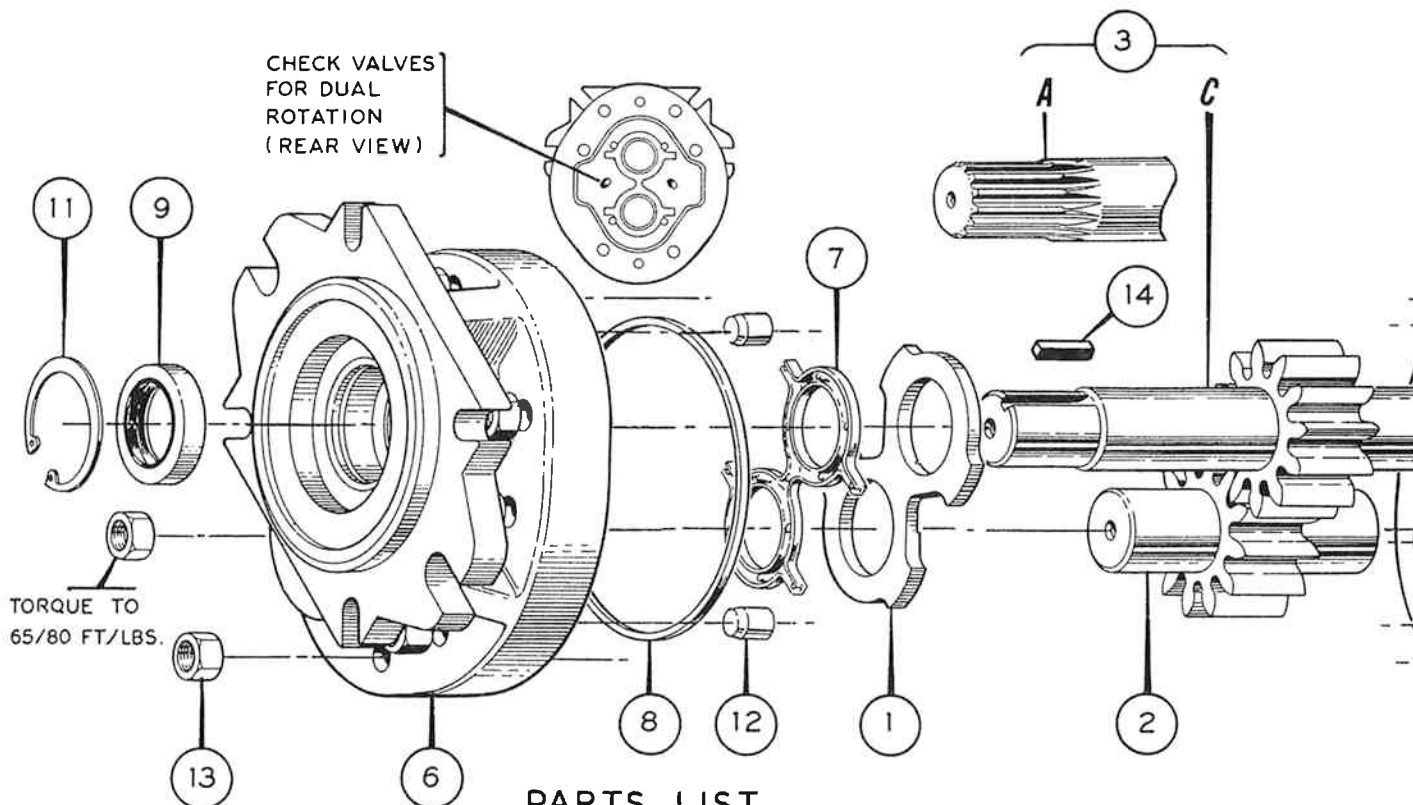


SERIES 60 Gear Pump and Motor

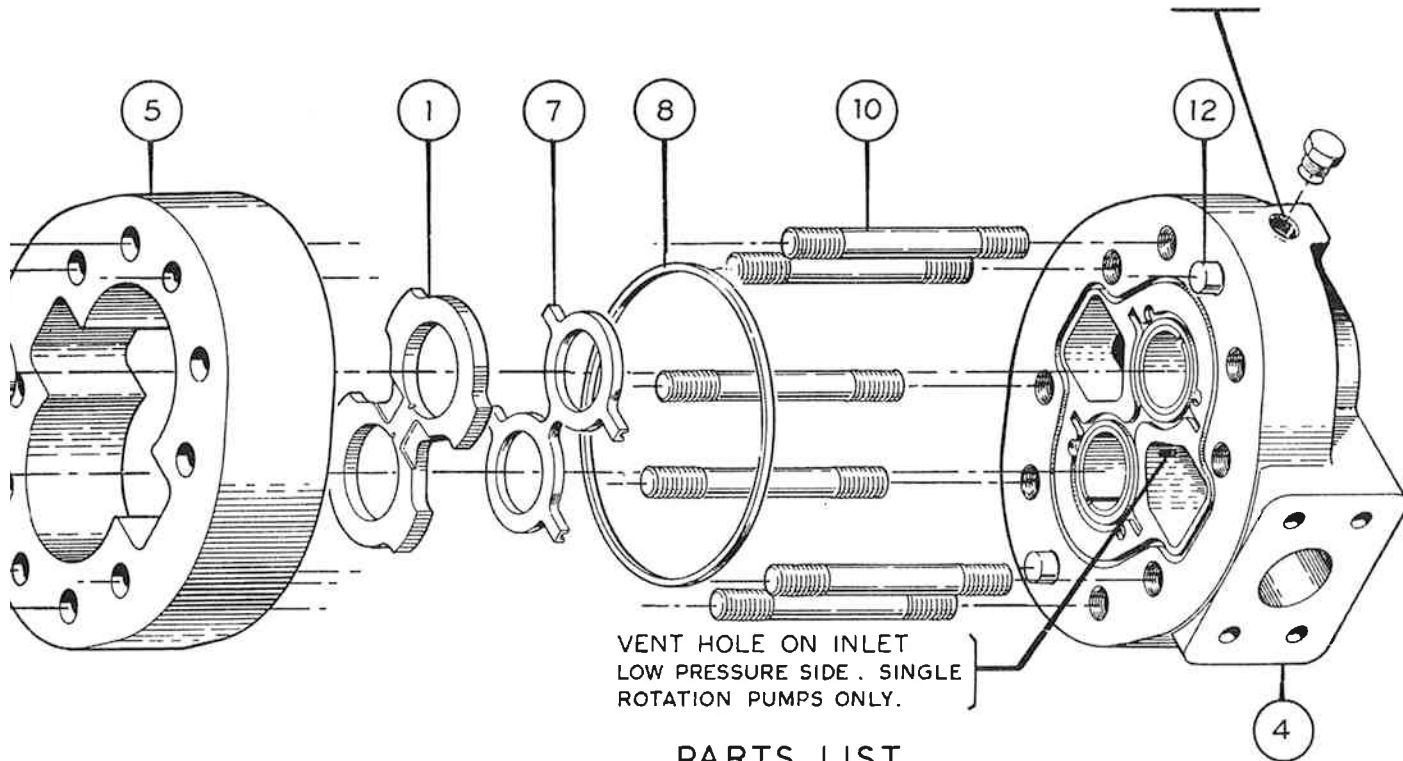
Parts Exploded



PARTS LIST

PART NUMBER	PART DESCRIPTION	DETAIL PART NUMBER	ASSEMBLY NUMBER						QTY
			60P040 60M040	60P051 60M051	60P061 60M061	60P071 60M071	60P081 60M081	60P092 60M092	
			DASH NUMBER						
1	THRUST PLATE	6P0013	001						2
2	DRIVEN GEAR	6P0012	001	002	003	004	005	006	1
3	DRIVE GEAR	6P0011	SEE SHAFT						1
4	REAR COVER ASSEMBLY	6P0007	SEE PORTING						1
5	BODY	6P0004	001	002	003	004	005	006	1
6	FRONT COVER ASSEMBLY	6P0003	002 DUAL ROTATION						1
		6P0003	001 SINGLE ROTATION						
7	LOADING SEAL	5A0079							2
8	STATIC SEAL	5A0041							2
9	SHAFT SEAL	5A0080	DUAL ROTATION						1
		5A0040	SINGLE ROTATION						
10	TIE BOLT	2A0580	431	456	481	506	531	562	8
	LENGTH		4 5/16	4 9/16	4 13/16	5 1/16	5 5/16	5 5/8	
11	RETAINING RING	2A0466	212						1
12	DOWEL PIN	2A0310	810						4
13	HEX NUT 1/2-13 THD	2A0235	8						8
14	STRAIGHT KEY	5A0082							1
	SEAL KIT	6P0017	001 SINGLE ROTATION (100 PSI)						0
	SEAL KIT	6P0017	002 DUAL ROTATION (250 PSI)						0
	SHIPPING PLUG	2A0353	30 1 7/8-12 O-RING PORT (SAE #24)						AS REQD
	SHIPPING PLUG	2A0353	26 1 5/8-12 O-RING PORT (SAE #20)						
	SHIPPING PLUG	2A0356	24 1 1/2" SPLIT FLANGE						
	SHIPPING PLUG	2A0356	20 1 1/4" SPLIT FLANGE						
	SHIPPING PLUG	2A0356	32 2.0 SPLIT FLANGE						

CASE DRAIN PORT—USE WHEN BACK PRESSURE EXCEEDS SEAL RATING. (DUAL ROTATION ONLY).



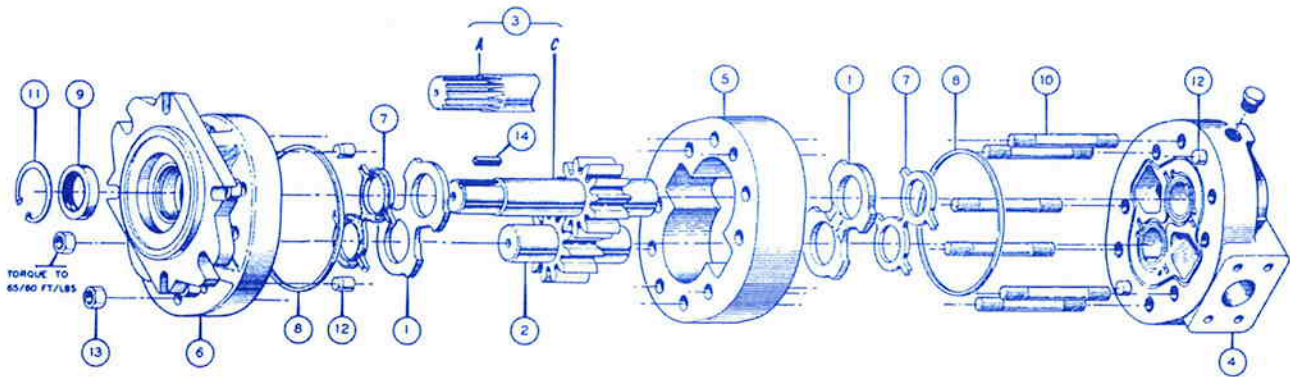
VENT HOLE ON INLET LOW PRESSURE SIDE . SINGLE ROTATION PUMPS ONLY.

PARTS LIST

PART DESCRIPTION & SIZE SHAFT FOR DRIVE GEAR, 6P0011 (3)		ASSEMBLY NUMBER					
		60P040 60M040	60P051 60M051	60P061 60M061	60P071 60M071	60P081 60M081	60P092 60M092
		DASH NUMBER					
A. 14 TOOTH SPLINE		007	008	009	010	011	012
C. 1 1/4" STRAIGHT KEY		001	002	003	004	005	006
SPECIFICATIONS	MINIMUM AT 1800 RPM	GPM 28.4	36.1	43.1	50.1	57.2	64.9
		LPM 107.5	136.7	163.3	189.8	216.4	245.6
	DISPLACEMENT	CU. IN. / REV. 66.4	84.4	100.8	117.2	133.6	151.6
		ml / REV.					
MAXIMUM PUMP RPM IN INLET PORTS	1 5/8 - 12 / 1 1/4" S.F.	2000	1750	1400	1900	1600	1400
	1 7/8 - 12 / 1 1/2" S.F.	3000	2500	2200	3000	2600	2500
	2" SPLIT FLANGE	3000	3000	3000	3000	2600	2500
MAXIMUM MOTOR SPEED IS 3000 RPM.							

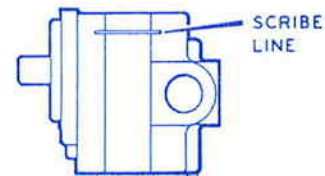
PART DESCRIPTION OF 6P0007 (4)				PORT SIZES		DASH NO. ALL ASSY'S
				INLET	OUTLET	
SAE O-RING REAR PORTS	SINGLE	R J	1 5/8-12(#20)	1 5/8-12(#20)	006	
		RK	1 7/8-12(#24)	1 7/8-12(#24)	007	
	DUAL	R J	1 5/8-12(#20)	1 5/8-12(#20)	011	
		RK	1 7/8-12(#24)	1 7/8-12(#24)	012	
SAE O-RING SIDE PORTS 1 7/8 - 12 (#24) UNLESS SPECIFIED	SINGLE	SA	1 7/8-12(#24)	1 5/8-12(#20)	014	
		SE	1 5/8-12(#20)	1 5/8-12(#20)	013	
		SF	1 7/8-12(#24)	1 7/8-12(#24)	015	
	DUAL	SA	1 7/8-12(#24)	1 5/8-12(#20)	017	
		SE	1 5/8-12(#20)	1 5/8-12(#20)	016	
		SF	1 7/8-12(#24)	1 7/8-12(#24)	018	
SPLIT FLANGE SIDE PORTS	SINGLE	SB	1 1/2"	1 1/4"	002	
		SC	2"	1 1/4"	001	
	DUAL	SH	1 1/2"	1 1/2"	004	
		SG	1 1/4"	1 1/4"	008	
	SH	1 1/2"	1 1/2"	009		

SEAL REPLACEMENT INSTRUCTIONS



A. DISASSEMBLY:

1. Remove unit and thoroughly clean. Remove shaft key (14) and any nicks or burrs on shaft.
2. Scribe line on outside of unit across front cover, body and rear cover to assure proper reassembly.
3. Lightly clamp rear cover (4) in vise, shaft up. **EXCESSIVE CLAMPING PRESSURE CAN CAUSE DISTORTION.**
4. Remove nuts (13) from front cover (6).
5. Tap upwards, underneath front cover flange and remove front cover. As unit separates, the body may remain with either the front or rear cover. Remove loose parts (rings, plates, etc.)
- *6. To separate body from front cover, clamp body in vise and again tap upwards on front cover flange. To separate body from rear cover, clamp body in vise and tap downward on shaft. Remove static seals (8) and loading seals (7) from grooves. **DO NOT DAMAGE GROOVE OR COVER SURFACE.**
7. Remove snap ring (11) from shaft seal cavity in front cover using internal snap ring pliers.
8. Clamp front cover in vise, seal down, and drive shaft seal out of cavity using screwdriver held at about a 45° angle. **USE CAUTION NOT TO DAMAGE CAVITY.**
- * Step 6 can be by-passed if only the shaft seal is being replaced.



B. PARTS INSPECTION:

1. Thoroughly clean all parts in solvent and dry with compressed air.
2. Inspect all parts for damage and unusual or excessive wear. If gears, bushings or body are damaged or badly worn, replace unit (Only plates and seals are replaceable).

C. REASSEMBLY:

1. Install new shaft seal (9) in front cover (6). Be sure bearing drain hole is not blocked.
2. Install snap ring (11) and new seals (7, 8) in covers (if needed)
3. Assemble body (5) and rear cover (4) aligning dowel pins (12) and scribed line.
4. Insert thrust plate (1) into body (5) flat side toward seal 7. Lubricate gears and insert.
5. Insert thrust plate (1) over shaft, flat side toward seal 7.
6. Lubricate shaft and slide front cover (6) over shaft and dowel pins (12). Tap if needed.
7. Add nuts and tighten evenly 65/80 ft. lbs.
8. Rotate shaft, the maximum torque is 25 ft. lbs.
If greater torque is required, disassemble unit, re-clean and re-assemble.

It is the policy of Cross Manufacturing, Inc. to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.