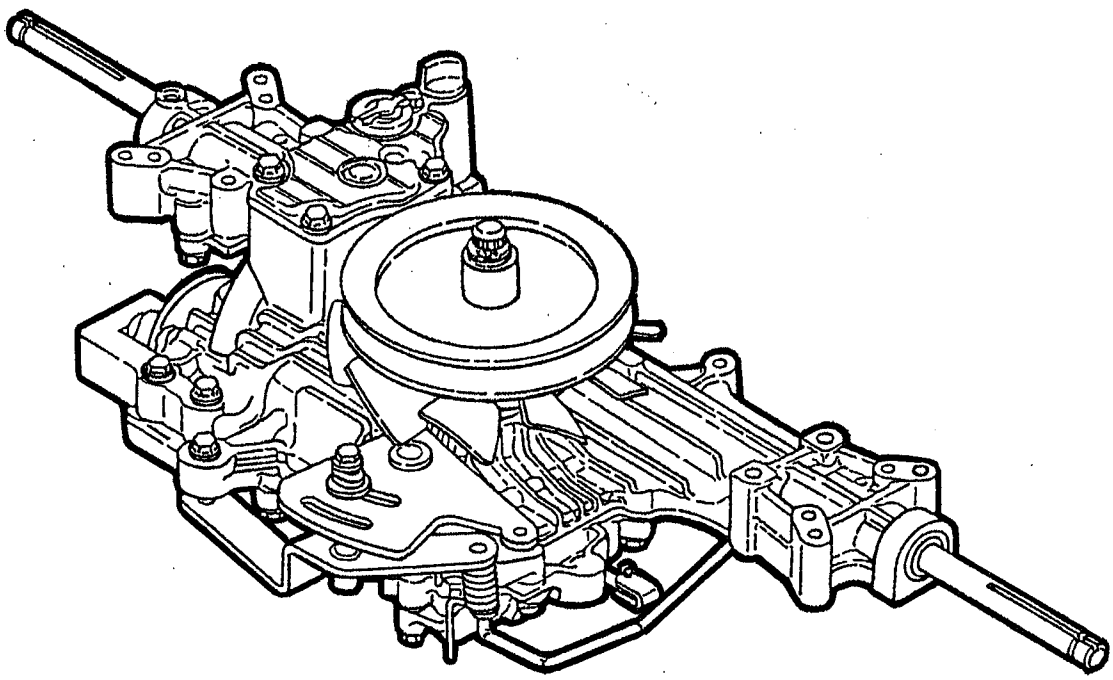
SNAPPER®

TUFF TORQ MODEL K50/K55
HYDROSTATIC TRANSAXLE



SERVICE MANUAL

SNAPPER® McDonough, GA., 30253 U.S.A. MANUAL No. 07011 (I.R. 7/94)

TABLE OF CONTENTS

NOTE

When making repairs that require replacement parts or components, use only original SNAPPER replacement parts to keep the equipment in top operating condition. Refer to the appropriate parts manual for correct part numbers and proper quantities required.

Section I

GENERAL INFORMATION

Section I - GENERAL INFORMATION

INTRODUCTION

HOW TO USE THIS MANUAL

This manual contains the Service and Maintenance information required to properly inspect, service and repair **a SNAPPER TUFF TORQ Model K50/K55 Hydrostatic Transaxle.** The manual is divided into sections for quick, easy reference. Carefully read all procedures described for servicing a particular component BEFORE repairs are started, to avoid needless disassembly.

WARNINGS & CAUTIONS

Details of standard workshop safety procedures are not included in this manual. WARNING & CAUTIONS occur where procedures, if improperly performed, could cause personal injury and/or damage to the transaxle or its components. These WARNINGS & CAUTIONS do not cover all conceivable ways hazardous consequences could be created by improperly following the instructions or by the incorrect use of service tools.

TOOL REQUIREMENTS

The normal complement of Standard and Metric tools found in most repair shops are all that will normally be needed to repair the **SNAPPER TUFF TORQ Model K50/K55 Hydrostatic Transaxle.**

Section II

TROUBLESHOOTING

Section II - TROUBLESHOOTING

HYDROSTATIC TRANSAXLE

TRANSAXLE WILL NOT MOVE FORWARD OR IN REVERSE

Roll release lever is engaged	disengage lever
Oil level low	add oil
Input drive belt is slipping or broken	adjust/replace belt
Parking brake is set	release park brake
Stripped splines on input shaft	replace input shaft
Stripped keys on axles	replace axle keys
Broken axle or ring gear	replace axle or ring gear

TRANSAXLE IS OVERHEATING

Oil level low	check/add oil
Oil is of wrong type	drain. replace with specified oil
Cooling fins on transaxle are clogged	clean fins
Broken cooling fan blades	replace cooling fan
Exceeding load rating for tractor	reduce load
Parking brake not fully released	release park brake

LEAKING OIL

...from axle seals	replace axle seals and/or bushings
...from oil breather	overfilled. drain excess oil

FREEPLAY IN SHIFTER ARM

Shift blocks probably worn	check/replace shift blocks

Section III

TRANSAXLE REMOVAL FROM TRACTOR

Section III - TRANSAXLE REMOVAL FROM TRACTOR

TRANSAXLE REMOVAL

NOTE:
The following information covers removal of the **SNAPPER TUFF TORQ Model K50/K55 Hydrostatic Transaxle** from **SNAPPER LAWN TRACTORS.**

Raise hood and disconnect spark plug wire.

Remove mower deck. See Operator's Manual.

Remove drain plug and seal washer from lower case. See Figure 3.1.

Allow oil to drain completely.

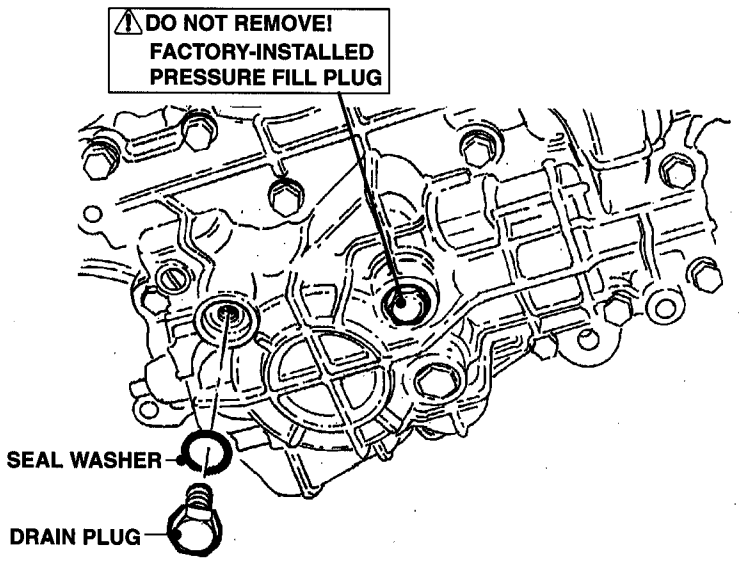


FIGURE 3.1

NOTE:
When reinstalling drain plug, use a new seal washer, **SNAPPER Part No. 9-1434**, and torque drain plug to 20-24 N•m (174-217 lb-in).

Elevate rear of tractor and support frame with jack stands.

Remove and discard rear wheel hubcaps.

Remove rear wheels.

Disconnect brake linkage from brake arm, located under the right rear frame. See Figure 3.2.

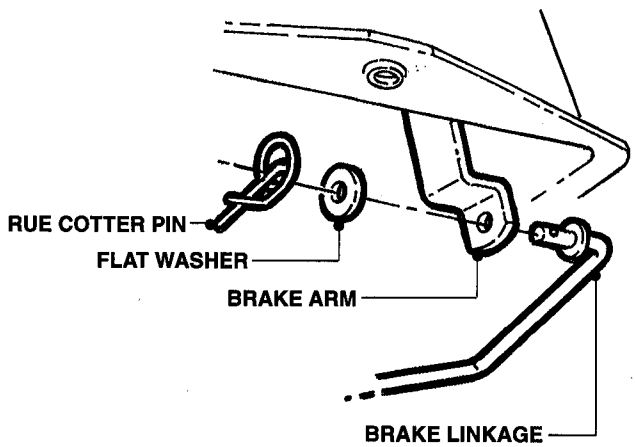


FIGURE 3.2

Remove tractor drive belt. Refer to Operator's Manual for instructions.

Remove hairpin and washer and disconnect transaxle speed control linkage from front of transaxle. See Figure 3.3.

Remove mounting bolts from transaxle and tractor frame.

Lower transaxle and remove deck cable bracket.

Remove transaxle for service.

Remove all tractor parts which are attached to the transaxle. Refer to Section VI, Figure 6.1 for parts breakdown.

Transaxle is now ready for repair.

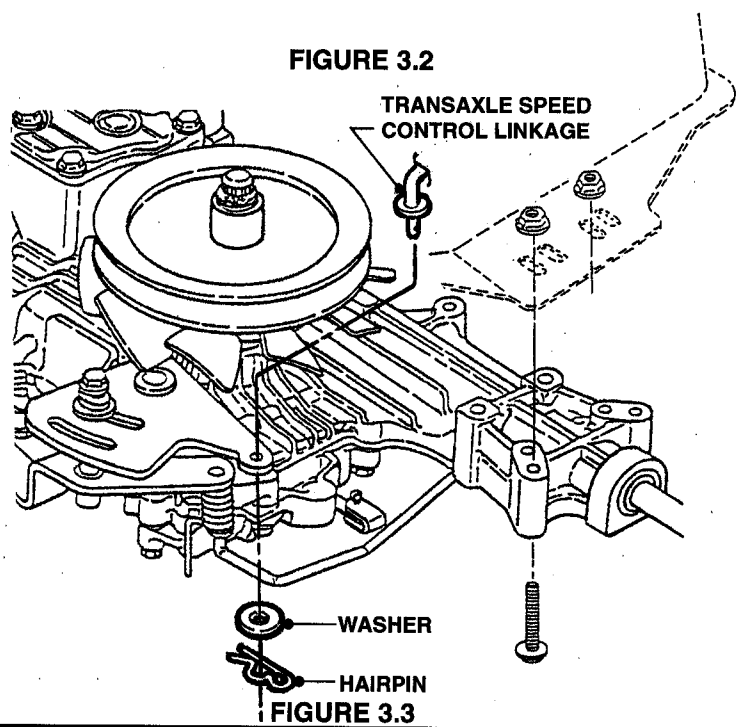


FIGURE 3.3

Section IV

TRANSAXLE DISASSEMBLY

Section IV - TRANSAXLE DISASSEMBLY

VENT VALVE REMOVAL

Thoroughly clean outside surface of transmission.

Remove the vent valve cap.

Inspect condition of vent valve cap and body. Replace either, if required. See Figure 4.1.

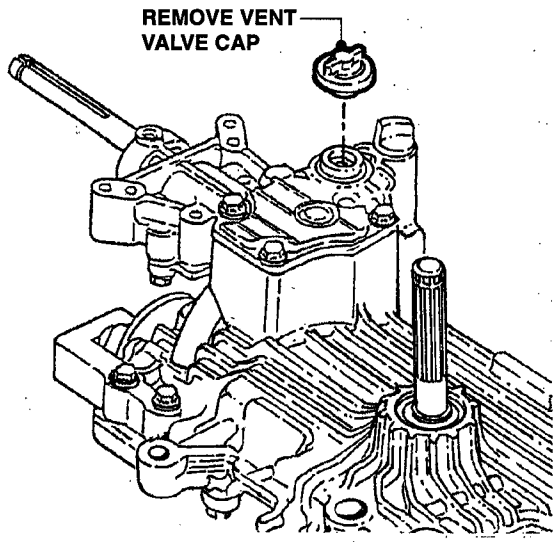


FIGURE 4.1

BRAKE INSPECTION

Check brake assembly components for worn or damaged parts as follows:

1. Inspect the case at points **(A)** and **(B)** for signs of contact with the brake disc. See Figure 4.2.

2. Inspect the inner edge of the mounting bracket at point **(C)** for any wear caused by contact with the brake lever.

NOTE:
If contact with the mounting bracket has caused any wear, replace the brake lever, shoe, shims and disc.

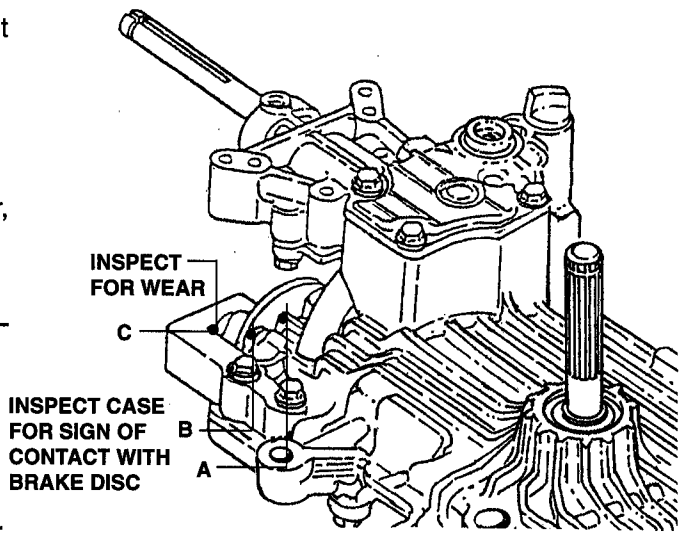


FIGURE 4.2

BRAKE DISASSEMBLY

Remove the two cap screws.

Remove the brake lever mounting bracket, brake lever, brake disc, brake shoe and shims. See Figure 4.3.

Inspect the splines on the output shaft and inside the brake disc for chipped or broken teeth. Replace as required.

Inspect all components of the brake assembly for general wear, cracks, scoring and rust. Clean or replace items as required.

After cleaning or replacing components of brake assembly, set them aside until final assembly.

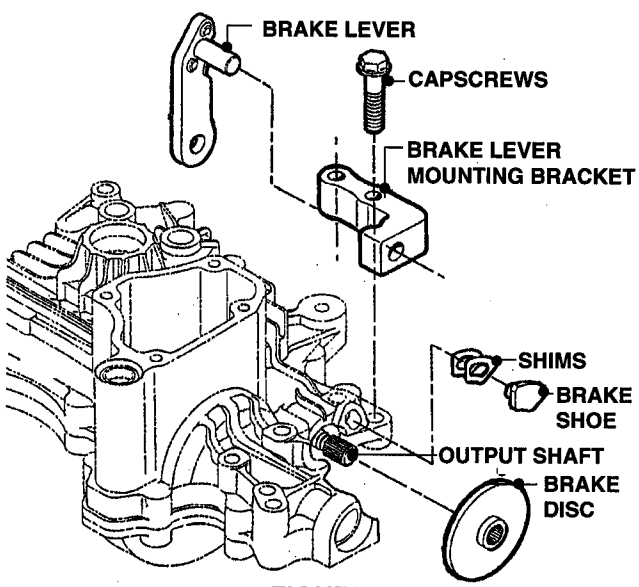


FIGURE 4.3

Section IV - TRANSAXLE DISASSEMBLY

TRANSAXLE HOUSING CASE SEPARATION

Remove seventeen capscrews to separate the transaxle housing case. See Figure 4.4.

Separate the upper and lower halves of the housing case by inserting a screwdriver between the halves at the five (5) pry points and pry them apart. See Figure 4.5

Remove any remaining gasket material from both case halves.

Carefully inspect components and case halves for obvious damage.

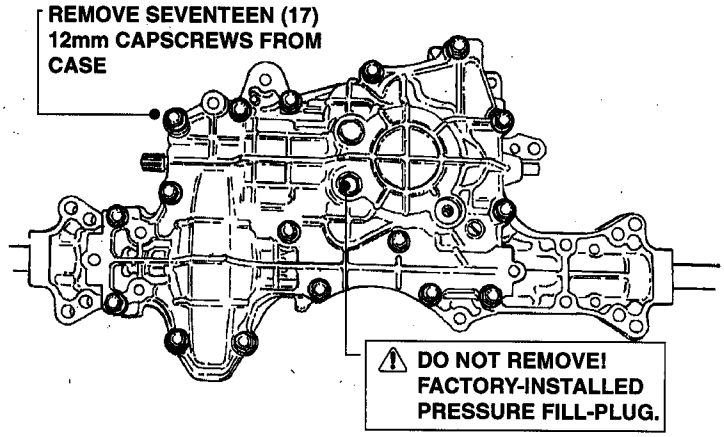


FIGURE 4.4

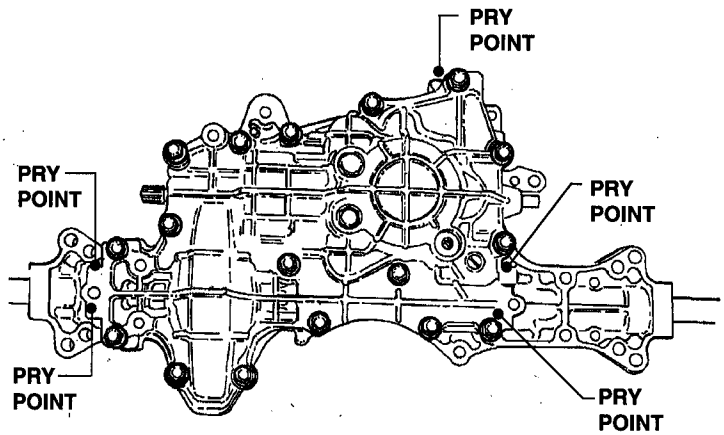


FIGURE 4.5

MAGNET REMOVAL & CLEANING

Pull magnet out of slot in lower case half. See Figure 4.6.

Clean magnet by blowing it with compressed air.

After cleaning, inspect the rubber seal around the magnet for splits and brittleness. If damaged, replace with a new magnet assembly.

Set the magnet aside for final assembly.

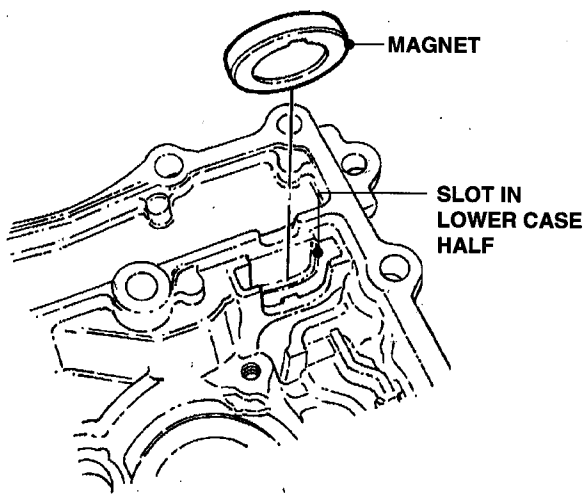


FIGURE 4.6

Section IV - TRANSAXLE DISASSEMBLY

DIFFERENTIAL AXLE INSPECTION

Check the differential axle assembly components as follows:

1. Inspect the ring gear for worn, broken or missing teeth. See Figure 4.7.

2. Check to make sure that the sides of the ring gear have only *floating* contact with the walls of the case half.

3. Check to see that the thrust plates are holding the ring gear assembly in alignment.

4. Inspect the bevel gears for worn, broken or missing teeth.

5. Check to make sure that the axle shafts are smooth.

6. Check to see that the differential bevel gears respond instantly to movement of the axle shafts and bevel gear splines.

7. Carefully inspect axle seals for leakage or damage.

NOTE:
If axle seals are not to be replaced, DO NOT remove differential axle assembly. Complete removal of the axles require the installation of new seals.

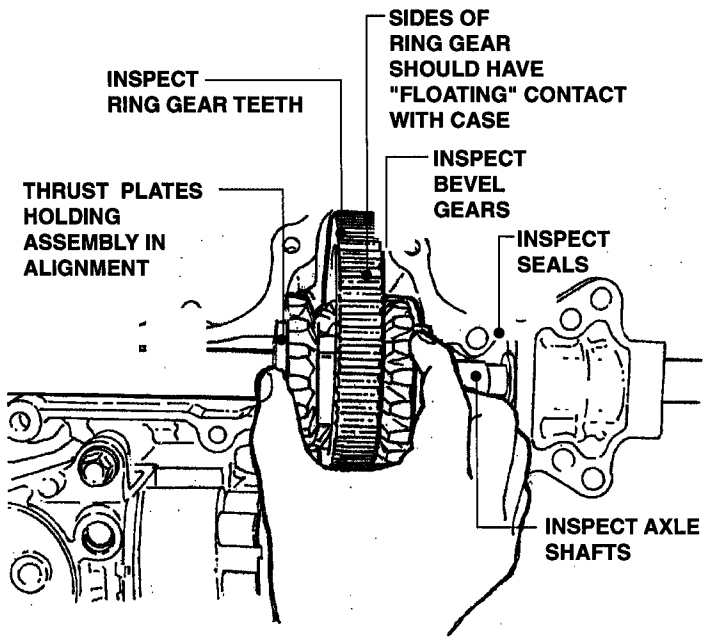


FIGURE 4.7

Section IV - TRANSAXLE DISASSEMBLY

DIFFERENTIAL AXLE REMOVAL

NOTE:
Remove differential axle assembly BEFORE removing pump and motor assembly. This sequence of removal makes it easier to work on the pump - you do not have to work around the ring gear.

Remove thrust washer from the "short axle" side. See Figure 4.8.

Rotate the C-ring 180° in its slot so opening is facing down. This will prevent the C-ring from dropping down into the case. See Figure 4.9.

Hold the "short axle" bevel gear stationary as you slide the axle outward to free the C-ring.

Remove C-ring from axle.

NOTE:
Do not remove axle at this point - it holds the bevel gear in place while the long axle side is being disassembled.

Repeat above procedures for "long axle" side.

Hold differential axle assembly by both bevel gears and slide axles clear.

Remove gear assembly. See Figure 4.10.

Remove axles.

Remove axle seals.

Inspect condition of axle bushings, then measure the inside diameter of each. The bushing ID should measure NO LARGER than 19.2mm (0.76 inch) MAXIMUM! If the bushings exceed specification, replace the upper case housing - the bushings are not to be replaced.

Inspect all components of the ring gear and bevel gear assemblies for signs of scoring, pitting, breakage or undue wear. Replace components as required.

GEAR, SHAFT & AXLE SPECIFICATIONS
Bevel gear ID - 15.11mm (0.06 inch) MAXIMUM
Cross-shaft OD - 14.96mm (0.589 inch) MINIMUM
Axle OD (Long & Short) - 19mm (0.748 inch) MINIMUM

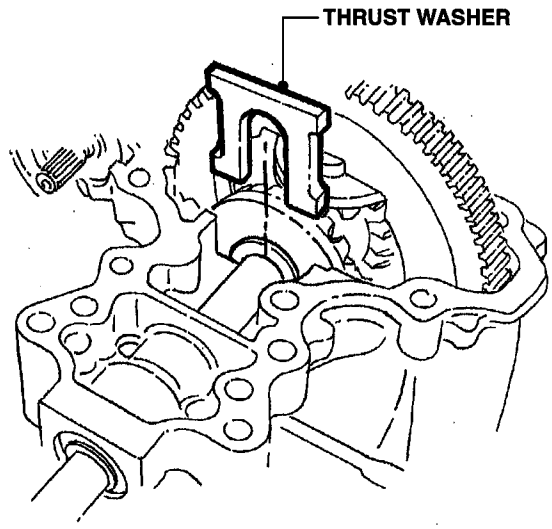


FIGURE 4.8

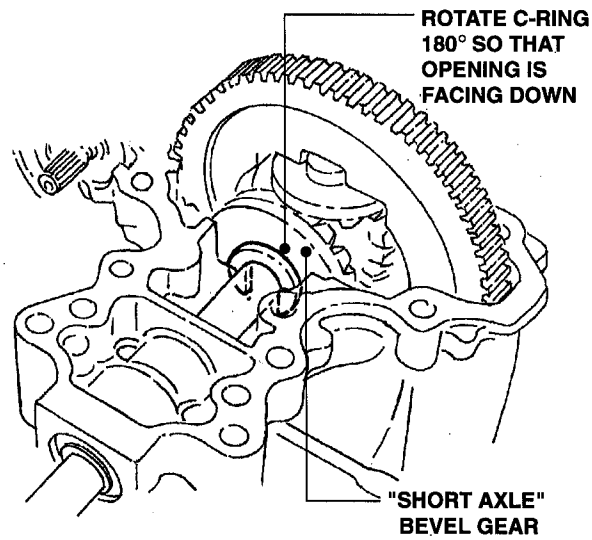


FIGURE 4.9

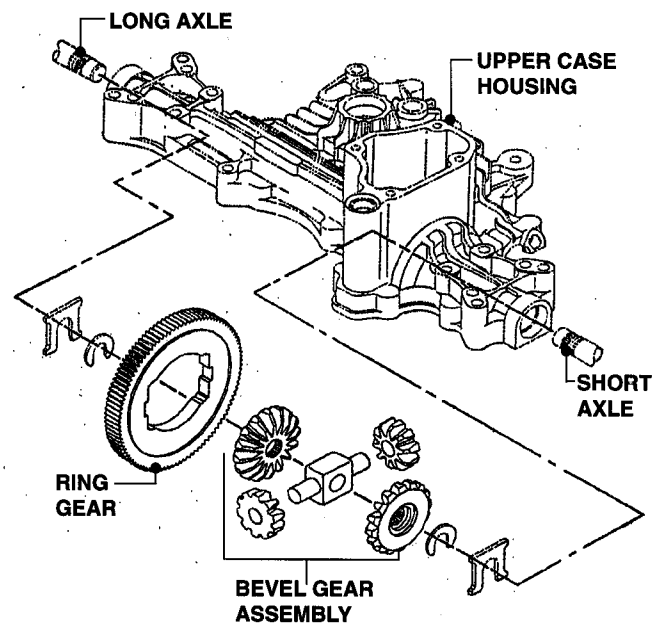


FIGURE 4.10

Install new axle shaft seals. Protect the new seals from damage by wrapping tape around the axle splines and C-ring groove before installing axle. See Figure 4.11.

NOTE:
Lube inside lip of axle shaft seal with GP grease or 30 wt motor oil before installing.

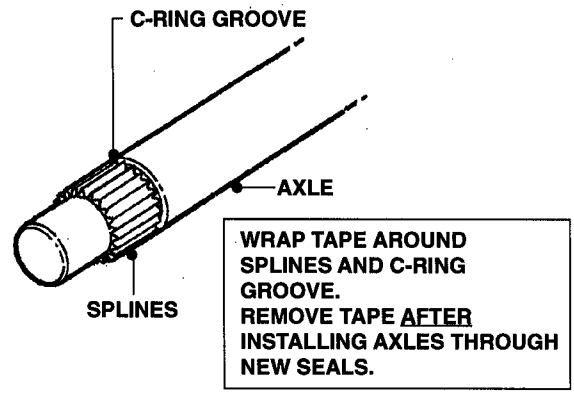


FIGURE 4.11

DISASSEMBLY OF TRANSPORT (FREE-WHEELING) ASSEMBLY

LOWER CASE HALF

The transport actuating bracket and pin are located in the lower case half. Inspect the case on the outside for oil leakage around the pin, then check the bracket and pin for signs of wear. If everything is in good condition, set the lower case aside until final assembly. See Figure 4.12.

If any sign of oil leakage is visible on the outside of the lower case half, the transport assembly must be removed from the case and the O-ring on the pin replaced. See Figure 4.13.

After removal, check the actuating bracket, pin and C-ring for wear or damage. Replace components as required.

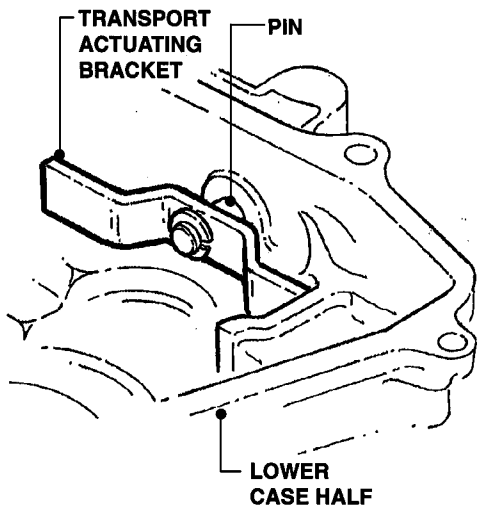


FIGURE 4.12

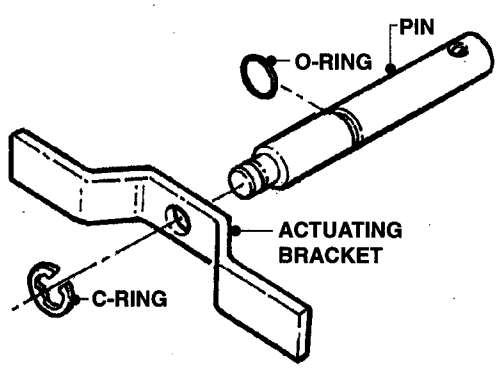


FIGURE 4.13

UPPER CASE HALF

Remove filter. See Figure 4.14.

Remove push-pins, springs and push-pin guides from valve body. Inspect all parts for wear or damage. Replace as required.

Inspect transport valve bores and balls for wear or damage.

If any wear or damage is found, install the brake disc on the output shaft and rotate the disc in both directions to force the valve bodies from the housing. See Figure 4.15.

NOTE:

Hold a cloth over valve bores to catch valve body assemblies as they are expelled.

If the valve assemblies are not expelled as the disc is rotated back and forth, then remove the bleed port connector plug (Figure 4.14) and blow compressed air through the bleed port to eject valve assemblies. Swap locations of bleed port connector and pump plug to eject opposite valve assembly with compressed air.

If the compressed air does not eject the valve assemblies, carefully insert snap-ring pliers into the valve sleeves and pull them out of the valve bores.

Check the bores for wear or damage. If required, replace center block valve body.

Remove pump port plug and O-ring from valve body.

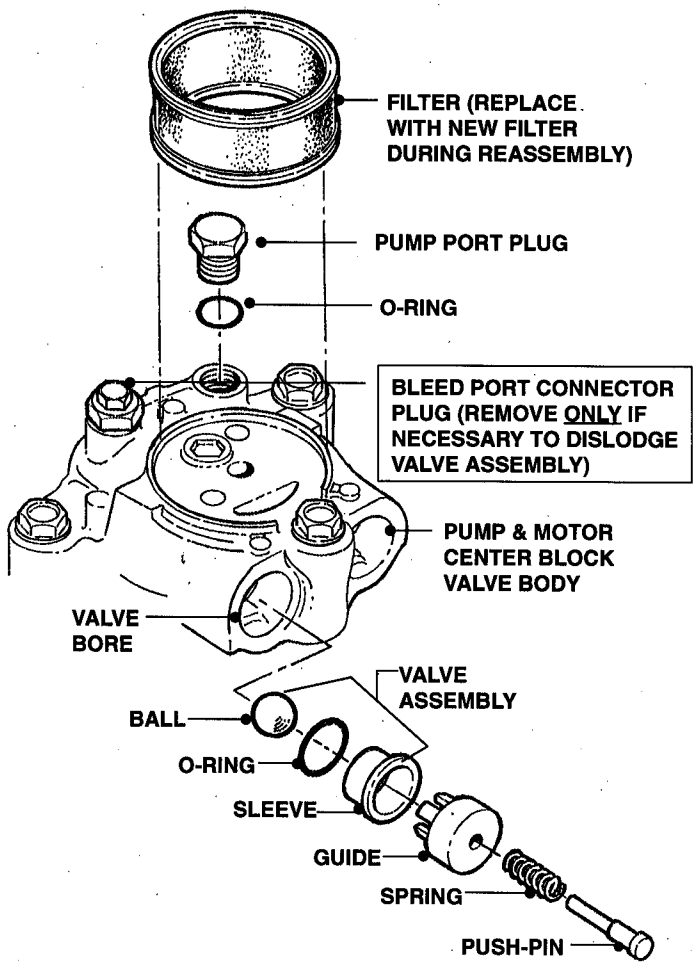


FIGURE 4.14

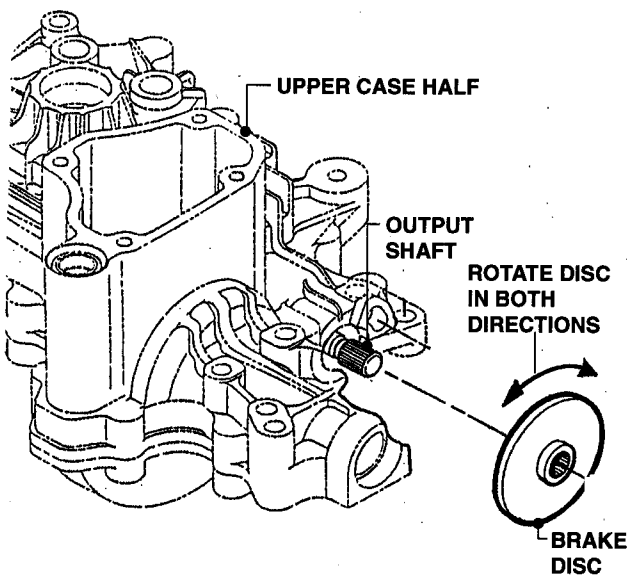


FIGURE 4.15

SHIFTER SHAFT DISASSEMBLY

Using a feeler gauge, measure the gap between the edge of the swashplate slot and the shift blocks. The maximum allowable gap is 0.15mm (0.0059 inch). If the gap exceeds this dimension, replace both shift blocks. See Figure 4.16.

Remove shifter shaft and shift blocks. See Figure 4.17.

Check end of shaft and mating surface in the case for signs of wear. Replace components as required.

Remove existing O-ring - a new one will be installed during reassembly.

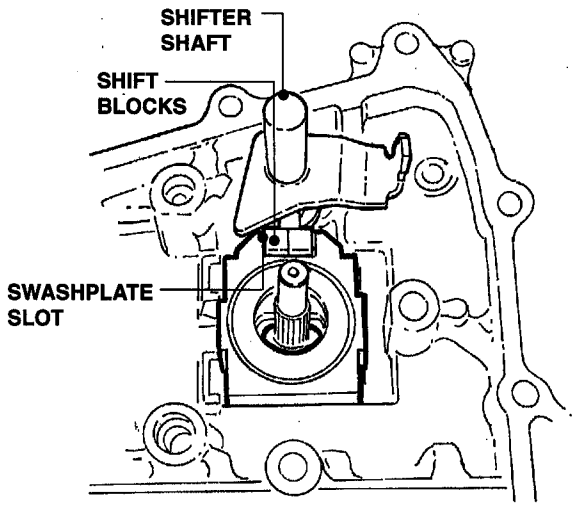


FIGURE 4.16

PUMP, MOTOR & CENTER BLOCK DISASSEMBLY

CAUTION!

Before proceeding with the disassembly of the pump, motor & center block, BE AWARE that they are assembled UNDER PRESSURE. While disassembling, do not let these components FLY APART as they could be damaged beyond use.

Remove the bleed port connector (if it was not previously removed in the "Transport (Free-Wheeling) Assembly Disassembly"). See Figure 4.18.

Remove and discard the two O-rings.

Hold down on the pump, motor and center block assembly with one hand as you loosen and remove the three capscrews and spacers with the other. See Figure 4.19.

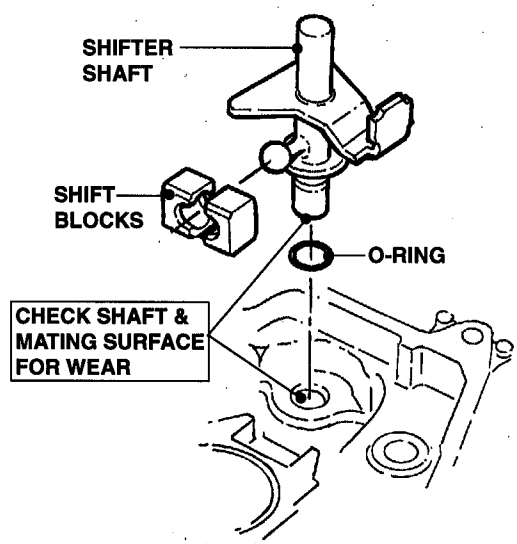


FIGURE 4.17

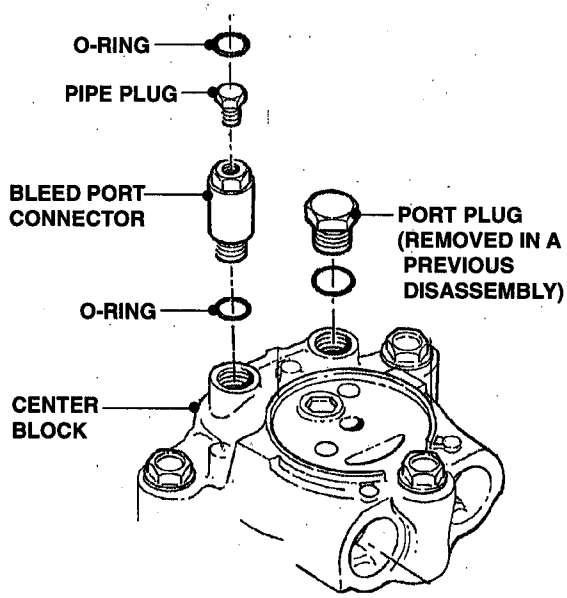


FIGURE 4.18

Section IV - TRANSAXLE DISASSEMBLY

While keeping downward pressure on the assembly with one hand, grasp the disc brake* on the end of the output shaft with the other. Now, reposition the hand holding down on the assembly to where it is holding the pump and center block position. Press in towards the disc brake end. See Figure 4.20.

Move motor, pump and center block assembly to a work-bench. Gradually release pressure on the components and allow them to separate.

Leave these components for now; they will be inspected and reassembled later.

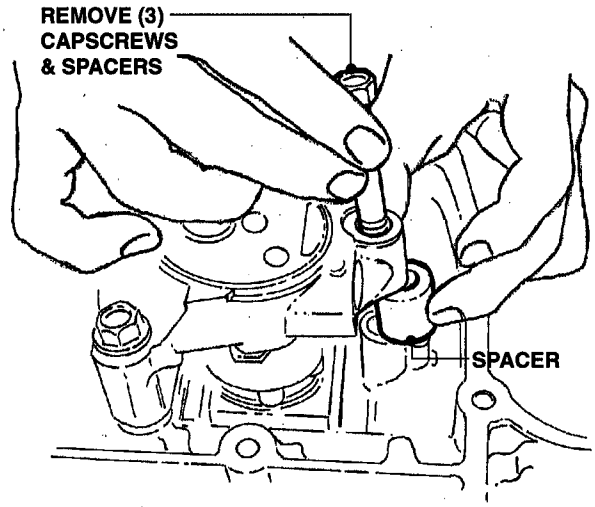


FIGURE 4.19

REMOVAL OF PUMP SHAFT ASSEMBLY

Remove shaft seal. See Figure 4.21.

Remove snap ring.

Remove pump shaft assembly.

Inspect ball bearing for wear or damage.

If bearing is damaged, remove the snap rings and slide the bearing off the shaft. See Figure 4.22.

Inspect shaft for damage. Replace as required.

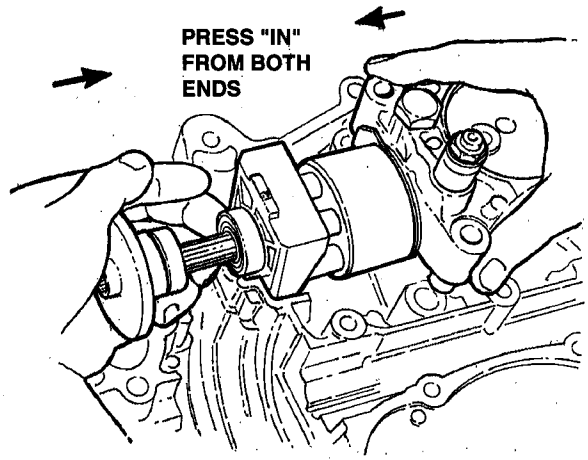


FIGURE 4.20

PART NUMBERS

9-1438	SEAL, Input Shaft	(1)
9-1435	SNAP-RING	(1)
9-1458	SNAP-RING	(2)
9-1459	BEARING, Ball	(1)
9-1457	SHAFT, Pump Input	(1)

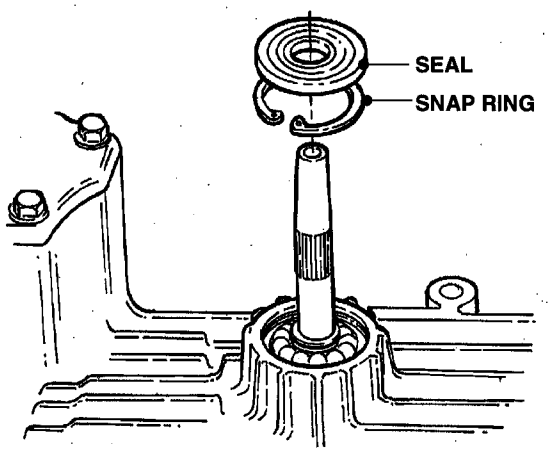


FIGURE 4.21

* DISC BRAKE SHOULD HAVE BEEN PREVIOUSLY INSTALLED ON END OF OUTPUT SHAFT DURING THE DISASSEMBLY OF THE TRANSPORT (FREE-WHEELING) ASSEMBLY.

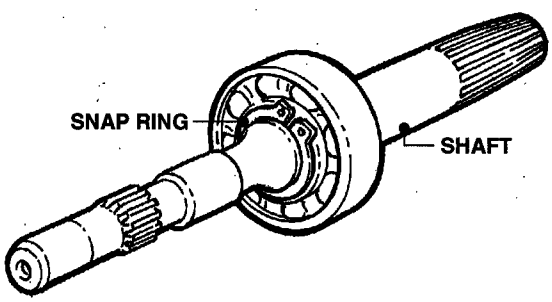


FIGURE 4.22

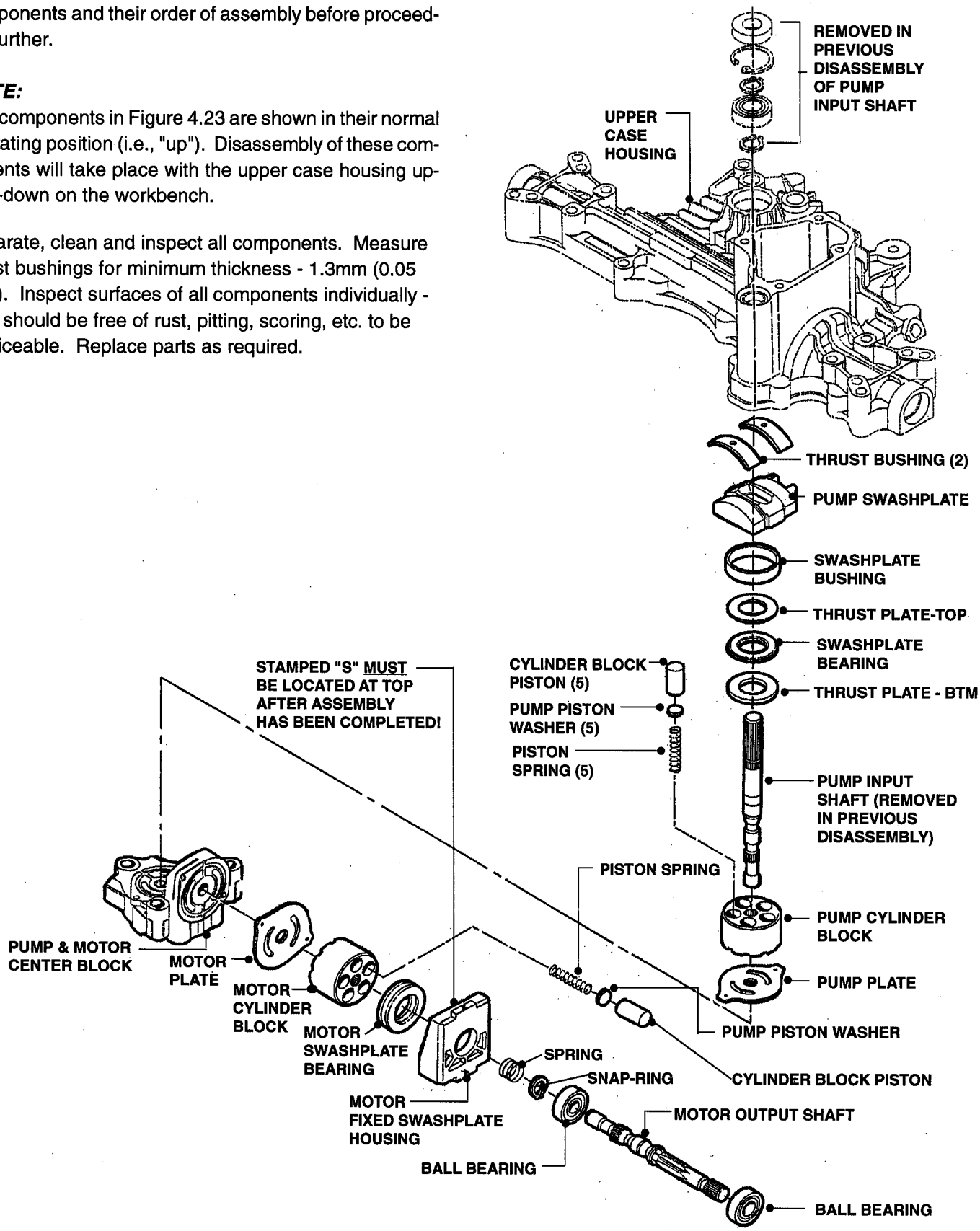
Section IV - TRANSAXLE DISASSEMBLY

PUMP & SWASHPLATE DISASSEMBLY

Shown in Figure 4.23 are the components of the pump and swashplate assembly. Familiarize yourself with all components and their order of assembly before proceeding further.

NOTE:
The components in Figure 4.23 are shown in their normal operating position (i.e., "up"). Disassembly of these components will take place with the upper case housing upside-down on the workbench.

Separate, clean and inspect all components. Measure thrust bushings for minimum thickness - 1.3mm (0.05 inch). Inspect surfaces of all components individually - they should be free of rust, pitting, scoring, etc. to be serviceable. Replace parts as required.



Section V

TRANSAXLE ASSEMBLY

Section V - TRANSAXLE ASSEMBLY

ASSEMBLY & INSTALLATION

PUMP SHAFT ASSEMBLY

Coat all components with 10W-30 Class FSCD Motor Oil before assembly.

Assemble components of pump shaft assembly and install it into the upper case. See Figure 5.1.

Secure the pump shaft into the upper case with the snap ring.

Wrap tape around splines on end of shaft to protect seal.

Coat lip surfaces of seal with GP grease or motor oil before installation. Refer to Figure 5.1.

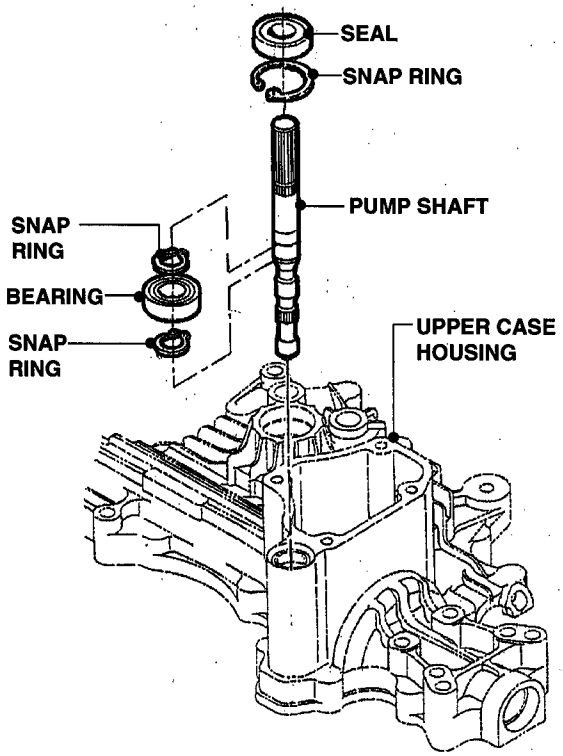


FIGURE 5.1

SWASHPLATE & SHIFTER SHAFT ASSEMBLY

Install thrust plates. See Figure 5.2.

Install a new O-ring on the shifter shaft.

Apply GP grease to inside of shaft blocks to help them adhere to the shifter ball.

Fit the swashplate, shift blocks and shifter shaft together.

While holding these components together, fit them into the upper case half. See Figure 5.3.

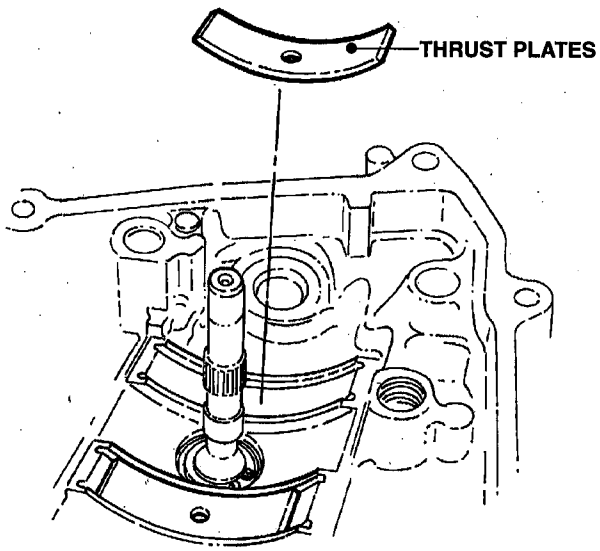


FIGURE 5.2

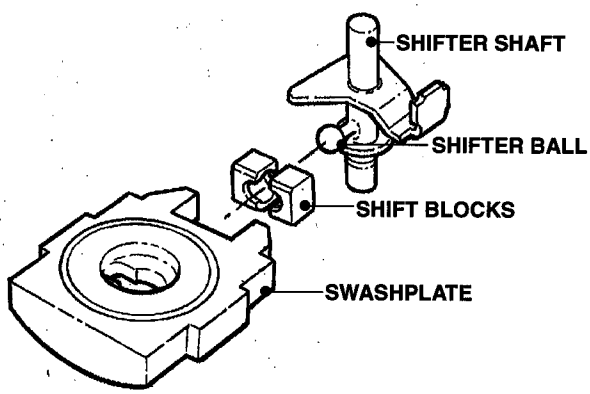


FIGURE 5.3

Section V - TRANSAXLE ASSEMBLY

PUMP ASSEMBLY

Install the thin thrust washer on the swashplate. See Figure 5.4.

Install ball bearing.

Install the thick thrust washer.

Inspect all components of the pump cylinder block to make sure they are clean, then coat them lightly with motor oil before assembling. See Figure 5.5.

To assemble pump cylinder block, place a spring in each opening, then top each spring with a pump piston washer. Insert the pump pistons into the cylinder block one at a timw. Hold your fingers tightly between the pistons to prevent them from dropping out of the cylinder block. See Figure 5.6. Hold the cylinder block assembly firmly and install it onto the pump shaft. Make sure that the splines on the shaft and cylinder block are aligned, then slowly release your hold on the cylinder block assembly.

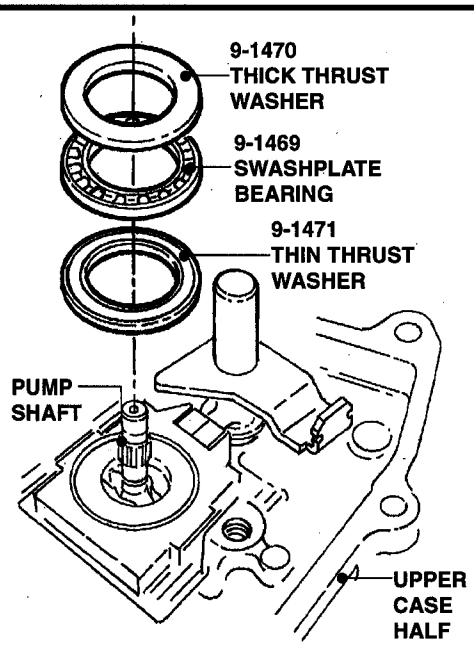


FIGURE 5.4

PUMP MOTOR & DRIVE SHAFT ASSEMBLY

Install the bearings, snap ring and a new seal on the drive shaft. See Figure 5.7.

NOTE:

Coat inside lip of seal with 30 WT. motor oil and wrap spline-end of shaft with tape before installing seal.

Install the thin thrust washer into the opening of the fixed swashplate. See Figure 5.8.

Lightly oil, then install, the bearing into the opening.

Install the thick thrust washer against the bearing.

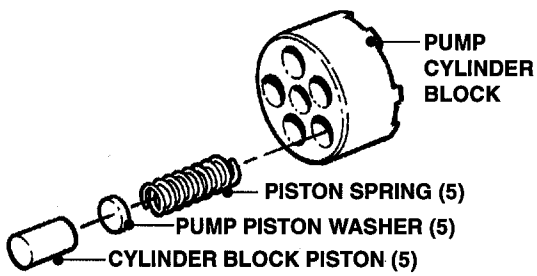


FIGURE 5.5

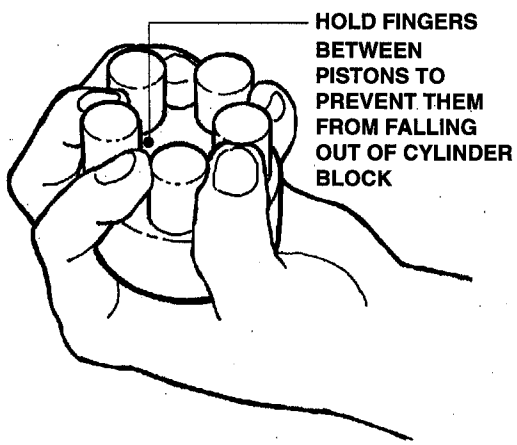


FIGURE 5.6

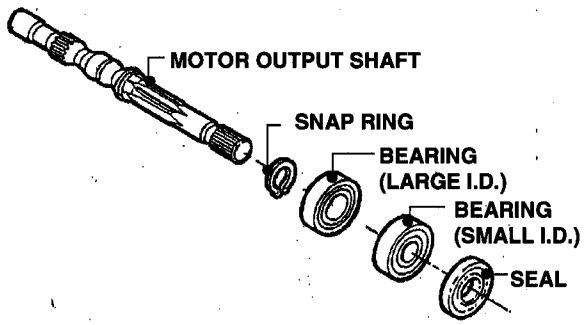


FIGURE 5.7

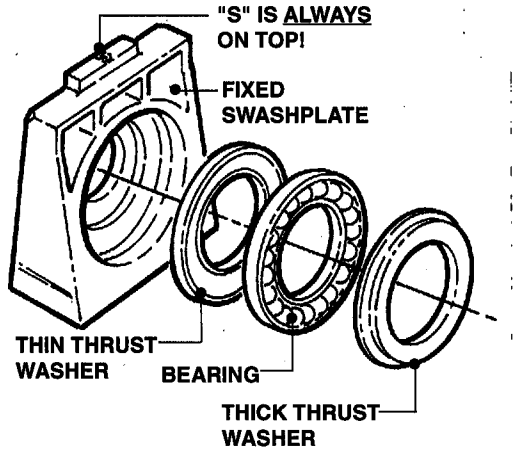


FIGURE 5.8

Insert the drive shaft assembly through the hole in the fixed swashplate as shown in Figure 5.9.

Coat the backside of the bronze pump and motor plates with GP grease. See Figure 5.10.

With the bronze sides facing out, fit the bronze pump and motor plates to the dowel pins on the center block. Press plates firmly against center block after installation.

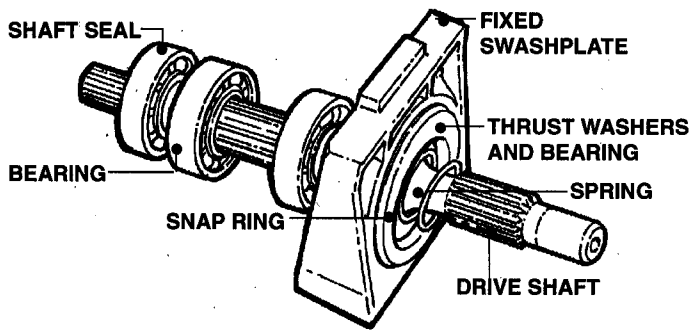


FIGURE 5.9

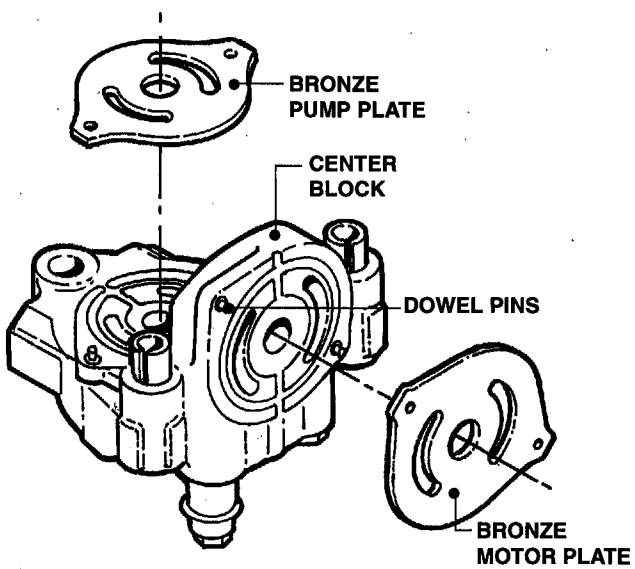


FIGURE 5.10

Section V - TRANSAXLE ASSEMBLY

PUMP, MOTOR & CENTER BLOCK ASSEMBLY

Install the brake disc on the end of the drive shaft.

Carefully fit center block to motor cylinder block and drive shaft assembly. *Perform this step in a vertical position as shown in Figure 5.11 - this will prevent the pistons from falling out of the cylinder block.*

Hold the center block and motor cylinder block with one hand while pressing in on the brake disc with the other hand.

Turn the assembly at a slight angle until the seal, ball bearings and fixed swashplate (the thick portion, stamped "R", will be facing up) are aligned with mating grooves in the upper case half. See Figure 5.12.

Slowly seat the seal, ball bearings and swashplate into their mating grooves. At the same time, adjust your holding pressure on the assembly to align the two center block roll pins with their mating holes in the upper case half.

Make sure that the end of the pump shaft is aligned with the center hole of the bronze pump plate as you seat the assembly!

After pump shaft and roll pins have been located in their holes, install two capscrews in roll pin holes and finger tighten. See Figure 5.13.

Install spacer and capscrew into third hole. Finger tighten.

Check installation for alignment, then torque the three capscrews to 391-520 in. lb. (44-58 N•m).

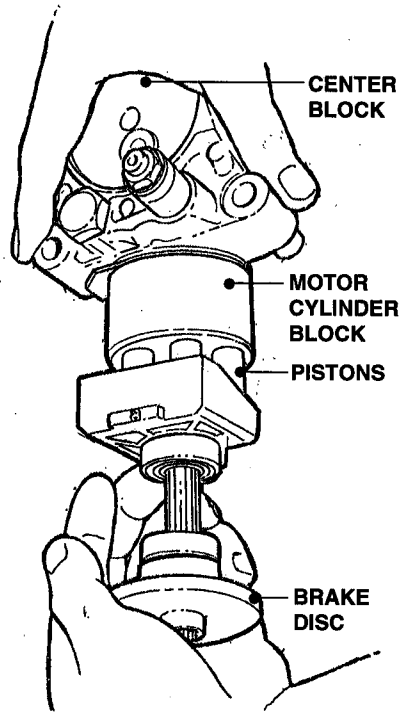


FIGURE 5.11

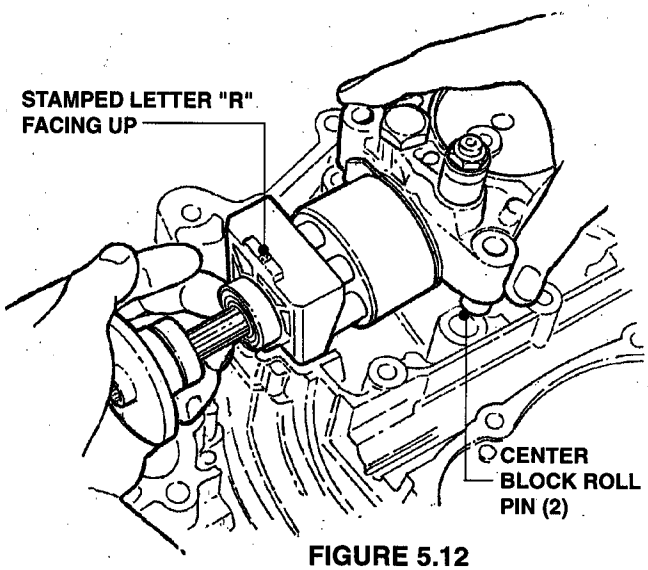


FIGURE 5.12

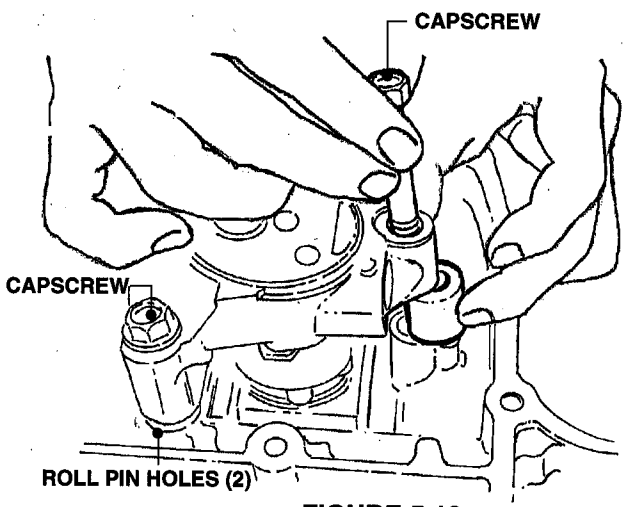


FIGURE 5.13

Section V - TRANSAXLE ASSEMBLY

DIFFERENTIAL AXLE ASSEMBLY

Lightly grease inside lip of new axle seal with GP grease or 30 WT motor oil and install them flush with outside of upper case lip. See Figure 5.14.

Wrap tape around splines and C-ring grooves on both axles to protect new seals.

Install shafts through seals and bushings, then remove tape.

Slide axles up to differential area.

Assemble components of bevel gear assembly and insert them into ring gear. Holding these parts together, align the ring gear with the motor drive shaft gear and the bevel gears with both shafts. See Figure 5.15.

Slide axle shafts into bevel gears and install C-rings and thrust washers. See Figure 5.16.

NOTE:
Rotate C-rings 180° after installation.

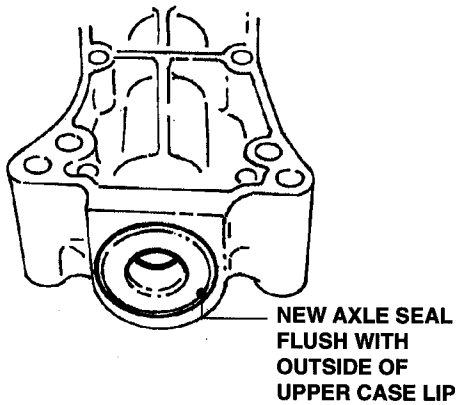


FIGURE 5.14

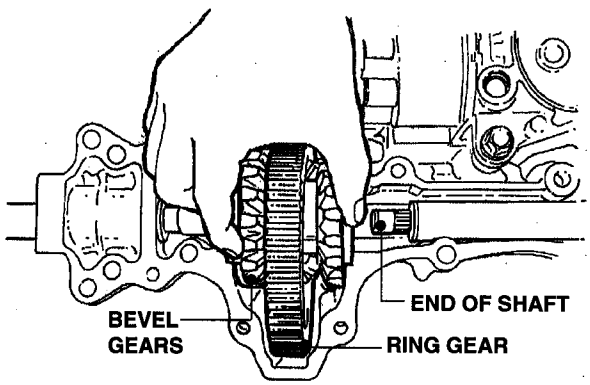


FIGURE 5.15

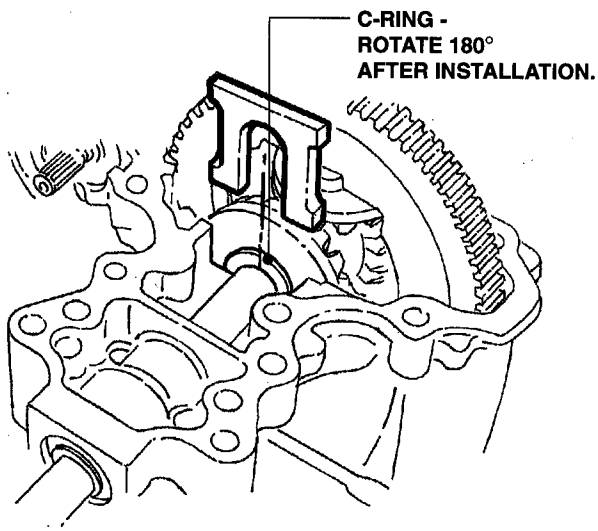


FIGURE 5.16

Section V - TRANSAXLE ASSEMBLY

TRANSPORT (FREE-WHEELING) ASSEMBLY

Install new relief valve assemblies 0.51 inches (13mm) inside bores of center block. See Figure 5.17.

NOTE:
The sleeve on the pump port side of the center block has a 0.9mm orifice. It is VERY IMPORTANT to MAKE SURE that this sleeve is installed on the correct side!

Install new pump filter. See Figure 5.18.

Install the bypass valve push pin guides, springs and push pins.

Install a new O-ring on the actuating pin. See Figure 5.19.

Install the actuating pin in the bore of the lower case half.

Install the actuating bracket and secure it with the E-ring.

NOTE:
Push actuating pin and bracket all the way towards the outside before assembling case halves.

MAGNET ASSEMBLY

Install magnet in slot in lower case half. See Figure 5.20.

TRANSAXLE CASE HALVES ASSEMBLY
Clean mating surfaces of case halves, then apply a bead of RTV gasket sealer on the surface of the lower case half along the inside of the mounting holes. Be careful not to get sealer in mounting holes!

Apply a bead of sealer around the two inner holes on the lower case half.

Carefully place lower case half onto upper case half. Check hole alignment - *especially* the hole over the bleed port connector! Press halves together.

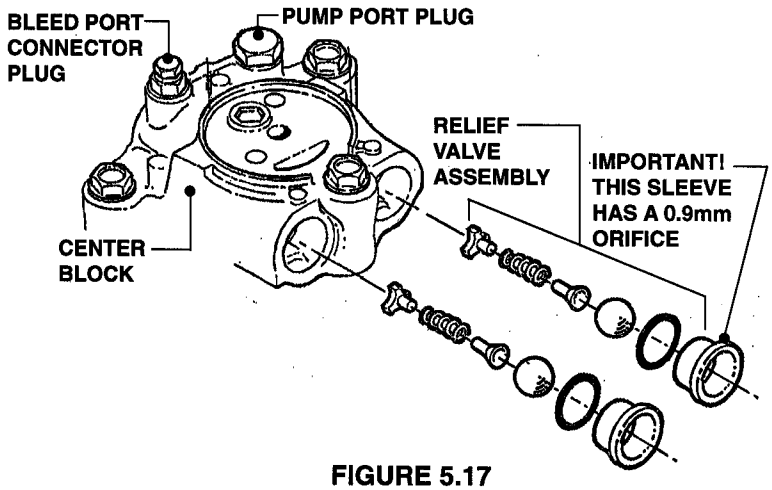


FIGURE 5.17

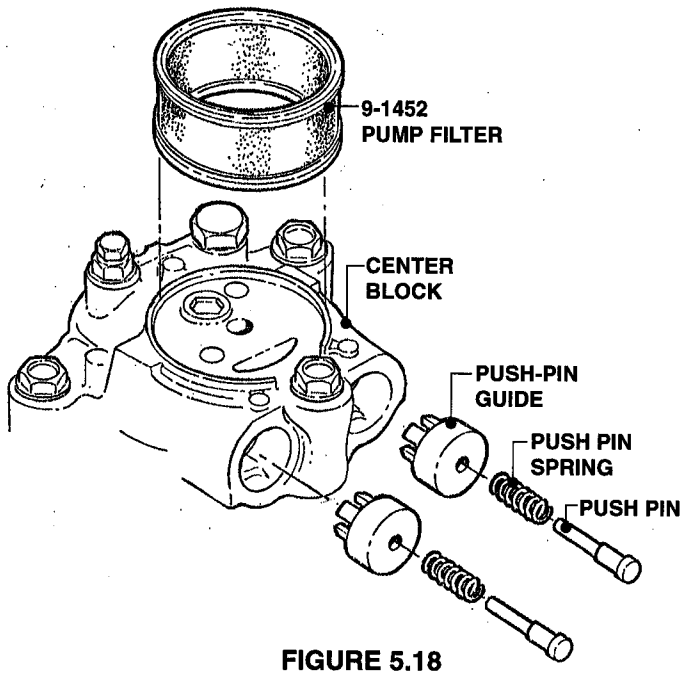


FIGURE 5.18

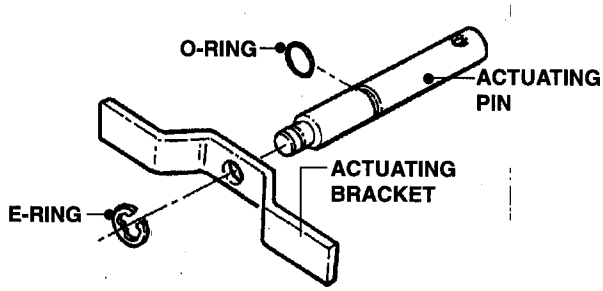


FIGURE 5.19

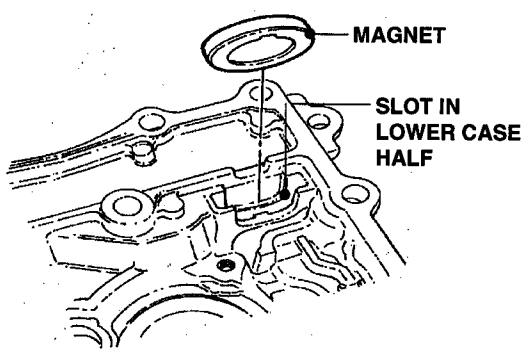


FIGURE 5.20

Section V - TRANSAXLE ASSEMBLY

TRANSAXLE CASE HALVES ASSEMBLY

Install seventeen capscrews and tighten them in a criss-cross pattern from center to outside. Begin with the two inner screws shown in Figure 5.21 and torque all screws to 200-243 lb. in. (23-27 N•m).

NOTE:
If a new upper case half has been installed, torque all screws to 243-278 lb. in. (27-31 N•m).

Install new seal washer on drain plug, then install plug. Torque plug to 174-217 lb. in. (20-24 N•m). See Figure 5.22.

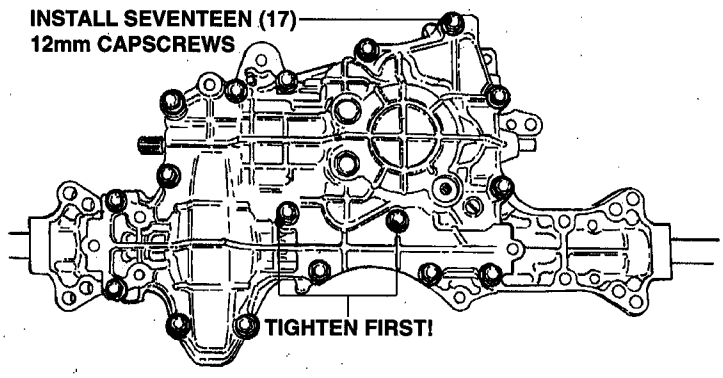


FIGURE 5.21

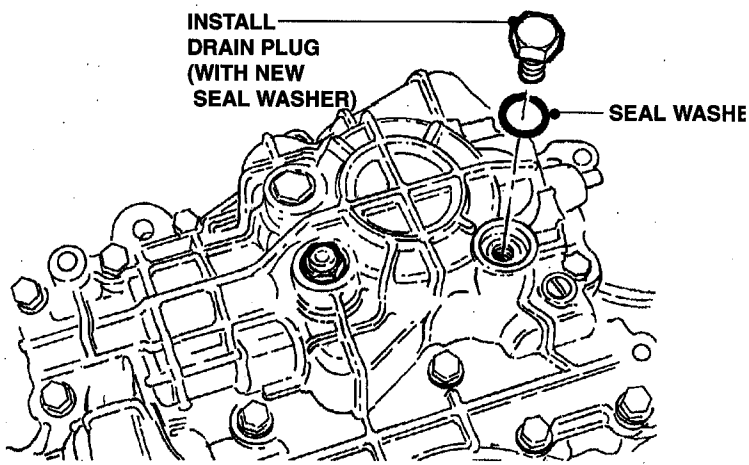


FIGURE 5.22

DISC BRAKE ASSEMBLY

Install disc brake components on transaxle as shown in Figure 5.23.

Adjust air gap between brake disc and brake lever to 0.03-0.05 in. (0.08-1.3mm) by using shims.

Torque capscrews to 391-521 lb. in. (44-59 N•m).

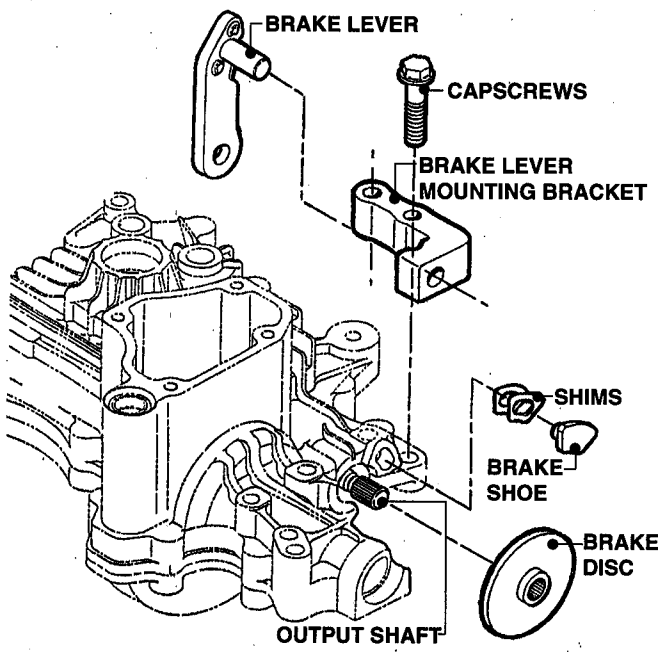


FIGURE 5.23

RESERVOIR COVER & BREATHER VALVE ASSEMBLY

If the reservoir cover was removed, it must have a bead of sealant applied before installation.

Install covers and torque the four capscrews to 174-217 lb. in. (20-24 N•m). See Figure 5.24.

Remove oil fill cap and breather valve assembly.

Fill oil reservoir with 1.7 U.S. qt. (1.6 liter) of 10W30 Class FSCD motor oil. Oil level should be level with the bottom of the fill hole.

Reinstall breather assembly and oil fill cap.

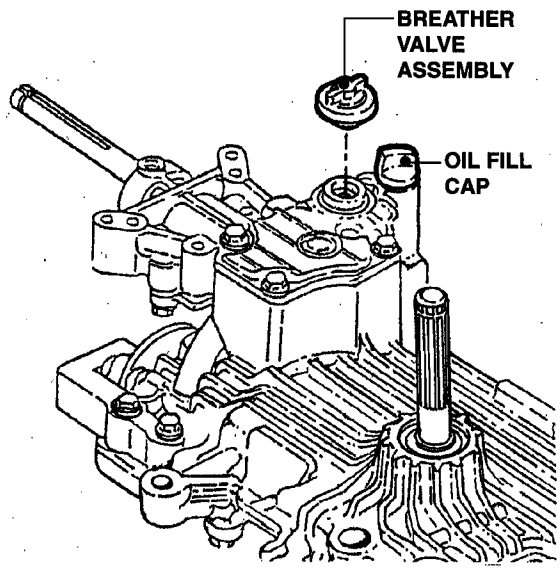


FIGURE 5.24

TRANSAXLE QUICK-BLEED PROCEDURE

Place transaxle upside-down on work bench.

Remove pipe plug from bleed port connector. See Figure 5.25.

Have a helper to hold the transaxle in a position to where he can turn the brake disc while you are adding oil.

With the helper turning the brake disc, pour 10W30 Class FSCD motor oil into the plug hole. Stop pouring oil when it is level with the bottom of the hole.

Wrap pipe plug threads with Teflon® tape and install in bleed port connector. Torque plug to 72 lb. in. (8 N•m).

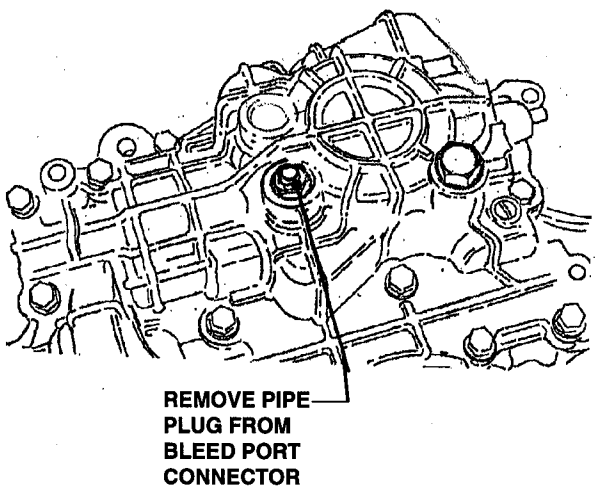


FIGURE 5.25

NOTES

Section VI

TRANSAXLE INSTALLATION

Section VI - TRANSAXLE INSTALLATION

SNAPPER LT TRACTOR MODELS:

ELT140H33BBV, LT140H33BBV, LT140H38BBV, LT150H38BBV & LT155H42BBV

Reassemble the transaxle and tractor components removed in Sections III and IV. Figure 6.1 and the adjoining parts list will aid in reassembly.

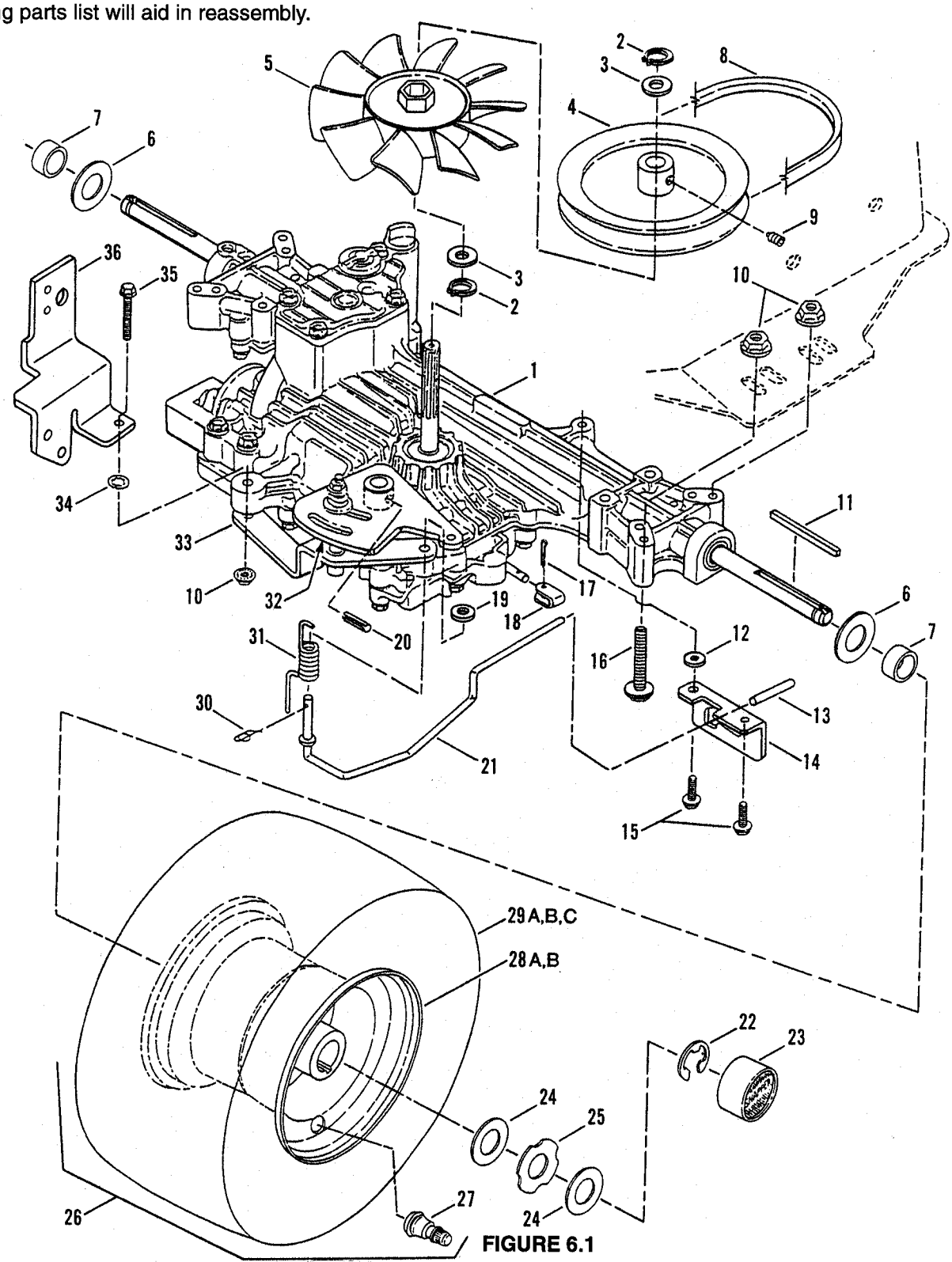


FIGURE 6.1

Section VI - TRANSAXLE INSTALLATION

PARTS LIST

ITEM	PART NO.	DESCRIPTION
1	2-8083	TRANSAXLE, Hydro Drive, Tuff-Torq Models K50/K55
2	2-8078	RING, Retaining (2)
3	2-8084	WASHER, Fan/Hub (2)
4	2-8077	PULLEY, Drive
5	2-8076	FAN
6	3-4453	WASHER, Flat, .132 x .781 I.D. x 1.5 O.D. (2)
7	2-8049	SPACER (2)
8	2-8334	BELT, Traction Drive (Models ELT140H33BBV, LT140H33BBV, LT140H38BBV, LT150H38BBV, & LT155H42BBV) (Hydro Drive Only!)
9	9-1277	SETSCREW, 1/4-20 x 5/16" Locking
10	9-1601	NUT, 5/16-18 Hex Flange Lock (5)
11	1-7173	KEY, Square, 3/16 x 3/16 x 2 1/2" (2)
12	3-2070	WASHER, Flat, 3/4" O.D.
13	3-4137	GRIP, Roll Release
14	3-4139	DETENT, Roll Release
15	9-1284	SCREW, 3/8-16 x 1 3/4" Self-Tapping (2)
16	9-0702	BOLT, 5/16-18 x 2 1/4" Hex Flange Lock (4)
17	9-1516	COTTER-PIN, 5/32 x 1"
18	3-4154	LINK, Roll Release
19	9-1296	WASHER
20	3-4146	ROLL-PIN, Speed Control Arm
21	3-4140	WIREFORM, Roll Release
22	2-9738	RING, Retaining
23	1-1022	HUB-CAP
24	2-9617	WASHER, Flat, .07 x .77 I.D. x 1.31 O.D. (2)
25	2-9618	WASHER, Hub-Cap Retaining
26	5-2845	ASSEMBLY, Rear Tire & Rim (Models ELT140H33BBV & LT140H33BBV) (Includes items 27, 28A, & 29A)
–	5-2846	ASSEMBLY, Rear Tire & Rim (Model LT140H38BBV) (Includes items 27, 28B, & 29B)
–	5-3563	ASSEMBLY, Rear Tire & Rim (Models LT150H38BBV & LT155H42BBV) (Includes items 27, 28B, & 29C)
27	1-2234	VALVE, Air (Snap-in)
28A	2-4453	RIM, 8 x 5.375 (Models ELT140H33BBV & LT140H33BBV)
28B	2-4454	RIM, 8 x 7.00 (Models LT140H38BBV, LT150H38BBV, & LT155H42BBV)
29A	2-6112	TIRE, 18 x 7.50 (Models ELT140H33BBV & LT140H33BBV)
29B	2-6113	TIRE, 18 x 8.50 (Model LT140H38BBV)
29C	2-9589	TIRE, 18 x 9.50 (Models LT150H38BBV & LT155H42BBV)
30	3-4162	COTTER-PIN, 5/16 Self-Locking
31	3-4155	SPRING, Torsion (Roll Release)
32	5-3386	ASSEMBLY, Speed Control/Friction (Includes Part No's. Listed Below)
–	4-1612	WELDMENT, Speed Control Arm
–	2-8036	SPRING
–	3-4192	STUD, Friction
–	9-0593	NUT, 3/8-16 Hex Flange Lock
–	9-1331	WASHER, .120 x .406 I.D. x 1.5 O.D. (2)
–	3-4267	WASHER, Friction Pad (2)
33	5-3380	SUPPORT, Friction Stud Assembly (Includes Part No's. Listed Below)
–	1-2306	BUSHING, Flange
–	3-4178	SUPPORT, Friction Stud
34	1-1791	RETAINER, 5/16 Bolt
35	9-1592	BOLT, 5/16-18 x 2" Hex Flange Lock
36	3-4400	BRACKET, Spool

NOTES

Section VII

PREPARING TRANSAXLE FOR OPERATION

Section VII - PREPARING TRANSAXLE FOR OPERATION

TRANSAXLE BLEED PROCEDURE

Raise and block rear wheels 2 inches off the floor.

Start engine, allow it to warm up, then set throttle at slow idle.

Have a helper to move the speed control lever into forward, neutral and reverse as you engage , then disengage the roll release lever. See Figure 7.1.

Continue to move the roll release lever until the wheels begin to turn.

As wheels start to turn, disengage the roll release lever and move the speed control lever to neutral.

Lower tractor to floor.

Sit in the operator's seat, shift speed control lever into a low forward speed and, if necessary, have someone to push the tractor until the transaxle will drive under its own power.

Drive tractor at fast idle speed and shift speed control lever back-and-forth until transaxle gives full response.

Check transaxle oil level. Add oil as required.

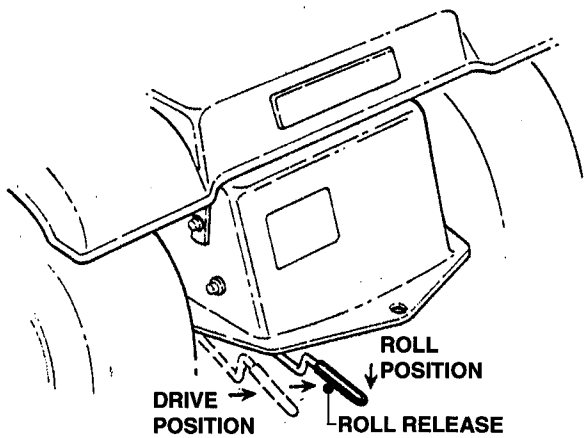


FIGURE 7.1

NOTES

SERVICE MANUAL

TUFF TORQ MODEL K50/K55
HYDROSTATIC TRANSAXLE

SNAPPER® McDonough, GA., 30253 U.S.A.

MANUAL No. 07011 (I.R. 7/94)