

NATIONAL OILWELL
Drilling Technologies

PARTS LIST

A1700-PT
TRIPLEX PISTON 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

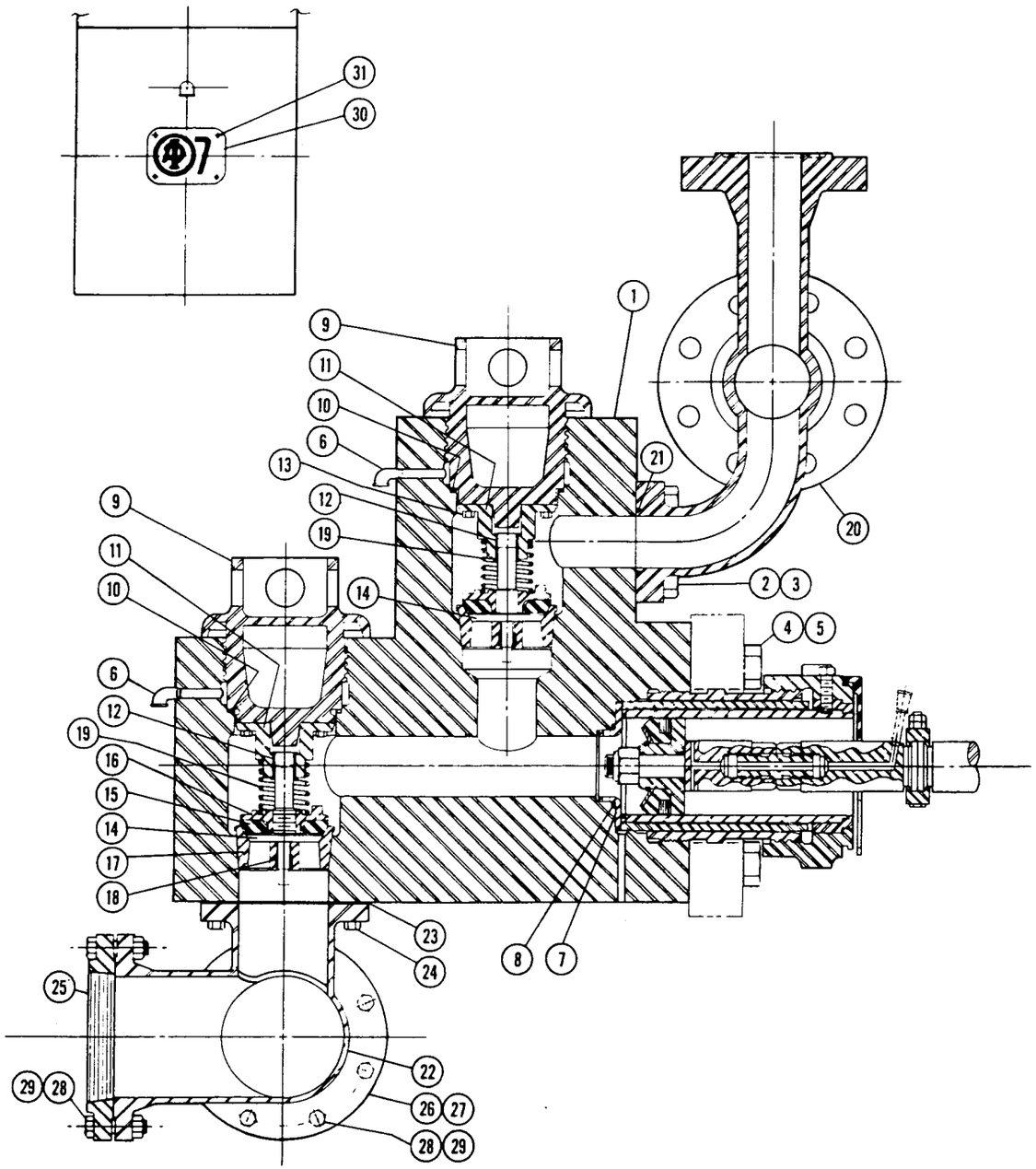
ISSUE DATE: 11-15-89

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PARTS LIST
INDEX AND CHECK LIST

A1700-PT
TRIPLEX PISTON PUMP

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BILL OF MATERIAL

ITEM	REQ'D	COMM NO	DESCRIPTION
1	3	10-300-181	FLUID END, STUDDED (INCLS. ITEMS 2 THRU 8)
2	12	49-001-292	1-3/8–8 X 4-1/2 STUD
3	12	75-511-754	1-3/8–8 HEAVY HEX NUT
4	12	49-002-837	1-3/4–8 X 7-1/2 STUD
5	12	75-510-126	1-3/4–8 HEAVY HEX NUT
6	6	86-342-102	1/4 150# BLK MI STREET ELBOW
7	3	10-300-184	PLATE, LINER WEAR
8	3	20-100-008	GASKET, LINER WEAR PLATE
9	6	10-300-005	COVER, VALVE
10	6	10-300-011	GASKET, VALVE COVER
11	6	10-300-004	SLEEVE, VALVE COVER
12	6	20-200-004	BUSHING, VALVE COVER SLEEVE
13	24	75-632-234	5/8–11 X 1-1/4 SELF–LOCKING CAPSCREW
14	6	20-160-928	VALVE COMPLETE W/POLYURETHANE DISC (INCLS. ITEMS 15 & 16)
	6	20-160-929	VALVE COMPLETE W/BUNA "N" DISC (INCLS. ITEMS 15 & 16)
15	6	20-180-049	VALVE DISC (POL YURETHANE)
	6	20-180-050	VALVE DISC (BUNA "N")
16	6	20-860-044	NUT, VALVE
17	6	20-220-105	SEAT, VALVE (INCLS. ITEM 18)
18	6	20-101-767	BUSHING, VALVE SEAT
19	6	20-160-225	SPRING, VALVE
20	1	10-300-340	MANIFOLD, DISCHARGE
21	3	99-609-345	"O"–RING (4-3/8 X 4" X 3/16)
22	1	10-300-193	MANIFOLD, SUCTION
23	3	10-300-201	GASKET
24	24	75-634-382	3/4–10 X 2" HEX HD HT CAPSCREW
25	1	98-029-039	10" 150 # RAISED FACE THREADED FLANGE
26	2	98-031-039	10" 150 # RAISED FACE BLIND FLANGE
27	3	45-804-096	GASKET, SUCTION FLANGE
28	36	75-634-405	7/8–9 X 3-1/2 HEX HD HT CAPSCREW
29	36	75-510-314	7/8–9 HEAVY HEX NUT
30	3	10-300-202	PLATE, NAME
31	12	75-632-022	No. 2 X 3/8 DRIVE SCREW

1

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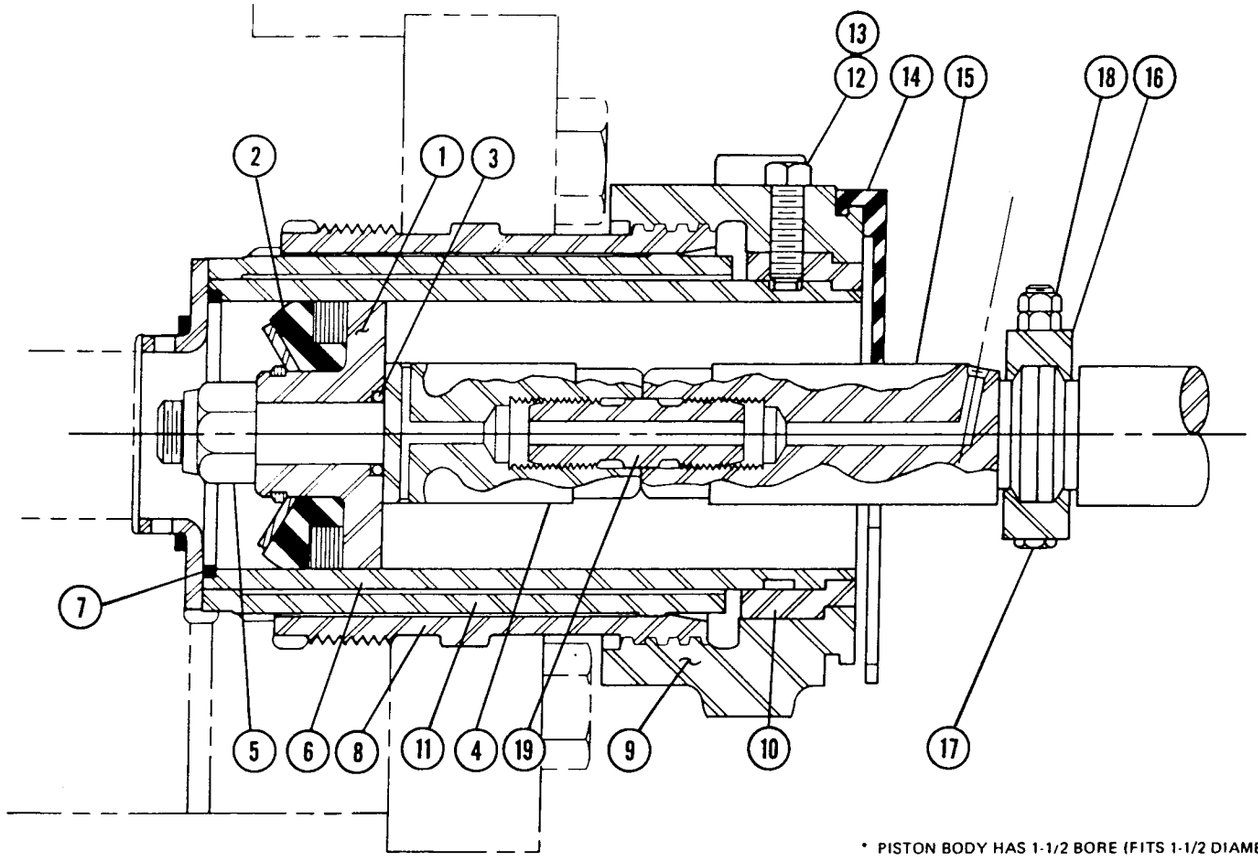
NATIONAL - OILWELL

FLUID END

A1700-PT TRIPLEX PISTON PUMP

DRAWING NO. **P184-BE1**

SIZE **D**



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 **
31	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
101†	3	10-300-185	RING, SPACER ††
111†	3	10-300-186	RING, SPACER ††
12	9	75-632-758	3/4-10 X 1-3/4 SETSCREW
131†	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

2

* 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.

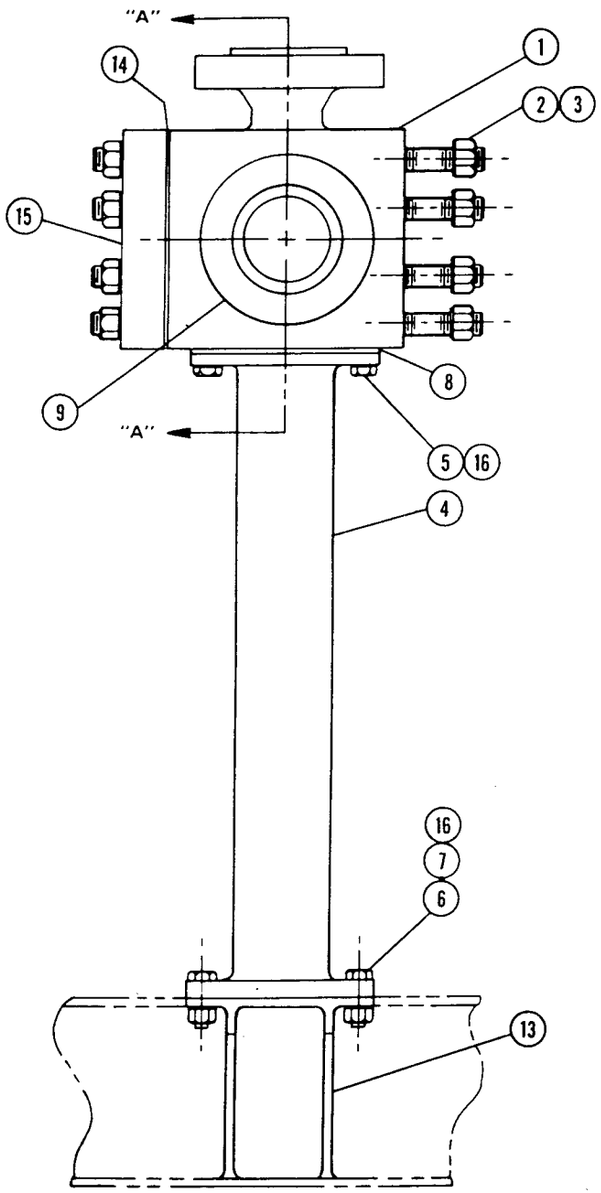
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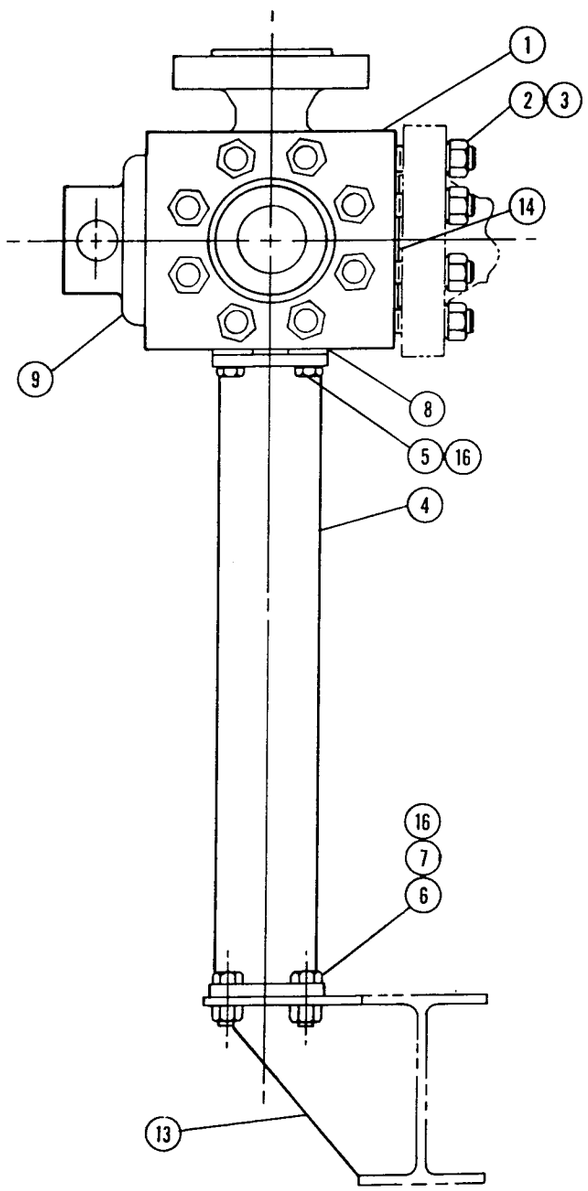
NATIONAL-OILWELL

LINER & PISTON ASSEMBLY A1700-PT TRIPLEX PISTON PUMP

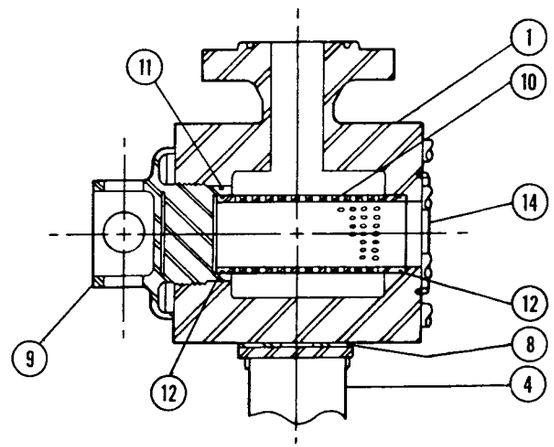
DRAWING NO. P403-AS1

SIZE D





BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-307-005	BLOCK, STRAINER (INCLS. 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		10-307-064	SHIM SET (2 REQ'D) CONSISTS OF THE FOLLOWING
	6	10-307-065	SHIM (16 GA. THK.)
	2	10-307-066	SHIM (11 GA. THK.)
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



SECTION "A–A"

3

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

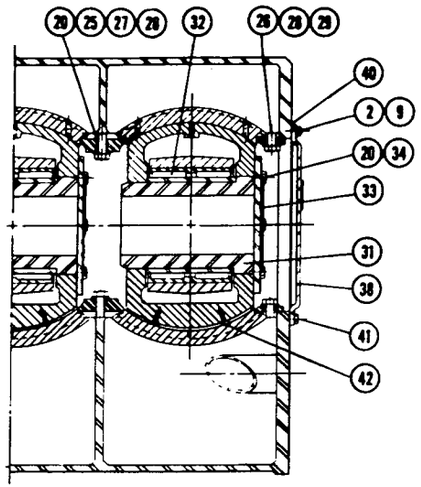
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NATIONAL-OILWELL

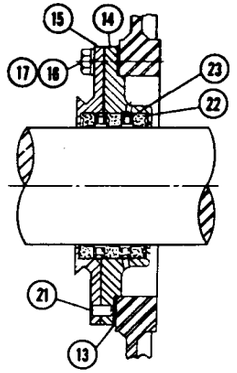
STRAINER BLOCK ASSEMBLY
A1700-PT TRIPLEX PISTON PUMP

DRAWING NO. P184-BM1

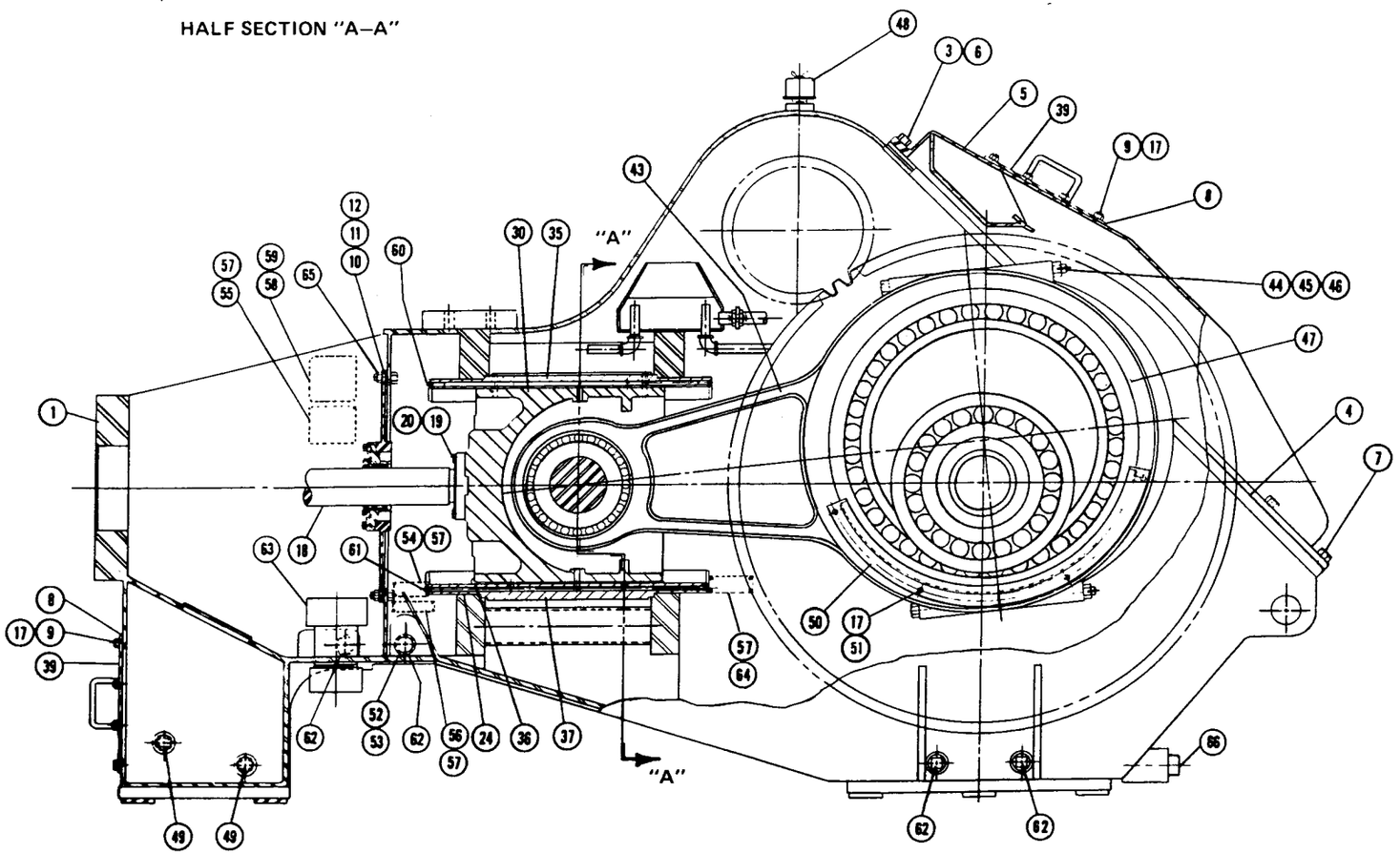
SIZE D



HALF SECTION "A–A"



DIAPHRAGM ASSEMBLY



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-300-259	FRAME END, STUDDED (INCLS. 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	06-503-869	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	10-300-062	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	45-142-600	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	10-301-207	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 (INCLS. ITEMS 44 & 45)
44	6	10-300-155	BOLT, CONNECTING ROD
45	6	75-513-114	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

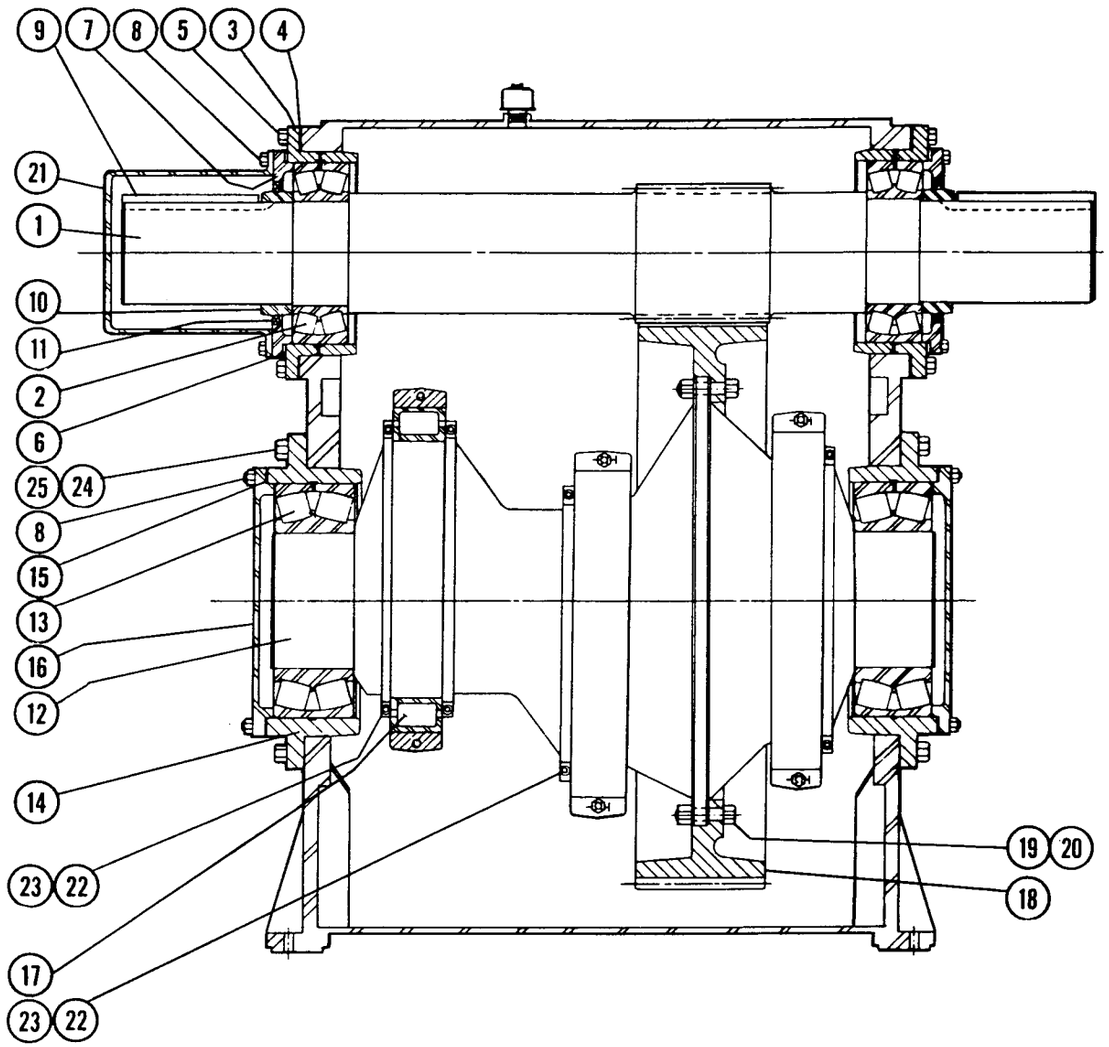
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NATIONAL-OILWELL

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		45-803-732	SHIM SET (2 REQ'D) CONSISTS OF THE FOLLOWING
	5	45-803-733	SHIM (.005" THICK)
	4	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		45-803-739	SHIM SET (2 REQ'D) CONSISTS OF THE FOLLOWING
	3	45-803-740	SHIM (.005" THICK)
	4	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

5

GEAR REDUCTION RATIO: 4.5:1

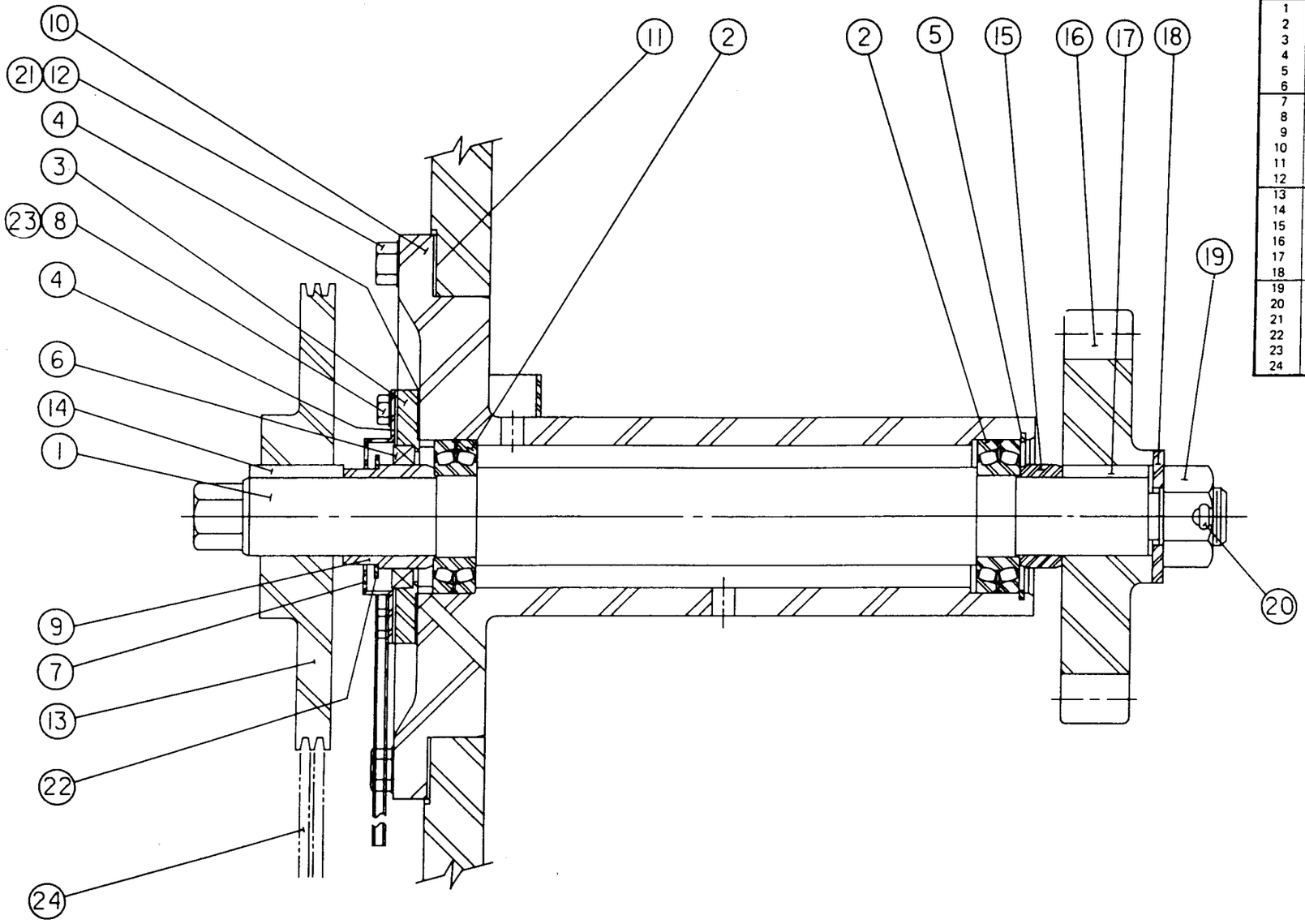
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NATIONAL - OILWELL

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

6

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

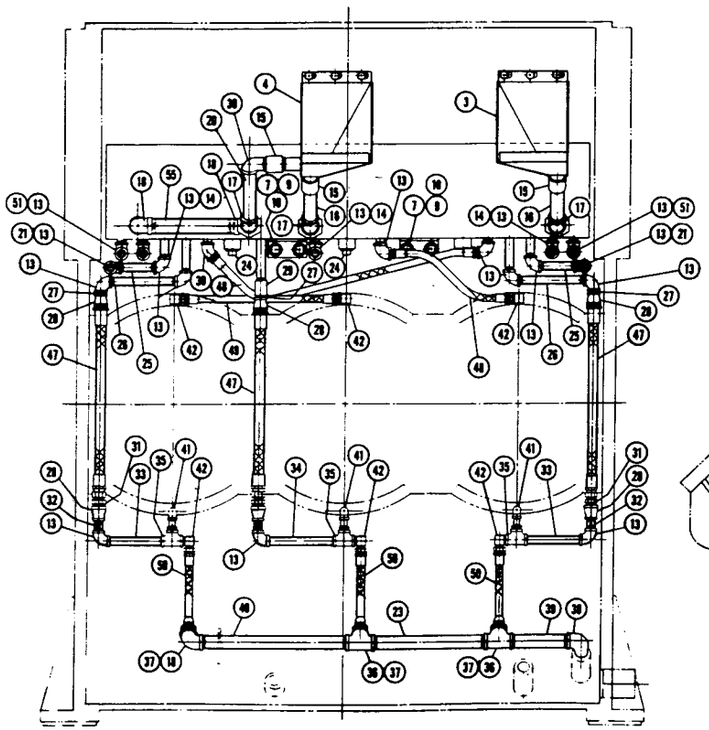
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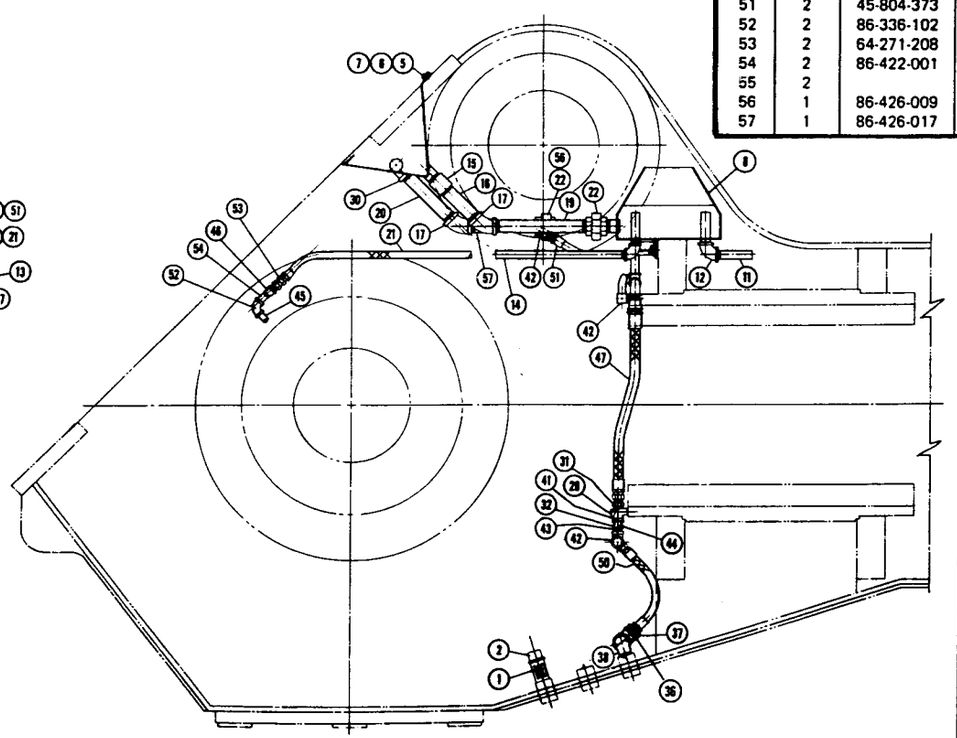
SIZE C

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

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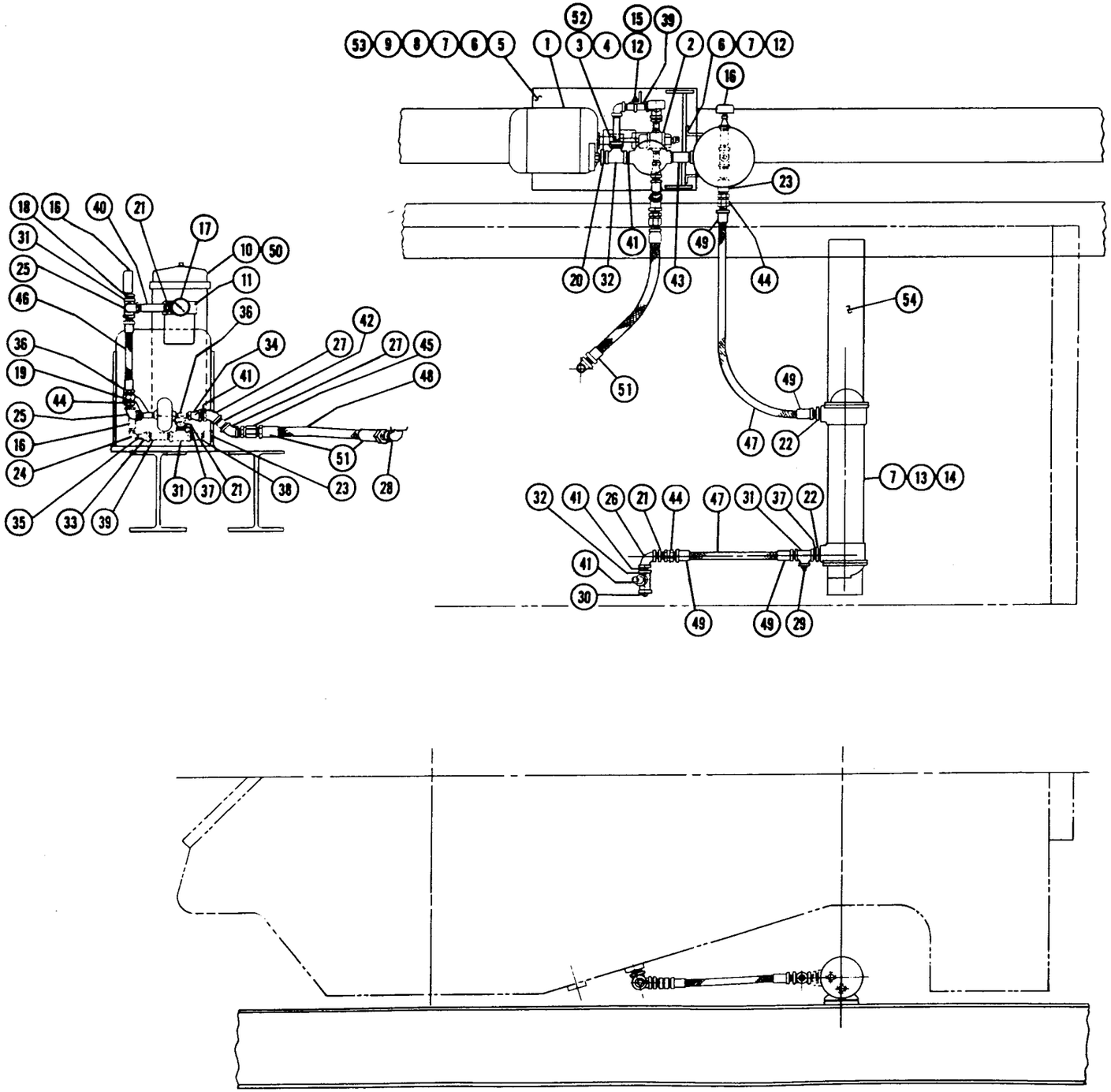
ISSUE DATE: 11–15–89

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		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.

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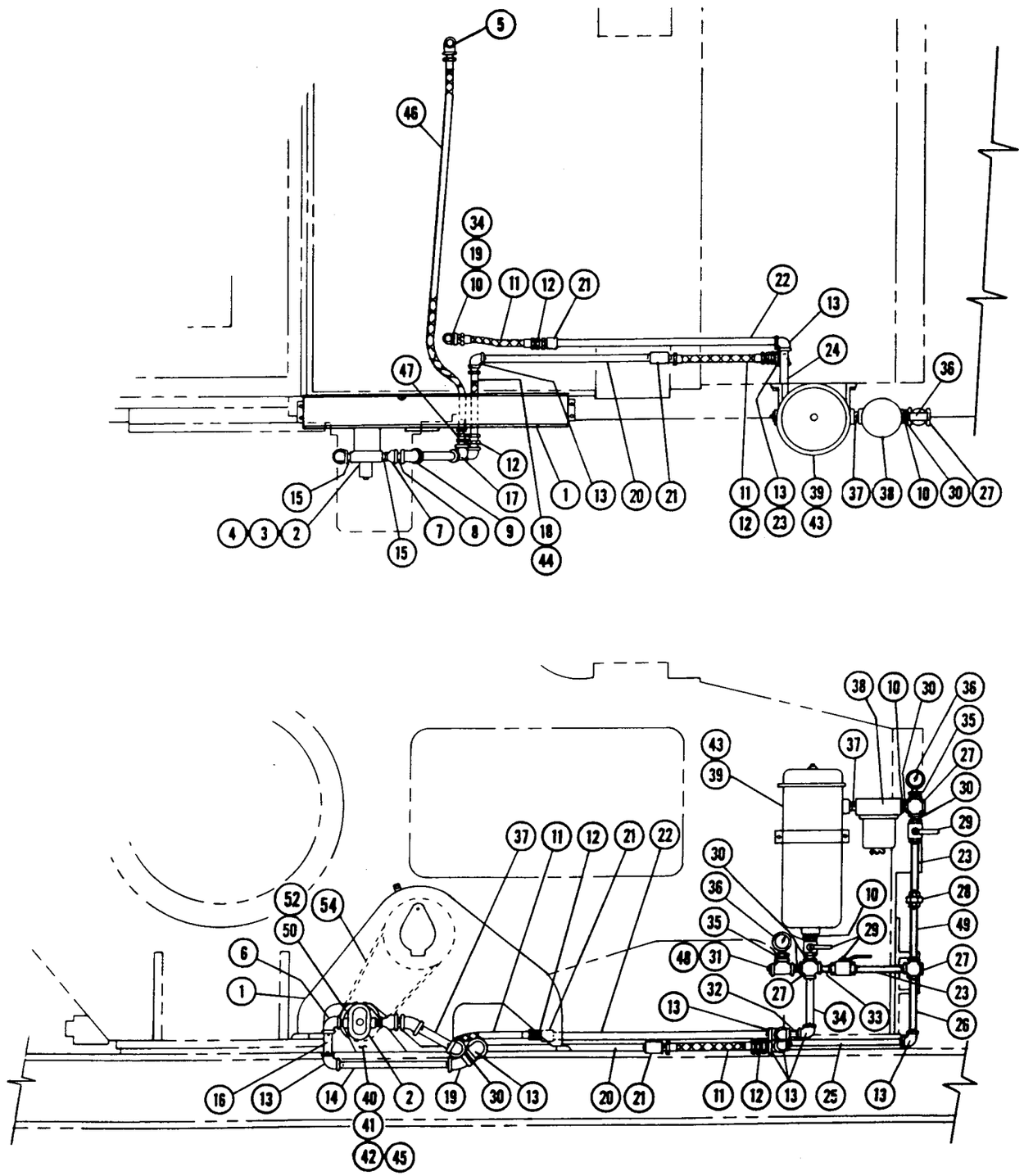
ISSUE DATE: 11-15-89

NATIONAL - OILWELL

EXTERNAL LUBRICATION SYSTEM (ELECTRICAL) A1700-PT TRIPLEX PISTON PUMP

DRAWING NO. P403-AN1

SIZE 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

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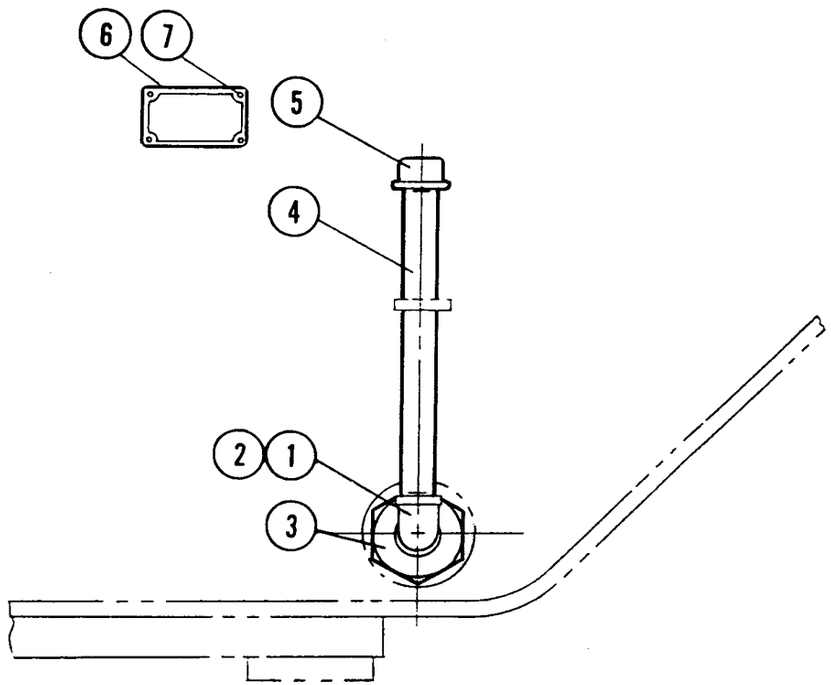
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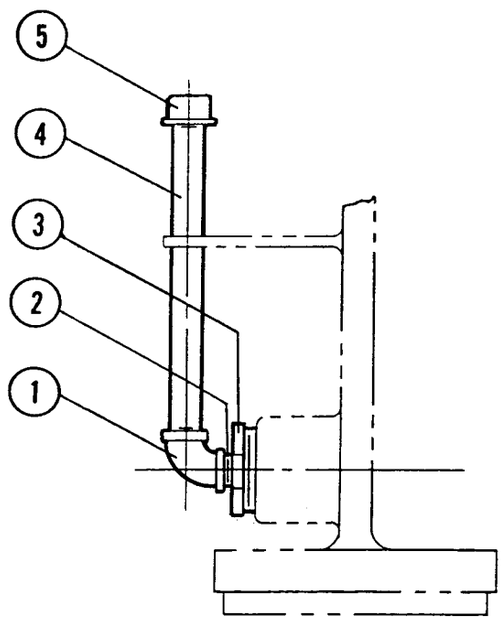
NATIONAL-OILWELL

EXTERNAL LUBRICATION SYSTEM (MECHANICAL) A1700-PT TRIPLEX PISTON PUMP

DRAWING NO. P185-AS1 SIZE 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





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ISSUE DATE: 11–15–89

NATIONAL-OILWELL

OIL LEVEL ASSEMBLY
A1700-PT TRIPLEX PISTON PUMP

DRAWING NO. P185-AK1

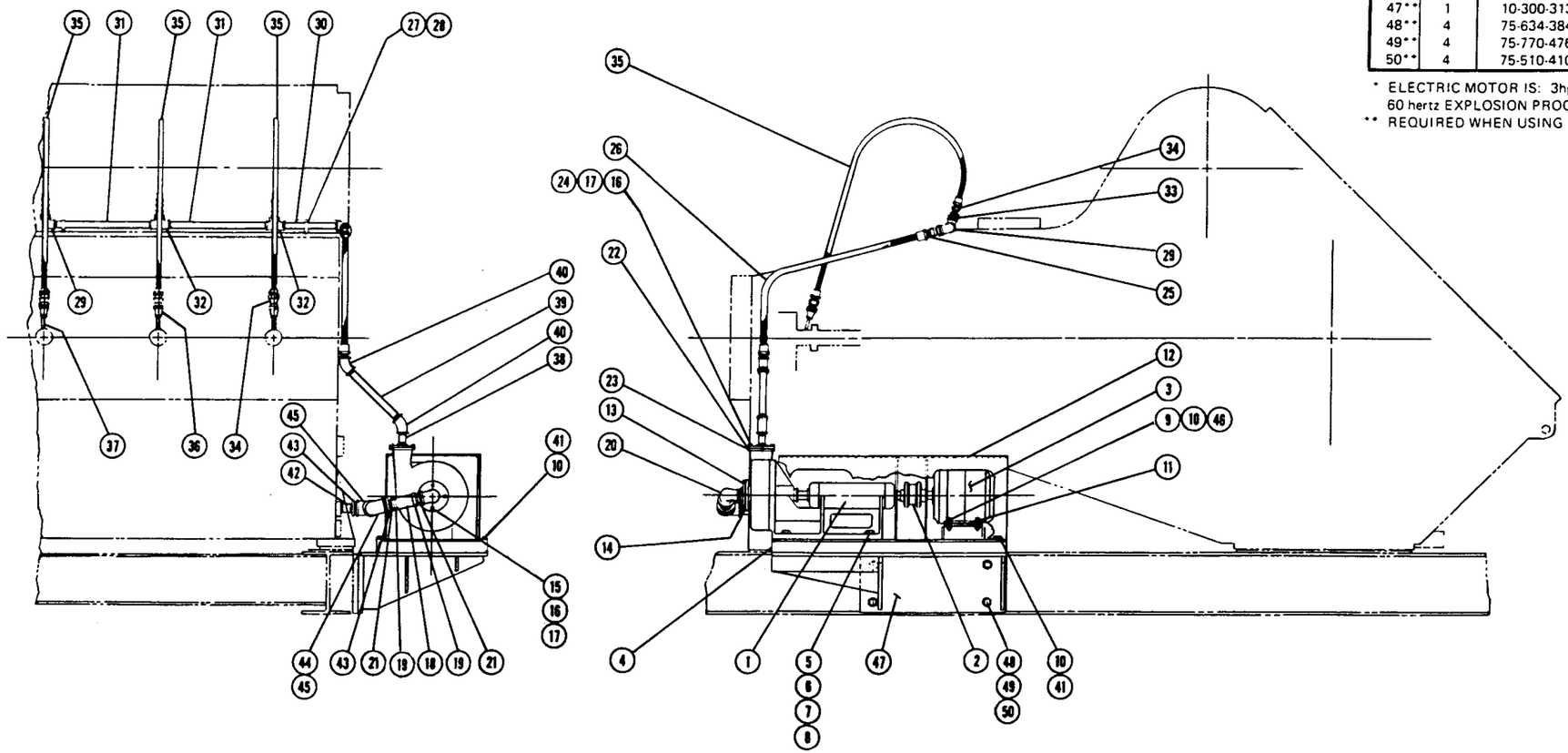
SIZE B

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/FRAME 182–T.

** REQUIRED WHEN USING THE STANDARD TWO RUNNER PUMP BASE.



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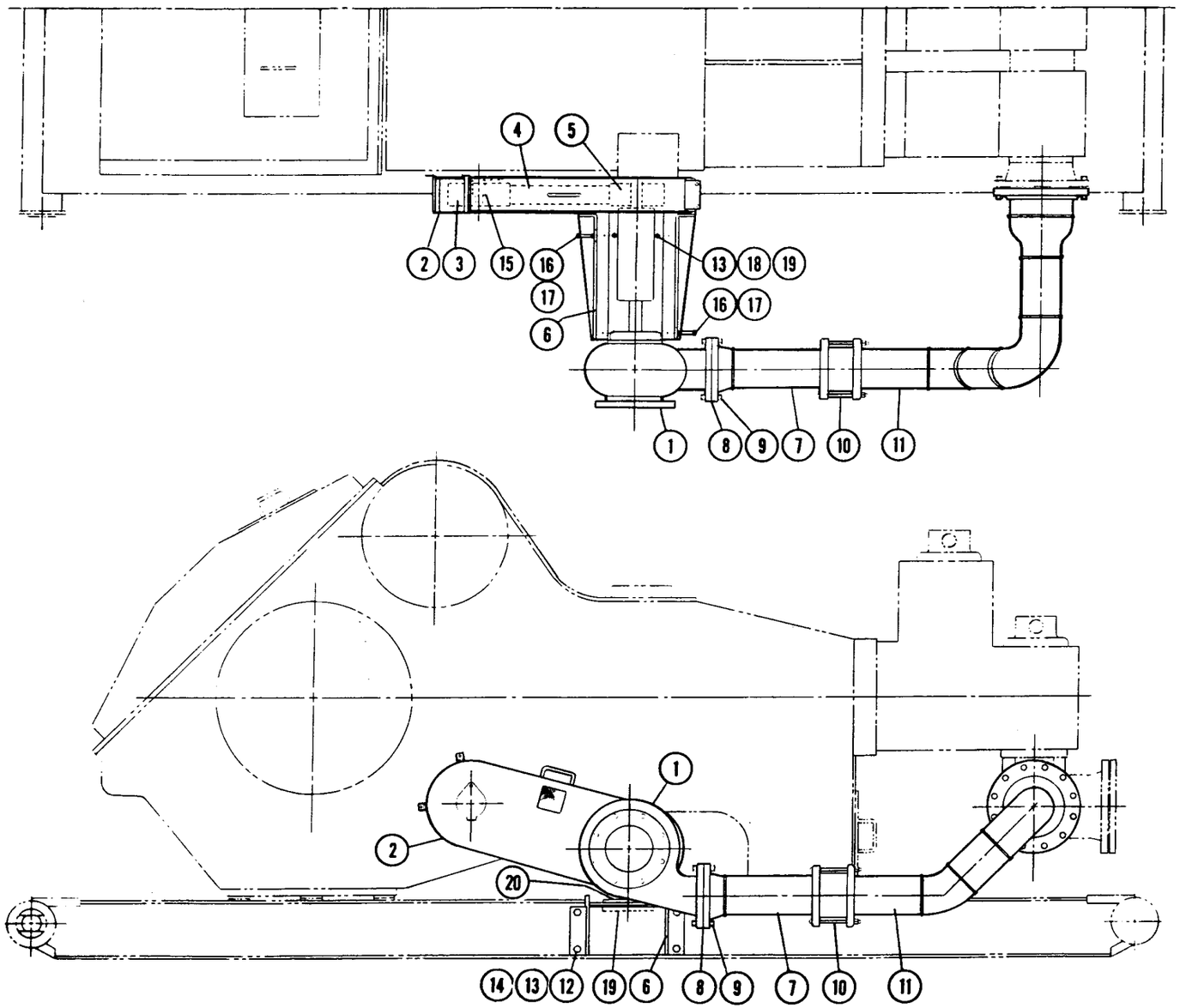
ISSUE DATE: 11–15–89

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

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NATIONAL - OILWELL

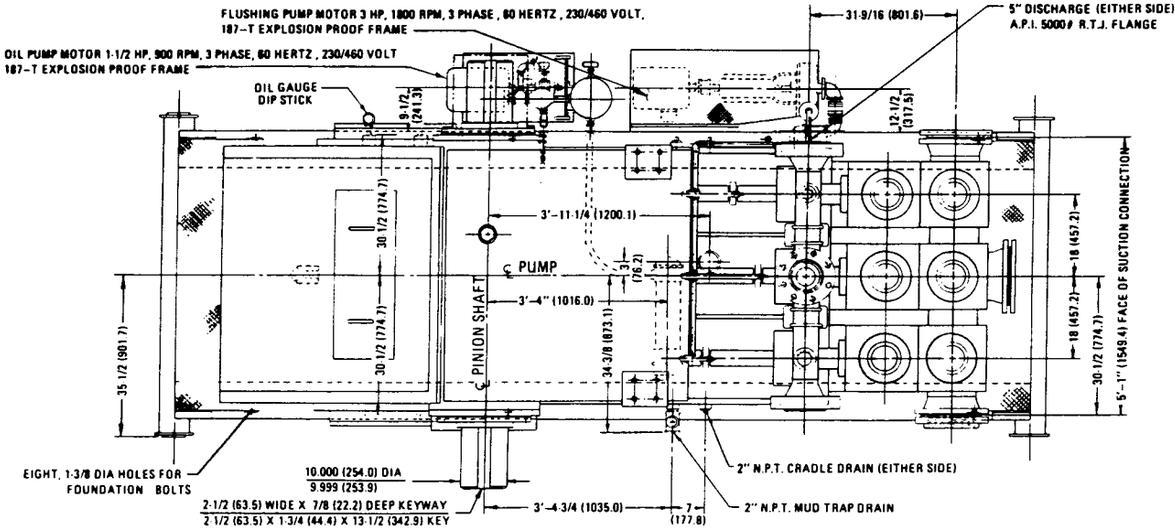
CHARGING PUMP
A1700-PT TRIPLEX PISTON PUMP

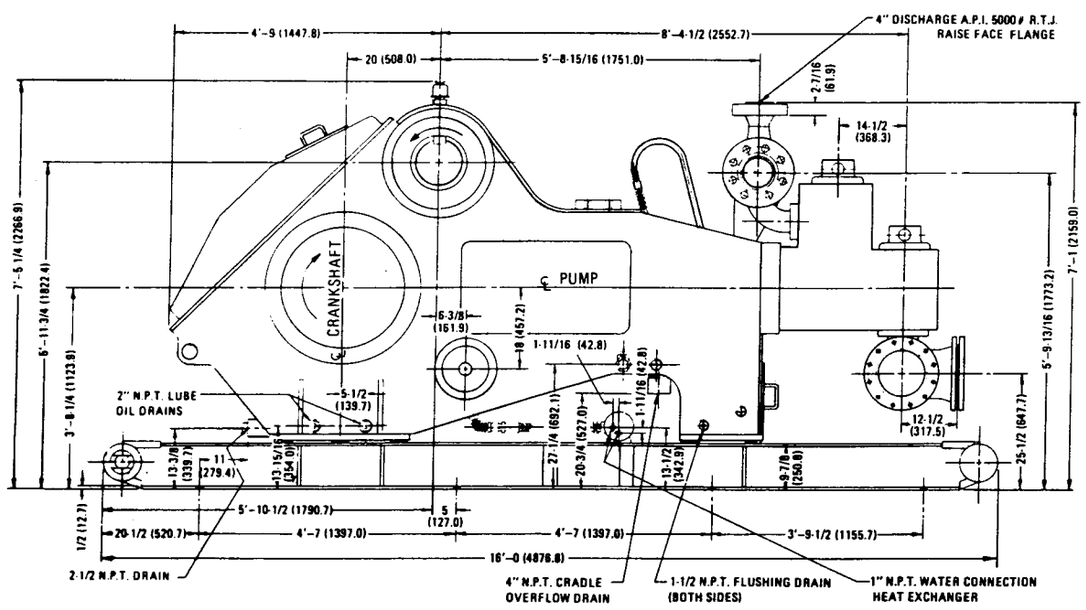
DRAWING NO. P403-AH1

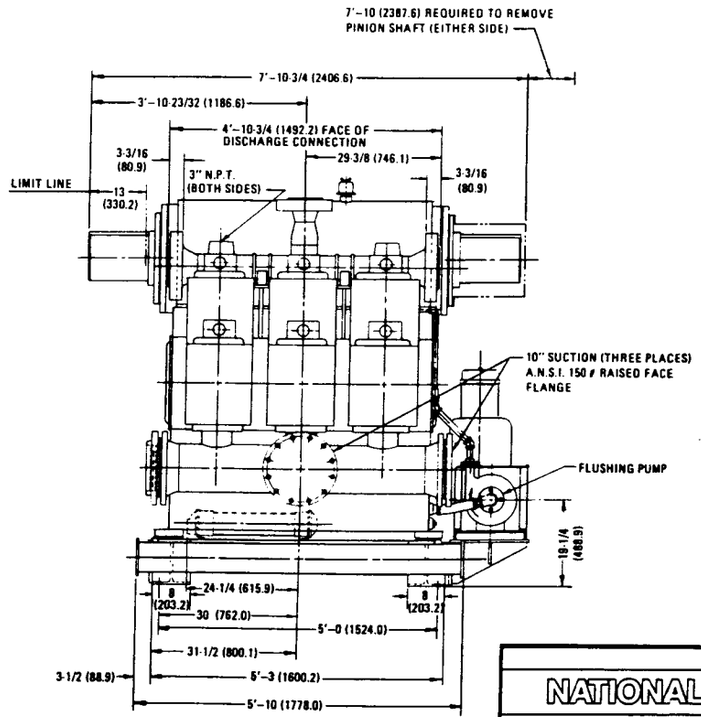
SIZE D

NOTE: THESE DIMENSIONS ARE ACCURATE BUT SHOULD NOT BE USED FOR INSTALLATION UNLESS CERTIFIED. DIMENSIONS IN BRACKETS ARE MEASURED IN MILLIMETERS.

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







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ISSUE DATE: 11-15-89

NATIONAL-OILWELL

OUTLINE DRAWING
A1700-PT TRIPLEX PISTON PUMP

		DRAWING NO.	SIZE
		P184-D2	D