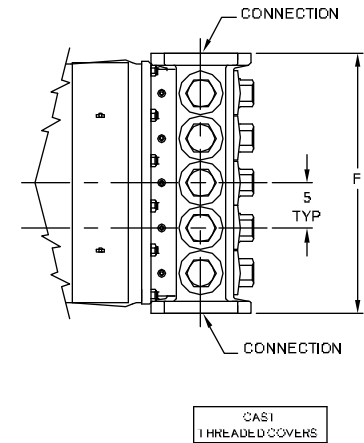
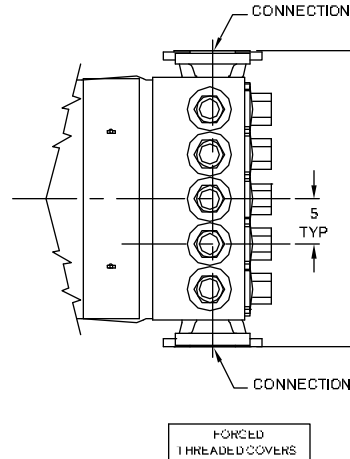
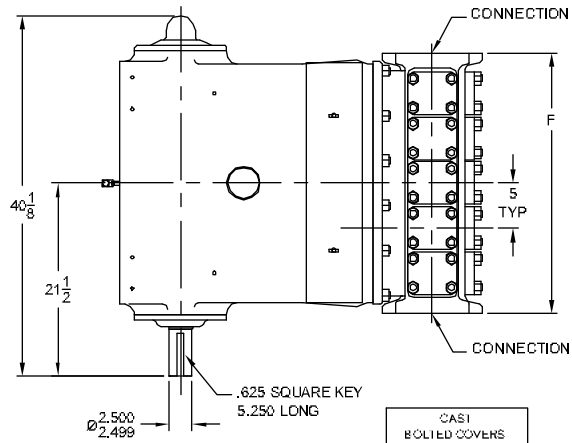
SHT.:

1 OF 1

### FIELD CONNECTIONS

PUMP TYPE	DIMENSIONS IN INCHES	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
103Q-3L	3" - 600# ANSI	6" - 150# ANSI

PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
CAST, BOLTED COVERS	5	7 1/4	9 7/8	41 5/8	28	29
FORGED THREADED, COVERS	5	7 3/4	10 7/8	42 5/8	28 1/16	33
CAST, THREADED COVERS	5	7 1/4	10 1/4	42	28	29



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

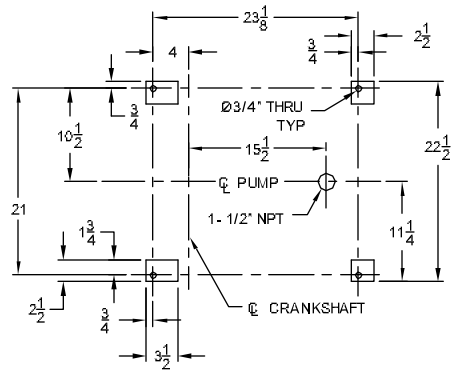
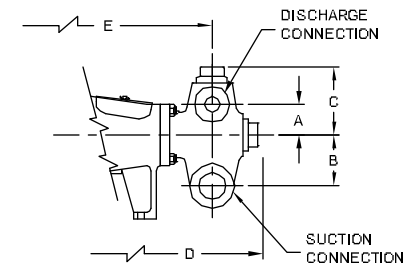
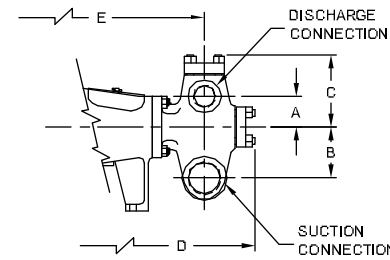
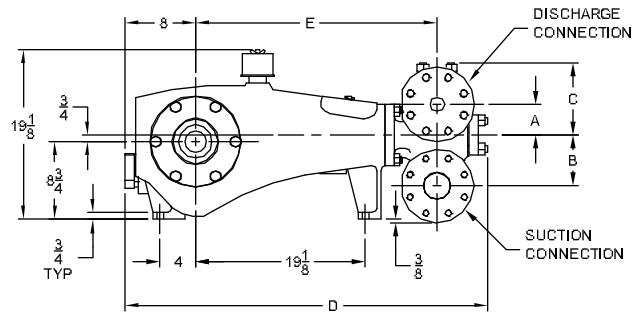
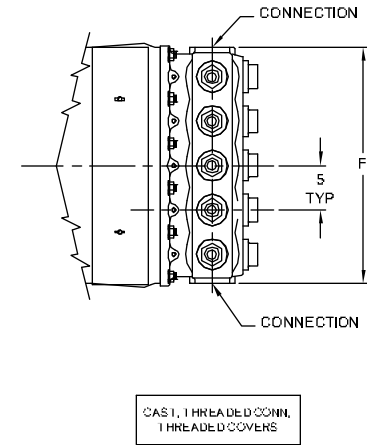
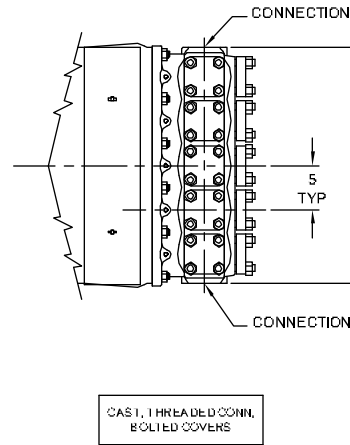
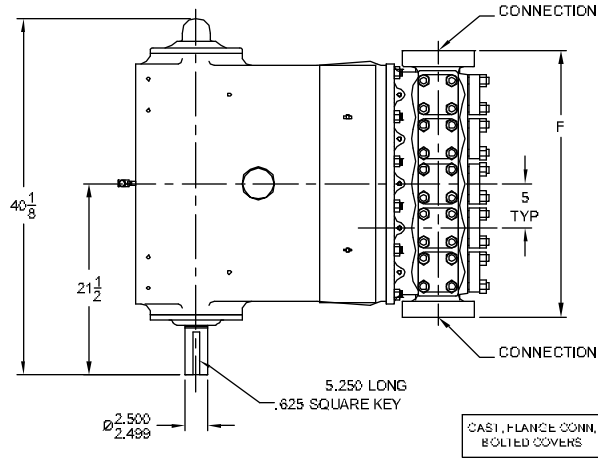
TITLE:  
**GENERAL DIMENSION, RHD  
 "L" CLASS FLUID END  
 103Q-3L (Q3115L, Q3115AL)**

DWG No.: <b>118165</b>	SCALE: <b>NONE</b>	REV <b>A</b>	SHT.: <b>1</b> OF <b>1</b>
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PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
CAST, FLANGE CONN, BOLTED COVERS	3 7/16	5 3/4	8 1/8	40 13/16	27 3/16	30
CAST, THREADED CONN, BOLTED COVERS	3 7/16	5 3/4	8 1/8	40 13/16	27 3/16	26 5/8
CAST, THREADED CONN, THREADED COVERS	3 7/16	5 3/4	7 3/4	40 5/8	27 3/16	26 5/8

### FIELD CONNECTIONS

PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
103Q-3M CAST, FLANGE CONNECTIONS, BOLTED COVERS	2" (50.8) CL 1500# ANSI	3" (76.2) CL 300# ANSI
103Q-3M CAST, THREADED CONN, BOLTED COVERS	2" (50.8) - 11.5 NPT	3" (76.2) - 8 NPT
103Q-3M CAST, THREADED CONN, THREADED COVERS	2" (50.8) - 11.5 NPT	3" (76.2) - 8 NPT



PUMP FOOTPRINT

**NOV NATIONAL OILWELL VARCO**

HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

GENERAL DIMENSION, RHD  
"M" CLASS FLUID END  
103Q-3M (Q3115M, Q3115AM)

DWG No.:

118166

SCALE:

NONE

REV

A

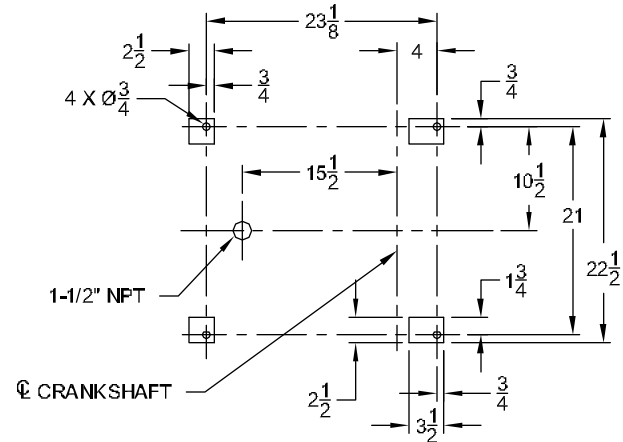
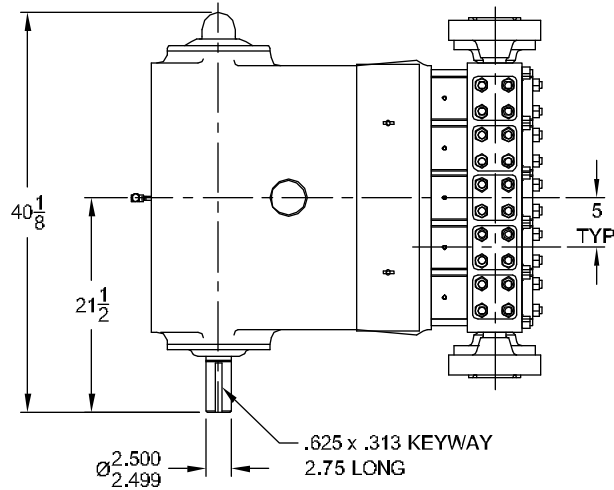
SHT.:

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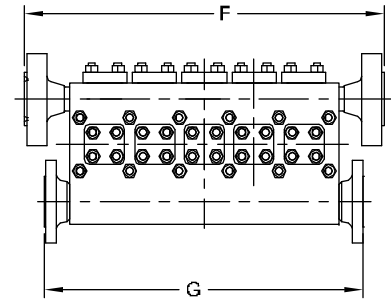
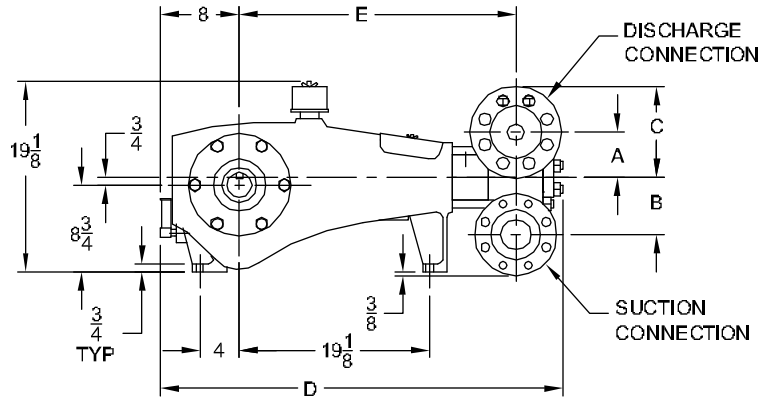
OF 1

### FIELD CONNECTIONS

PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
103Q-3M FORGED, FLANGE CONN, BOLTED COVERS	2" (50.8) 2500# ANSIRTJ	3" (76.2) 300# ANSIRF



PUMP FOOTPRINT



PUMP TYPE	DIMENSIONS IN INCHES						
	A	B	C	D	E	F	G
FORGED, WELDED FLANGE CONN, BOLTED COVERS	4-9/16	5-3/4	9-3/16	40-1/2	27-3/4	36-1/4	32



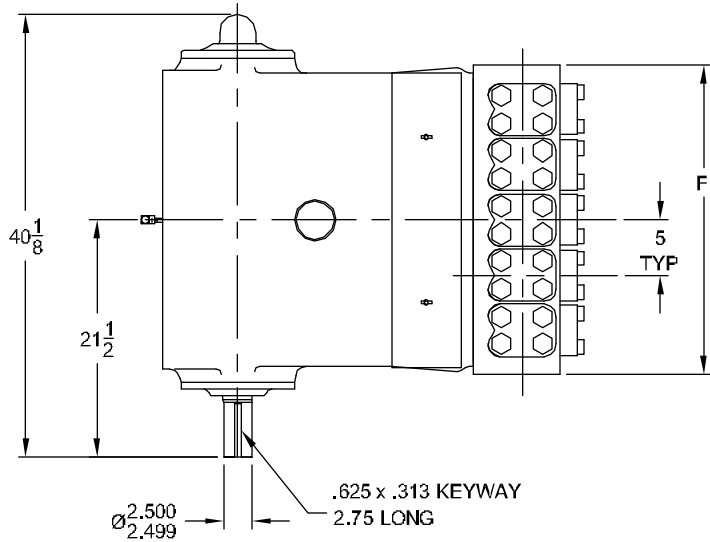
HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE: GENERAL DIMENSION, RHD  
103Q-3MSC (Q150-2)

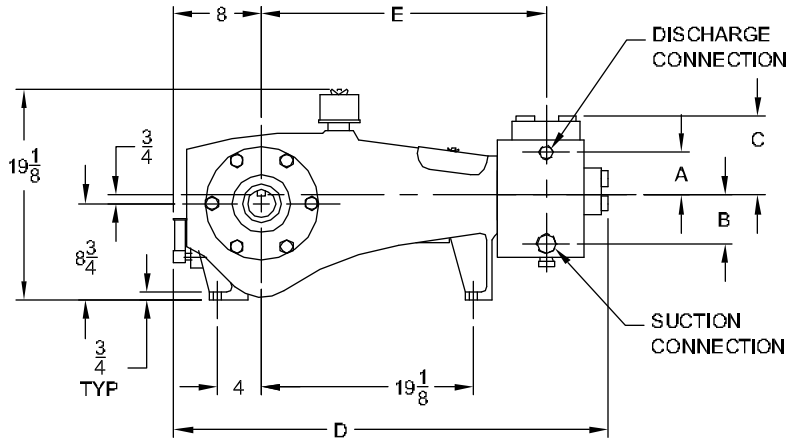
DWG No.: 118167 SCALE: NONE REV: A SHT.: 1 OF 1

# FIELD CONNECTIONS

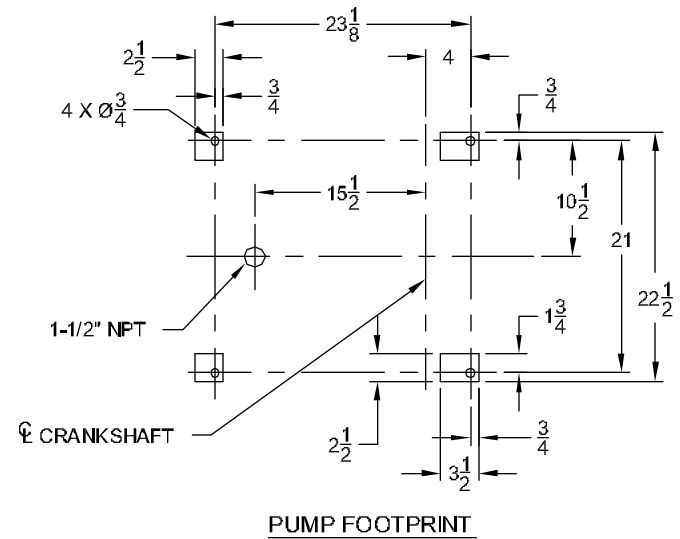
PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
103Q-3H FORGED STEEL, BOLTED COVERS	1" (25.4) 11-1/2 NPT	1-1/2" (38.1) 11-1/2 NPT



FORGED STEEL,  
BOLTED COVERS



PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
FORGED STEEL, BOLTED COVERS	3 7/8	4 3/8	7 3/8	39 3/8	25 3/4	28



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

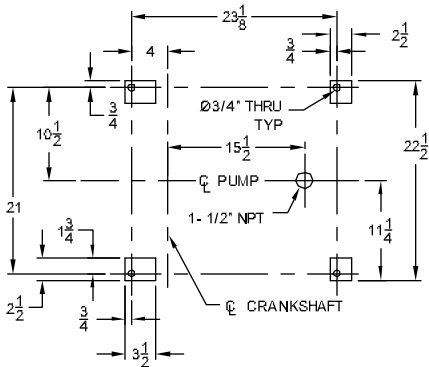
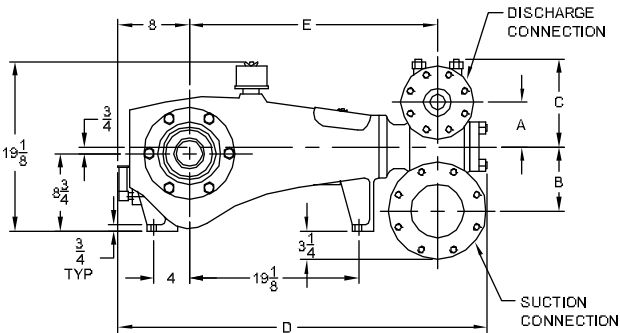
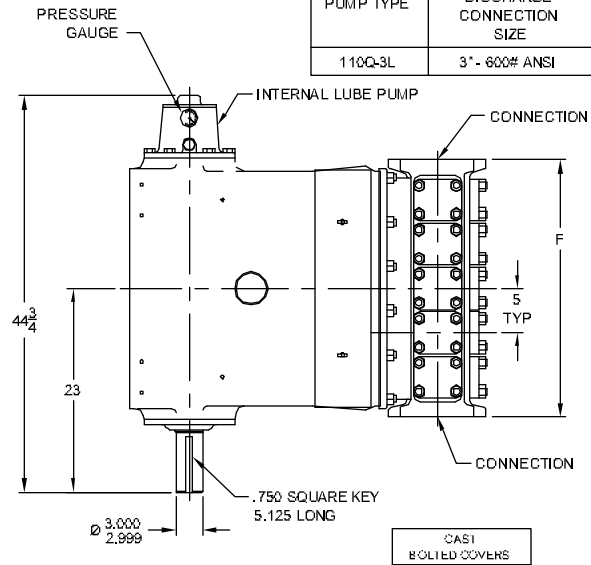
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"H" CLASS FLUID END  
103Q-3H (Q3115H)

DWG No.: 118168	SCALE: NONE	REV A	SH1.: 1 OF 1
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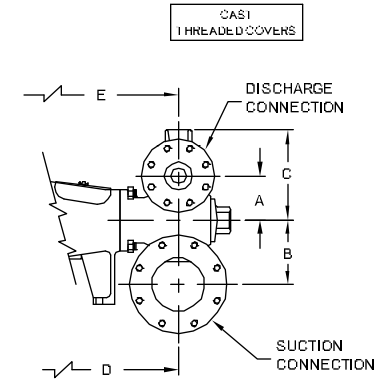
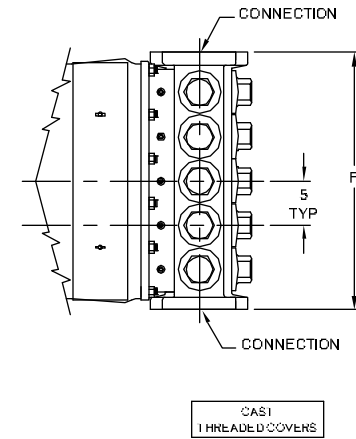
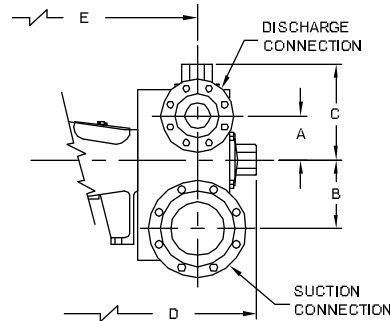
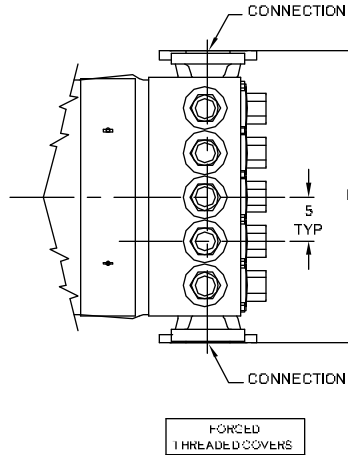


### FIELD CONNECTIONS

PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
110Q-3L	3" - 600# ANSI	6" - 150# ANSI



PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
CAST, BOLTED COVERS	5	7 1/4	9 7/8	41 5/8	28	29
FORGED THREADED, COVERS	5	7 3/4	10 7/8	42 5/8	28 1/16	33
CAST, THREADED COVERS	5	7 1/4	10 1/4	42	28	29



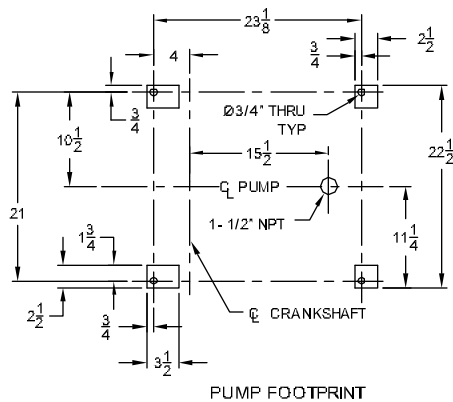
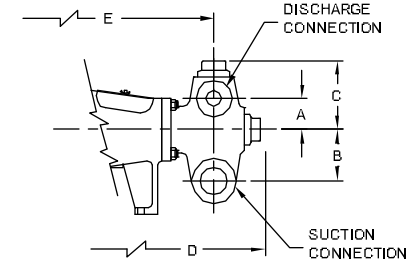
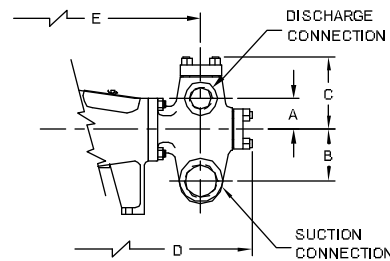
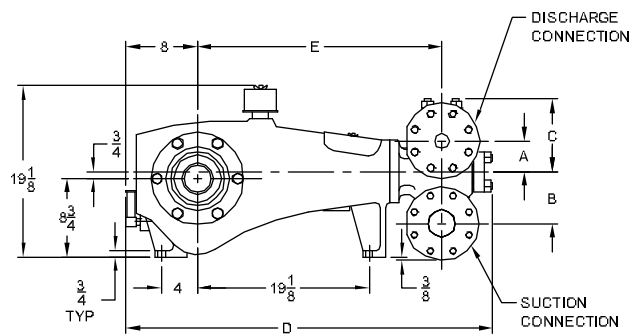
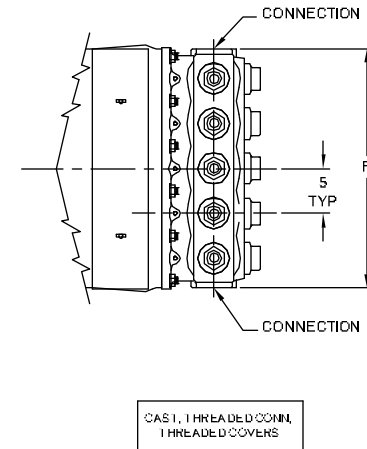
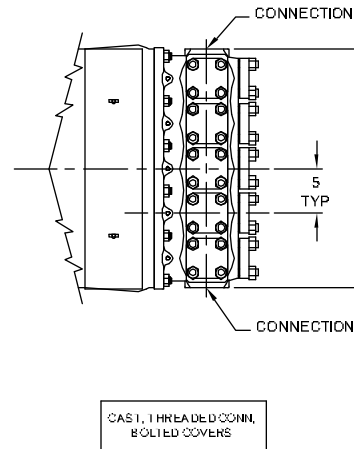
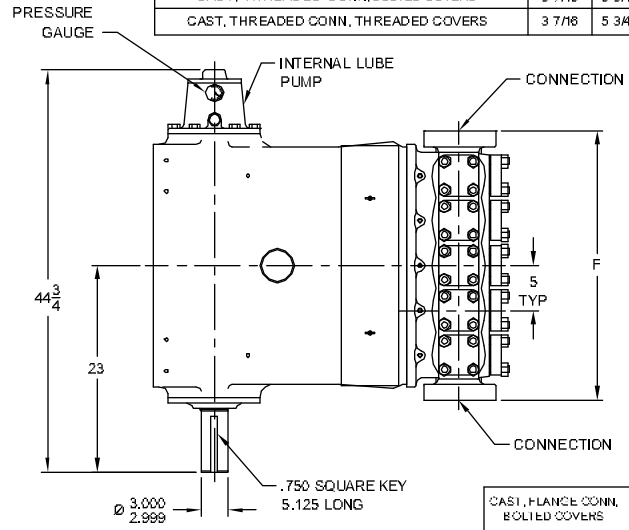
**NOV NATIONAL OILWELL VARCO**  
 HOUSTON, TEXAS, U.S.A. ENGINEERING, TULSA, OKLAHOMA

TITLE: GENERAL DIMENSION, RHD  
 "L" CLASS FLUID END  
 110Q-3L (HP125L, HP125AL)

DWG No.: 118169    SCALE: NONE    REV: A    SH1: 1 OF 1

PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
CAST, FLANGE CONN, BOLTED COVERS	3 7/16	5 3/4	8 1/8	40 13/16	27 3/16	30
CAST, THREADED CONN, BOLTED COVERS	3 7/16	5 3/4	8 1/8	40 13/16	27 3/16	28 5/8
CAST, THREADED CONN, THREADED COVERS	3 7/16	5 3/4	7 5/8	40 5/8	27 3/16	28 5/8

PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
110Q-3M CAST, FLANGE CONNECTIONS, BOLTED COVERS	2" (50.8) CL 1500# ANSI	3" (76.2) CL 300# ANSI
110Q-3M CAST, THREADED CONN, BOLTED COVERS	2" (50.8) - 11.5 NPT	3" (76.2) - 8 NPT
110Q-3M CAST, THREADED CONN, THREADED COVERS	2" (50.8) - 11.5 NPT	3" (76.2) - 8 NPT



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

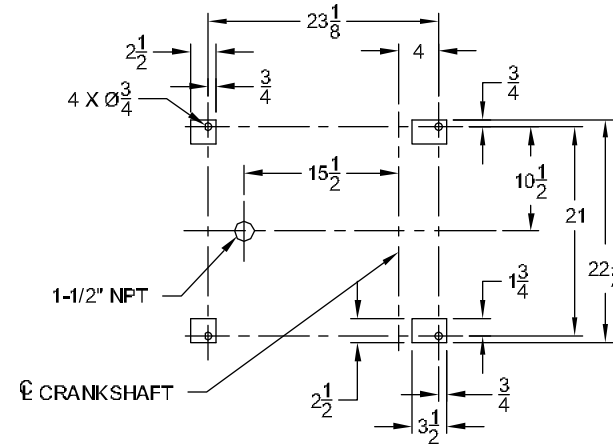
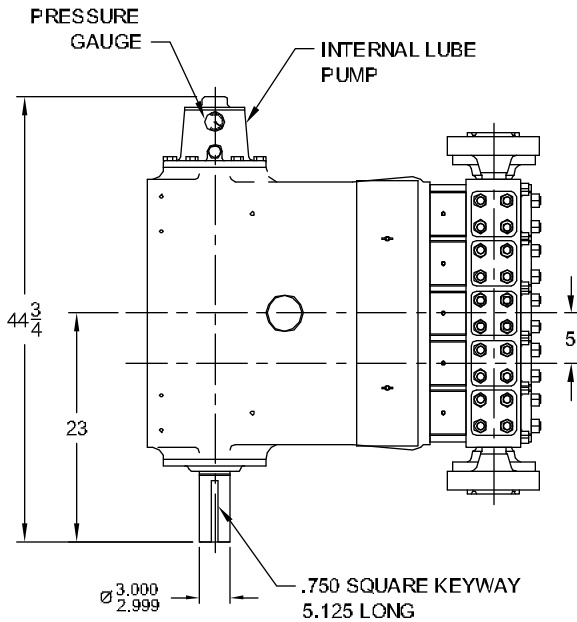
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**GENERAL DIMENSION, RHD  
 "M" CLASS FLUID END  
 110Q-3M (HP125M, HP125AM)**

DWG No.: **118170** SCALE: **NONE** REV **A** SHT.: **1** OF **1**

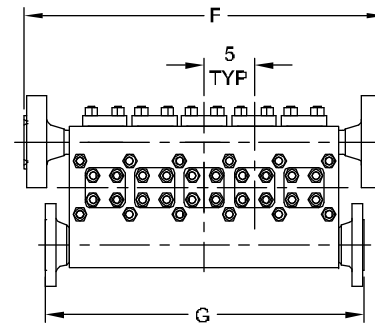
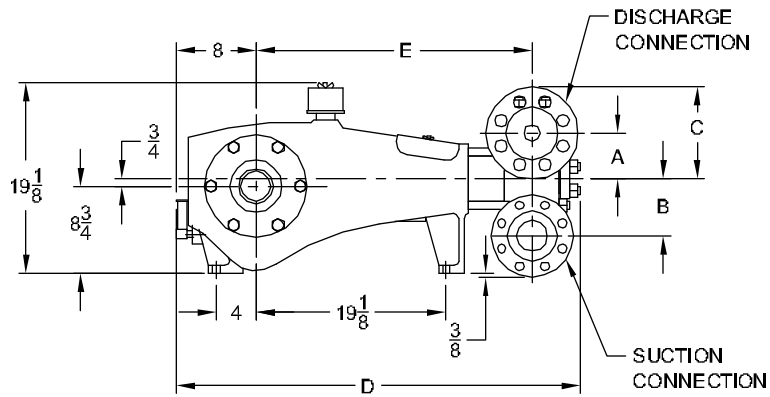
### FIELD CONNECTIONS

DIMENSIONS IN INCHES (MM)

PUMP TYPE	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
110Q-3M FORGED, FLANGE CONN, BOLTED COVERS	2" (50.8) 2500# ANSIRTJ	3" (76.2) 300# ANSIRF



PUMP FOOTPRINT



PUMP TYPE	DIMENSIONS IN INCHES						
	A	B	C	D	E	F	G
FORGED, WELDED FLANGE CONN, BOLTED COVERS	4-9/16	5-3/4	9-3/16	40-9/16	27-3/4	36-1/4	32



HOUSTON, TEXAS, U.S.A.

ENGINEERING, TULSA, OKLAHOMA

TITLE:

GENERAL DIMENSION, RHD  
110Q-3MSC

DWG No.: 118171

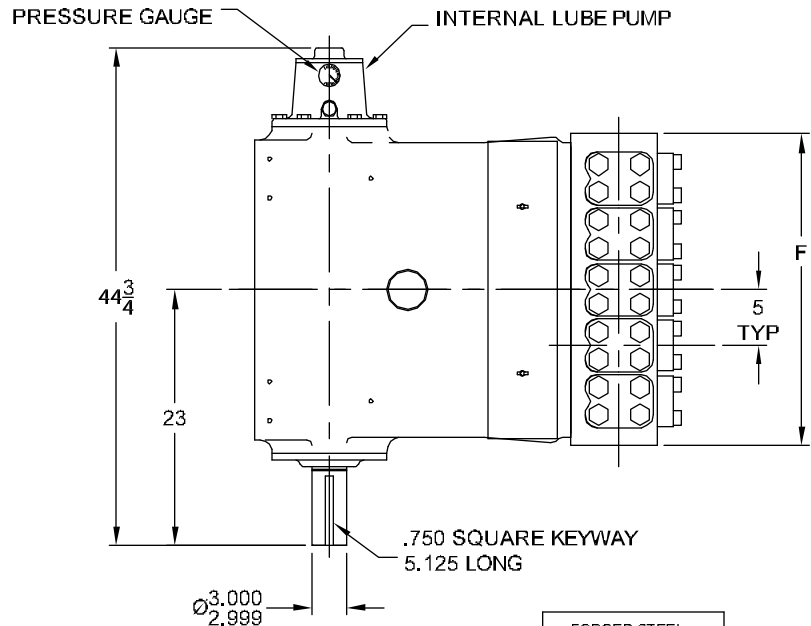
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REV A

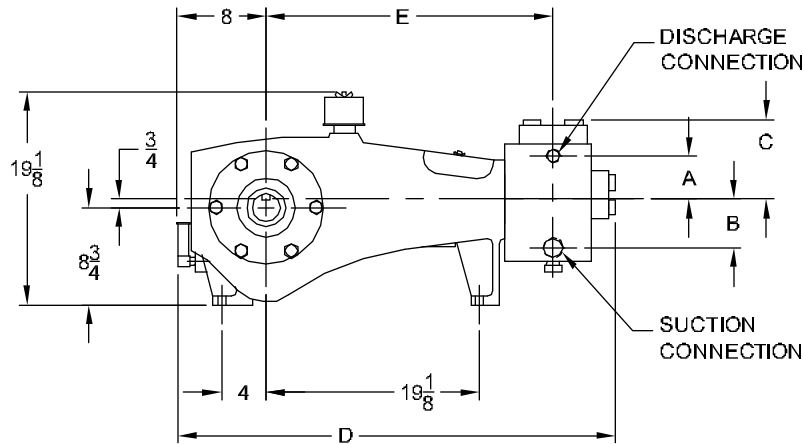
SHT.: 1 OF 1

# FIELD CONNECTIONS

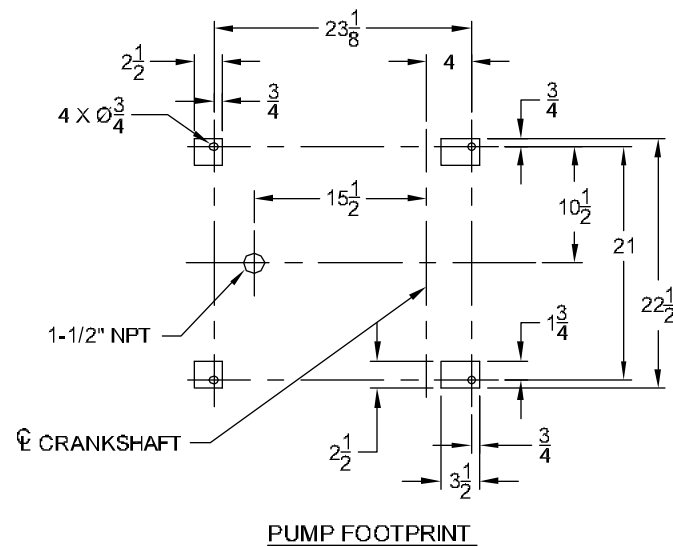
PUMP TYPE	DIMENSIONS IN INCHES (MM)	
	DISCHARGE CONNECTION SIZE	SUCTION CONNECTION SIZE
110Q-3H FORGED STEEL, BOLTED COVERS	1" (25.4) 11-1/2 NPT	1-1/2" (38.1) 11-1/2 NPT



FORGED STEEL,  
BOLTED COVERS



PUMP TYPE	DIMENSIONS IN INCHES					
	A	B	C	D	E	F
FORGED STEEL, BOLTED COVERS	3 7/8	4 3/8	7 3/8	39 3/8	25 3/4	28



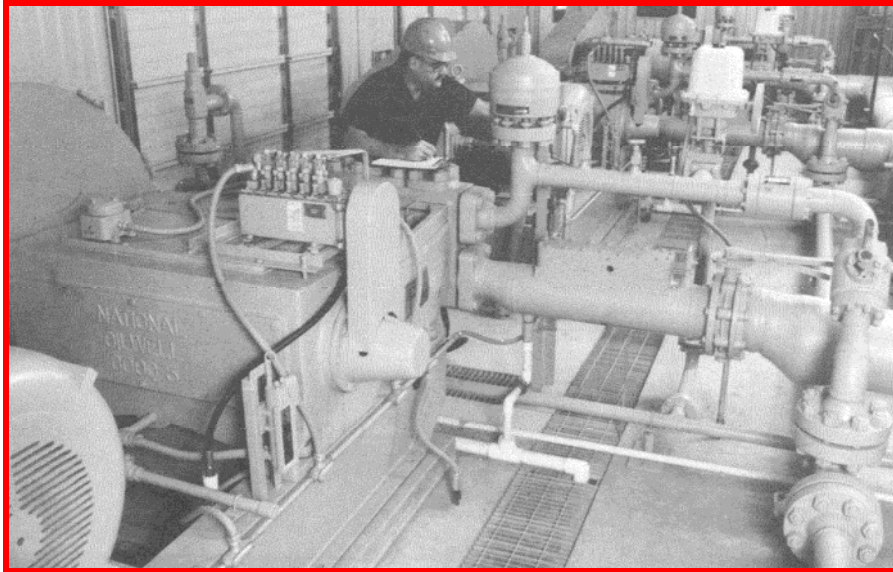
**NOV NATIONAL OILWELL VARCO**

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

TITLE:  
GENERAL DIMENSION, RHD  
"H" CLASS FLUID END  
110Q-3H (HP125H)

DWG No.: 118172	SCALE: NONE	REV A	SHT.: 1 OF 1
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