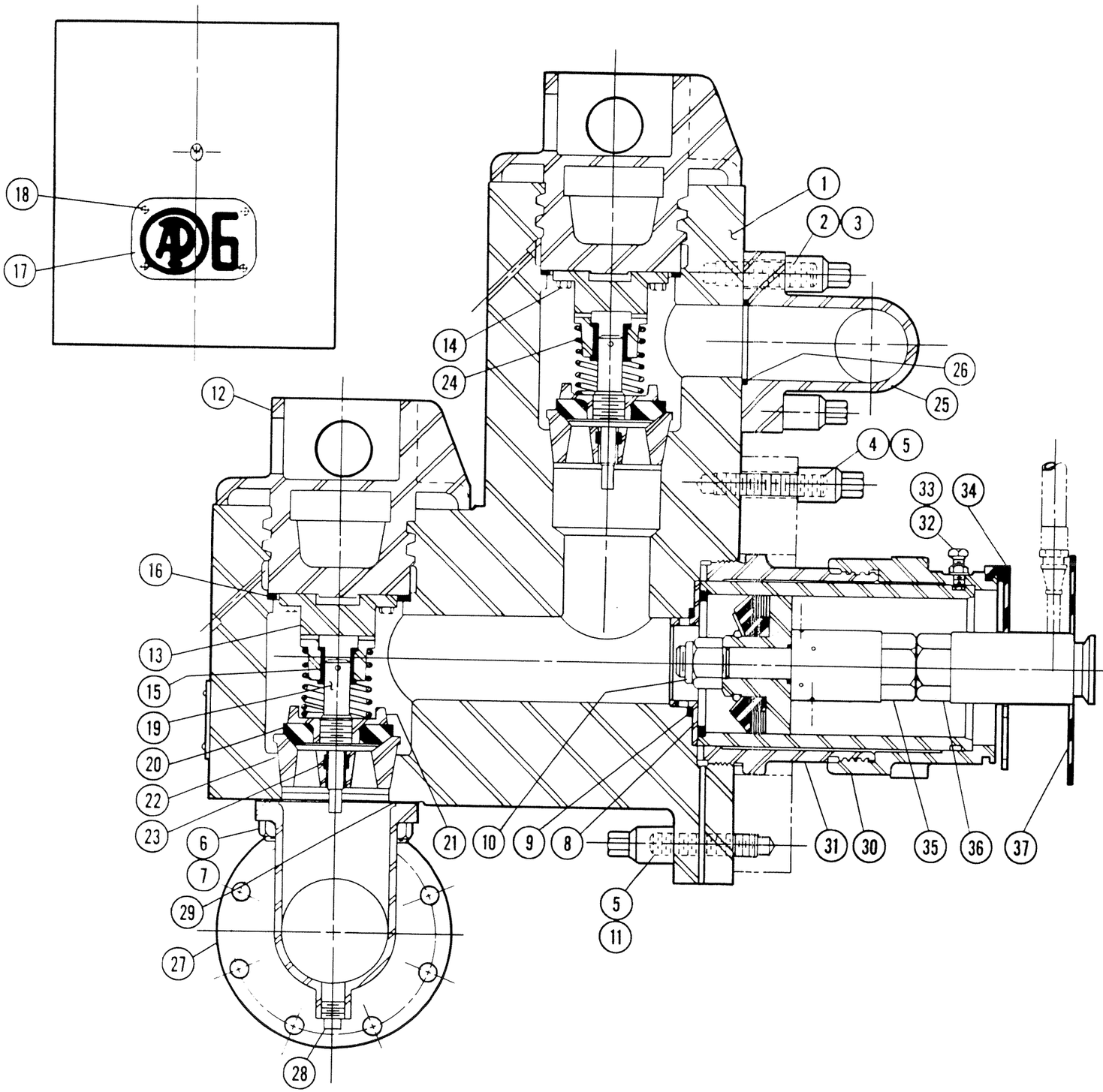


BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1*	3	10-304-052	FLUID END, STUDDED *
2	12	45-810-063	1-1/4–8 X 4-1/2 STUD
3	12	16-700-025	1-1/4 –8 ACORN NUT
4	6	45-810-020	1-1/8–8 X 5-1/4 STUD
5	12	10-200-004	1-1/8–8 ACORN NUT
6	12	45-810-018	7/8–9 X 3" STUD
7	12	75-510-314	7/8–9 HEAVY STEEL HEX NUT
8	3	10-305-110	PLATE, LINER WEAR
9	3	20-100-014	GASKET, LINER WEAR PLATE
10	3	20-150-142	1-1/2–8 PISTON RETAINING NUT
11	6	49-002-277	1-1/8–8 X 5" STUD
12	6	10-305-097	COVER, VALVE
13	6	10-304-054	GUIDE, VALVE
14	24	75-632-135	1/2–13 X 1" SELF-LOCKING HEX HEAD CAPSCREW
15	6	20-200-004	BUSHING, VALVE GUIDE
16	6	10-268-004	GASKET, VALVE COVER
17	3	10-305-126	PLATE, SPECIFICATION
18	12	75-632-022	No. 10 X 3/8 CAD. PLATED DRIVE SCREW
19	6	20-160-171	VALVE COMPLETE (INCLUDES ITEMS 20 AND 21)
20	6	20-180-024	DISC (POLYURETHANE), VALVE
21	6	20-860-029	NUT, VALVE
22	6	20-220-099	SEAT, VALVE (INCLUDES ITEM 23)
23	6	20-101-767	BUSHING, VALVE SEAT
24	6	20-160-225	SPRING, VALVE
25	1	10-304-053	MANIFOLD, DISCHARGE
26	3	08-568-023	GASKET, DISCHARGE MANIFOLD
27	1	10-305-087	MANIFOLD, SUCTION (INCLUDES ITEM 28)
28	1	86-486-108	1" C.I. COLID SQUARE HEAD PIPE PLUG
29	3	10-305-103	GASKET, SUCTION MANIFOLD
30	3	10-305-037	NUT, LINER
31	3	10-305-020	ADAPTER, LINER
32	9	75-632-735	5/8–11 X 1-1/4 DOG POINT SQUARE HEAD SETSCREW
33	9	75-510-508	5/8–11 HEX STEEL JAM NUT
34	3	20-460-666	SHIELD, LINER FLUSHING
35	3	20-150-123	ROD, PISTON
36	3	20-150-124	EXTENSION, PISTON ROD
37	3	10-304-115	BAFFLE, FLUID

1

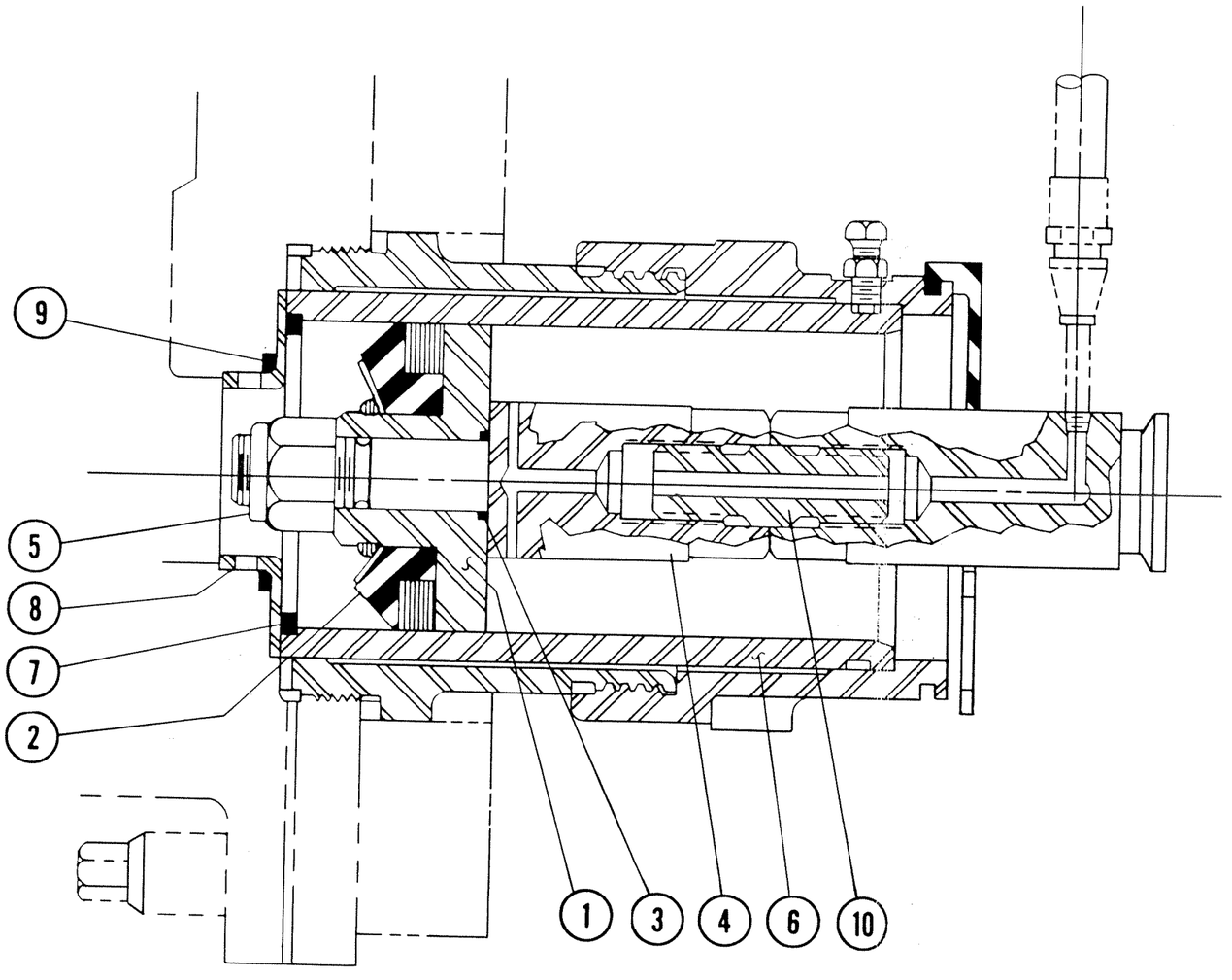
* FLUID END , STUDDED INCLUDES ITEMS 2, 3, 4, 6, 7, 8, 9 AND SIX OF ITEM 5.

ISSUE DATE: 1–15–90

NATIONAL - OILWELL

FLUID END
A600-PT TRIPLEX PISTON PUMP

		DRAWING NO.	SIZE
		P210-AF1	C



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1*	3	20-020-500	4" (SERIES "K") PISTON COMPLETE*
	3	20-020-501	4-1/2 (SERIES "B") PISTON COMPLETE *
	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	20-020-509	7" (SERIES "L") PISTON COMPLETE *
2**	3	20-040-051	4" PISTON RUBBER**
	3	20-040-001	4-1/2 PISTON RUBBER **
	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	20-040-041	7" PISTON RUBBER **
3†	3	99-607-325	"O"–RING (1-1/2 X 1-7/8 X 3/16) †
4	3	20-150-123	PISTON ROD
5	3	20-150-142	1-1/2–8 PISTON RETAINING NUT
6	3	05-329-400	4" SUPER DI–HARD LINER
	3	05-329-450	4-1/2 SUPER DI–HARD LINER
	3	05-329-500	5" SUPER DI–HARD LINER
	3	05-329-550	5-1/2 SUPER DI–HARD LINER
	3	05-329-575	5-3/4 SUPER DI–HARD LINER
	3	05-329-600	6" SUPER DI–HARD LINER
	3	05-329-650	6-1/2 SUPER DI–HARD LINER
	3	05-329-700	7" SUPER DI–HARD LINER
7	3	20-100-013	4" LINER GASKET
	3	20-100-014	4-1/2 LINER GASKET
	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	20-100-017	7" LINER GASKET
8	3	10-305-110	LINER WEAR PLATE
9	3	20-100-014	LINER WEAR PLATE GASKET
10	3	10-305-203	PISTON ROD STUD

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.

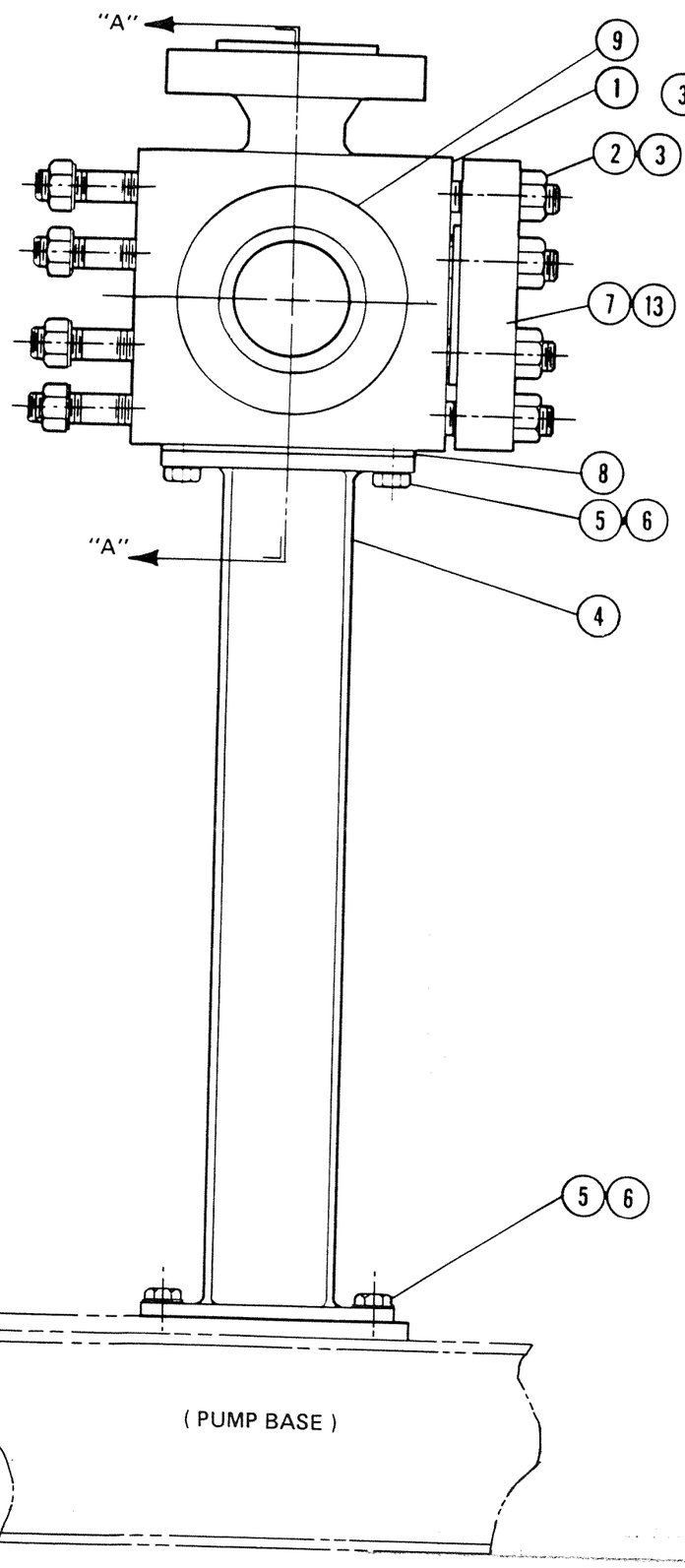
† "O"–RINGS ARE PACKAGED SIX PIECES PER PACKAGE AND ARE IDENTIFIED AS COMMODITY NUMBER 20-680-020.

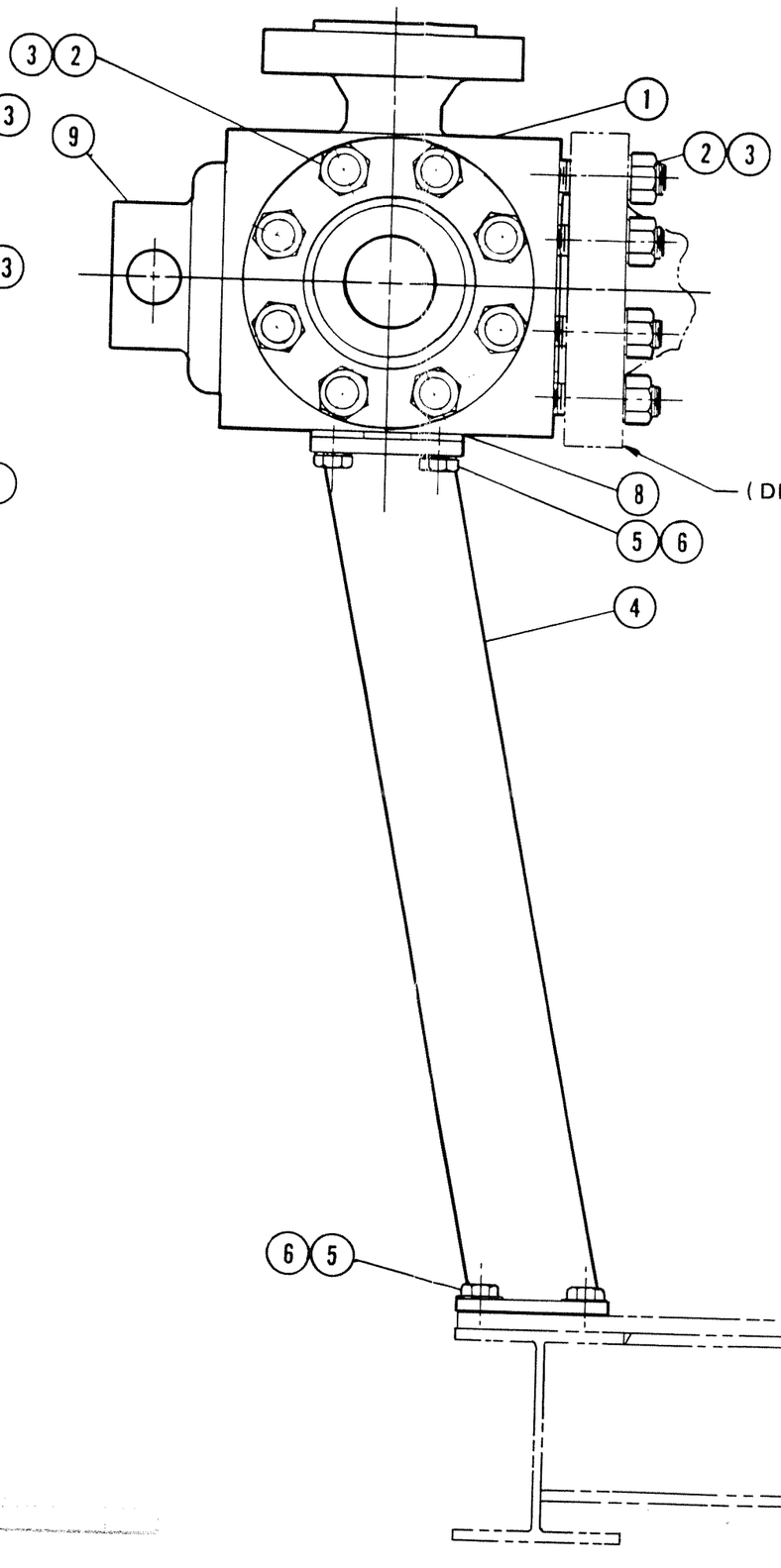
ISSUE DATE: 1–15–90

NATIONAL-OILWELL

LINER & PISTON ASSEMBLY
A600-PT TRIPLEX PISTON PUMP

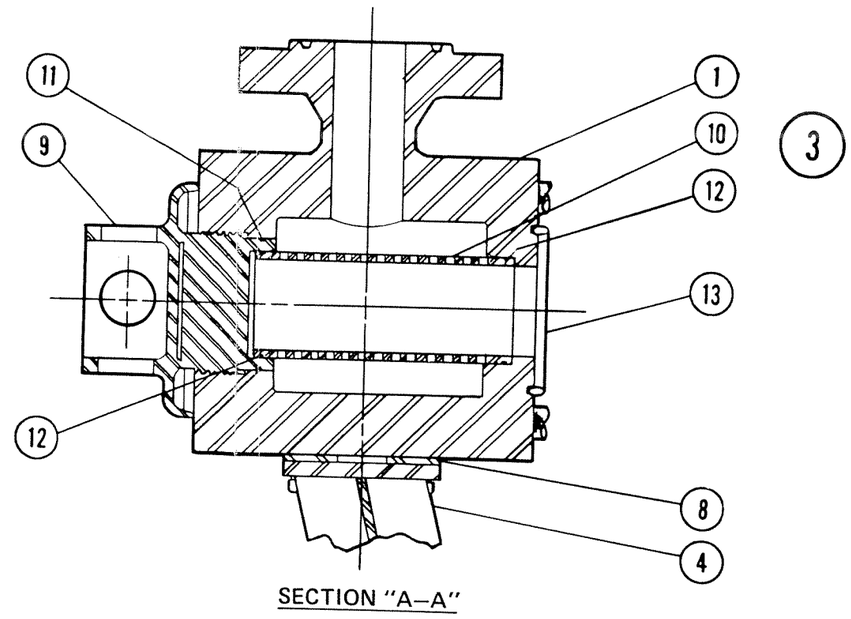
		DRAWING NO.	SIZE
		P210-BU1	D





BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10 304 066	STRAINER BLOCK, STUDDED (INCLS. ITEMS 2 & 3)
2	24	11 060 464	1-1/4 – 8 X 5-1/4 STUD
3	24	75 510 121	1-1/4 –8 HEAVY HEX NUT
4	1	10 304 068	SUPPORT, STRAINER BLOCK
5	4	75 635 091	1" – 8 X 2" HEX HD HT CAPSCREW
6	8	75 770 478	1" EXT. SHAKEPROOF LOCKWASHER
7•	2	98 032 117	4" A.P.I. 5000# R.T. J. BLIND FLANGE•
8		10 307 064	SHIM SET (2 REQ'D) CONSISTS OF THE FOLLOWING
	12	10 307 065	SHIM (16 GAUGE)
	4	10 307 066	SHIM (11 GAUGE)
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 1/8)
13	3	78 206 539	OVAL RING GASKET (R–39)
14••	8	45 803 503	1-1/4–8 X 7-1/2 STUD W/2 NUTS ••
15	4	75 635 429	1"–8 X 1-1/4 HEX HD HT CAPSCREW

• ONE (1) REQ'D FOR OPPOSITE END OF DISCHARGE MANIFOLD.
•• USE WITH ITEM 7 AT OPPOSITE END OF DISCHARGE MANIFOLD.



SECTION "A–A"

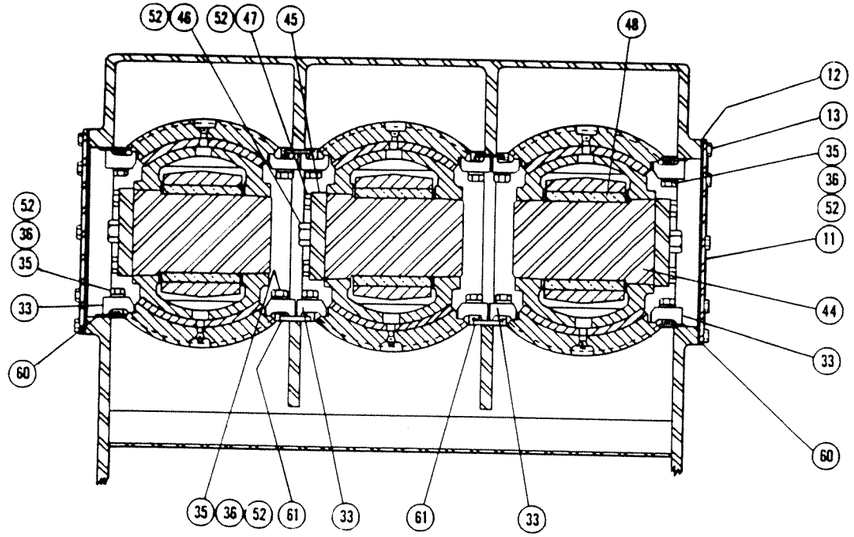
ISSUE DATE: 1–15–90

NATIONAL-OILWELL

STRAINER BLOCK ASSY.
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-AK1

SIZE D

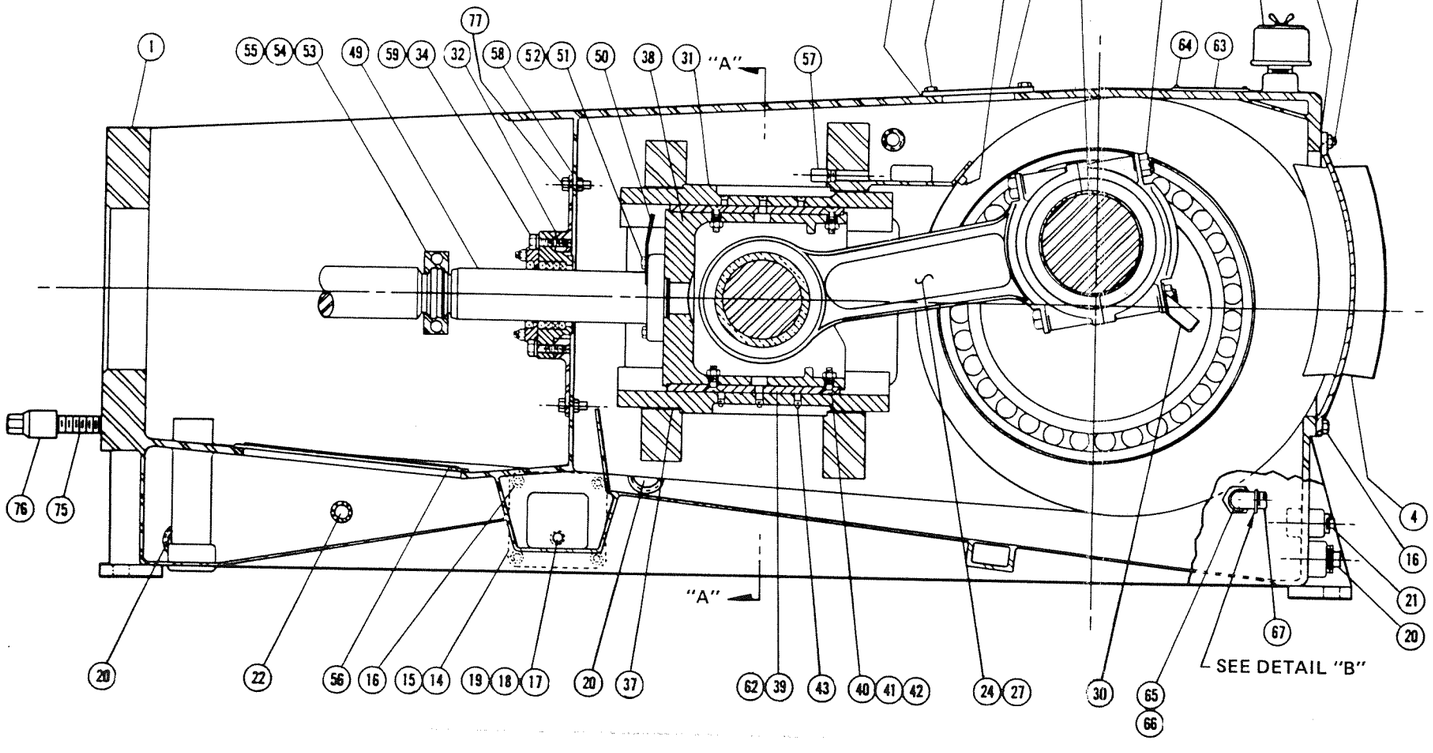


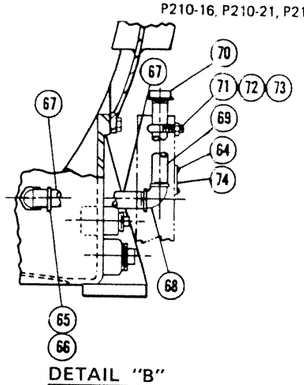
SECTION "A–A"

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-304-000	FRAME END, STUDDED (INCLUDES ITEMS 2,3,75 & 76)
2	2	29-000-281	1/2–13 X 1-1/2 STUD
3	2	75-510-308	1/2–13 HEAVY STEEL HEX NUT
4	1	10-305-106	COVER, CRANKCASE
5	1	45-803-857	GASKET, CRANKCASE COVER
6	3	86-486-102	1/4 C.I. SOLID SQUARE HEAD PIPE PLUG
7	2	10-305-140	COVER
8	2	10-305-058	GASKET, COVER
9	8	75-634-313	3/8–16 X 3/4 HEX HEAD HT CAPSCREW
10	8	75-770-203	3/8 PLATE WASHER
11	2	10-304-030	PLATE, NAME
12	2	10-304-049	GASKET, NAME PLATE
13	20	75-634-415	1/2–13 X 3/4 HEX HEAD HT CAPSCREW
14	2	10-305-011	COVER, MUD TRAP
15	2	10-305-054	GASKET, MUD TRAP COVER
16	24	75-634-417	1/2–13 X 7/8 HEX HEAD HT CAPSCREW
17	1	86-486-104	1/2 C.I. SOLID SQUARE HEAD PIPE PLUG
18	1	86-424-001	1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
19	1	78-101-132	1/2 STOP COCK
20	5	86-486-112	1/2 C.I. SOLID SQUARE HEAD PIPE PLUG
21	2	86-486-108	1" C.I. SOLID SQUARE HEAD PIPE PLUG
22	4	86-486-106	3/4 C.I. SOLID SQUARE HEAD PIPE PLUG
23	1	64-229-100	BREATHER
24	3	10-304-113	CONNECTING ROD (INCLUDES ITEMS 25, 26, 27 & 48)
25	12	16-247-001	7/8–9 SQUARE HEAD BOLT
26	12	75-513-112	7/8–9 SLOTTED HEAVY STEEL HEX NUT
27	6	75-555-770	1/2 X 2" DOWEL PIN
28	12	75-103-008	5/32 X 2" COTTER
29	3	16-347-002	BEARING (TWO HALVES), CRANK PIN
30	3	10-305-015	SLINGER, OIL

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
31	6	10-304-002	GUIDE , CROSSHEAD
32	3	16-486-660	GASKET, DIAPHRAGM
33	24	10-304-027	CLAMP, CROSSHEAD GUIDE
34	12	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
35	24	45-143-501	5/8–11 X 2-1/4 DRILLED HEX HEAD HT CAPSCREW
36	24	75-770-100	5/8 SPHERICAL WASHER
37		10-304-018	SHIM SET (2 REQ'D.) CONSISTS OF THE FOLLOWING
	72	10-304-019	SHIM (.005" THICK)
38	3	10-235-000	CROSSHEAD
39	6	10-304-012	SHOE, CROSSHEAD
40	12	75-633-196	1/2–13 X 1-1/2 FLAT HEAD MACHINE SCREW
41	12	75-510-506	1/2–13 STEEL HEX JAM NUT
42	12	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
43	9	86-486-102	1/4 C.I. SOLID SQUARE HEAD PIPE PLUG
44	3	10-239-000	PIN, CROSSHEAD
45	3	10-304-015	PLATE, CROSSHEAD PIN RETAINING
46	6	45-142-603	7/8–9 X 2" DRILLED HEAD HEAD HT CAPSCREW
47	12	45-143-501	5/8–11 X 2-1/4 DRILLED HEX HEAD HT CAPSCREW
48	3	11-044-025	BEARING, CROSSHEAD PIN
49	3	16-484-101	ROD, CROSSHEAD EXTENSION
50	3	16-341-001	BAFFLE, CROSSHEAD EXTENSION
51	18	45-143-007	1/2–13 X 1-3/4 DRILLED HEX HEAD HT CAPSCREW
52		59-800-016	16 GA. ANNEALED STEEL WIRE
53	3	20-150-132	EXTENSION ROD CLAMP (INCLUDES ITEMS 54 & 55)
54	6	75-074-694	5/8–11 X 6" HEX HEAD MACHINE BOLT
55	12	75-510-438	5/8–11 STEEL HEX NUT
56	3	10-304-055	COVER
57	3	86-424-403	1/2 X 1-1/2 PIPE NIPPLE (THREADED ONE END)
58	3	10-304-028	GASKET, DIAPHRAGM SUPPORT
59	12	75-634-365	5/8–11 X 1-3/4 HEX HEAD HT CAPSCREW
60*	8	10-304-094	SPACER (OUTSIDE), CROSSHEAD GUIDE CLAMP *
61*	8	10-304-093	SPACER (INSIDE), CROSSHEAD GUIDE CLAMP *
62		10-238-014	SHIM SET (6 REQ'D.) CONSISTS OF THE FOLLOWING
	12	10-238-008	SHIM (.002" THICK)
	6	10-238-015	SHIM (.005" THICK)
	12	10-238-016	SHIM (.007" THICK)
63	1	10-304-111	PLATE, INSTRUCTION
64	8	75-632-012	No. 2 X 1/4 CAD. PLATED DRIVE SCREW
65	1	86-061-019	1-1/4 X 1/2 C.I. HEX PIPE BUSHING
66	1	86-342-104	1/2 X 90° 150# M.I. STREET ELBOW
67	1		1/2 X 14-3/8 SCH 40 BW STEEL PIPE
68	1	86-336-104	1/2 X 90° 150# M.I. PIPE ELBOW
69	1	86-424-023	1/2 X 7 SCH 40 BW STEEL PIPE
70	1	06-009-375	GAUGE, OIL
71	1	45-803-866	1/4 U–BOLT
72	2	75-510-400	1/4–20 STEEL HEX NUT
73	2	75-770-470	1/4 EXTERNAL SHAKEPROOF LOCKWASHER
74	1	10-304-107	PLATE, PUMP OIL LEVEL
75	6	49-002-277	1-1/8–8 X 5" STUD
76	6	10-200-004	1-1/8 –8 STEEL HEX NUT
77	24	99-606-340	1/2 STAT–O–SEAL (600 SERIES) WASHER

* ONLY REQUIRED ON PUMPS WITH THE FOLLOWING SERIAL NUMBERS : P210-16, P210-21, P210-23, P210-24, P210-25, P210-26 AND P210-38.





DETAIL "B"

ISSUE DATE: 1–15–90

NATIONAL - OILWELL

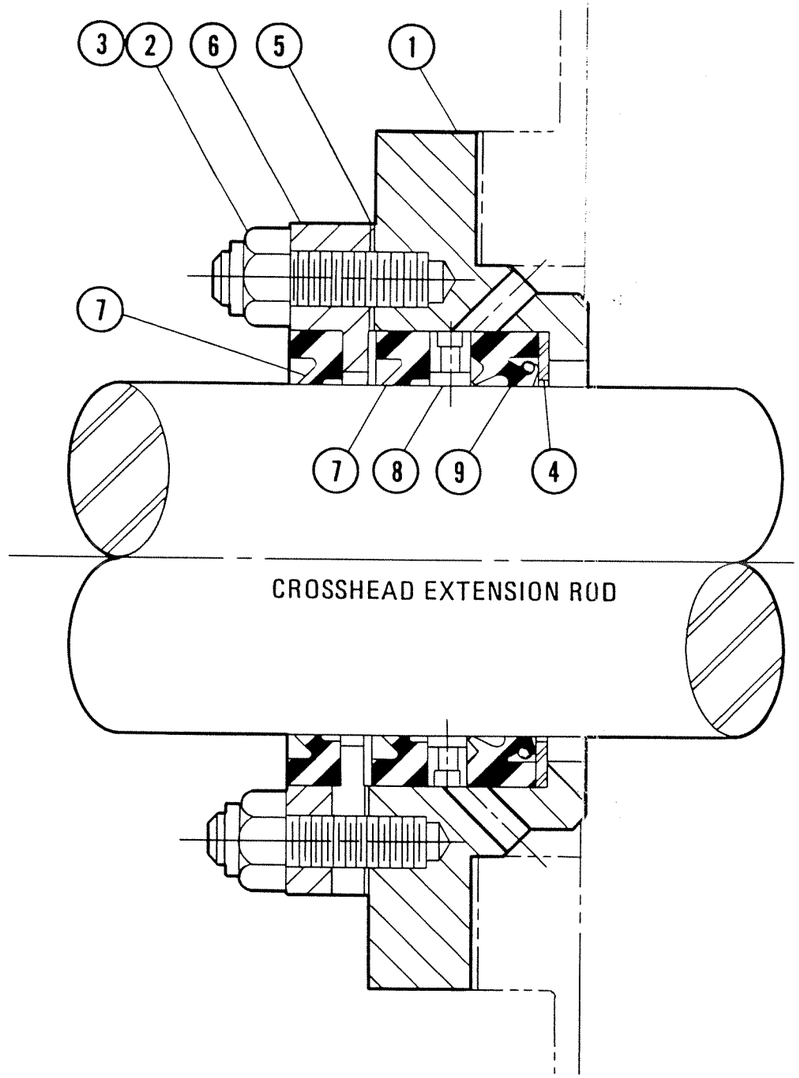
POWER END
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-AX1

SIZE D

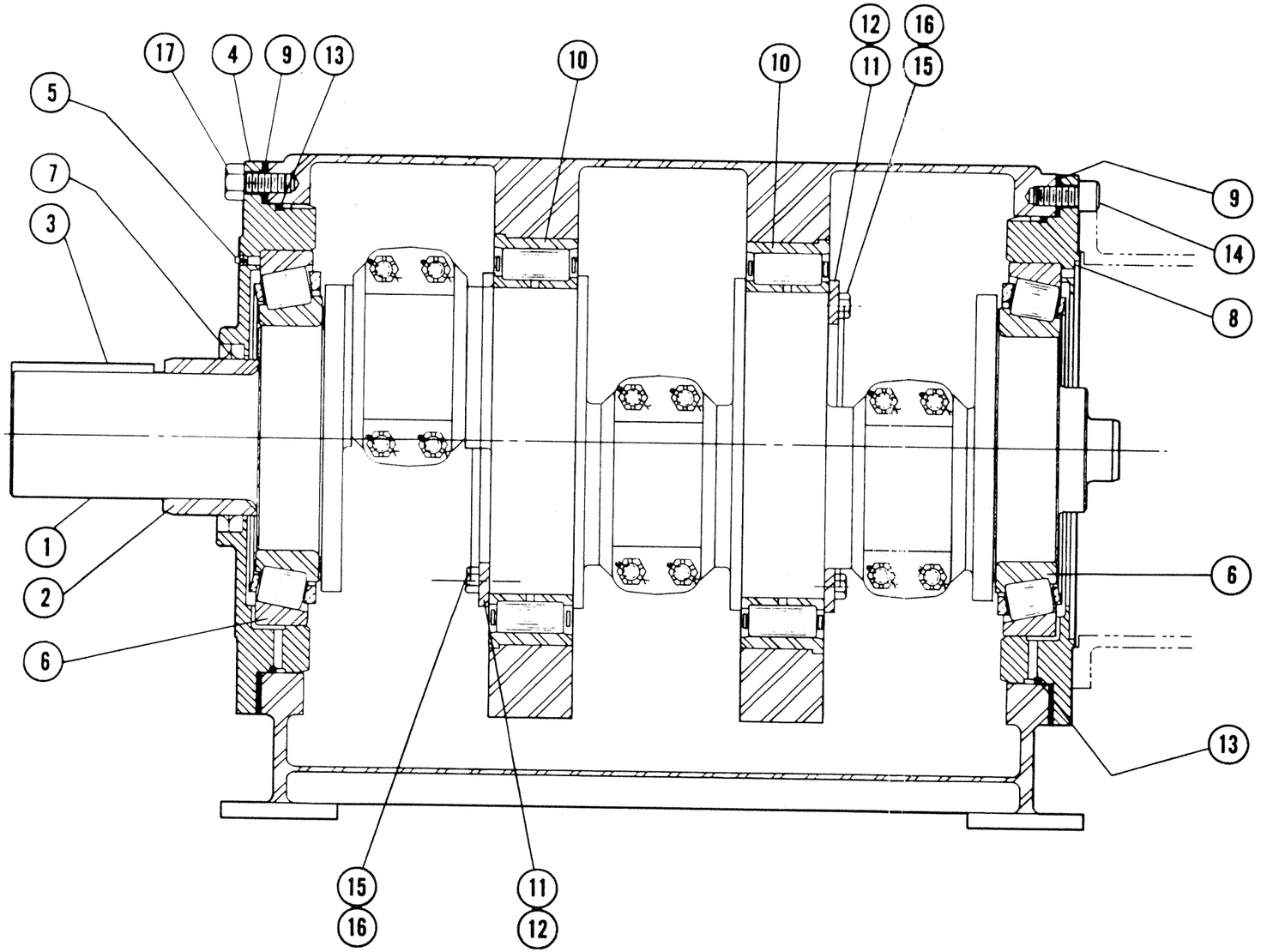
4

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	3	16-566-005	DIAPHRAGM HOUSING (INCLS. ITEMS 2 & 3)
2	12	49-002-925	1/2–13 X 2" STUD
3	12	75-509-994	1/2–13 HEX STL LOCKNUT
4	3	16-566-010	WASHER, DIAPHRAGM
5	3	16-566-008	GASKET, DIAPHRAGM
6	3	16-566-009	GLAND, DIAPHRAGM
7	6	16-566-002	RING, WIPER
8	3	16-566-012	RING, LANTERN
9	3	38-630-409	OIL SEAL



5

ISSUE DATE: 1–15–90			
NATIONAL - OILWELL			
DIAPHRAGM ASSEMBLY A600-PT TRIPLEX PISTON PUMP			
		DRAWING NO. P124-AD1	SIZE B



BILL OF MATERIAL			
ITEM	REQ'D.	COMM NO	DESCRIPTION
1	1	10-304-102	CRANKSHAFT
2	1	10-305-043	SPACER, CRANKSHAFT
3	1	34-134-052	KEY (1-1/2 X 1" X 6-13/16), CRANKSHAFT
4	1	10-304-008	HOUSING (GEAR SIDE), MAIN BEARING
5	7	86-486-102	1/4 C.I. SOLID SQUARE HEAD PIPE PLUG
6	2	65-725-980	BEARING (OUTER), MAIN
7	2	68-630-925	OIL SEAL
8	1	10-304-007	HOUSING, MAIN BEARING
9		10-304-020	SHIM SET (2 REQ'D) CONSISTS OF THE FOLLOWING
	12	10-304-021	SHIM (.005" THICK)
	10	10-304-022	SHIM (.007" THICK)
	6	10-304-023	SHIM (.020" THICK)
	2	10-304-024	SHIM (16 GAUGE)
10	2	65-701-980	BEARING, INTERMEDIATE
11	2	10-242-005	RETAINER, INTERMEDIATE BEARING
12	2	10-242-006	SHIM, INTERMEDIATE BEARING RETAINER
13	2	99-609-552	"O"-RING (22-1/2 X 21-15/16 X 1/4)
14	8	75-635-750	1"-8 X 2" SOCKET HEAD HT CAPSCREW
15		59-800-016	16 GA. ANNEALED STEEL WIRE
16	10	21-032-041	3/4-10 X 1-1/4 DRILLED HEX HEAD HT CAPSCREW
17	8	75-635-091	1"-8 X 2" HEX HEAD HT CAPSCREW

6

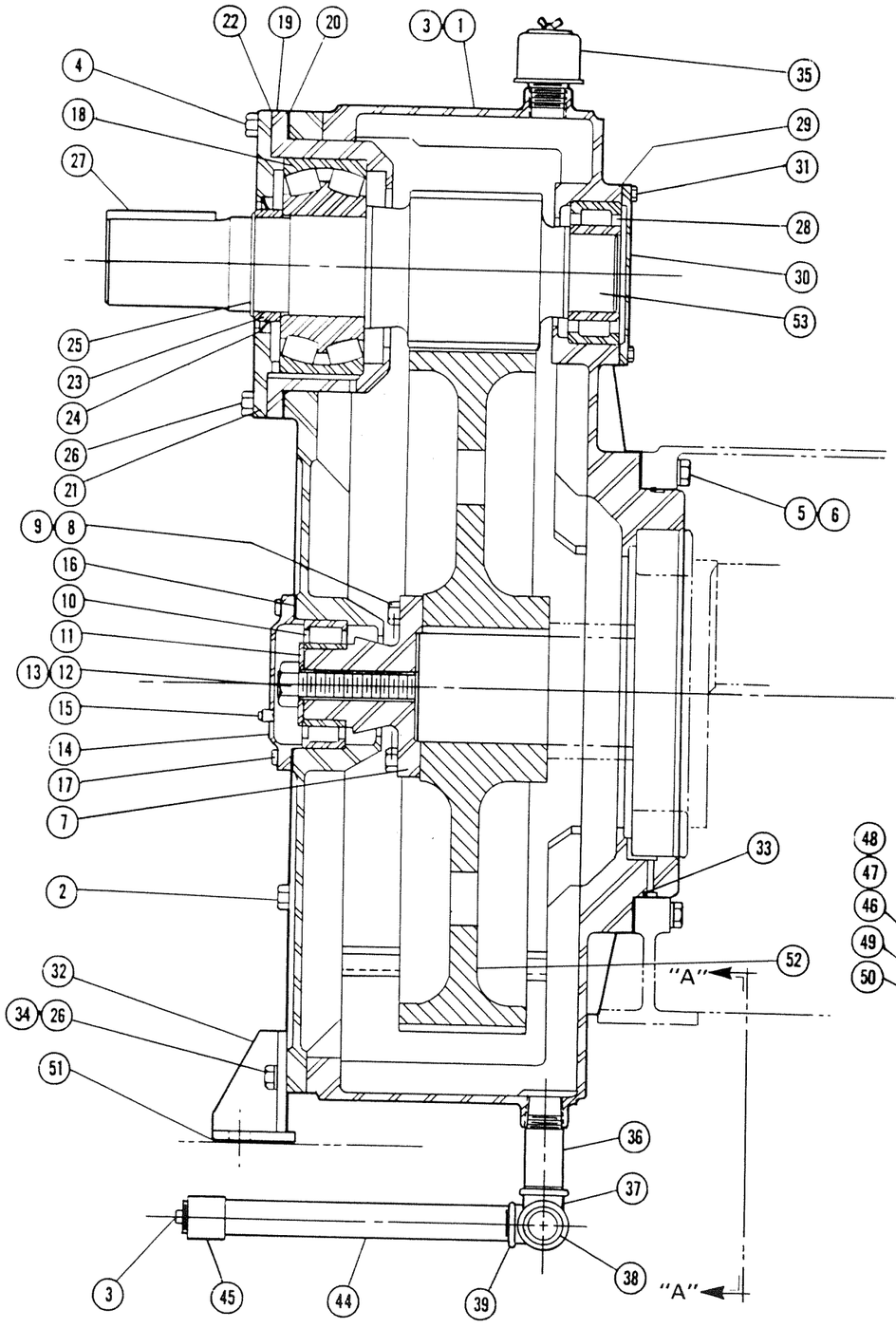
ISSUE DATE: 1-15-90

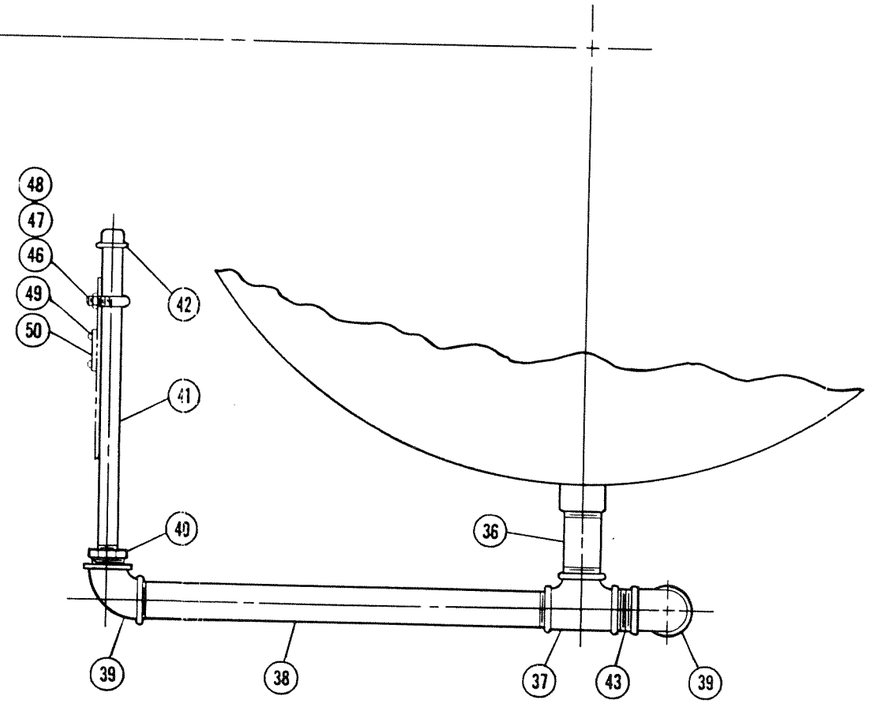
NATIONAL - OILWELL

CRANKSHAFT ASSY.
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-AW1

SIZE C





VIEW "A–A"

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	10-304-001	GEAR CASE (INCLUDES ITEM 2 AND SIX OF ITEM 3)
2	14	75-634-379	3/4–10 X 1-3/4 HEX HEAD HT CAPSCREW
3	7	86-485-512	1-1/2 C.I. SOLID SQUARE HEAD PIPE PLUG
4	6	75-634-427	3/4–10 X 4-1/4 HEX HEAD HT CAPSCREW
5	8	75-635-095	1"–8 X 3-1/4 HEX HEAD HT CAPSCREW
6	8	75-770-478	1" EXTERNAL SHAKEPROOF LOCKWASHER
7	1	10-305-025	EXTENSION, CRANKSHAFT
8	8	21-032-042	3/4–10 X 2" DRILLED HEX HEAD HT CAPSCREW
9		59-800-016	16 GAUGE ANNEALED STEEL WIRE
10	1	65-725-730	BEARING
11	1	10-305-009	RETAINER, BEARING
12	1	45-810-044	1-1/2–6 X 9" STUD
13	1	75-514-026	1-1/2–6 FLEX-LOC LOCKNUT
14	1	10-305-019	RETAINER, BEARING
15	1	86-485-502	1/4 C.I. SOLID SQUARE HEAD PIPE PLUG
16	1	45-803-853	GASKET, BEARING RETAINER
17	6	75-634-351	1/2–13 X 1-1/4 HEX HEAD HT CAPSCREW
18	1	65-724-103	BEARING (OUTER), PINION SHAFT
19	1	10-304-013	HOUSING, PINION BEARING
20		45-804-253	SHIM SET (1 REQ'D) CONSISTS OF THE FOLLOWING
	6	45-804-254	SHIM (.005" THICK)
	5	45-804-255	SHIM (.007" THICK)
	3	45-804-256	SHIM (.020" THICK)
	1	45-804-257	SHIM (16 GAUGE)
21	1	10-304-014	RETAINER, PINION BEARING
22	1	45-804-251	GASKET, PINION BEARING RETAINER
23	1	10-305-121	SPACER, PINION SHAFT
24	1	68-630-825	OIL SEAL
25	1	75-660-208	SNAP RING
26	4	75-634-384	3/4–10 X 2-1/2 HEX HEAD HT CAPSCREW
27	1	45-804-880	KEY (1-1/4 X 7/8 X 5-3/4), PINION SHAFT
28	1	65-725-732	BEARING (INNER) , PINION SHAFT
29	1	45-804-258	GASKET, BEARING RETAINER
30	1	10-304-017	RETAINER, BEARING

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
31	6	75-634-349	1/2–13 X 1" HEX HEAD HT CAPSCREW
32	1	10-304-067	SUPPORT, GEAR CASE
33	1	99-609-552	"O"–RING (22-1/2 X 21-15/16 X 1/4)
34	2	75-770-206	3/4 PLATE WASHER
35	1	64-229-100	BREATHER
36	1	86-428-015	1-1/2 X 4-1/2 SCH 40 BW STEEL PIPE NIPPLE
37	1	86-543-112	1-1/2 150# M.I. PIPE TEE
38	1		1-1/2 X 22-1/4 SCH 40 BW STEEL PIPE
39	2	86-336-112	1-1/2 X 90 ° 150# BLK M.I. PIPE ELBOW
40	1	86-061-025	1-1/2 X 1/2 C.I. BLK HEX PIPE BUSHING
41	1		1/2 X 18-7/8 SCH 40 BW STEEL PIPE
42	1	06-009-375	GAUGE, OIL
43	1	86-428-001	1-1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
44	1		1-1/2 X 16-3/4 SCH 40 BW STEEL PIPE
45	1	86-149-012	1-1/2 150# M.I. PIPE COUPLING
46	1	45-803-866	1/4 U–BOLT
47	2	75-510-400	1/4 –20 STEEL HEX NUT
48	2	75-770-470	1/4 EXTERNAL SHAKEPROOF LOCKWASHER
49	4	75-632-012	No. 2 X 1/4 CAD. PLATED DRIVE SCREW
50	1	10-304-109	PLATE, GEAR CASE INSTRUCTION
51		45-804-670	SHIM SET (1 REQ'D) CONSISTS OF THE FOLLOWING
	6	45-804-671	SHIM (.005" THICK)
	5	45-804-672	SHIM (.007" THICK)
	3	45-804-673	SHIM (.020" THICK)
	2	45-804-674	SHIM (16 GAUGE)
			4.604:1 GEAR RATIO
52	1	10-304-005	GEAR (221 TEETH), CRANKSHAFT
53	1	10-304-009	PINION SHAFT (48 TEETH)
			6.911:1 GEAR RATIO
52	1	10-304-006	GEAR (235 TEETH), CRANKSHAFT
53	1	10-304-010	PINION SHAFT (34 TEETH)

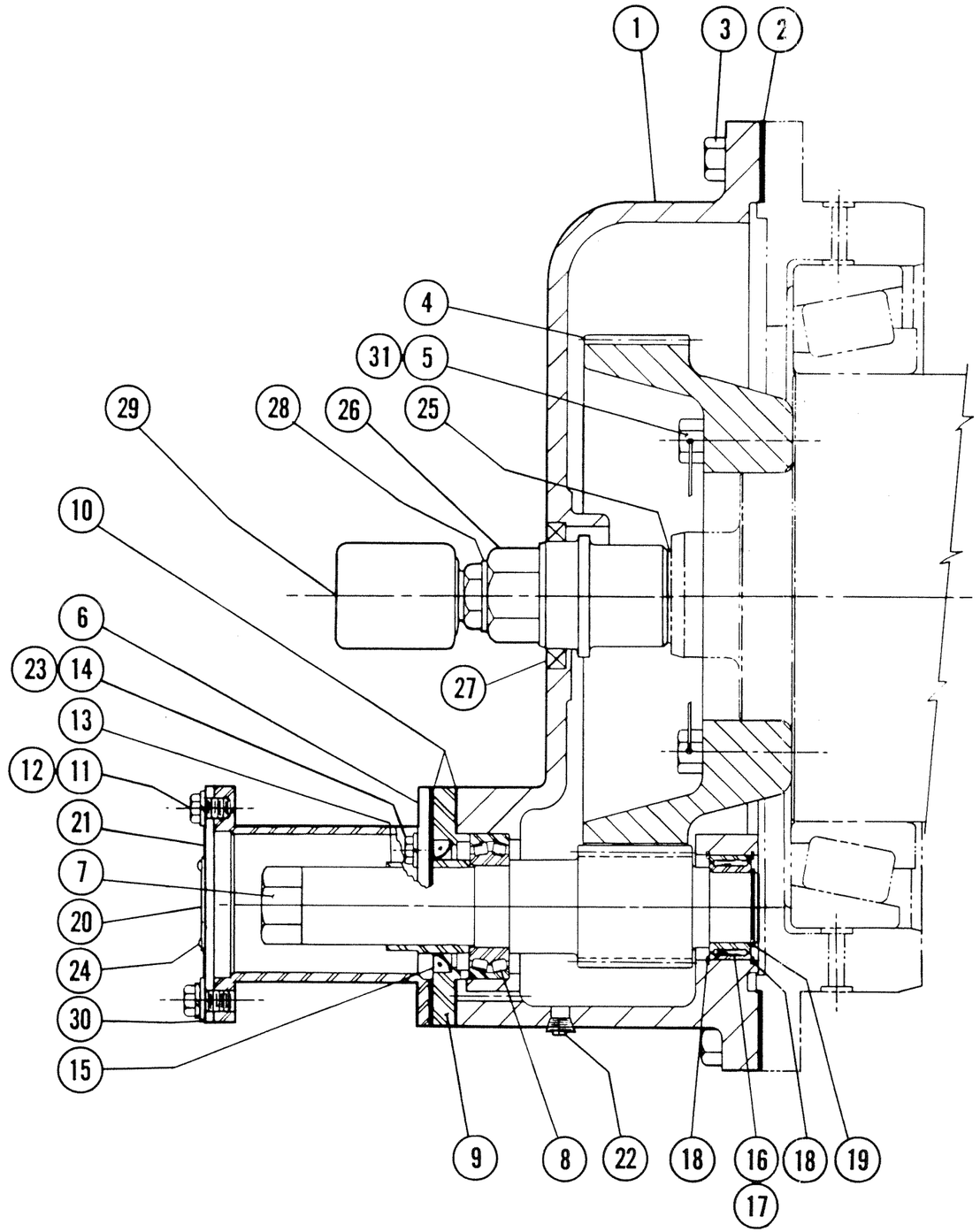
ISSUE DATE: 1–15–90

NATIONAL - OILWELL

GEAR REDUCTION UNIT
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-BA1

SIZE D



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	16-803-096	CASE, CRANKSHAFT DRIVE GEAR
2	1	45-803-854	GASKET
3	16	75-634-379	3/4–10 X 1-3/4 HEX HEAD HT CAPSCREW
4	1	10-305-060	GEAR (122 TEETH), SPUR
5	6	45-803-868	5/8–11 X 3" DRILLED HEX HEAD HT CAPSCREW
6	1	10-304-116	GUARD, COUNTERSHAFT
7	1	10-305-059	COUNTERSHAFT (27 TEETH)
8	1	65-725-031	BEARING
9	1	10-300-032	RETAINER, BEARING
10	2	45-803-797	GASKET, BEARING RETAINER
11	2	75-634-337	3/8–16 X 7/8 HEX HEAD HT CAPSCREW
12	2	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
13	1	10-300-034	SPACER, JACKSHAFT BEARING
14	4	75-634-351	1/2–13 X 1-1/4 HEX HEAD HT CAPSCREW
15	1	38-630-235	OIL SEAL
16	1	65-725-751	BEARING (OUTER)
17	1	65-725-785	BEARING (INNER)
18	2	75-660-038	RETAINING RING
19	1	75-660-135	RETAINING RING
20	1	10-300-317	PLATE, CAUTION
21	1	10-304-118	SHIELD, GUARD
22	1	36-485-502	1/4 C.I. SOLID SQUARE HEAD PIPE PLUG
23	4	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
24	4	75-632-012	No. 2 X 1/4 CAD. PLATED DRIVE SCREW
25	1	16-494-277	GASKET, ROTORSEAL ADAPTER
26	1	16-803-097	ADAPTER, ROTORSEAL
27	1	38-630-280	OIL SEAL
28	1	06-001-803	GASKET, ROTORSEAL
29	1	06-001-857	ROTORSEAL
30	1	75-770-203	3/8 PLATE WASHER
31		59-800-016	16 GA. ANNEALED STEEL WIRE

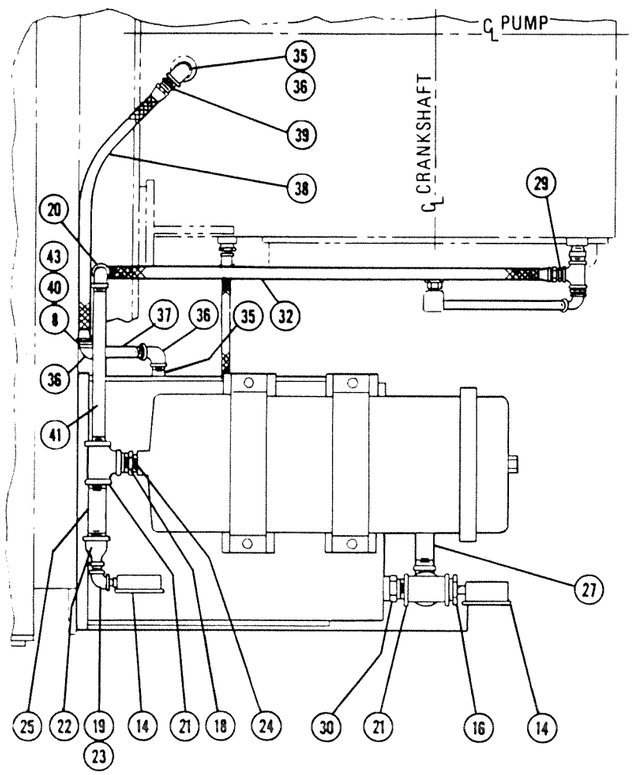
ISSUE DATE: 1–15–90

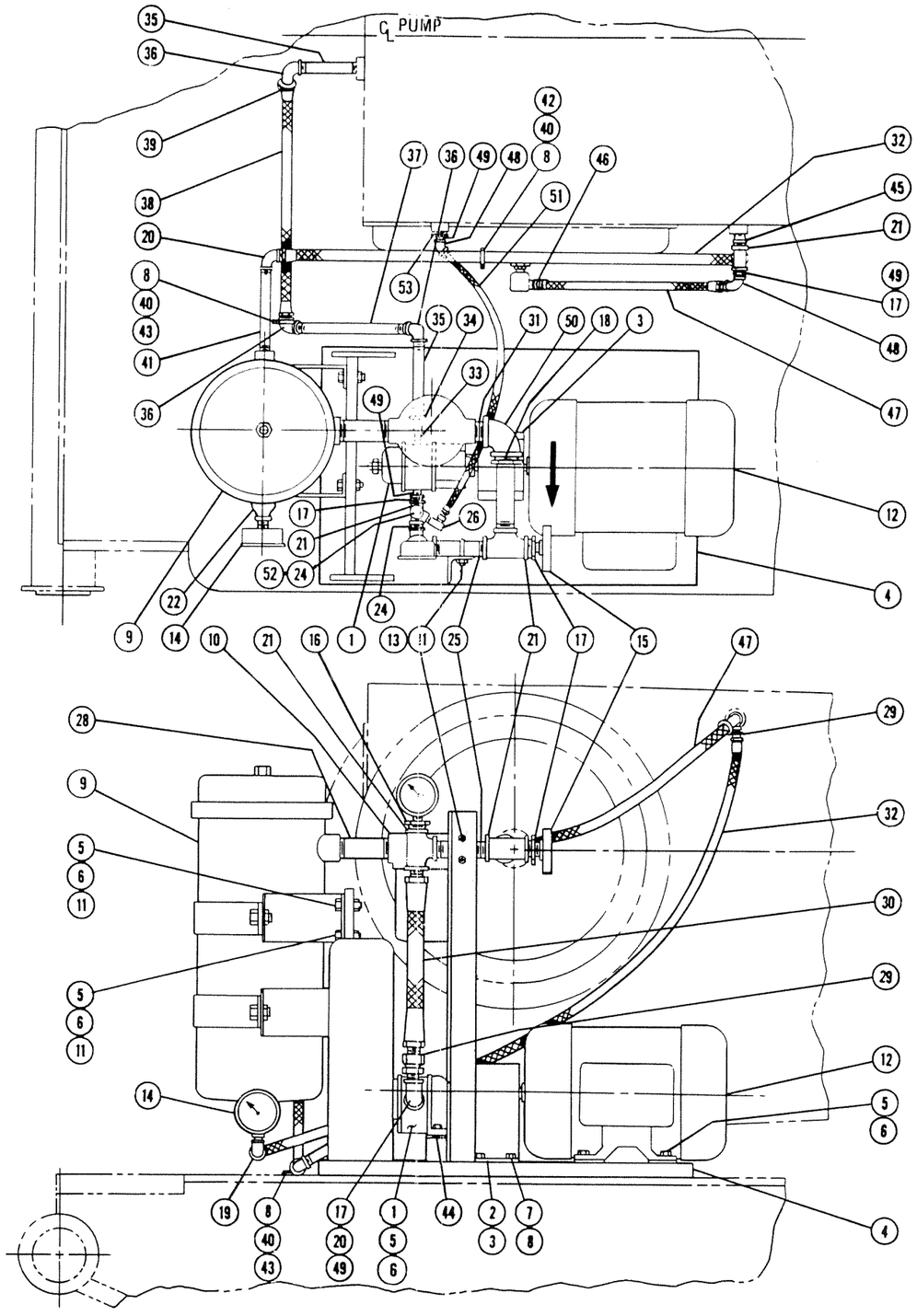
NATIONAL - OILWELL

COUNTERSHAFT ASSY.
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-AV1

SIZE C





BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	64-182-007	OIL PUMP
2	1	68-103-991	FLEX COUPLING
3	1	06-510-607	GUARD, COUPLING
4	1	10-300-310	BASE (LEFT HAND), PUMP AND MOTOR
5	16	75-634-340	3/8–16 X 1-1/4 HEX HEAD HT CAPSCREW
6	16	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
7	4	75-634-300	1/4–20 X 5/8 HEX HEAD HT CAPSCREW
8	6	75-770-470	1/4 EXTERNAL SHAKEPROOF LOCKWASHER
9	1	64-212-832	FILTER, FULL FLOW OIL
10	1	64-212-003	FILTER, MAGNETIC OIL
11	10	75-510-404	3/8–16 HEAVY STEEL HEX NUT
12*	1	74-450-830	ELECTRIC MOTOR *
13	1	45-804-150	3/8 U–BOLT
14	2	78-256-532	2-1/2 PRESSURE GAUGE (0–200 P.S.I.)
15	1	78-684-250	THERMOMETER (0–250° F.)
16	1	86-061-008	3/4 X 1/4 C.I. BLK HEX PIPE BUSHING
17	3	86-061-010	3/4 X 1/2 C.I. BLK HEX PIPE BUSHING
18	2	86-061-015	1" X 3/4 C. I. BLK HEX PIPE BUSHING
19	1	78-176-002	1/4 X 90° 2000 # F.S. PIPE ELBOW
20	2	86-336-106	3/4 X 90° 150# BLK M.I. PIPE ELBOW
21	5	86-543-106	3/4 150 # M.I. PIPE TEE
22	1	86-600-008	3/4 X 1/4 150# BLK M.I. REDUCER COUPLING
23	1	78-420-001	1/4 X CLOSE SCH 80 BW STEEL PIPE NIPPLE
24	3	86-425-001	3/4 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
25	2	86-425-013	3/4 X 4" SCH 40 BW STEEL PIPE NIPPLE
26	1	64-289-484	1/2 MALE UNION ELBOW ADAPTER
27	1	86-425-017	3/4 X 5" SCH 40 BW STEEL PIPE NIPPLE
28	1	86-426-013	1" X 4" SCH 40 BW STEEL PIPE NIPPLE
29	2	64-289-324	3/4 MALE UNION ADAPTER
30	1	45-804-717	3/4 X 12-1/2 HOSE ASSEMBLY
31	1	86-426-001	1" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
32	1	45-805-139	3/4 X 58" HOSE ASSEMBLY
33	1	86-424-005	1/2 X 2" SCH 40 BW STEEL PIPE NIPPLE
34	1	86-600-019	1-1/4 X 1/2 150# BLK M.I. REDUCER COUPLING
35	2	86-424-017	1-1/4 X 5" SCH 40 BW STEEL PIPE NIPPLE
36	3	86-336-110	1-1/4 X 90° 150# BLK M.I. PIPE ELBOW
37	1	86-427-029	1-1/4 X 10 SCH 40 BW STEEL PIPE NIPPLE
38	1	45-171-830	1-1/4 X 18" HOSE ASSEMBLY
39	1	64-289-328	1-1/4 MALE UNION ADAPTER
40	2	75-632-956	1/4–20 X 1/2 TYPE "F" SELF-TAPPING SCREW
41	1	86-425-025	3/4 X 8" SCH 40 BW STEEL PIPE NIPPLE
42	1	64-228-160	3/4 PIPE CLAMP
43	1	64-228-175	1-1/2 PIPE CLAMP
44		45-194-207	SHIM SET (1 REQ'D.) CONSISTS OF THE FOLLOWING
	3	45-194-208	SHIM (.020" THICK)
	3	06-015-462	SHIM (16 GAUGE)
45	1	10-304-120	3/4 CHOKE
46	1	64-271-208	1/2 MALE ADAPTER
47	1	45-804-069	1/2 X 16-7/8 HOSE ASSEMBLY
48	2	86-339-104	1/2 X 45° 150# BLK M.I. PIPE ELBOW
49	3	86-424-001	1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
50	1	86-336-108	1" X 90° 150# BLK M.I. PIPE ELBOW
51	1	45-805-208	1/2 X 19-1/4" HOSE ASSEMBLY
52	1	64-182-055	RELIEF VALVE
53	1	86-061-019	1-1/4 X 1/2 C.I. BLK HEX PIPE BUSHING

* ELECTRIC MOTOR IS: 1-1/2 H.P., 900 R.P.M., 230/460 V., 3 PH., 60 HZ.
EXPLOSION PROOF ELECTRIC MOTOR WITH 184-T FRAME.

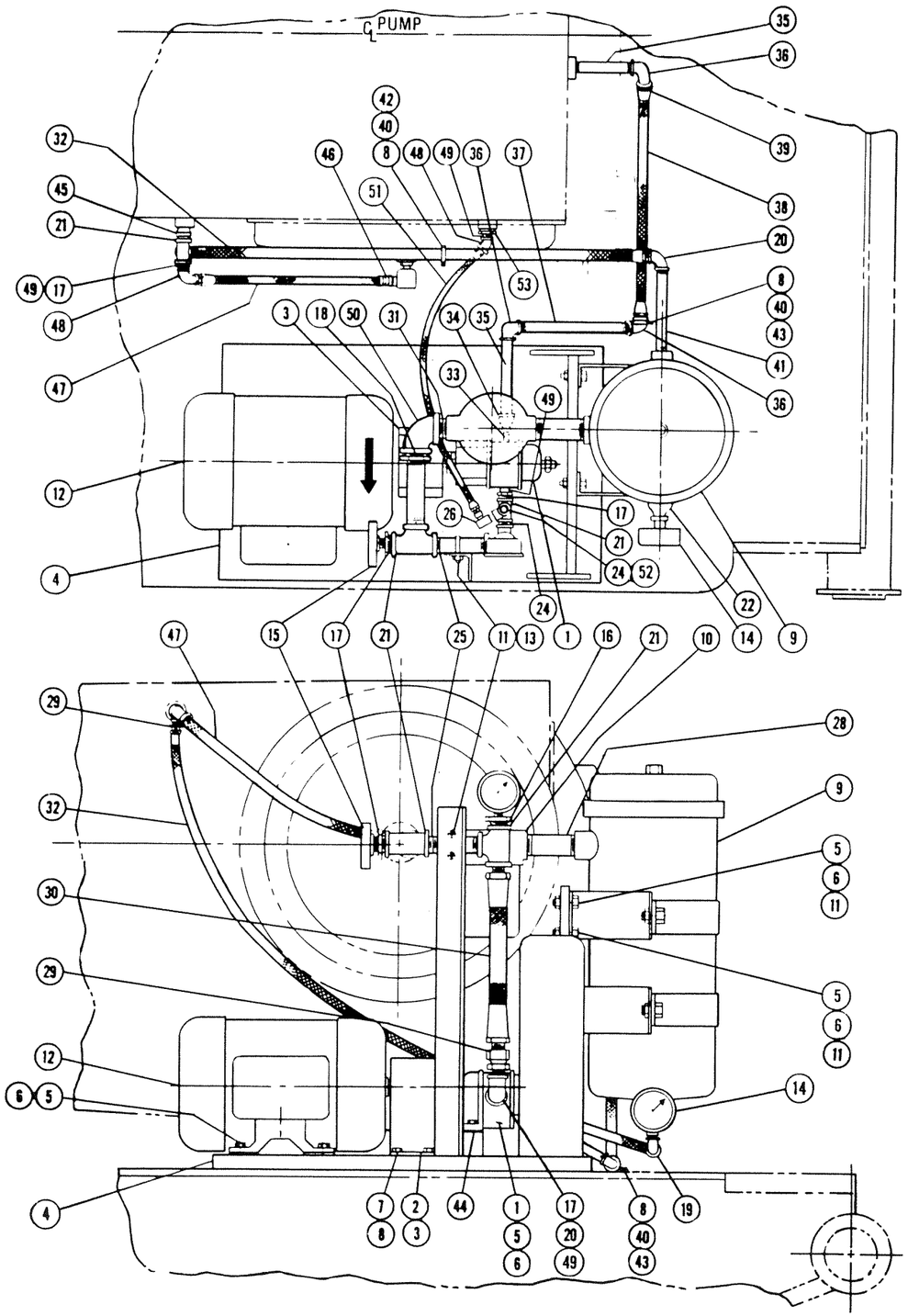
ISSUE DATE: 1–15–90

NATIONAL - OILWELL

EXTERNAL LUBRICATION
(LEFT HAND DRIVE)
A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-AT1

SIZE D



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	64-182-007	OIL PUMP
2	1	68-103-991	FLEX COUPLING
3	1	06-510-607	GUARD, COUPLING
4	1	10-304-114	BASE (RIGHT HAND), PUMP AND MOTOR
5	16	75-634-340	3/8–16 X 1-1/4 HEX HEAD HT CAPSCREW
6	16	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
7	4	75-634-300	1/4–20 X 5/8 HEX HEAD HT CAPSCREW
8	6	75-770-470	1/4 EXTERNAL SHAKEPROOF LOCKWASHER
9	1	64-212-832	FILTER, FULL FLOW OIL
10	1	64-212-003	FILTER, MAGNETIC OIL
11	10	75-510-404	3/8–16 HEAVY STEEL HEX NUT
12*	1	74-450-830	ELECTRIC MOTOR *
13	1	45-804-150	3/8 U–BOLT
14	2	78-256-532	2-1/2 PRESSURE GAUGE (0–200 P.S.I.)
15	1	78-684-250	THERMOMETER (0–250° F.)
16	1	86-061-008	3/4 X 1/4 C.I. BLK HEX PIPE BUSHING
17	3	86-061-010	3/4 X 1/2 C.I. BLK HEX PIPE BUSHING
18	2	86-061-015	1" X 3/4 C. I. BLK HEX PIPE BUSHING
19	1	78-176-002	1/4 X 90° 2000 # F.S. PIPE ELBOW
20	2	86-336-106	3/4 X 90° 150 # BLK M.I. PIPE ELBOW
21	5	86-543-106	3/4 150 # M.I. PIPE TEE
22	1	86-600-008	3/4 X 1/4 150 # BLK M.I. REDUCER COUPLING
23	1	78-420-001	1/4 X CLOSE SCH 80 BW STEEL PIPE NIPPLE
24	3	86-425-001	3/4 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
25	2	86-425-013	3/4 X 4" SCH 40 BW STEEL PIPE NIPPLE
26	1	64-289-484	1/2 MALE UNION ELBOW ADAPTER
27	1	86-425-017	3/4 X 5" SCH 40 BW STEEL PIPE NIPPLE
28	1	86-426-013	1" X 4" SCH 40 BW STEEL PIPE NIPPLE
29	2	64-289-324	3/4 MALE UNION ADAPTER
30	1	45-804-717	3/4 X 12-1/2 HOSE ASSEMBLY
31	1	86-426-001	1" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
32	1	45-805-139	3/4 X 58" HOSE ASSEMBLY
33	1	86-424-005	1/2 X 2" SCH 40 BW STEEL PIPE NIPPLE
34	1	86-600-019	1-1/4 X 1/2 150 # BLK M.I. REDUCER COUPLING
35	2	86-424-017	1-1/4 X 5" SCH 40 BW STEEL PIPE NIPPLE
36	3	86-336-110	1-1/4 X 90° 150 # BLK M.I. PIPE ELBOW
37	1	86-427-029	1-1/4 X 10 SCH 40 BW STEEL PIPE NIPPLE
38	1	45-171-830	1-1/4 X 18" HOSE ASSEMBLY
39	1	64-289-328	1-1/4 MALE UNION ADAPTER
40	2	75-632-956	1/4–20 X 1/2 TYPE "F" SELF-TAPPING SCREW
41	1	86-425-025	3/4 X 8" SCH 40 BW STEEL PIPE NIPPLE
42	1	64-228-160	3/4 PIPE CLAMP
43	1	64-228-175	1-1/2 PIPE CLAMP
44		45-194-207	SHIM SET (1 REQ'D.) CONSISTS OF THE FOLLOWING
	3	45-194-208	SHIM (.020" THICK)
	3	06-015-462	SHIM (16 GAUGE)
45	1	10-304-120	3/4 CHOKE
46	1	64-271-208	1/2 MALE ADAPTER
47	1	45-804-069	1/2 X 16-7/8 HOSE ASSEMBLY
48	2	86-339-104	1/2 X 45° 150 # BLK M.I. PIPE ELBOW
49	3	86-424-001	1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
50	1	86-336-108	1" X 90° 150 # BLK M.I. PIPE ELBOW
51	1	45-805-208	1/2 X 19-1/4" HOSE ASSEMBLY
52	1	64-182-055	RELIEF VALVE
53	1	86-061-019	1-1/4 X 1/2 C.I. BLK HEX PIPE BUSHING

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* ELECTRIC MOTOR IS: 1-1/2 H.P., 900 R.P.M., 230/460 V., 3 PH., 60 HZ. EXPLOSION PROOF ELECTRIC MOTOR WITH 184-T FRAME.

ISSUE DATE: 1–15–90

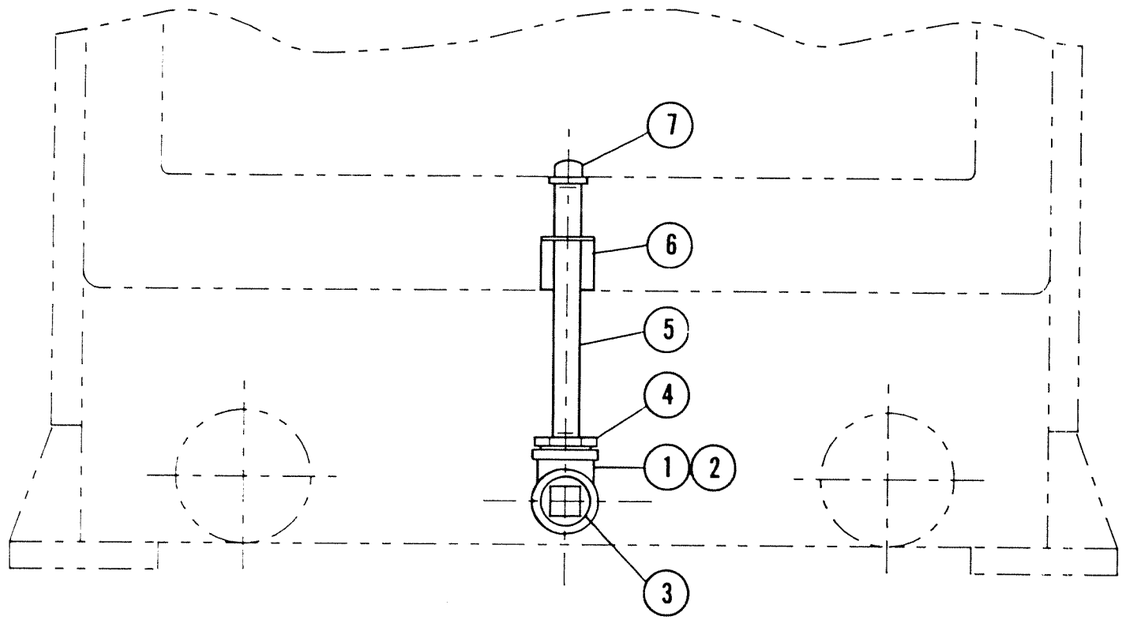
NATIONAL - OILWELL

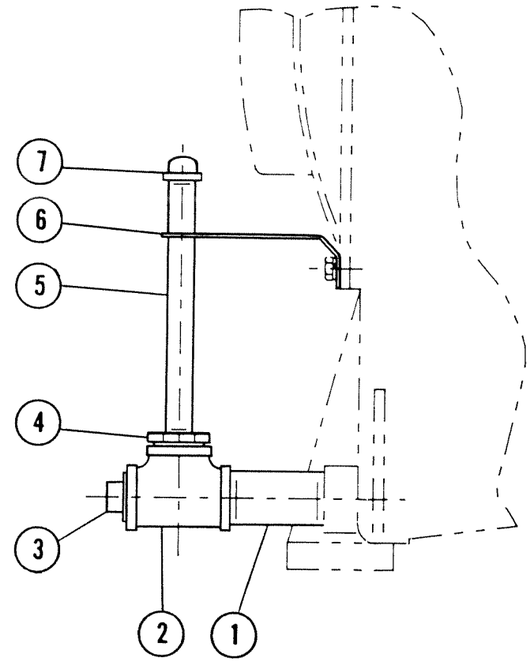
EXTERNAL LUBRICATION (RIGHT HAND DRIVE) A600-PT TRIPLEX PISTON PUMP

DRAWING NO. P210-BB1

SIZE D

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	86-428-017	1-1/2 X 5" SCH 40 BW STEEL PIPE NIPPLE
2	1	86-543-112	1-1/2 150# M.I. PIPE TEE
3	1	86-485-412	1-1/2 C.I. CORED SQUARE HEAD PIPE PLUG
4	1	86-061-025	1-1/2 X 1/2 C.I. BLK. HEX PIPE BUSHING
5	1		1/2 X 9-3/8 SCH 40 BW STEEL PIPE NIPPLE
6	1	06-514-555	BRACKET, OIL LEVEL GAUGE
7	1	06-009-375	GAUGE, OIL LEVEL





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NOTE: OIL LEVEL GAUGE IS FURNISHED ONLY WHEN THE PUMP IS NOT EQUIPPED WITH A GEAR REDUCTION UNIT.

ISSUE DATE: 1–15–90

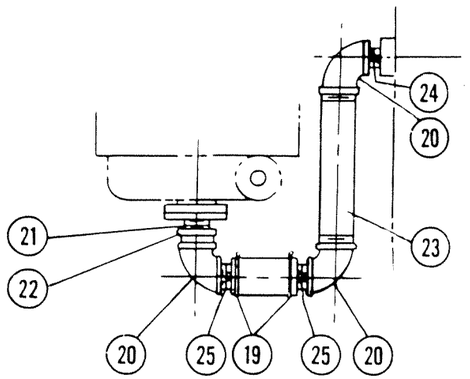
NATIONAL - OILWELL

OIL LEVEL GAUGE ASSY.
A600-PT TRIPLEX PISTON PUMP

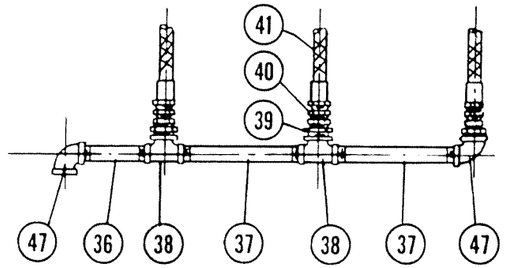
DRAWING NO. P210-BS1

SIZE C

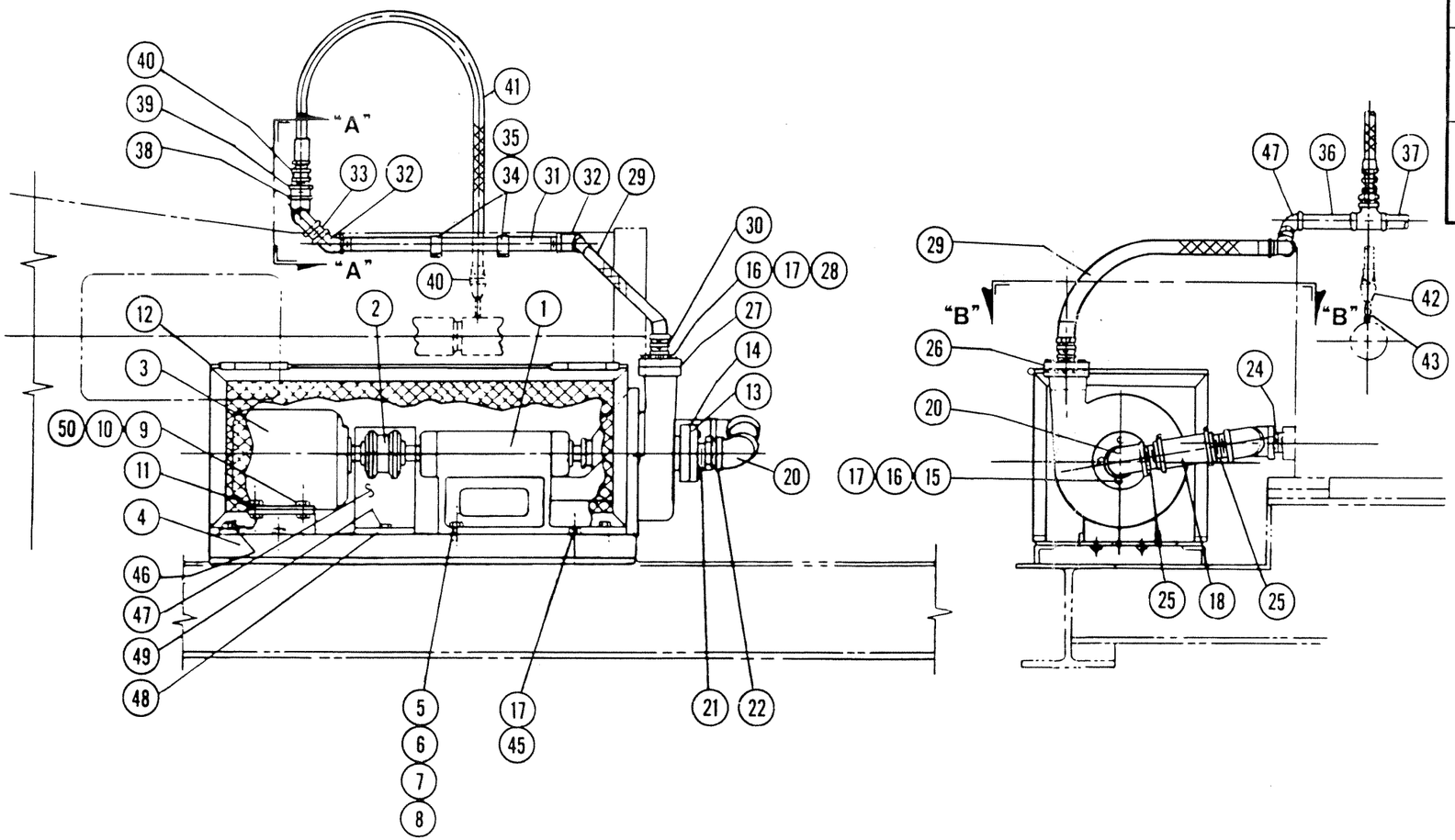
BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	95-999-050	CENTRIFUGAL PUMP (1" X 1-1/2)
2	1	68-103-964	FLEX COUPLING
3*	1	74-450-826	ELECTRIC MOTOR *
4	1	10-300-343	BASE, FLUSHING PUMP
5	4	75-634-361	5/8–11 X 2" HEX HEAD HT CAPSCREW
6	4	75-510-408	5/8–11 STEEL HEX NUT
7	4	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
8	4	75-770-205	5/8 HEAVY PLATE WASHER
9	4	75-634-343	3/8–16 X 1-3/4 HEX HEAD HT CAPSCREW
10	10	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER



VIEW "B-B"



VIEW "A-A"



BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
11	4	29-001-153	SHIM SET
12	1	10-300-344	GUARD, FLUSHING PUMP
13	1	98-029-012	1-1/2 150# F.S. RAISED FACE THREADED FLANGE
14	1	78-208-036	GASKET, FLANGE
15	4	75-635-043	1/2–13 HEX HEAD HT CAPSCREW
16	8	75-510-406	1/2–13 STEEL HEX NUT
17	12	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
18	1	99-287-816	2" I.D. HOSE
19	2	99-094-086	HOSE CLAMP
20	3	86-336-116	2" X 90° 150# BLK M.I. PIPE ELBOW
21	1	86-428-001	1-1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
22	1	86-061-036	2" X 1-1/2 C.I. BLK HEX PIPE BUSHING
23	1		2" X 13-1/4 SCH 40 BW STEEL PIPE
24	1	86-429-001	2" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
25	2	45-002-642	2" X 2-1/2 SCH 40 BW STEEL PIPE NIPPLE (THREADED ONE END)
26	1	98-029-005	1" 150# F.S. RAISED FACE THREADED FLANGE
27	1	78-208-012	GASKET, FLANGE
28	4	75-634-353	1/2–13 X 2" HEX HEAD HT CAPSCREW
29	1	45-805-141	1" X 42-1/4 HOSE ASSEMBLY
30	1	64-289-323	1" MALE ADAPTER UNION
31	1		1" X 16" SCH 40 BW STEEL PIPE
32	2	86-339-108	1" X 45° 150# M.I. STREET ELBOW
33	1	86-426-001	1" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
34	2	64-228-165	STRAP, PIPE
35	2	75-632-956	1/4–20 X 1/2 TYPE "F" ROUND HEAD SELF-TAPPING SCREW
36	1	86-426-017	1" X 5" SCH 40 BW STEEL PIPE NIPPLE
37	2	86-426-029	1" X 10" SCH 40 BW STEEL PIPE NIPPLE
38	2	86-543-103	1" 150# M.I. PIPE TEE
39	3	86-061-014	1" X 1/2 C.I. BLK HEX PIPE BUSHING
40	6	64-289-320	1/2 MALE ADAPTER UNION
41	3	06-510-761	1/2 X 48" HOSE ASSEMBLY
42	3	86-600-005	1/2 X 1/4 STD. THREADED PIPE REDUCER
43	3	86-422-007	1/4 X 2-1/2 SCH 40 BW STEEL PIPE NIPPLE
44	4	75-634-350	1/2–13 X 3" HEX HEAD HT CAPSCREW
45	3	86-336-103	1" X 90° 150# M.I. PIPE ELBOW
46	6	75-634-335	3/8–16 X 5/8 HEX HEAD HT CAPSCREW
47	1	10-300-295	GUARD, COUPLING
48	2	10-300-301	BAR, TAPPED
49	2	75-634-415	1/2–13 X 3/4 HEX HEAD HT CAPSCREW
50	4	75-510-404	3/8–16 STEEL HEX NUT

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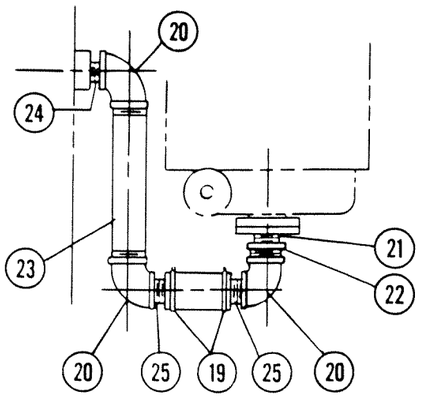
* ELECTRIC MOTOR IS: 5H.P., 1750 R.P.M., 230/460V., 3 PH., 60 HZ., EXPLOSION PROOF ELECTRIC MOTOR WITH 184-T FRAME.

ISSUE DATE: 1–15–90

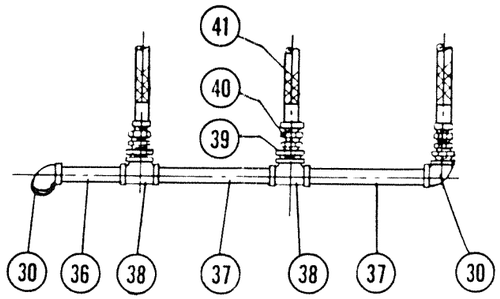
NATIONAL - OILWELL

LINER FLUSHING PIPING
(LEFT HAND DRIVE)
A600-PT TRIPLEX PISTON PUMP

		DRAWING NO.	SIZE
		P210-AH1	C



VIEW "B-B"

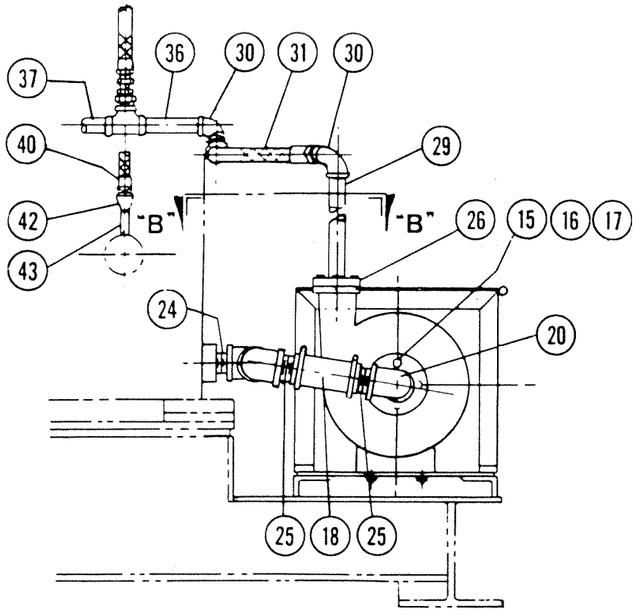


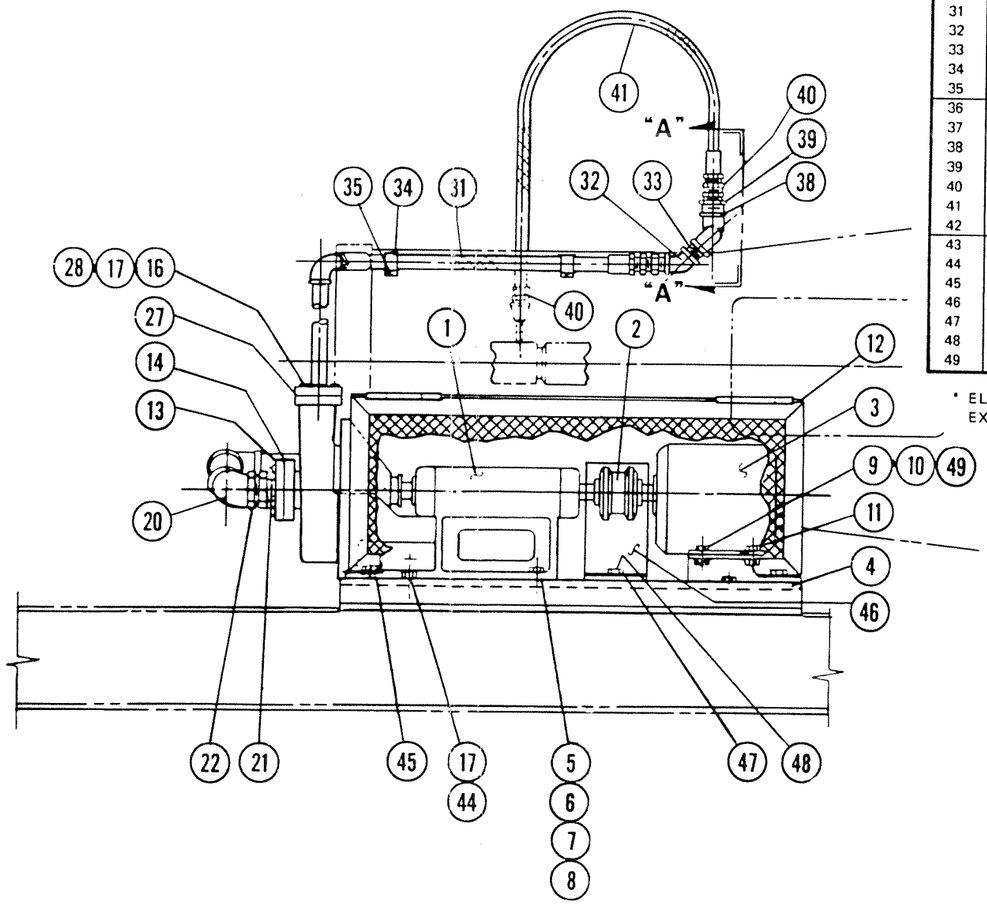
VIEW "A-A"

BILL OF MATERIAL			
ITEM	REQ'D	COMM NO	DESCRIPTION
1	1	95-999-050	CENTRIFUGAL PUMP (1" X 1-1/2)
2	1	68-103-964	FLEX COUPLING
3*	1	74-450-826	ELECTRIC MOTOR *
4	1	10-300-343	BASE, FLUSHING PUMP
5	4	75-634-361	5/8–11 X 2" HEX HEAD HT CAPSCREW
6	4	75-510-408	5/8–11 STEEL HEX NUT
7	4	75-770-475	5/8 EXTERNAL SHAKEPROOF LOCKWASHER
8	4	75-770-205	5/8 HEAVY PLATE WASHER
9	4	75-634-343	3/8–16 X 1-3/4 HEX HEAD HT CAPSCREW
10	10	75-770-472	3/8 EXTERNAL SHAKEPROOF LOCKWASHER
11	4	29-001-153	SHIM SET
12	1	10-300-344	GUARD, FLUSHING PUMP
13	1	98-029-012	1-1/2 150# F.S. RAISED FACE THREADED FLANGE
14	1	78-208-036	GASKET, FLANGE
15	4	75-635-043	1/2–13 HEX HEAD HT CAPSCREW
16	8	75-510-406	1/2–13 STEEL HEX NUT
17	12	75-770-474	1/2 EXTERNAL SHAKEPROOF LOCKWASHER
18	1	99-287-816	2" I.D. HOSE
19	2	99-034-086	HOSE CLAMP
20	3	86-336-116	2" X 90° 150# BLK M.I. PIPE ELBOW
21	1	86-428-001	1-1/2 X CLOSE SCH 40 BW STEEL PIPE NIPPLE
22	1	86-061-036	2" X 1-1/2 C.I. BLK HEX PIPE BUSHING
23	1		2" X 13-1/4 SCH 40 BW STEEL PIPE
24	1	86-429-001	2" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
25	2	45-002-642	2" X 2-1/2 SCH 40 BW STEEL PIPE NIPPLE (THREADED ONE END)
26	1	98-029-006	1" 150# F.S. RAISED FACE THREADED FLANGE
27	1	78-208-012	GASKET, FLANGE
28	4	75-635-043	1/2–13 X 2-1/4 HEX HEAD HT CAPSCREW
29	1		1" X 9-1/2 SCH 40 BW STEEL PIPE NIPPLE
30	3	86-342-108	1" X 90° 150# M.I. STREET ELBOW
31	1	45-805-141	1" X 42-1/4 HOSE ASSEMBLY
32	2	86-341-006	1" X 45° 150# M.I. STREET ELBOW
33	1	86-426-001	1" X CLOSE SCH 40 BW STEEL PIPE NIPPLE
34	2	64-228-165	CLAMP, PIPE
35	2	75-632-956	1/4–20 X 1/2 TYPE "F" ROUND HEAD SELF-TAPPING SCREW
36	1	86-426-017	1" X 5" SCH 40 BW STEEL PIPE NIPPLE
37	2	86-426-029	1" X 10" SCH 40 BW STEEL PIPE NIPPLE
38	2	86-543-108	1" 150# M.I. PIPE TEE
39	3	86-061-014	1" X 1/2 C.I. BLK HEX PIPE BUSHING
40	6	64-209-320	1/2 MALE ADAPTER UNION
41	3	06-510-985	1/2 X 42" HOSE ASSEMBLY
42	3	86-600-005	1/2 X 1/4 STD. THREADED PIPE REDUCER
43	3	86-422-007	1/4 X 2-1/2 SCH 40 BW STEEL PIPE NIPPLE
44	4	75-634-350	1/2–13 X 3" HEX HEAD HT CAPSCREW
45	6	75-634-335	3/8–16 X 5/8 HEX HEAD HT CAPSCREW
46	1	10-300-299	GUARD, COUPLING
47	2	10-300-300	BARR, TAPPED
48	2	75-634-415	1/2–13 X 3/4 HEX HEAD HT CAPSCREW
49	4	75-510-404	3/8–13 STEEL HEX NUT

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* ELECTRIC MOTOR IS: 3 H.P., 1750 R.P.M., 230/460 V., 3 PH., 60 HZ., EXPLOSION PROOF ELECTRIC MOTOR WITH 184-T FRAME.





ISSUE DATE: 1–15–90

NATIONAL - OILWELL

LINER FLUSHING PIPING
(RIGHT HAND DRIVE)
A600-PT TRIPLEX PISTON PUMP

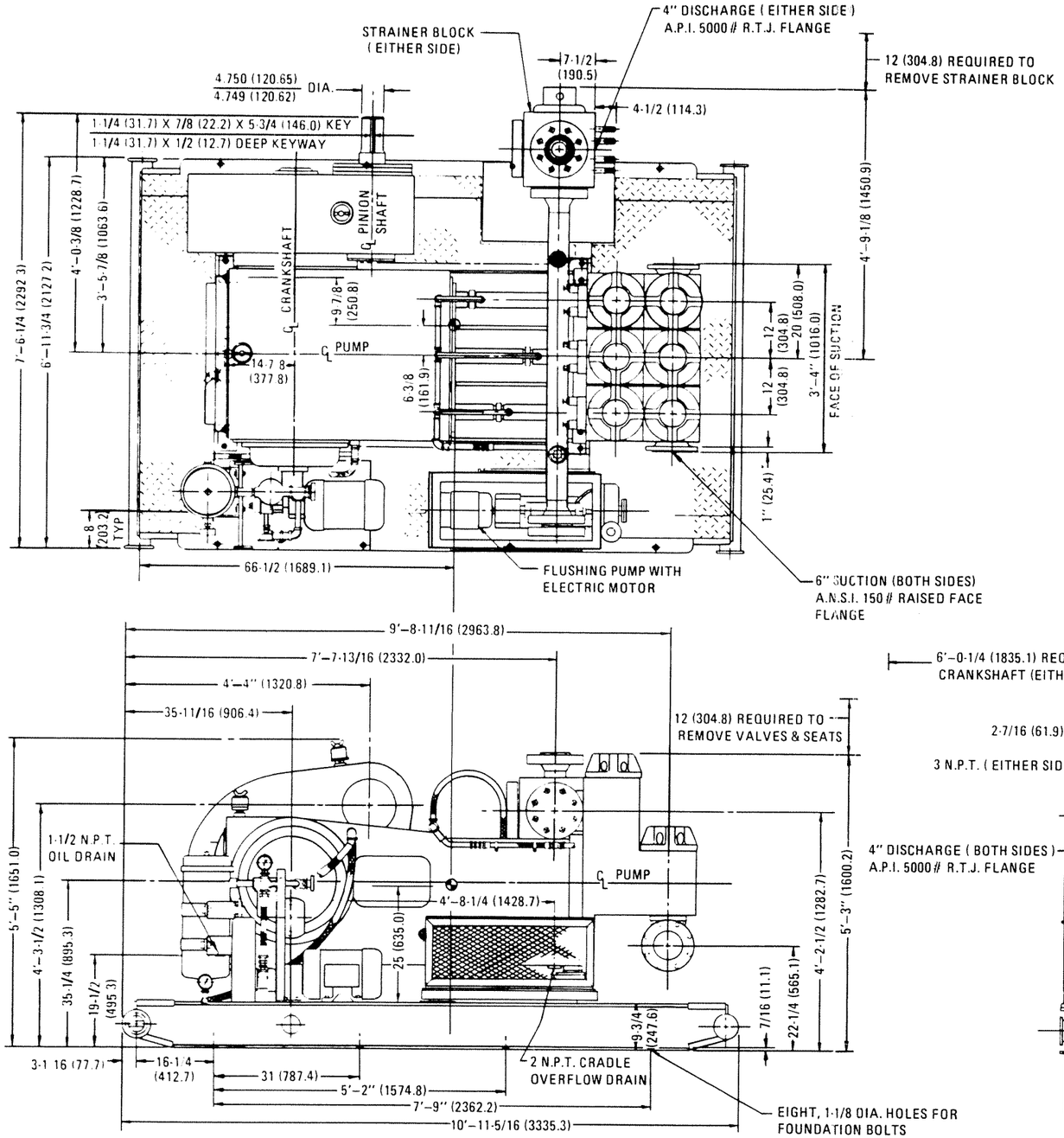
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		P210-AD1	C

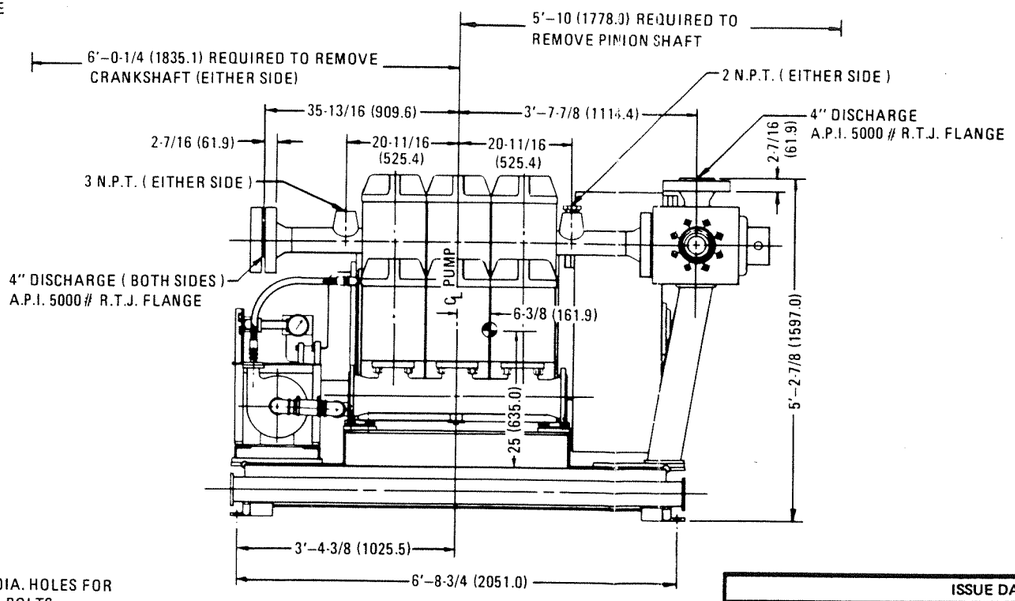
NOTE: THESE DIMENSIONS ARE ACCURATE BUT SHOULD NOT BE USED FOR INSTALLATION UNLESS CERTIFIED. DIMENSIONS IN BRACKETS ARE MEASURED IN MILLIMETERS.

PUMP, AS SHOWN, IS FOR LEFT HAND DRIVE. RIGHT HAND DRIVE IS OPPOSITE THAT SHOWN. LEFT HAND DRIVE IS CONSIDERED STANDARD.

APPROXIMATE WEIGHT . . . . . 18,800 LBS.

APPROXIMATE CENTER OF GRAVITY





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ISSUE DATE: 1–15–90

NATIONAL - OILWELL

OUTLINE DRAWING
A600-PT TRIPLEX PISTON PUMP

		DRAWING NO.	SIZE
		P210-E2	D