

PARTS & SERVICE NEWS

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DATE	May 23, 1997

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SUBJECT: RELEASE OF HIGH TORQUE CIRCLE REVERSE MOTORS AND SERVICE PARTS

PURPOSE: To provide service parts for Circle Reverse Motor Installation on the below listed Graders. The previous motors, P/N 1257958H91 and 1435598H1, were discontinued.

APPLICATION: GD530A-1 Graders S/N 201114 thru 201440
 GD530AW-1 Graders S/N 201114 thru 201440
 GD530A-2 Graders S/N 202002 thru 203192
 GD530AW-2 Graders S/N 202001 thru 203192
 GD650A-1 Graders S/N 200840 thru 201491
 GD650AW-1 Graders S/N 200840 thru 201491
 GD650A-2 Graders S/N 202001 thru 203192
 GD650AW-2 Graders S/N 202001 thru 203192
 GD670A-2 Graders S/N 202011 thru 203192
 GD670AW-2 Graders S/N 202011 thru 203192
 830 Graders S/N 100485 thru 201491
 830B Graders S/N 202038 thru 203192
 830C Graders S/N 202038 thru 203192
 850 Graders S/N 100477 thru 201502
 850B Graders S/N 202018 thru 203192
 850C Graders S/N 202018 thru 203192
 870 Graders S/N 100481 thru 201506
 870B Graders S/N 202028 thru 203192
 870C Graders S/N 202018 thru 203192

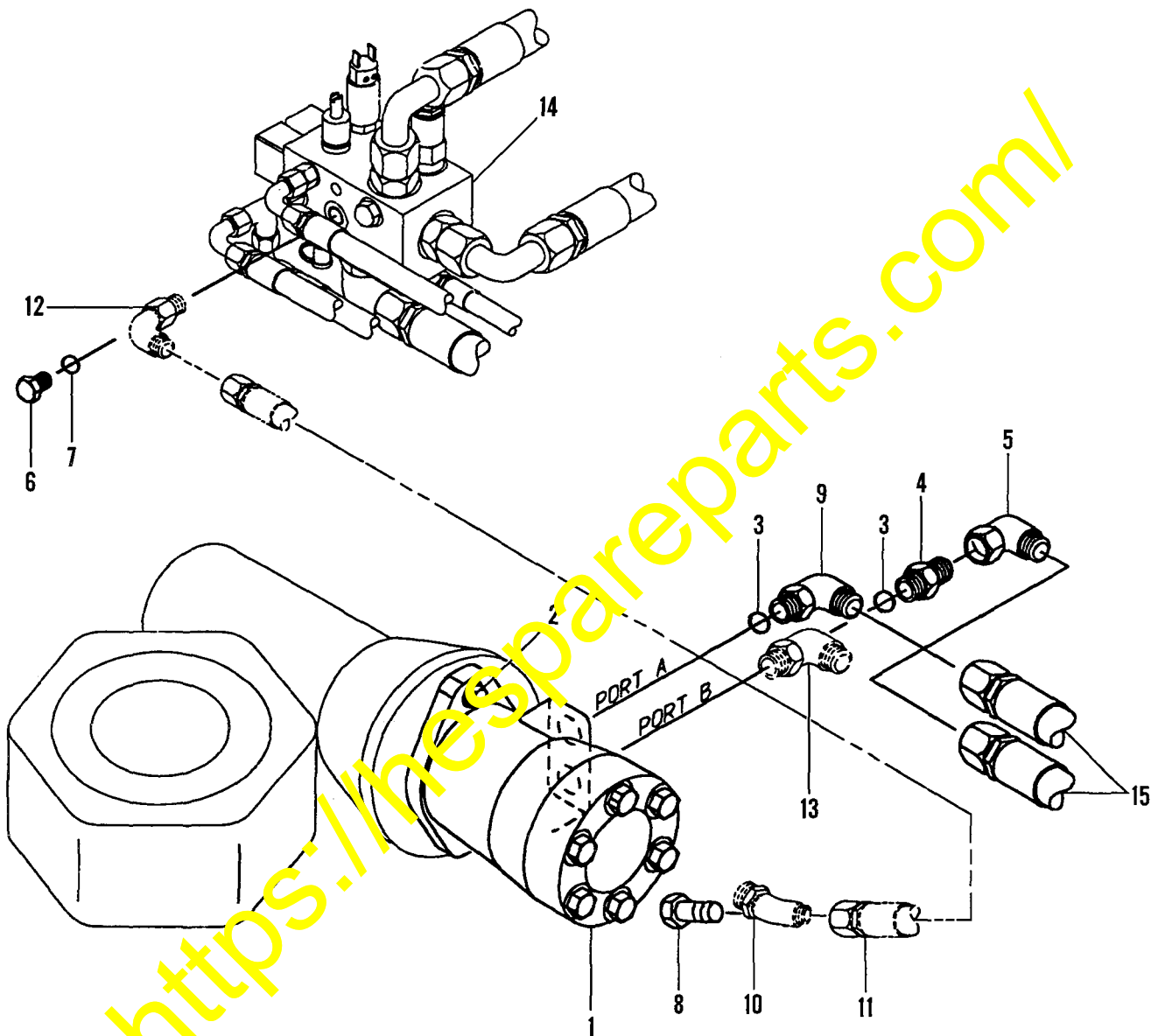
DESCRIPTION:

Introduction:

The component parts for the Circle Reverse Hydraulic Motors and the related service parts are released for service.

For individual service part numbers, refer to the subsequent pages of this **PARTS & SERVICE NEWS**.

CIRCLE REVERSE HYDRAULIC MOTOR FIELD INSTALLATION

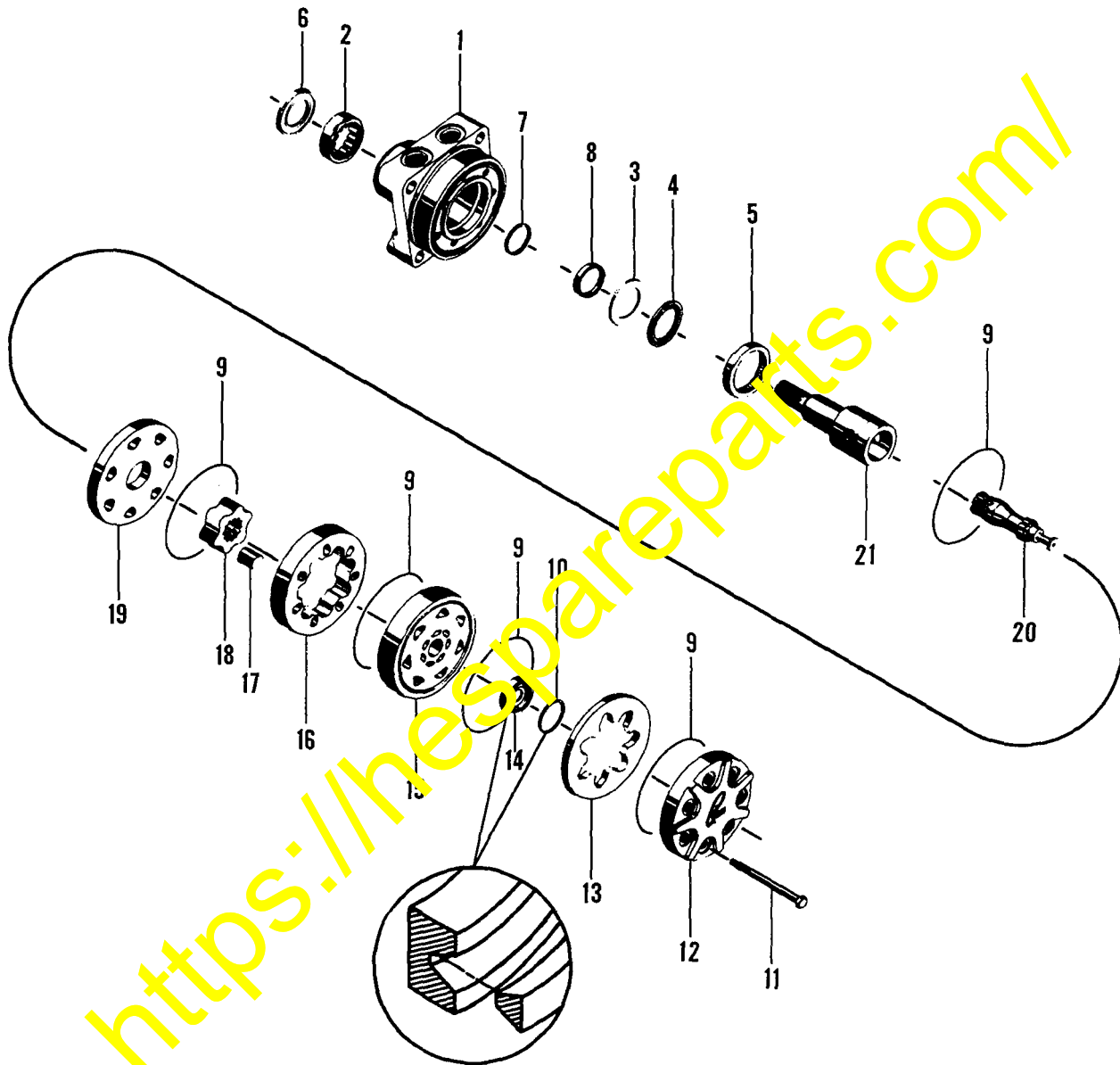


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CIRCLE REVERSE HYDRAULIC MOTOR FIELD INSTALLATION

Item	Part Number	Description	Qty.	Ref.
1		MOTOR, CIRCLE REVERSE (SEE PG 5 or 7)	1	
	140 317	GASKET	1	
2	45 279	BOLT - 12 PT 1/2-13 X 1	2	
	1232 271 H1	LOCTITE 12017	1	
3	364 885 R1	O-RING	2	
4	9410 204	CONNECTOR	1	
5	9410 282	ELBOW - 90° SWIVEL NUT	1	
6	9410 358	PLUG	1	
7	364 839 R1	O-RING	1	
8	9403 330	PLUG - IN DRAIN HOSE IF NOT REMOVED	1	
THE FOLLOWING ITEMS ARE FOR REFERENCE ONLY:				
9	9410 978	ELBOW - 90°		REF
10	9411 102	ELBOW - 45°		REMOVE
	369 751 R1	O-RING		REMOVE
11	1287 374 H1	HOSE, DRAIN		REMOVE
12	9410 976	ELBOW - 90°		REMOVE
	364 839 R1	O-RING		REMOVE
13	9410 978	ELBOW - 90°		REMOVE
14		BLOCK JUNCTION		REF
<i>LOCATED UNDER REAR LEFT SIDE OF CAB</i>				
15	1430 136 H1	HOSE, CIRCLE REVERSE		REF

**CIRCLE REVERSE MOTOR
FOR STANDARD CIRCLE**

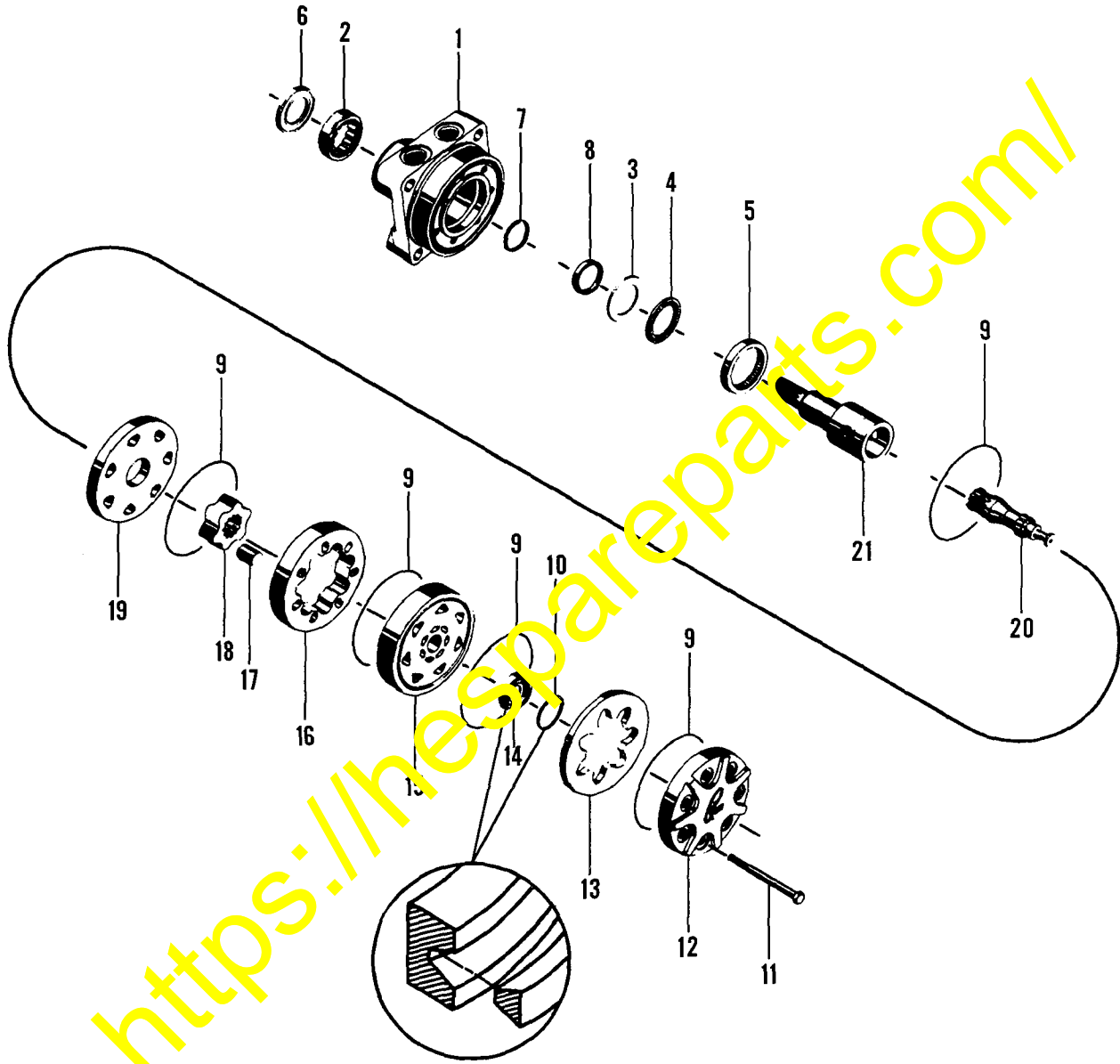


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**CIRCLE REVERSE MOTOR
FOR STANDARD CIRCLE**

Item	Part Number	Description	Qty.	Ref.
	1437 990 H91	MOTOR, CIRCLE REVERSE	1	
1	1438 022 H91	.HOUSING	1	
2	1438 023 H1	..BEARING, NEEDLE	1	
3	1438 024 H1	..WASHER, THRUST	1	
4	1438 025 H1	..BEARING, THRUST	1	
5	1438 026 H1	..BEARING, NEEDLE	1	
	1438 027 H91	.KIT, SEAL	1	
6	1438 028 H1	..SEAL, DIRT & WATER	1	
7	1438 263 H1	..WASHER, BACKUP	1	
8	1438 264 H1	..SEAL, INNER	1	
9	1438 265 H1	..RING, SEAL	5	
10	1438 033 H1	..SEAL, COMMUTATOR	1	
11	1438 034 H1	.BOLT	5	
12	1438 035 H1	.COVER, END	1	
	1438 036 H91	.COMMUTATOR & RING ASSEMBLY	1	
13	NSS	..COMMLUTATOR	1	
14	NSS	..RING	1	
15	1438 037 H1	.MANIFOLD	1	
	1438 038 H91	.SET, ROTOR	1	
16	NSS	..STATOR	1	
17	NSS	..VANE	7	
18	NSS	..ROTOR	1	
19	1438 039 H1	.PLATE, WEAR	1	
20	1437 794 H1	.LINK, DRIVE	1	
21	1438 200 H1	.SHAFT, COUPLING	1	

**CIRCLE REVERSE MOTOR
FOR CIRCLE WITH REPLACEABLE WEAR PADS**



A10AV026

**CIRCLE REVERSE MOTOR
FOR CIRCLE WITH REPLACEABLE WEAR PADS**

Item	Part Number	Description	Qty.	Ref.
	1437 957 H91	MOTOR, CIRCLE REVERSE	1	
1	1438 022 H91	.HOUSING	1	
2	1438 023 H1	..BEARING, NEEDLE	1	
3	1438 024 H1	..WASHER, THRUST	1	
4	1438 025 H1	..BEARING, THRUST	1	
5	1438 026 H1	..BEARING, NEEDLE	1	
	1438 027 H91	.KIT, SEAL	1	
6	1438 028 H1	..SEAL, DIRT & WATER	1	
7	1438 263 H1	..WASHER, BACKUP	1	
8	1438 264 H1	..SEAL, INNER	1	
9	1438 265 H1	..RING, SEAL	5	
10	1438 033 H1	..SEAL, COMMUTATOR	1	
11	1438 201 H1	.BOLT	5	
12	1438 035 H1	.COVER, END	1	
	1438 036 H91	.COMMUTATOR & RING ASSEMBLY	1	
13	NSS	..COMMLUTATOR	1	
14	NSS	..RING	1	
15	1438 037 H1	.MANIFOLD	1	
	1438 202 H91	.SET, ROTOR	1	
16	NSS	..STATOR	1	
17	NSS	..VANE	7	
18	NSS	..ROTOR	1	
19	1438 039 H1	.PLATE, WEAR	1	
20	1438 203 H1	.LINK, DRIVE	1	
21	1438 200 H1	..SHAFT, COUPLING	1	

INSTRUCTIONS TO INSTALL CIRCLE REVERSE MOTOR

1. Remove hoses (1) and elbows (2) from motor.
2. If drain hose (3) is connected to motor, remove hose and elbow (4). Plug hose with 9403 330 plug (5) if hose is not removed at junction block. (See page 3 for plug at junction block.)

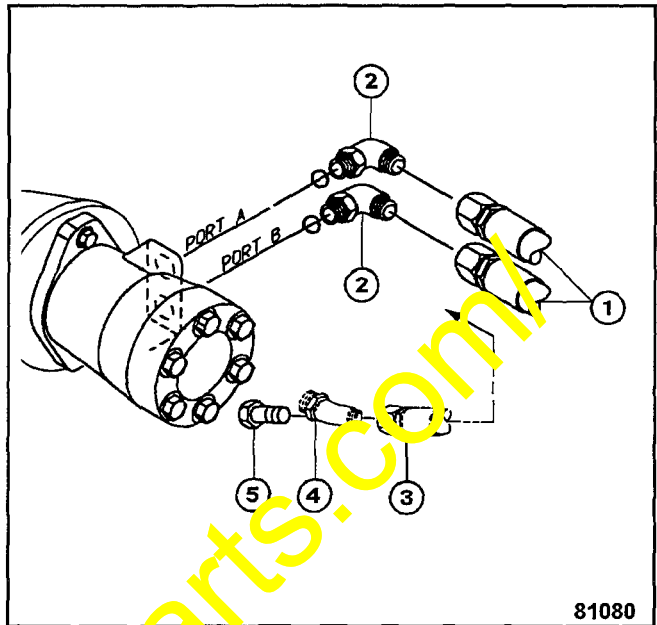


Figure 1

3. Remove motor (1), gasket or o-ring (2) and coupling (3).

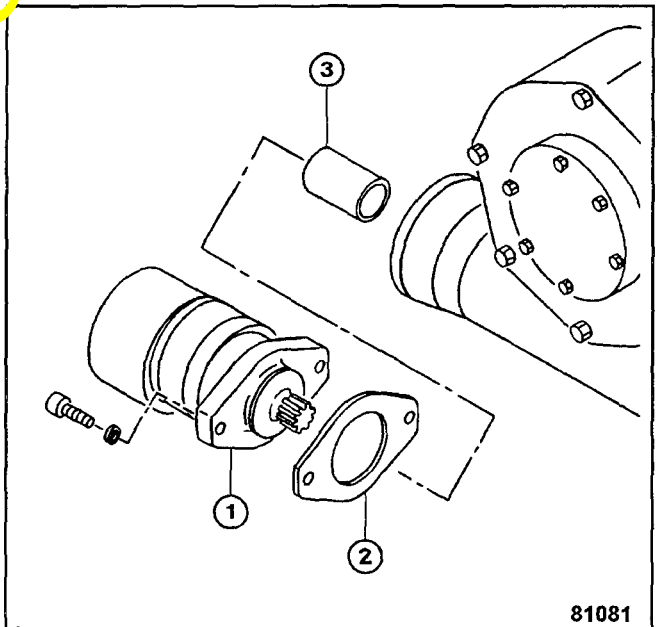


Figure 2

4. If you are replacing the motor on a grader serial number 202400 and below, the worm gear (1), bearing cones (2) and bearing cups (3) must also be replaced. The worm gear is now heat treated. See Shop Manual Section F-01.30 for a disassembly and reassembly procedure. Use shims (4) as required. The worm gear may be removed without removing the circle reverse gear.

You will need the following parts to service the worm gear:

Item	Part Number	Description	Qty
1	60230	Gear, Worm	1
2	28797	Cone, Bearing	2
3	28796	Cup, Bearing	2
4	28781A	Shim - .003	3
	28781BH45	Shim - .005	3

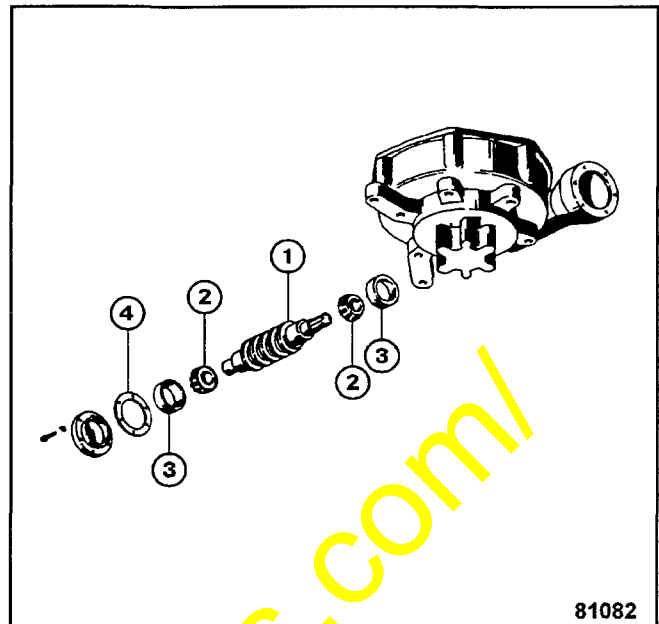


Figure 3

5. Using one of the elbows (1) removed in step 1, replace o-ring (2) and install in port A of the motor.
6. Install o-ring (3) on connector (4) and install in port B of motor. Install elbow (5) onto connector (4).
7. Install hoses (6) to elbows (1 & 5).

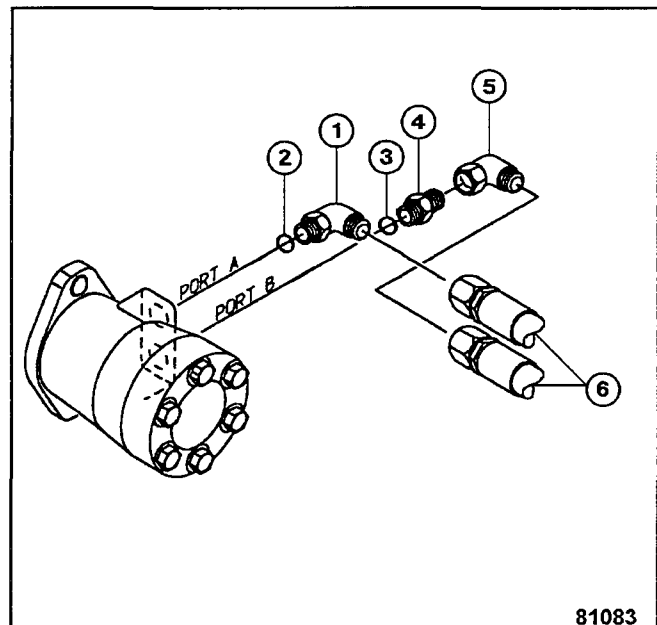


Figure 4

8. Place coupling (1) on worm gear shaft. Place gasket (2) on motor (3).
9. Apply Loctite 12017 to two 45279 bolts (4) and install motor to gear case. Tighten to 70 lbf ft.

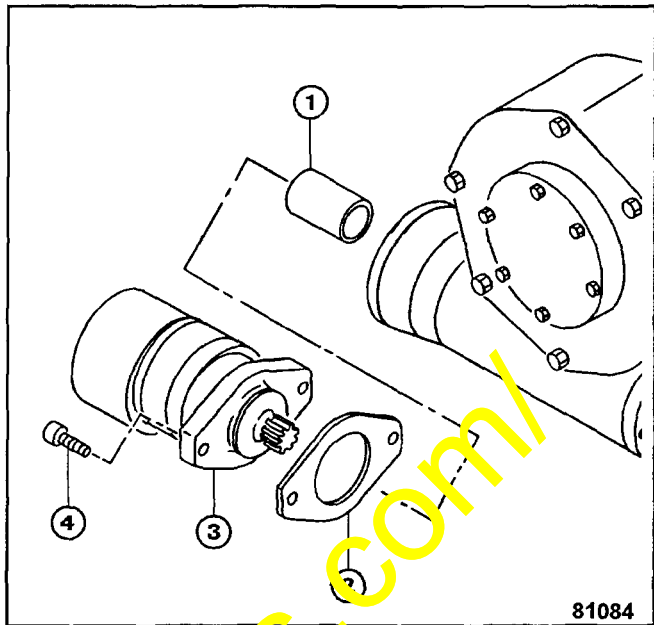


Figure 5

INSTRUCTIONS TO SEAL CIRCLE DRIVE GEAR CASE

1. Remove six bolts and washers (1) from bearing retainer (2).
2. Remove bearing retainer and shims. Use extreme care not to damage shims. These shims will be used in reassembly to preheat bearings.
3. Remove six bolts and washers (3) from circle drive case cover (4).
4. Remove cover. Bearing cup will also be removed with cover.

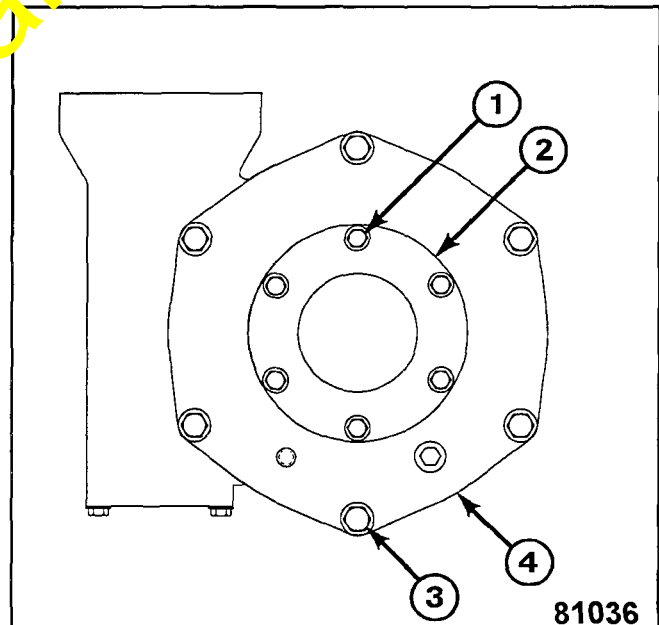


Figure 6

5. Chamfer (.03 inches x 45°) case at (1, Figure 7), and case cover at (2). Protect the inside of the gearcase from foreign material.
6. Thoroughly clean mating surfaces of case and cover with degreasing solvent; apply primer "N" to chamfered case surface (1) and apply .06 bead of Loctite 12017 to cover (3) on mating surface between the cover and case; circle bolt holes with Loctite.
7. Install cover to case, apply Loctite to threads of two bolts used in through holes at worm pinion (1, Figure 8); install six washers and bolts. Cross tighten bolts to 80 lbf ft (9.7 kg•m).

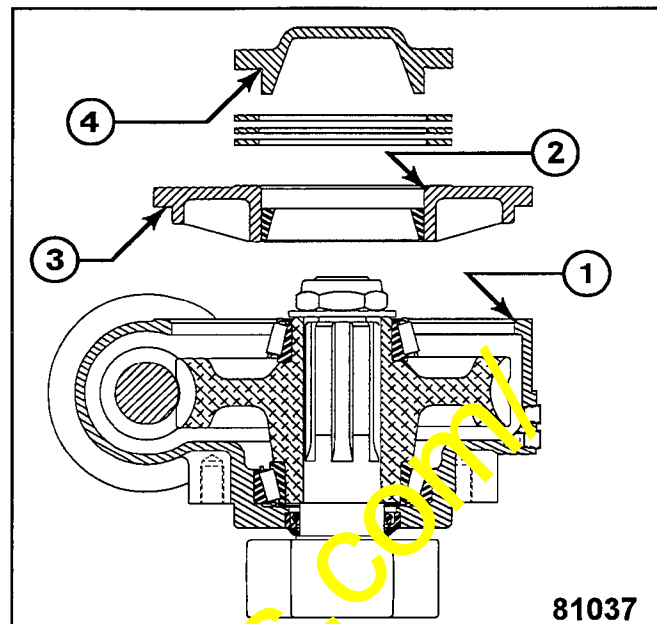


Figure 7

8. Before installing bearing retainer, see Shop Manual Section F-01.30 for preload adjustment procedure.
9. After shim pack is determined, thoroughly clean mating surfaces with degreasing solvent; apply primer "N" to chamfered cover surface (2, Figure 7), and apply .06 bead of Loctite 12017 to bearing retainer (4) at the root of the radius; circle bolt holes with Loctite.
10. Place determined shim pack on bearing retainer. Install bearing retainer and shims to circle drive case cover; install six washers and bolts (2, Figure 8). Tighten to 32 lbf ft (4.4 kg•m).

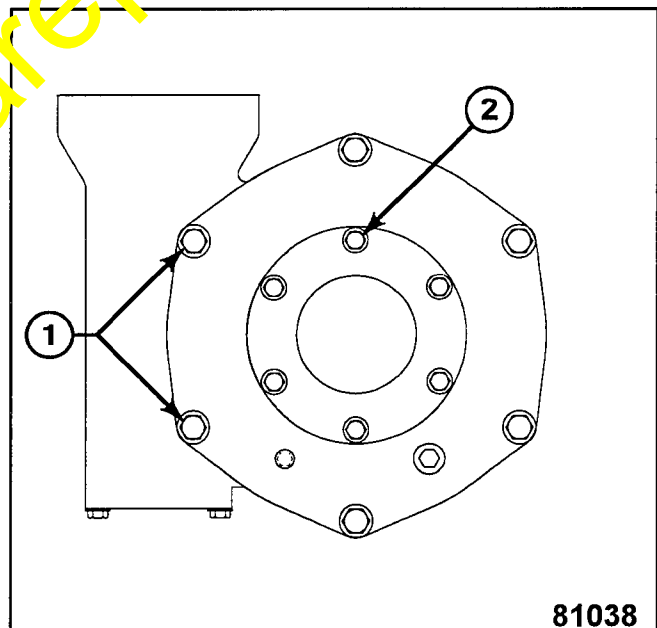


Figure 8

<https://hespareparts.com/>