



**NATIONAL OILWELL**

# **PARTS LIST**

## **A1700-PT TRIPLEX MUD PUMP**

**NATIONAL-OILWELL  
P.O. BOX 4638  
HOUSTON, TEXAS 77210-4638**

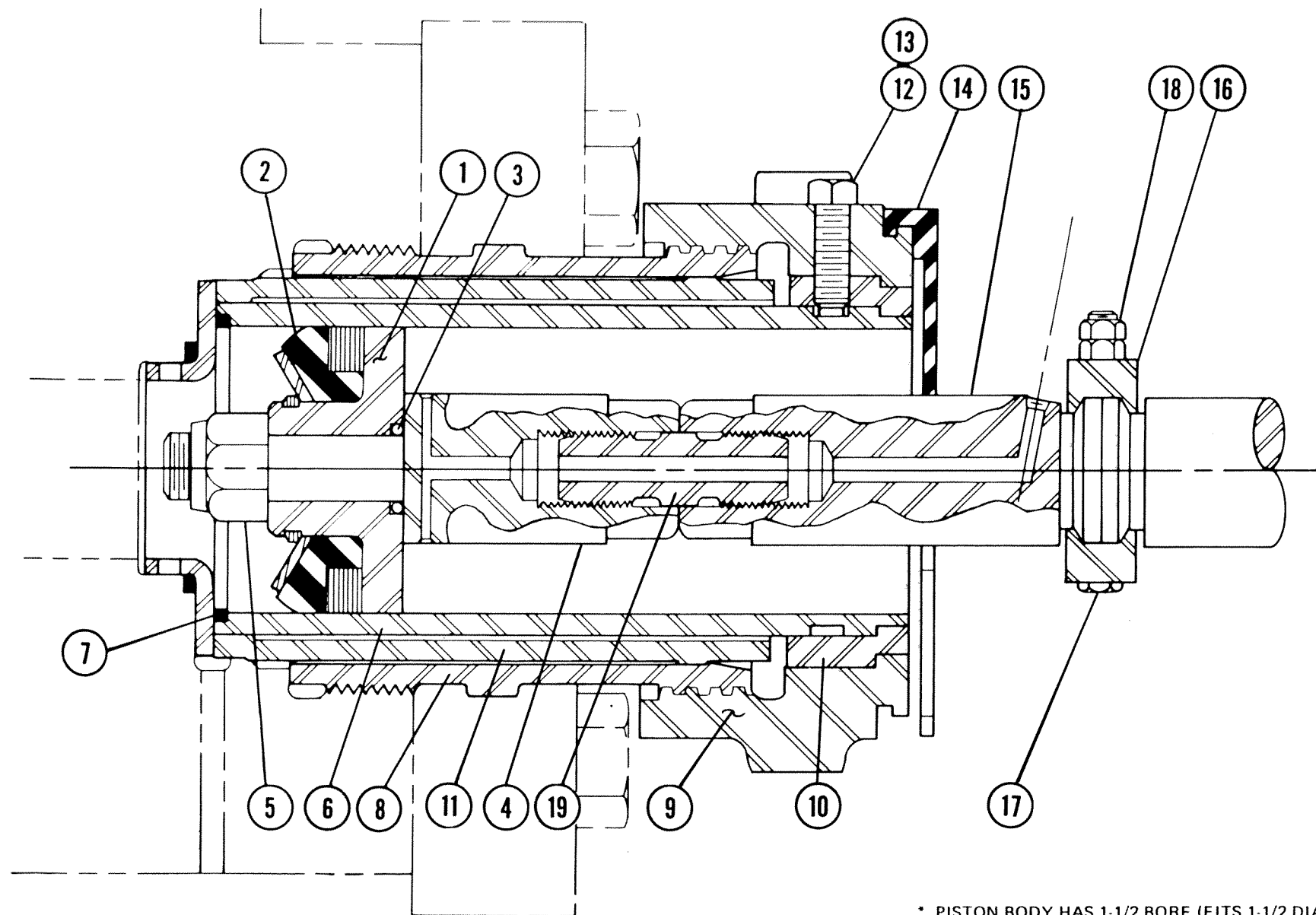
As used herein, any references to OILWELL  
shall be deemed to mean NATIONAL-OILWELL

**PARTS LIST  
INDEX AND CHECK LIST**

A1700-PT  
TRIPLEX PISTON PUMP

PAGE	DRAWING NUMBER	DESCRIPTION	SERIES OF ISSUE	DATE OF ISSUE
1	P184-BE1	FLUID END	FOURTH	11-15-89
2	P403-AS1	LINER & PISTON ASSEMBLY	FIRST	11-15-89
3	P184-BM1	STRAINER BLOCK ASSEMBLY	FIRST	11-15-89
4	P184-BH1	POWER END	FOURTH	11-15-89
5	P184-AV1	SHAFT ASSEMBLIES	FOURTH	11-15-89
6	P185-AC1	JACKSHAFT ASSEMBLY	THIRD	11-15-89
7	P184-BK1	INTERNAL LUBRICATION SYSTEM	FOURTH	11-15-89
8	P403-AN1	EXTERNAL LUBRICATION SYSTEM (ELECTRICAL)	FOURTH	11-15-89
9	P185-AS1	EXTERNAL LUBRICATION SYSTEM (MECHANICAL)	FIRST	11-15-89
10	P185-AK1	OIL LEVEL ASSEMBLY	FOURTH	11-15-89
11	P185-AN1	LINER FLUSHING SYSTEM	FOURTH	11-15-89
12	P403-AH1	CHARGING PUMP	SECOND	11-15-89
13	P184-D2	OUTLINE DRAWING	FOURTH	11-15-89



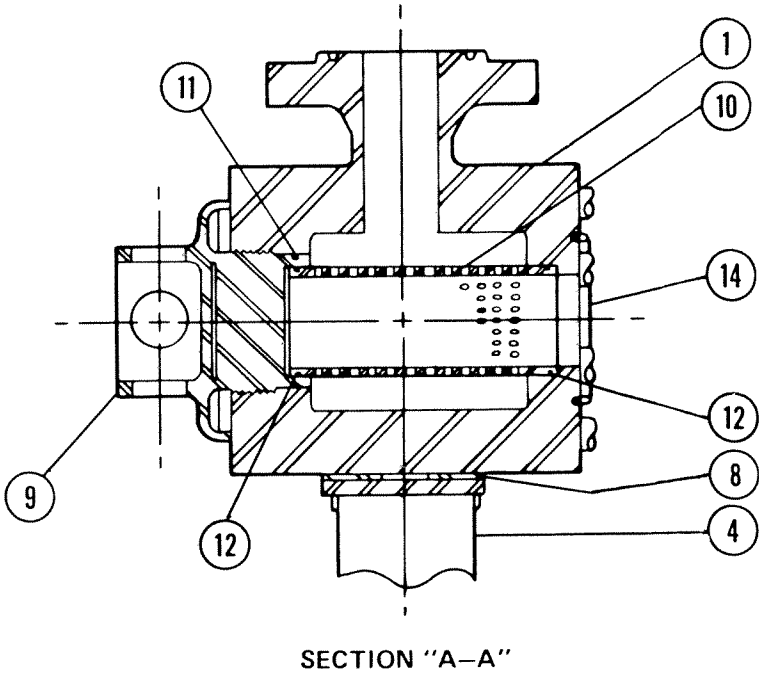
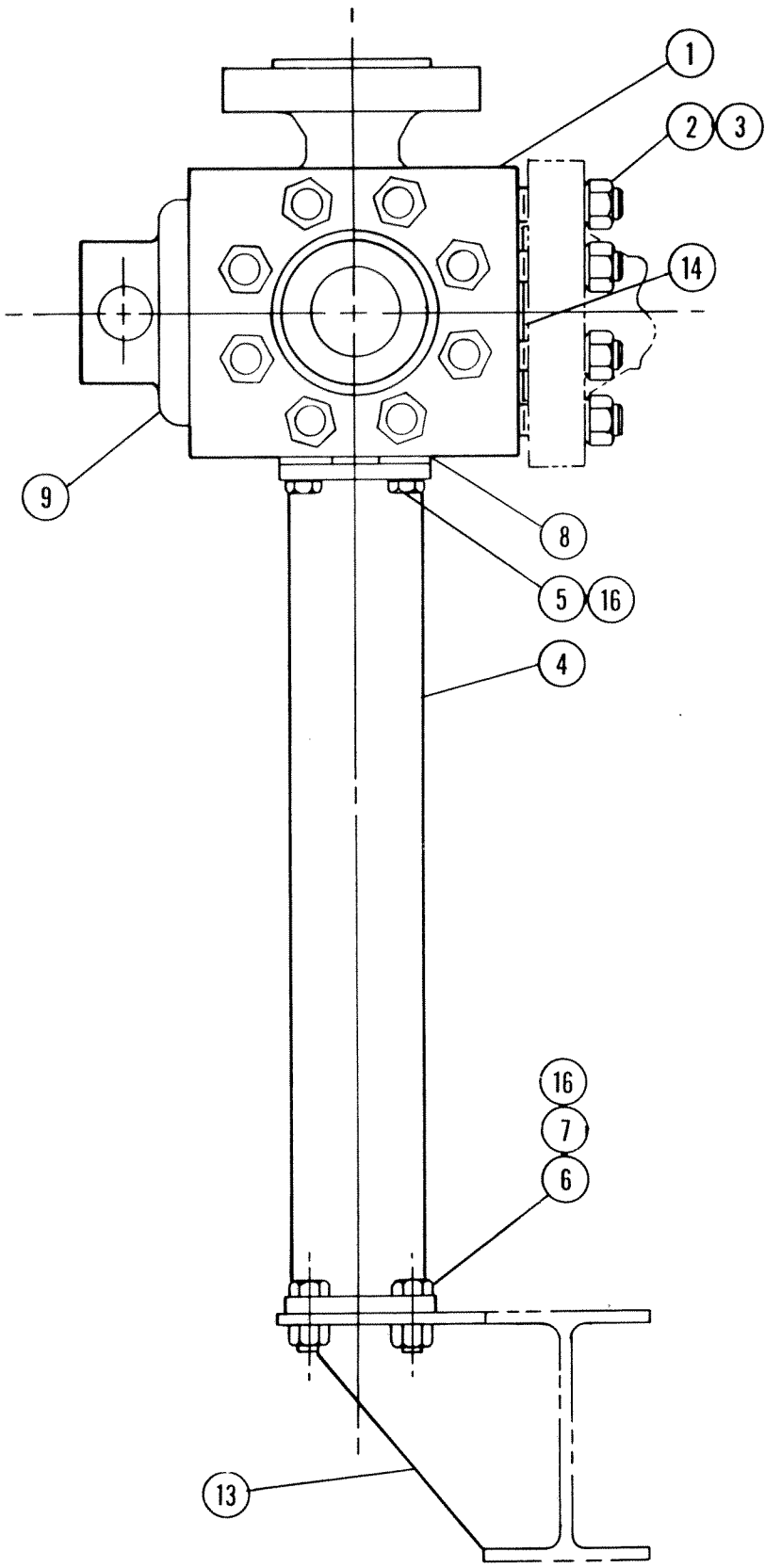
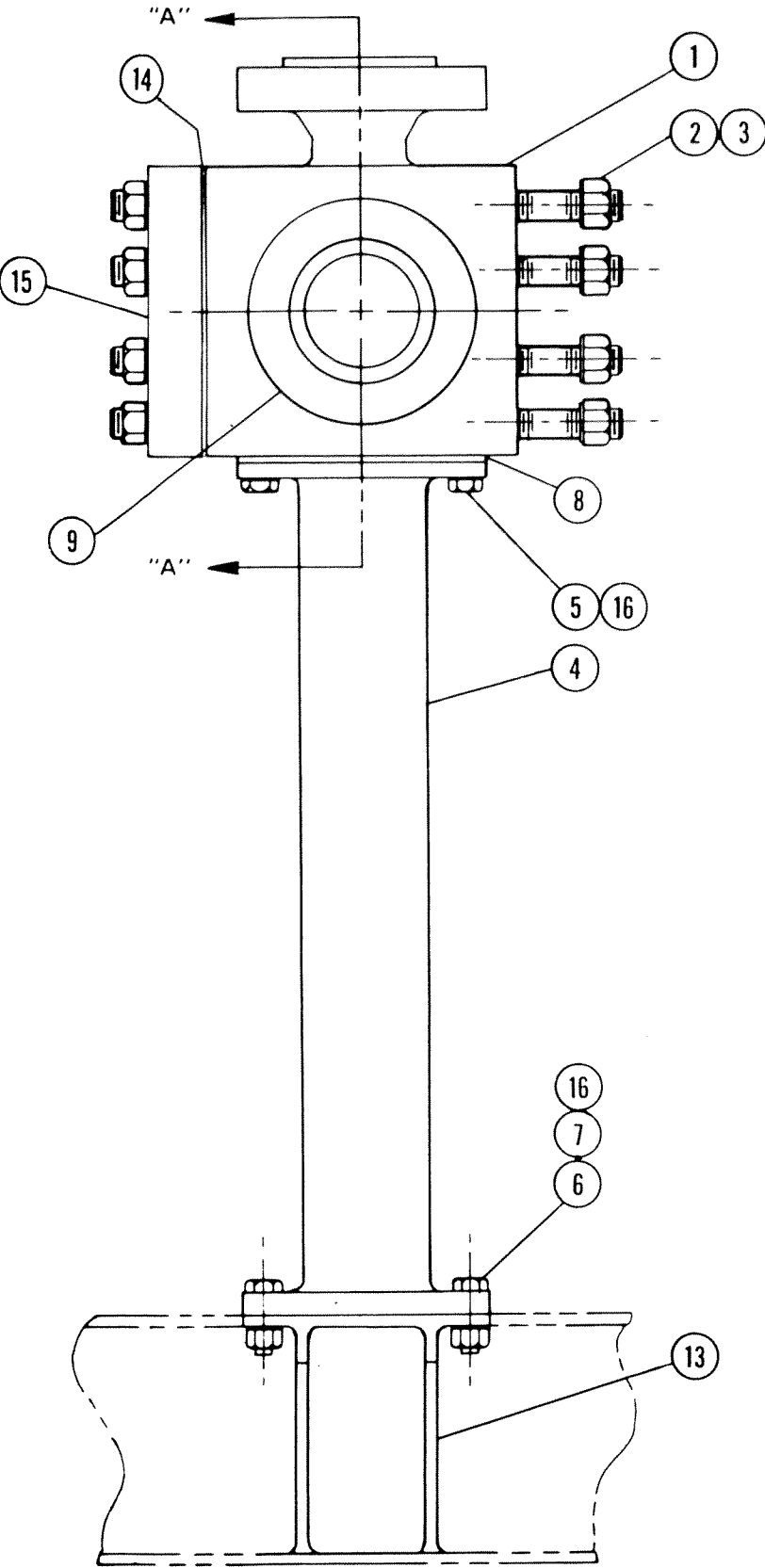


- \* PISTON BODY HAS 1-1/2 BORE (FITS 1-1/2 DIAMETER ROD).
- \*\* PISTON RUBBERS ARE PACKAGED IN "PAIRS". A PAIR OF PISTON RUBBERS CONSISTS OF TWO EACH, PISTON RUBBERS, PLATES AND SNAP RINGS. ONE PAIR OF RUBBERS WILL DRESS TWO SINGLE ACTING PISTONS.
- † "O"-RINGS ARE PACKAGED SIX PIECES PER PACKAGE AND ARE IDENTIFIED AS COMMODITY NUMBER 20-680-020.
- †† NOT USED WITH 6-1/2 AND LARGER DIAMETER LINERS AND PISTONS.

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1*	3	20-020-502	5" (SERIES "B") PISTON COMPLETE*
	3	20-020-503	5-1/2 (SERIES "B") PISTON COMPLETE*
	3	20-020-504	5-3/4 (SERIES "B") PISTON COMPLETE*
	3	20-020-505	6" (SERIES "B") PISTON COMPLETE*
	3	20-020-507	6-1/2 (SERIES "L") PISTON COMPLETE*
	3	20-020-508	6-3/4 (SERIES "L") PISTON COMPLETE*
	3	20-020-509	7" (SERIES "L") PISTON COMPLETE*
	3	20-020-510	7-1/4 (SERIES "L") PISTON COMPLETE*
	3	20-020-511	7-1/2 (SERIES "L") PISTON COMPLETE*
	3	20-020-512	7-3/4 (SERIES "L") PISTON COMPLETE*
2**	3	20-040-005	5" PISTON RUBBER **
	3	20-040-009	5-1/2 PISTON RUBBER **
	3	20-040-011	5-3/4 PISTON RUBBER **
	3	20-040-013	6" PISTON RUBBER **
	3	20-040-037	6-1/2 PISTON RUBBER **
	3	20-040-039	6-3/4 PISTON RUBBER **
	3	20-040-041	7" PISTON RUBBER **
	3	20-040-043	7-1/4 PISTON RUBBER **
	3	20-040-045	7-1/2 PISTON RUBBER **
	3	20-040-047	7-3/4 PISTON RUBBER **
3†	3	99-607-325	"O"-RING (1-1/2 X 17/8 X 3/16) †
4	3	20-150-123	PISTON ROD (INCLS ITEM 19)
5	3	20-150-142	NUT, PISTON RETAINING
6	3	07-326-500	5" SUPER DI-HARD LINER
	3	07-326-550	5-1/2 SUPER DI-HARD LINER
	3	07-326-575	5-3/4 SUPER DI-HARD LINER
	3	07-326-600	6" SUPER DI-HARD LINER
	3	07-326-651	6-1/2 SUPER DI-HARD LINER
	3	07-326-675	6-3/4 SUPER DI-HARD LINER
	3	07-326-700	7" SUPER DI-HARD LINER
	3	07-326-725	7-1/4 SUPER DI-HARD LINER
	3	07-326-750	7-1/2 SUPER DI-HARD LINER
	3	07-326-775	7-3/4 SUPER DI-HARD LINER
7	3	20-100-008	5" LINER GASKET
	3	20-100-009	5-1/2 LINER GASKET
	3	20-100-010	5-3/4 LINER GASKET
	3	20-100-011	6" LINER GASKET
	3	20-100-012	6-1/2 LINER GASKET
	3	20-100-016	6-3/4 LINER GASKET
	3	20-100-017	7" LINER GASKET
	3	20-100-018	7-1/4 LINER GASKET
	3	20-100-019	7-1/2 LINER GASKET
	3	20-100-020	7-3/4 LINER GASKET
8	3	10-300-183	ADAPTER, LINER
9	3	10-300-182	NUT, LINER ADAPTER
10††	3	10-300-185	RING, SPACER ††
11††	3	10-300-186	RING, SPACER ††
12	9	75-632-758	3/4-10 X 1-3/4 SETSCREW
13††	9	75-632-760	3/4-10 X 2-1/2 SETSCREW ††
14	3	20-460-668	SHIELD, LINER FLUSHING
15	3	20-150-125	ROD, EXTENSION
16	3	20-150-132	CLAMP COMPLETE (INCLS ITEMS 17 & 18)
17	6	75-074-694	5/8-11 X 6" HEX HD CAD PLTD BOLT
18	12	75-510-438	5/8-11 S.S. HEX NUT
19	3	10-305-203	STUD, PISTON ROD

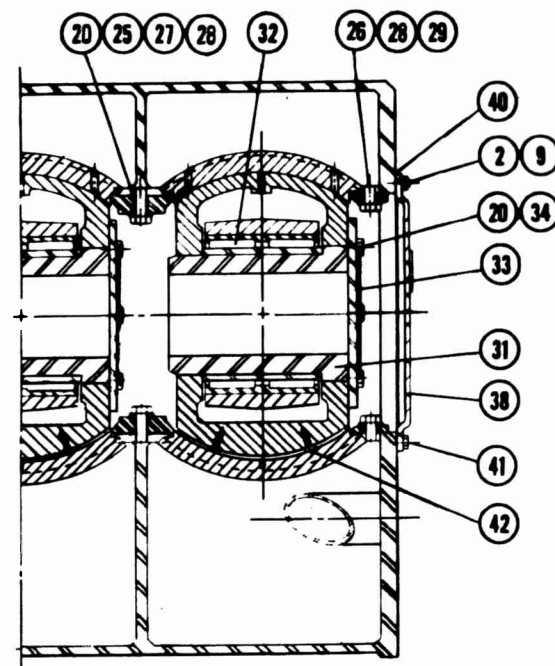
ISSUE DATE: 11-15-89		
NATIONAL - OILWELL		
LINER & PISTON ASSEMBLY A1700-PT TRIPLEX PISTON PUMP		
	DRAWING NO.	SIZE
	P403-AS1	D

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-307-005	BLOCK, STRAINER (INCL. ITEMS 2 & 3)
2	24	45-810-062	1-1/2 -8 X 6-1/2 STUD
3	24	75-510-323	1-1/2-8 HEAVY STL. HEX NUT
4	1	06-511-998	SUPPORT, STRAINER BLOCK
5	4	75-635-091	1"-8 X 2" HEX HD HT CAPSCREW
6	4	75-634-408	1"-8 X 3" HEX HD HT CAPSCREW
7	4	75-510-316	1"-8 HEAVY STL. HEX NUT
8	6	10-307-064	SHIM SET ( 2 REQ'D ) CONSISTS OF THE FOLLOWING
	2	10-307-065	
		10-307-066	
9	1	10-307-009	COVER, STRAINER
10	1	10-307-010	STRAINER, DISCHARGE
11	1	99-609-258	"O"-RING ( 6 X 6-1/4 X 1/8 )
12	2	99-609-249	"O"-RING ( 4-7/8 X 5-1/8 X 3/8 )
13	1	06-512-130	BRACKET, STRAINER SUPPORT
14	2	78-206-544	R-44 OVAL RING GASKET
15	1	98-032-122	5" API 5000# R.T.J. BLIND FLANGE
16	8	75-770-478	1" EXTERNAL SHAKEPROOF LOCKWASHER

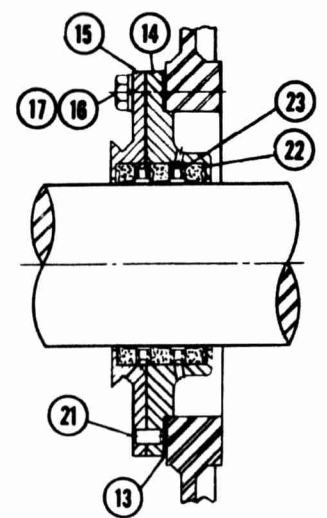


DRAWING IS APPLICABLE TO A1400-PT AND A1700-PT  
TRIPLEX PISTON PUMPS WITH THE STANDARD TWO  
RUNNER PUMP BASE.

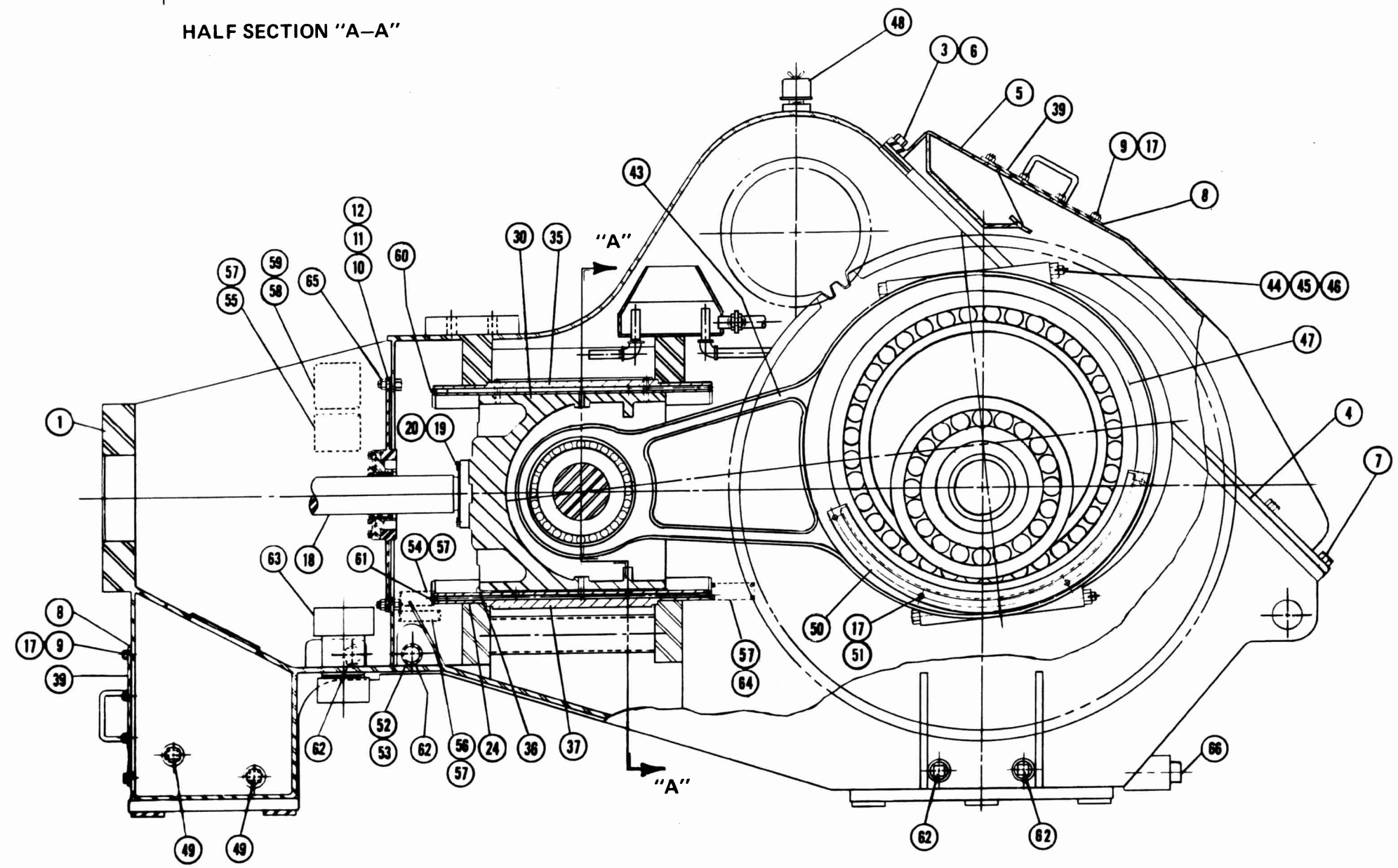
ISSUE DATE: 11-15-89		
NATIONAL - OILWELL		
STRAINER BLOCK ASSEMBLY A1700-PT TRIPLEX PISTON PUMP		
DRAWING NO.	SIZE	
P184-BM1	D	



HALF SECTION "A-A"



DIAPHRAGM ASSEMBLY



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-300-259	FRAME END, STUDDED (INCL. ITEMS 2 & 3)
2	4	29-000-777	1/2-13 X 1-3/4 STUD
3	3	29-000-700	3/4-10 X 2-1/2 STUD
4	1	10-300-272	GASKET, CRANKCASE COVER
5	1	10-300-274	COVER, CRANKCASE
6	3	75-510-410	3/4-10 HEAVY STL. HEX NUT
7	21	75-634-373	3/4-10 X 1-1/2 HEX HD HT CAPSCREW
8	3	08-506-869	GASKET, INSPECTION COVER
9	44	75-510-406	1/2-13 HEAVY STL. HEX NUT
10	1	10-300-065	GASKET, DIAPHRAGM SUPPORT (R.H.)
11	1	10-300-064	GASKET, DIAPHRAGM SUPPORT (L.H.)
12	1	10-300-066	GASKET, DIAPHRAGM SUPPORT (CENTER)
13	3	10-300-082	GASKET, DIAPHRAGM
14	3	10-300-020	DIAPHRAGM
15	3	10-300-021	CAP, DIAPHRAGM
16	18	75-634-352	1/2-13 X 1-1/2 HEX HD HT CAPSCREW
17	70	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
18	3	10-300-142	ROD, EXTENSION
19	12	45-142-703	3/4-10 X 1-3/4 DRLD HEX HD HT CAPSCREW
20		59-800-016	16 GA. ANNEALED STL WIRE
21	6	45-127-305	3/8 X 3/4 DOWEL PIN
22	9	20-100-015	ROD WIPERS
23	6	10-300-022	LANTERN RING
24		10-300-082	SHIM SET (12 REQ'D) CONSISTS OF THE FOLLOWING
	72	10-300-081	SHIM (.005" THK.)
25	8	10-300-230	CLAMP, CENTER CROSSHEAD GUIDE
26	8	10-300-100	CLAMP, SIDE CROSSHEAD GUIDE
27	8	45-142-800	7/8-9 X 3" DRLD HEX HD HT CAPSCREW
28	16	10-300-103	WASHER
29	8	45-142-603	7/8-9 X 2" DRLD HEX HD HT CAPSCREW
30	3	10-300-132	CROSSHEAD
31	3	10-300-131	PIN, CROSSHEAD
32	3	65-725-957	BEARING, CROSSHEAD PIN
33	3	10-300-054	PLATE, CROSSHEAD PIN RETAINING
34	18	45-142-701	3/4-10 X 1-1/2 DRLD HEX HD HT CAPSCREW
35	3	10-300-141	GUIDE, CROSSHEAD UPPER
36	3	10-300-232	SHOE, CROSSHEAD
37	3	10-300-233	GUIDE, CROSSHEAD LOWER
38	2	10-300-207	DOOR, A1700-PT FRAME
39	2	10-300-254	COVER, INSPECTION
40	2	10-300-061	GASKET, FRAME DOOR
41	28	75-634-351	1/2-13 X 1-1/4 HEX HD HT CAPSCREW
42	12	75-633-119	1/2-13 X 1-1/4 FLAT HD BRASS MACHINE SCREW
43	3	10-300-071	CONNECTING ROD (INCL. ITEMS 44 & 45)
44	6	10-300-155	BOLT, CONNECTING ROD
45	6	75-613-114	1"-8 HEAVY STL SLOTTED HEX NUT
46	6	75-104-007	3/16 X 2 STL COTTER
47	3	10-300-083	RETAINER, ECCENTRIC BEARING CONNECTING ROD
48	1	64-229-100	BREATHER
49	3	86-486-112	1-1/2 3000# F.S. SQ HD SOLID PIPE PLUG
50	3	10-300-123	TROUGH, CONNECTING ROD OIL
51	12	75-634-415	1/2-13 X 3/4 HEX HD HT CAPSCREW
52	1	86-429-001	2 X CLOSE SCH 40 BW STL PIPE NIPPLE
53	1	83-803-512	2 DRAIN COCK
54	1	10-300-203	PLATE, INSTRUCTION
55	1	10-300-240	PLATE, LUBRICATION INSTRUCTION
56	2	10-300-125	PLATE, MUD TRAP INSTRUCTION
57	24	75-632-012	No. 2 X 1/4 STL DRIVE SCREW
58	1	45-803-400	PLATE, NAME
59	4	75-632-022	No. 10 X 3/8 STL DRIVE SCREW
60	3	86-486-104	1/2 CI CORED SQ HD PIPE PLUG
61	3	78-558-103	3/8 CI SOLID SQ HD PIPE PLUG
62	6	86-486-116	2" CI SOLID SQ HD PIPE PLUG
63	1	10-300-258	COVER, OVERFLOW
64	1	10-300-317	PLATE, CAUTION
65	33	75-514-117	1/2-13 STL. LOCKNUT
66	1	86-486-120	2-1/2 CI SOLID SQ HD PIPE PLUG

4

ISSUE DATE: 11-15-89

NATIONAL - OILWELL

POWER END

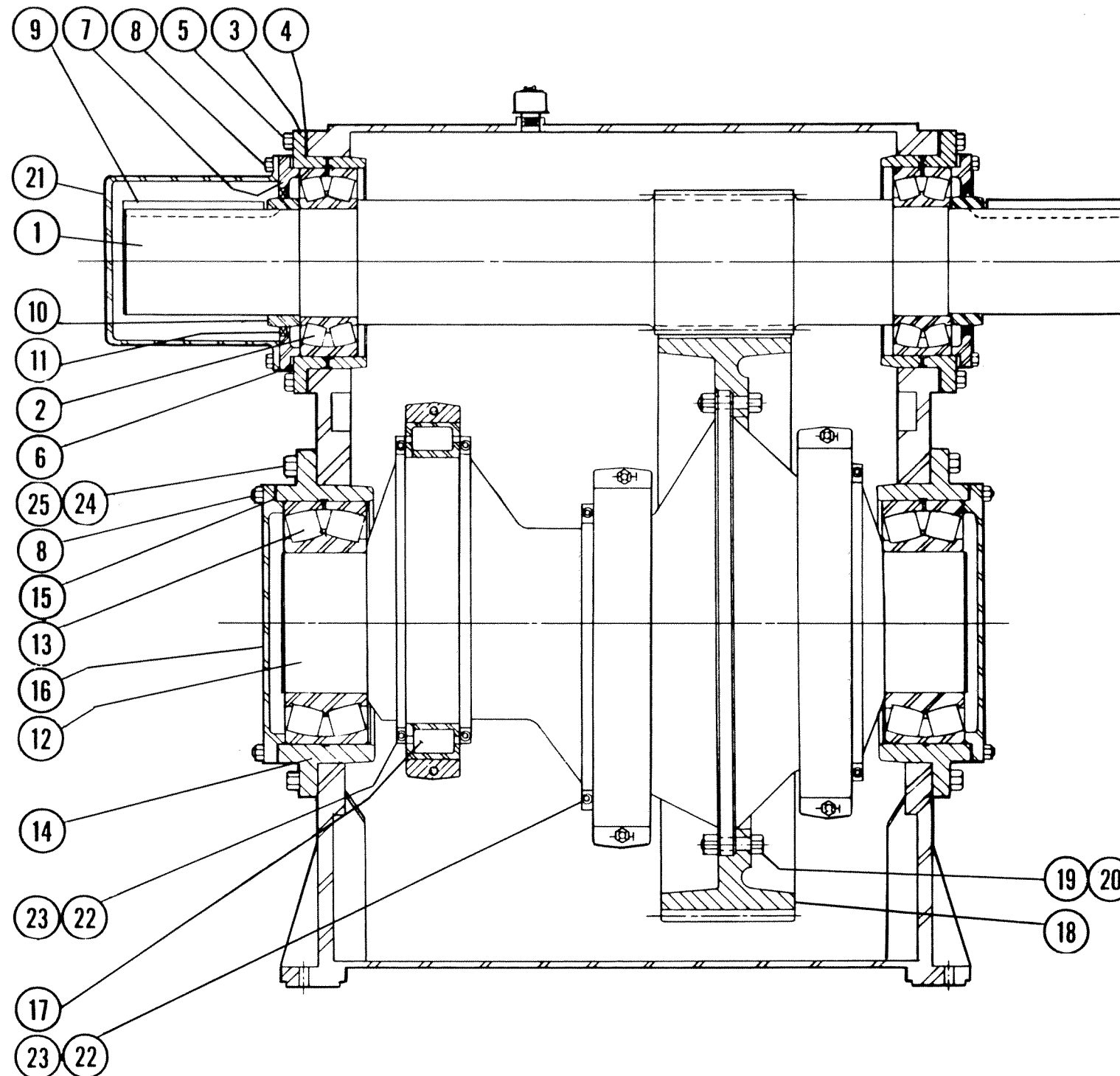
A1700-PT TRIPLEX PISTON PUMP

DRAWING NO.

P184-BH1

SIZE

D

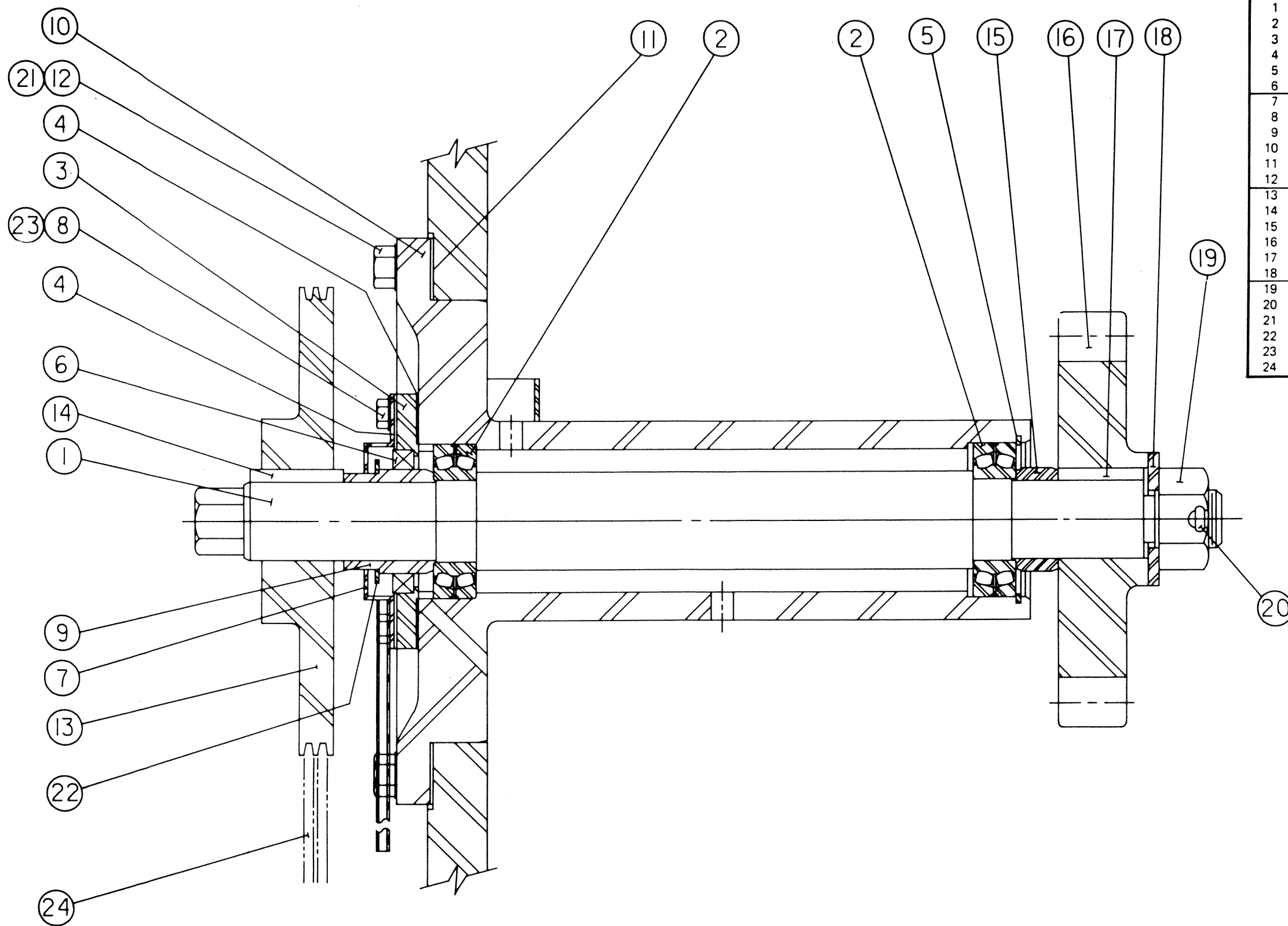


BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-301-004	SHAFT WITH INTEGRAL PINION ( 24 TEETH )
2	2	65-725-032	BEARING, PINION SHAFT
3	2	10-306-027	HOUSING, PINION SHAFT BEARING
4	2	45-803-730	GASKET, BEARING HOUSING
5	16	75-634-402	7/8-9 X 2-1/2 HEX HEAD HT CAPSCREW
6	5	45-803-732	SHIM SET ( 2 REQ'D ) CONSISTS OF THE FOLLOWING
	4	45-803-733	SHIM ( .005" THICK )
	1	45-803-734	SHIM ( .007" THICK )
	1	45-803-735	SHIM ( .020" THICK )
	1	45-803-736	SHIM ( 16 GAUGE )
7	2	10-300-027	RETAINER, BEARING
8	32	75-634-383	3/4-10 X 2-1/4 HEX HEAD HT CAPSCREW
9	2	10-300-088	KEY ( 1-3/4 X 2-1/2 X 13-1/2 )
10	2	10-300-028	SLEEVE, PINION SHAFT
11	2	68-631-025	OIL SEAL
12	1	10-300-154	CRANKSHAFT
13	2	65-725-034	BEARING, MAIN
14	2	10-300-024	HOUSING, MAIN BEARING
15	3	45-803-739	SHIM SET ( 2 REQ'D ) CONSISTS OF THE FOLLOWING
	4	45-803-740	SHIM ( .005" THICK )
	2	45-803-741	SHIM ( .007" THICK )
	2	45-803-742	SHIM ( .020" THICK )
	2	45-803-743	SHIM ( 16 GAUGE )
16	2	10-300-025	RETAINER, MAIN BEARING
17	3	65 725-936	BEARING, CRANKSHAFT
18	1	10-300-060	GEAR, CRANKSHAFT ( 108 TEETH )
19	8	75-634-409	1"-8 X 4" HEX HEAD HT CAPSCREW
20	8	75-514-120	1"-8 HEX STEEL LOCKNUT
21	1	10-301-012	COVER, PINION SHAFT EXTENSION
22	4	10-300-156	RING, RETAINING ( INCLUDES ITEM 23 )
23	8	75-632-445	1/2-13 X 2-1/4 SOCKET HEAD SELF-LOCKING CAPSCREW
24	24	10-300-246	1-1/4-8 X 6" STUD
25	24	75-510-121	1-1/4-8 HEAVY STEEL HEX NUT

GEAR REDUCTION RATIO: 4.5:1

ISSUE DATE: 11-15-89			
NATIONAL - OILWELL			
SHAFT ASSEMBLIES			
A1700-PT TRIPLEX PISTON PUMP			
DRAWING NO.	P184-AV1		SIZE
			C





BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-300-030	JACKSHAFT
2	2	65-725-031	BEARING, JACKSHAFT
3	1	10-300-032	RETAINER, JACKSHAFT BEARING
4	2	45-803-797	GASKET, RETAINER
5	1	75-660-073	RETAINING RING
6	1	68-630-235	OIL SEAL
7	1	10-300-098	CATCHER, OIL
8	4	75-634-352	1/2-13 X 1-1/2 HEX HD HT CAPSCREW
9	1	10-300-034	SPACER, BEARING
10	1	10-300-031	BRACKET, JACKSHAFT
11	1	45-803-729	GASKET, JACKSHAFT BRACKET
12	6	75-634-359	5/8-11 X 1-1/2 HEX HD HT CAPSCREW
13	1	68-097-451	10.6 O.D. 3-V TWO GROOVE DRIVE SHEAVE
14	1	45-802-800	KEY ( 1/2 X 1/2 X 2" )
15	1	10-300-033	SPACER, BEARING
16	1	10-300-068	PINION, JACKSHAFT
17	1	45-803-362	KEY (1/2 X 1/2 X 3/4 )
18	1	10-300-035	WASHER, JACKSHAFT
19	1	75-513-018	1-1/4 -7 SLOTTED HEX NUT
20	1	75-104-013	3/16 X 2-1/2 STL COTTER
21	6	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
22	1	10-300-099	SLINGER, OIL
23	4	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
24	2	68-028-560	3V-560 V-BELT

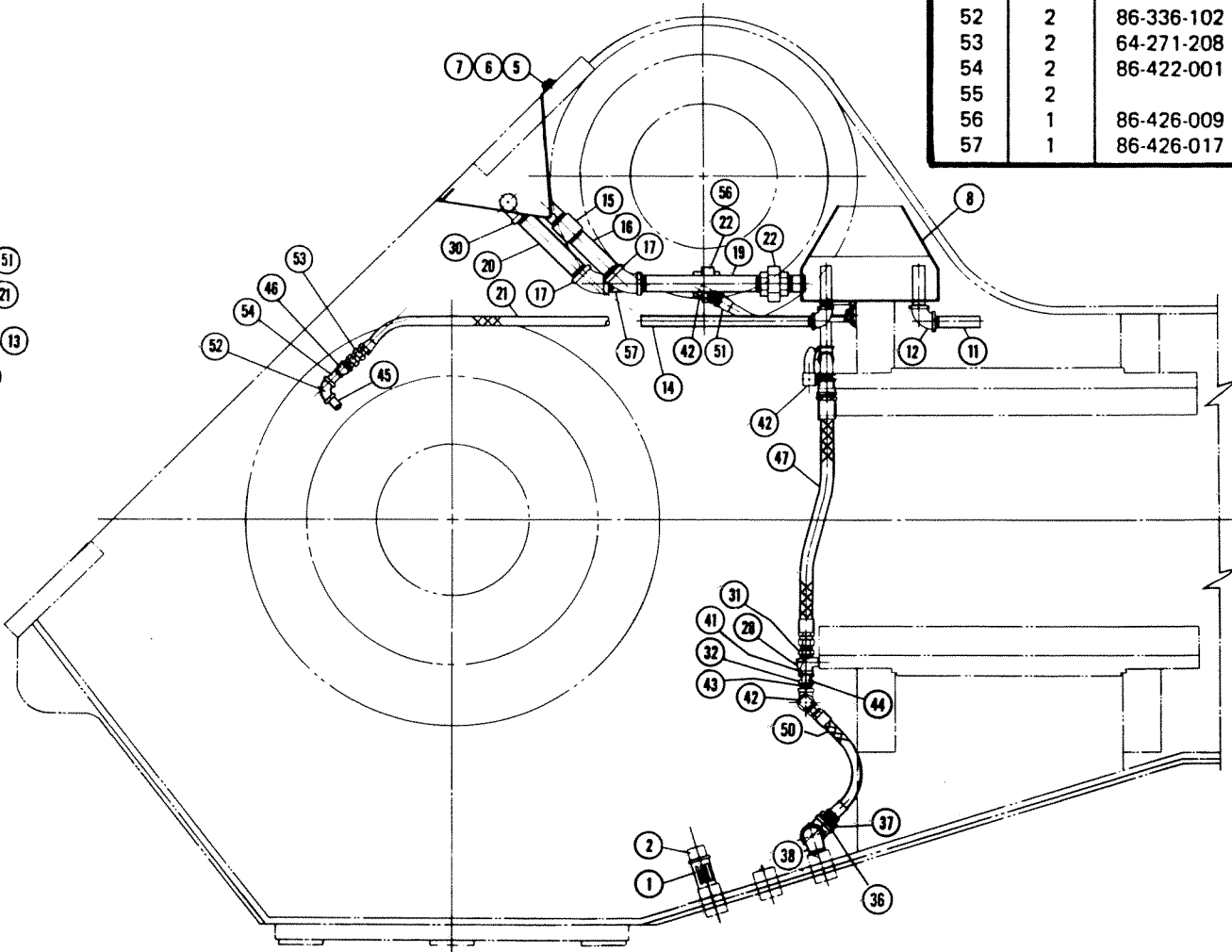
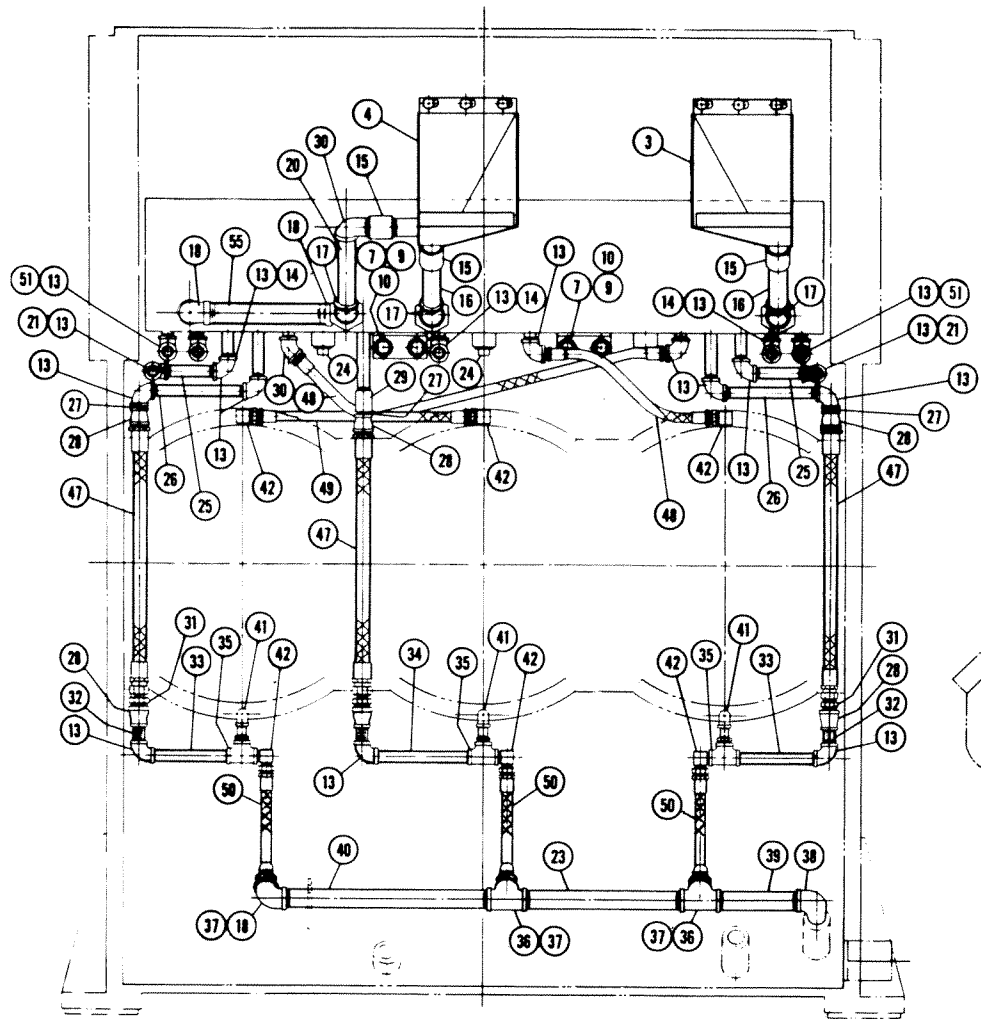
THIS DRAWING IS APPLICABLE  
FOR THE FOLLOWING PUMPS:  
1400-PT A1400-PT HD1400-PT  
1700-PT A1700-PT HD1700-PT

ISSUE DATE: 11-15-89			
NATIONAL - OILWELL			
JACKSHAFT ASSEMBLY A1700-PT TRIPLEX PISTON PUMP			
DRAWING NO.		SIZE	
P185-AC1		C	

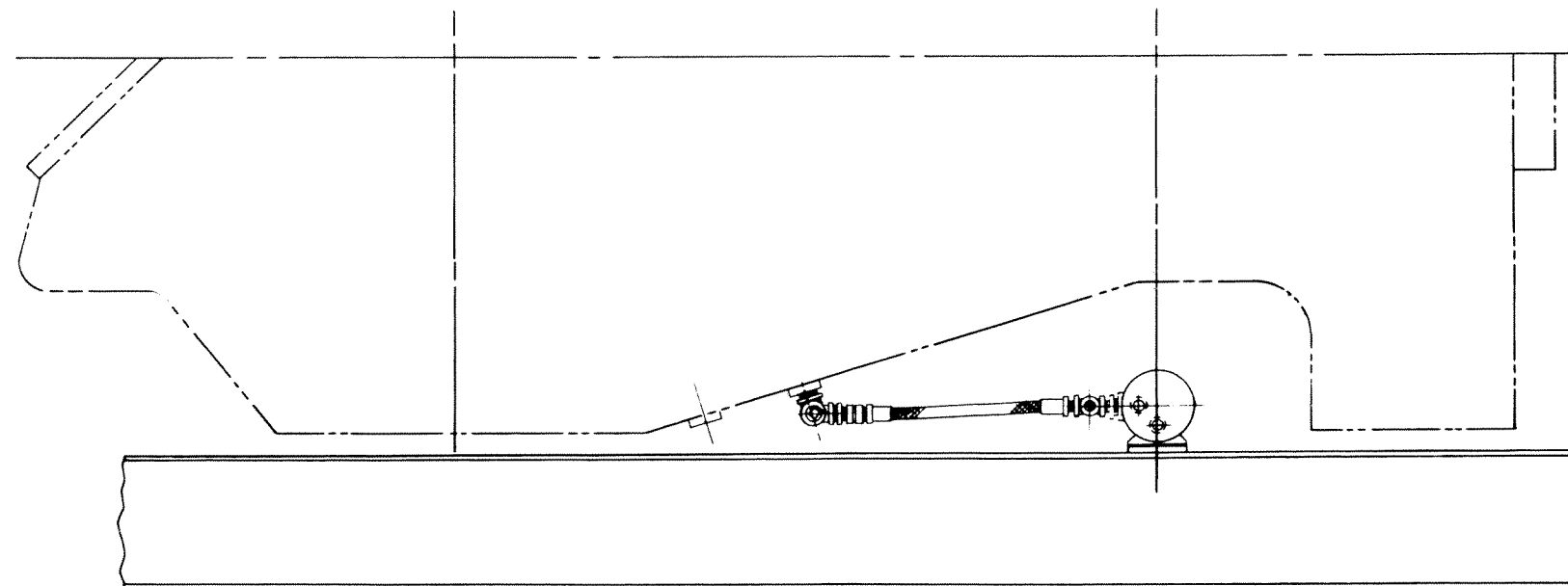
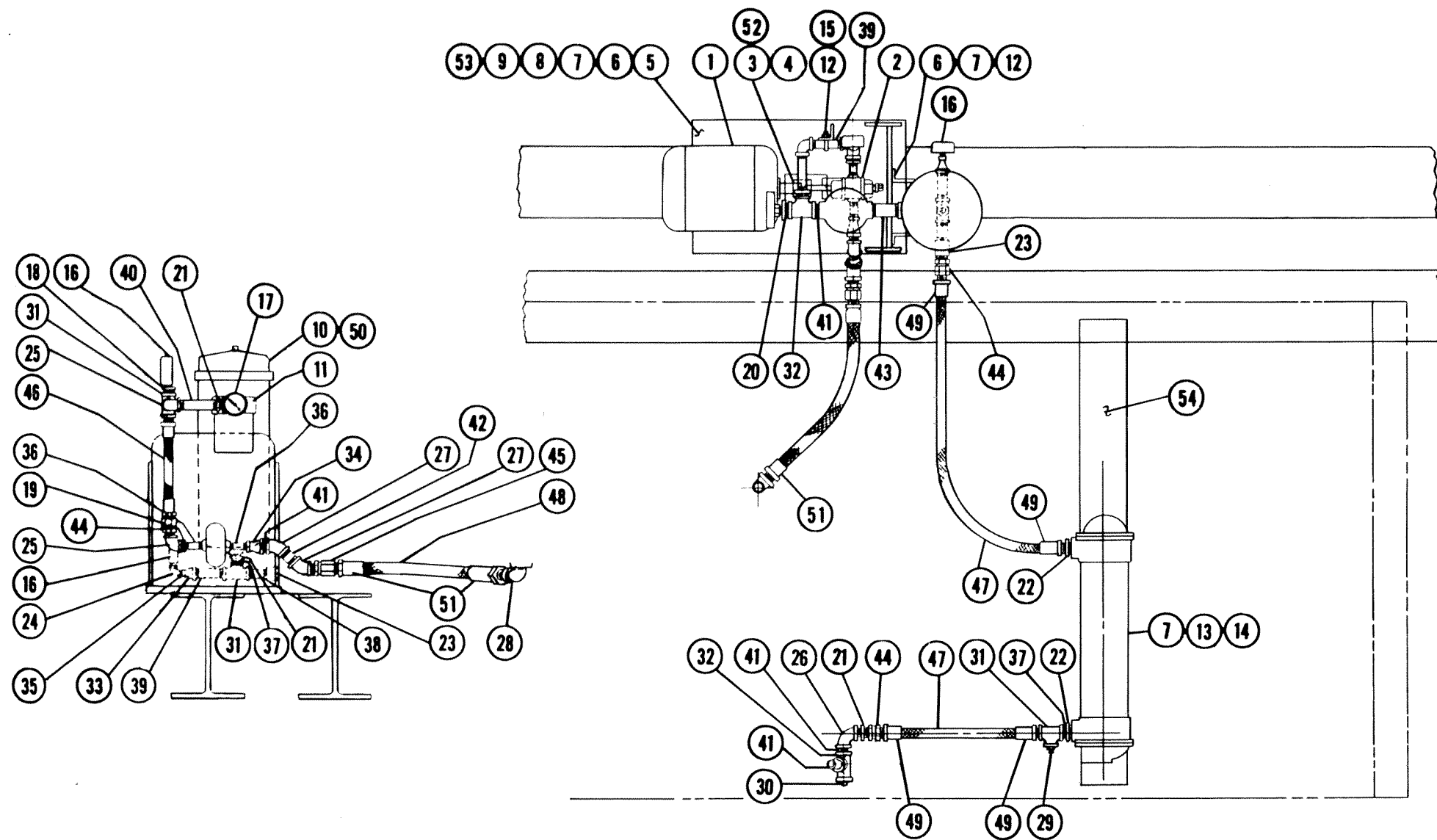


BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-300-037	NIPPLE, STRAINER
2	1	86-132-008	1" 150 # BLK MI PIPE CAP
3	1	10-300-049	TROUGH, (R.H.) OIL
4	1	10-300-050	TROUGH, (L.H.) OIL
5	6	45-143-001	1/2-13 X 3/4 DRLD HEX HD HT CAPSCREW
6	6	75-770-204	1/2 HEAVY PLATE WASHER
7		59-800-016	16 GA ANNEALED STL WIRE
8	1	10-300-260	TROUGH, OIL DISTRIBUTING
9	4	33-007-010	5/8-11 X 1" DRLD HEX HD HT CAPSCREW
10	4	75-772-305	5/8 PLATE WASHER
11	3	86-425-013	3/4 X 4 SCH 40 BW STL PIPE NIPPLE
12	3	86-336-106	3/4 X 90° 150 # BLK MI PIPE ELBOW
13	18	86-336-104	1/2 X 90° 150 # BLK MI PIPE ELBOW
14	3	45-001-585	1/2 X 14 SCH 40 BW STL PIPE
15	3	78-104-108	1" 3000 # F.S. TAPER TAPPED PIPE COUPLING
16	2	86-426-027	1" X 9 SCH 40 BW STL PIPE NIPPLE
17	3	86-339-108	1" X 45° 150 # BLK MI ELBOW
18	3	86-336-108	1" X 90° 150 # BLK MI ELBOW
19	1		1" X 7-7/8 SCH 40 BW STL PIPE NIPPLE
20	1		1" X 13-1/8 SCH 40 BW STL PIPE NIPPLE
21	2	45-804-371	1/2 X 38-7/8 HOSE ASSEMBLY
22	3	86-641-108	1" 150 # MI FEMALE GROUND JOINT PIPE UNION
23	1		1" X 13 SCH 40 BW STL PIPE

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
24	3	86-486-108	1" CI SOLID SQ HD PIPE PLUG
25	2		1/2 X 4-3/8 SCH 40 BW STL PIPE NIPPLE
26	2		1/2 X 7-5/8 SCH 40 BW STL PIPE NIPPLE
27	3	86-424-001	1/2 X CLOSE SCH 40 BW STL PIPE NIPPLE
28	6	86-600-010	3/4 X 1/2 150 # MI REDUCING COUPLING
29	1	78-104-104	1/2 3000 # F.S. TAPER TAPPED PIPE COUPLING
30	1	86-339-104	1/2 X 45° 150 # BLK MI PIPE ELBOW
31	3	64-271-212	3/4 MALE HOSE ADAPTER
32	3	86-424-013	1/2 X 4" SCH 40 BW STL PIPE NIPPLE
33	2		1/2 X 6-1/2 SCH 40 BW STL PIPE NIPPLE
34	1	86-424-025	1/2X 8 SCH 40 BW STL PIPE NIPPLE
35	3	86-543-104	1/2 150 # MI PIPE TEE
36	2	86-543-108	1" 150 # MI PIPE TEE
37	3	86-061-014	1" X 1/2 STD CI BLK HEX PIPE BUSHING
38	1	86-342-108	1" X 90° 150 # BLK MI STREET ELBOW
39	1	86-426-021	1" X 6 SCH 40 BW STL PIPE NIPPLE
40	1		1" X 17 SCH 40 BW STL PIPE
41	3	86-342-103	3/8 X 90° 150 # BLK MI STREET ELBOW
42	8	64-271-214	1/2 X 90° MALE ADAPTER ELBOW
43	3	86-061-006	1/2 X 3/8 STD CI BLK HEX PIPE BUSHING
44	3	86-423-003	3/8 X 1-1/2 SCH 40 BW STL PIPE NIPPLE
45	2	86-422-005	1/4 X 2 SCH 40 BW STL PIPE NIPPLE
46	2	86-600-005	1/2 X 1/4 150 # MI REDUCING COUPLING
47	3	45-804-366	3/4 X 19-1/2 HOSE ASSEMBLY
48	2	45-804-374	1/2 X 16-7/8 HOSE ASSEMBLY
49	1	45-804-370	1/2 X 31-7/8 HOSE ASSEMBLY
50	3	45-804-369	1/2 X 13-3/8 HOSE ASSEMBLY
51	2	45-804-373	1/2 X 11-1/8 HOSE ASSEMBLY
52	2	86-336-102	1/4 X 90° 150 # BLK MI ELBOW
53	2	64-271-208	1/2 MALE HOSE ADAPTER
54	2	86-422-001	1/4 X CLOSE SCH 40 BW STL PIPE NIPPLE
55	2		1" X 10-1/4 SCH 40 BW STL PIPE NIPPLE
56	1	86-426-009	1" X 3 SCH 40 BW STL PIPE NIPPLE
57	1	86-426-017	1" X 5 SCH 40 BW STL PIPE NIPPLE



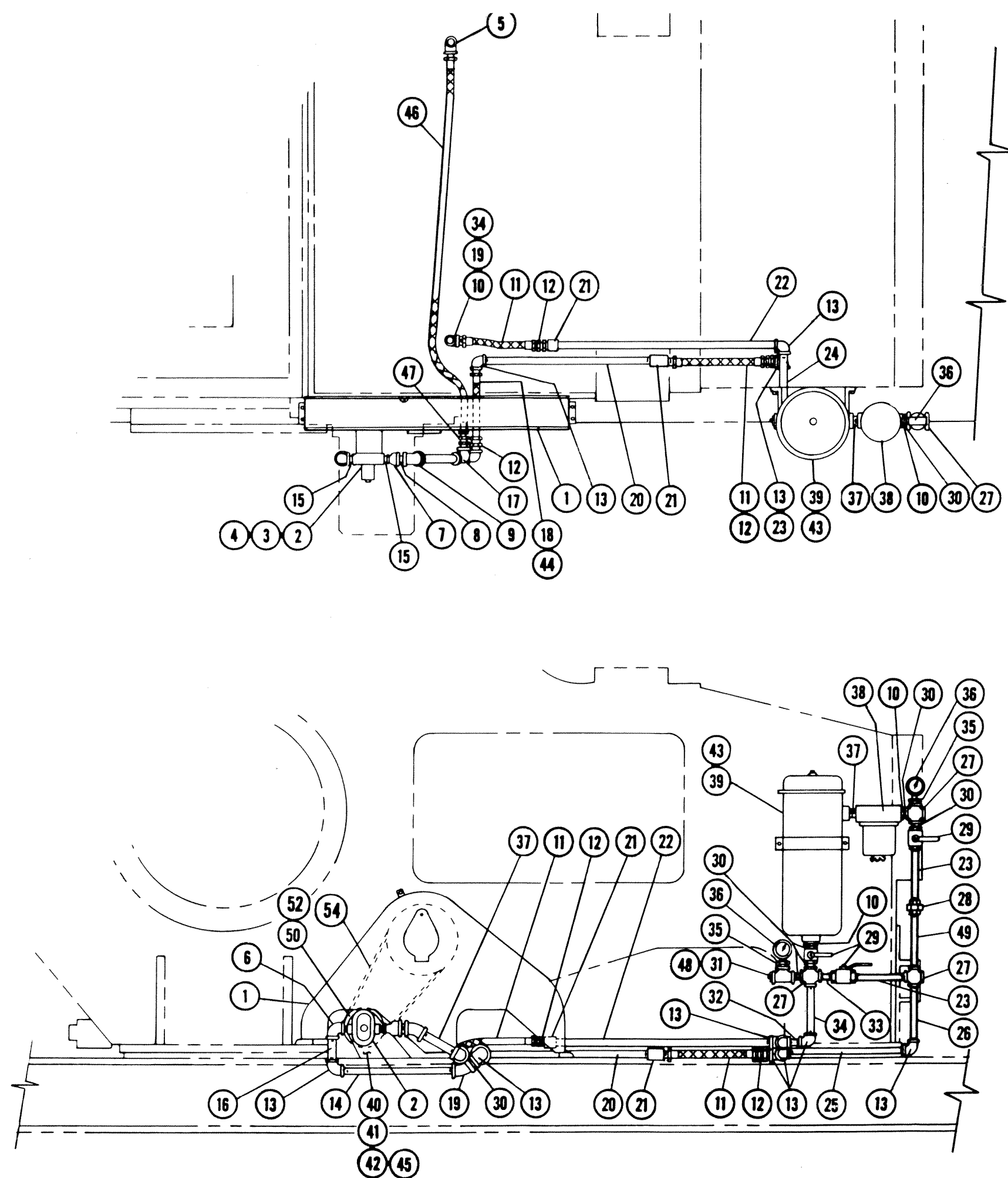
ISSUE DATE: 11-15-89		
NATIONAL - OILWELL		
INTERNAL LUBRICATION SYSTEM A1700-PT TRIPLEX PISTON PUMP		
DRAWING NO.	P184-BK1	SIZE F



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1*	1	74-450-830	ELECTRIC MOTOR*
2	1	64-182-010	OIL PUMP
3	1	68-103-991	FLEXIBLE COUPLING
4	1	06-510-607	GUARD, COUPLING
5	1	10-300-310	BASE, MOTOR & FILTER
6	16	75-633-740	3/8-16 X 1-1/4 HEX HD HT CAPSCREW
7	20	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
8	4	75-633-707	1/4 -20 X 5/8 HEX HD HT CAPSCREW
9	4	75-770-470	1/4 EXTERNAL SHAKEPROOF LOCKWASHER
10	1	64-212-832	OIL FILTER
11	1	64-212-003	MAGNETIC OIL FILTER
12	10	75-510-404	3/8-16 HEAVY HEX STL. NUT
13	1	16-385-012	HEAT EXCHANGER
14	4	75-634-335	3/8-16 X 5/8 HEX HD HT CAPSCREW
15	1	45-804-150	3/8 U-BOLT
16	2	78-256-532	2-1/2 PRESSURE GAUGE (0-200 P.S.I.)
17	1	78-684-250	3" THERMOMETER (0-250° F.)
18	1	86-061-008	3/4 X 1/4 CI BLK HEX PIPE BUSHING
19	1	86-061-010	3/4 X 1/2 CI BLK HEX PIPE BUSHING
20	1	86-061-014	1" X 1/2 CI BLK HEX PIPE BUSHING
21	4	86-061-015	1" X 3/4 CI BLK HEX PIPE BUSHING
22	1	86-061-026	1-1/2 X 3/4 CI BLK HEX PIPE BUSHING
23	1	57-000-006	3/4 X 150 # MI TAPPED PIPE COUPLING
24	1	78-176-002	1/4 X 90° 2000 # F.S. PIPE ELBOW
25	3	86-336-106	3/4 X 90° 150 # BLK MI PIPE ELBOW
26	1	86-336-108	1" X 90° 150 # BLK MI PIPE ELBOW
27	2	86-339-108	1" X 45° 150 # BLK MI PIPE ELBOW
28	2	86-342-108	1" X 90° 150 # BLK MI PIPE ELBOW
29	1	86-486-106	3/4 CI CORED SQ HD PIPE PLUG
30	1	86-485-508	1" CI CORED SQ HD PIPE PLUG
31	2	86-543-106	3/4 150 # MI PIPE TEE
32	2	86-543-108	1" 150 # MI PIPE TEE
33	1	86-600-008	3/4 X 1/4 150 # MI REDUCING PIPE COUPLING
34	1	86-600-014	1" X 1/2 150 # MI REDUCING PIPE COUPLING
35	1	86-422-002	1/4 X CLOSE SCH 80 BW STL PIPE NIPPLE
36	2	86-424-007	1/2 X 2-1/2 SCH 40 BW STL PIPE NIPPLE
37	1	86-425-001	3/4 X CLOSE SCH 40 BW STL PIPE NIPPLE
38	1	86-425-009	3/4 X 3" SCH 40 BW STL PIPE NIPPLE
39	2	86-425-013	3/4 X 4" SCH 40 BW STL PIPE NIPPLE
40	1	86-425-017	3/4 X 5" SCH 40 BW STL PIPE NIPPLE
41	3	86-426-001	1" X CLOSE SCH 40 BW STL PIPE NIPPLE
42	1	86-426-007	1" X 2-1/2 SCH 40 BW STL PIPE NIPPLE
43	2	86-426-013	1" X 4" SCH 40 BW STL PIPE NIPPLE
44	3	64-289-324	3/4 HOSE UNION ADAPTER
45	1	64-289-326	1" HOSE UNION ADAPTER
46	1	45-804-717	3/4 X 12-1/2 HOSE ASSEMBLY
47	1	64-270-012	3/4 HOSE
48	1	64-271-014	1" HOSE
49	4	64-271-012	3/4 MALE HOSE COUPLING
50	1	64-212-848	ELEMENT, OIL FILTER
51	2	64-271-226	1" MALE HOSE COUPLING
52	1	45-124-506	KEY (3/16 X 3/16 X 1")
53	3	45-194-207	SHIM SET ( 1 REQ'D ) CONSISTS OF THE FOLLOWING
	3	45-194-208	SHIM (.020" THK )
	3	06-015-462	SHIM (16 GA. THK.)
54	1	10-300-311	PLATE, HEAT EXCHANGER BASE

\* ELECTRIC MOTOR IS: 1-1/2 hp, 900 rpm, 230/460 volt, 3-phase, 60 hertz  
184 T explosion proof motor.

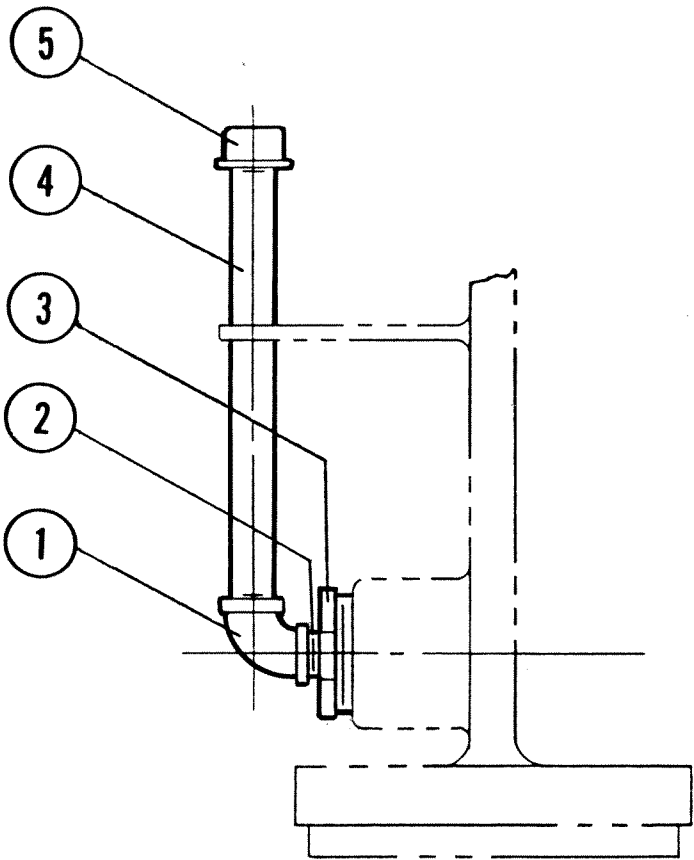
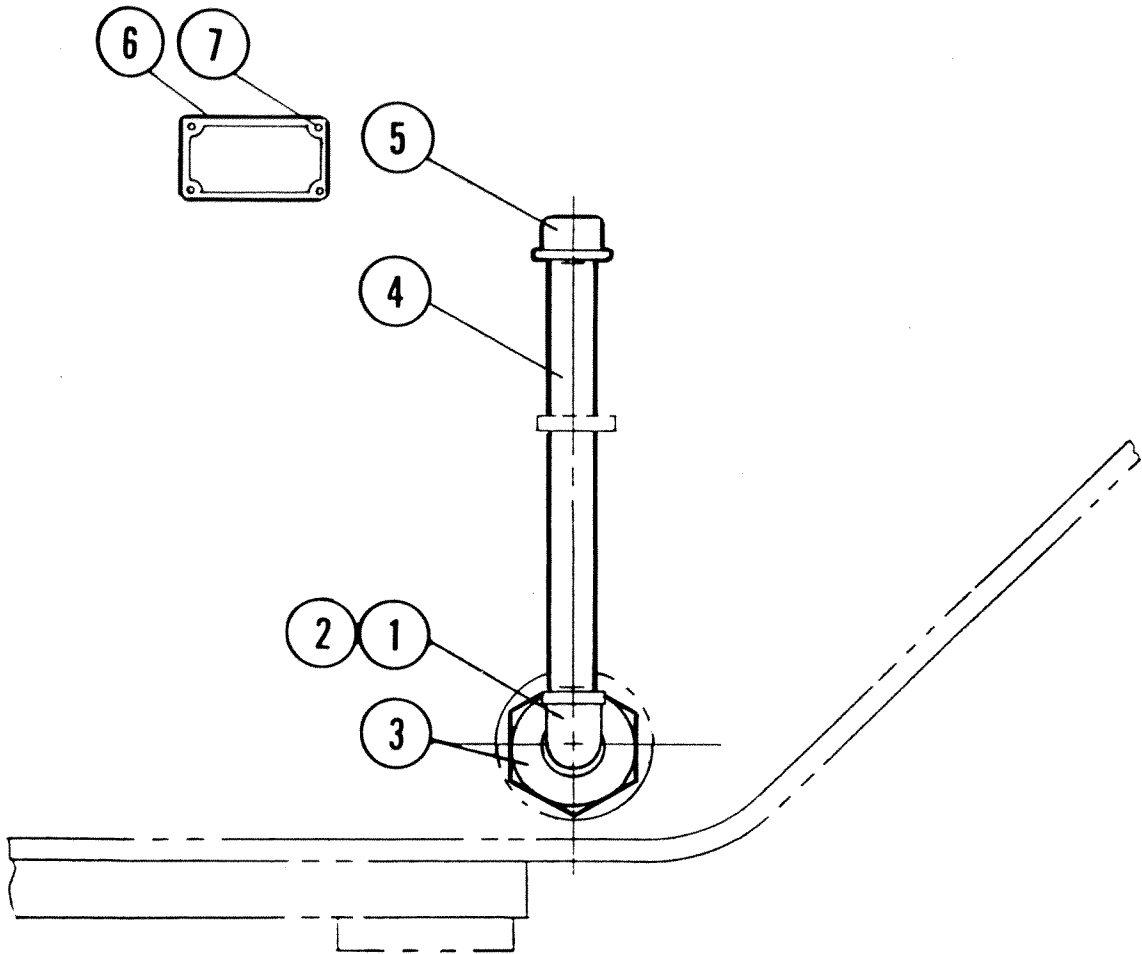
ISSUE DATE: 11-15-89	
NATIONAL - OILWELL	
EXTERNAL LUBRICATION SYSTEM (ELECTRICAL)	
A1700-PT TRIPLEX PISTON PUMP	
DRAWING NO.	SIZE
P403-AN1	D



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-300-144	GUARD, BELT
2	1	64-182-042	OIL PUMP
3	4	75-634-314	3/8-16 X 1" HEX HD HT CAPSCREW
4	4	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
5	1	86-342-108	1" 150# BLK MI STREET ELBOW
6	1	86-359-016	1/2 X 3/4 150# BLK MI REDUCING ELBOW
7	1	86-600-014	1/2 X 1" 150# BLK MI REDUCING COUPLING
8	1	86-426-001	1" X CLOSE SCH 40 BW STL PIPE NIPPLE
9	1	86-341-006	1" X 45° 150# BLK MI PIPE ELBOW
10	2	86-061-015	1" X 3/4 CI BLK HEX PIPE BUSHING
11	2	45-171-917	3/4 X 12 HOSE ASSEMBLY
12	3	64-289-324	3/4 MALE ADAPTER UNION
13	9	86-336-106	3/4 X 90° 150# BLK MI ELBOW
14	1	86-425-031	3/4 X 11 SCH 40 BW STL PIPE NIPPLE
15	2	86-424-001	1/2 X CLOSE SCH 40 BW STL PIPE NIPPLE
16	1	86-425-013	3/4 X 4" SCH 40 BW STL PIPE NIPPLE
17	1	86-336-108	1" X 90° 150# BLK MI PIPE ELBOW
18	1	45-804-050	3/4 M.P.T. X 3/4 F.P.T. X 26 HOSE ASSEMBLY
19	1	86-339-106	3/4 X 45° 150# BLK MI PIPE ELBOW
20	1		3/4 X 30 SCH 40 BW STL PIPE
21	2	57-000-006	3/4 150# MI TAPPED PIPE COUPLING
22	1		3/4 X 28 SCH 40 BW STL PIPE
23	3	86-425-025	3/4 X 8" SCH 40 BW STL PIPE NIPPLE
24	1	86-425-029	3/4 X 10 SCH 40 BW STL PIPE NIPPLE
25	1		3/4 X 16 SCH 40 BW STL PIPE
26	1	86-425-019	3/4 X 5-1/2 SCH 40 BW STL PIPE NIPPLE
27	3	86-240-106	3/4 150# BLK MI PIPE CROSS
28	1	86-641-106	3/4 150# MI GROUND JOINT PIPE UNION
29	3	83-899-802	3/4 BALL VALVE
30	5	86-425-001	3/4 X CLOSE SCH 40 BW STL PIPE NIPPLE
31	1	86-486-106	3/4 CI BLK SOLID SQ HD PIPE PLUG
32	2	86-425-005	3/4 X 2" SCH 40 BW STL PIPE NIPPLE
33	1	86-425-007	3/4 X 2-1/2 SCH 40 BW STL PIPE NIPPLE
34	2	86-425-013	3/4 X 4" SCH 40 BW STL PIPE NIPPLE
35	2	86-061-008	3/4 X 1/4 CI BLK HEX PIPE BUSHING
36	2	78-256-532	PRESSURE GAUGE (0-200 P.S.I.)
37	2	86-426-009	1" X 3" SCH 40 BW STL PIPE NIPPLE
38	1	64-212-003	MAGNETIC OIL FILTER
39	1	64-212-832	OIL FILTER
40	2	75-068-020	5/8-11 X 1-3/4 MACHINE BOLT
41	2	75-510-408	5/8-11 HEX NUT
42	2	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
43	1	64-212-848	OIL FILTER ELEMENT
44	1	64-270-030	SPRING GUARD
45	1	10-300-040	BRACKET, OIL PUMP
46	1	45-804-103	1" X 42 HOSE ASSEMBLY
47	1	64-271-234	1" HOSE ADAPTER
48	1	86-543-106	3/4 150# BLK MI PIPE TEE
49	1	45-804-245	3/4 X 8-1/4 SCH 40 BW STL PIPE NIPPLE
50	1	68-097-458	6.5 O.D. 3V SINGLE GROOVE DRIVEN SHEAVE
51	1	45-803-774	KEY (3/16 X 3/16 X 1-3/4)
52	1	10-303-074	PLATE, INSTRUCTION
53	4	75-632-012	No. 2 X 1/4 DRIVE SCREW
54	1	68-028-560	3V-560 V-BELT

ISSUE DATE: 11-15-89	
NATIONAL - OILWELL	
EXTERNAL LUBRICATION SYSTEM (MECHANICAL)	
A1700-PT TRIPLEX PISTON PUMP	
DRAWING NO.	SIZE
P185-AS1	B

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	86-336-104	1/2 X 90° 150# BLK MI PIPE ELBOW
2	1	86-424-001	1/2 X CLOSE SCH 40 BW STL PIPE NIPPLE
3	1	86-061-032	2" X 1/2 CI STD BLK HEX PIPE BUSHING
4	1	86-424-029	1/2 X 10 SCH 40 BW STL PIPE NIPPLE
5	1	06-109-007	STICK, OIL LEVEL DIP
6	1	10-305-112	PLATE, INSTRUCTION
7	4	75-632-012	No. 2 X 1/4 DRIVE SCREW



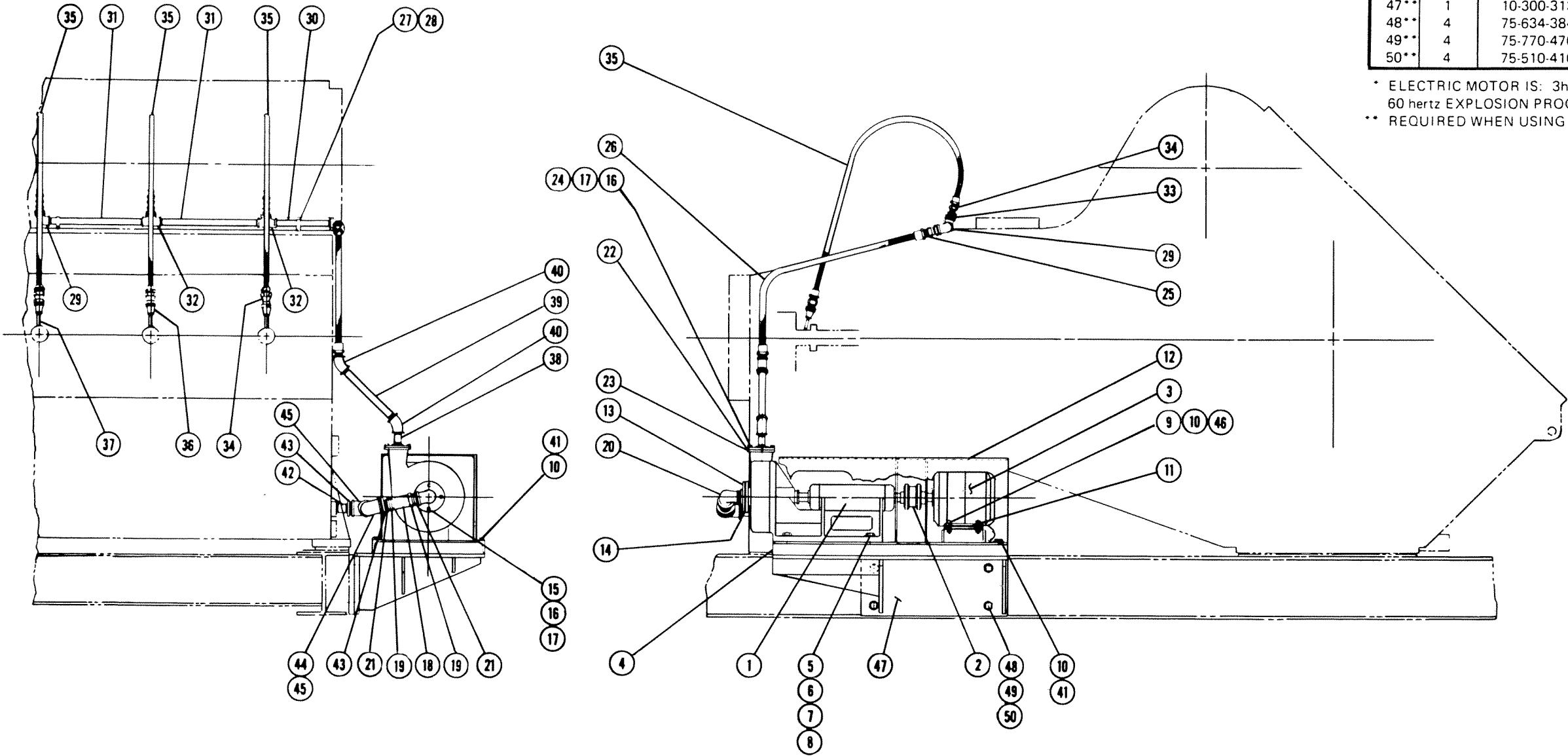
10

ISSUE DATE: 11-15-89			
NATIONAL - OILWELL			
OIL LEVEL ASSEMBLY			
A1700-PT TRIPLEX PISTON PUMP			
DRAWING NO.		SIZE	
P185-AK1		B	

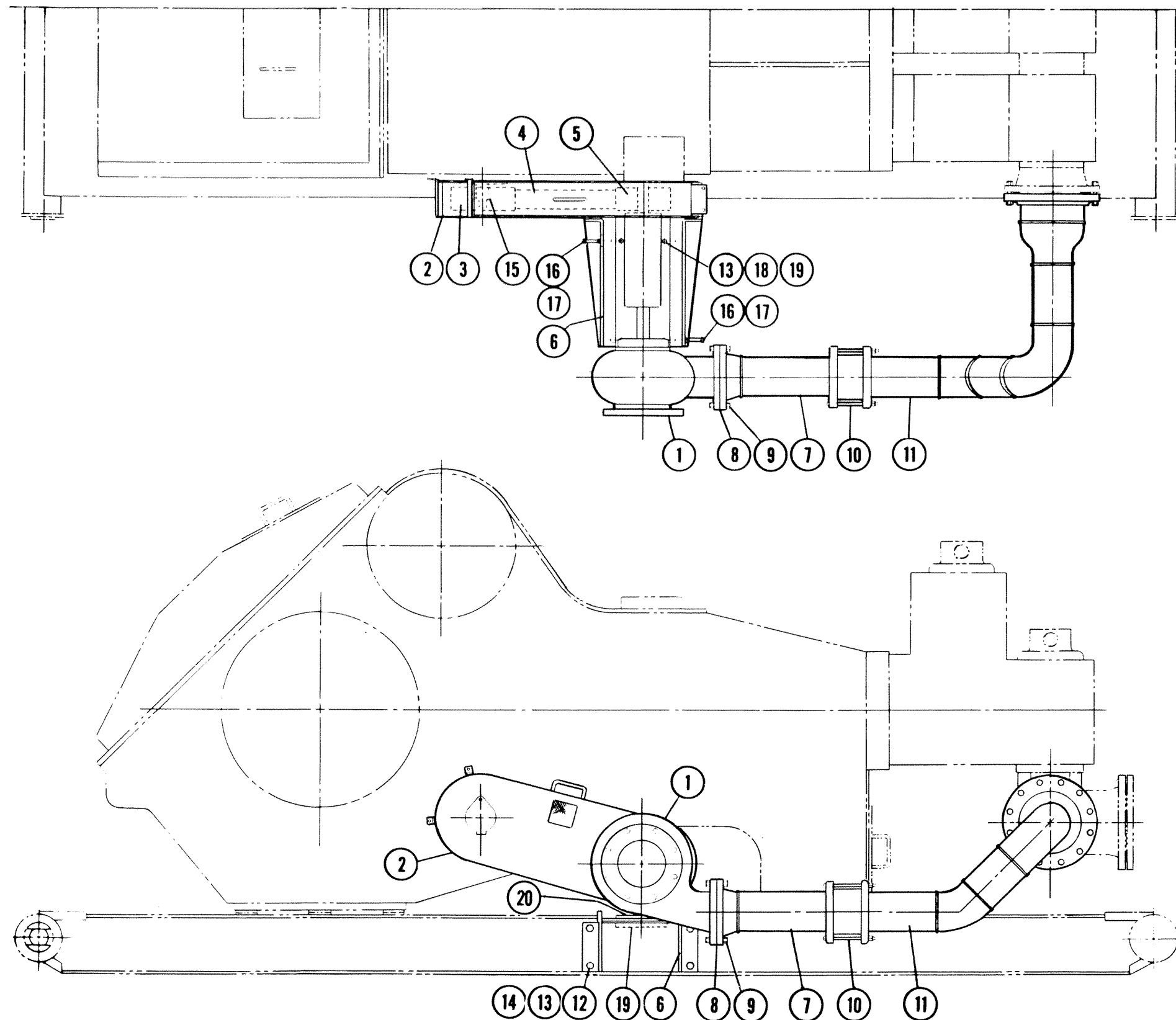
BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	95-999-050	CENTRIFUGAL PUMP
2	1	68-103-964	COUPLING, SHAFT
3*	1	74-450-826	ELECTRIC MOTOR*
4	1	10-300-343	BASE, PUMP
5	4	75-634-361	5/8-11 X 2" HEX HD HT CAPSCREW
6	4	75-510-408	5/8-11 STL. HEX NUT
7	4	75-770-205	5/8 PLATE WASHER
8	4	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
9	4	75-634-343	3/8-16 X 1-3/4 HEX HD HT CAPSCREW
10	10	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
11	4	29-001-153	SHIM SET PACK
12	1	10-300-344	GUARD, PUMP
13	1	98-029-012	1-1/2 150 # F.S. RAISE FACE THREADED FLANGE
14	1	78-208-036	FLANGE GASKET
15	4	75-634-353	1/2-13 X 2" HEX HD HT CAPSCREW
16	8	75-510-406	1/2-13 STL HEX NUT
17	10	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
18	1	99-287-816	2" I.D. X 5" RADIATOR HOSE
19	2	99-094-086	HOSE CLAMP
20	1	86-342-112	1-1/2 X 90° 150 # BLK MI STREET ELBOW

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
21	2	45-003-181	1-1/2 X 3" SCH 40 BW STL PIPE NIPPLE
22	1	98-029-006	1" 150 # F.S. THREADED RAISE FACE FLANGE
23	1	78-208-012	GASKET, FLANGE
24	4	75-634-354	1/2-13 X 1-3/4 HEX HD HT CAPSCREW
25	1	64-289-326	1" MALE ADAPTER UNION
26	1	06-511-873	1" X 37" HOSE ASSEMBLY
27	3	64-228-103	PIPE STRAP
28	3	75-634-317	5/16-18 X 1/2 HEX HD HT CAPSCREW
29	2	86-336-108	1" X 90° 150 # BLK MI PIPE ELBOW
30	1	86-426-029	1" X 10" SCH 40 BW STL PIPE NIPPLE
31	2		1" X 16" SCH 40 BW STL PIPE
32	2	86-543-108	1" 150 # BLK MI PIPE TEE
33	3	86-061-014	1" X 1/2 CI STD BLK HEX PIPE BUSHING
34	6	64-289-320	1/2 MALE ADAPTER UNION
35	3	06-510-761	1/2 X 48" HOSE ASSEMBLY
36	3	86-600-005	1/2 X 1/4 150 # BLK MI PIPE REDUCER
37	3	86-422-007	1/4 X 2-1/2 SCH 40 BW STL PIPE NIPPLE
38	1	86-426-009	1" X 3" SCH 40 BW STL PIPE NIPPLE
39	1	86-426-025	1" X 8" SCH 40 BW STL PIPE NIPPLE
40	2	86-339-108	1" X 45° 150 # BLK MI PIPE ELBOW
41	4	75-634-313	3/8-16 X 3/4 HEX HD HT CAPSCREW
42	1	86-428-009	1-1/2 X 3" SCH 40 BW STL PIPE NIPPLE
43	2	86-061-036	2" X 1-1/2 CI STD BLK HEX PIPE BUSHING
44	1	86-429-017	2" X 5" SCH 40 BW STL PIPE NIPPLE
45	2	86-336-116	2" X 90° 150 # BLK MI PIPE ELBOW
46	4	75-510-404	3/8-16 HEX NUT
47**	1	10-300-313	SUPPORT, PUMP**
48**	4	75-634-384	3/4-10 X 2-1/2 HEX HD HT CAPSCREW**
49**	4	75-770-476	3/4 EXTERNAL SHAKEPROOF LOCKWASHER**
50**	4	75-510-410	3/4-10 HEX NUT**

\* ELECTRIC MOTOR IS: 3hp, 1800 rpm, 230/460 volt, 3-phase  
60 hertz EXPLOSION PROOF ELECTRIC MOTOR W/F RAME 182-T.  
\*\* REQUIRED WHEN USING THE STANDARD TWO RUNNER PUMP BASE.



ISSUE DATE: 11-15-89		
NATIONAL - OILWELL		
LINER FLUSHING SYSTEM		
A1700-PT TRIPLEX PISTON PUMP		
DRAWING NO.	P185-AN1	SIZE
		D



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	95-999-067	6 X 8R CENTRIFUGAL CHARGING PUMP
2	1	10-300-205	GUARD, BELT
3	1	68-097-465	10.3 O.D. 5V SIX GROOVE DRIVE SHEAVE
4	6	68-029-085	5V850 V-BELT (MATCHED SET)
5	1	68-097-467	9" O.D. 5V SIX GROOVE DRIVEN SHEAVE
6	1	10-300-204	BRACKET, PUMP MOUNTING
7	1	06-509-871	MANIFOLD
8	1	45-802-038	GASKET, MANIFOLD FLANGE
9	8	75-659-066	3/4-10 X 3-3/4 ALL-THREAD STUD W/TWO NUTS
10	1	78-106-063	6" DRESSER COUPLING
11	1	10-300-275	6" FABRICATED SUCTION CHARGING PIPE
12	4	75-635-028	5/8-11 X 5" HEX HD HT CAPSCREW
13	4	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
14	4	75-510-408	5/8-11 HEAVY STL. HEX NUT
15	1	45-802-800	KEY (1/2 X 1/2 X 2")
16	2	75-634-536	1/2-13 X 4" SQ HD CUP POINT SETSCREW
17	2	75-510-506	1/2-13 STL. HEX JAM NUT
18	4	75-634-367	5/8-11 X 3-1/4 HEX HD HT CAPSCREW
19	2	10-300-093	RETAINER, CENTRIFUGAL PUMP
20	2	10-300-094	SHIM BLOCK

12

ISSUE DATE: 11-15-89		
NATIONAL - OILWELL		
CHARGING PUMP A1700-PT TRIPLEX PISTON PUMP		
DRAWING NO.	P403-AH1	SIZE
		D

PUMP, AS SHOWN, IS FOR RIGHT HAND DRIVE.  
IT CAN BE DRIVEN FROM EITHER SIDE OR BOTH SIDES.

