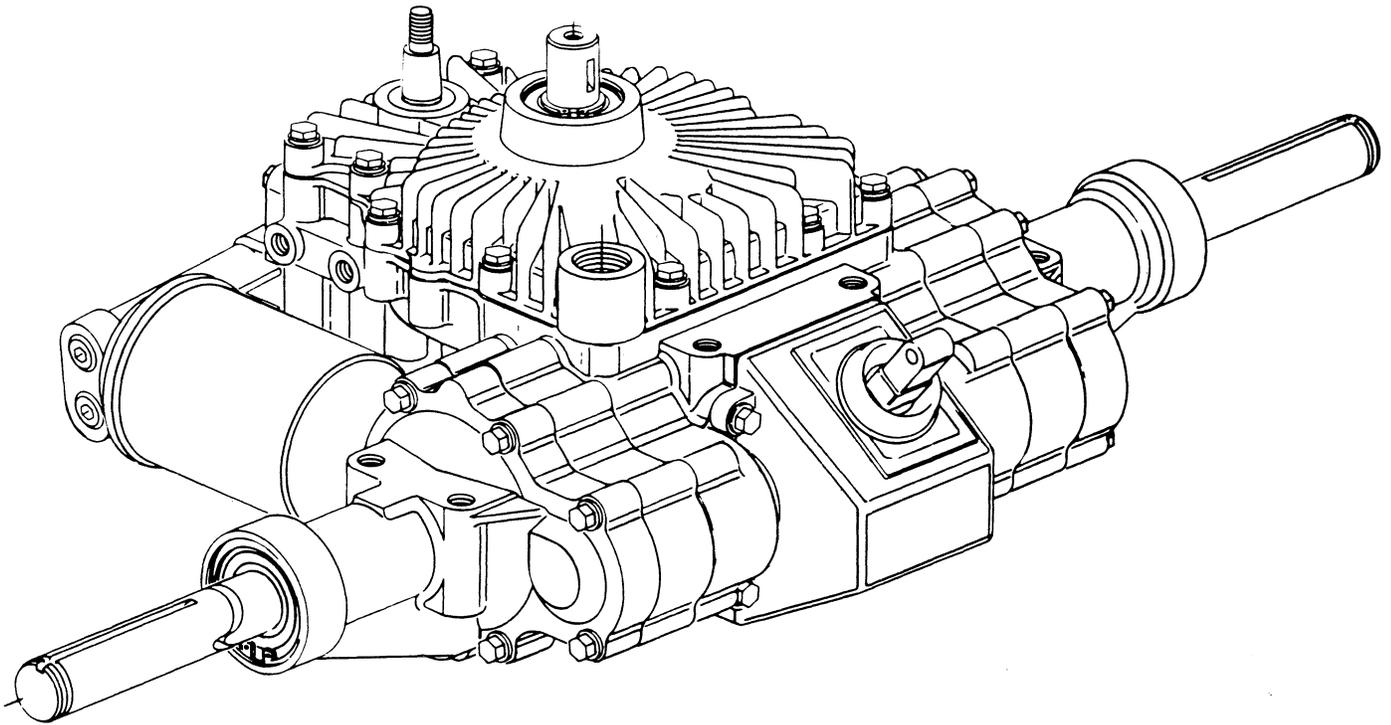


Eaton
Hydraulics
Division

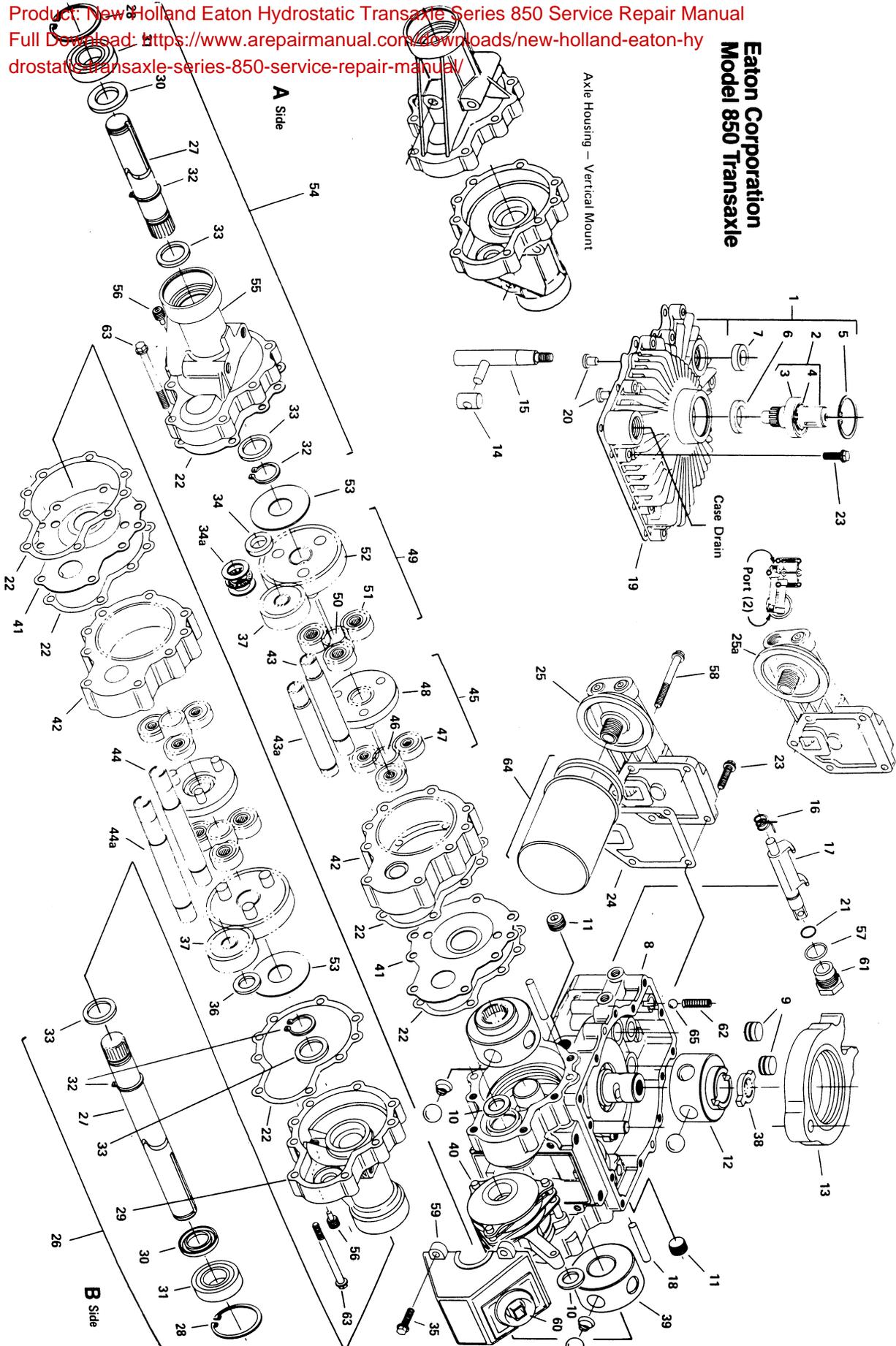
Repair Information

Hydrostatic Transaxle Series 850



EATON

**Eaton Corporation
Model 850 Transaxle**



850 Transaxle Parts List

Ref. No.	Description	Qty
1	Cover, Subassembly (S/A)	1
2	Shaft, Input, S/A	1
3	Bearing, Input Shaft	1
4	Ring, Retaining, External	1
5	Ring, Retaining, Internal	1
6	Seal, Input Shaft	1
7	Seal, Control Shaft	1
8	Housing, S/A	1
9	Piston, Dampening, S/A	2
10	Seal, Brake Shaft	2
11	Plug, Socket Pipe	2
12	Pump Rotor-Ball-Pin, S/A	1
13	Cam Ring, S/A	1
14	Insert	1
15	Control Shaft, S/A	1
16	Spring, Dump Valve	1
17	Bracket, Dump Valve	1
18	Dowel	4
19	Gasket, Cover	1
20	Button	2
21	O-ring	1
22	Gasket, Axle Housing	6
23	Screw, 1/4-20 Hex Flange	16
24	Gasket, Filter Base or Port Plate	1
25	Filter Base, S/A	1
26	Axle Housing, S/A - B	1
27	Shaft, Axle	1
28	Retaining Ring, Internal	1
29	Housing, Axle - B	1
30	Seal, Axle Shaft	1
31	Bearing, Axle	1
32	Retaining Ring, External	2
33	Washer, Thrust	2
34	Spacer (Thick - PB)	1
34 a	Washers, Thrust and Bearing, Thrust (DL/PB)	2&1
35	Screw, 1/4-20 Self Tap	4
36	Spacer (Thin - PB or DL/PB)	1
37	Brake Gear	2
38	Drive	1
39	Motor, Rotor-Ball, A & B S/A	2
40	Parking Brake or Option Differential Lock/Parking Brake (PB or DL/PB)	1
41	Plate, Wear	2
42	Ring Gear, A & B S/A	2
43	Brake Shaft-A (PB)	1
43 a	Brake Shaft-A (DL/PB)	1
44	Brake Shaft-B (PB)	1
44 a	Brake Shaft-B (DL/PB)	1
45	Planetary Gear, First, Subassembly	2
46	Sun Gear, First	2
47	Pint Gear, First, A & B S/A	6
48	Primary Carrier, A & B S/A	2
49	Planetary Gear, Second, A & B S/A	2
50	Sun Gear, Second	2
51	Pint Gear, Second, A & B S/A	6
52	Secondary Carrier, A & B S/A	2
53	Washer, Thrust	2
54	Axle Housing, S/A - A	1
27	Shaft, Axle	1
28	Retaining Ring, Internal	1
55	Housing, Axle - A	1
30	Seal, Axle Shaft	1
31	Bearing, Axle	1
32	Retaining Ring, External	2
33	Washer, Thrust	2
56	Plug, Magnetic	2
57	O-ring, Dump Valve Nut	1
58	Screw, 1/4-20 Hex Flange	2
59	Cover (PB or DL/PB)	1
60	Boot, Dust	1
61	Nut, Dump Valve	1
62	Spring, Relief Valve	1
63	Screw, 1/4-20 Hex Flange	14
64	Filter, Oil (w/seal)	1
65	Ball, Grade 200	1

Transaxle Series 850

The following tools are required for disassembly and reassembly of the transaxle.

- 3/8 inch Socket or End Wrench
- 1 inch Socket or End Wrench
- Torque Wrench (300 lb-in)
- No. 5 or 7 Internal Retaining Ring Pliers
- No. 4 or 5 External Retaining Ring Pliers
- 6 or 8 inch C-clamp
- Small Screwdriver (4 to 6 inches long)
- Long Drift Punch
- Piece of Pipe or Hydraulic Tubing (1½ in. O.D. x 6 in. long)

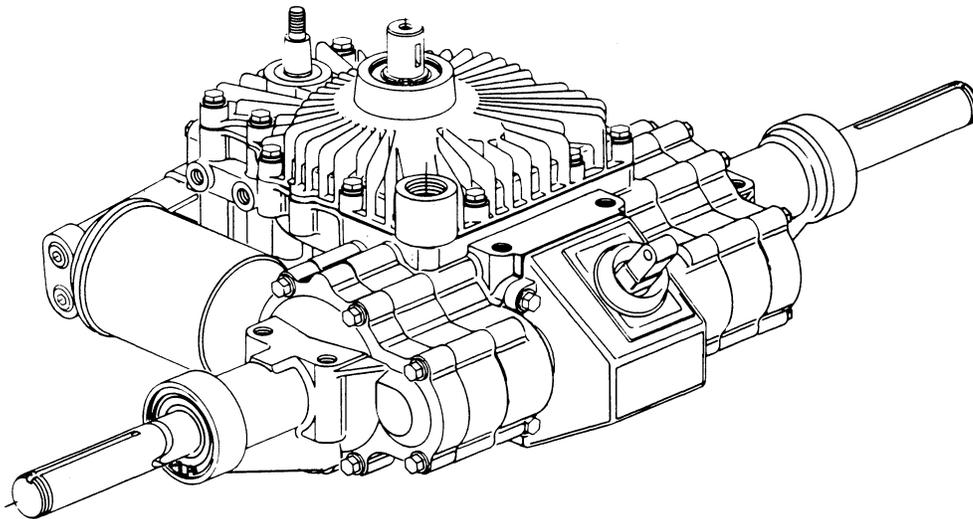
- 3 or 4 Large Wide Rubber Bands
- Light Petroleum Jelly (such as Vaseline)

Product Identification and Ordering Information

When ordering parts for the transaxle, please include the following:

Date Code
Input Rotation
Model Number
Part Name
Part Number
Quantity of Parts

This information is located on the under side of the pump housing, opposite the input shaft.



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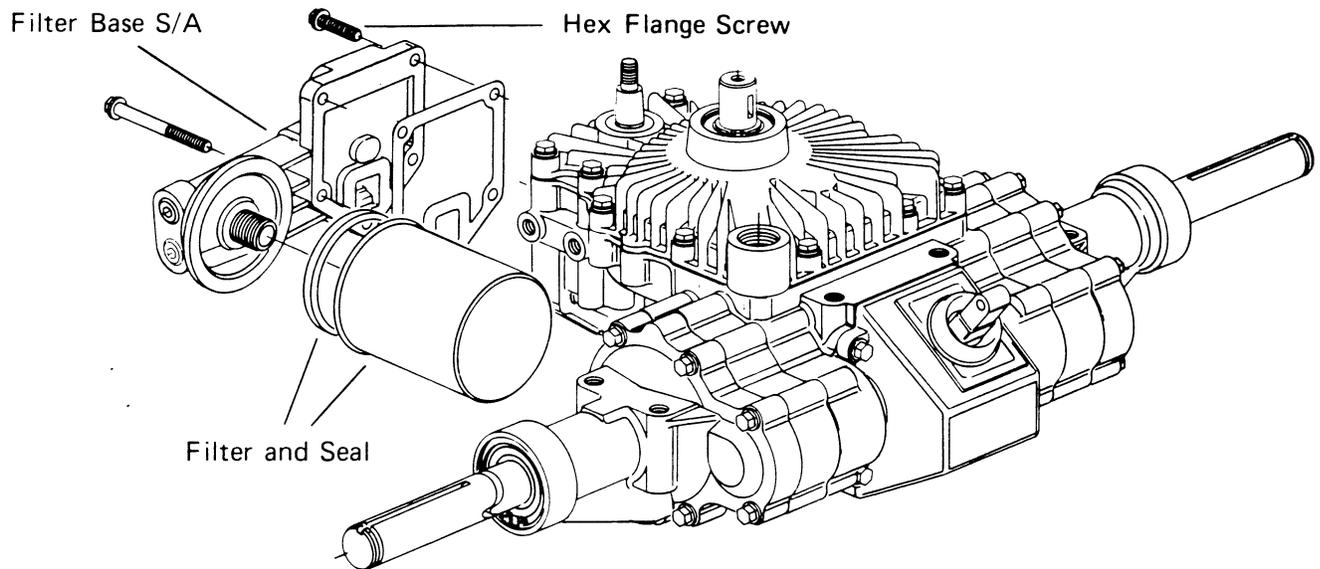
Complete Disassembly

The following procedures describe complete disassembly of the Transaxle Series 850. These procedures cover the basic unit only. However, procedures for units with options such as the differential lock/parking brake are still basically the same.

The level of cleanliness maintained while repairing the transaxle could affect its performance. Work in a clean area. After disassembly, wash all parts with clean solvent and blow the parts dry with air. Inspect

all mating surfaces. Replace any damaged parts that could cause internal leakage. Do not use grit paper, files or grinders on finished parts.

Our service policy is to replace all seals and gaskets whenever a transaxle is disassembled. Lubricate the new seals with petroleum jelly before installation. Use only clean, recommended hydraulic fluid on the finished surfaces at reassembly.



1 Drain the transaxle and then remove the filter from the filter base.

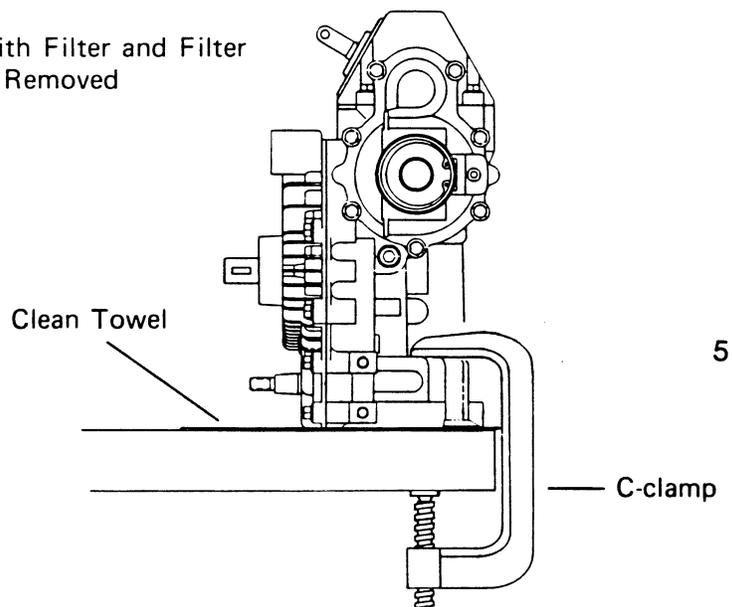
2 Remove the hex flange screws from the filter base.

3 Remove the filter base from the housing assembly.

4 Remove the filter base gasket.

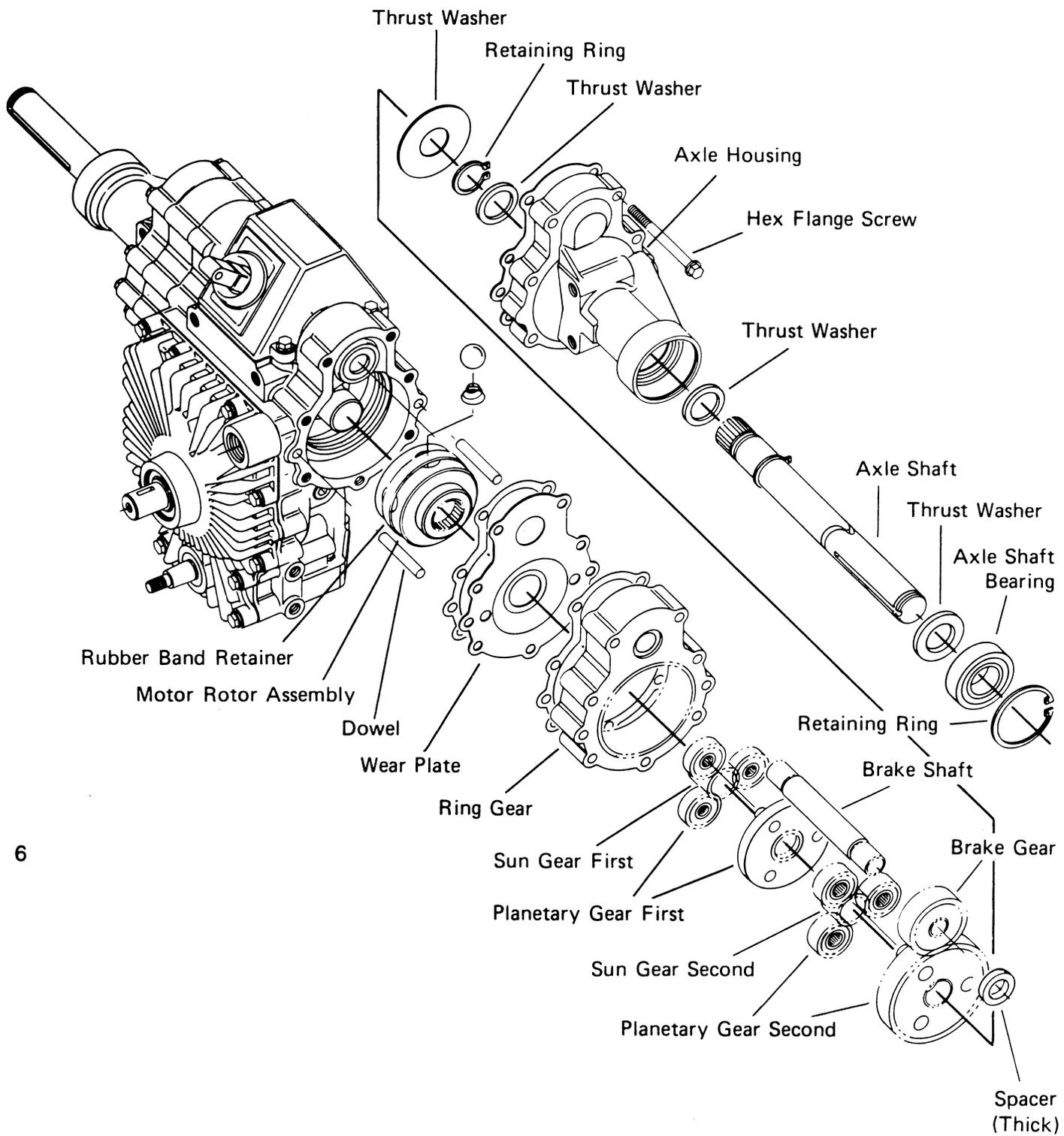
Note: This gasket may have remained on the filter base when the filter base was removed from the housing assembly.

Transaxle with Filter and Filter Base S/A Removed



5 It is easier to disassemble the axle assemblies with the transaxle as shown. Before securing the transaxle in this position, place a clean towel between the housing's filter base surface and the work surface. This towel protects the sealing surface from possible damage during repositioning.

Secure the transaxle to a clean work surface with a 6 to 8 inch C-clamp. Do not overtighten the C-clamp when securing the transaxle.



6 Remove the hex flange screws from either axle assembly.

7 Carefully remove the axle assembly from the housing assembly.

8 In most cases the brake shaft will remain in the housing assembly when the axle assembly is removed. If this occurs, remove the brake shaft at this time.

Important: Be extremely careful when removing the motor rotor assemblies. The ball pistons are spring loaded in the bores and must remain intact because each ball piston is matched to its respective bore.

9 The best way to remove the motor rotor assemblies is to place a separate motor race on top of the existing motor race in the housing assembly. Hold the separate race securely in position. Then carefully pull the motor rotor assembly outward until the ball pistons are fully engaged in the groove located in the center of the separate race. Carefully remove the rotor assembly and race together as a set, handling the motor rotor assembly only.

Note: If a separate motor race is not available, work a wide rubber band around the outside of the motor rotor to hold the ball pistons in their bores. It is essential that the ball pistons be retained in their bores during handling. This is especially true for the motor rotors, as the motor ball pistons are spring loaded in the bores.

10 Reposition the transaxle and remove the hex flange screws from the remaining axle assembly.

11 Carefully remove the axle assembly from the housing assembly.

12 Remove the remaining brake shaft from the housing assembly.

13 Using a separate race or wide rubber band to retain the ball pistons in their bores, carefully remove the other motor rotor assembly.

Axle Disassembly Procedures

14 The following procedures apply to both axle assemblies.

15 Remove the axle housing gasket from the wear plate.

Note: This gasket may have remained on the housing assembly when the axle assembly was removed.

16 Remove the wear plate from the axle assembly.

17 Remove the axle housing gasket from the ring gear assembly.

18 Remove the first sun gear from the primary carrier assembly.

Note: The first sun gear may have remained in the motor rotor during removal of the axle assembly.

19 Remove the primary carrier assembly from the ring gear assembly.

20 Remove the second sun gear from the secondary carrier assembly.

21 Remove the ring gear assembly from the axle housing.

22 Remove the gasket and dowel pins from the axle housing.

23 Remove the brake gear from the axle housing.

24 Remove the spacer washer from the axle housing.

Note: On transaxles with the differential lock/parking brake option, two thrust washers and a thrust bearing are used in place of the spacer in the A axle assembly.

25 Remove the secondary carrier assembly from the axle shaft.

26 Both the primary and secondary carrier assemblies may be disassembled for inspection.

27 Remove the thrust washer from the axle housing.

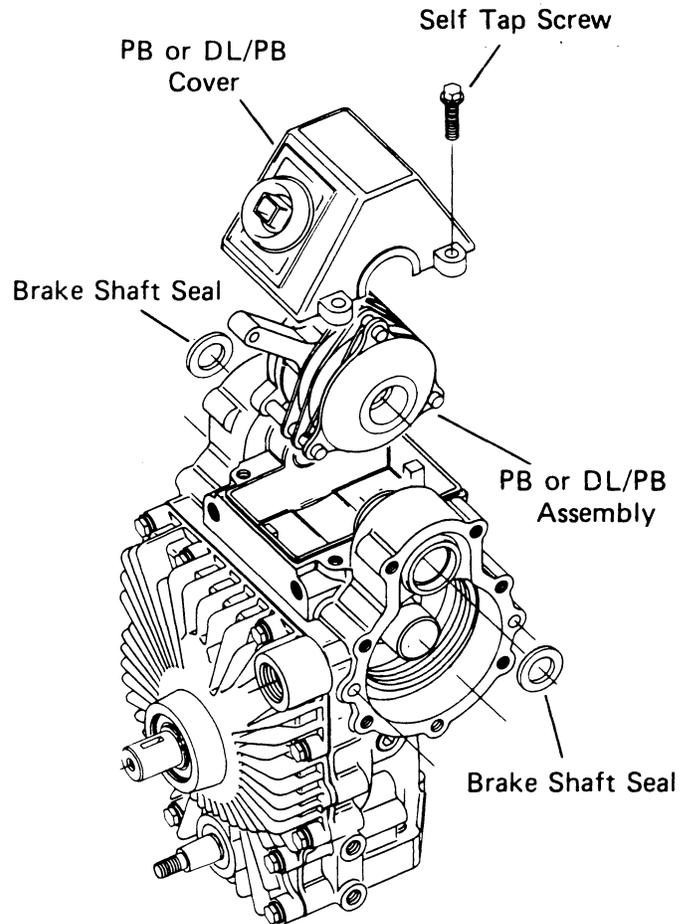
28 Reposition the axle housing with the splined end of the axle in the up position. Use a no. 4 or 5 external retaining ring pliers to remove the retaining ring and thrust washer from the axle shaft.

29 Reposition the axle housing assembly with the wheel end of the axle in the up position. Use a no. 5 or 7 internal retaining ring pliers to remove the bearing retaining ring from the axle housing.

30 Remove the axle from the axle housing by using a small press or by tapping the splined end of the axle with a plastic tipped hammer. This will dislodge the seal and bearing from the axle bore.

31 Press the bearing from the axle shaft. Remove the seal and thrust washer from the axle shaft. The thrust washer may have remained in the axle housing when the axle shaft was removed.

Note: The retaining ring remaining on the axle shaft need not be removed.



Housing Disassembly Procedures

32 Remove the four self tap screws from the brake (PB or DL/PB).

33 Remove the PB or DL/PB cover from the housing assembly.

34 Remove the PB or DL/PB assembly from the housing assembly.

35 In most cases total disassembly of the PB or DL/PB is not recommended. 9

36 On units with the differential lock/parking brake option, the two outside disks are the only disks that can be removed easily for inspection and cleaning.

Note: On transaxles with the differential lock/parking brake option, do not move the lever unnecessarily, especially when it is out of the housing assembly. The differential lock/parking brake assembly incorporates automatic self-adjusting brakes. Activation of the lever may cause the brake to expand and make installation of the assembly very difficult.

