BANJO CORPORATION
150 BANJO DRIVE
CRAWFORDSVILLE, INDIANA 47933
U.S.A.
Telephone: (765) 362-7367
Fax: 1-800-458-0232
Fax: (765) 362-0744

MGG20025BC1D3 (Banjo P/N HY10131) Tech Sheet

U.S. Gallons/Rev.	0.0025
Cubic Inches/Rev.	0.580
Liters/Rev.	0.0097

Max Hydraulic Pressure	2000 psi
Min Hydraulic Pressure	200 psi

Minimum Hydraulic GPM req'd to motor for Banjo Pump 6 gpm (2400 rpm)
Maximum Hydraulic GPM req'd to motor for Banjo Pump 10 gpm (4000 rpm)
Ideal GPM req'd to motor for Banjo Pump 9 gpm (3600 rpm)

Inlet Port	SAE 10 (7/8-14 UNF, 2B)
Outlet Port	SAE 10 (7/8-14 UNF, 2B)

HY1013-1 Repair Kit

Motor P/N	Repair Kit
MGG20025BC1D3	No Repair Kit Available

Connection Information

- "A" PORT - TO TANK (OUTLET)
- "B" PORT - PRESSURE (INLET)
- SUPPLIED CHECK VALVE IS TO ENSURE PROPER ROTATION OF THE BANJO PUMP. PLACE CHECK VALVE IN OUTLET PORT (MARKED "B") FOR PROPER RIGHT HAND ROTATION.
- THE SUPPLIED CHECK VALVE MUST BE INSTALLED IN THE OUTLET PORT BEFORE USING MOTOR
- IF YOU DO NOT HAVE THE CHECK VALVE OR HAVE ANY QUESTIONS REGARDING THE PROPER CONNECTIONS CALL:

BANJO CORPORATION
150 BANJO DR. CRAWFORDSVILLE, IN 47933
(765) 362-7367

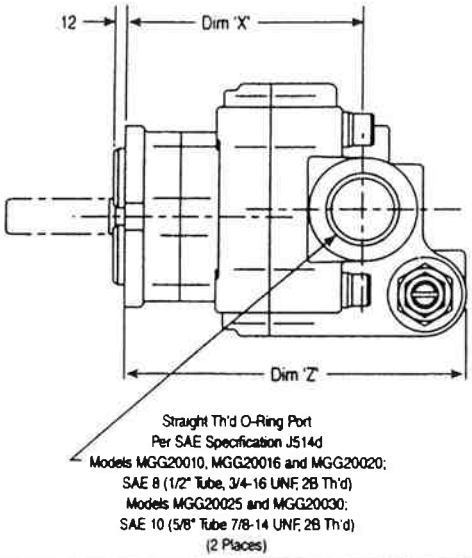
ADDITIONAL TECHNICAL HELP
Power Train Company
2334 Production Drive
Indianapolis, IN 46242

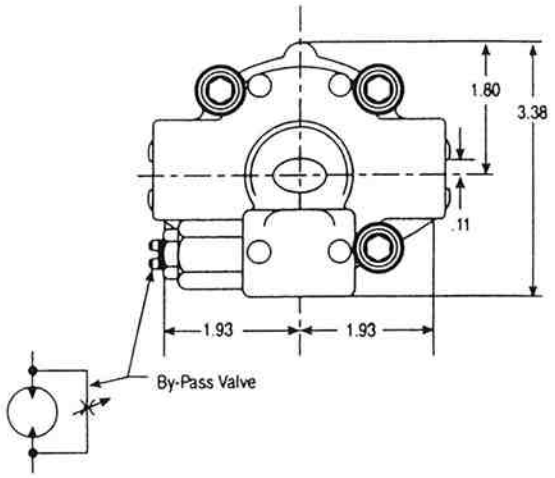
1 (317) 241-9393 Phone
1 (317) 243-1439 Fax

Dimensional Data

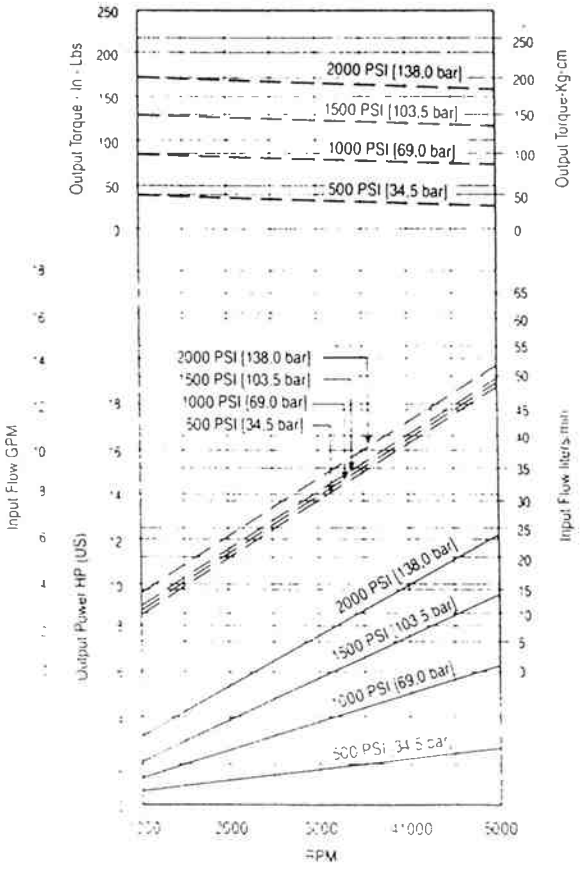
Mounting Dimensions With Non-Pressure Compensated Adjustable Flow By-Pass

MODEL NO.	DIMENSIONS		
	'X'	'Y'	'Z'
MGG20010	2.86	3.62	4.16
MGG20016	3.02	3.78	4.32
MGG20020	3.10	3.87	4.41
MGG20025	3.25	4.00	4.54
MGG20030	3.38	4.14	4.68





MGG20025 Motor

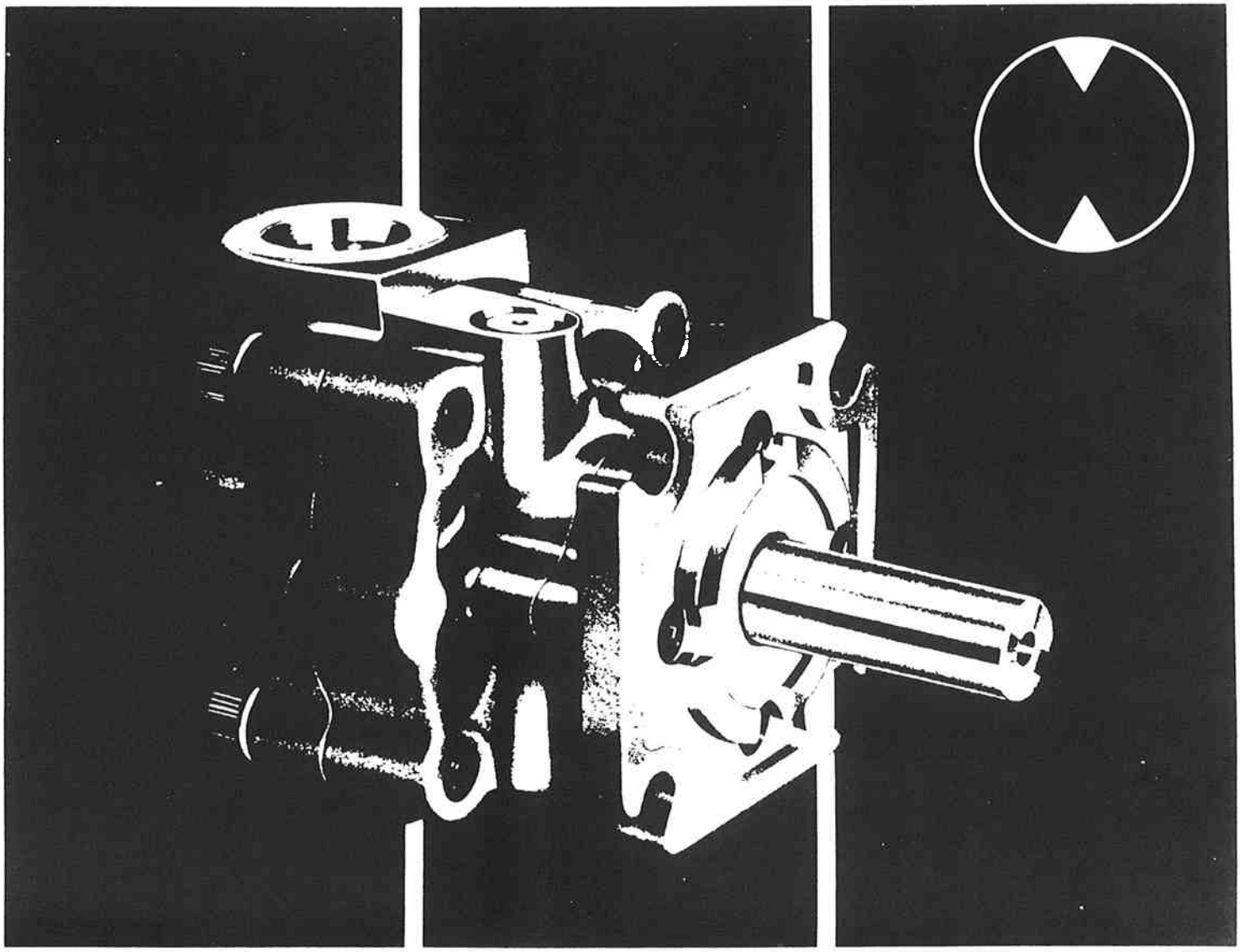


GRESEN

Power Train Company
2334 Production Drive
Indianapolis, IN 46242
1 (317) 241-9393 Phone
1 (317) 243-1439 Fax

MODEL MGG2
BI-DIRECTIONAL
HYDRAULIC MOTORS

GEROTOR TYPE INTERNAL GEAR
FIXED DISPLACEMENT



MODEL NO. MGG2 0010 B A 1 A 3

BASIC MODEL NO.

DISPLACEMENT

	Gallons [Litres] Per Revolution
0010	0010 [.0039]
0016	0016 [.0062]
0020	0020 [.0078]
0025	0025 [.0097]
0030	0030 [.0116]

DESIGN NUMBER ASSIGNED BY FACTORY

FLANGE ADAPTER

A	2 Bolt AA
B	4 Bolt
C	2 Bolt A

SHAFT ROTATION

1	Counterclockwise
2	Clockwise
3	Bi-Directional

PORT LOCATIONS

MGG20010, MGG20016, MGG20020
SAE 8 (3/4-16 UNF) Both Ports

MGG20025, MGG20030
SAE 10 (7/8-14 UNF) Both Ports

A	2 Rear Ports (Standard)
B	2 Side Ports (Optional)
D	Cover w/adj. by-pass (side ports only)

SHAFT

1	9/169 [14. 29 MM] Dia. Keyed
2	8 Tooth, 16/32 Pitch, Splined
*6	9 Tooth, 16/32 Pitch, Splined

*Available only in Models MGG20020, MGG20025 and MGG20030

TECHNICAL DATA

	MODEL NO. MGG20025
DISPLACEMENT PER REVOLUTION	.580 in.^{3} [9,50 cm^3]
MAXIMUM RATED RPM	5000
RATED FLOW PER 1000 RPM (NOMINAL)	2.51 GPM [9,5 liters/min]
MAXIMUM RATED PRESSURE — CONTINUOUS	2000 PSI [138,0 bar]
MAXIMUM RATED PRESSURE — INTER-MITTENT	2500 PSI [172,5 bar]
TORQUE PER 1000 PSI* [69,0 bar]	92 in.-lbs. [107 kg-cm]
WEIGHT	3.3 pounds [1,50 kg]
SIDE LOAD**	70 lbs. [31,7 kg]

*Theoretical

**SIDE LOAD Maximum Permissible Shaft Side Load at 2500 RPM and 1000 PSI [69,0 bar] (B_{10} Bearing Life of 1000 Hrs.)

OIL TEMPERATURE: Maximum recommended oil temperture 180°F (82.2°C)

OIL VISCOSITY: Recommended viscosity 150 SUS (32 centistokes)
Minimum recommended viscosity 60 SUS (13 centistokes)

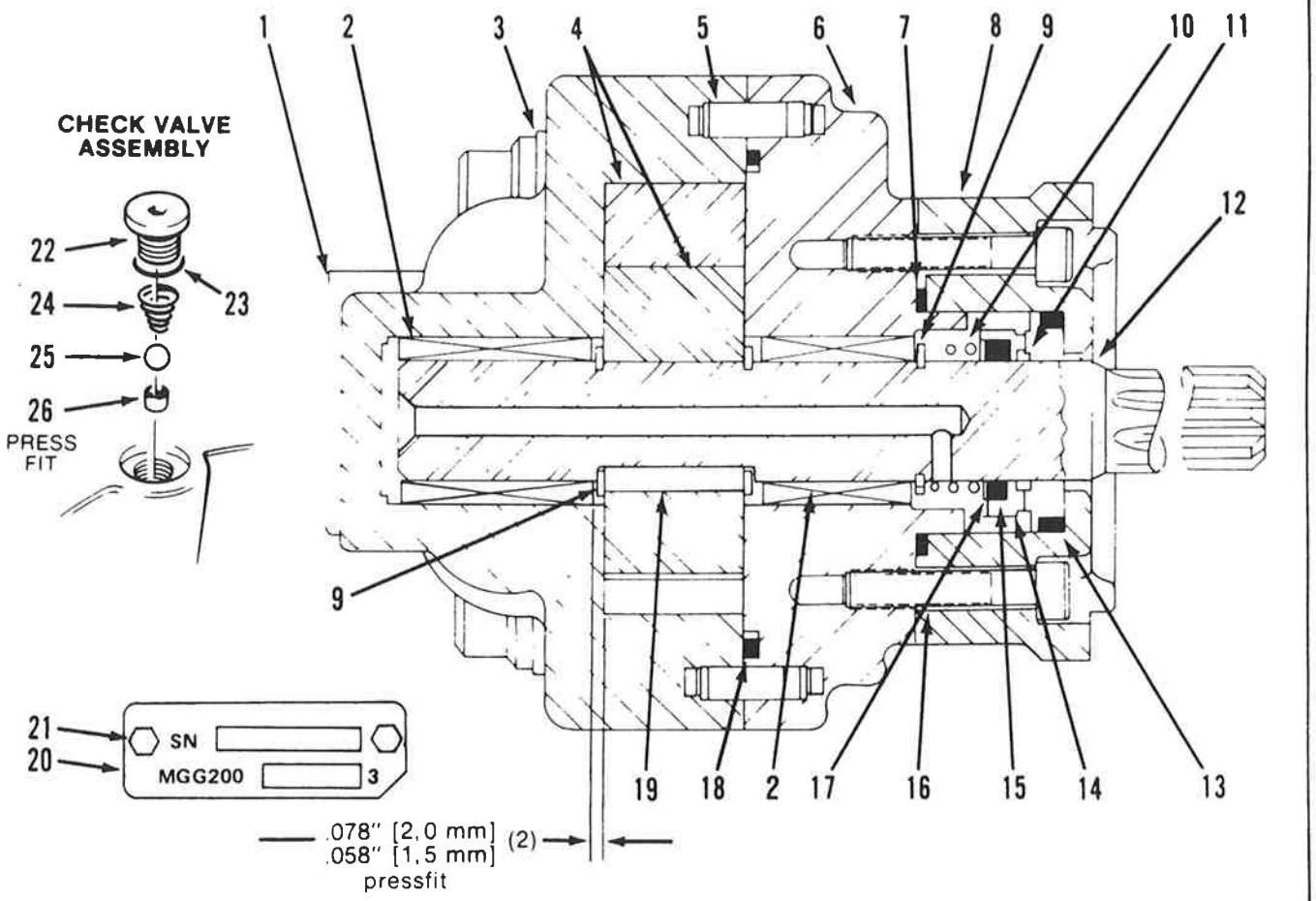
FILTRATION: Minimum recommended filtration 10 Micron

END THRUST: 80 lbs. [36.3 kg] maximum.

WARNING

Never exceed 2500 PSI [172 bar] hydraulic oil pressure or 5000 RPM

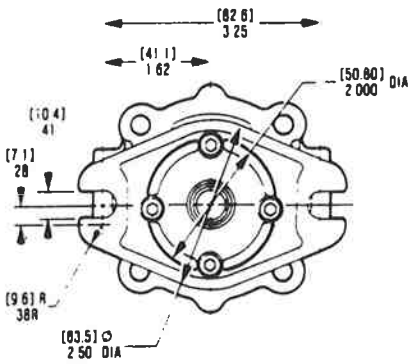
MGG2 HYDRAULIC MOTOR



ITEM NO.	PART NO.	DESCRIPTION		QTY. REQD.
	904813	Seal Kit (Contains items 7, 11, 13, 14, 15 & 18 listed below)		
1	See Page 6	Body		1
2	906005	Bearing		2
3	See Page 5	Screw, Body		4
4	See Page 5	Geroter Element		1
5	906004	Pin, Dowel		2
6	907102	Cover		1
7	906008	Seal, O-Ring		1
8	See Page 4	Plate, Mounting		1
9	906003	Ring, Retaining		3
10	906010	Spring		1
11	906012	Seat, Seal		1
12	See Page 4	Shaft		1
13	906036	Seal, O-Ring		1
14	906011	Cup Seal		1
15	906030	Seal, O-Ring		1
16	906002	Screw, No. 10-24 x 1"		4
17	906013	Washer		1
18	906007	Seal, O-Ring		1
19	See Page 5	Pin, Drive		1
20	8638-001	Plate, Name		1
21	—	Screw, Hex Head, No. 4-40		2
22	—	Plug, Soc. Head SAE No. 2	Not Sold Separately Order 906031	2
23	906042	Seal, O-Ring		2
24	906026	Spring		2
25	88830	Ball		2
26	906028	Seat		2

MOUNTING PLATE OPTIONS (Item 8)

ALL DIMENSIONS ARE IN [MILLIMETRES] INCHES AND ARE FOR REFERENCE ONLY

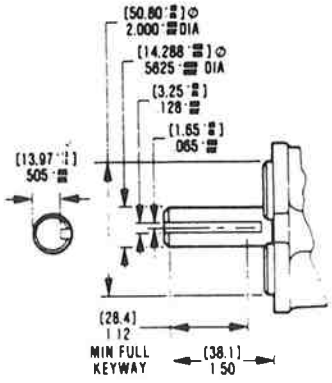


2-BOLT AA FLANGE ADAPTER (OPTION A)

PART NO.
909101

SHAFT OPTIONS (Item 12)

KEYED SHAFT

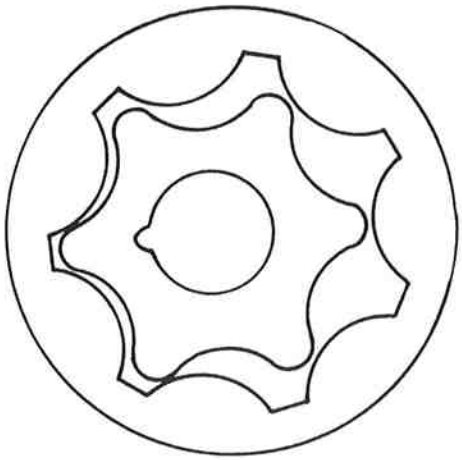


MODEL NO.	KEYED SHAFT PART NO.		
MGG20025	905104		

BODY SCREW (Item 3)
DRIVE PIN (Item 19)

MODEL NO.	BODY SCREW PART NO.	DRIVE PIN PART NO.
MGG20025	905404	905304

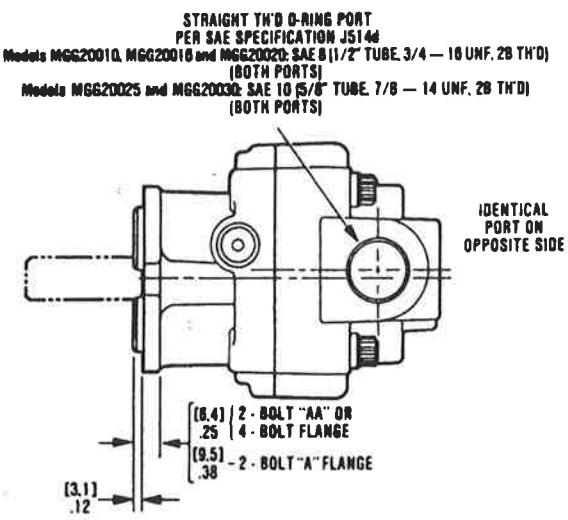
GEROTER ELEMENT (Item 4)



MODEL NO.	PART NO. (INNER AND OUTER GEAR ARE MATCHED SETS)
MGG20025	905204

BODY (Item 1)

SIDE PORTING



BACK PORTING

FOR LEFT HAND ROTATION, PRESSURIZE PORT "A".
FOR RIGHT HAND ROTATION, PRESSURIZE PORT "B".

MODEL NO.	BODY PART NO. FOR BACK PORTING	BODY PART NO. FOR SIDE PORTING
MGG20025	908108	908113

DISASSEMBLY AND REASSEMBLY INSTRUCTIONS

Refer to Assembly Drawing, Page 3

DISASSEMBLY

1. Remove the 4 screws holding the mounting flange, Item 16.

2. Remove mounting flange, Item 8.

3. Remove the face seal assembly.
   3a. Normally the face seal seat does not have to be removed from the mounting flange. If items 11 & 13 are to be removed, drive out item 11 evenly with a soft aluminum or brass punch.

4. Remove exposed retaining ring, Item 9.

5. Hold motor (across port flanges) in a locking fixture such as a vice.
   CAUTION: Use wood slats to protect the aluminum housing when clamping.
   Remove the 4 body screws, Item 3.

6. Separate evenly the body, Item 1, and the cover, Item 6, by holding at cover and tapping gently at port flanges. (Use rubber or plastic mallet.)

7. Remove gerotor gear, Item 4, and shaft, Item 12.

8. Remove 2 retaining rings, Item 9 from the shaft. This will allow the inner gear and drive pin, item 19, to be removed from the shaft. NOTE: Gerotor gear is a matched inner and outer gear set.

9. NOTE: Do not remove bearings, Item 2, from the housing unless there is absolute evidence of damage. (The needle rollers should be free to rotate and not show signs of surface breakdown.)

REASSEMBLY

1. If bearings have been removed:
   1a. Press new bearing, Item 2, into body, Item 1, to a depth of .078/.058" [2,0-1,5 mm].

   1b. Press new bearing, Item 2, into cover, Item 6, to a depth of .078/.058" [2,0-1,5 mm].
   CAUTION: This depth must be maintained to provide clearance for the snap rings on the shaft. Depth is measured from edge of body and cover counterbore to the bearing race.

2. If dowel pins, Item 5, have been removed, insert dowel pins into cover, Item 6.

3. Assemble drive pin, Item 19, and inner gear, Item 4, onto shaft, Item 12.

4. Install retaining rings, Item 9, on each side of the inner gear assembly.

5. Slip the outer gear, Item 4, into gear pocket in the motor body, Item 1.

6. Install shaft assembly, Item 12, to gear pocket.

7. Insert O-ring seal, Item 18, into groove in motor cover, Item 6.

8. Hold motor in locking fixture.
   CAUTION: (Use wood slats to protect aluminum housing when clamping), and install 4 body screws. Torque to 21-24 ft./lbs. [28,5-32,5 Nm].
   NOTE: After torquing of screws, motor shaft must rotate freely.

9. Install outer retaining ring, Item 9, on shaft.

10. Slip spring, Item 10, over end of shaft until it contacts retaining ring, Item 9.

11. Slip washer, Item 17, over end of shaft to contact spring.

12. Assemble seal, Item 15, to cup seal, Item 14, and install (lip out) to shaft, Item 12.
    NOTE: This does require special tool (# 906021).

13. Install "O" Ring, Item 13, into seal seat, Item 11.

14. Lubricate and install seal seat, assembly 11, into mounting flange counterbore (lip of seal out).

15. Install O-ring seal Item 7 in groove on mounting face.

16. Install mounting flange assembly, Item 8.

17. Install 4 mounting flange screws, Item 16. Torque to 46-54 in./lbs. [5,2-6,1 Nm].

18. Fill Port "A" with clean hydraulic oil and rotate shaft clockwise until oil drains from Part "B".

AVAILABLE KITS

K-29007 Bearing & Seal Kit

BANJO CORPORATION
150 Banjo Drive
Crawfordsville, Indiana 47933
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Telephone: (765) 362-7367
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