



1997 SEMINAR INFORMATION

"THE RIGHT DIRECTION FOR '97"

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AUTOMATIC TRANSMISSION SERVICE GROUP

9200 S. DADELAND BLVD.

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"THE RIGHT DIRECTION FOR '97"

INTRODUCTION

In this third manual on "THE RIGHT DIRECTION IN '97" seminar, we continue with Ford on complaint, cause and correction information as well as updates and part changes. The manual concludes with answers to both electrical and mechanical problems the technician faces when working on Chrysler's 41TE and 42RE transmissions.

**We thank the Chrysler
Corporation for the illustrations
and information that made this
booklet possible.**

The information and part numbers contained in this booklet have been carefully compiled from industry sources known for their reliability, but ATSG does not guarantee its accuracy.

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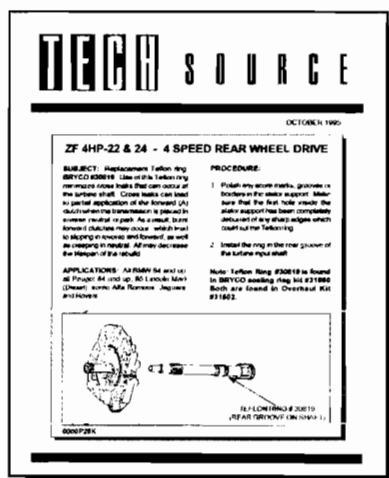
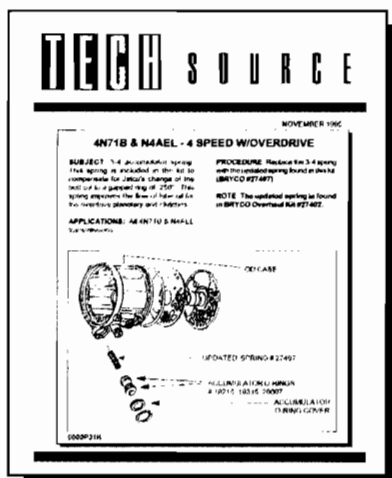
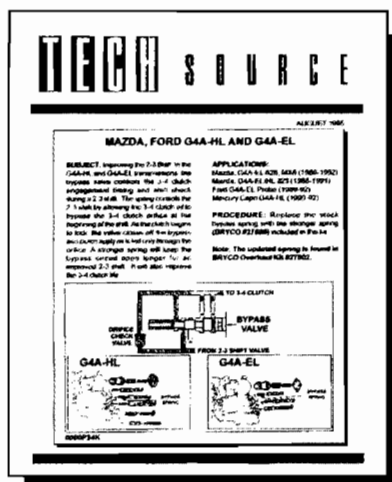
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FORD E4OD NEW DESIGN INTERMEDIATE SERVO PISTON ASS'Y

CHANGE: Beginning on August 8, 1995, all 1996 model E4OD transmissions were produced with a new design Intermediate Band Servo Assembly (See Figure 1)

REASON: Ease of installation on the assembly line

PARTS (1) INTERMEDIATE SERVO PISTON -Total change in design Fig.1
AFFECTED: (2) SERVO PISTON RETAINER-Eliminated see Figure 1.
(3) RETAINING SNAP RING-Eliminated see Figure 1
(4) TRANSMISSION CASE-Snap ring groove in case piston bore was eliminated, as it was no longer needed. (see Figure 2)

INTERCHANGEABILITY:

- (1) When replacing the intermediate Band Apply Servo Assembly becomes necessary, either design level (Previous or new) can be used in a previous model transmission case, as the new design level part will retro fit back to all previous model units.
- (2) When using the new design piston and seal assembly in a previous model unit, discard the piston retainer and snap ring.
- (3) If you have a later model transmission without the snap ring groove in the piston bore, *only* the new design piston and seal can be used.

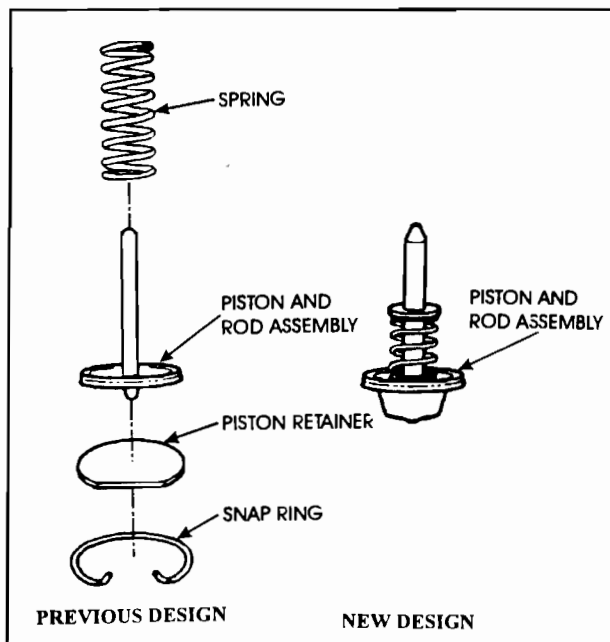


Figure 1

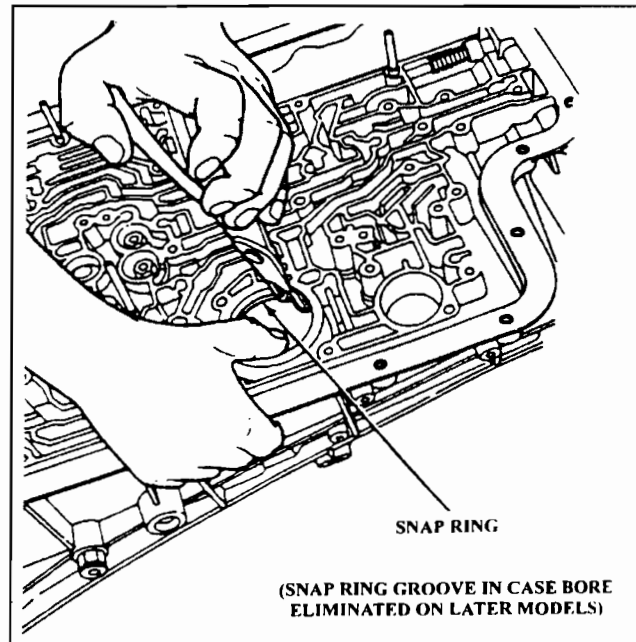


Figure 2

FORD E4OD

NEW DESIGN OVERDRIVE CLUTCH PISTON ASSEMBLY

ISSUE: Some 1996-97 E4OD transmissions have been built with a new design level overdrive clutch piston assembly with the piston seals bonded to the piston. The overdrive/intermediate cylinder has also changed to accommodate the new bonded seal piston.

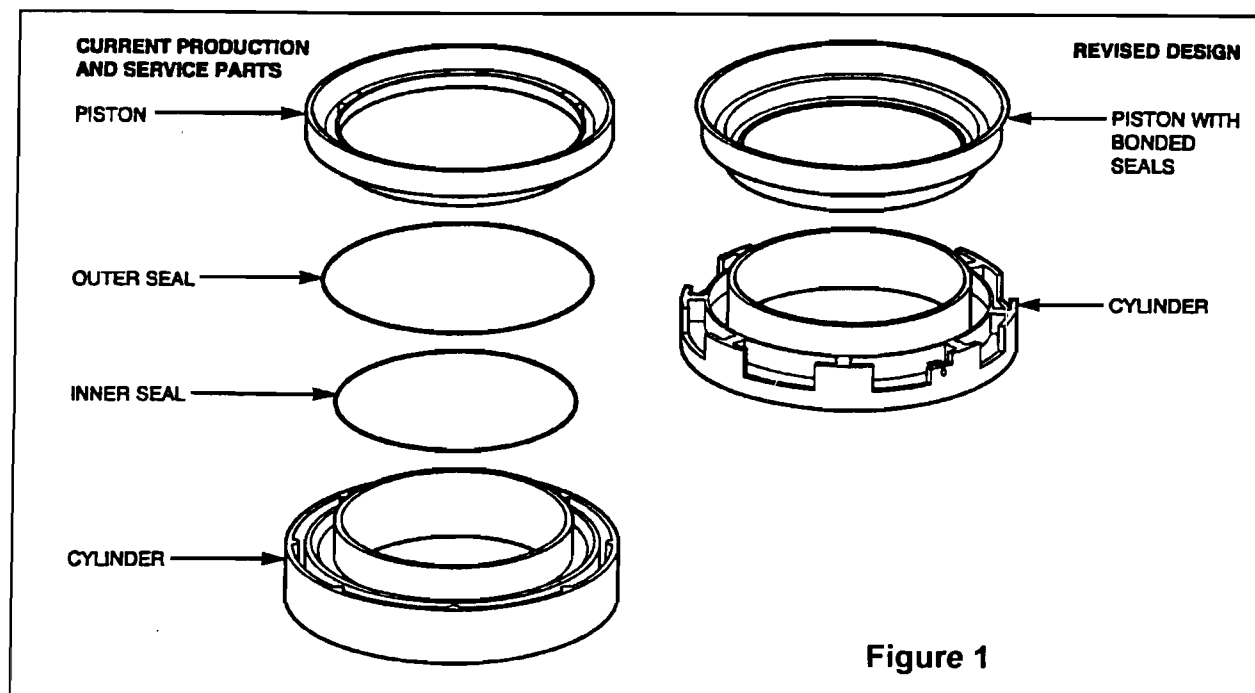
ACTION: Until the new design parts (Figure 1) are fully stocked, the current service parts (Figure 1) must be used to replace the new design parts. When replacing either the new design bonded seal piston or the overdrive/intermediate cylinder assembly, replace both with current level (previous design) overdrive piston, inner piston seal and the overdrive/intermediate cylinder. Refer to part replacement chart for correct part usage.

CAUTION:

New design parts are not interchangeable with the current level parts on AN INDIVIDUAL BASIS. Use all the current level parts as noted in in the replacement chart if either the new design bonded seal piston or cylinder need replacement.

PARTS:

| Part Name | Old Part Number | New Part Number |
|-----------------------|---|----------------------|
| OD piston Assembly | E9TZ-7A262-A | F6TZ-8A262-AA |
| Inner Piston Seal | E9TZ-7F225-A | Bonded to new piston |
| Outer Piston Seal | E9TZ-7A548-A | Bonded to new piston |
| OD/INT Cylinder Ass'y | E9TZ-7G384-B | F6TZ-7G384-AA |
| PART NUMBER | PART NAME | |
| E9TZ-7A262-A | Overdrive piston Assembly (Previous Design) | |
| E9TZ-7F225-A | Inner Piston Seal (Previous Design) | |
| E9TZ-7A548-A | Outer Piston Seal (Previous Design) | |
| E9TZ-7G384-B | Cylinder Assembly (Previous Design) | |





FORD E4OD FORWARD PLANETARY AND THRUST WASHER UPDATE

ISSUE: Some 1996 and all 1997 E4OD transmissions have been built with a needle bearing located between the forward planetary carrier and forward ring gear hub. This is a revised design for 1997 which was pulled ahead for a running change for 1996. This needle bearing replaces the # 10A thrust washer. The slots in the planet carrier for the thrust washer tabs were also removed. The forward ring gear hub was changed to accomodate the needle bearing instead of the thrust washer.

ACTION: If service is required on the needle bearing, hub or planetary assembly, Use the new service kit (F7TZ-7B067-AB) to service these components. This kit will service all E4OD Transmissions. The new design forward planetary carrier #10A needle bearing, forward ring gear hub and forward planetary assemblies are NOT interchangeable with the PAST design components.

SERVICE PROCEDURE

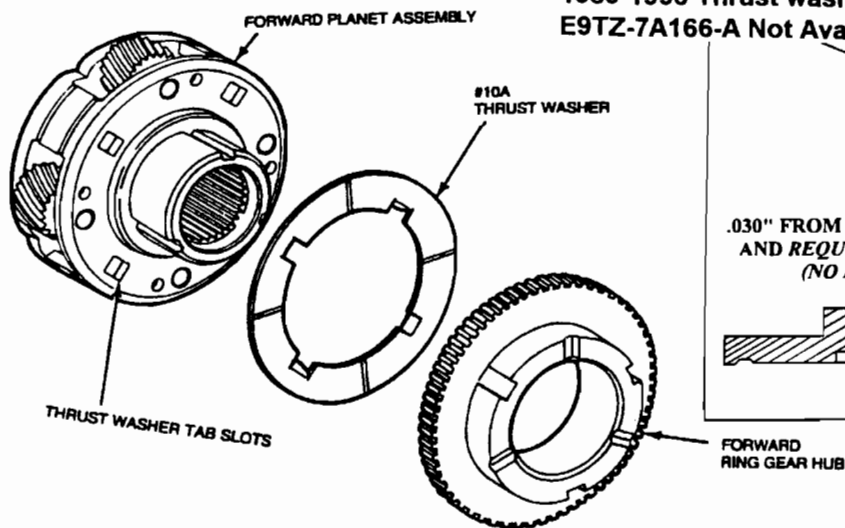
If the forward planetary carrier has slots (Figure 1) for the thrust washer tabs, it does NOT have to be replaced unless it is damaged. The planetary carrier must have slots to be used with the #10A thrust washer. Either planetary assembly with or without slots CAN BE USED WITH THE BEARING. Refer to Figure 1 and the part application Chart for correct part usage.

| PART APPLICATION CHART | | |
|-----------------------------|-------------------|-----------------|
| PART | CURRENT DESIGN | REVISED DESIGN |
| Forward Planet Assembly | E9TZ-7A398-A | F7TZ-7A398-BA |
| #10A Forward Thrust Washer | F7TZ-7B067-AB kit | N/A |
| #10A Forward Needle Bearing | N/A | In Kit 7B067-AB |
| Forward Ring Gear Hub | F7TZ-7B067-AB kit | In-Kit 7B067-AB |

The early planetary will work with either the thrust washer with tabs or the needle bearing. The late planetary will not retro fit with out the use of the new hub and thrust bearing. The #10A thrust washer E9TZ-7A166-A IS NO LONGER AVAILABLE nor the ring gear hub E9TZ-7B067-A.

| PART NUMBER | PART NAME |
|---------------|--|
| E9TZ-7A398-A | Planetary Assembly (Thrust Washer Type) |
| F7TZ-7A398-BA | Planetary Assembly (Thrust bearing Type) |
| F7TZ-7B067-AB | Service Kit |
| F7TZ-7B067-AB | Ring Gear Hub |

PREVIOUS DESIGN



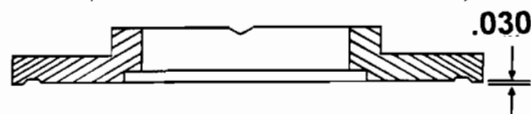
EARLY FORWARD RING GEAR HUB



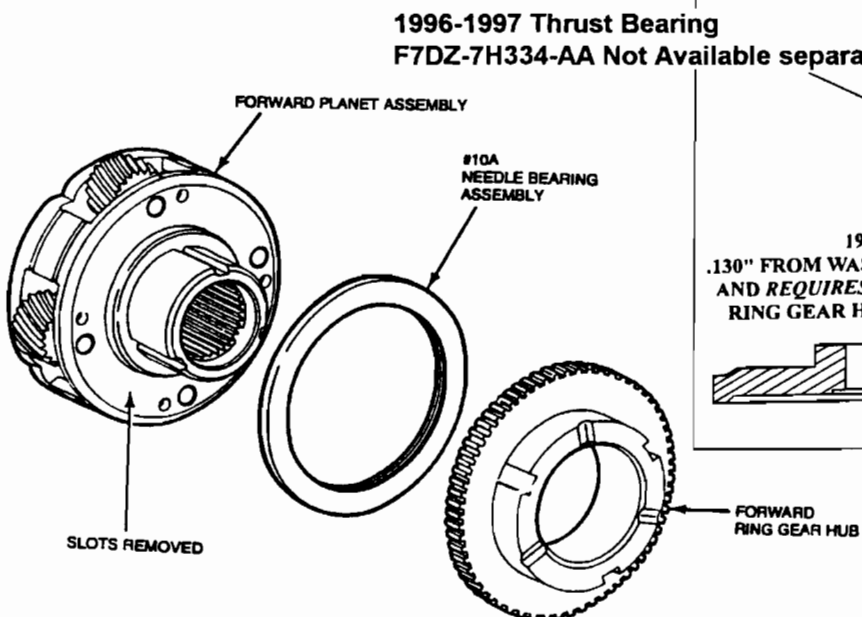
1989-1996 Thrust washer
E9TZ-7A166-A Not Available



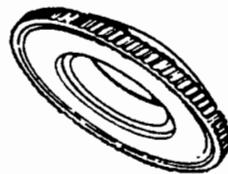
1989-1996 RING GEAR HUB
.030" FROM WASHER SURFACE TO EDGE AS SHOWN,
AND *REQUIRES* THRUST WASHER SHOWN ABOVE.
(NO LONGER AVAILABLE FROM FORD)



REVISED DESIGN



LATE FORWARD RING GEAR HUB



1996-1997 Thrust Bearing
F7DZ-7H334-AA Not Available separately



1997-UP RING GEAR HUB
.130" FROM WASHER SURFACE TO EDGE AS SHOWN,
AND *REQUIRES* THRUST BEARING SHOWN ABOVE.
RING GEAR HUB PART NUMBER F7TZ-7B067-AA.

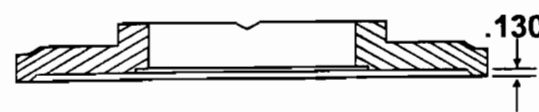


Figure 1
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**FORD E4OD
DIRECT CLUTCH FRICTION PLATES
CHANGE FOR 1996 MODELS**

CHANGE: Beginning at the Start Of Production (SOP) for all 1996 model E4OD transmissions, the Direct Clutch Friction Plates change to a "Grooved" plate instead of the previous design level "Smooth" plate (See Figure 1).

REASON: Valve Body and PCM calibration changes that occurred in 1996 models.

PARTS AFFECTED:

- (1) **DIRECT CLUTCH FRICTION PLATE** - Now has grooves in the friction material instead of the previous design level smooth friction material (See Figure 1). No dimensional changes were necessary.

INTERCHANGEABILITY:

Using the incorrect friction plates in the Direct Clutch could result in shift concerns. Always use the "Smooth" plate in 1989-1995 model transmissions, and the "Grooved" plate in 1996 models. Refer to Figure 1.

SERVICE INFORMATION:

Direct Clutch Friction Plate (89-95 Smooth) E9TZ-7B164-D
Direct Clutch Friction Plate (1996 Grooved) F6TZ-7B164-B

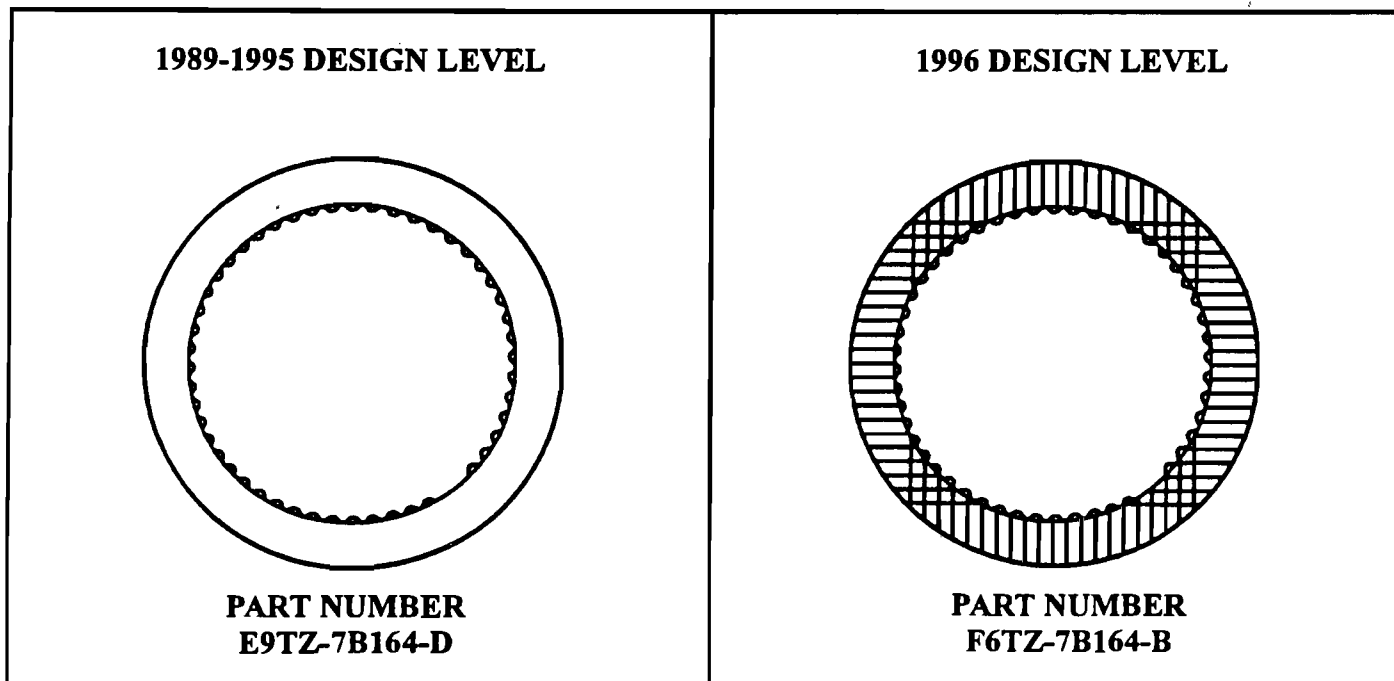


Figure 1



FORD AOD-E/4R70W EPC SOLENOID AND RETAINER CHANGES

CHANGE: The Electronic Pressure Control (EPC) solenoid changed at the start of production for all 1993 models of the AOD-E/4R70W transmissions, and care must be taken to use the proper EPC solenoid retainer (See Figure 1).

REASON: Improved line pressure control.

PARTS AFFECTED:

- (1) **EPC SOLENOID** - The external dimensions on the solenoid changed in the area where the retainer goes over the solenoid to hold it into the case, in addition to internal changes to improve the durability. The previous design solenoid is no longer available. Refer to Figure 1, which shows you the current EPC Solenoid F3AZ-7G383-A, which comes with the retainer for 1992-1995 model transmissions.
- (2) **EPC SOLENOID RETAINER** - Changed in 1993 to accommodate the new design solenoid, and must be used with the new design solenoid on 1992 models (See Figure 1).
The EPC Solenoid retainer changed again in 1996, and was made 1/16" *shorter*, to accommodate a thinner valve body plate, and must be used on 96 models with the thinner plate (See Figure 1).

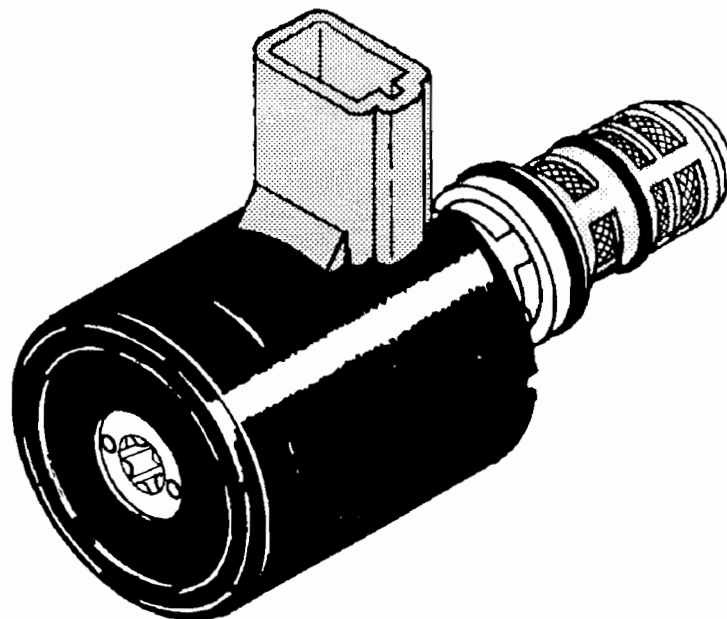
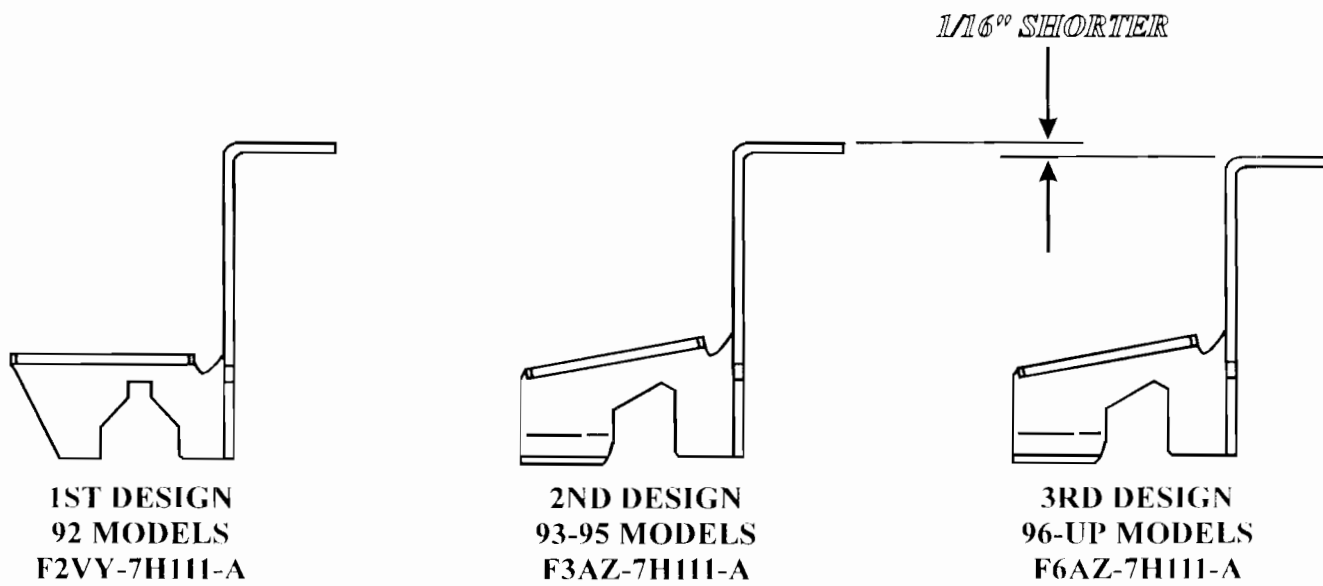
INTERCHANGEABILITY:

- (1) When the EPC Solenoid is replaced, the 2nd design solenoid is the only one available, and comes with the proper retainer which *must* be used on 1992-1995 models (See Figure 1). The new design solenoid will retro-fit to 1992 models.
- (2) The only retainer that can be used on 1996 models is the one that is 1/16" shorter to accommodate the thinner valve body plate that was used in 1996 (See Figure 1).

SERVICE INFORMATION:

| | |
|---|--------------|
| EPC Solenoid, 2nd Design (Includes F3AZ-7H111-A Retainer) | F3AZ-7G383-A |
| EPC Solenoid Retainer (1st Design) | F2VY-7H111-A |
| EPC Solenoid Retainer (2nd Design) | F3AZ-7H111-A |
| EPC Solenoid Retainer (3rd Design) | F6AZ-7H111-A |

EPC SOLENOID RETAINER DIFFERENCES

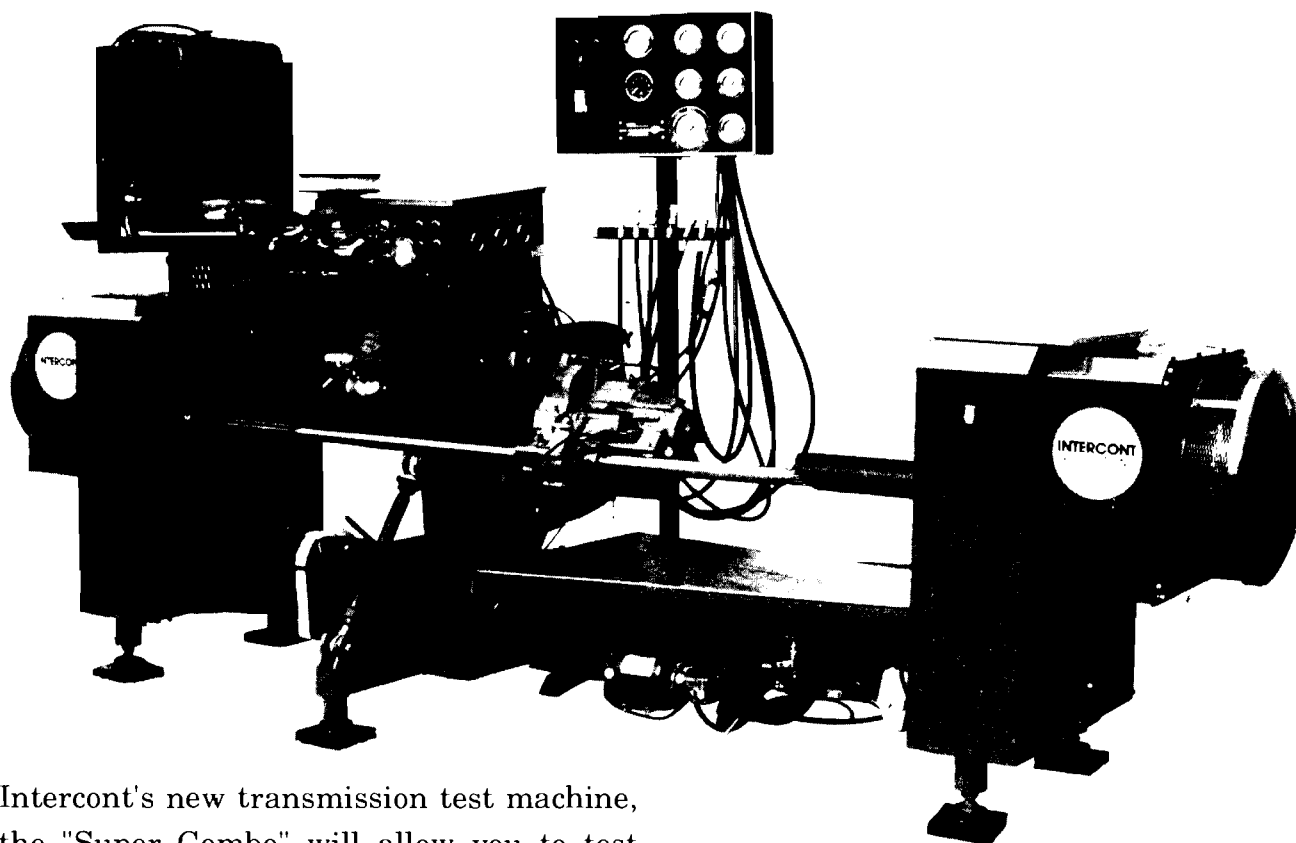


EPC SOLENOID
PART NUMBER F3AZ-7G383-A
(INCLUDES F3AZ-7H111-A RETAINER)

Figure 1

TEST YOURSELF

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FORD AODE/4R70W SLIPS AND/OR CHATTERS FORWARD REVERSE IS OKAY

COMPLAINT: After rebuild, the vehicle displays a slip and/or chatter in forward ranges when you are accelerating from a stop, and reverse is okay. All sealing rings, bushings, seals, and forward clutch drum are known to be good.

CAUSE: The cause may be, a partially clogged Shift Solenoid No. 2, which will stroke the 3-4 shift valve far enough to exhaust some of the forward clutch oil.

CORRECTION: Install two pressure gages to check line pressure and forward clutch pressure, as shown in Figure 1. With the transmission in Drive, both gages should read the same and should be approximately 55-75 PSI.
If the forward clutch gage reads lower than the line pressure gage, *and all internal parts are known to be good*, replace the Shift Solenoid Assembly with OEM part number F5AZ-7G484-A (See Figure 2).

SERVICE INFORMATION:

Shift Solenoid Assembly (Latest Design Level) F5AZ-7G484-A

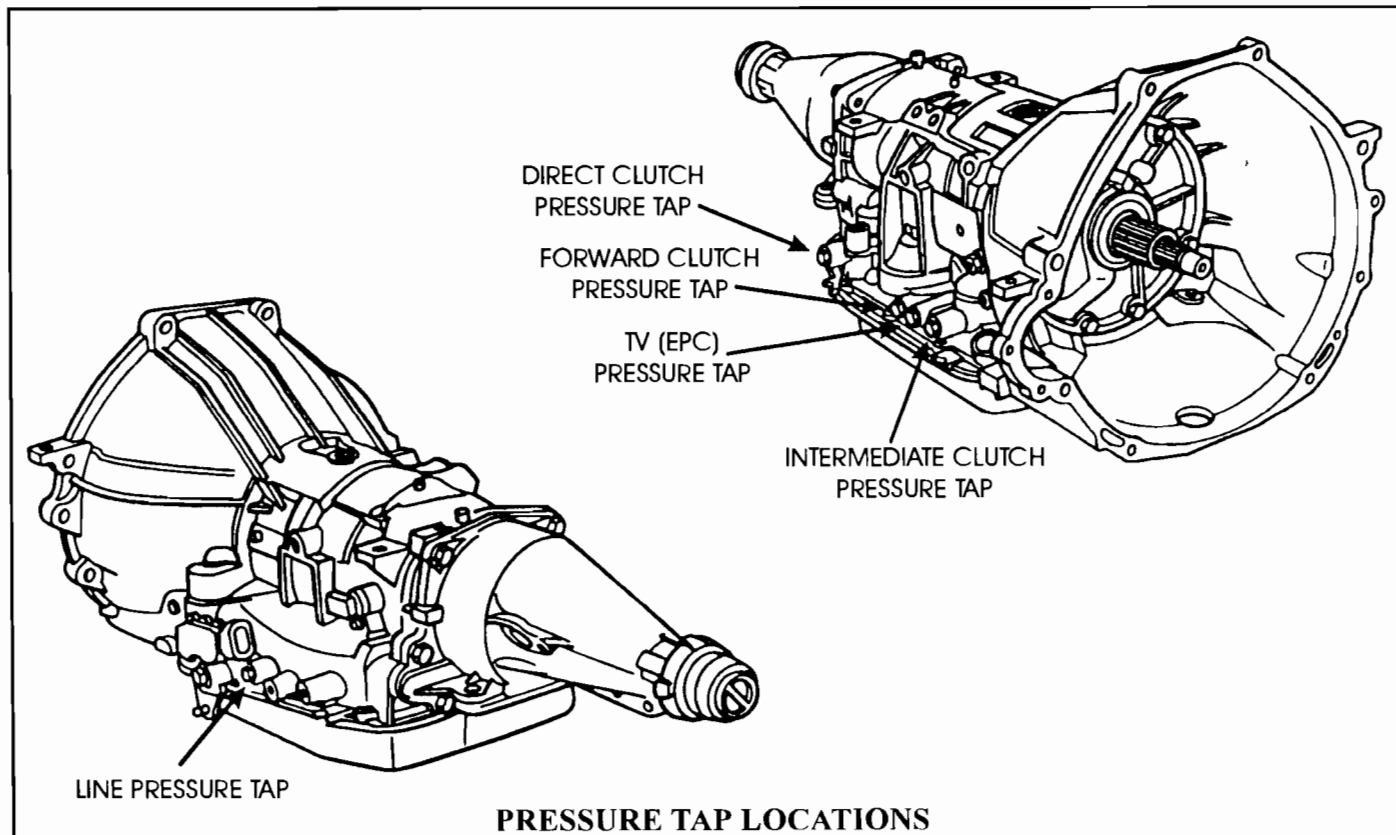
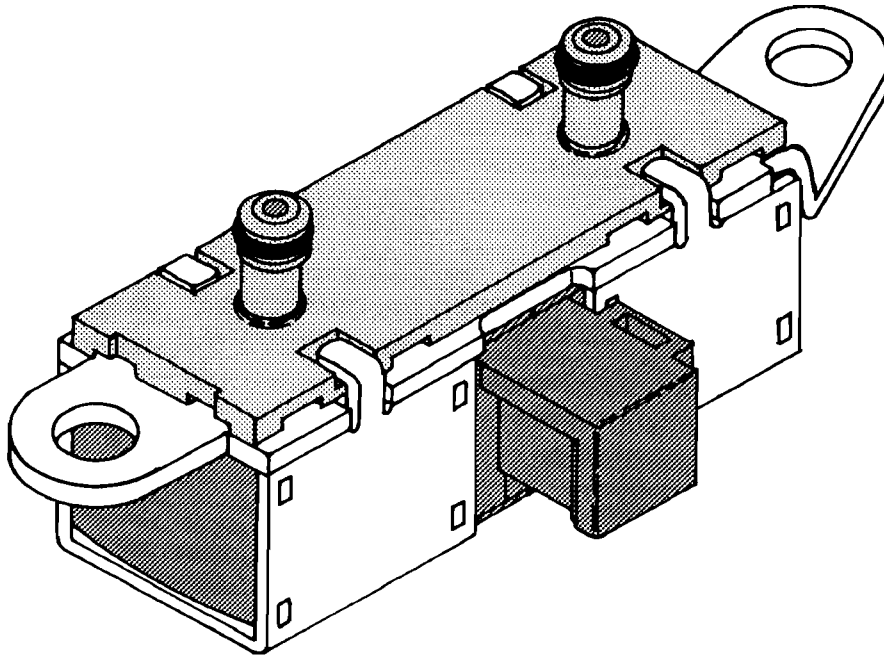


Figure 1



**SHIFT SOLENOID ASSEMBLY
PART NUMBER F5AZ-7G484-A**

Figure 2



FORD 4R70W Leak At Extension Housing

COMPLAINT: Leaking of transmission fluid may occur at the transmission extension housing on some vehicles. Verify the area of the leak.

CAUSE; This may be due to loads on the transmission extension housing affecting the joint clamping load(*where the extension housing bolts to the case*). This leak location is often mis-diagnosed as a pan gasket leak.

CORRECTION: If leak is from the extension housing gasket, replace with the revised steel backed gasket (F6AZ-7086-A) and slot the holes in the rear bracket assembly (Figures 1 and 2) refer to the following service procedures in the following note:

NOTE: DURING REASSEMBLY OF THE EXHAUST SYSTEM TRANSMISSION BRACKET, TIGHTEN NUTS ON EXHAUST SYSTEM END FIRST. INSTALL AND TIGHTEN THROUGH BOLTS TO THE EXTENSION HOUSING MOUNT FLANGE LAST. IF NECESSARY, SLOT HOLES IN BRACKET (FIGURES 1 AND 2) UP TO 3 mm (0.125") MAXIMUM AXIALLY FRONT TO REAR TO PROVIDE CLEARANCE FOR EXTENSION HOUSING MOUNT BOLT INSTALLATION. THE PURPOSE OF THIS IS TO PREVENT PRELOADING THE JOINT ON THE TRANSMISSION EXTENSION HOUSING-TO-CASE FLANGE.

| PART NUMBER | PART NAME |
|------------------|---|
| F6AZ-7086-A..... |Transmission Extension Housing Gasket |

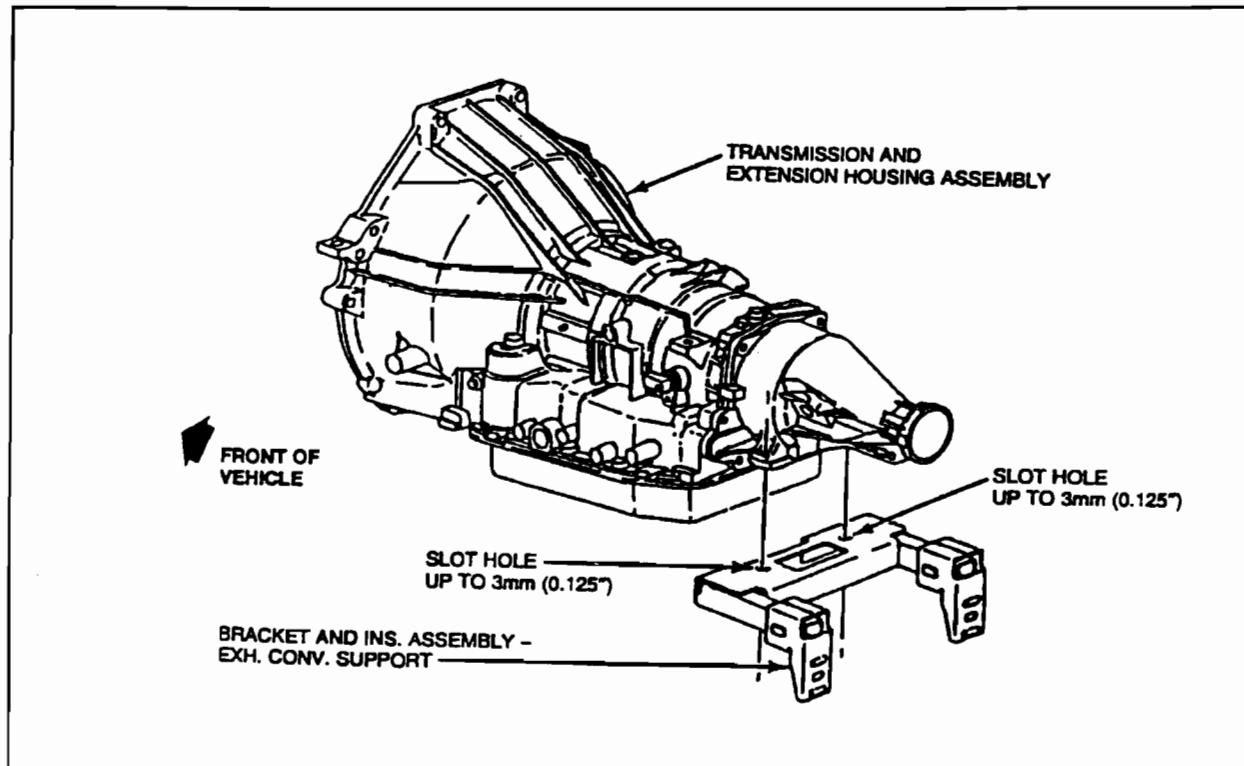


Figure 1

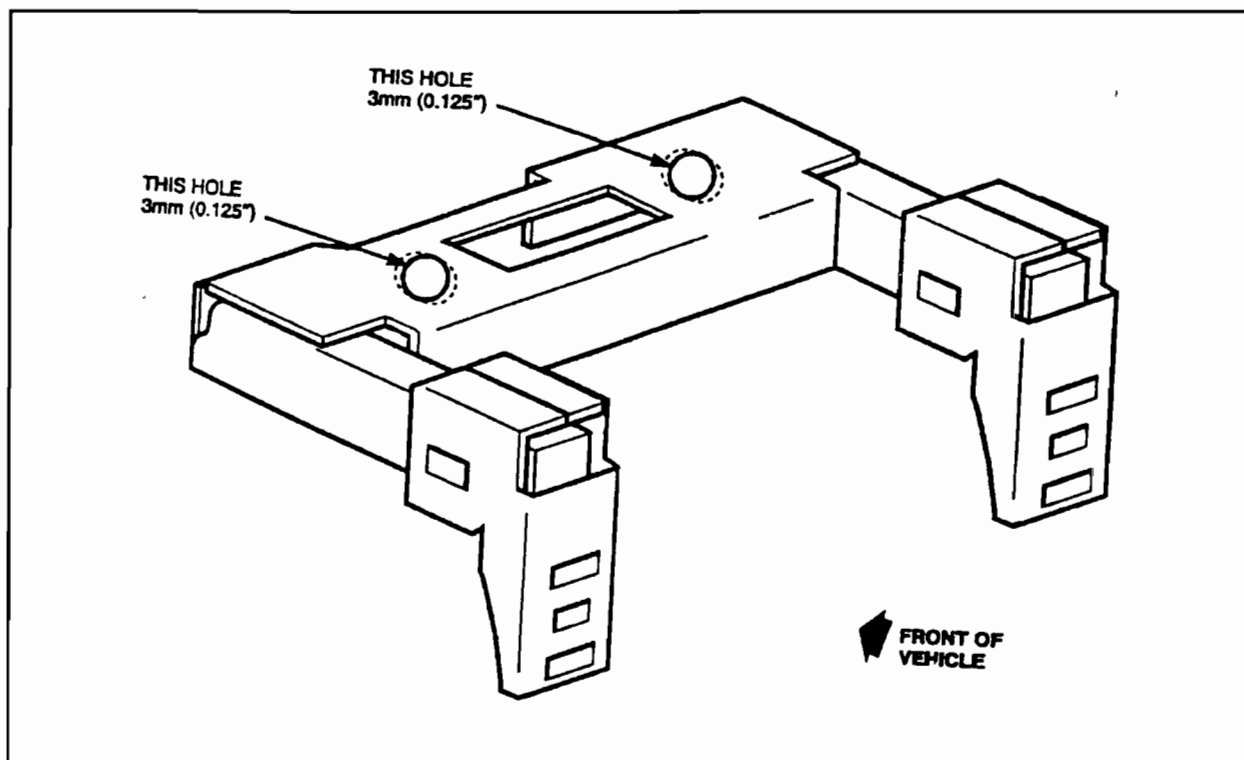


Figure 2

FORD AODE/4R70W CONVERTER CLUTCH SHUDDER

COMPLAINT: Some 1992-1995 vehicles equipped with the AODE/4R70W transmission may exhibit a converter clutch shudder or vibration, during light to moderate acceleration, and may occur on the apply and/or the release of the converter clutch.

CAUSE: The cause may be, insufficient diameter of the converter clutch.

CORRECTION: There is now available from Ford Motor Company, new design level converters for the AODE/4R70W transmissions, that have an increased diameter converter clutch plate (Approx. 7/8" Larger), that will eliminate the condition above. Refer to the chart shown in Figure 2, for the proper part number for your application.

Note: Refill transmission with Mercon® Automatic Transmission Fluid (Part No. XT-2-QDX), when refilling to ensure proper fluid quality is being used.

**NEW DESIGN LEVEL TORQUE CONVERTER NOW AVAILABLE
WITH 7/8" LARGER DIAMETER CLUTCH PLATE.**

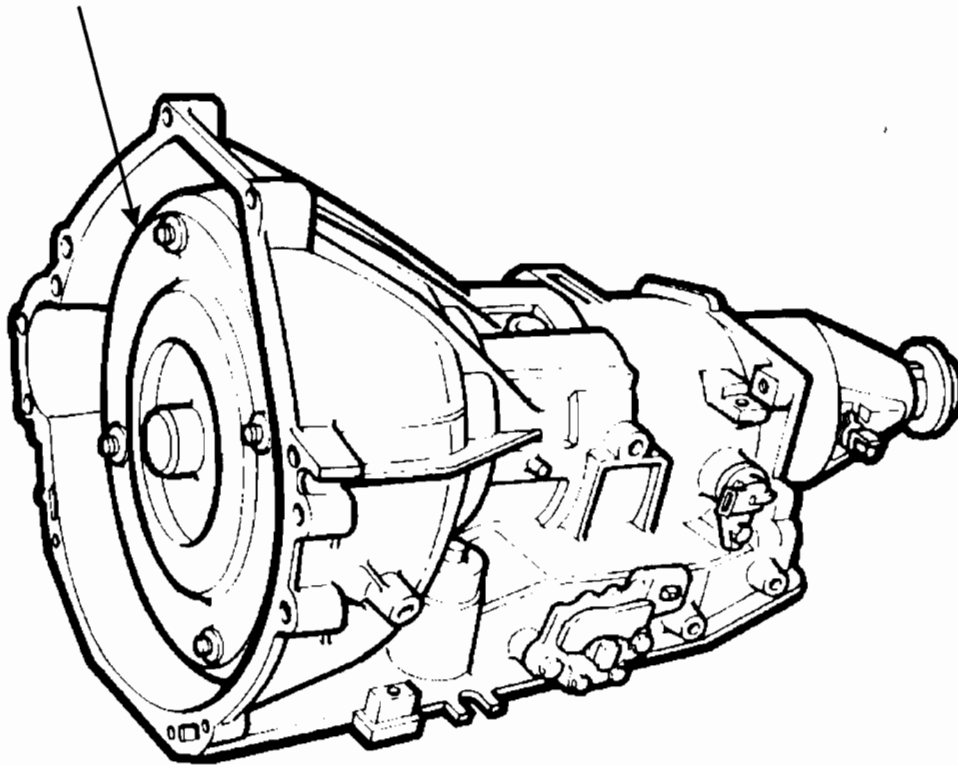


Figure 1



1997 SEMINAR INFORMATION
SLIDE

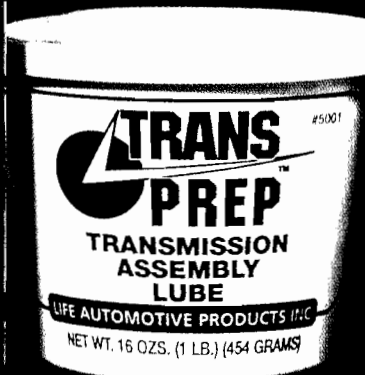
17

| YEAR | VEHICLE APPLICATION | ENGINE SIZE | I.D. NUMBER | PART NUMBER |
|---------|-------------------------------|-------------|-------------|---------------|
| 1992-94 | Crown Victoria, Grand Marquis | ALL | 51A, 59A | F5ZZ-7902-ARM |
| 1995 | Crown Victoria, Grand Marquis | ALL | 72 | F5AZ-7902-ARM |
| 1992-94 | Lincoln Town Car | ALL | 51A, 59A | F5ZZ-7902-ARM |
| 1995 | Lincoln Town Car | ALL | 72 | F5AZ-7902-ARM |
| 1994 | Mustang | 3.8L | 51A, 59A | F5ZZ-7902-ARM |
| 1994 | Mustang | 5.0L | 64A, 69A | F5ZZ-7902-ARM |
| 1995 | Mustang | ALL | 71A | F5ZZ-7902-ARM |
| 1993 | Lincoln Mark VIII | ALL | 70A | F4LY-7902-ARM |
| 1994-95 | Lincoln Mark VIII | ALL | 62A | F4LY-7902-ARM |
| 1994 | Thunderbird, Cougar | 3.8L EFI | 51A, 59A | F5ZZ-7902-ARM |
| 1995 | Thunderbird, Cougar | 3.8L EFI | 71A | F5ZZ-7902-ARM |
| 1994 | Thunderbird | 3.8L SC | 60A, 66A | F4SZ-7902-BRM |
| 1995 | Thunderbird | 3.8L SC | 67A | F4SZ-7902-BRM |
| 1994 | Thunderbird, Cougar | 4.6L | 61A | F5AZ-7902-ARM |
| 1995 | Thunderbird, Cougar | 4.6L | 72A | F5AZ-7902-ARM |
| 1994 | E-150 Econoline | ALL | 65A | F5AZ-7902-ARM |
| 1995 | E-150 Econoline | ALL | 72A | F5AZ-7902-ARM |
| 1994 | F-150 Trucks | ALL | 63A, 65A | F5AZ-7902-ARM |
| 1995 | F-150 Trucks | ALL | 72A | F5AZ-7902-ARM |

Figure 2

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- Contains NO mineral spirits (that must be disposed of as hazardous waste)

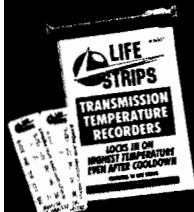
- INSTANTLY eliminates & prevents lock up shudder
- Synthetics are the choice of future OEM factory fills
- Keeps valves & governors free
- Softens hard shifting
- Inhibits overheating and fluid oxidation
- Reduces wear on gears & pumps better than factory fills
- Fully compatible with all electronics, solenoids & transmission fluids

- Converts Dexron III® fluid into a highly friction modified ATF found in Hondas • Toyotas • Chrysler 7176 & others
- Eliminates the need for multiple OEM fluids
- INSTANTLY eliminates & prevents lock up shudder
- Softens hard shifting
- Increase profits
- Keeps valves & governors free
- Inhibits overheating and fluid oxidation

- Blue color helps prevent misdiagnosing leaks
- Apply to rings, seals, bearings, washers, bushings, & gaskets
- Compatible with all transmission fluids
- Will not clog filters

- Eliminates sticking valves
- Works in temps of -30° to above 600°
- Improves quality control and reduces costly comebacks
- Cleans & coats with Teflon®
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- High pressure works better than pumps

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- Can be read without raising the vehicle



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**FORD 4R70W
IRREGULAR AND/OR
NO CONVERTER CLUTCH APPLY**

COMPLAINT: Some 1995 model Crown Victoria, Grand Marquis, and Lincoln Town Cars might illuminate the "Check Engine" light, and may store Diagnostic Trouble Code (DTC) P0743, and there may also be a concern of irregular and/or no torque converter clutch operation.

CAUSE: The cause may be, an incorrect Torque Converter Clutch (TCC) Solenoid, with low resistance (1.0 - 3.0 ohms), mistakenly installed in *some* 4R70W transmissions. Refer to Figure 1. The resistance should be 10-16 ohms on *some* models.

CORRECTION: *Step 1:* Perform the normal on board diagnostics and if DTC P0743 is present, measure the resistance of the TCC solenoid across the transmission case connector pins 3 and 8. Refer to Figure 2 for pin locations in the transmission case connector.

Step 2: If the resistance measures 1.0-3.0 ohms, remove the transmission bottom pan, and record the "Valve Body I.D. Code" from the I.D. tag located on the valve body.

Step 3: *If* the valve body I.D. code is G2T, G3T, or G2U, *and* resistance on the TCC solenoid measures 1.0-3.0 ohms, *replace* the TCC Solenoid with OEM part number F5AZ-7G136-A. The resistance on these models should be 10-16 ohms.

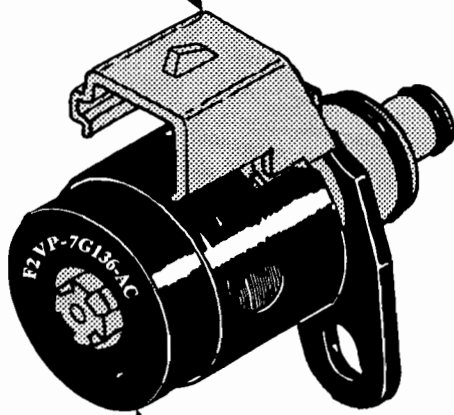
SERVICE INFORMATION:

92-96 Mustang, Thunderbird, Cougar,
Mark VIII, E/F Series Trucks,
TCC SOLENOID (All Models) F2VY-7G136-A

92-96 Crown Victoria, Grand Marquis,
Lincoln Town Car,
TCC SOLENOID (All *Except* V.B. Codes G2T, G3T, G2U) F2VY-7G136-A
TCC SOLENOID (G2T, G3T, G2U V.B. Codes *Only*) F5AZ-7G136-A

**1.0 - 3.0 OHMS RESISTANCE
TCC SOLENOID**

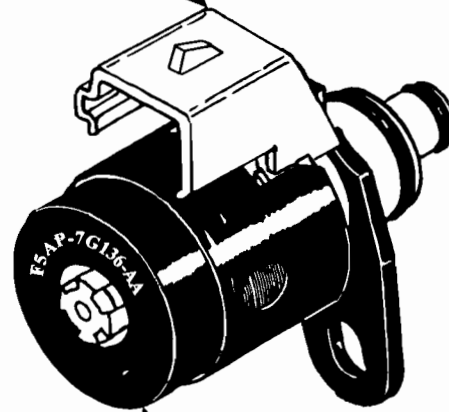
"BLACK" PLASTIC
ELECTRICAL CONNECTOR



F2VP-7G136-AC STAMPED
IN THIS END OF SOLENOID

**10 - 16 OHMS RESISTANCE
TCC SOLENOID**

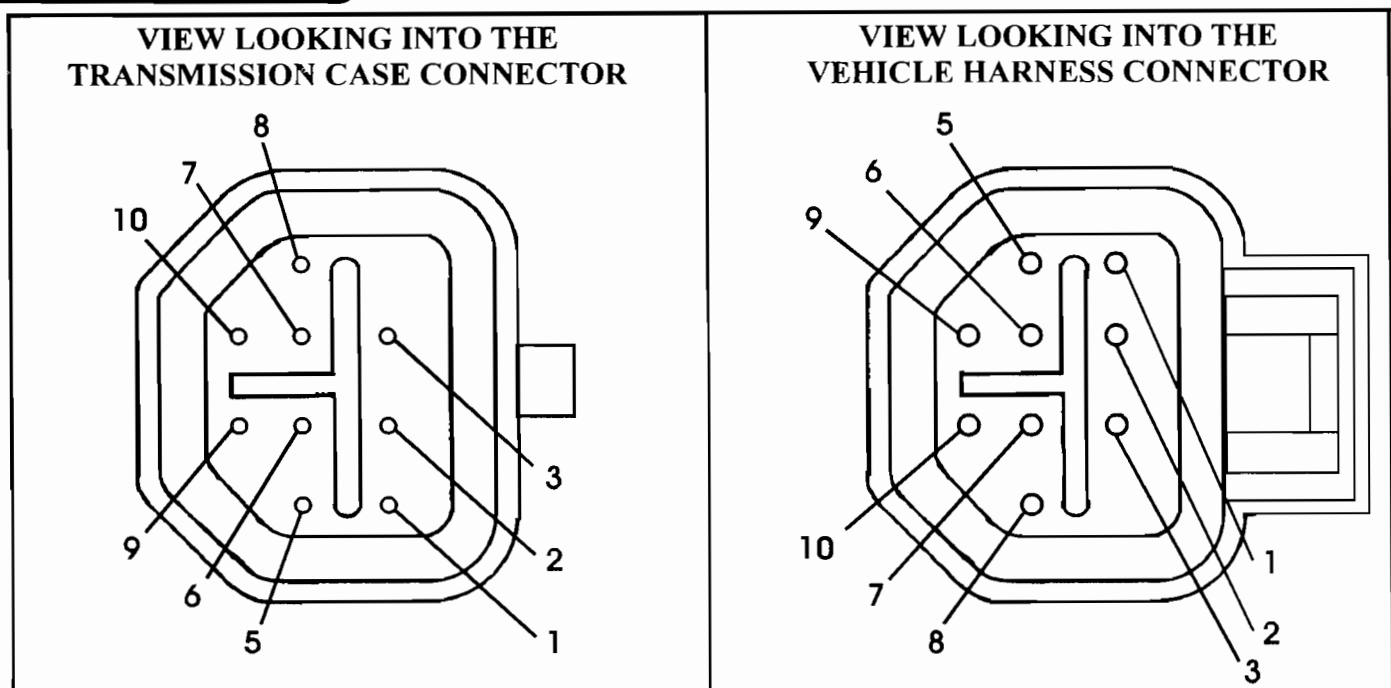
"WHITE" PLASTIC
ELECTRICAL CONNECTOR



F5AP-7G136-AA STAMPED
IN THIS END OF SOLENOID

**REFER TO "SERVICE INFORMATION" ON PAGE ONE TO
DETERMINE WHICH MODELS THESE SOLENOIDS FIT.**

Figure 1



| PIN NO. | IDENTIFICATION | INTERNAL COLOR | EXTERNAL COLOR | CIRCUIT NUMBER | PCM PIN NUMBER |
|---------|--------------------------|----------------|----------------|----------------|----------------|
| 1 | SS-1 GROUND SIGNAL | WHITE | ORG - YEL | 237 | 51 |
| 2 | SHIFT SOLENOID POWER 12V | WHT - BLK | RED | 361 | 37 & 57 |
| 3 | MCC GROUND SIGNAL | GREEN | ** | 480 | 53 |
| 4 | NOT USED | | | | |
| 5 | TOT - | WHT - RED | ORG - BLK | 923 | 49 |
| 6 | SS-2 GROUND SIGNAL | BLACK | PPL - ORG | 315 | 52 |
| 7 | EPC POWER IN | WHT - BLU | RED | 361 | 37 & 57 |
| 8 | MCC POWER IN | WHT - GRN | RED | 361 | 37 & 57 |
| 9 | TOT + | RED | GRY - RED | 359 | 46 |
| 10 | EPC GROUND SIGNAL | BLUE | WHT - YEL | 925 | 38 |

** TAN - WHT, BRN - ORG, PPL - YEL, DEPENDING ON YEAR AND MODEL.

| SOLENOID | PIN NO. | RESISTANCE |
|---|---------|------------------|
| SHIFT SOLENOID - 1 | 1 & 2 | 20 - 30 OHMS |
| SHIFT SOLENOID - 2 | 6 & 2 | 20 - 30 OHMS |
| TORQUE CONVERTER CLUTCH (SOME 1995 MODELS) | 3 & 8 | 1.0 - 3.0 OHMS |
| | 3 & 8 | 10 - 16 OHMS |
| ELECTRONIC PRESSURE CONTROL | 7 & 10 | 2.48 - 5.66 OHMS |

Figure 2

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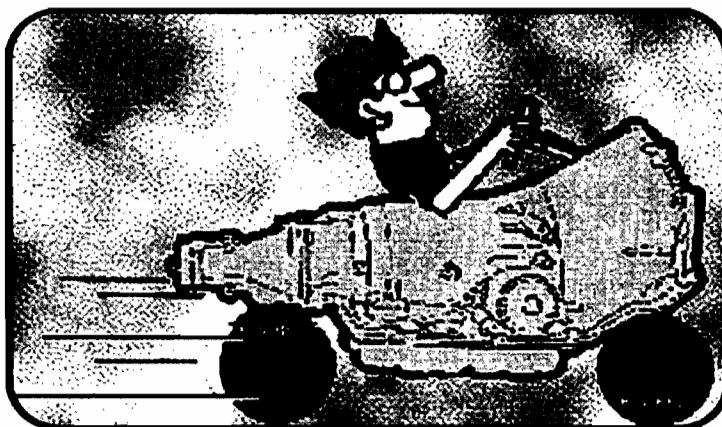
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FORD AXODE (AX4S)
CHANGES FOR THE CHAIN COVER AND
NO. 1 AND NO. 3 THRUST WASHERS

CHANGE: Beginning on October 13, 1995, introduced as a running change for 1996 models, the AX4S transaxles were built with new design Number 1 and Number 3 thrust washers (See Figure 1).

REASON: To improve the assembly process.

PARTS AFFECTED:

- (1) **NUMBER 1 THRUST WASHER** - New design washer has symetrically located tabs for ease af assembly, as opposed to the previous design with non-symetrically located tabs. Refer to Figure 1 for illustrations of both designs.
- (2) **NUMBER 3 THRUST WASHER** - New design washer is Black plastic with 3 symetrically located tabs, as opposed to previous design bronze washer with tangs on the outside diameter. Refer to Figure 1 for illustrations of both designs.
- (3) **CHAIN COVER** - New design will accept either the previous bronze No. 3 thrust washer with the tangs on outside diameter, or the new design Black plastic No. 3 thrust washer with the 3 symetrically located tabs, as shown in Figure 3.
The previous design Chain Cover will accept *only* the bronze No. 3 thrust washer with the tangs on the outside diameter, as shown in Figure 2.
The new design Chain Cover will accept *only* the new design No. 1 thrust washer with 3 symetrically located tabs, as shown in Figure 3.
The previous design Chain Cover will accept *only* the previous design No. 1 thrust washer with 3 non-symetrically located tabs, as shown in Figure 2.

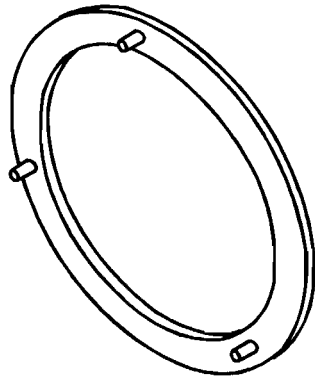
INTERCHANGEABILITY:

If replacement of the number 1 and/or the number 3 thrust washer becomes necessary, inspect the chain cover in the thrust washer tab areas to determine the correct thrust washers required. Refer to Figures 2 and 3.

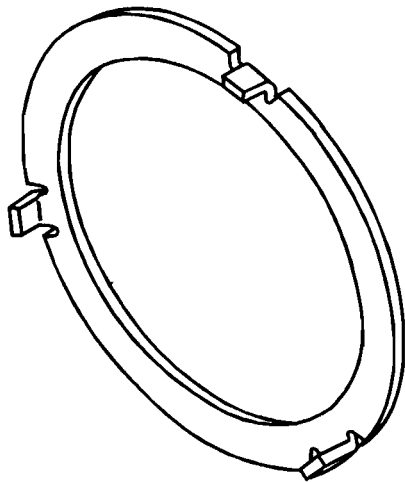
SERVICE INFORMATION:

| | |
|---|--------------|
| Number 1 Thrust Washer (Before 10/13/95) | E6DZ-7G099-A |
| Number 3 Thrust Washer (Before 10/13/95) | E6DZ-7G096-A |
| Number 1 Thrust Washer (On or After 10/13/95) | F5DZ-7G099-A |
| Number 3 Thrust Washer (On or After 10/13/95) | F5DZ-7G096-A |

PREVIOUS DESIGN

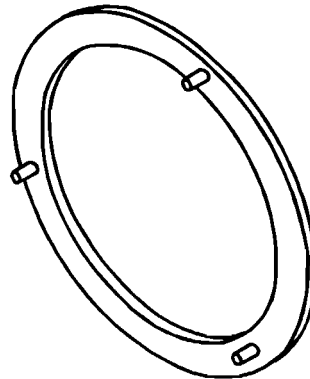


**NUMBER 1 THRUST WASHER
WITH NON-SYMETRICALLY LOCATED TABS
PART NUMBER E6DZ-7G099-A**

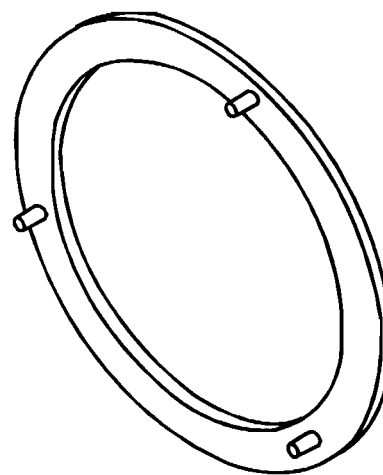


**NUMBER 3 BRONZE THRUST WASHER
WITH TANGS ON OUTSIDE DIAMETER
PART NUMBER E6DZ-7G096-A**

NEW DESIGN



**NUMBER 1 THRUST WASHER
WITH SYMETRICALLY LOCATED TABS
PART NUMBER F5DZ-7G099-A**



**NUMBER 3 PLASTIC THRUST WASHER
WITH SYMETRICALLY LOCATED TABS
PART NUMBER F5DZ-7G096-A**

Figure 1

**CHAIN COVER AND THRUST WASHERS
PRIOR TO OCTOBER 13, 1995**

**NUMBER 3
THRUST WASHER**



REQUIRES THE BRONZE NO. 3
THRUST WASHER WITH TANGS ON
THE OUTSIDE DIAMETER
PART NUMBER E6DZ-7G096-A

**NUMBER 1
THRUST WASHER**



REQUIRES THE PLASTIC NO. 1
THRUST WASHER WITH TABS THAT
ARE NON-SYMETRICALLY LOCATED
PART NUMBER E6DZ-7G099-A

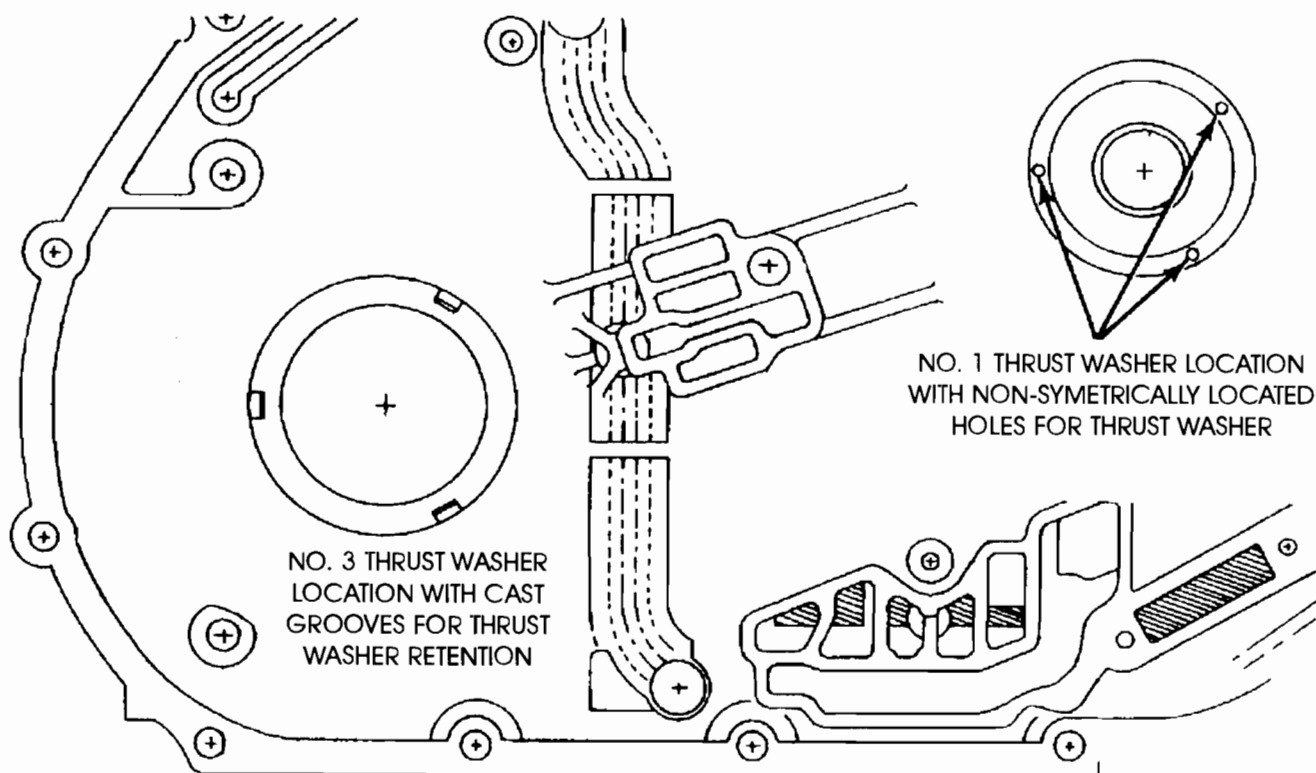
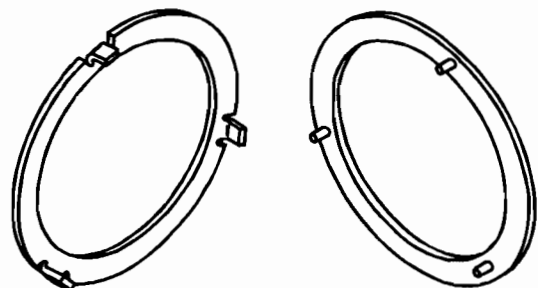


Figure 2

**CHAIN COVER AND THRUST WASHERS
OCTOBER 13, 1995 AND BEYOND**

**NUMBER 3
THRUST WASHER**

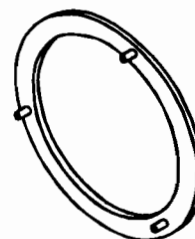


(BRONZE)
E6DZ-7G096-A

(BLACK PLASTIC)
F5DZ-7G096-A

CAN USE EITHER OF THE
PART NUMBERS LISTED ABOVE

**NUMBER 1
THRUST WASHER**



REQUIRES THE PLASTIC NO. 1
THRUST WASHER WITH TABS THAT
ARE SYMETRICALLY LOCATED
PART NUMBER F5DZ-7G099-A

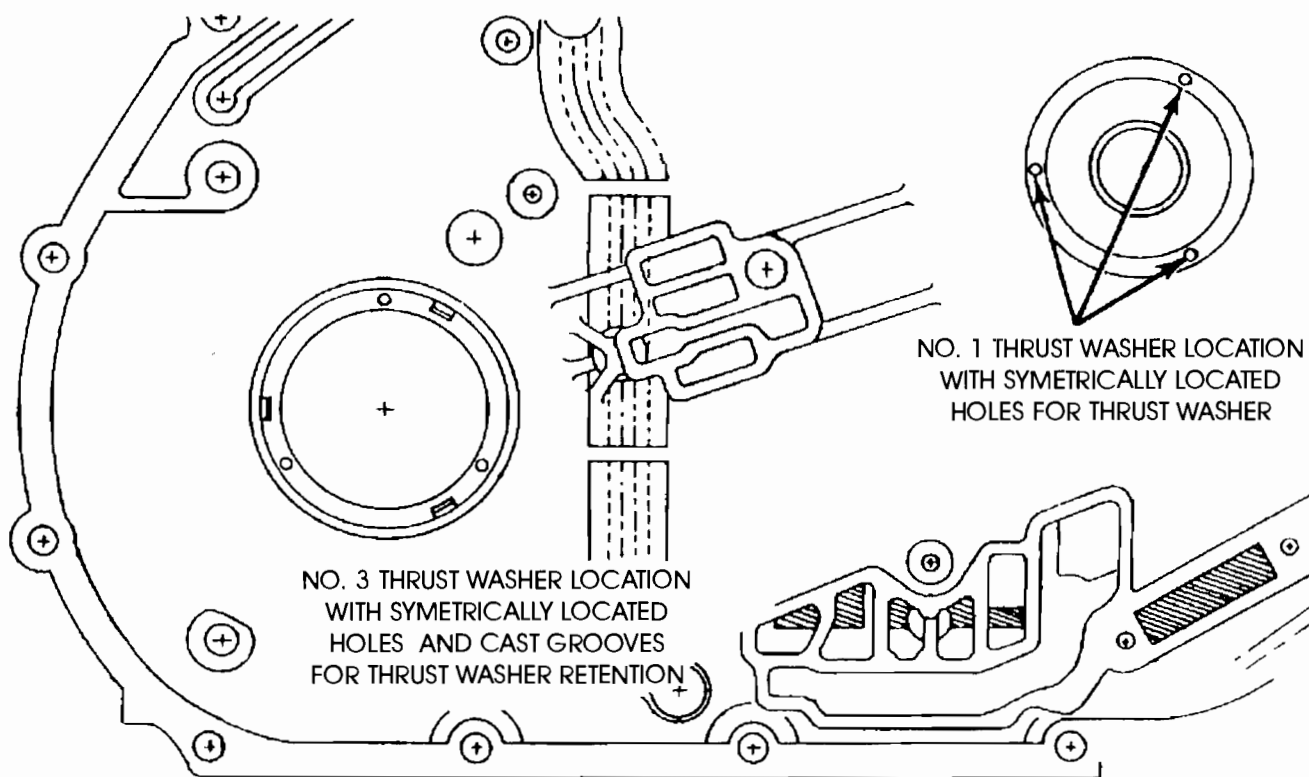


Figure 3

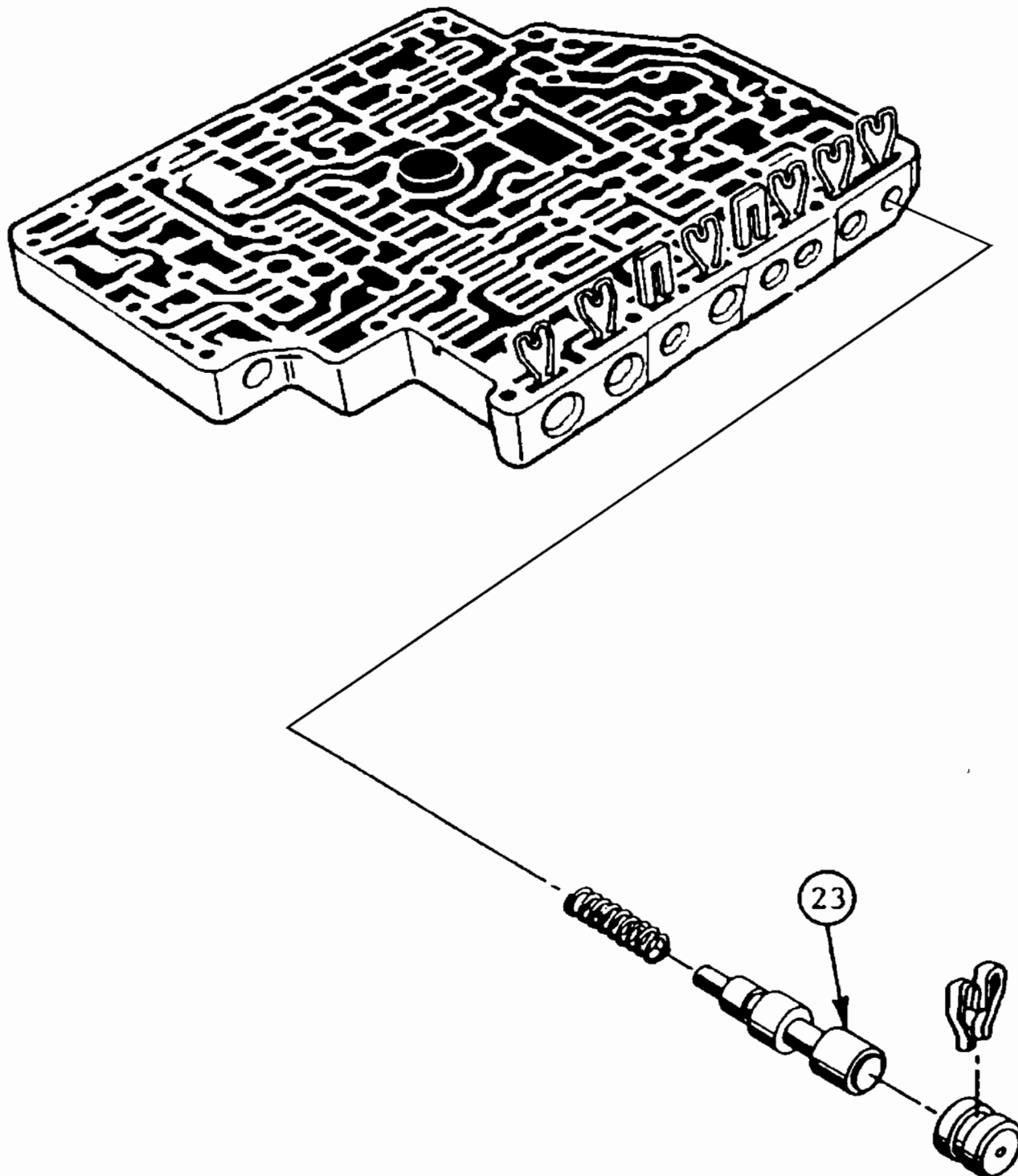


FORD AXOD-E (AX4S)
NO FORWARD MOVEMENT
AFTER PULLING TO STOP

COMPLAINT: After driving the vehicle fast enough to achieve fourth gear, the vehicle will no longer move forward, after coming to a stop. You will still have reverse.

CAUSE: The cause may be, the 2-3 servo regulator valve in the valve body stuck, which will block servo apply oil to the 1-2 band (See Figure 1).

CORRECTION: Free the 2-3 servo regulator valve in the valve body from whatever contamination or debris that is keeping the valve stuck (See Figure 1).



23. 2-3 SERVO REGULATOR VALVE

Figure 1

FORD AX4N
NO 2-3 UPSHIFT AND/OR
NO ENGINE BRAKING IN MANUAL LOW

COMPLAINT: The AX4N transaxle, after rebuild, may exhibit a condition of a no 2-3 upshift and/or no engine braking in manual low.

CAUSE: One cause for this condition may be that the No. 8 checkball, located in the pump is missing, or off location (See Figure 1). A missing checkball in this location causes direct clutch oil to exhaust through the 1-2 shift valve, causing the transaxle to remain in second gear. In manual low, direct clutch oil, used for engine braking exhausts through the 2-3 capacity modulator valve and the 1-2 shift valve.

CORRECTION: Install the number 8 checkball in the location shown in Figure 1.

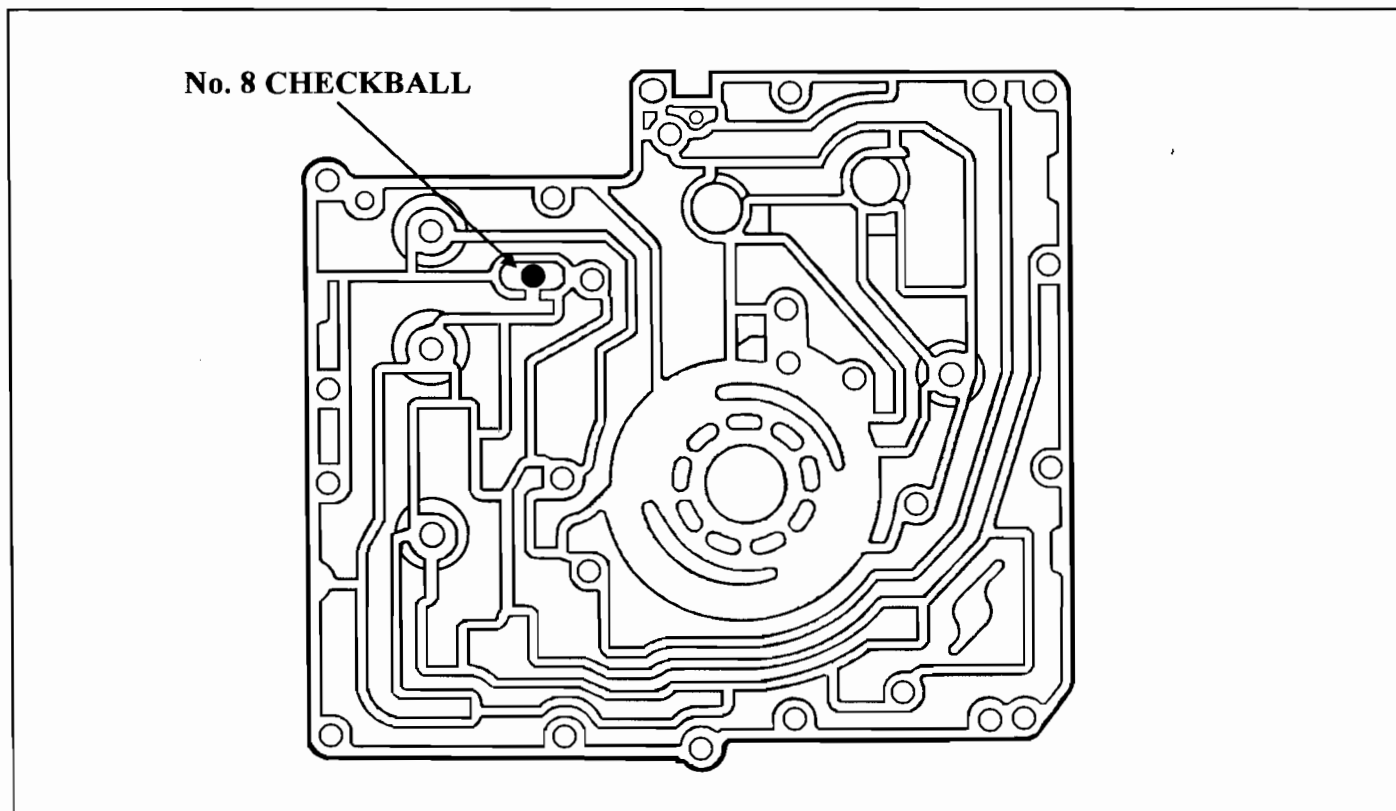


Figure 1

FORD CD4E NEW DESIGN PARKING PAWL RATCHET SPRING AND PARKING CAM

ISSUE: Beginning in Sept 1996 (transaxle serial number 6244-0000), the CD4E transaxle will contain a crimp nut design parking cam actuating lever assembly (Figure 1). This crimp nut design is serviced as an assembly excluding the parking pawl spring. In addition, the parking pawl ratchet spring has been redesigned and must only be used with the crimp nut design lever assembly. The revised design spring is **BLUE** in color (Figure 2) The previous design spring was **YELLOW** in color.

ACTION: If replacement of the cam actuating lever is required on a CD4E transmission, beginning with serial number 6244-0000, service with the crimp nut design park lever assembly. The assembly includes the cam spacer, shaft, nut and actuating lever and will **NOT** be serviced separately. Only use the new design parking pawl ratchet spring **BLUE** with the crimp nut design park lever assembly.

| | |
|---------------|---|
| PARTS: | <div style="display: flex; flex-direction: column; gap: 5px;"> <div>F7RZ-7A180AA Parking Pawl Ratchet Spring (Blue)</div> <div>E1FZ-7A180-A Parking Pawl Ratchet Spring (Yellow)</div> <div>F6RZ-7R392-AA Parking Cam Actuating Lever Assembly</div> </div> |
|---------------|---|

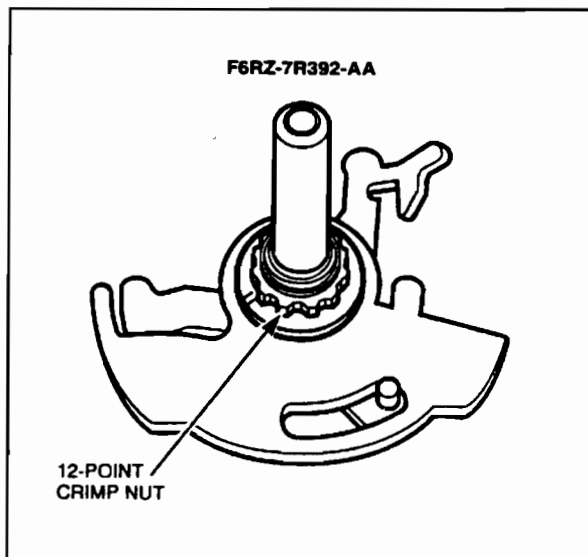


Figure 1

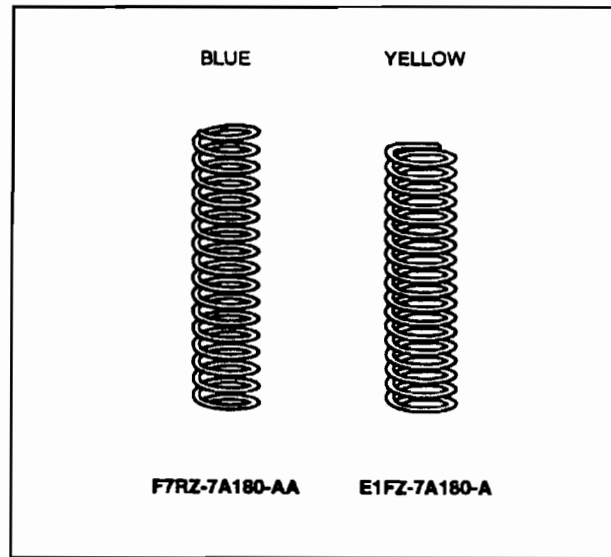


Figure 2



FORD CD4E
TCC SOLENOID MEASURES HIGH RESISTANCE
AND RESISTANCE CHART FOR ALL SOLENOIDS

COMPLAINT: When checking resistance values on the solenoid pack on 1995 CD4E transaxles during rebuild, the TCC Solenoid shows a resistance value well above the specification shown in the service manuals.

CAUSE: Some 1995 CD4E transaxles, built after May 1995, were assembled with solenoid bodies that contain a **high impedance** TCC Solenoid, is identified with a Natural/Beige colored case connector, and has a resistance value of 12.5 - 19.0 ohms.
The previous design solenoid bodies contain a **low impedance** TCC Solenoid, identified with a Black colored case connector, and has a resistance value of 1.0 - 2.0 ohms, as indicated in the service manuals.

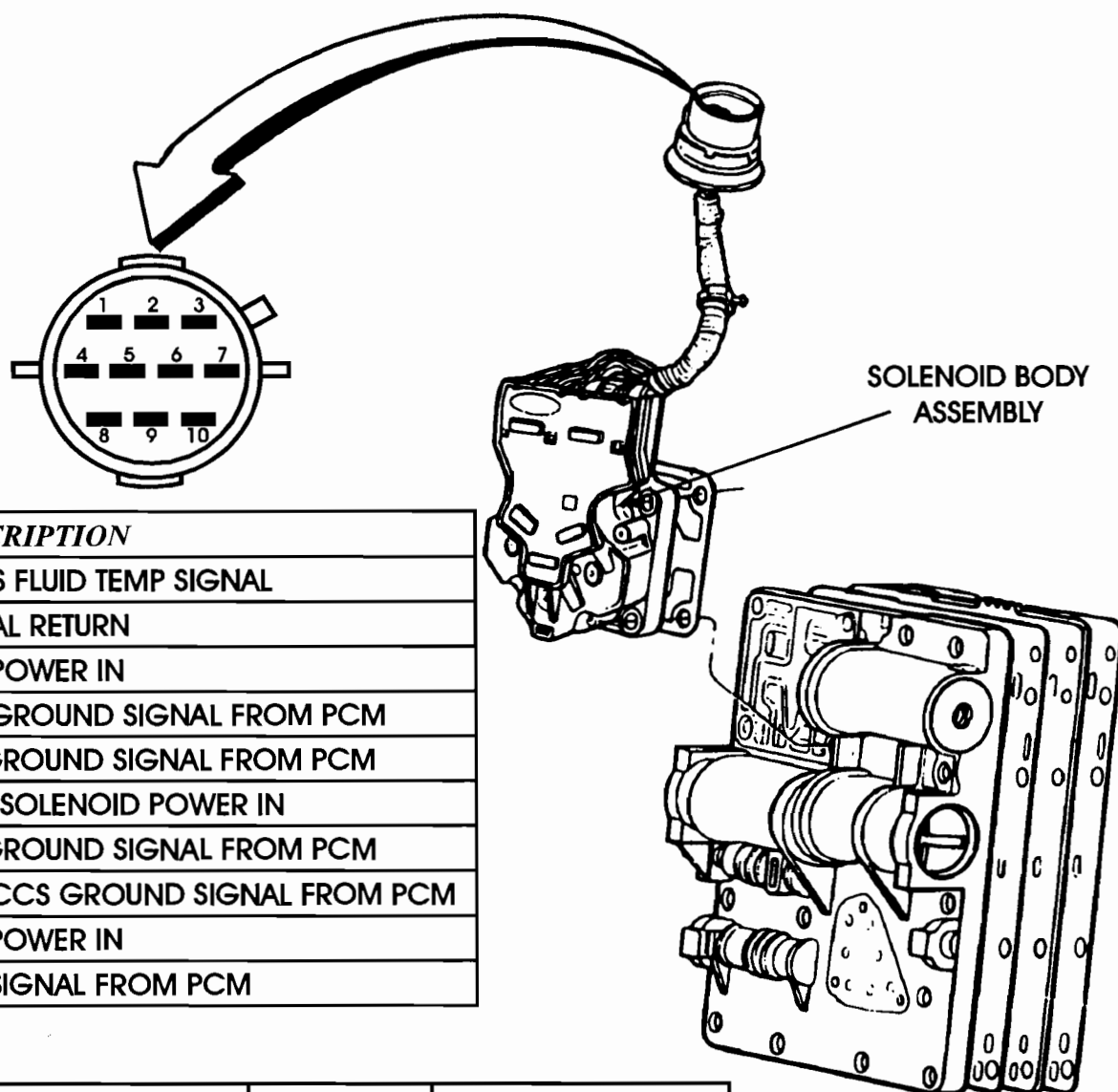
CORRECTION: 1993-1995 CD4E transaxles may be serviced with a Solenoid Body Assembly containing **either the high impedance or low impedance** TCC Solenoid, with no adverse effects. The TCC Solenoid resistance can be checked across pins 3 and 4 of the transaxle case connector as shown in Figure 1.
The Natural/Beige colored connector should measure 12.5 - 19.0 ohms resistance.
The Black colored connector should measure 1.0 - 2.0 ohms resistance.
Refer to Figure 1 for the resistance value on all other solenoids.

CAUTION: DO NOT USE SOLENOID BODY WITH LOW IMPEDANCE (BLACK CONNECTOR) FOR SERVICE ON CD4E TRANSAXLES BEYOND THE 1995 MODEL YEAR.

SERVICE INFORMATION:

Solenoid Body Assembly (High Impedance-Beige Connector) F6RZ-7G391-A

CD4E CASE CONNECTOR AND SOLENOID PACK ASSEMBLY



| PIN | DESCRIPTION |
|-----|---------------------------------|
| 1 | TRANS FLUID TEMP SIGNAL |
| 2 | SIGNAL RETURN |
| 3 | TCC POWER IN |
| 4 | TCC GROUND SIGNAL FROM PCM |
| 5 | SS2 GROUND SIGNAL FROM PCM |
| 6 | SHIFT SOLENOID POWER IN |
| 7 | SS1 GROUND SIGNAL FROM PCM |
| 8 | 3-2T/CCS GROUND SIGNAL FROM PCM |
| 9 | EPC POWER IN |
| 10 | EPC SIGNAL FROM PCM |

| COMPONENT | PINS | OHMS RESISTANCE |
|---------------------|----------|-----------------|
| SS1 | 6 AND 7 | 12.0 - 22.0 |
| SS2 | 5 AND 6 | 12.0 - 22.0 |
| TCC (Black) | 3 AND 4 | 1.0 - 2.0 |
| TCC (Natural/Beige) | 3 AND 4 | 12.5 - 19.0 |
| EPC | 9 AND 10 | 3.75 - 5.92 |
| 3-2T/CCS | 6 AND 8 | 3.75 - 5.92 |
| TSS | | 140 - 290 |

Figure 1



FORD CD4E DIRECT CLUTCH STEEL PLATES CHANGE

CHANGE: Beginning on March 1, 1996, all CD4E transaxles in 1996 Contour, Mystique and Probe vehicles, equipped with the 2.0L engine, were assembled with thinner direct clutch steel plates, as shown in Figure 1.

REASON: Incorporation of the direct clutch *high energy* friction material.

PARTS AFFECTED:

- (1) DIRECT CLUTCH STEEL PLATES - The thickness changes from .123" thick on the previous design level, to .080" thick on the new design level plates. The previous design level plates (.123" Thick) are identified with a tooth omitted every 90 degrees, as shown in Figure 1. The best and most positive identification is to measure the thickness with a dial caliper.
- (2) FORWARD/DIRECT/COAST CLUTCH DRUM - Changed because of relocation of the snap ring groove, to accommodate the thinner steel plates. The previous design level clutch drum that uses the .123" thick direct steel plates, can be identified by the mark on the inner splines just below the snap ring groove, as shown in Figure 2.

INTERCHANGEABILITY:

For 1995 Models, - when replacing the Forward/Direct/Coast Clutch Drum, use the previous design level drum that requires the .123" thickness direct clutch steel plates. The .123" thick direct clutch steel plates are included in service package F5RZ-7G120-A.

For 1996 Models, - when replacing the Forward/Direct/Coast Clutch Drum, use the latest design level drum that requires the .080" thickness direct clutch steel plates, using OEM part number F7RZ-7G120-AA.

If the direct clutch steel plates require replacement without replacing the clutch drum, identify the thickness of the steel plates being used by measuring with a dial caliper, and replace with the same thickness plates (See Figure 1).

SERVICE INFORMATION:

| | |
|--|---------------|
| Direct Clutch Steel Plates (New Design .080" Thick) | F3RZ-7B442-E |
| Direct Clutch Steel Plates (Previous Design .125" Thick) | F5RZ-7B442-A |
| Clutch Drum Assembly (Previous Design Level) | F5RZ-7G120-A |
| Clutch Drum Assembly (Latest Design Level) | F7RZ-7G120-AA |

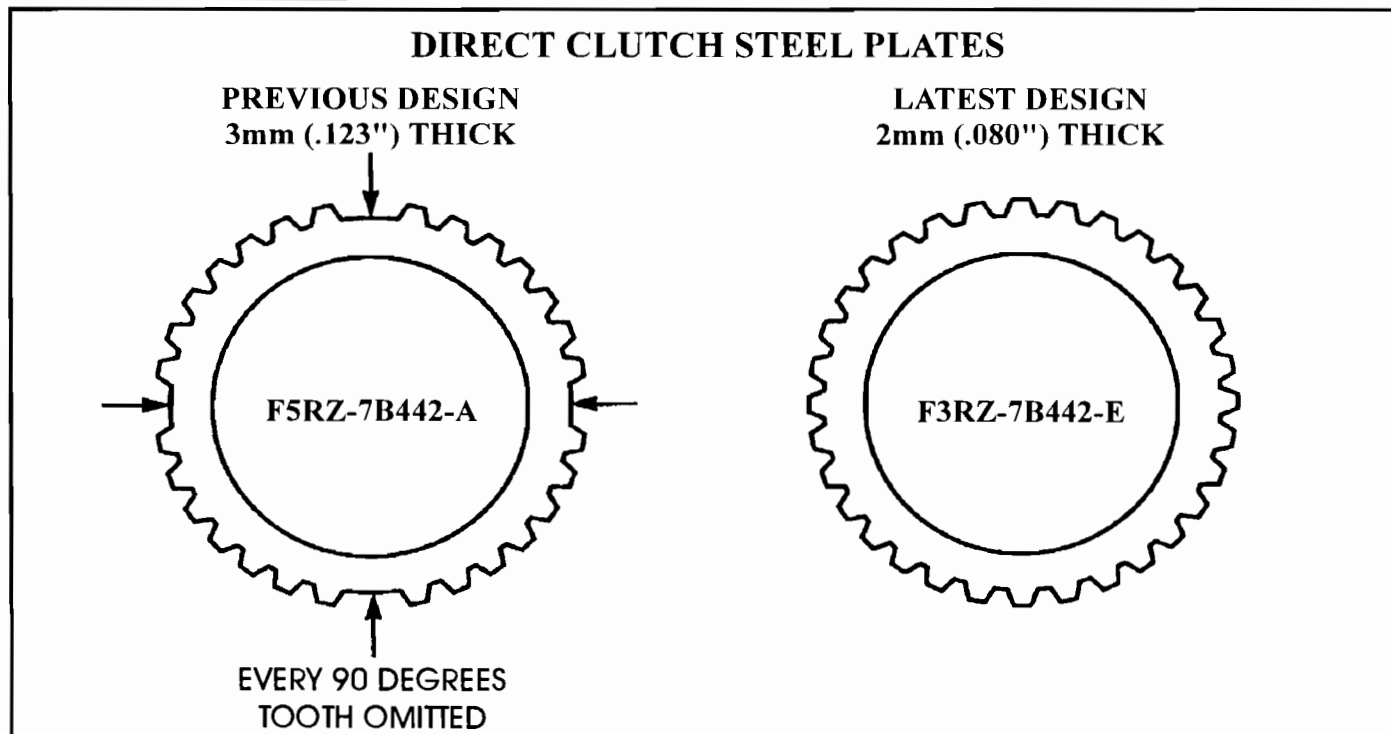


Figure 1

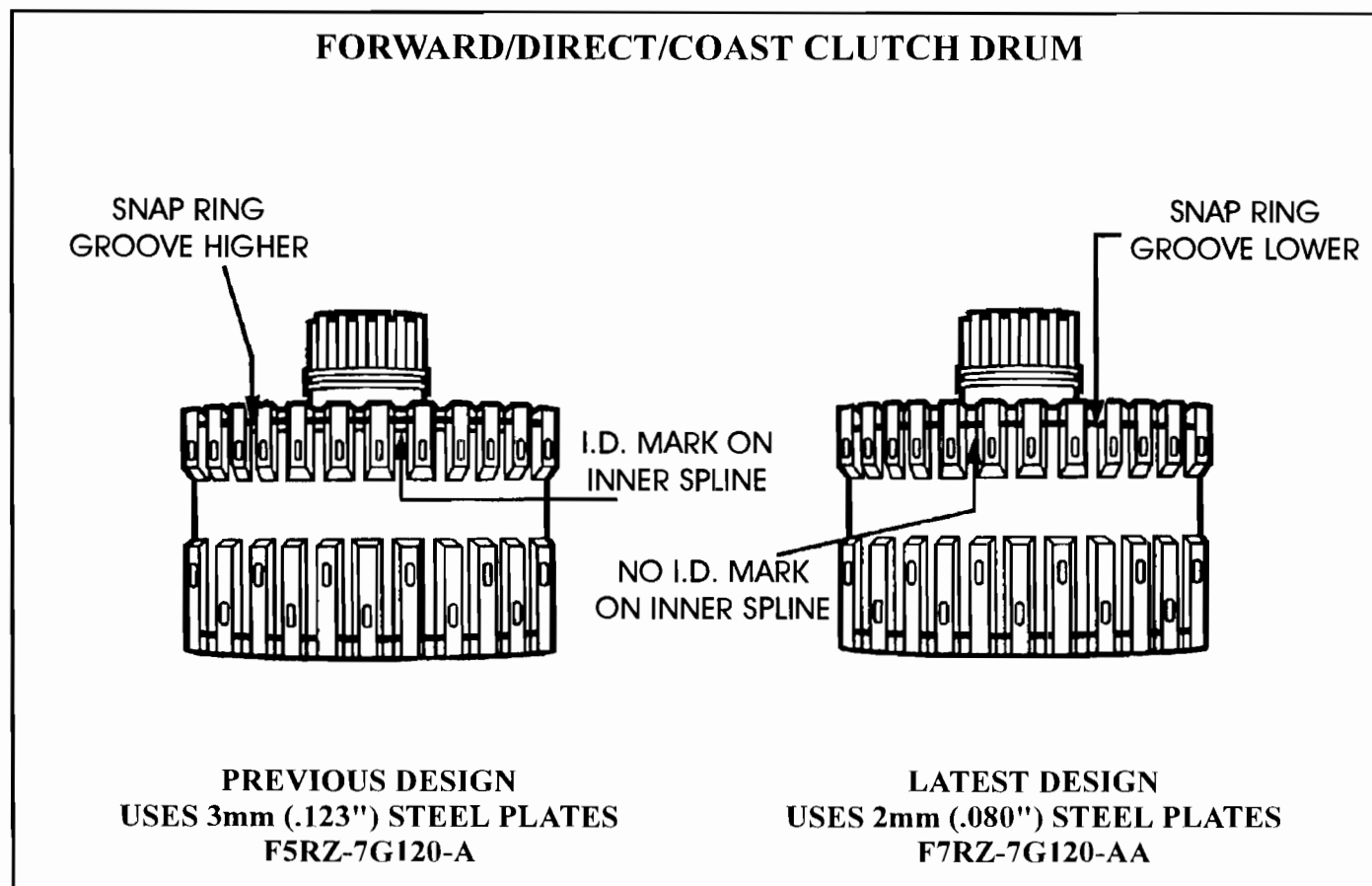
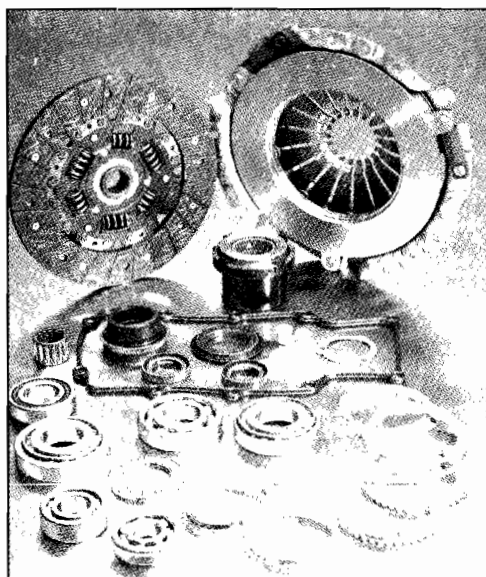
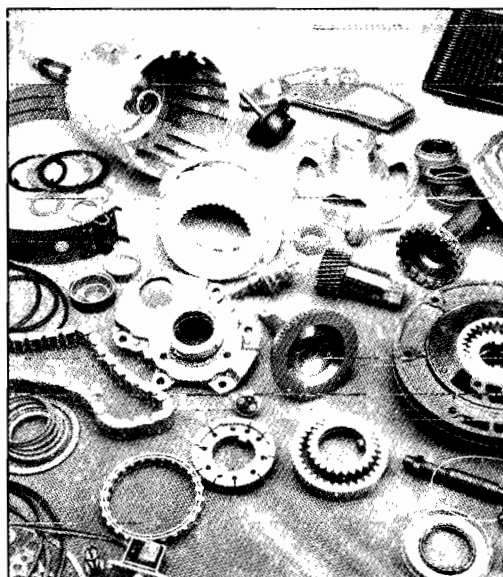


Figure 2

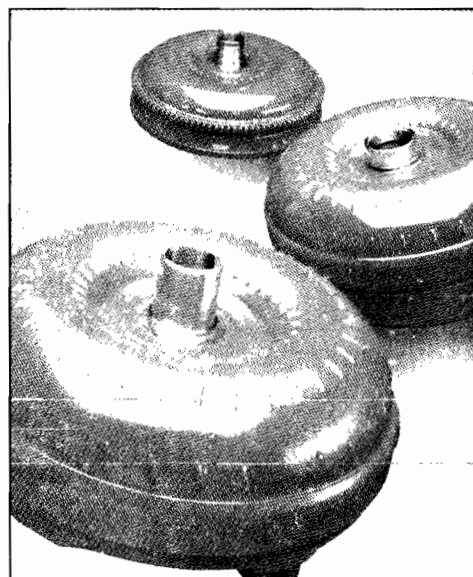
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FORD CD4E
Fluid Seeping From Vent
1994-96 PROBE 1995-96 CONTOUR and MYSTIQUE

COMPLAINT: Transmission fluid may be seeping from the vent assembly down the main control assembly cover on some vehicles. It is easy to misdiagnos that the fluid is coming from an oil cooler line and/or the main control cover gasket.

CAUSE: Vent not functioning properly

CORRECTION: If fluid is detected on the main control cover near the vent and the area around the grommet is damp, check the transmission fluid level. If the fluid level is *below* the cross hatched area, check for alternate leaks. If the fluid level is *between* the crosshatched area. Install the remote vent kit.

PARTS KITS: The 1994-96 2.0L Probe vent kit F6RZ-7034-BA *consists of*
1-vent tube 460 mm (18.1")*
1-Barbed vent body
1-clamp
1-White plastic clip
1-Black steel clip *
1-Instruction Sheet #7142

The 1995-96 Contour/Mystique vent kit F6RZ-7034-AA *consists of*
1-Vent Tube 640mm (25.2")
1-Barbed Vent Body
1-Clamp
1-White plastic clamp
1-Instruction sheet #7143
*parts differences between the two kits

FORD A4LD NO ENGAGEMENT IN REVERSE

COMPLAINT: No engagement in reverse on late model vehicles with reverse engagement control valve

CAUSE: The cause may be, the Number 2 retainer missing or off location.

CORRECTION: Position the Number 2 retainer in the valve body in the location shown in Figure 1.

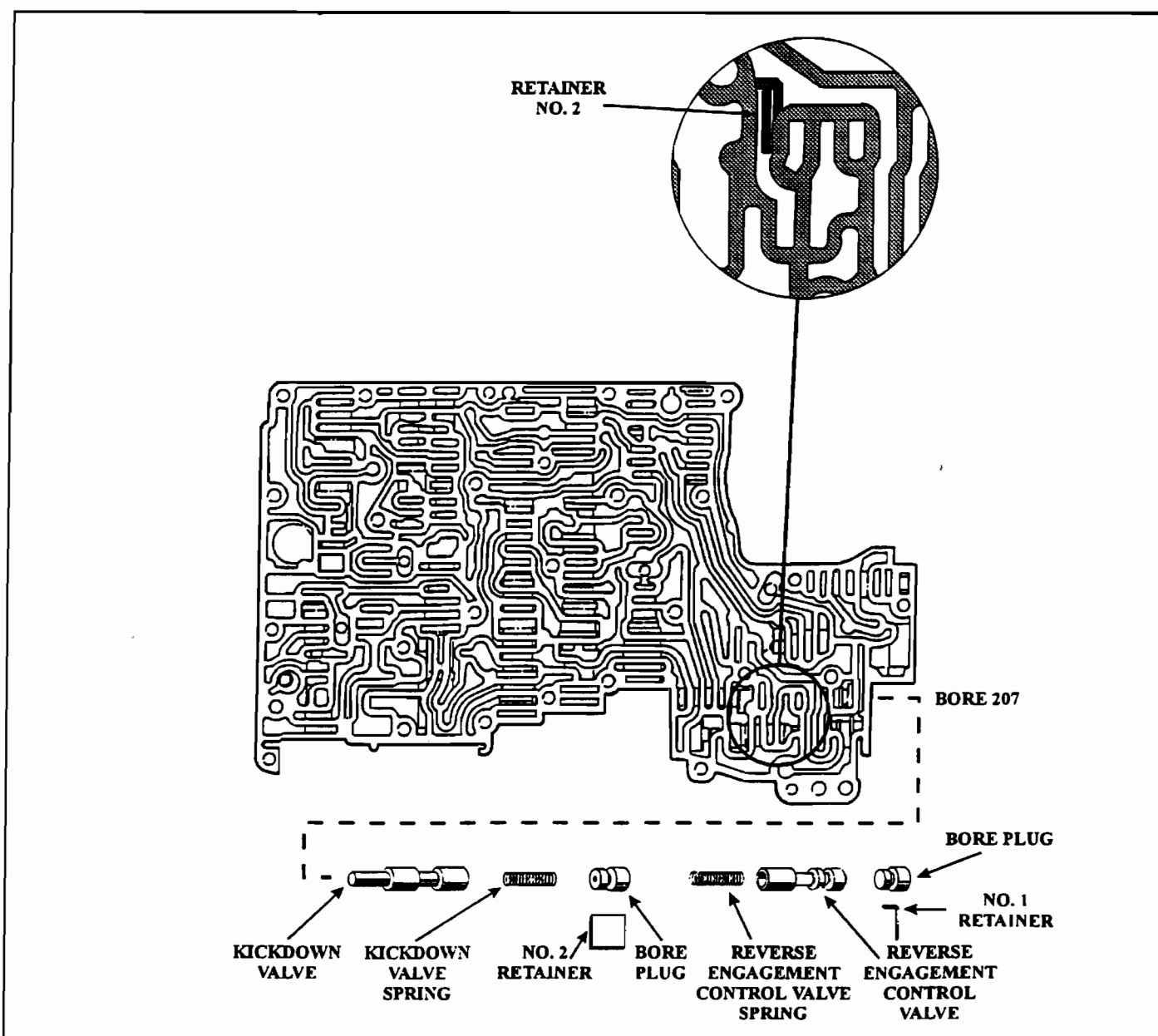


Figure 1



FORD A4LD
REAR CASE THRUST WASHER AVAILABILITY
(BEHIND THE REAR SPRAG INNER RACE)

COMPLAINT: The thrust washer behind the rear sprag inner race on the 4.0L models, equipped with the A4LD transmission, is prone to damage and/or wear beyond use, and required buying a complete case to get the washer in the past (See Figure 1).

CAUSE: This thrust washer was not serviced by Ford Motor Company.

CORRECTION: The rear case thrust washer for the 4.0L engine models equipped with the A4LD, is now available from Aftermarket sources (See Figure 1).
Following is the service procedure to remove the rear sprag inner race from the case, and replace the rear case thrust washer:

1. The transmission must be completely disassembled.
2. Using a 1/4" drill bit, with an approximate 30 degree angle outward, drill two holes through the case at both locations marked with the "X", as shown in Figure 2. You may want to practice on a scrap case first.
3. After verifying that the holes drilled have hit the steel inner race, use a 1.4" drift punch to drive the inner race from the case. Alternate from one side to the other until the race has been removed (See Figure 2).
4. Install the new thrust washer and retain with "Trans-Jel", and press the inner race back into the case using a press.

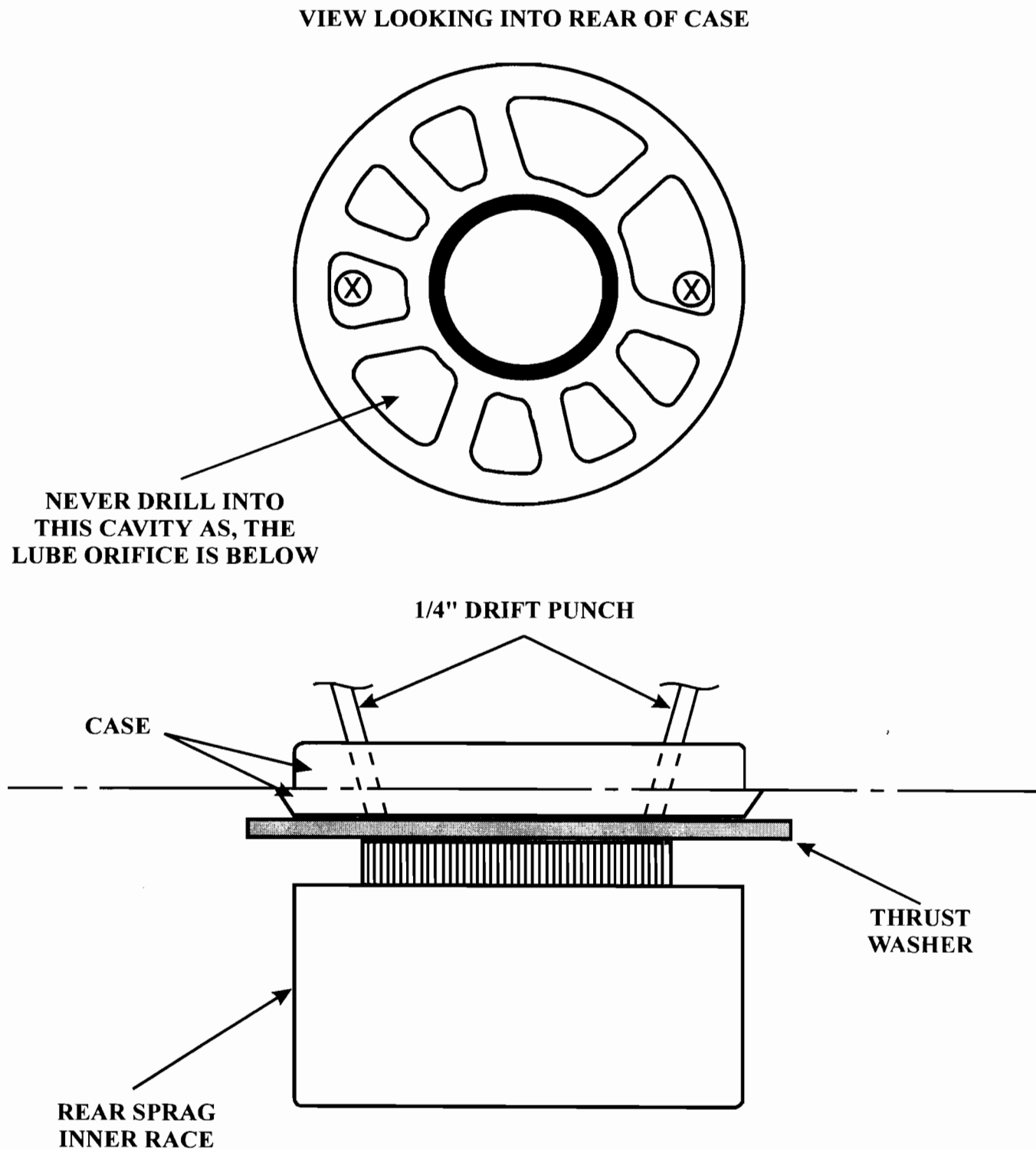
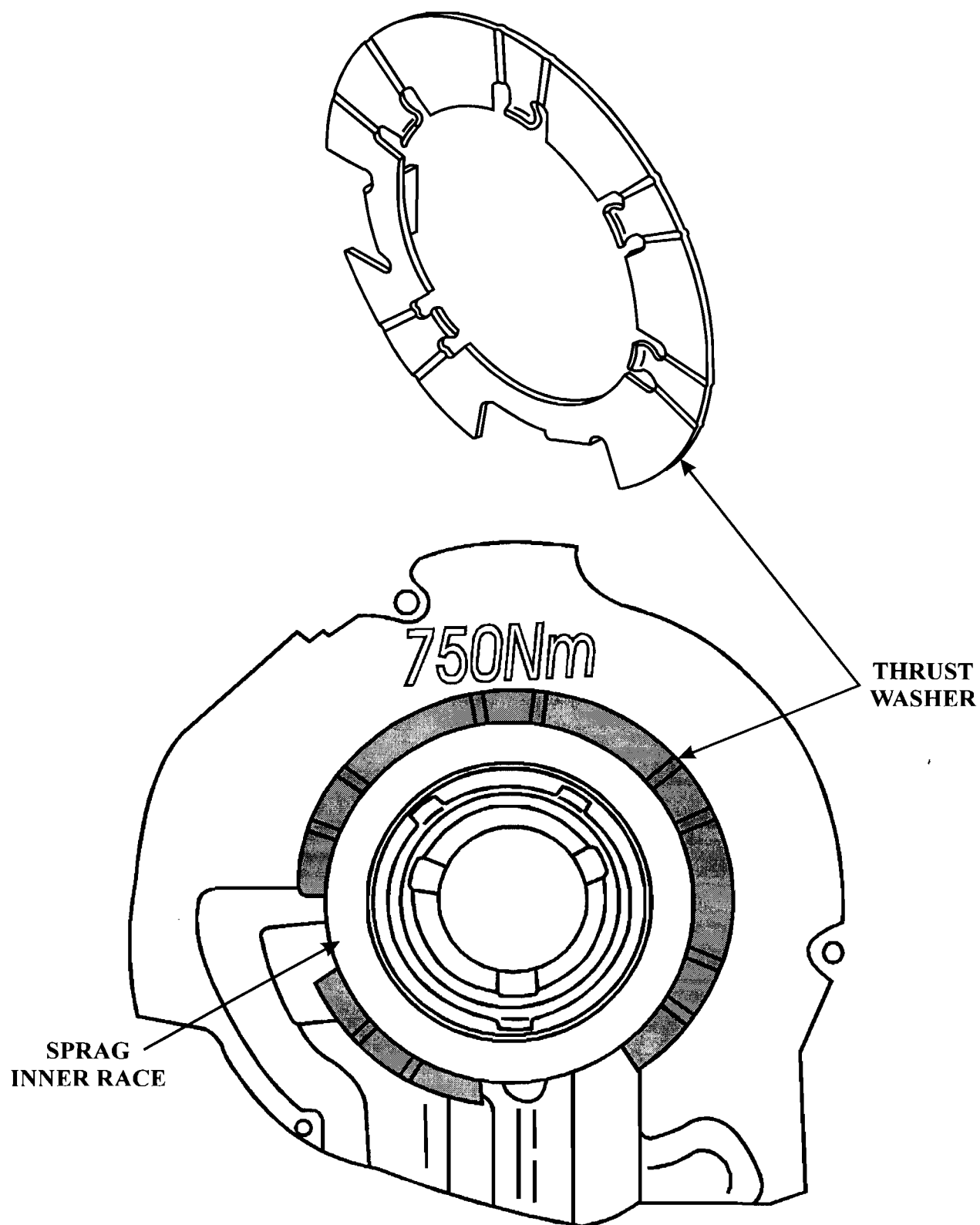


Figure 2



VIEW LOOKING INTO CASE FROM FRONT

Figure 1

VIDEO

PRELIMINARY ELECTRICAL CHECKS

Basic electrical checks should be made on any computer controlled transmissions. Bad battery power or bad battery grounds can cause erratic computer control. A bad alternator that either undercharges or overcharges the system will also be another potential problem. The following basic electrical checks should be made and can be made quickly and easily with a volt meter.

STEP 1

With the ignition key in the OFF position, turn on the headlights for approximately 1 minute to drain off any surface charge. After 1 minute, turn off the headlights.

STEP 2

Using a Digital Volt Ohm Meter (DVOM) set to DC volts, measure the open post battery voltage by placing the negative lead to the negative battery post and the positive meter lead to the positive battery post as shown in Figure 1.

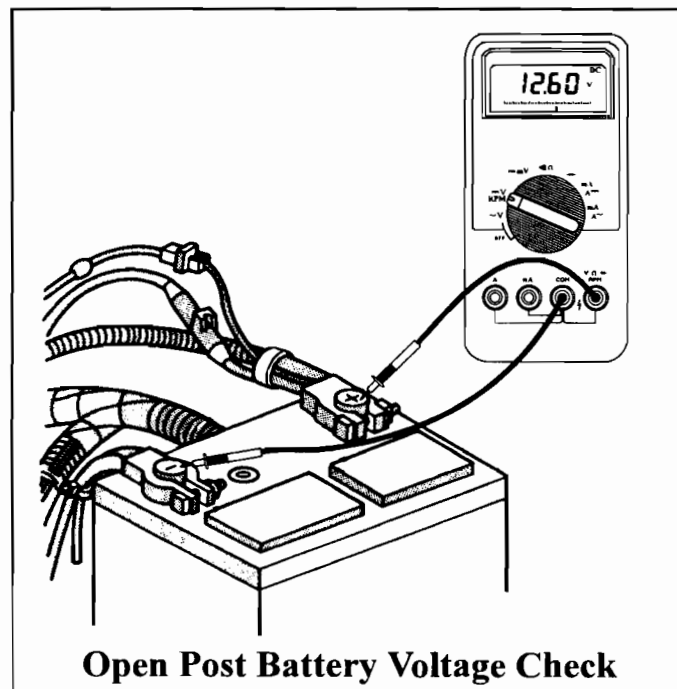


Figure 1

A fully charged battery should measure approximately 12.60 volts. However, 12.40 volts is the average seen and is acceptable. If battery voltage is below 12.00 volts, the result may be erratic computer behaviour. Refer to the table in Figure 2 for the typical voltage values in relationship to percentage of charge.

| VOLTAGE | % of CHARGE |
|---------|-------------|
| 12.60V | 100 |
| 12.45V | 75 |
| 12.30V | 50 |
| 12.15V | 25 |

Figure 2

IMPORTANT: If the battery needs to be charged, disconnect the NEGATIVE cable first before charging. This will aid in avoiding damage to the electrical system. Never exceed 16.0 volts while charging the battery.

WARNING: Do not charge a battery that has an excessively low electrolyte level. The battery may spark internally and explode.

STEP 3

With the volt meter connected to the battery as shown in Figure 1, start the vehicle. Turn on the headlights and blower motor to put a load on the voltage system. Approximately 13.5 to 14.4 volts should be seen (See Figure 3). If 15 volts or higher is seen, this may indicate an overcharging alternator which may result in erratic computer behaviour. This problem needs to be rectified before going to the next step.

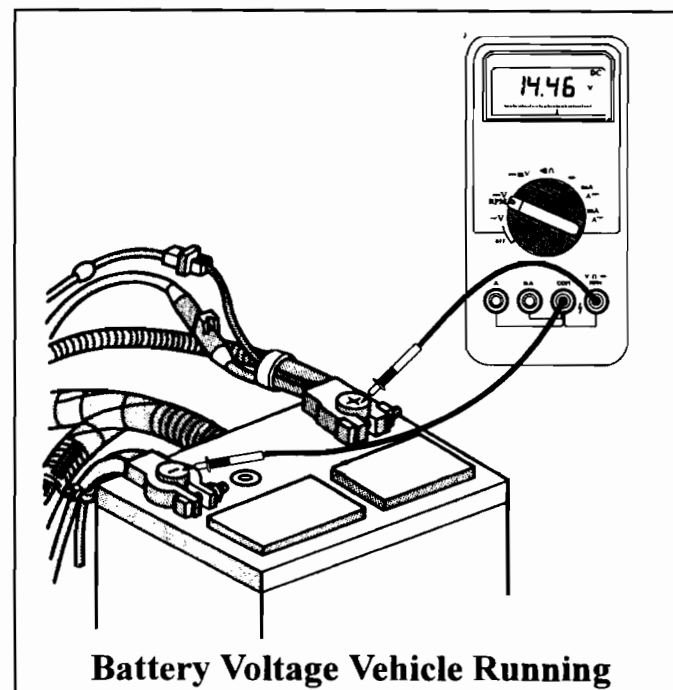


Figure 3

VIDEO

PRELIMINARY ELECTRICAL CHECKS

STEP 4

The next step is to perform a voltage drop test across the ground cable. This checks for corrosion or bad connections with the main ground cable itself. To do this, keep the vehicle running and turn on as many accessories as possible, i.e. headlights, AC, radio, etc. With the meter set to DC volts, place the negative lead of the meter to the negative post of the battery. Place the positive lead of the meter to either the body or engine block (See Figure 4). No more than 0.10 volts should be seen. A good ground will usually show 0.00 or 0.01 volts. If 0.20 or more is seen, clean and/or replace the main ground cable to obtain a 0.00 or 0.01 reading.

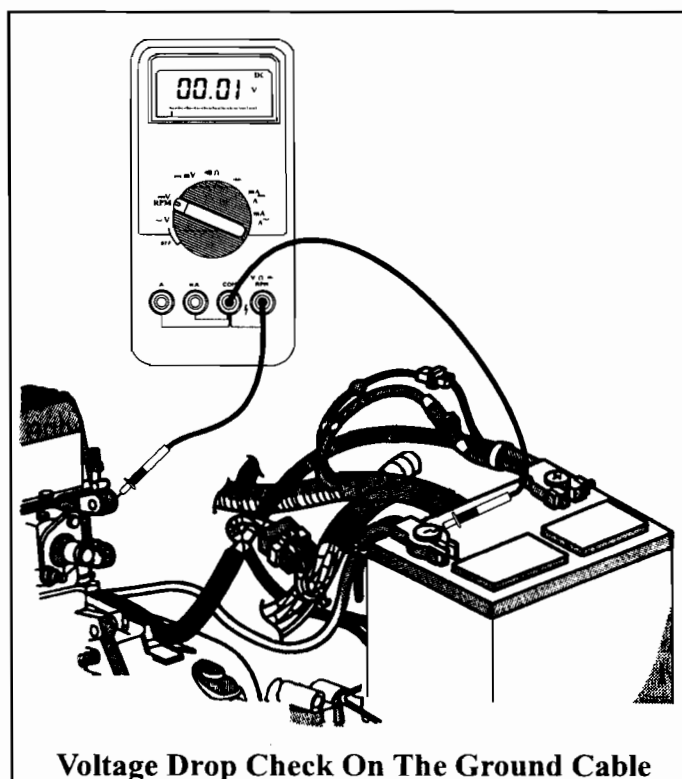


Figure 4

These 4 simple basic electrical steps should be performed on all computer controlled transmissions prior to any other diagnosis. The fifth and final step in which the computer's ground wires are checked should also be included in the basic electrical pre diagnostic routine. Of course this will require specific information as to which wires are the ground wires in the computer for the year and model vehicle being diagnosed.

STEP 5

In this step, first locate the transaxle controller. If the vehicle being checked is a van, the controller is on the passenger side firewall. If it is a passenger car, the controller is located in the passenger side fender behind the headlight. Once the controller is located, pop the plastic harness cover away from the wires going into the connector (Do not remove the center bolt). Once the cover is removed and the 60 way connector can be viewed from the wire side, locate the transaxle controller ground wires 53, 54, 57 and 58 (See Figure 5). Start the vehicle and turn on as many accessories as possible. With the volt meter set to DC volts, place the positive lead of the meter to the negative battery post. Carefully back probe each ground wire as shown in Figure 5. No more than 0.10 volts can be seen. If more than 0.10 volts is seen, that ground wire is bad.

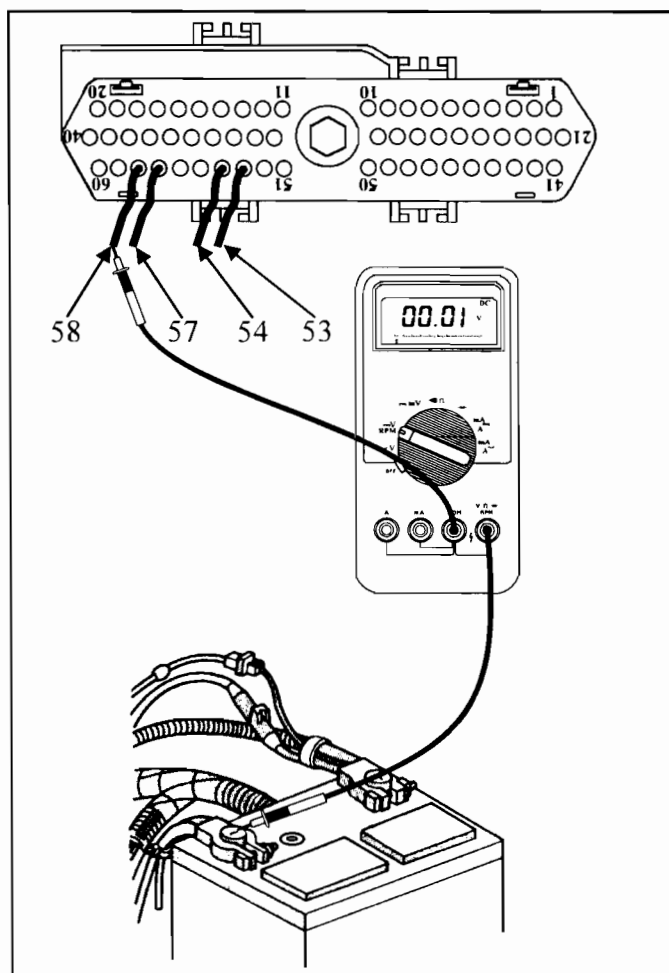


Figure 5



CHRYSLER 41TE & 42LE
CHRONIC SOLENOID TROUBLE CODES
41, 42, 43 OR 44

COMPLAINT: Before and/or after overhaul, a Chrysler, Dodge vehicle continues to go/or remain in failsafe with one or more of the following solenoid codes:

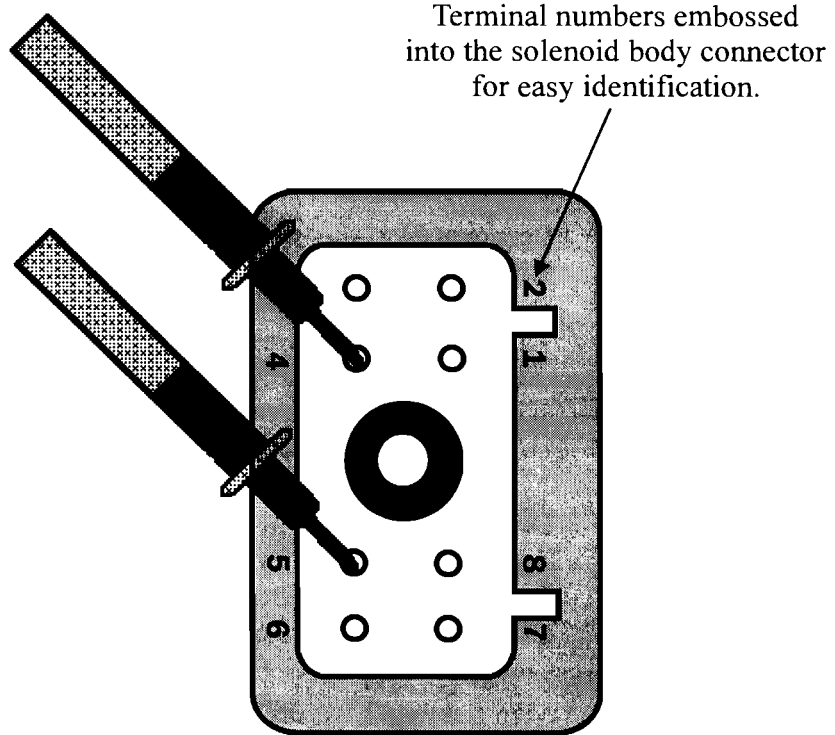
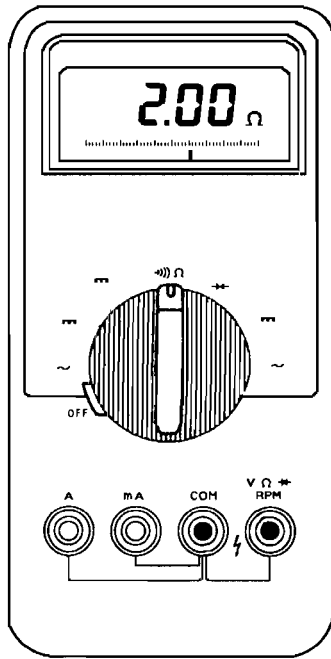
- 41 - L/R solenoid circuit error
- 42 - 2/4 solenoid circuit error
- 43 - OD solenoid circuit error
- 44 - UD solenoid circuit error

CAUSE: One cause may be that one or more of the solenoids in the solenoid body has gone bad. Another cause may be defective harness connectors in either the solenoid body or the EATX controller. A third possibility is a severed wire. A forth and **LAST** possibility is a defective EATX controller.

CORRECTION: Step number 1 would be during an overhaul of the transaxle, the solenoid body should always be checked with an ohm meter. Numbers are embossed into the solenoid body connector for easy pin identification (See Figure 1). Place the positive meter lead to pin # 4 as shown in Figure 1. With the negative, measure all 4 solenoids by touching pins 5, 6, 7 and 8 one at a time. Refer to the chart in Figure 1 for the solenoid pin assignment and resistance specification. All 4 solenoids should measure 1.5 to 2.0 ohms. They all should be within 0.2 ohms of each other. If the resistances exceeds specifications, replace the solenoid body.

If the unit is installed into the vehicle, the above check can best be made at the transaxle controller connector with the solenoid body plugged in. The controller can be located on the passenger side firewall with all Vans and inside the passenger side fender on passenger cars. As with the solenoid body, the controller connector also has pin numbers embossed into the connector for easier pin identification (See Figure 2). Once oriented to the connector, unplug it and place the positive lead onto pin 16 or 17 as seen in Figure 3. With the negative lead, carefully touch pins 19, 20, 59 and 60 one at a time. Use the chart in Figure 3 for the solenoid pin assignments and resistance specifications. While making the resistance check of each individual solenoid at the controller connector, have someone wiggle the solenoid wires and see if the readings go erratic. If so, the solenoid connector is bad and will need to be replaced with part # 4419476.

If when making the above checks and the meter reads infinity on all solenoids, the power wire going to the # 4 pin in the solenoid body has been known to break below the splice as shown in Figure 5. This will require peeling back the harness from the solenoid body connector back until the break is located.



| POSITIVE METER LEAD | NEGATIVE METER LEAD | SOLENOID | RESISTANCE |
|---------------------|---------------------|----------|----------------|
| PIN # 4 | PIN # 5 | UD | 1.5 - 2.0 ohms |
| PIN # 4 | PIN # 6 | OD | 1.5 - 2.0 ohms |
| PIN # 4 | PIN # 7 | L/R | 1.5 - 2.0 ohms |
| PIN # 4 | PIN # 8 | 2/4 | 1.5 - 2.0 ohms |

Figure 1

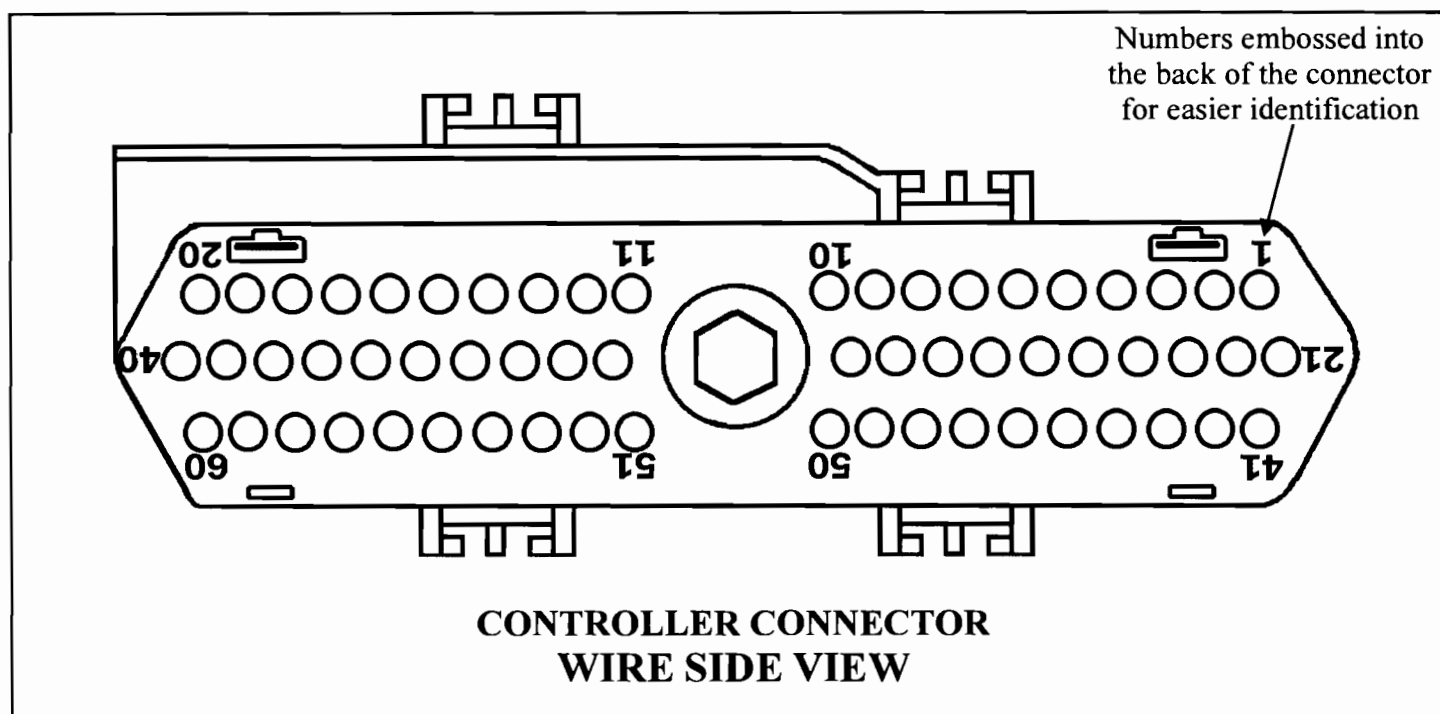


Figure 2

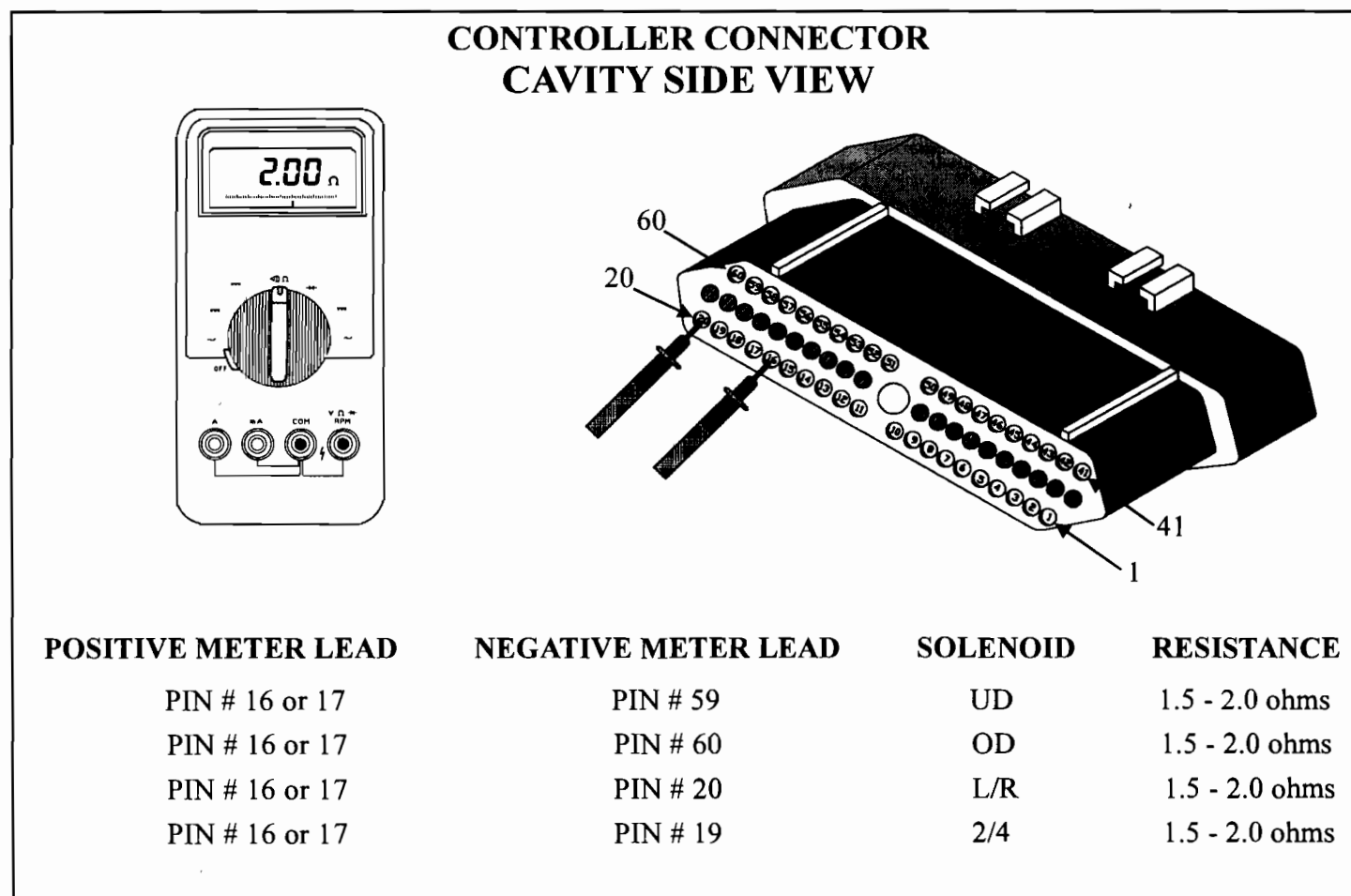


Figure 3
Automatic Transmission Service Group

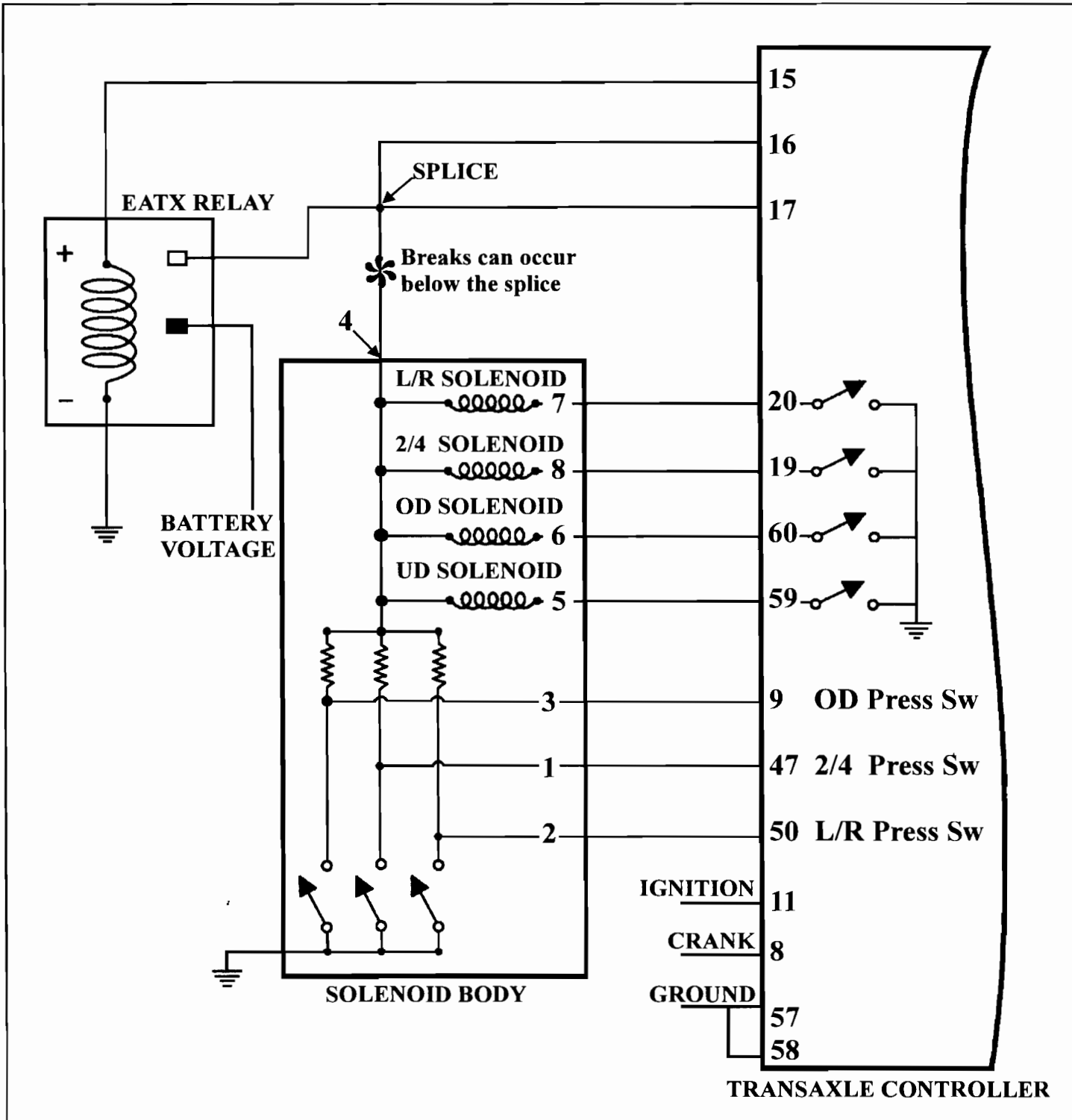


Figure 4



CHRYSLER A 604 PLANETARY FAILURE

COMPLAINT: Before or after overhaul, premature planetary gear failure occurs.

CAUSE: The cause may be:

1. Damaged turbine shaft sealing rings or a scored surface where they ride in the rear of the pump cover.
2. A worn bushing in the rear of the turbine shaft where the underdrive clutch hub rides.
3. A restriction in the underdrive clutch hub lubrication holes.
4. Worn bushings in the overdrive clutch hub and shaft.
5. Worn or misplaced (moved) bushings in the 2-4 sun gear hub or a restriction in the two lube holes.
6. End clearance too loose allowing the input drum to "Walk" back and forth causing a loss of lube pressure because of a possible mis-alignment of the lubrication holes.
7. A restricted or blocked oil cooler restricting lubrication flow to the planetary gear train.

CORRECTION: Inspect and repair or replace as needed:

1. Inspect "Turbine Shaft" sealing rings and the sleeve area in the rear of the pump cover for wear. Apply compressed air into hole "A" in turbine shaft and ensure the air exit's through hole "B" freely. (See Figure 1)
2. Inspect the bushing in the rear of the turbine shaft for wear or scoring. Ensure that the bushing clearance to the Underdrive clutch hub shaft is no more than .003" to .006." (See Figure 1)
3. Apply compressed air to hole "C," in the end of the Underdrive Clutch Hub Shaft, and ensure the air exits freely through holes "D" and "E" on the sides of the shaft as well as hole "F", which is the .062" hole in the "Splined" end of the shaft. (See Figure 2)
4. Inspect the bushings inside of the "Overdrive Clutch Hub Shaft" for wear or scoring and ensure a snug fit on the "Underdrive Clutch Hub Shaft." Inspect lube holes "G" and "H" and ensure that the bushings are not covering or restricting the lube holes. Replace the overdrive clutch hub and shaft as necessary. (See Figure 3)
5. Inspect the bushings in the "2-4 Sun Gear Hub" for wear or scoring and ensure a snug fit on the "Overdrive Clutch Hub Shaft." Inspect the bushing placement and ensure that the bushings have not "Walked" together causing the two .076" holes, "I" and "J", to be blocked or restricted. A small "Paper Clip" or "Scribe" bent at a 90° angle will serve as a good tool to check for restrictions in these lube holes. (See Figure 4)
6. After re-assembly of the transaxle is completed, "Turbine Shaft" end play ***MUST*** be measured with the use of a "Dial Indicator." Use the chart in Figure 5 for the correct #4 shim thickness. This is "Critical," ***"Turbine Shaft End Play" must be between .005" to .015" !***



1997 SEMINAR INFORMATION VIDEO

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CORRECTION: (cont.)

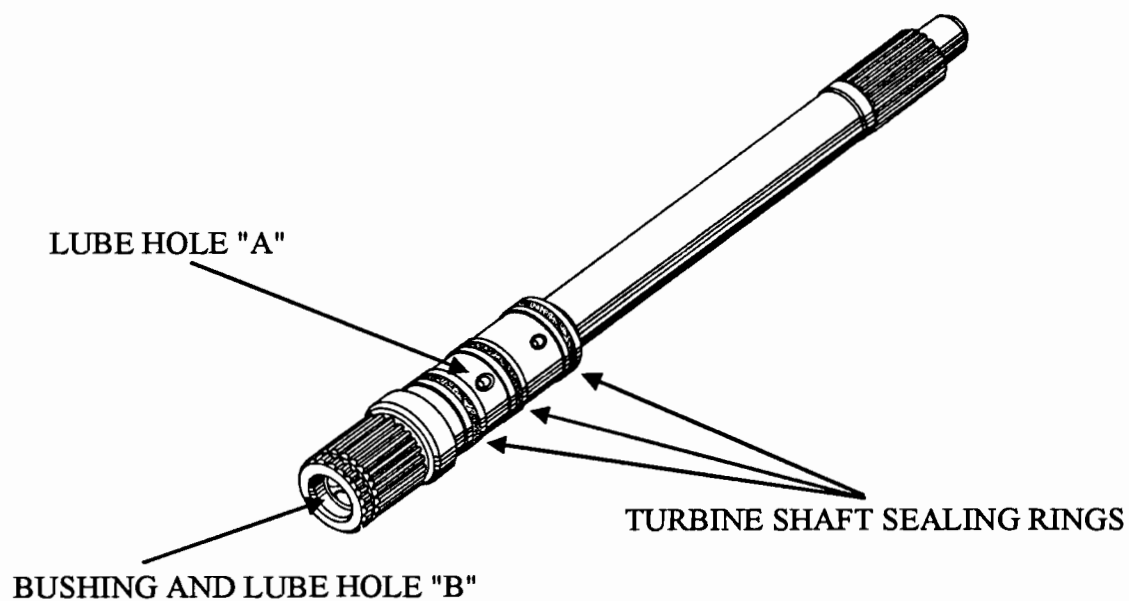
7. Refer to Figure 6 and enlarge hole indicated by the arrow in the spacer plate for better lubrication on all models.
8. After the transaxle is installed into the vehicle check the amount of cooler flow entering the front cooler fitting by removing the cooler line and placing it into a container. Start the engine and ensure that *more* than 1 quart of fluid is flowing into the container every 20 seconds minimum. If there are any restrictions or not enough flow, the radiator or factory external cooler may require replacement. If the vehicle is equipped with the external "Cooler Bypass," refer to Figure 7 to ensure that the cooler lines are installed correctly onto the transaxle. If the transmission is equipped with the internal cooler bypass valve, refer to Figure 8 to ensure that the bypass valve is assembled correctly into the case.
9. Refer to Figure 9 for a complete cross-sectional view of all the lube holes and their positioning after re-assembly.

SERVICE INFORMATION:

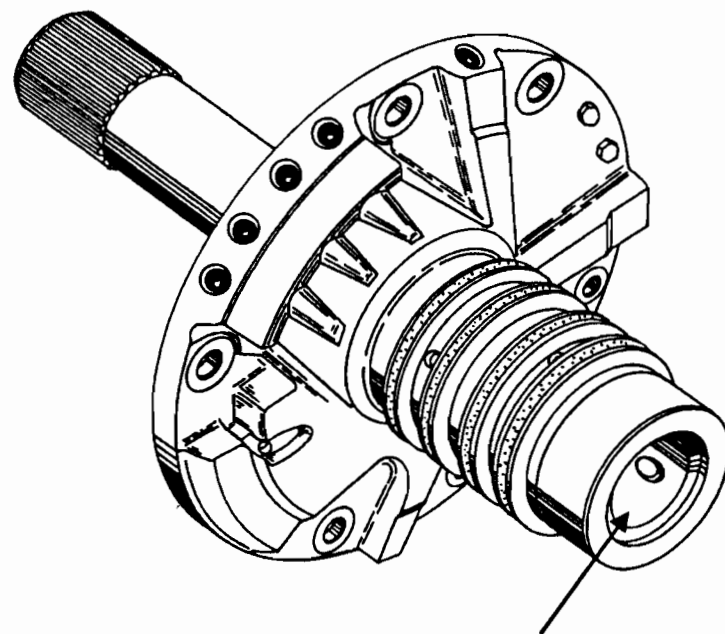
Overdrive Hub and Shaft (.050" larger in diameter).....4659615
2-4 Sun gear and Hub (.050"larger bushing diameter).....4659618

NOTE: The overdrive clutch hub shaft was changed in diameter to prevent it from breaking. The 2-4 sun gear and hub was changed in diameter to accommodate the new overdrive clutch hub shaft. These parts will retro fit to previous design as long as they are used together.

TURBINE SHAFT



PUMP COVER



INSPECT FOR "SEALING RING" WEAR OR SCORING

Figure 1
Automatic Transmission Service Group

UNDERDRIVE CLUTCH HUB AND SHAFT

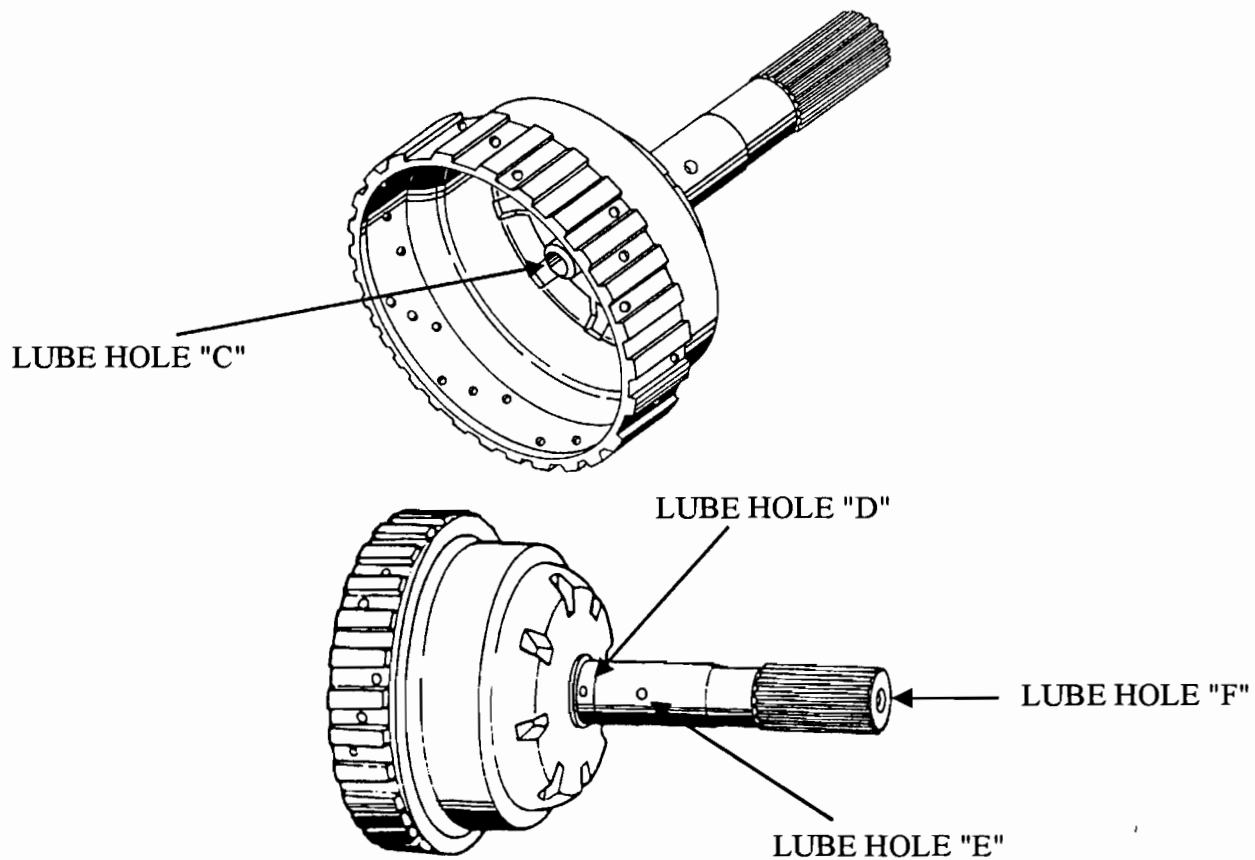


Figure 2

OVERDRIVE CLUTCH HUB AND SHAFT

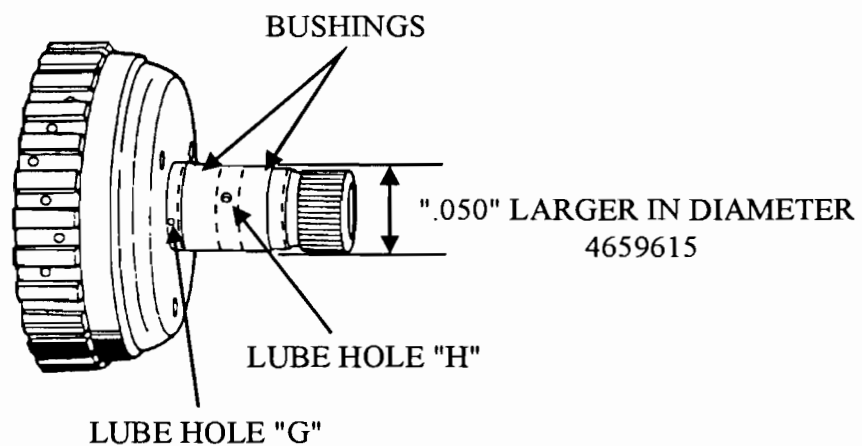
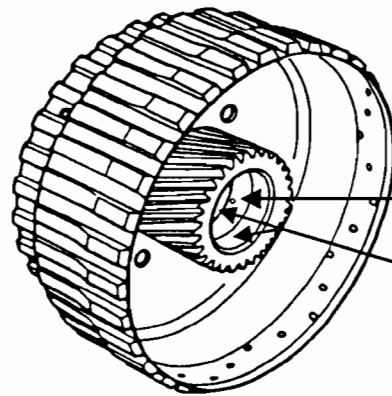


Figure 3
Automatic Transmission Service Group

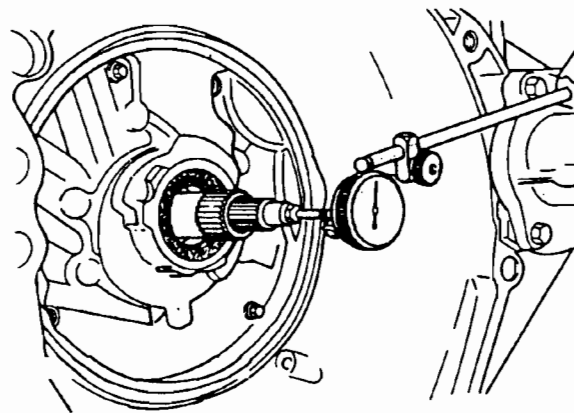


2 LUBE HOLES "I" & "J"
180° APART
SUN GEAR BUSHINGS
.050" LARGER IN DIAMETER
4659618

2-4 SUN GEAR HUB

Figure 4

END PLAY CHECK



"TURBINE SHAFT ENDPLAY" MUST BE BETWEEN .005"-.015"

| #4 SHIM THICKNESS | | PART NUMBER |
|-------------------|-----------|-------------|
| mm | inch | |
| 0.93-1.00 | .037-.039 | 4431662 |
| 1.15-1.22 | .045-.048 | 4431663 |
| 1.37-1.44 | .054-.057 | 4431664 |
| 1.59-1.66 | .063-.066 | 4431665 |
| 1.81-1.88 | .071-.074 | 4431666 |
| 2.03-2.10 | .080-.083 | 4431667 |
| 2.25-2.32 | .089-.091 | 4431668 |
| 2.47-2.54 | .097-.100 | 4431669 |
| 2.69-2.76 | .106-.109 | 4446670 |
| 2.91-2.98 | .114-.117 | 4446671 |
| 3.13-3.20 | .123-.126 | 4446672 |
| 3.35-3.42 | .132-.135 | 4446601 |

Figure 5

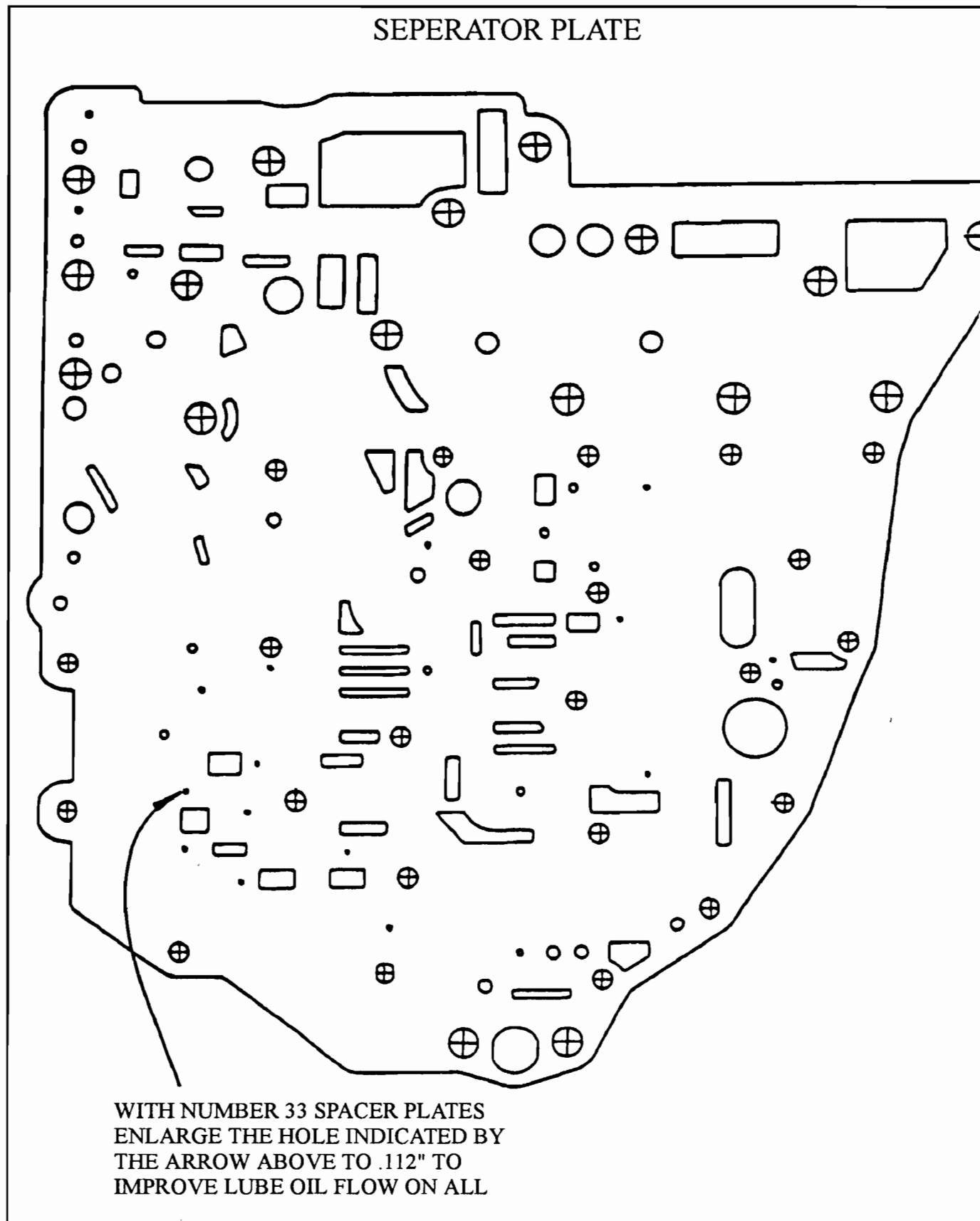
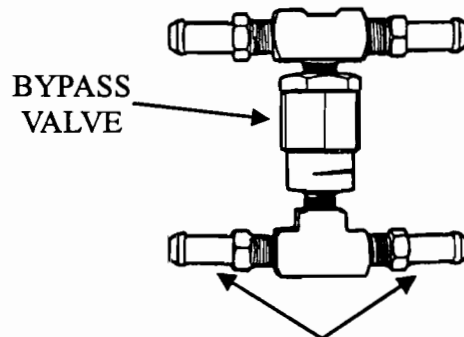
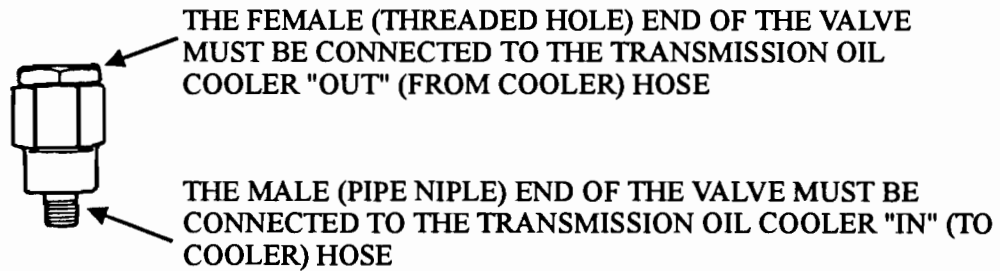


Figure 6
Automatic Transmission Service Group

EXTERNAL "COOLER BYPASS"



THIS SIDE OF THE BYPASS VALVE ASSEMBLY "MUST" BE CONNECTED TO THE TRANSMISSION OIL "IN" (TO COOLER) HOSE

NOTE: THE BYPASS VALVE IS DIRECTIONAL. IF IT IS NOT CONNECTED TO THE TRANSAXLE OIL COOLER HOSES IN THE CORRECT OIL FLOW DIRECTION, THE BYPASS VALVE WILL NOT FUNCTION AND MAY CAUSE PLANETARY FAILURE.

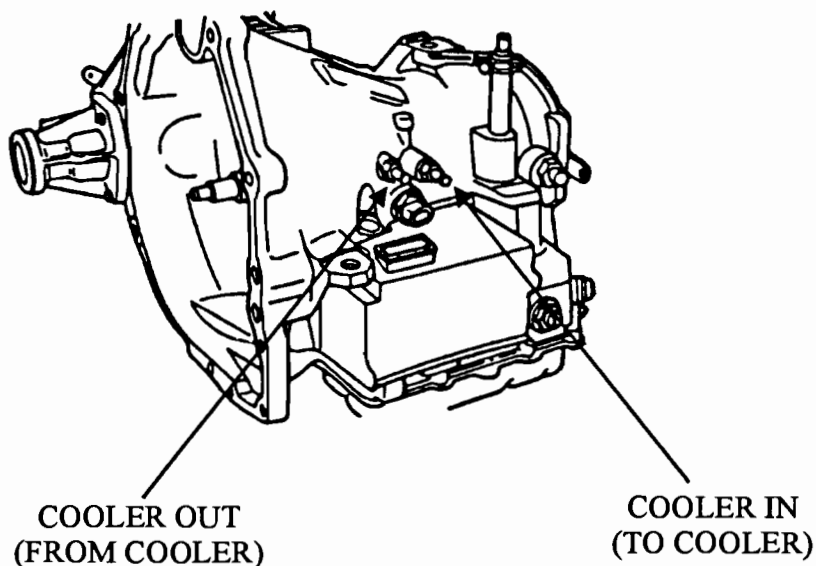
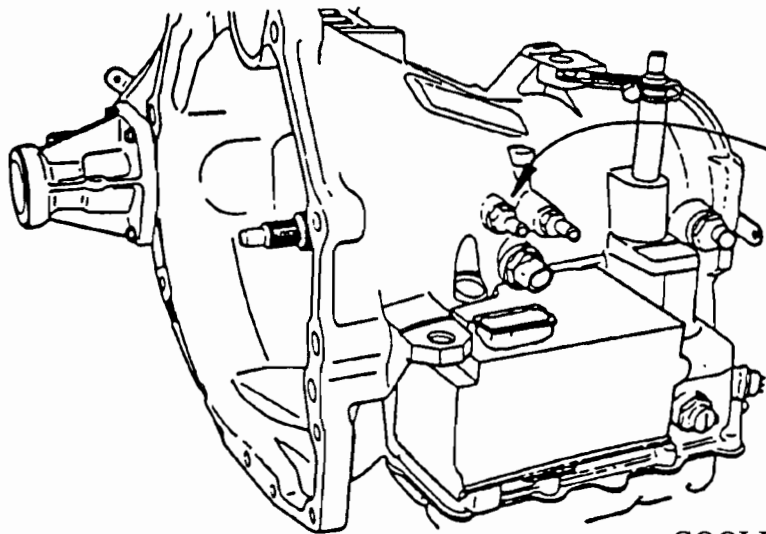


Figure 7

INTERNAL COOLER BYPASS



THE CASE FOR THE INTERNAL COOLER BYPASS HAS ADDED MATERIAL BETWEEN COOLER FITTINGS TO ACCOMMODATE THE NEW COOLER BYPASS VALVE

COOLER BYPASS VALVE

INSTALL IN THE CASE PASSAGE UNDER THE OIL PUMP IN THE DIRECTION SHOWN

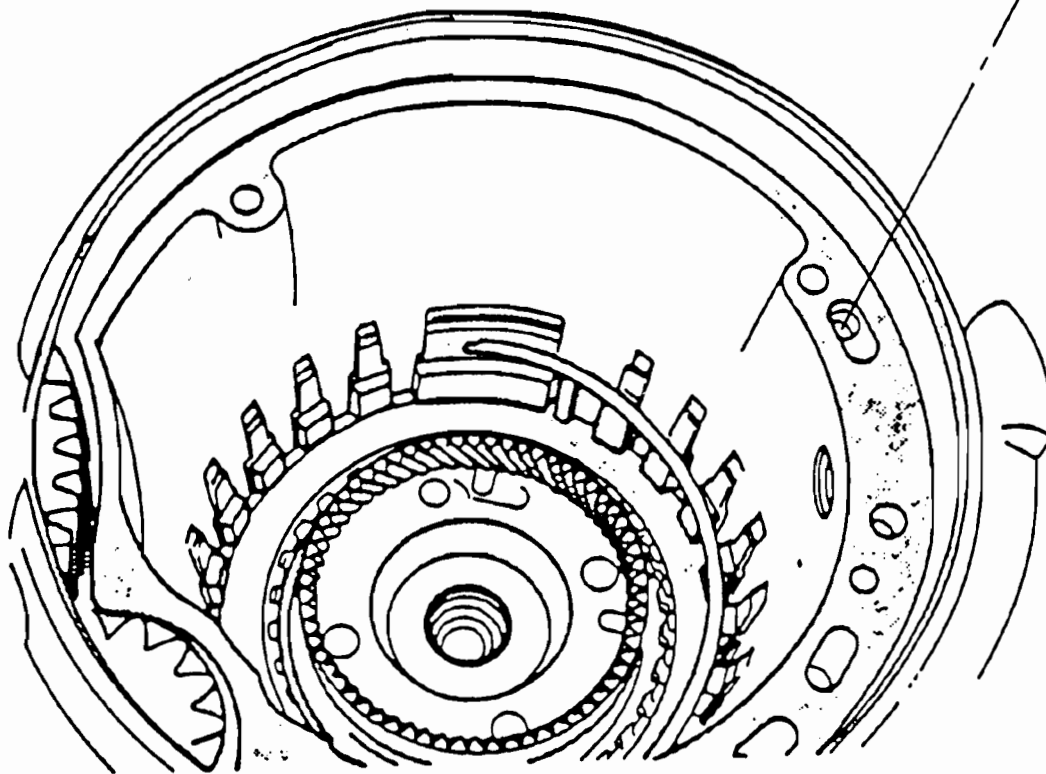
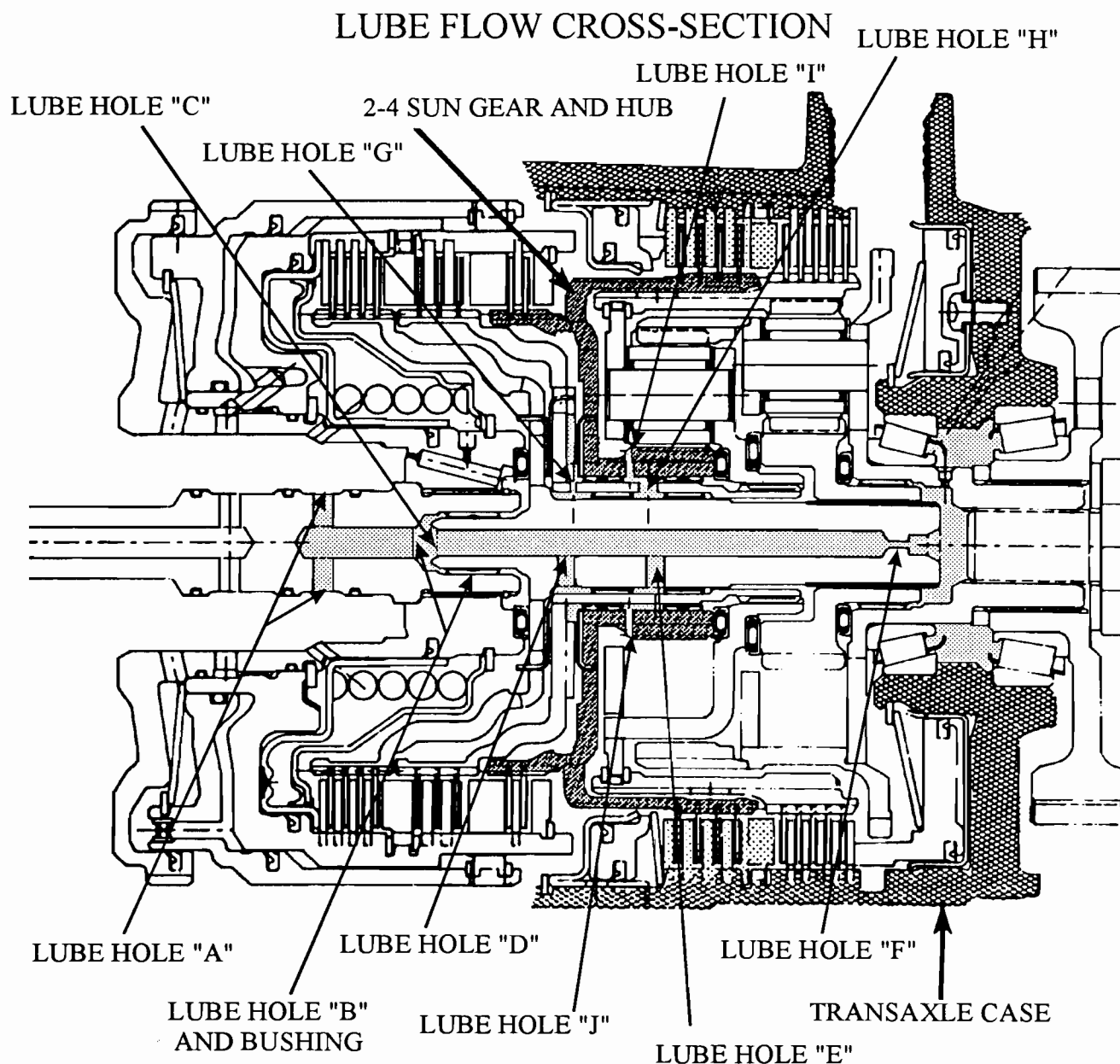


Figure 8



| LUBE HOLE I.D. | LOCATION |
|----------------|--|
| LUBE HOLE "A" | TURBINE SHAFT (See Figure 1) |
| LUBE HOLE "B" | TURBINE SHAFT (See Figure 1) |
| LUBE HOLE "C" | UNDERDRIVE CLUTCH HUB AND SHAFT (See Figure 2) |
| LUBE HOLE "D" | UNDERDRIVE CLUTCH HUB AND SHAFT (See Figure 2) |
| LUBE HOLE "E" | UNDERDRIVE CLUTCH HUB AND SHAFT (See Figure 2) |
| LUBE HOLE "F" | UNDERDRIVE CLUTCH HUB AND SHAFT (See Figure 2) |
| LUBE HOLE "G" | OVERDRIVE CLUTCH HUB AND SHAFT (see Figure 3) |
| LUBE HOLE "H" | OVERDRIVE CLUTCH HUB AND SHAFT (See Figure 3) |
| LUBE HOLE "I" | 2-4 SUN GEAR HUB (See Figure 4) |
| LUBE HOLE "J" | 2-4 SUN GEAR HUB (See Figure 4) |

Figure 9
Automatic Transmission Service Group



CHRYSLER A604

I.D. OVERALL GEAR RATIOS FROM 1989 TO 1995

OVERALL GEAR RATIO I.D.:

It is imperative that you identify the transaxle properly as overall gear ratio are different and will not interchange.

The transaxle is identified by the "Last 3 Digits" of the OEM part number, and is found on a sticker located on the rear gear cover (See Figure 1). Below is an example of what to look for. Once the part number is found, cross reference the part number in the chart in Figures 6-10 for proper applications.

If that sticker is missing, or painted over, there is another bar code decal located on the case directly above the PRNODL and neutral safety switches (See Figure 2).

The most permanent form of identification is an etching, in the case, located near the rear gear cover (See Figure 3). Below is an example of what to look for. Once the part number is found, cross reference the part number in the chart in Figures 6-10 for proper applications.

It may be necessary to remove the rear cover to see the part number, but if the vehicle has been in service for some time, this may be the only way to identify the unit. Then refer to the chart in Figures 6-10, for proper applications.

PART NUMBER IDENTIFICATION

[White Tag on Transfer Gear Cover See Figure 1]

| | JULIAN DATE | SEQ. NO. |
|------|----------------|-------------|
| TAG# | 360 | 1261 |

(FIRST 3 NUMBERS IS LAST 3 OF PART NUMBER)

PART NUMBER IDENTIFICATION

[Etched in Case by Transfer Gear Cover See Figure 3]

| PART NUMBER | JULIAN DATE | SEQ. NO. |
|----------------|----------------|-------------|
| PK# | 4659360 | 1261 |

Example given reveals a 1992 3.0L transaxle with a 2.52 overall gear ratio that has 27.5° pitched transfer gears (55T/58T) and a 17T/59T Ring and Pinion.
[See Figures 4 through 10]

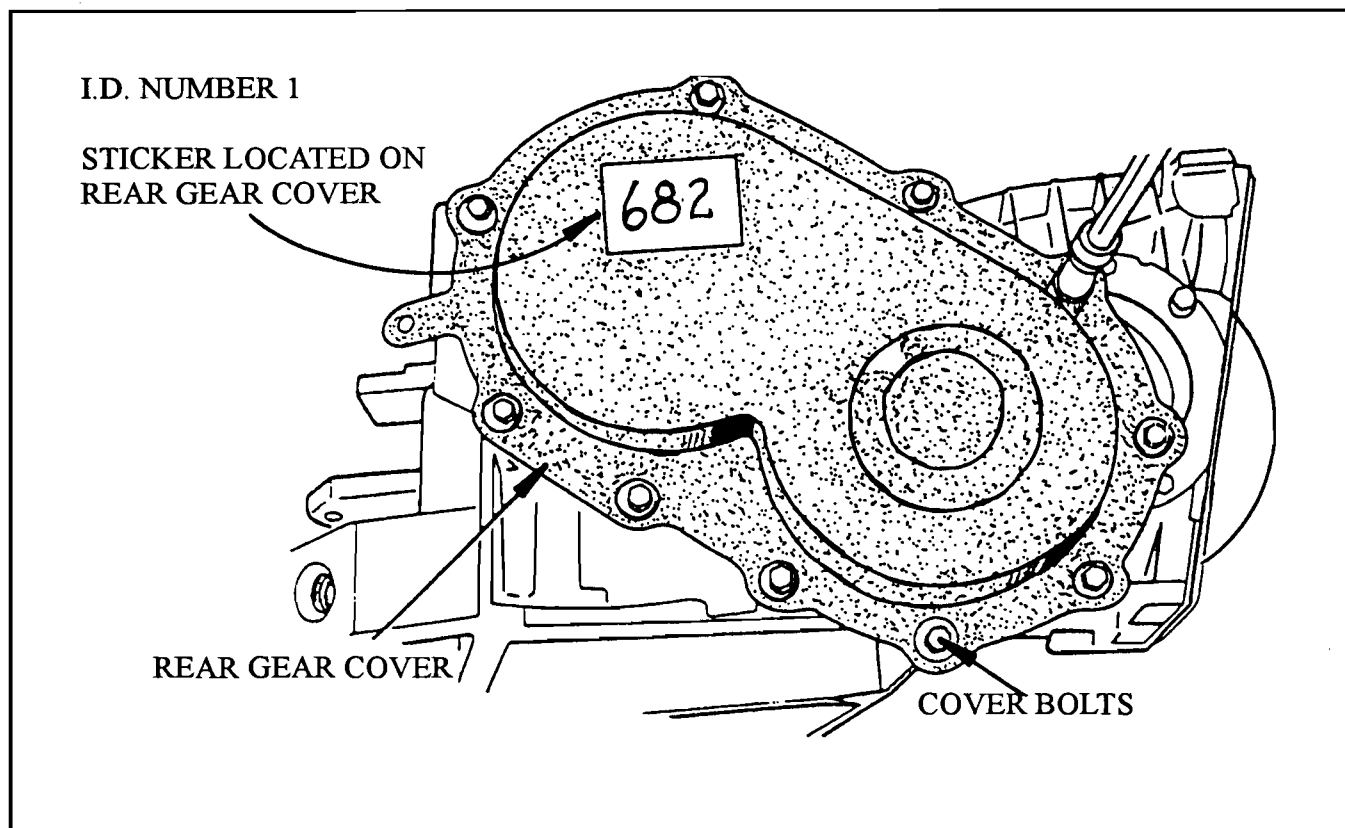


Figure 1

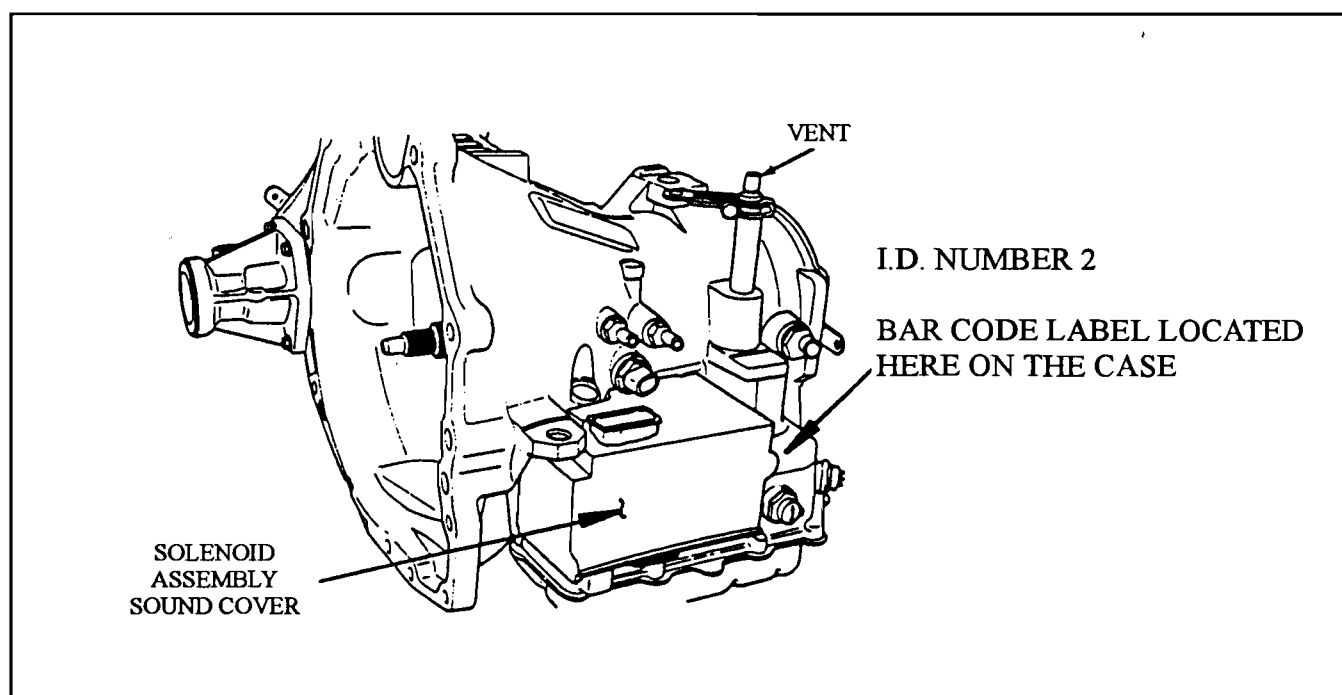


Figure 2

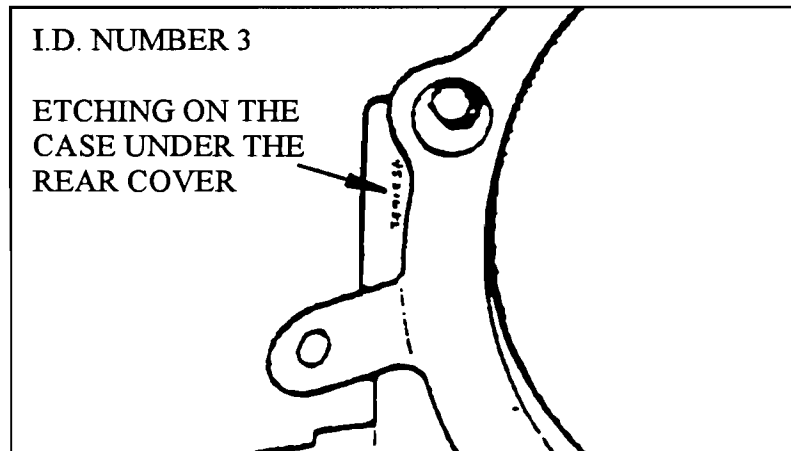


Figure 3

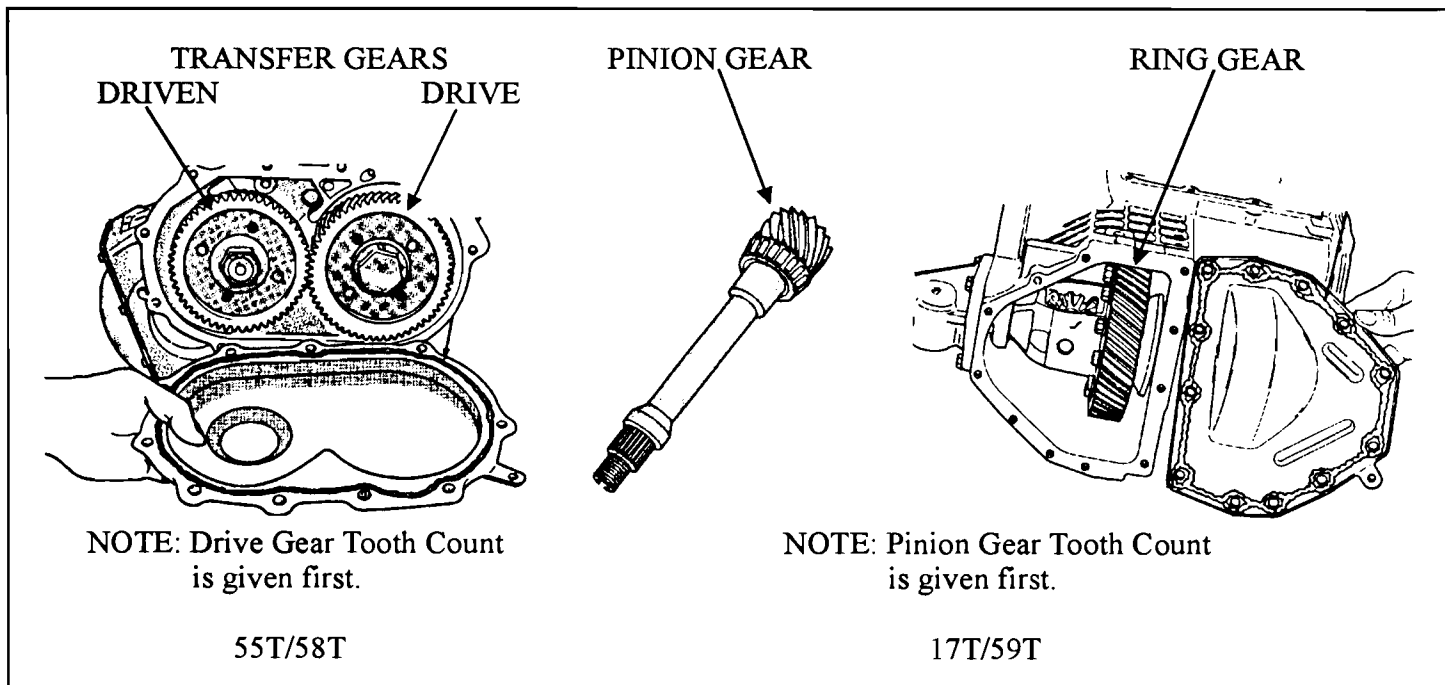
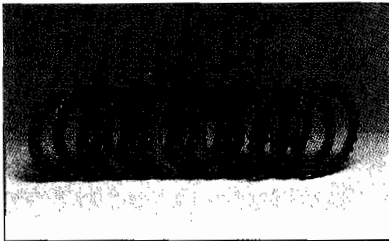


Figure 4

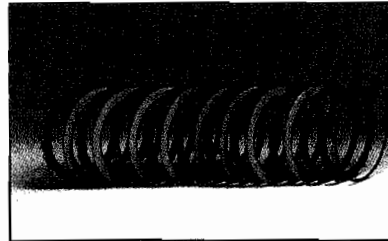


POWERPACKS® BY ALTO

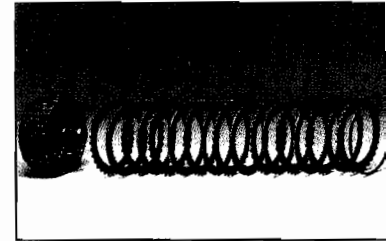
Increased Capacity Enhances Performance and Durability



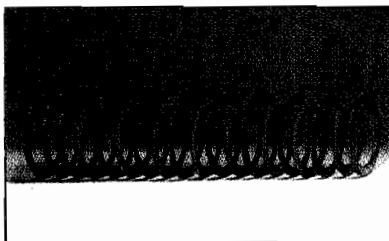
ZF3HP/4HP22 FWD (A) DRUM POWERPACK®
ELIMINATES DISTRESS & BURN UP IN THE FWD (A) PACK.
ALTO #53755



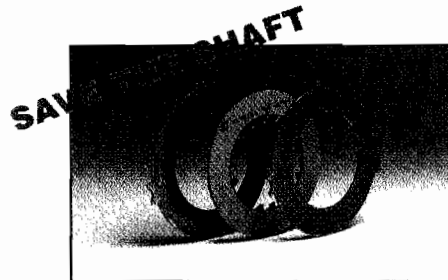
FORD C6/E40D
AVOID BURN UP/DISTRESS IN THE DIRECT CLUTCH PACK.
ALTO #26757



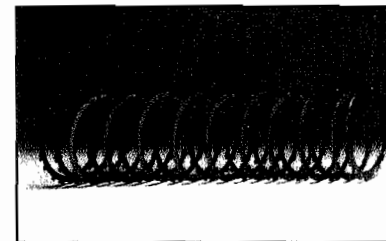
FORD AOD-E DIRECT
ELIMINATES DIRECT CLUTCH DISTRESS & BURN UP. USED WITH STAMPED DRUM. DESIGNED TO GIVE ENHANCED DURABILITY.
ALTO #49754A



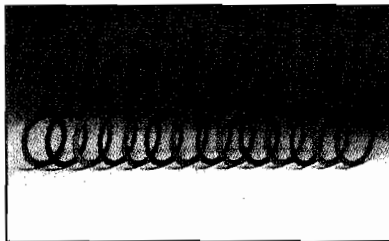
FORD AOD DIRECT
ELIMINATES DIRECT CLUTCH DISTRESS & BURN UP. USE IN ALL HEAVY DUTY APPLICATIONS, COMMERCIAL VEHICLES & TRUCKS.
ALTO #49750A



GM 4T60E/TH440-T4 "BENT TOOTH"
ELIMINATES ACCELERATED WEAR OF 4TH CLUTCH SHAFT. USE TO PREVENT PEENING OR TO REUSE SHAFT.
ALTO #'S 62758 89-ON, 62758A 91-92, 62758B 93-ON



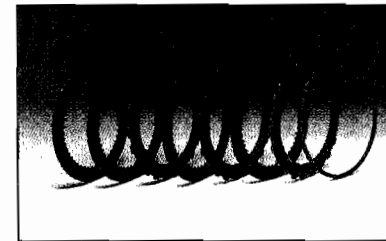
GM 4L60-E/TH700-R4 3/4
ELIMINATES 3/4 CLUTCH DISTRESS & BURN UP. CONTAINS CUSTOM MADE SNAP RING. ENHANCES PERFORMANCE AND DURABILITY.
ALTO #57757B



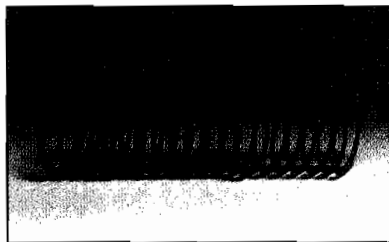
FORD A4LD REVERSE/HIGH
ELIMINATES DISTRESS & BURN UP IN THE REVERSE/HIGH CLUTCH
ALTO# 41756



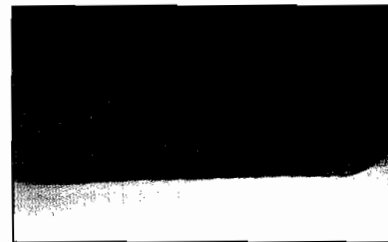
GM 4T60/TH440-T4 2ND
ELIMINATES 2ND CLUTCH DISTRESS & BURN UP.
ALTO #62756



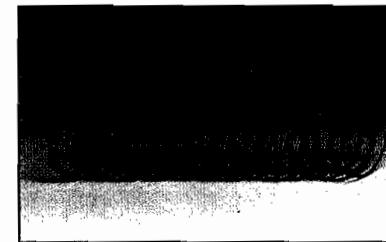
GM TH400 INTERMEDIATE
ELIMINATES INTERMEDIATE CLUTCH DISTRESS & BURN UP. USE IN VEHICLE THAT RECEIVE ADDED STRESS & ABUS LIKE 4X4'S & POLICE CARS.
ALTO #31757



FORD AOD DIRECT HI-PERFORMANCE
ELIMINATES DIRECT CLUTCH DISTRESS & BURN UP. USE IN ALL RACING APPLICATIONS.
ALTO #49750AHP



GM POWERGLIDE FRONT HI-PERFORMANCE
AVOID BURN UP/DISTRESS OF DRUM IN RACING APPLICATIONS.
ALTO #19755HP



GM 4L60-E/TH700-R4 3/4 HI-PERFORMANCE
ELIMINATES 3/4 CLUTCH DISTRESS & BURN UP. CONTAINS CUSTOM MADE SNAP RING. ENHANCES PERFORMANCE AND DURABILITY.
ALTO #57757BHP

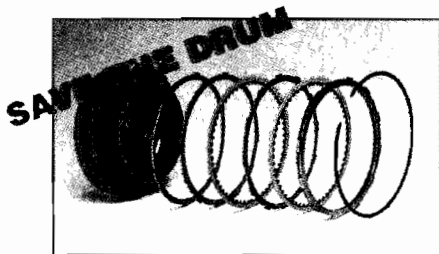
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Call for your local distributor - Phone: 908- 249-3633 • Fax: 908-745-7774 • E-mail: altousa@aol.com

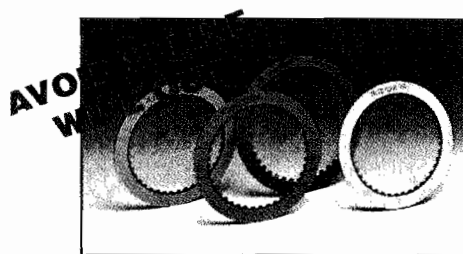
brochure box 06/12/91



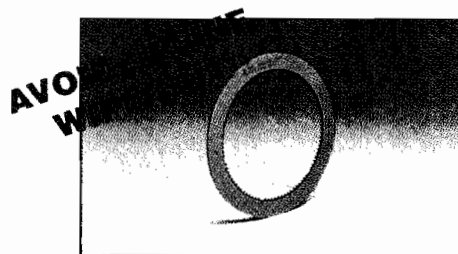
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**G-4EAT REVERSE
DRUM SAVER**
REUSE WORN REVERSE DRUM.
ALTO #74705XW



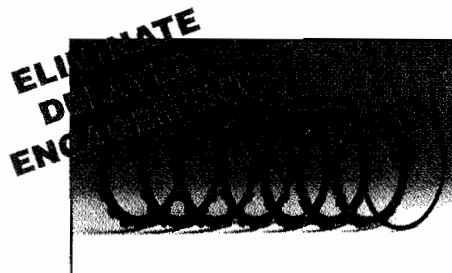
**TH700 FORWARD CLUTCH
HARDENED STEEL CORE**
ALTO #'S 57700HS,
57740HS



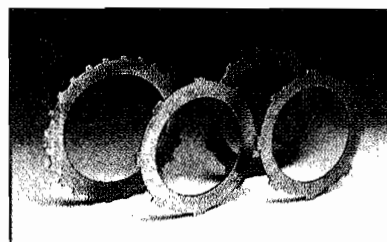
**C6/E40D FORWARD CLUTCH
HARDENED STEEL CORE**
ALTO #26730



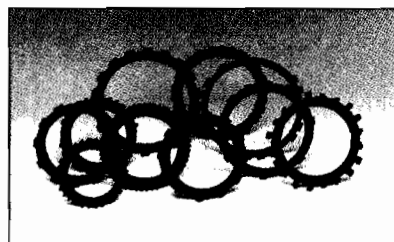
ZF4HP22 "E" CLUTCH
REUSE WORN DRUM. AVOID NEW
DRUM WEAR.
ALTO #53758



E40D CLEARANCE KIT
REDUCES THE CLEARANCE IN
ALL THREE DRUMS. AVOID
DELAYED REVERSE.
ALTO #26759



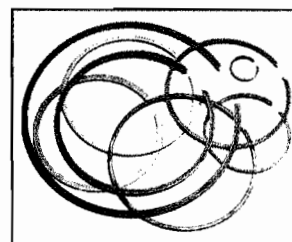
HONDA SELECTIVE STEELS
SELECTIVE STEELS AVOID BUYING
MANY SELECTIVE PRESSURE PLATES.
ALTO #'S 58701-2.1,
58721-2.1, 78701-2.1



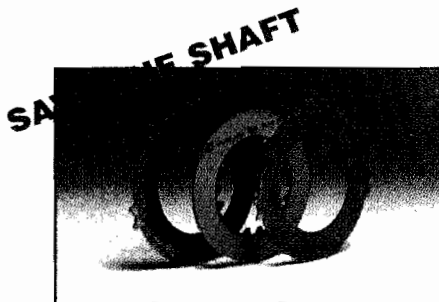
KOLENE® STEELS
KOLENE® IS A REGISTERED
TRADEMARK OF KOLENE® CORP.



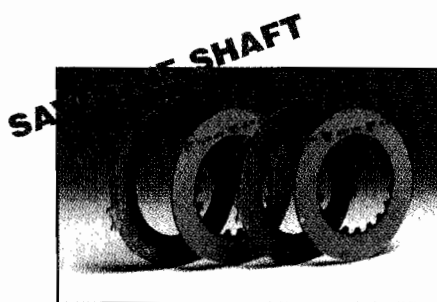
RED EAGLE® FRICTIONS
ALTO ORIGINAL
HI-PERFORMANCE CLUTCHES.



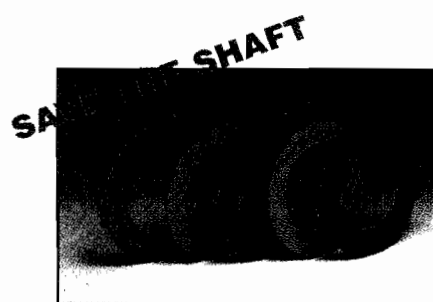
SNAP RINGS KITS
ALSO AVAILABLE INDIVIDUALLY.



**4T60E/TH440-T4
"BENT TOOTH"**
ELIMINATES ACCELERATED WEAR OF
4TH CLUTCH SHAFT. USE TO PREVENT
PEENING OR TO REUSE SHAFT.
ALTO #62758 1989-ON



**4T60E/TH440-T4
"BENT TOOTH"**
ELIMINATES ACCELERATED WEAR OF
4TH CLUTCH SHAFT. USE TO PREVENT
PEENING OR TO REUSE SHAFT
ALTO #62758A 1991-92



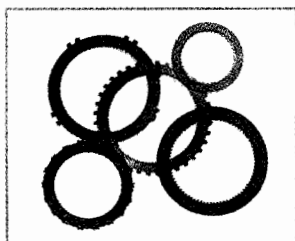
**4T60E/TH440-T4
"BENT TOOTH"**
ELIMINATES ACCELERATED WEAR OF
4TH CLUTCH SHAFT. USE TO PREVENT
PEENING OR TO REUSE SHAFT.
ALTO #62758B 1993-ON

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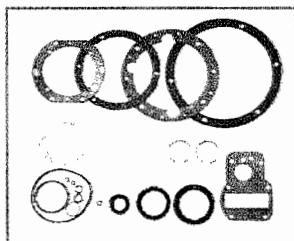
Call for your local distributor - Phone: 908- 249-3633 • Fax: 908-745-7774 • E-mail: altousa@aol.com



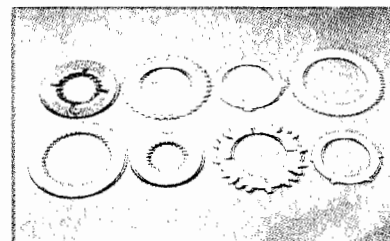
SPECIALTY ITEMS BY ALTO



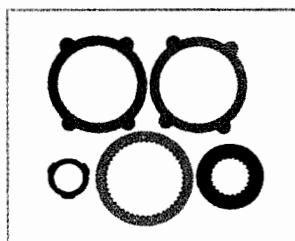
ALLISON



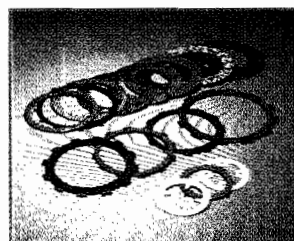
MARINE



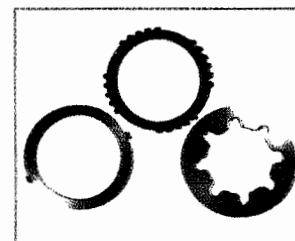
INDUSTRIAL



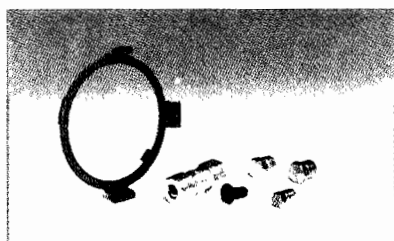
DIFFERENTIAL



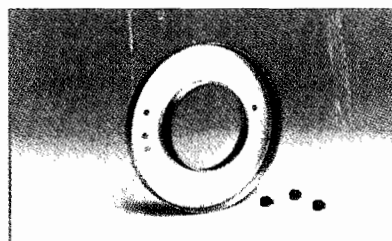
MOTORCYCLE



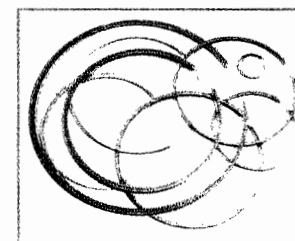
DISHED SPRINGS
CUSHION SPRINGS
PRESSURE PLATES



BRASS UNION
HEX PLUGS
700 RETAINER
ZF TORX® HEAD SCREW



CHRYSLER A604/A606
CLUTCH P. ST. COVER AND
TORX® HEAD SCREWS.
ALTO #77670



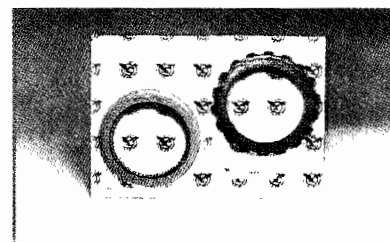
SNAP RING KITS
ALSO AVAILABLE INDIVIDUALLY



ALTO PART LOCATOR
SOFTWARE TO IDENTIFY
CLUTCHES BY SPECIFICATION
OR INDUSTRY PART NUMBER.
ALTO #99598A



ALTO SHADOW BOOK
COMPLETE BOOK OF SHADOWS
FOR ALL DOMESTIC AND IMPORT
CLUTCHES CARRIED BY ALTO.
ALTO #99598-2



MODULES
COMPLETE LINE OF FRICTION AND
STEEL MODULES.

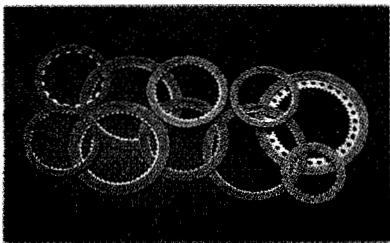
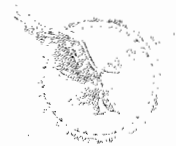
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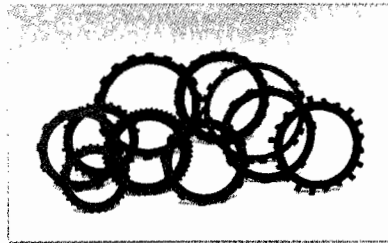
brochure.bux 06/12/96



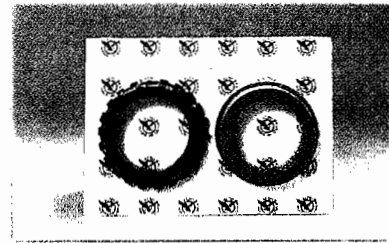
HI-PERFORMANCE BY ALTO



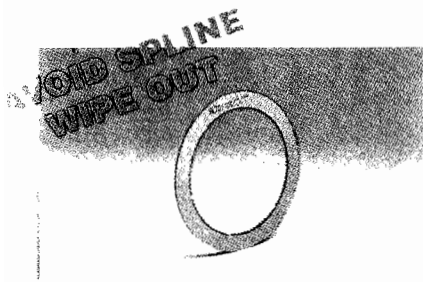
HI-PERFORMANCE
RED EAGLE® CLUTCHES



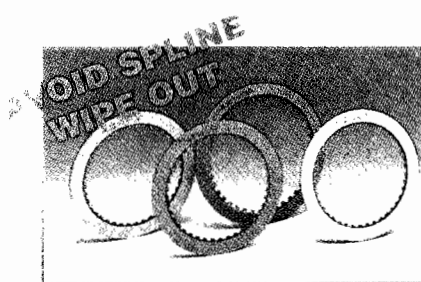
KOLENE® STEELS



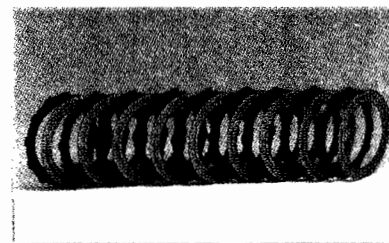
HI-PERFORMANCE
MODULES



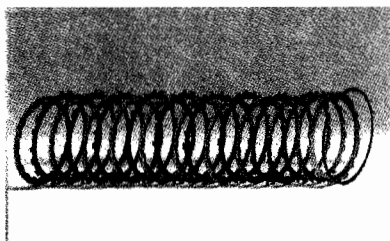
HI-PERFORMANCE
C6/E40D FORWARD
CLUTCH W/ HARDENED
STEEL CORE
ALTO# 26730



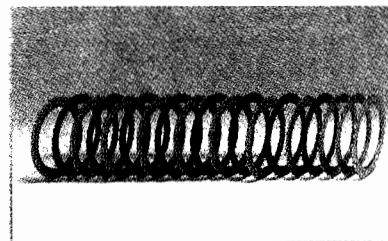
HI-PERFORMANCE
TH700 FORWARD CLUTCH
W/ HARDENED STEEL CORE
ALTO #'S 57700HS, 57740HS



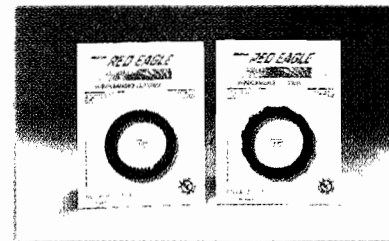
HI-PERFORMANCE
GM POWERGLIDE
POWERPACK®
ALTO #19755HP



HI-PERFORMANCE
GM TH700-R4 3/4
POWERPACK®
ALTO #57757BHP



HI-PERFORMANCE
FORD AOD DIRECT
POWERPACK®
ALTO #49750AHP



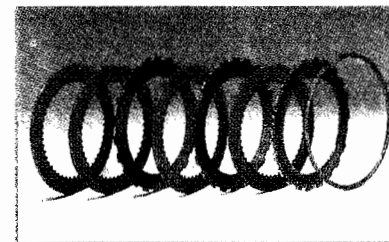
HI-PERFORMANCE
RED EAGLE® UNIT PACKS
& KOLENE® UNIT PACKS



HI-PERFORMANCE
RED EAGLE® LINED BANDS



HI-PERFORMANCE
KEVLAR® BANDS



HI-PERFORMANCE
GM TH400 INTERMEDIATE
POWERPACK®
ALTO #31757HP

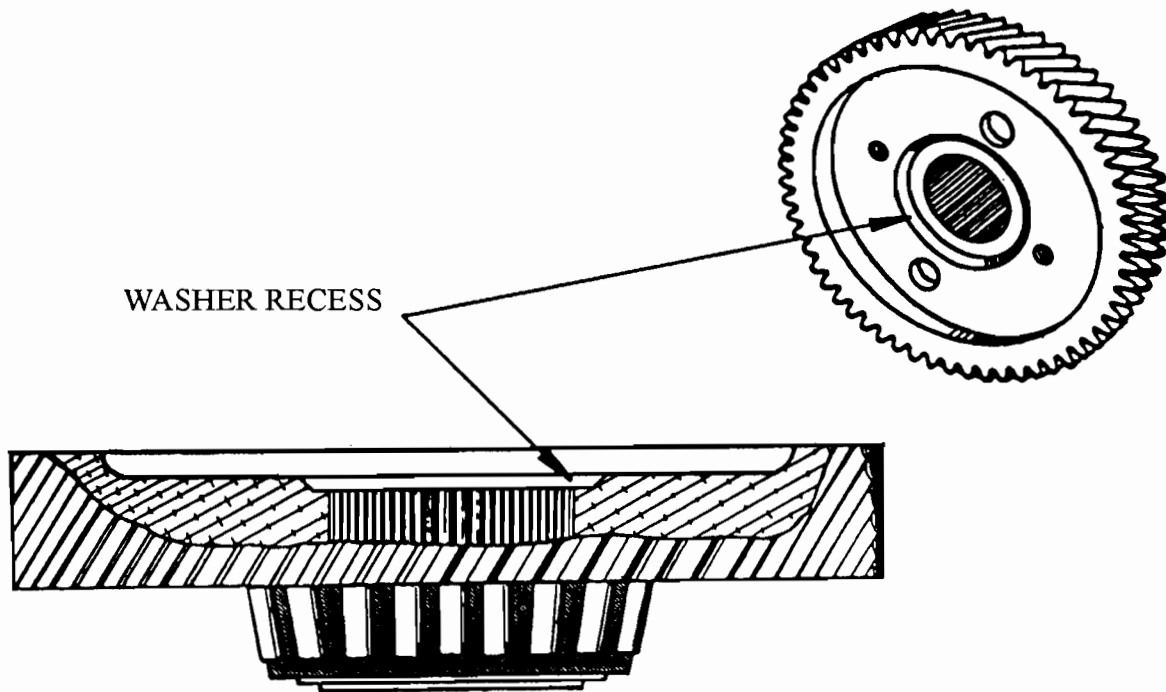
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Excluded from 11/1/96

CHRYSLER A 604 TRANSFER GEARS
27.5 DEGREE HELIX



CHRYSLER A 604 TRANSFER GEARS
32 DEGREE HELIX

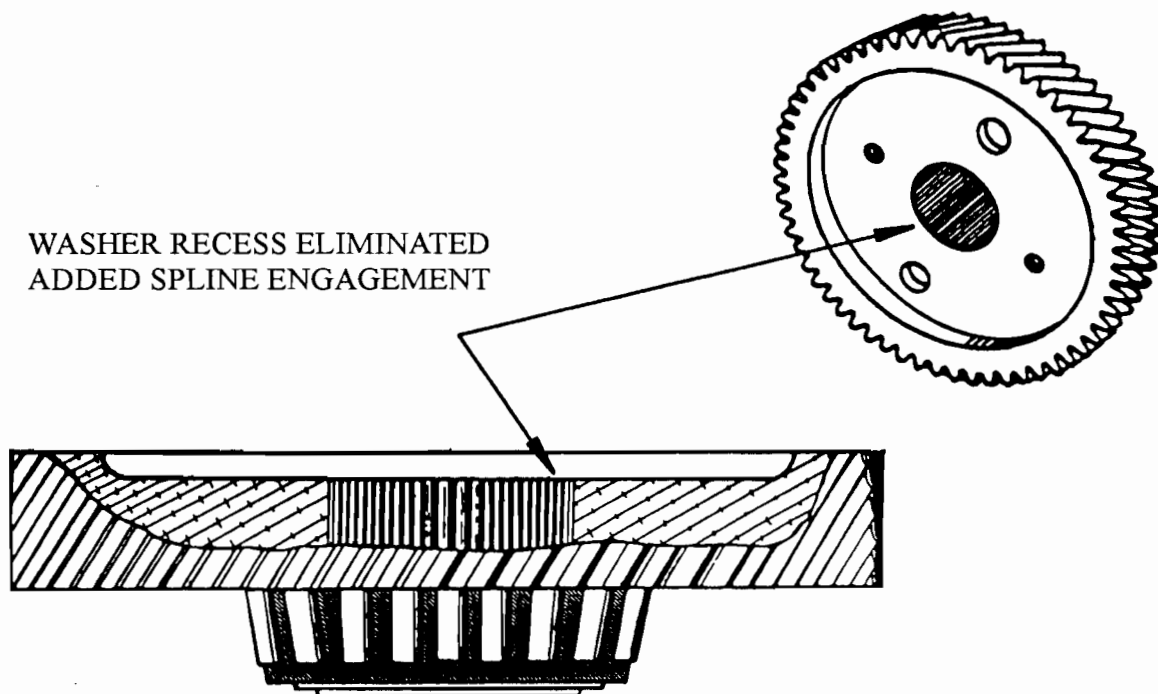


Figure 5

| 41TE (A604) PRODUCTION PART NUMBERS | | | | | | | | |
|-------------------------------------|------|----------|-------|-----------------|---------|--|--|--|
| PART NO. | YEAR | ENGINE | RATIO | GEARS | DIFF | | | |
| 4446659 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531551 | 1990 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531552 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531630 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531664 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531681 | 1990 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531682 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531689 | 1991 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4567500 | 1994 | 2.0L | 2.69 | (32°) | | | | |
| 4567645 | 1993 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4567646 | 1993 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4567647 | 1993 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4567692 | 1994 | 2.5L | 2.69 | (32°) | | | | |
| 4567848 | 1991 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4567849 | 1991 | 3.3L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4567850 | 1991 | 3.3L 4X4 | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4567857 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4567981 | 1994 | 2.0L | 2.81 | (32°) | | | | |
| 4567989 | 1993 | 3.3L 4X4 | 2.49 | 47T/49T (32°) | 17T/59T | | | |

Figure 6



1997 SEMINAR INFORMATION
SLIDE

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| 41TE (A604) PRODUCTION PART NUMBERS (Continued) | | | | | | | | |
|---|-------|----------|------|-----------------|---------|--|--|--|
| 4659071 | 1994 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4659072 | 1994 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659073 | 1994 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659074 | 1994 | 3.3L 4X4 | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659075 | 1994 | 3.8L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659076 | 1994 | 3.8L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659359 | 1992 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4659360 | 1992 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4659361 | 1992 | 3.3L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4659362 | 92-93 | 3.3L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659764 | 93-95 | 3.8L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659777 | 1995 | 3.3L 4X4 | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659902 | 1995 | 2.0L | 2.81 | (32°) | | | | |
| 4659903 | 1995 | 2.0L | 2.69 | (32°) | | | | |
| 4659904 | 1995 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659905 | 1995 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4659907 | 1995 | 3.8L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659908 | 1995 | 2.5L | 2.69 | (32°) | | | | |

Figure 7

| 41TE (A604) SERVICE PART NUMBERS (Continued) | | | | | | | | |
|--|------|----------|-------|-----------------|---------|--|--|--|
| PART NO. | YEAR | ENGINE | RATIO | GEARS | DIFF | | | |
| 4446530 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4471895 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4530030 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531487 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4531488 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4531495 | 1990 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531496 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531632 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531671 | 1990 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531672 | 1990 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531687 | 1989 | 3.0L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531688 | 1991 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4531690 | 1991 | 3.3L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4531691 | 1991 | 3.3L 4X4 | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531969 | 1991 | 3.3L 4X4 | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531972 | 1991 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4531973 | 1991 | 3.3L | 2.36 | 59T/54T (27.5°) | 16T/60T | | | |
| 4543989 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4543990 | 1991 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |

Figure 8

| 41TE (A604) SERVICE PART NUMBERS (Continued) | | | | | | | | |
|--|-------|----------|-------|-----------------|---------|--|--|--|
| PART NO. | YEAR | ENGINE | RATIO | GEARS | DIFF | | | |
| 4543992 | 1991 | 3.3L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4567847 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4638748 | 1991 | 3.8L | 2.19 | 59T/54T (27.5°) | 17T/59T | | | |
| 4638749 | 1991 | 3.0L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4638750 | 1991 | 3.3L | 2.52 | 55T/58T (27.5°) | 17T/59T | | | |
| 4659076 | 91-94 | 3.3L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659902 | 1995 | 2.0L | 2.81 | (32°) | | | | |
| 4659906 | 1995 | 3.8L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4659907 | 1995 | 3.3L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4713052 | 1989 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4713053 | 1990 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4713054 | 1990 | 3.3L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4713486 | 1993 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4713487 | 1993 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4713488 | 1993 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4723553 | 1991 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4723554 | 1991 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4723555 | 1992 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |

Figure 9



| 41TE (A604) SERVICE PART NUMBERS (Continued) | | | | | | | | |
|--|-------|----------|-------|---------------|---------|--|--|--|
| PART NO. | YEAR | ENGINE | RATIO | GEARS | DIFF | | | |
| 4728180 | 1990 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4728181 | 1990 | 3.3L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4728181 | 1990 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4728182 | 1989 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4728923 | 1991 | 3.3L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4740826 | 1994 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4740827 | 1994 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4740828 | 1994 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4741743 | 1990 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4741744 | 1990 | 3.3L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4741746 | 91-92 | 3.8L | 2.20 | 50T/46T (32°) | 17T/59T | | | |
| 4741747 | 91-92 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4741748 | 1992 | 3.3L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4741749 | 1992 | 3.3L 4X4 | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4761821 | 1989 | 3.0L | 2.38 | 50T/46T (32°) | 16T/60T | | | |
| 4761822 | 1995 | 2.0L | 2.69 | (32°) | | | | |
| 4761823 | 1995 | 2.5L | 2.69 | (32°) | | | | |
| 4761824 | 1995 | 2.0L | 2.81 | (32°) | | | | |
| 4778903 | 1995 | 2.0L | 2.69 | (32°) | | | | |
| 4778904 | 1995 | 3.0L | 2.49 | 47T/49T (32°) | 17T/59T | | | |
| 4778908 | 1995 | 2.5L | 2.69 | (32°) | | | | |

Figure 10



CHRYSLER A 604

COAST DOWNSHIFT CLUNK

COMPLAINT: Before or after overhaul, vehicle exhibits a harsh coast downshift or a trailer hitching effect when slowing to a stop.

CAUSE: The cause may be:

A. Hydraulic / Mechanical: (See Qualification Section)

1. Leakage at the pump cover sealing rings and or the bushing in the "Input shaft hub assembly," allowing a pressure loss, and allowing the possibility of a harsh re-engagement of the Underdrive clutch when downshifting from Overdrive back to 3rd or 2nd gear.
2. Incorrect usage of the Underdrive Overdrive retainer plate and or "Tapered" snap ring.
3. Incorrect usage of the Underdrive "Outer" piston seal, and or leakage of the inner piston seal.
4. Leakage at the Low / Reverse piston seals, orifice screen, or Low / Reverse piston retainer and gasket, due to warpage at the attaching bolt holes or loose retainer attaching bolts.
5. Leakage at the Low Reverse clutch accumulator rings and / or the O-ring on the accumulator cap, or the cap installed backwards.
6. Underdrive and Overdrive accumulator pistons installed backwards.
7. Excessive Low Reverse clutch clearance.
8. A "Dented" valve body separator plate where it meets the Low Reverse feed pipe in the rear of the case, or incorrectly torqued valve body bolts.
9. A leak at the large check ball staked into the rear of the case, connecting the Low Reverse feed passage to the Low Reverse accumulator, causing a loss of Low / Reverse clutch oil.

B. Electrical: (See Qualification Section)

1. Intermittant current "drop's" from the Turbine or Output speed sensors confusing the transmission controller and causing a downshift command to be timed incorrectly.
2. Throttle position sensor faulty, out of range, or mis-adjusted.
3. Solenoid body malfunction's.
4. Faulty transmission controller.

NOTE: ALL HYDRAULIC CONCERNS MUST BE CHECKED AND REPAIRED FIRST BEFORE ELECTRICAL CONCERNS CAN BE ADDRESSED!



SLIDE

QUALIFICATION:

1. Scan the transaxle's controller and record trouble codes if any. Clear the memory and leave the scanner attached for the complete road test. If codes 56 "Turbine sensor error" or 57 "Output sensor error" were stored in it's memory fix these codes first. If "Pressure switch" and "Gear ratio error" codes were stored in its memory then continue. **NOTE: "Pressure switch" and "Gear ratio error" codes may be an electrical fault or a hydraulic fault setting a "FALSE" code.**
2. Attach a 0-300 lb. pressure gage to the Low Reverse and the Underdrive pressure ports as shown in Figure 1. Record the pressures at an idle seen in Park, Reverse, Neutral and Drive while the vehicle is standing still.
3. Road test the vehicle with the pressure gage's and scanner still attached. **NOTE: For safety concerns, this road test should be performed with two people.** "Observe" the gage on the Underdrive port, when a 4-3 downshift occurs the pressure gage should rise to between 20-30psi. for a split second and then rise quickly up to 75-95 PSI., this is "Normal" operation. When a downshift to 1st occurs, the gage on the Low Reverse port should rise to between 20-30psi. for a split second, and then rise quickly up to 115-145 PSI. This should all happen right **before** the vehicle is at a complete stop, and is "Normal" operation. If the pressure, on the Underdrive port, builds to 20-30 PSI., stays there, and then jumps up from 20-30 PSI. to 115-145 PSI. when the 4-3 downshift clunk is felt, the problem is most likely hydraulic / mechanical (See Correction A for a list of most common possibilities). If the pressure, on the Low Reverse port, builds to 20-30 PSI., stays there, and then jumps up from 20-30 PSI. to 115-145 PSI. **after** the vehicle is at a complete stop, the problem is most likely hydraulic / mechanical (See Correction A). If pressure stays at "0" but rises up to 20-30 PSI., and then to 115-145 PSI., **long after** a complete stop, the problem is most likely electrical. (See Correction B for a list of most common possibilities).

CORRECTION: A. Hydraulic / Mechanical:

1. Use "Solid Teflon Sealing rings" on the pump cover. Ensure that they are "White or Tan with Red and/or Green Speckles." If your overhaul kit does not furnish these sealing rings for you, use the "Center support sealing rings" from a "4L80-E." **NOTE :** The solid teflon sealing rings can be easily installed and sized with the "Input shaft hub assembly." Inspect the bushing journal at the end of the pump cover for wear or scoring (see Figure 2). Inspect the bushing in the "Input shaft hub assembly" and check for a snug fit on the pump cover. (See Figure 2)
2. Refer to Figure 3 to identify and select the correct Underdrive/Overdrive retainer plate and tapered snap ring.
3. Refer to Figure 3 to identify and select the correct Underdrive "Outer" piston seal. Refer to Figure 2 to Identify the placement of the Underdrive "Inner" piston seal.
4. Inspect the Low Reverse piston and ensure that the updated "D"-rings are used. Inspect the rear of the piston to ensure that the "Orifice Screen" is in place and is not damaged (See Figure 4). Replace piston with part # 4431672 if the transmission was produced prior to 1993. Replace piston retainer with part # 4431648 and replace the gasket under the piston retainer (See Figure 5). Coat the attaching bolts with "Loctite"® and torque them to 40 inch lbs. **NOTE: Be careful not to over-torque as the threads in the case can be easily "Stripped."**



SLIDE

CORRECTION: (cont.)

5. Inspect the Low Reverse accumulator scarf cut sealing rings for damage and proper fit. Install the accumulator springs, piston, cap and snap ring as shown in Figure 6
6. Check and adjust Low Reverse clutch clearance to .035"-.045." NOTE: A 2-4 steel plate is .030" thicker than a Low Reverse steel plate and can be used as a Low Reverse steel plate substitute to take up excessive clutch clearance if necessary.
7. Inspect the valve body separator plate where it seats around the Low Reverse feed pipe, shown in Figure 7, for "Dent's" that may have been caused by a mis-alignment of the valve body to the case. Torque valve body to case attaching bolts to 105 inch lbs.
8. Refer to Figure 7 to locate the "Large Steel Ball" staked into the rear of the case. Ensure "NO" leakage around the ball when air checking the Low Reverse clutch.
9. Refer to Figure 8 for the correct assembly of the Underdrive and Overdrive accumulator pistons and springs.

B. Electrical

1. Install a scanner to the diagnostic connector and observe the "Turbine" and "Output" speed sensor readings when slowing to a stop and ensure that both readings drop to "0" when the vehicle is completely stopped. If you have a "Snap-on" scanner and have "Scan Graphics" or you have a "Scope" you can more accurately determine whether the speed sensors are working correctly or not, by observing their output signal for erratic patterns. If you do not have the luxury of having these options then "Arm" or "Record" a movie of your road test and pay close attention to the steady drop of the speed sensor rpm's., when slowing to a stop. An erratic rpm. drop or a slow rpm. drop may indicate a speed sensor problem. **NOTE: The scanner is the last "Priority" on the "BUS" system so it may appear to be sluggish at times . This means that the downshift may have already occurred but the scanner did not show that it had happened yet. Do not be confused by this.** Before condemning a speed sensor inspect it's environment . A poor connection or a wire harness or spark plug wire laying on or wrapped around speed sensor wires can "Induce" current into the wire harness and can cause some erratic readings and cause many upshift or downshift problems. If the Turbine or Output Speed Sensors have erratic or no output and are found faulty, the part number for the Turbine Speed Sensor is 4412878. The part number for the Output Speed Sensor is 4412879. While the scanner is connected run the vehicle on the lift up to third gear, (If the car is *not* equipped with ABS.), Turbine and Output Speed Sensor rpm's. should read the same. "Wiggle" the speed sensor connectors and watch the scanner to see if the readings fluctuate. If they do this could indicate the need for replacement harness connectors, Chrysler part No. 4419478 . (See Figure 9)
2. Inspect "Throttle Position Sensor" voltage either with a hand held scanner or a volt meter and ensure that the "Base" or "Closed" throttle voltage reading is between .50-.78V, and the "Full" throttle voltage reading is between 3.8-4.0V. (See Figure 10) If the base throttle stays above 1.0 volt or if excessive or intermittent voltage or signal changes occur, harsher downshifts may result.



SLIDE

CORRECTION: (cont.)

3. To test the Solenoid pack install a scanner to the diagnostic connector and select "ATM" or "Actuator" test's. Connect a pressure guage to the corresponding pressure port (see Figure1) and observe the operation of the solenoid and the reaction on the pressure guage. **NOTE: the vehicle must have the drive wheels in the air and the selector in Overdrive and the Parking Brake engaged before starting this test. Consult your scanner reference manual.** If a solenoid does not respond consistently, this may indicate that the solenoid pack needs replacement. It has been noted that not all TCM's will activate the ATM or Actuator test. If you can not initiate the test, refer to Figures 11 and 12 to test the solenoid pack.
4. After all Hydraulic / Mechanical concerns have been addressed the Transmission Control Module (TCM) may need "Flashed", (Reprogramed), or replaced. The main requirements for a "Flashable" TCM. are:
 1. Must **have** "Cooling" Fin's." (See Figure13)
 2. Must **not have** one of the following part numbers: 4686174, 4686175, 4686208, 4686209, 4686223, 4686224, 4686490 or 4686491.

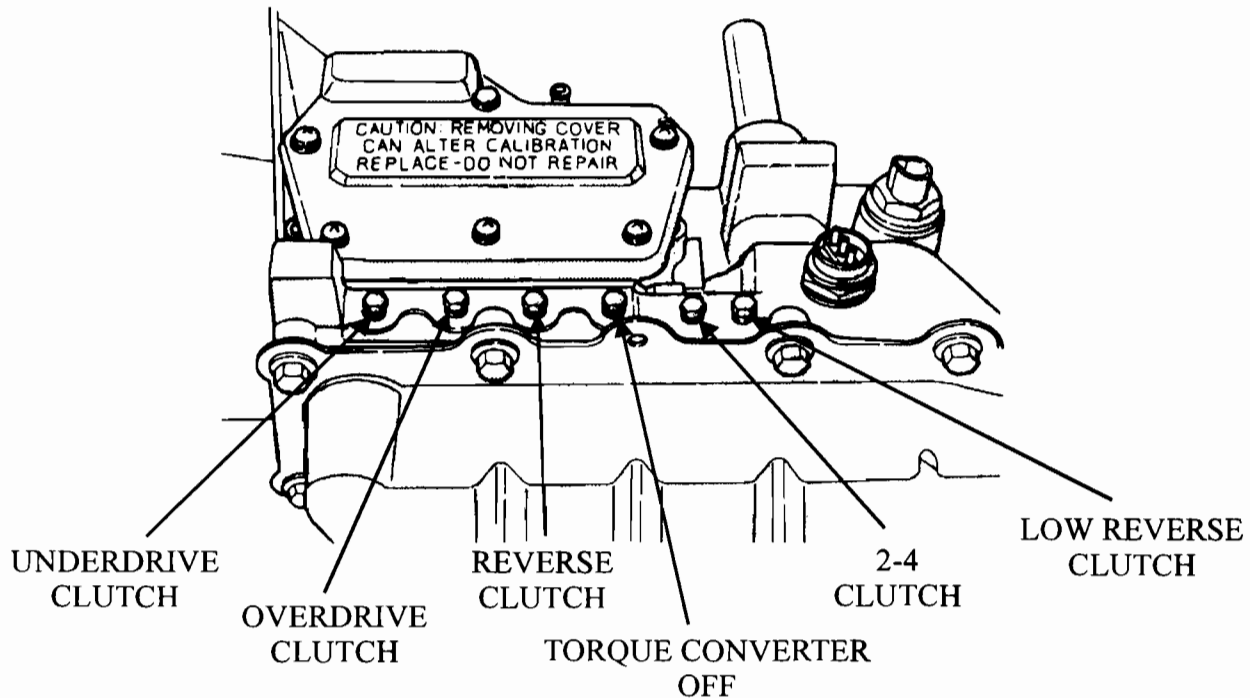
NOTE: The TCM can only be "Flashed" with the use of a "DRB III" or a Chrysler dealer.

If the TCM **does not** have "Cooling Fins," or **has** one of the part numbers listed above, contact your Chrysler dealer for a replacement TCM. Chrysler Technical Service Bulletin 18-24-95 refer's to "Flashing" procedures and a full list of updated TCM part numbers and important information concerning "Pin 49" on Spirit and Acclaim models.

SERVICE INFORMATION:

| | |
|---|---------|
| LOW REVERSE PISTON..... | 4431672 |
| LOW REVERSE PISTON RETAINER..... | 4431648 |
| LOW REVERSE "D-RING" KIT (INNER AND OUTER)..... | 4778883 |
| TURBINE SPEED SENSOR..... | 4412878 |
| OUTPUT SPEED SENSOR..... | 4412879 |
| SPEED SENSOR REPAIR HARNESS..... | 4419478 |

PRESSURE PORT LOCATIONS AND SPECIFICATIONS



| GEAR SELECTOR POSITION | ACTUAL GEAR | UNDER- DRIVE CLUTCH | OVER- DRIVE CLUTCH | REVERSE CLUTCH | LOCKUP OFF | 2-4 CLUTCH | LOW REVERSE CLUTCH |
|------------------------------|---------------------|---------------------------|--------------------------|-------------------|---------------|---------------|-----------------------|
| PARK ° 0-MPH | PARK | 0-2 | 0-5 | 0-2 | 60-110 | 0-2 | 115-145 |
| REVERSE ° 0-MPH | REVERSE | 0-2 | 0-7 | 165-235 | 50-100 | 0-2 | 165-235 |
| NEUTRAL ° 0-MPH | NEUTRAL | 0-2 | 0-5 | 0-2 | 60-110 | 0-2 | 115-145 |
| L # 20-MPH | FIRST | 110-145 | 0-5 | 0-2 | 60-110 | 0-2 | 115-145 |
| D # 30-MPH | SECOND | 110-145 | 0-5 | 0-2 | 60-110 | 115-145 | 0-2 |
| D # 45-MPH | DIRECT | 75-95 | 75-95 | 0-2 | 60-90 | 0-2 | 0-2 |
| OD # 30-MPH | OVERDRIVE | 0-2 | 75-95 | 0-2 | 60-90 | 75-95 | 0-2 |
| OD # 50-MPH | OVERDRIVE LOCKUP | 0-2 | 75-95 | 0-2 | 0-5 | 75-95 | 0-2 |

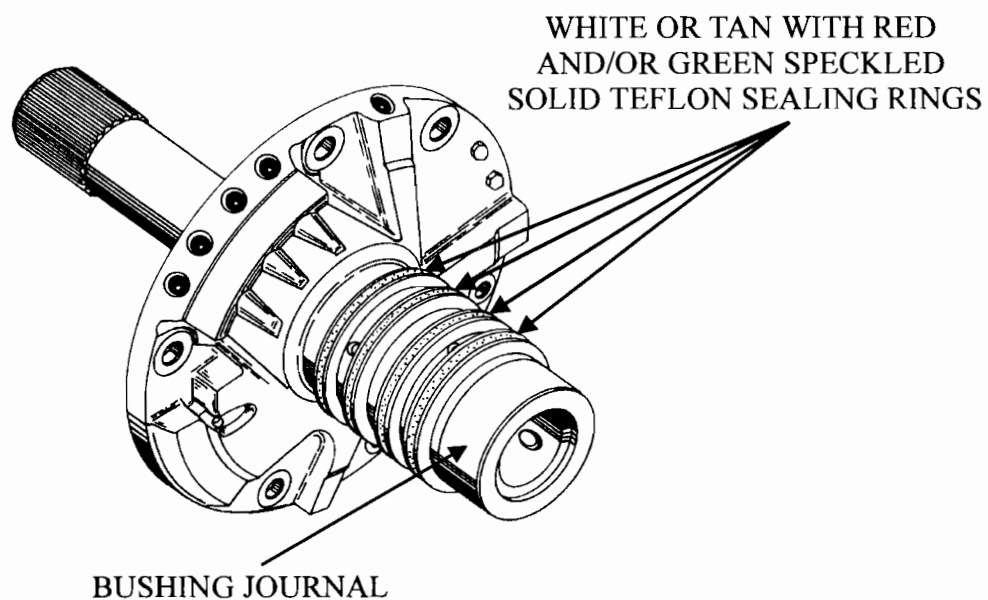
° ENGINE SPEED AT 1500 RPM

CAUTION: BOTH FRONT WHEELS MUST BE TURNING AT SAME SPEED

Figure 1

SLIDE

PUMP COVER



INPUT DRUM

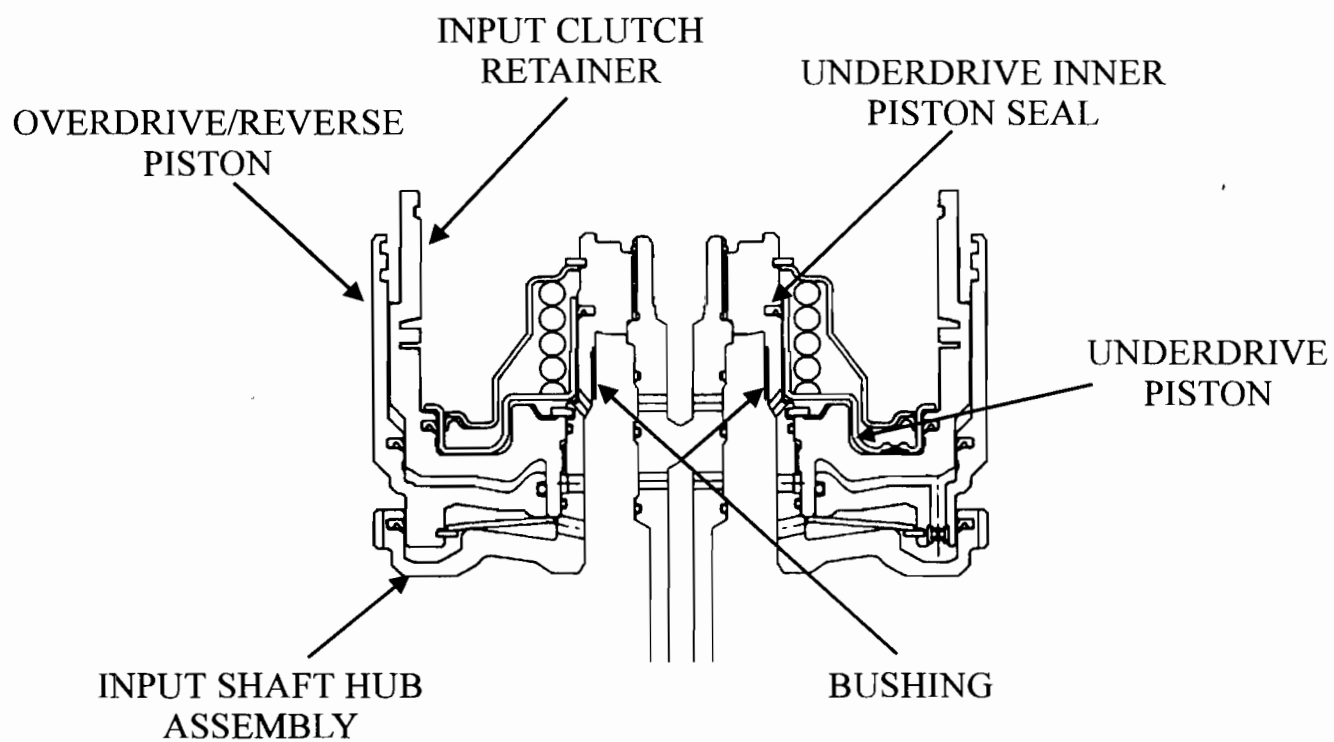
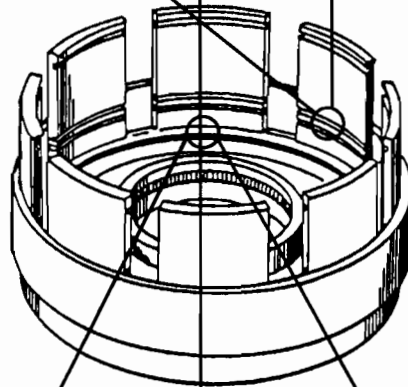
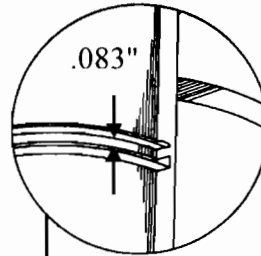
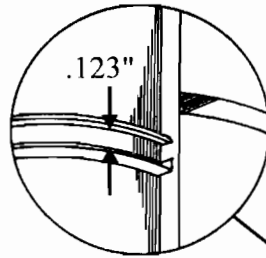


Figure 2

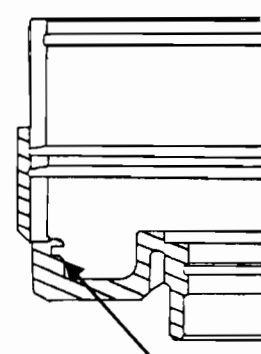
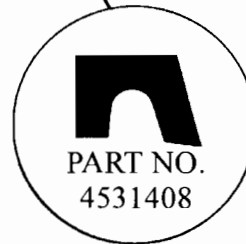
INPUT CLUTCH RETAINER

1989

1990 & UP

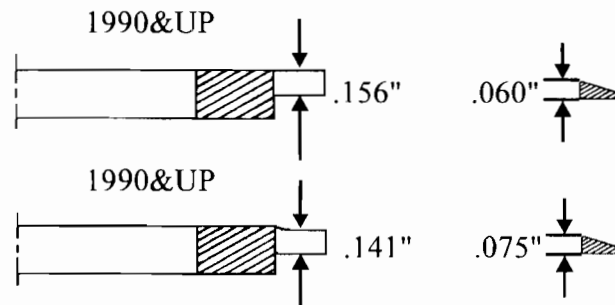
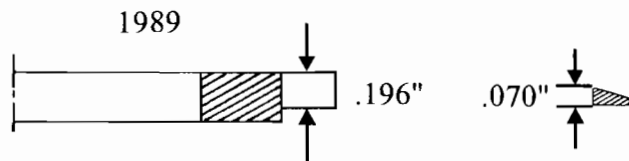


UNDERDRIVE OUTER PISTON SEALS



LIP SEAL GROOVE
.040" SHALLOWER TO
ACCOMMODATE
NEW OUTER LIP
SEAL

UNDERDRIVE / OVERDRIVE REACTION PLATE
LUG THICKNESS TO TAPERED SNAP RING USEAGE

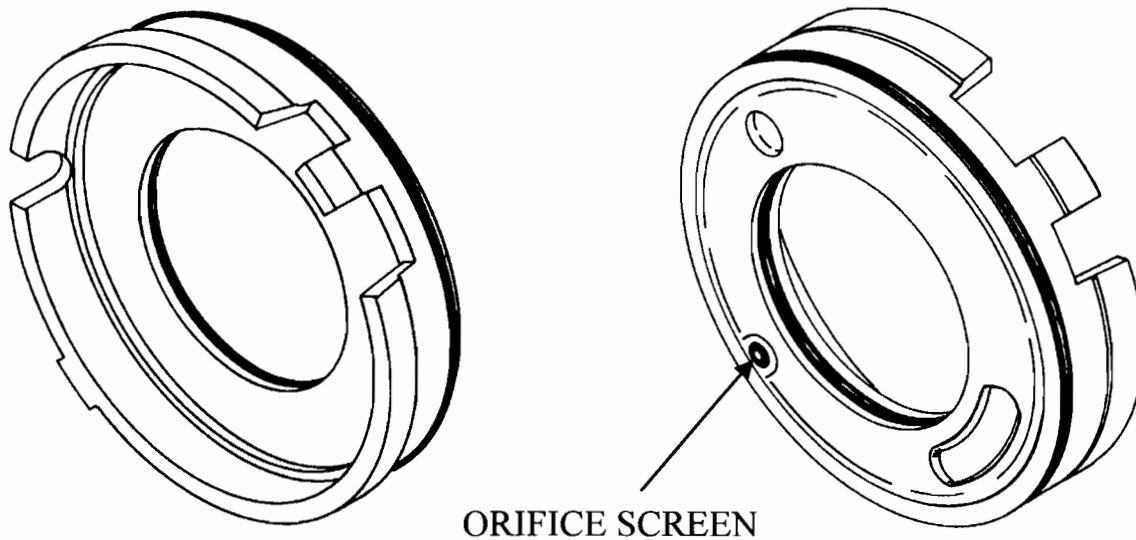


FOR FURTHER INFORMATION OF UNDERDRIVE / OVERDRIVE REACTION PLATE
SELECTIVES SEE ATSG BULLETIN NO. 93-07

Figure 3

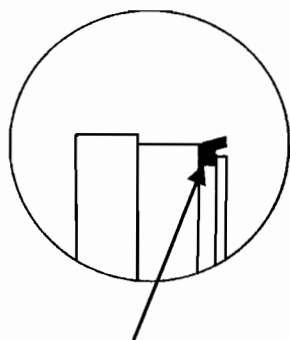
LOW REVERSE PISTON

PART NO. 4431672-93& UP

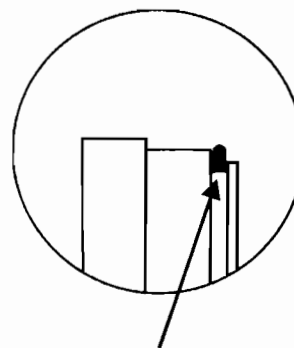


NOTE: USE PART NUMBER **4431672** 1993 & UP LOW REVERSE PISTON. IT IS .002" SMALLER IN DIAMETER ABOVE THE OUTER PISTON SEAL. THIS WAS DONE TO PREVENT THERMAL BINDING IN THE PISTON RETAINER.

LOW REVERSE INNER AND OUTER PISTON SEAL CHANGE



PREVIOUS DESIGN "LIP SEAL"



NEW DESIGN "D-RING"

NEW DESIGN "D-RING" KIT PART NO. 4778883
(Contains both Inner and Outer seals)

Figure 4

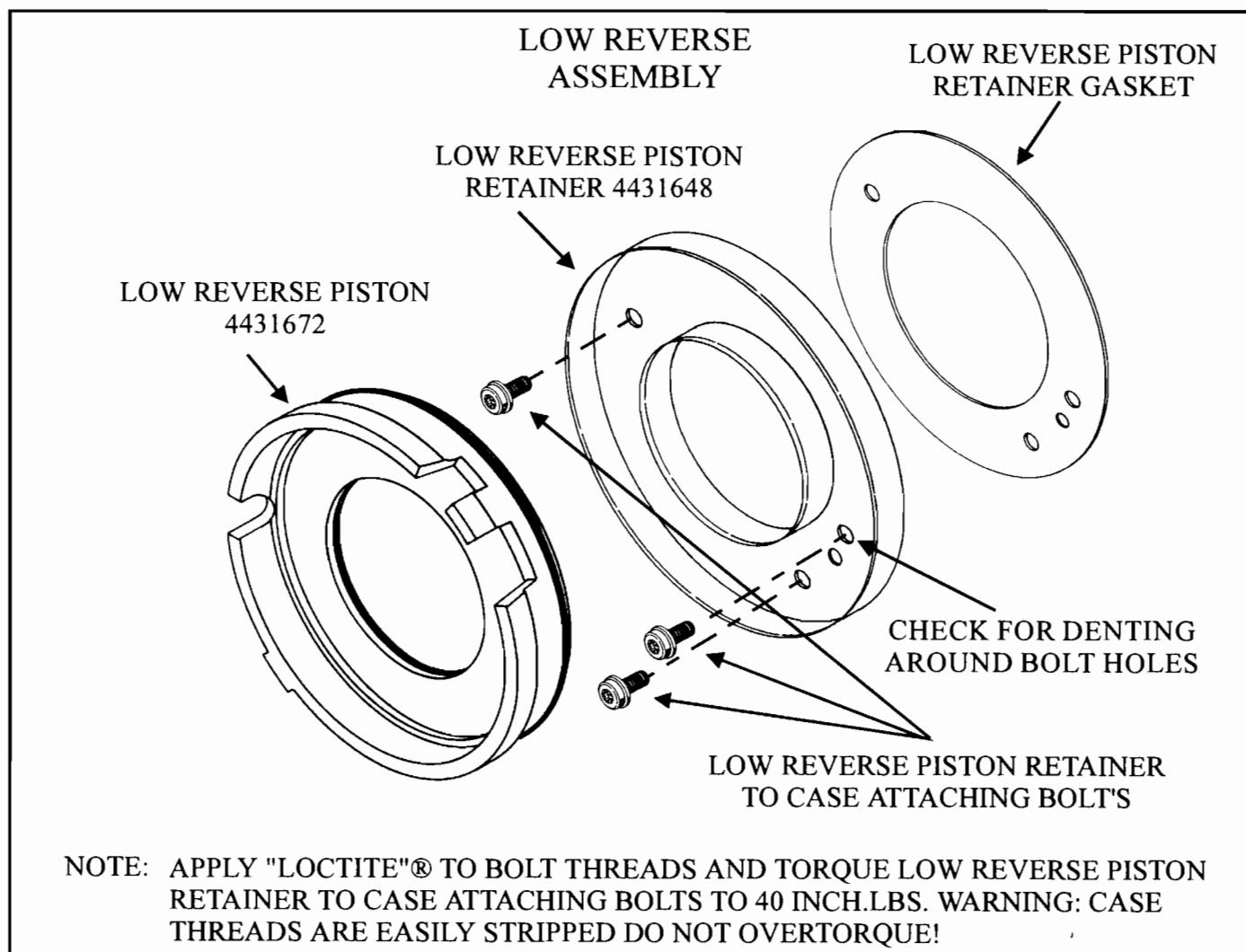


Figure 5

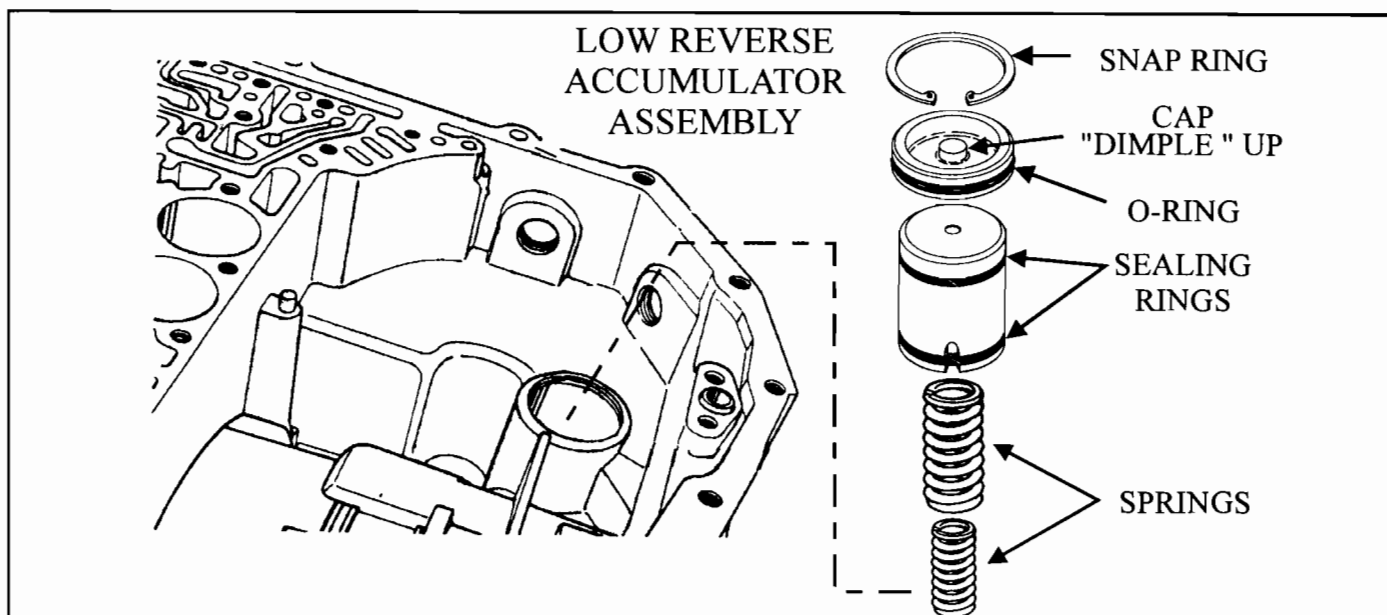
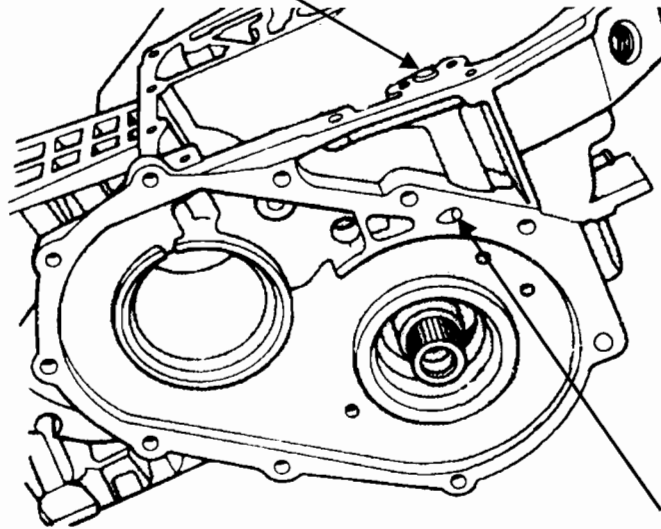


Figure 6

LOW REVERSE "AIR CHECK"

APPLY AIR PRESSURE IN
LOW REVERSE FEED PIPE



"NO" LEAKAGE ALLOWED FROM
STEEL BALL STAKED IN CASE

NOTE: THE LOW REVERSE ACCUMULATOR, ALL CLUTCH AND STEEL PLATES
MUST BE ASSEMBLED BEFORE AIR CHECKING. THE ORIFICE SCREEN
IN THE LOW REVERSE PISTON WILL LEAK A SMALL AMOUNT OF AIR,
THIS IS NORMAL

Figure 7

UNDERDRIVE AND OVERDRIVE ACCUMULATOR ASSEMBLY'S

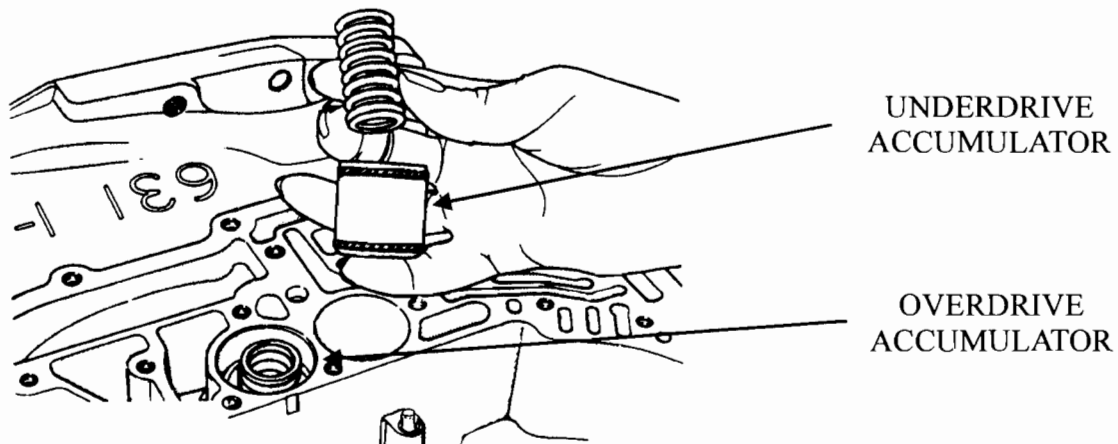


Figure 8

SLIDE

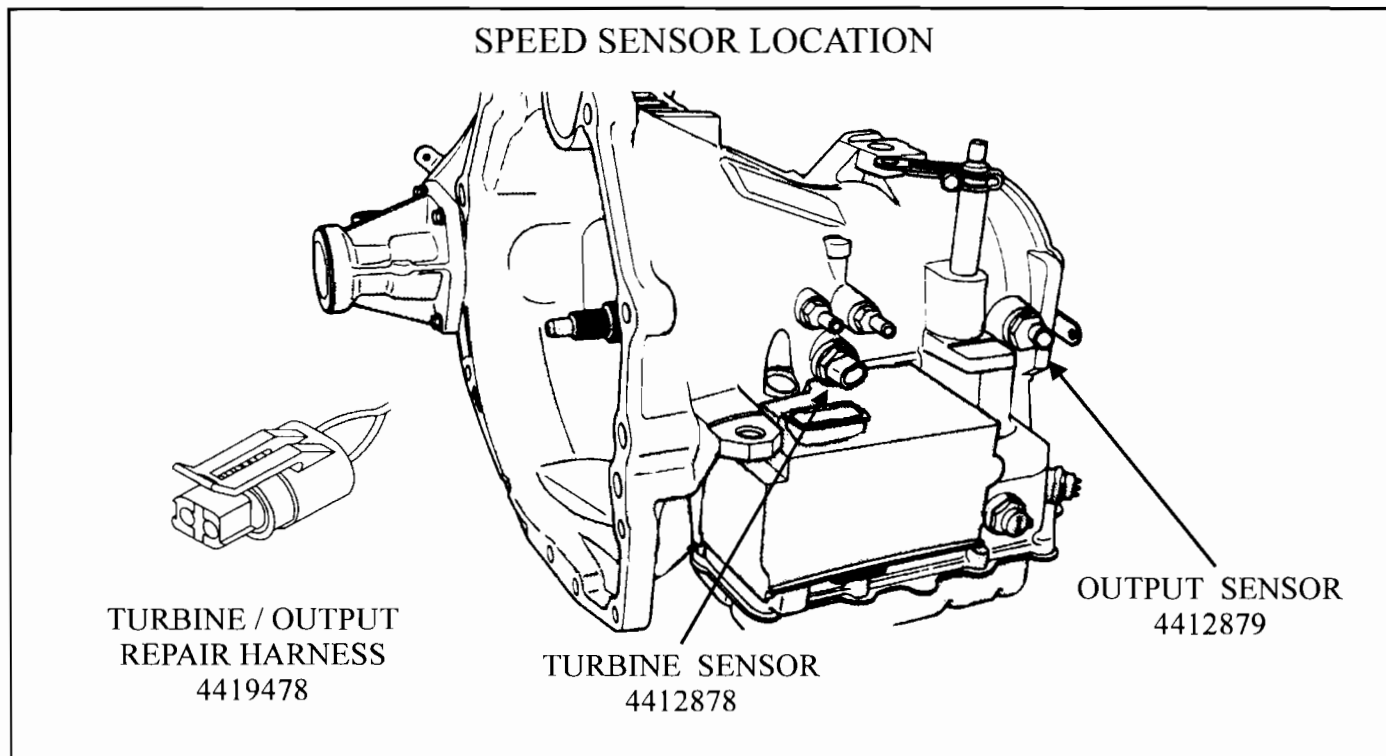


Figure 9

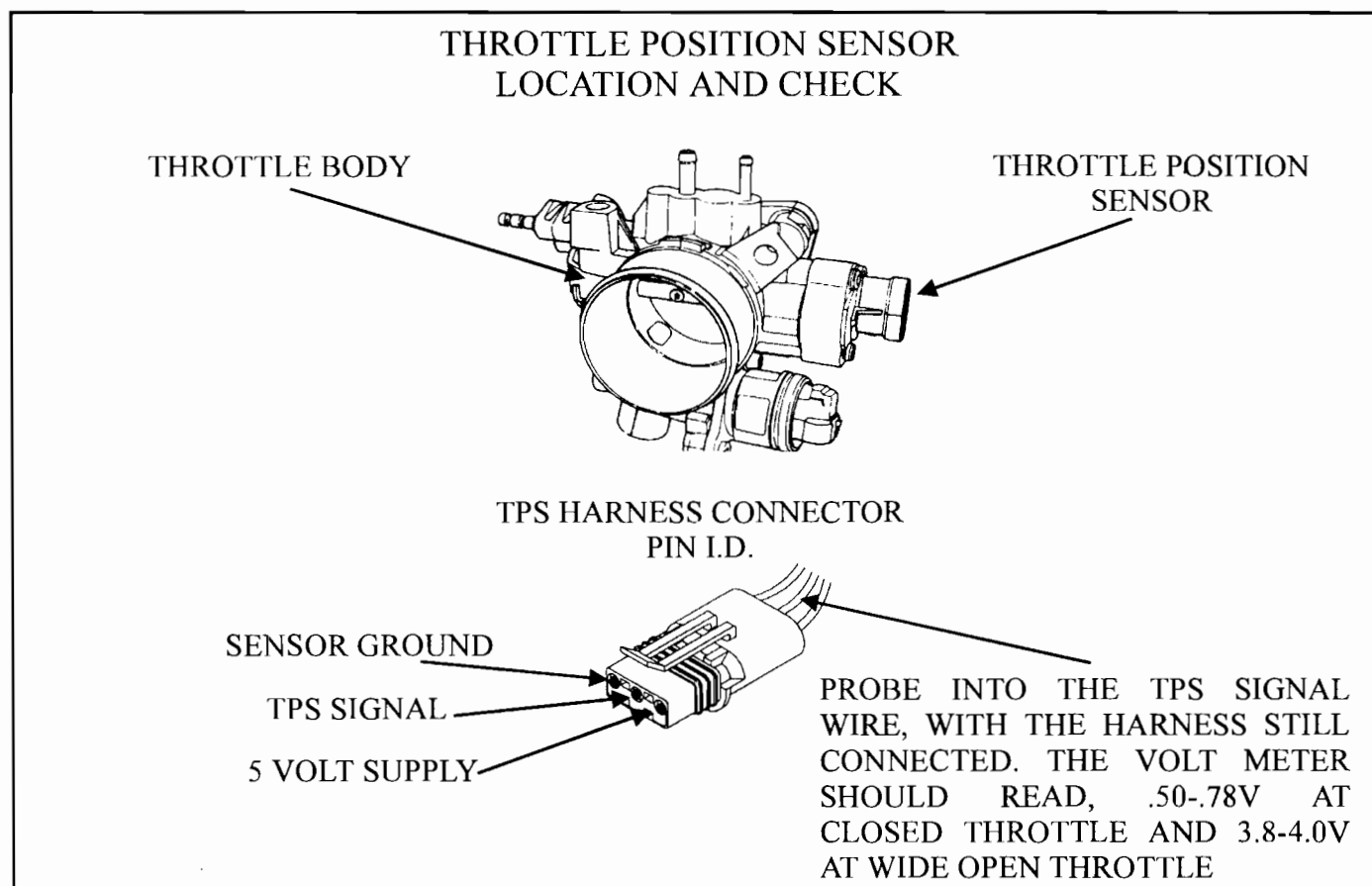
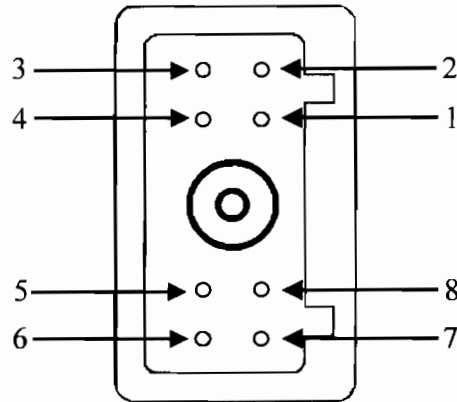


Figure 10

SOLENOID PACK CHECK

SOLENOID PACK CONECTOR



SOLENOID PACK PIN IDENTIFICATION

| PIN NO. | PIN IDENTIFICATION |
|---------|---|
| 1 | 2-4 PRESSURE SWITCH SIGNAL TO CONTROLLER |
| 2 | LOW REVERSE PRESSURE SWITCH TO CONTROLLER |
| 3 | OVERDRIVE PRESSURE SWITCH SIGNAL TO CONTROLLER |
| 4 | 12 VOLT INPUT FROM THE CONTROLLER |
| 5 | GROUND FROM CONTROLLER TO UNDERDRIVE SOLENOID |
| 6 | GROUND FROM CONTROLLER TO OVERDRIVE SOLENOID |
| 7 | GROUND FROM CONTROLLER TO LOW REVERSE / LOCKUP SOLENOID |
| 8 | GROUND FROM CONTROLLER TO 2-4 / REVERSE SOLENOID |

SOLENOID CHECK: ALL FOUR SOLENOIDS SHOULD HAVE 1.5 OHM'S RESISTANCE

SOLENOID 1- CONNECT OHMMETER TO PINS 4 AND 5

SOLENOID 2- CONNECT OHMMETER TO PINS 4 AND 6

SOLENOID 3- CONNECT OHMMETER TO PINS 4 AND 7

SOLENOID 4- CONNECT OHMMETER TO PINS 4 AND 8

RESISTOR CHECK: ALL THREE RESISTORS SHOULD HAVE 270-330 OHMS RESISTANCE

O.D. RESISTOR- CONNECT OHMMETER TO PINS 4 AND 3

L/R RESISTOR- CONNECT OHMMETER TO PINS 4 AND 2

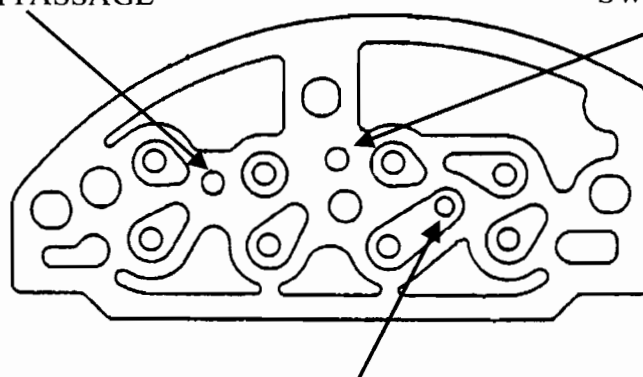
2-4 RESISTOR- CONNECT OHMMETER TO PINS 4 AND 1

Figure 11

SOLENOID PACK PRESSURE SWITCH TEST AND I.D.

2-4 PRESSURE
SWITCH PASSAGE

LOW REVERSE PRESSURE
SWITCH PASSAGE



OVERDRIVE PRESSURE
SWITCH PASSAGE

PRESSURE SWITCH TEST: ALL THREE PRESSURE SWITCHES ARE TESTED WITH 50PSI. OF AIR PRESSURE APPLIED TO THE PASSAGES SHOWN ABOVE AND AN OHMMETER. WITH NO AIR APPLIED TO THE SWITCH THE OHMMETER SHOULD READ NO CONTINUITY. WITH AIR APPLIED TO THE SWITCH THE OHMMETER SHOULD READ 0 OHM'S.

O.D. SWITCH- CONNECT OHMMETER TO PIN 3 AND GROUND

L/R SWITCH- CONNECT OHMMETER TO PIN 2 AND GROUND

2-4 SWITCH- CONNECT OHMMETER TO PIN 1 AND GROUND

Figure 12

TRANSMISSION CONTROL MODULE

TRANSMISSION CONTROLLER
WITH "COOLING FIN'S"

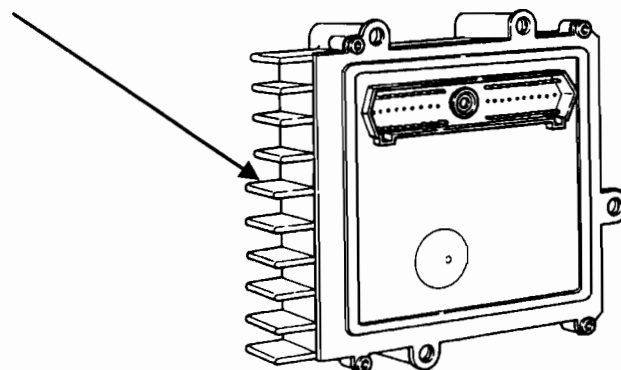


Figure 13

CHRYSLER A604 AND A606 INCREASED 2/4 CLUTCH CAPACITY

Extra attention has *always* been needed while assembling the Low/Reverse and the Two/Four clutch packs into the transaxle case, as both of the clutch packs are very similar, but the thickness of both lined and steel plates are different for the two different clutch packs, while the tooth profile is the same (See Figure 1).

FACTORY LOW/REVERSE STACK-UP:

- (1) Steel plate thickness is .070", and there are **5 required**.
Lined plate thickness is .070", and there are **5 required**.

FACTORY TWO/FOUR STACK-UP:

- (1) Steel plate thickness is .100", and there are **4 required**.
Lined plate thickness is .085", and there are **4 required**.

There is also a common pressure plate used between the two clutch packs. This common pressure plate comes in seven different thicknesses to adjust the Low/Reverse clutch clearance to factory specifications. ***There are no selectives for setting the 2/4 clutch clearance.*** We have provided a cross sectional view of the manufacturers arrangement of the L/R and 2/4 clutch packs in Figure 2.

INCREASED 2/4 CLUTCH CAPACITY TIP:

With increased torque demands placed on the transaxle with the addition of the 3.3L and 3.8L engines, it is possible for the technician to add an extra friction and steel plate to the 2/4 clutch stack-up, for increased capacity. This can be done by stacking the 2/4 clutch pack using friction and steel plates from both of the clutch packs, as shown in Figure 3, and stacked in ***exactly*** the order that follows. After the L/R clutches, the pressure plate, and the tapered snap ring have been installed and L/R clutch clearance is set properly, stack the 2/4 clutch ***exactly*** as follows:

1. Install one (1) of the 2/4 (.085" Thick) friction plates first, against the pressure plate.
2. Install four (4) each of the Low/Reverse (.070" Thick) friction and steel plates, beginning with a steel, on top of the 2/4 friction, and alternating with a friction plate, until you have installed four of each of the .070" thick plates. You should have put a friction in last.
3. Install one (1) of the 2/4 (.100" Thick) steel plates.
4. Install the 2/4 bellville spring, and the 2/4 clutch retainer with piston.
5. Compress the 2/4 retainer and install the retaining snap ring.

The stacking order should be kept as above with the thickest friction plate against the common pressure plate, and the thickest steel plate against the 2/4 piston. This will ensure that the proper clearance is maintained at the tapered snap ring and the thickest steel plate against the piston will ensure that it does not get bent. By using the thinner (.070") L/R friction and steel plates in the 2/4 clutch pack, enough clearance is left to add one extra friction and one extra steel plate, for increased capacity. If all 5 thin friction and steel were used, you would wind up with approximately .085" clutch clearance (***Too Much***). A better stack-up is with the above example. With this configuration, you will have approximately .040" 2/4 clutch clearance. The factory specification for 2/4 clutch clearance is .030" - .104".

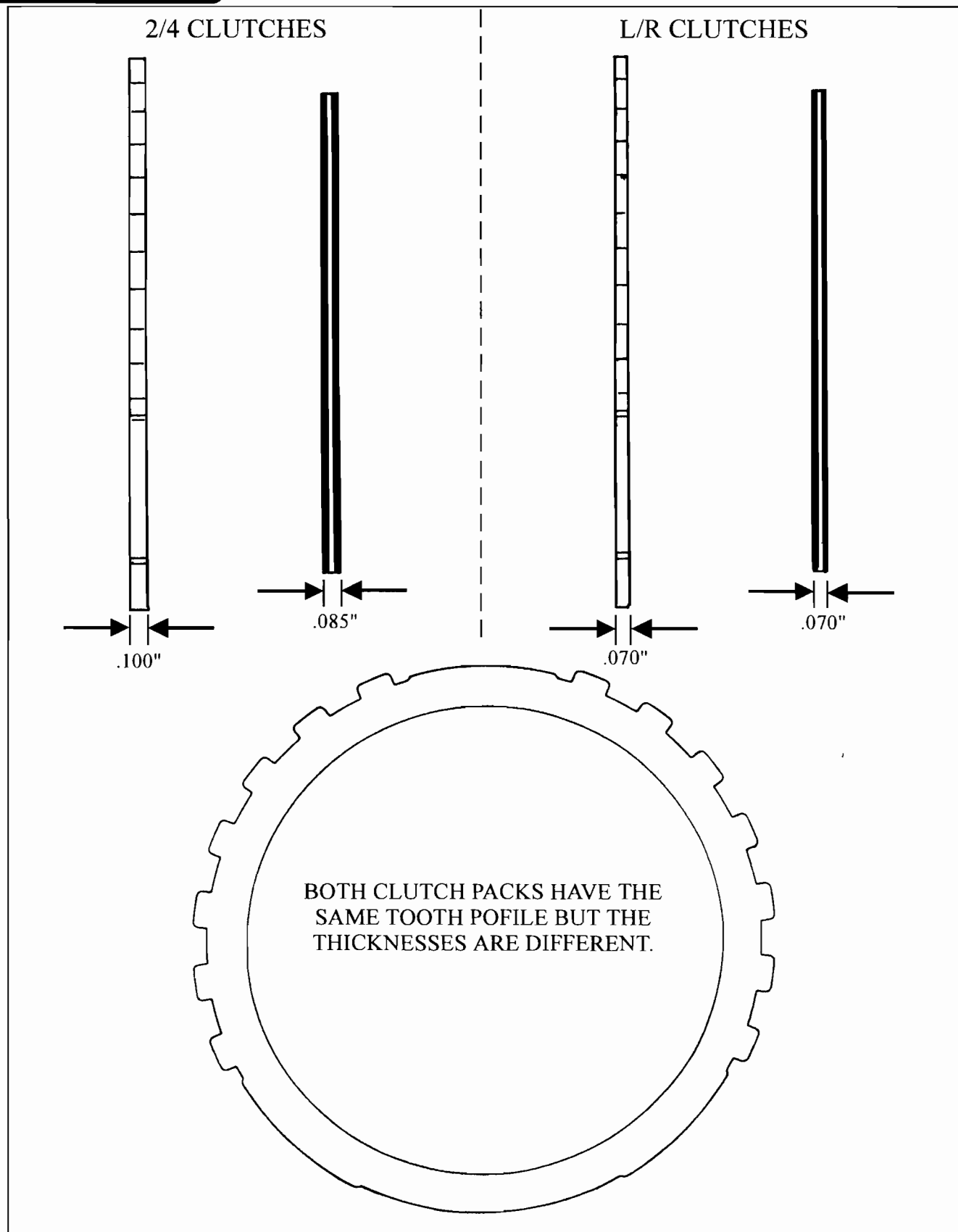
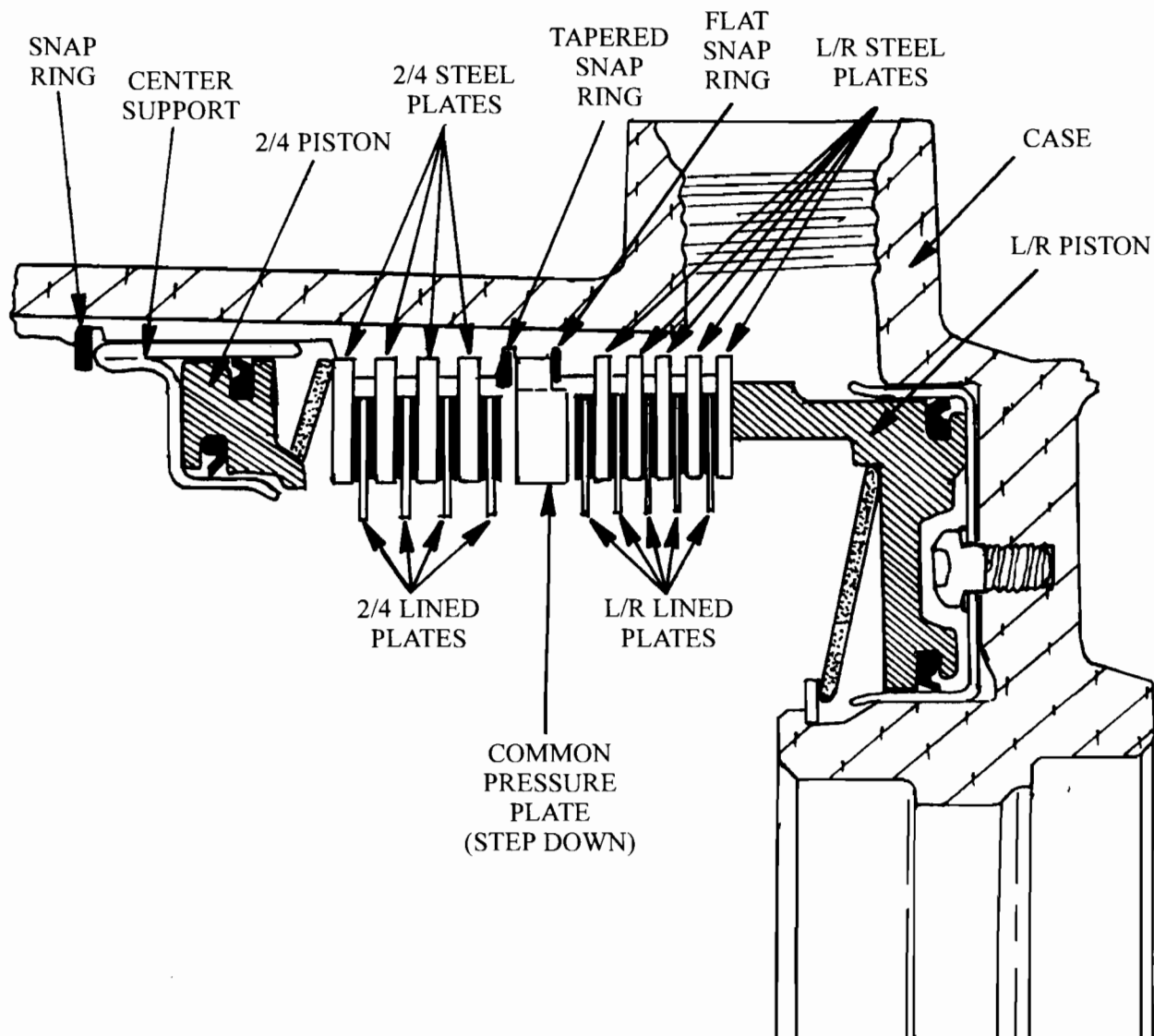


Figure 1

TWO/FOUR AND LOW/REVERSE CLUTCH PLATES



LOW/REVERSE CLUTCH PACK TAKES 5 STEEL PLATES (.070") AND 5 LINED PLATES (.070")

TWO/FOUR CLUTCH PACK TAKES 4 STEEL PLATES (.100") AND 4 LINED PLATES (.085")

LOW/REVERSE CLUTCH PACK CLEARANCE IS .042" TO .065" AND IS SET WITH THE COMMON SELECTIVE PRESSURE PLATE AVAILABLE IN SEVEN THICKNESSES.

TWO/FOUR CLUTCH PACK CLEARANCE IS .030" TO .104" AND IF NOT WITHIN SPEC, THE CLUTCH IS NOT ASSEMBLED PROPERLY.

THERE IS NO ADJUSTMENT FOR THE TWO /FOUR CLUTCH CLEARANCE.

Figure 2

2/4 CLUTCH STACK UP FOR INCREASED CAPACITY

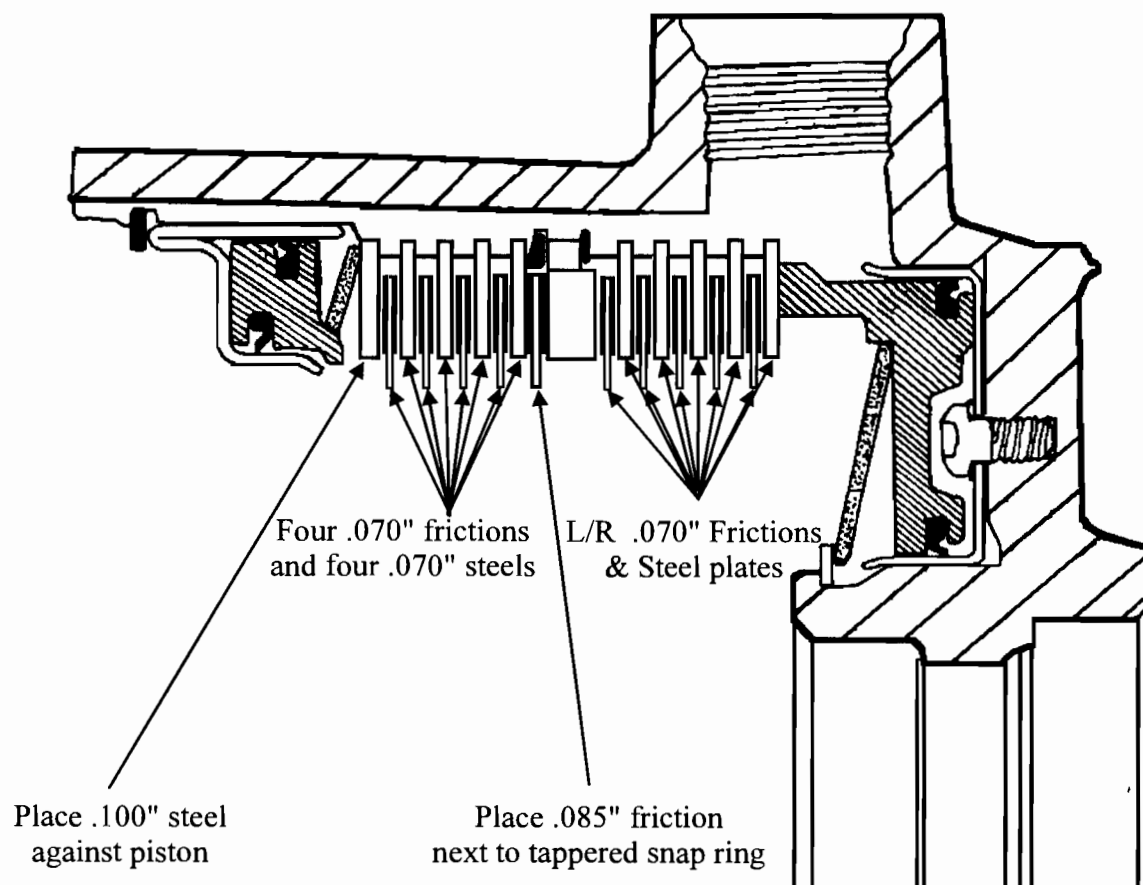


Figure 3

ANSWERMATIC®

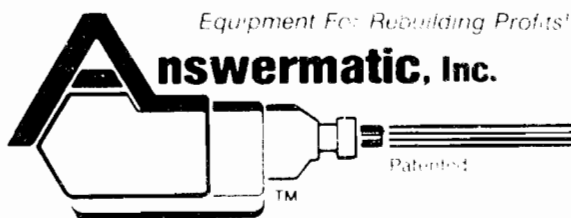
ANSWERS YOU CAN TAKE TO THE BANK!

1-800-322-0806

Losing valuable time and income due to superficially worn hard parts or non-sealing soft parts? Then bank on the original Answermatic® VBT-2000, or our AMI® Hydraulic Circuit Analyzer.

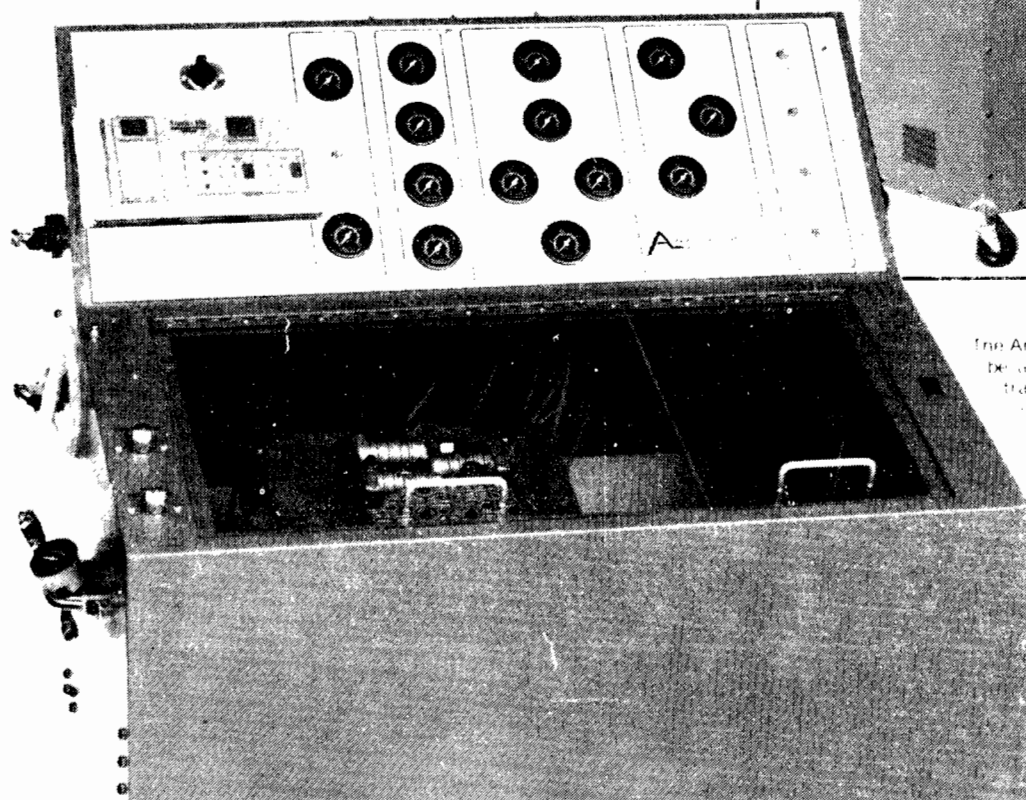
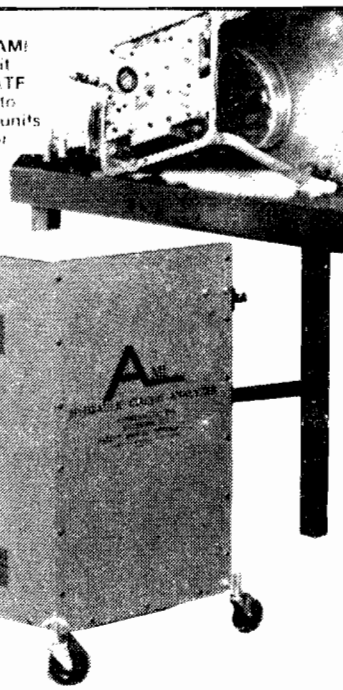
Let Answermatic® answer all your transmission repair questions. Call toll free 1-800-322-0806 or Fax (910) 754-2954 for our free brochure.

- Eliminate no-goes and come backs
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- Adapts to electronic transmissions.
- Very affordable, units start at \$3,995
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- Fits virtually all foreign and domestic front and rear wheel cars and trucks



225 SMITH AVE., SHALLOTTE, NC 28470
(910) 754-2944 • FAX (910) 754-2954

Answermatic's AMI Hydraulic Circuit Analyzer uses ATF under pressure to completely test units before, during or after rebuilding.



The Answermatic VBT-2000 can be adapted to test electronic transmissions, in addition to hydraulic transmissions. Examples of the TRAN-2000 are:

Answermatic®
Patent #4806541, #488422
Other patents pending

CHRYSLER A604

SELECTOR LEVER HARD TO MOVE

COMPLAINT: Vehicles equipped with A604 transmissions may exhibit trouble moving the selector lever into any range.

CAUSE: The cause may be, a bad Neutral Safety or PRNDL switch, a binding Manual shaft or a bad shifter cable

CORRECTION: Disconnect the shifter cable from manual shaft lever shown in Figure 1. Rotate the manual shaft lever through all ranges. If the lever rotates freely, replace the shifter cable. If the lever is still hard to move, loosen or remove the Neutral Safety and/or PRNDL switch and rotate the manual shaft lever. If the lever rotates freely, replace the Neutral Safety and/or PRNDL switch. If the lever is still hard to move, remove the valve body and inspect the manual shaft for straightness and remove any corrosion or rust from the shaft.

SERVICE INFORMATION:

| | |
|----------------------------|---------|
| SAFETY NEUTRAL SWITCH..... | 4671017 |
| PRNDL SWITCH..... | 4671019 |

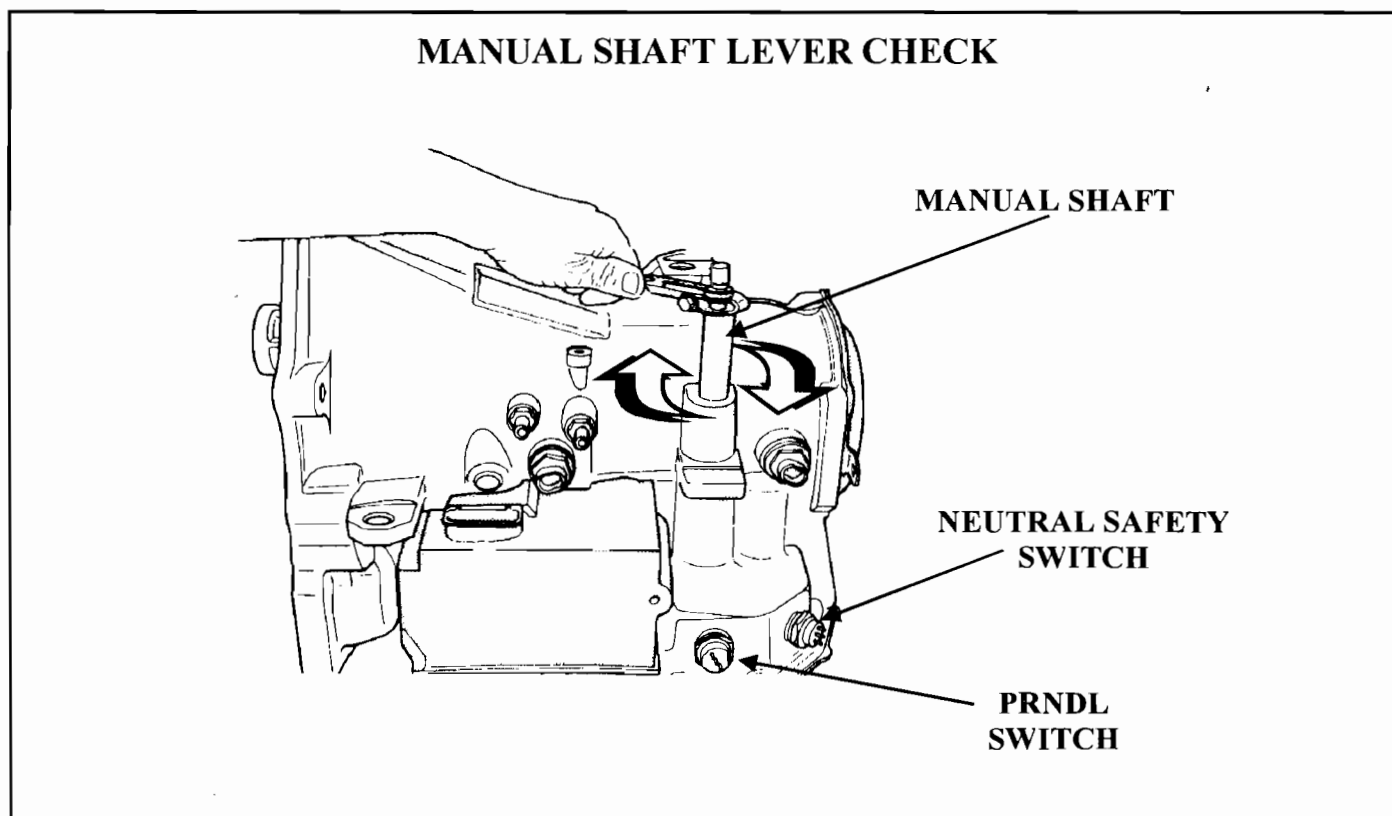


Figure 1



CHRYSLER 41TE
FAILSAFE WITH CODE 12 OR NO CODES AT ALL or
FAILSAFE WITH NO MODULES RESPONDING or
FAILSAFE WITH EATX RELAY PRODUCING A LOUD CLICKING NOISE

COMPLAINT: Vehicle stuck in a failsafe condition with a scanner read out of either a code 12 or 15 or no codes at all. Other symptoms may be the scanner indicates that the transaxle module is not responding, a sudden loss of communication, or that the EATX relay exhibits a loud clicking noise.

CAUSE: The most common cause for the above condition is a defective fusible link. This fusible link supplies keep alive battery voltage to pin # 56 at the transaxle controller and switched battery voltage to the EATX relay.

CORRECTION: A quick method to verify that the fusible link is the problem, locate wire 56 in the controller (See Figure 1). Carefully remove some of the insulation from the wire and connect battery voltage to the wire with a jumper wire (See Figure 2). Once connected, if all symptoms are removed, a defective fuse or fusible link is the problem. To assist on locating the defective fusible link, all fusible links are color coded and can be found below and between the battery and driver side spring tower (See Figure 3). Refer to the chart in Figure 4 which cross references the fusible link color identification to the vehicle make and year.

SERVICE INFORMATION:

Fusible links are ordered by color and wire gauge.

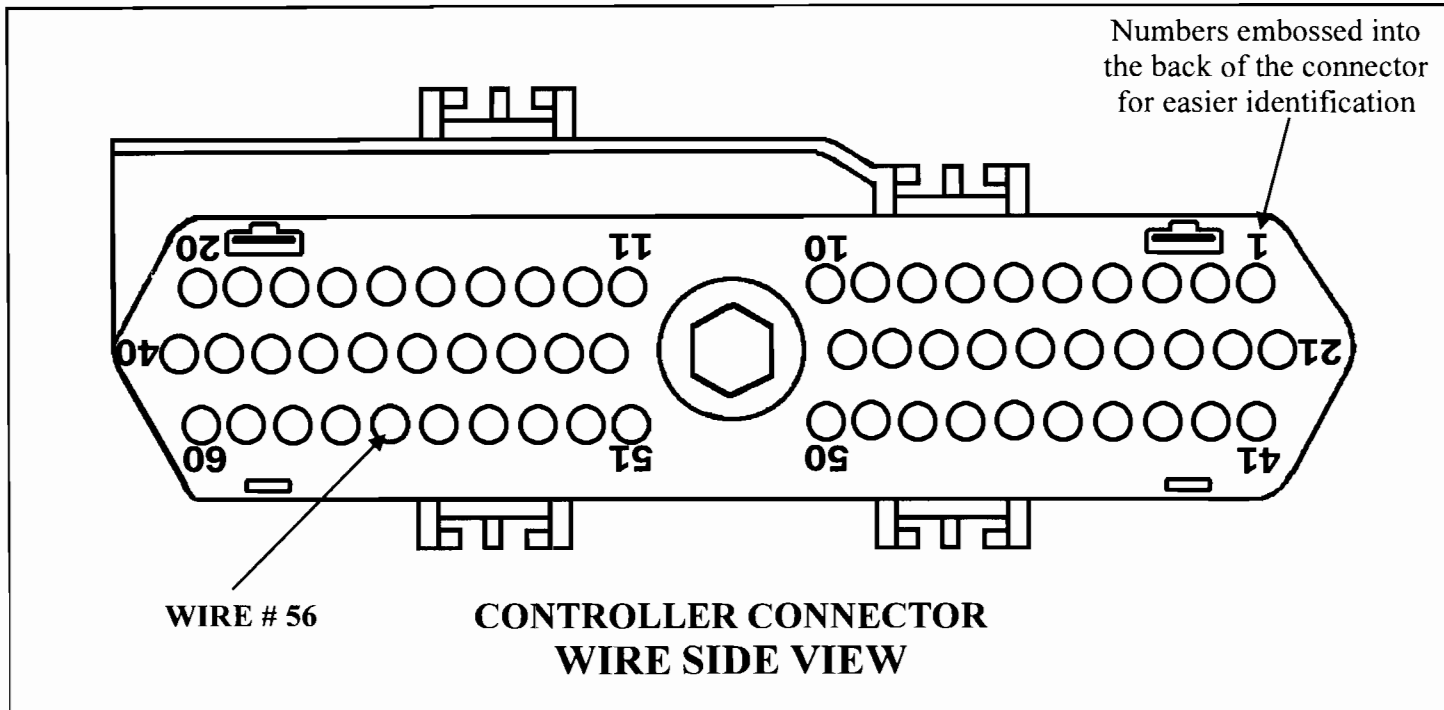


Figure 1

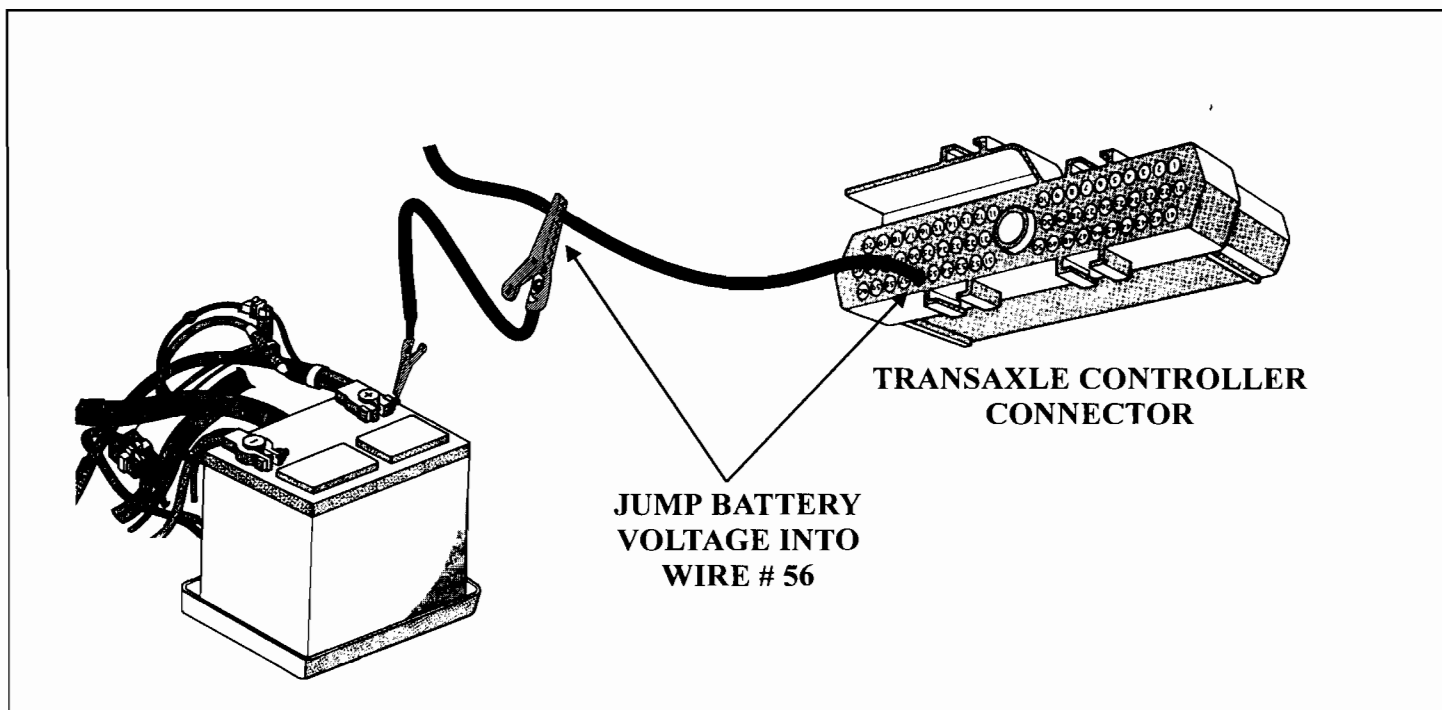


Figure 2

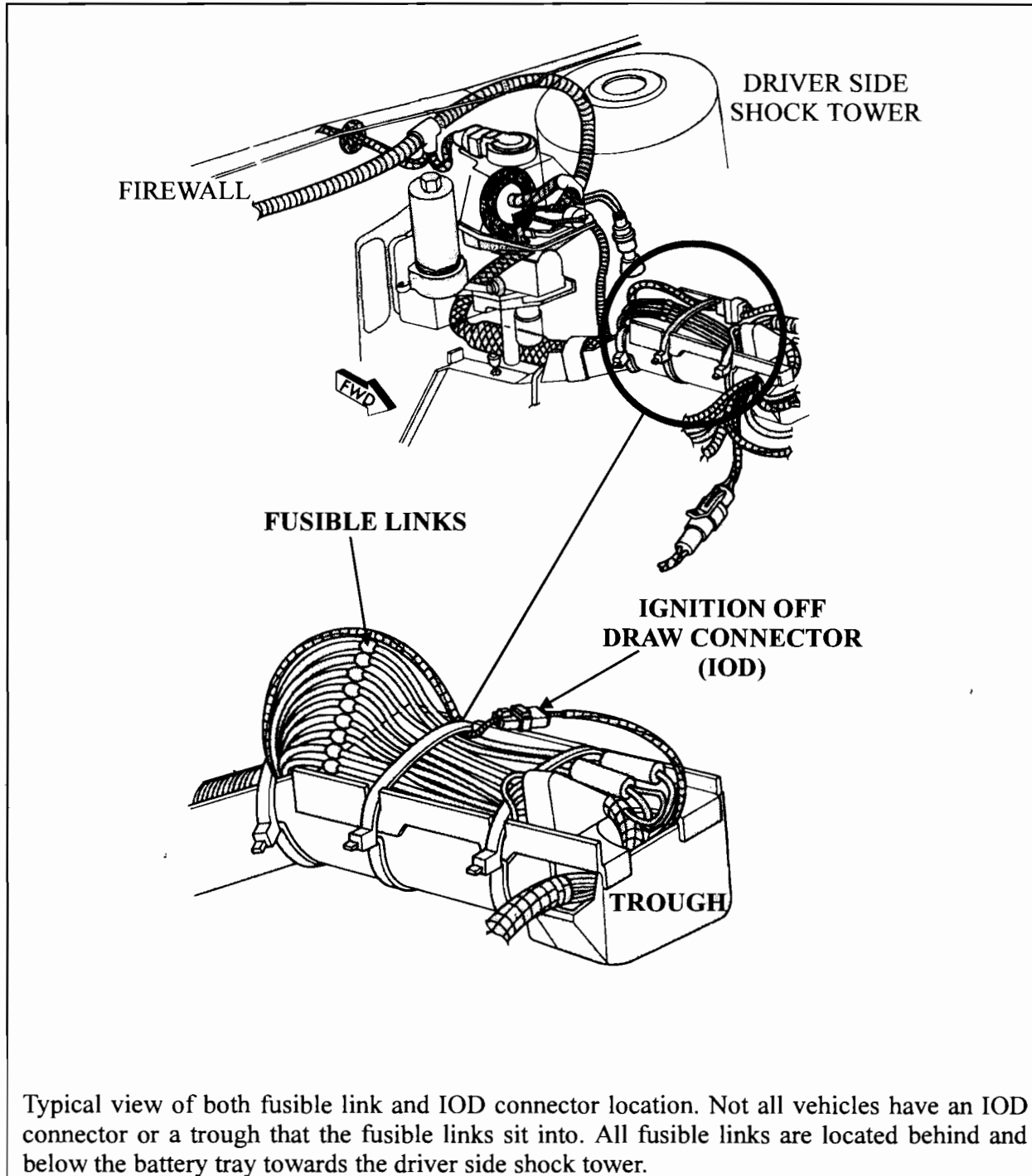


Figure 3



| | |
|---|--|
| 1989 | |
| Acclaim, Dynasty, New Yorker and Spirit..... | White Fusible Link |
| Caravan, Mini Ram Van & Voyager..... | Orange Fusible Link |
| 1990 | |
| Acclaim and Spirit..... | (IOD) - Orange Fusible Link |
| Daytona..... | (IOD) - Orange & or White Fusible Link |
| Dynasty, 5th Avenue, Imperial and New Yorker..... | (PDC) - Fuse J |
| Lebaron Convertable and Coupe..... | Orange & or White Fusible Link |
| Caravan, Mini Ram Van & Voyager..... | White Fusible Link |
| 1991 | |
| Acclaim, Lebaron Sedan and Spirit..... | White Fusible Link |
| Daytona, Lebaron Convertable and Coupe..... | (PDC) - Fuse # 54 |
| Dynasty, 5th Avenue, Imperial, New Yorker..... | (PDC) - Fuse J |
| Caravan, Town & Country & Voyager..... | (FB) - Fuse # 54 |
| 1992 | |
| Acclaim, Lebaron Sedan and Spirit..... | White Fusible Link |
| Daytona, Lebaron Convertable and Coupe..... | (PDC) - Fuse # 46 |
| Dynasty, 5th Avenue, Imperial, New Yorker..... | (PDC) - Fuse J |
| Caravan, Town & Country & Voyager..... | (IOD) - Gray Fusible Link |
| 1993 | |
| Acclaim, Lebaron Sedan and Spirit..... | Orange Fusible Link |
| Daytona, Lebaron Convertable and Coupe..... | (PDC) - Fuse # 55 |
| Dynasty, 5th Avenue, Imperial, New Yorker..... | (PDC) - 30 Amp Fuse (Fuel Pump Trans) |
| Shadow & Sundance..... | White Fusible Link |
| Caravan, Grand Caravan, Town & Country, Grand Voyager & Voyager..... | Gray Fusible Link |
| 1994 | |
| Acclaim, Lebaron Sedan and Spirit..... | White Fusible Link |
| Daytona, Lebaron Convertable and Coupe..... | (PDC) - Fuse # 55 |
| Shadow & Sundance..... | White Fusible Link |
| Caravan, Grand Caravan, Town & Country, Grand Voyager & Voyager..... | (FB) - Fuse # 15 |
| IOD = Ignition Off Draw Connector PDC = Power Distribution Center FB = Fuse Block | |

Figure 4

CHRYSLER A604
DELAYED FORWARD ENGAGEMENT
AND/OR NO FIRST GEAR AND FAILSAFES
WITH DTC's 24, 36 & 51

COMPLAINT: After overhaul vehicle exhibits delayed and/or a shuddering condition, when shift lever is engaged into any forward range, followed by an immediate abort to "Limp Mode."

CAUSE: The cause may be, that during the valve body cleaning process, retainer No.3 and/or one of the small "Buttons" in the solenoid switch valve train was not installed during reassembly. These parts can usually be found in the bottom of the solvent tank.

CORRECTION: Install the solenoid switch valve train and retainer No.3 as shown in Figure 1.
NOTE: Retainer location No.4 and Torque Converter Clutch Switch Valve Train shown in Figure 1 are for "92" and later only!

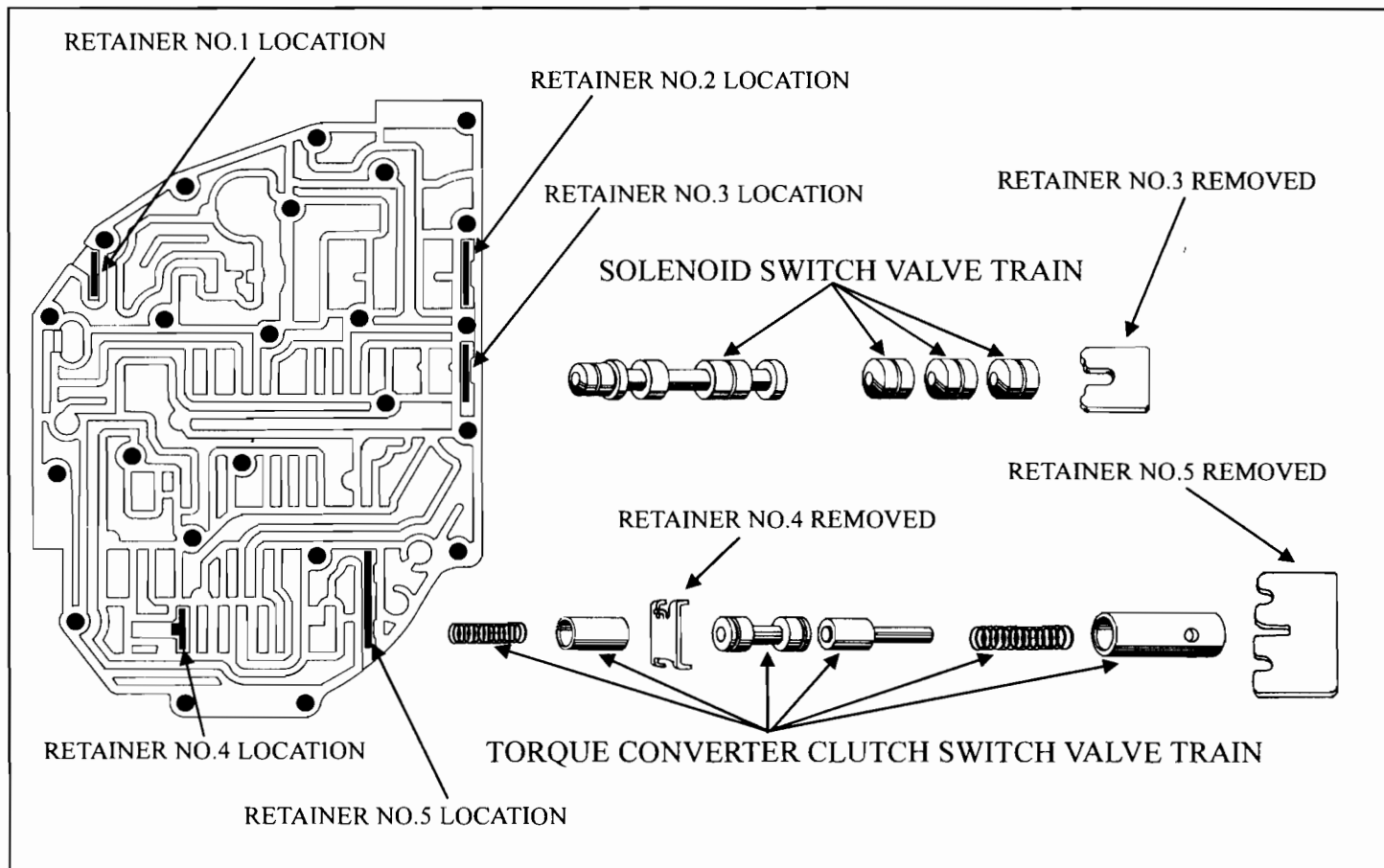


Figure 1



CHRYSLER 41TE & 42LE
IMPROVED TRANSMISSION SHIFT QUALITY
(*CHRYSLER BULLETIN 18-24-95*)

The following is a partial reprint from a Chrysler TSB indicating TCM calibration changes and updates.

| | |
|----------------|--|
| MODELS: | 1989-1995 (AA) Acclaim/Spirit/LeBaron Sedan |
| | 1989-1993 (AC) Dynasty/New Yorker/New Yorker Salon |
| | 1990-1993 (AG) Daytona |
| | 1990-1995 (AJ) LeBaron Coupe/LeBaron Convertible |
| | 1993-1994 (AP) Sundance/Shadow/Shadow Convertible |
| | 1990-1991 (AD) Chrysler TC |
| | 1989-1995 (AS) Caravan/Voyager/Town & Country |
| | 1990-1993 (AY) Imperial/New Yorker Fifth Avenue |
| | 1993-1995 (ES) Chrysler Voyager (European Market) |
| | 1995 (FJ) Sebring/Avenger/Talon |
| | 1995 (JA) Cirrus/Stratus |
| | 1993-1995 (LH) Concorde/Intrepid/Vision/LHS/New Yorker |

SYMPTOM/CONDITION:

1992 AC & AY vehicles built after Feb. 15, 1992, 1995 FJ vehicles and all other 1993-1995 subject vehicles built before Oct. 24, 1994 are equipped with an electronically modulated converter clutch (EMCC).

Vehicles that operate at speeds where EMCC (partial lock-up) usage is engaged (vehicle speeds between 34-41 MPH), may experience early deterioration of the transmission fluid (15,000-30,000 miles), exhibit a pronounced shudder during EMCC operation, harsh upshifts/downshifts, and/or harsh torque converter clutch engagements.

These conditions may be corrected by flashing the TCM with new calibrations which will eliminate EMCC operation under normal driving conditions. However, if an overheating condition is identified by the PCM or TCM, EMCC operation will be *temporarily* enabled. Change the fluid and drive the vehicle for 10 miles and change the fluid again.

NOTE: Flashing a TCM can only be achieved with Chryslers dedicated scan tool, the DRB III. Not all TCM's are flashable. These type controllers would then require replacement of an updated TCM.

On 1993 and later vehicles, when the TCM is replaced, setting the Pinion Factor and performing the Quick Learn Operation procedure will be necessary.

The TCM calibration used in the 1995 model year 41TE and the 42LE TCM is being made available for all the vehicles dating back to the 1989 model year. Listed on the following page are the shift quality improvements and default issues that will be corrected by the new TCM calibration.



1997 SEMINAR INFORMATION

INFORMATION ONLY

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1. Coastdown Tip-In Bump: Vehicle is decelerated almost to a stop (less than 8 MPH), then the driver tips back into the throttle to accelerate, a noticeable bump may be felt.
2. Coastdown Shift Harshness: Harsh coastdown shifts on some 4-3, 3-2 and 2-1 downshifts.
3. 1995 LH with 42LE Transaxle-Sluggishness/Lack of Response: On some early 1995 LH vehicles built prior to Oct. 24, 1994, a perceived lack of power or transmission responsiveness may be encountered under normal operating conditions. The transmission may not release the converter clutch as desired with increased throttle. This occurs in 4th gear from 35 MPH to 50 MPH.
4. 1989-1994 with 41TE & 42LE Transaxles: Harsh shifts and/or vehicle shudder during 3-2 or 2-1 kickdowns at speeds less than 25 MPH.
5. 1993 with 41TE Transaxle: Harsh 3-4 upshifts may occur, especially at highway speeds, while using the speed control.
6. 1989-1994 with 41TE Transaxle: Harsh/Delayed Garage Shifts: Delay is less than 2 seconds and the shift is harsh after the brief delay. NOTE: Delays greater than 2 seconds are caused by transmission hardware malfunction, i.e., valve body, pump, failed lip seals or malfunctioning PRNDL or neutral start switch.
7. 1989-1994 with 41TE & 42LE Transaxles - Poor Shift Quality After a Battery Disconnect: All transmission learned values are reset to the factory default values if battery power is lost to the TCM. The new 1995 calibration will now retain all learned values in memory after battery disconnect. However, if a transmission is rebuilt or a new transmission or TCM is installed, the Quick Learn procedure must be performed to calibrate Clutch Volume Indexes (CVI) on 1993 and later vehicles (1992 and prior vehicle cannot be Quick Learned).
8. Early 1993 with 41TE & 42LE Transaxle - Intermittent Speed Control Drop Out: The new calibration changes corrects this condition.
9. 1989-1993 with 41TE & 42LE Transaxles - New fault code 35 (failure to achieve pump prime) has been added for improved diagnostic capability, and fault codes 21, 22 and 24 are de-sensitized to reduce erroneous limp-in conditions.

Code 21 (OD Pressure Switch Circuit) - Can be set in error on vehicles with a maladjusted shift cable or if the transaxle is shifted slowly from the OD position to the N position. This typically happens if the operator has a tendency to rest the hand on the shift lever, or overshoots the OD gate while manually shifting from 1 or 3 to OD. The new software detects this maneuver and shifts the transaxle in Neutral rather than setting code a 21 faults and the subsequent limp-in conditions.

Code 22 and 24 (2-4 and L-R Pressure Switch Circuits) - In low ambient temperatures (below 32° F or 0° C) some 1989 and 1990 model year vehicles may set this fault in error. Condensation can form and freeze in the PRNDL and/or neutral start switch and cause a delay on garage shifts. The new software prevents this fault code from being set in error and the transaxle going into the limp-in mode.

Code 24 (Low Reverse Pressure Switch Circuit) - Can get set in error on vehicles where pump prime problems exist. The new fault code 35 (failure to achieve pump prime) has been added and does not trigger a limp-in condition.

NOTE: When flashing to, or installing the following TCM part numbers:

4796121, 4796122, 4796123, and 4796124

When flashing to or installing these TCM's, it is necessary to ensure no wire is connected at CAVITY 49 of the TCM wiring harness connector (See Figure 1). If the wire is left connected, and the vehicle is driven at speeds fast enough for the transmission to be in 4th gear/Overdrive (OD), when the brake pedal is pushed, the transmission will shift into 3rd gear or if the transmission was already in 3rd gear it will shift into OD. If the brake pedal is pushed again, the transmission will have OD enable/disable (whether or not an actual shift takes place depends on vehicle speed) and will change between enabled/disabled OD each time the brake pedal is pushed.

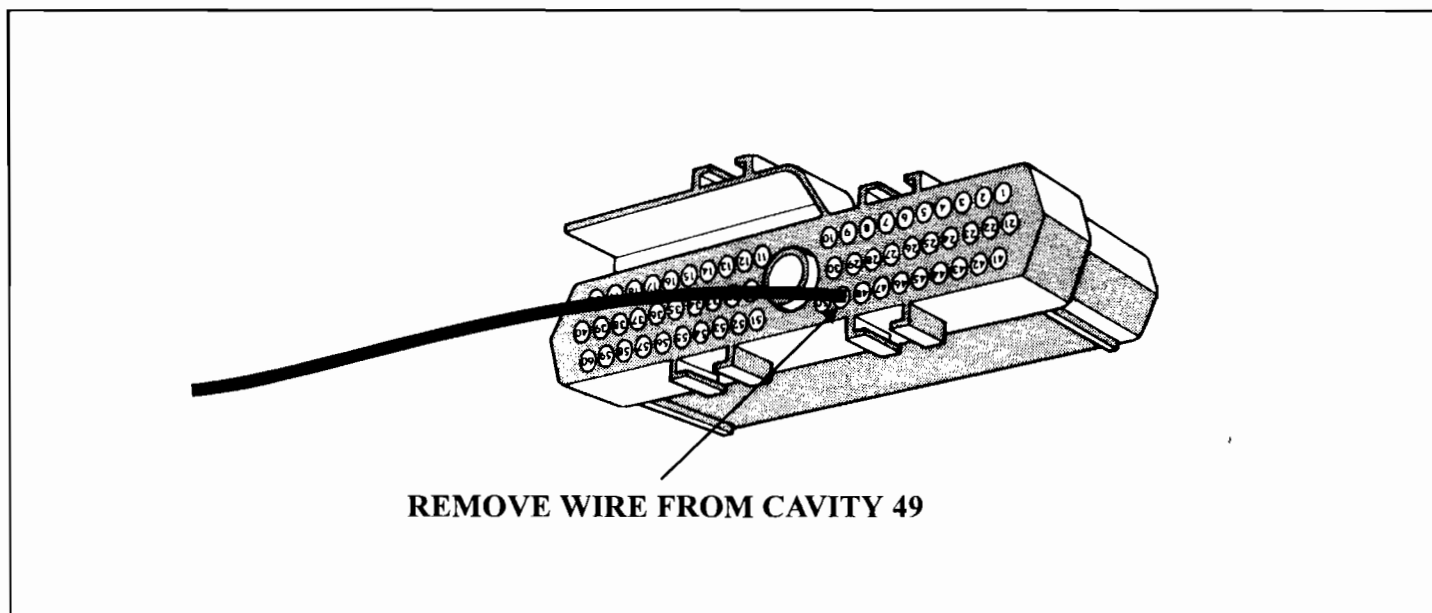


Figure 1

**You're Going To Love It
Your Satisfaction
Is Guaranteed!**

CHRYSLER A500SE(42RE) NO UPSHIFT AFTER REBUILD

COMPLAINT: After rebuild, the transmission will not upshift out of first gear. Governor pressure is checked with a gauge and 0 psi is seen at all times, even when the solenoid harness is unplugged.

CAUSE: One cause may be that during overhaul, it is not uncommon to find the overdrive piston support worn excessively where the low reverse drum rides (See Figure 1). When the support was replaced, one was used from an A500/518 transmission. This allows all governor oil to be exhausted as the A500/518 support has feed and return governor holes for the governor tubes to fit into where as the 42RE does not use tubes since governor pressure is solenoid controlled off the valve body (See Figure 2). The support found on the 42RE does not have these holes which blocks any governor oil from escaping to an exhaust (See Figure 3).

CORRECTION: Replace the support with one from a 42RE transmission. In some cases, the overdrive extension housing can be removed from the transmission without removing the whole transmission from the vehicle. If this is available, remove the overdrive section and carefully drill an tap and plug the two holes in the support with pipe plugs as shown in Figure 4.

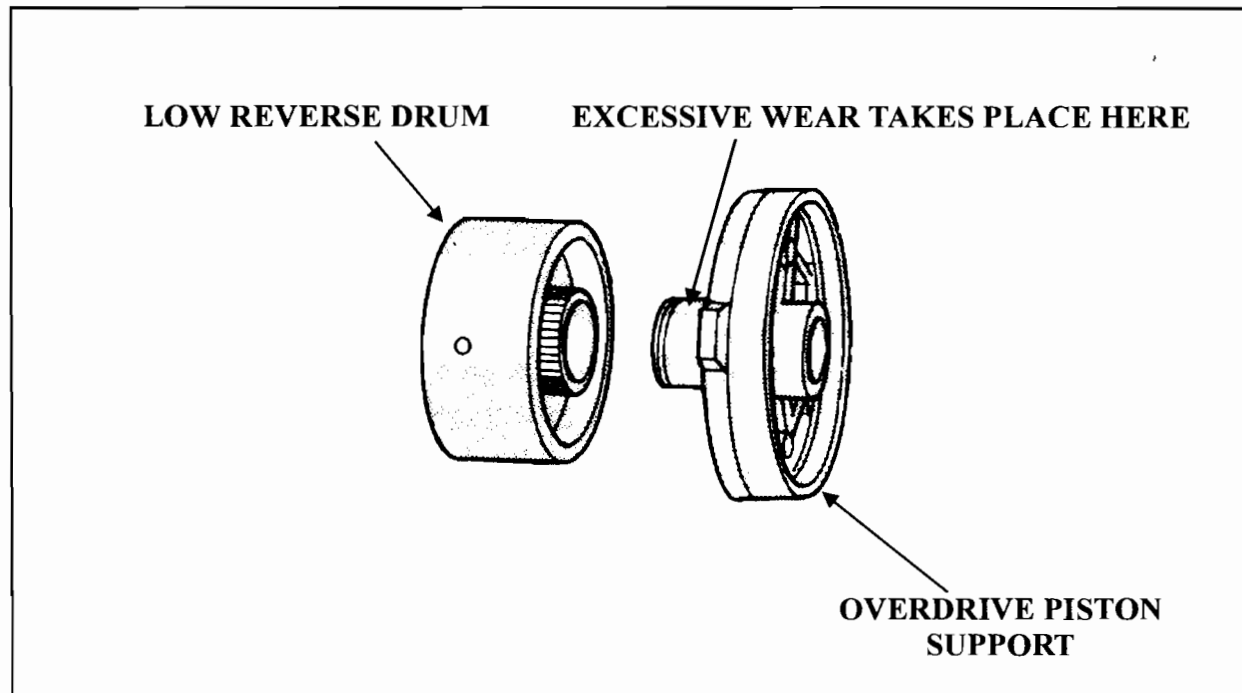
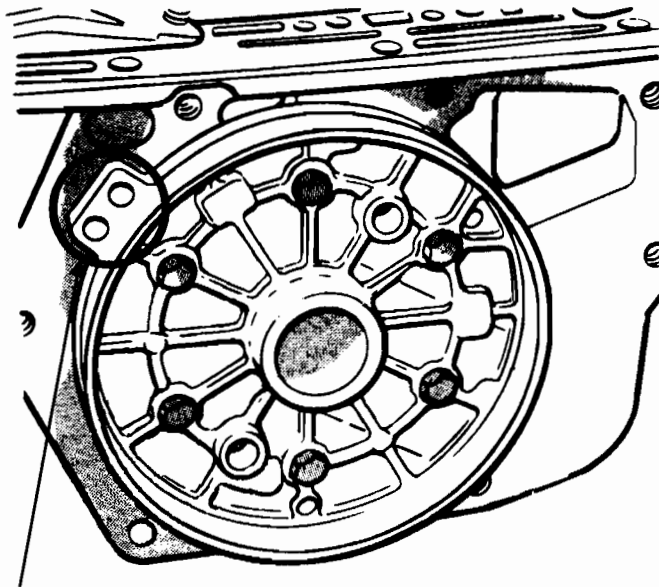
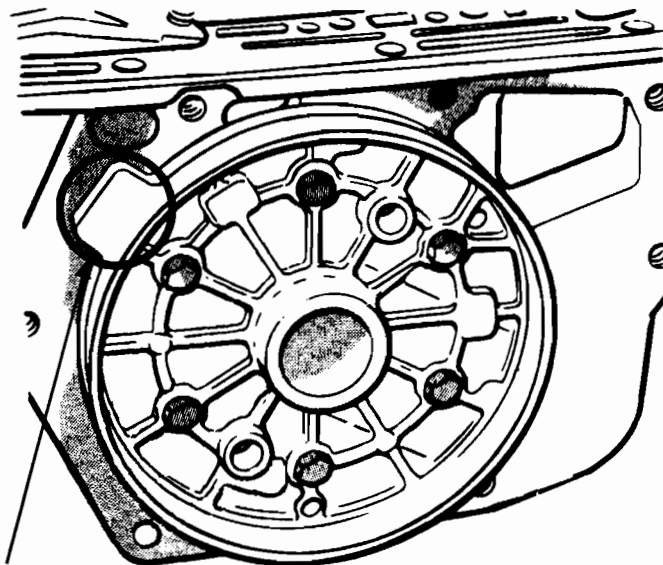


Figure 1



**GOVERNOR FEED AND RETURN
PIPE HOLES USED IN A500/518
MODEL TRANSMISSIONS ONLY**

Figure 2



**NO HOLES IN SUPPORT WITH
THE 42 & 46RE
TRANSMISSIONS**

Figure 3

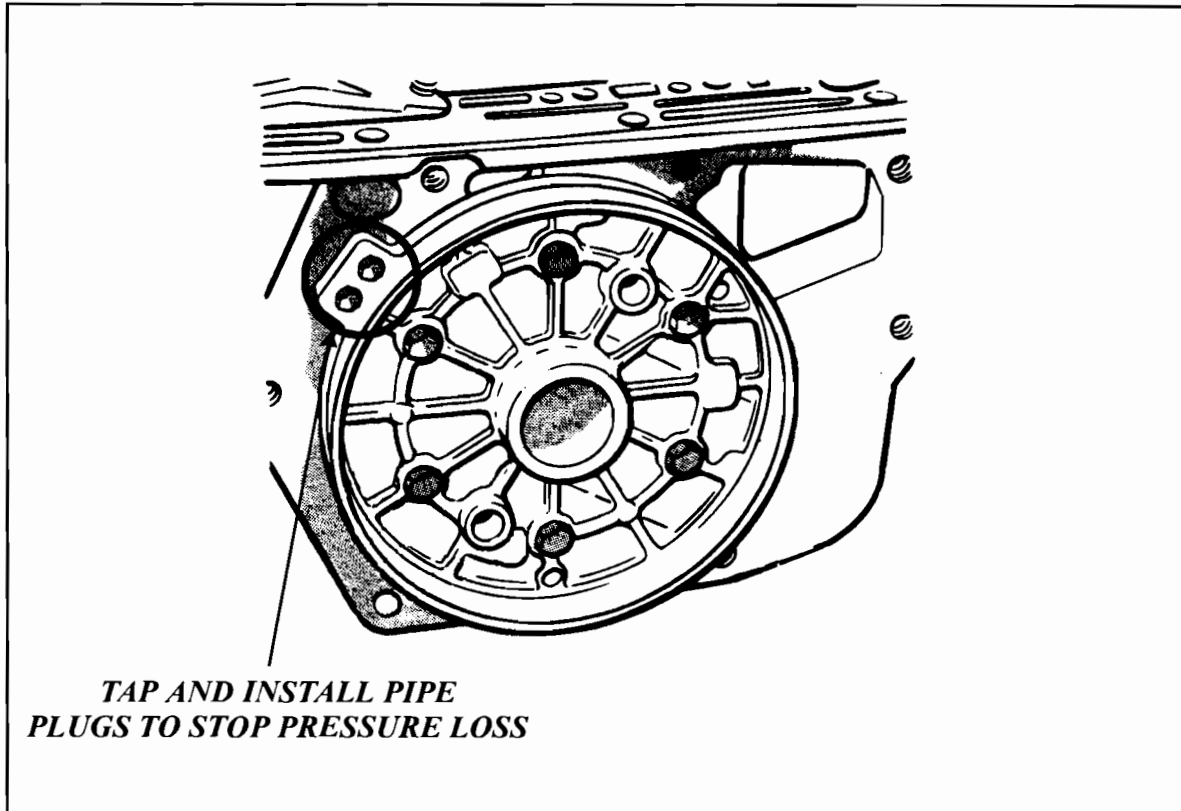


Figure 4



**CHRYSLER/JEEP 42RE
WRONG GEAR STARTS
(MAY OR MAY NOT UPSHIFT)**

COMPLAINT: Any Chrysler/Jeep vehicles equipped with the 42RE transmission may display one of the following complaints: (A) The vehicle exhibits a second or third gear start, *with* an upshift into fourth gear. (B) The vehicle exhibits a third gear start, *with no* upshift into fourth gear.

CAUSE: (A) If the vehicle has a wrong gear start, and *does* upshift into fourth gear, the cause may be a stuck 1-2 shift valve in the valve body, a defective governor pressure sensor, a defective governor pressure solenoid, or a defective computer.

(B) If the vehicle starts in third gear and *does not* upshift into fourth gear, the cause may be, either a power loss to the computer, or the computer is defective.

CORRECTION (A):

- (1) If the vehicle has a wrong gear start and upshifts to fourth gear, place a pressure gauge on the governor tap, as shown in Figure 1. Should 0 PSI be observed while taking off in second gear, a sticking 1-2 shift valve is the cause. To correct this condition will require removing the valve body and freeing the 1-2 shift valve.
Should 7 to 12 PSI be seen at 0 MPH, the governor pressure sensor or the governor pressure solenoid may be the problem. If a DRB III scanner *is* available, go to Step 2 as the next diagnostic procedure. If a DRB III scanner *is not* available, go to Step 3.
- (2) Chryslers dedicated DRB III scanner displays governor pressure sensor values that the computer monitors. The governor pressure sensor provides information to the computer as to the approximate pressure in the governor circuit. If at a stop, the sensor tells the computer that 0 PSI is in the governor circuit, but a pressure gauge reveals that there is actually 12 PSI in the governor circuit, the computer does not know to cycle the governor solenoid to a lower pressure since it already thinks it is at 0 PSI. If the sensor indicates that 12 PSI is in the governor circuit, and the pressure gauge verifies it, this means that the sensor is working properly and the governor pressure solenoid is most likely defective and will need to be replaced.
- (3) Without the DRB III scanner, voltage checks will have to be made on the governor pressure solenoid wire, and the governor pressure sensor wire with your DVOM, while a pressure gauge is attached to the governor pressure port as shown in Figure 1. Following is the procedure for these tests.
 - (a) Orient yourself to the transmissions case connector and the vehicle harness connector as shown in Figure 2.
 - (b) Once oriented to the case connector and vehicle harness connector, locate terminal number 4 and connect the vehicle harness back onto the case connector. With your DVOM set on DC volts, place the negative lead to a known good ground. Carefully backprobe into wire number 4 with the positive lead, as shown in Figure 3.

Continued on next Page.



CORRECTION (A): (Continued)

- (c) Now compare vehicle speed, governor pressure from the gauge, and governor sensor signal voltage from your DVOM, to that which is indicated in the chart in Figure 4. If at 0 MPH, your pressure gauge indicates 12 PSI, while the sensor voltage reads .66 volts, the governor pressure sensor is defective and will need to be replaced. If governor pressure sensor voltage corresponds to the pressure seen on the gauge, and agrees with the chart shown in Figure 4, move on to the next step.
(Example:) Pressure gauge indicates 12 PSI, at 0 MPH, while the sensor voltage indicates .95 volts. This example shows that the sensor is okay.
- (d) Maintain the ground lead to a known good ground and carefully backprobe into wire number 5 (Governor Pressure Solenoid) with the positive lead (See Figure 3). Again using the chart in Figure 4, compare the voltage values for the governor pressure solenoid, to the actual governor pressure indicated on the gauge.
If for example at 0 MPH, the pressure gauge indicates 12 PSI, and the DVOM shows that governor pressure solenoid voltage reads 8.30 volts, The solenoid is mechanically bad (Debris) and will need to be replaced. If the pressure gauge reads 12 PSI, and 8.70 volts is seen, the VSS or the computer is malfunctioning. Unplug the Vehicle Speed Sensor and see if governor pressure drops to 0 PSI. If it does, replace the VSS. If it does not, the computer will need to be replaced.

CORRECTION (B):

- (1) If the vehicle is stuck in third gear, with no upshifts to fourth gear, turn the engine off and place the ignition switch to the ON position, unplug the transmission harness connector and perform the following tests.
 - (a) Check pin cavity number 1 in the vehicle harness connector for battery voltage, as shown in Figure 5. If 0 volts is seen, the computer is either defective, or the computer has lost its power source, or the wire from the computer down to pin number 1 is broken. First locate the computer which is under the dash on the drivers side, and unplug the connector as seen in Figure 6, and continue to the next step.
 - (b) Locate pin cavity number D16 in the transmission control module connector, as shown in Figure 7. Perform a continuity test between cavity number D16 and pin cavity number 1 in the vehicle harness connector, as shown in Figure 8. There should be 5 ohms or less. If there is an open reading (Infinity), the wire is broken and will need to be repaired. If there is more than 5 ohms resistance observed, there is corrosion somewhere in the wiring, or a short to ground may have occurred, which means the wire will have to be replaced as well. If 5 ohms or less is seen, move on to the next step.
 - (c) With the engine off and the ignition switch in the ON position, check for battery voltage in the transmission control module connector, on pins C8, C9 and D8, as shown in Figure 9. If battery voltage is lost at *any* one of these terminals, check for blown fuses in the power distribution center, located on the passenger side fender shield by the battery. Check fuses F2, F3, F6, F15, and replace as necessary, as shown in Figure 10. If battery voltage is seen at all three locations, continue on to the next step.

Continued on next Page.



CORRECTION (B): (Continued)

- (d) Plug the transmission control module connector back into the computer, and with the engine off and ignition switch in the ON position, check for 5 volts at cavity number 2 in the vehicle harness connector, as shown in Figure 11. If no voltage is seen, unplug the transmission control module connector and test for continuity between cavity C10 at the transmission control module connector and terminal number 2 at the vehicle harness connector, as shown in Figure 12. If 5 ohms or less is indicated, the computer will need to be replaced. If an open circuit is indicated, repair or replace the broken wire between C10 and terminal 2.

SERVICE INFORMATION:

| | |
|----------------------------------|----------|
| Governor Pressure Sensor | 56027562 |
| Governor Pressure Solenoid | 4617210 |

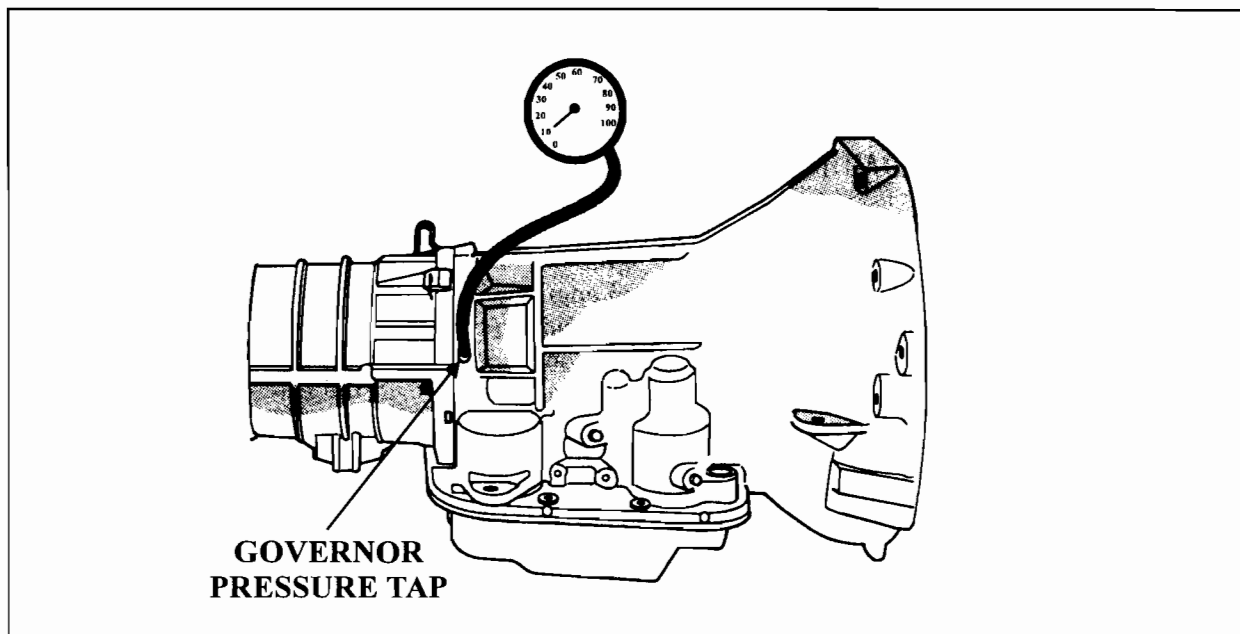


Figure 1

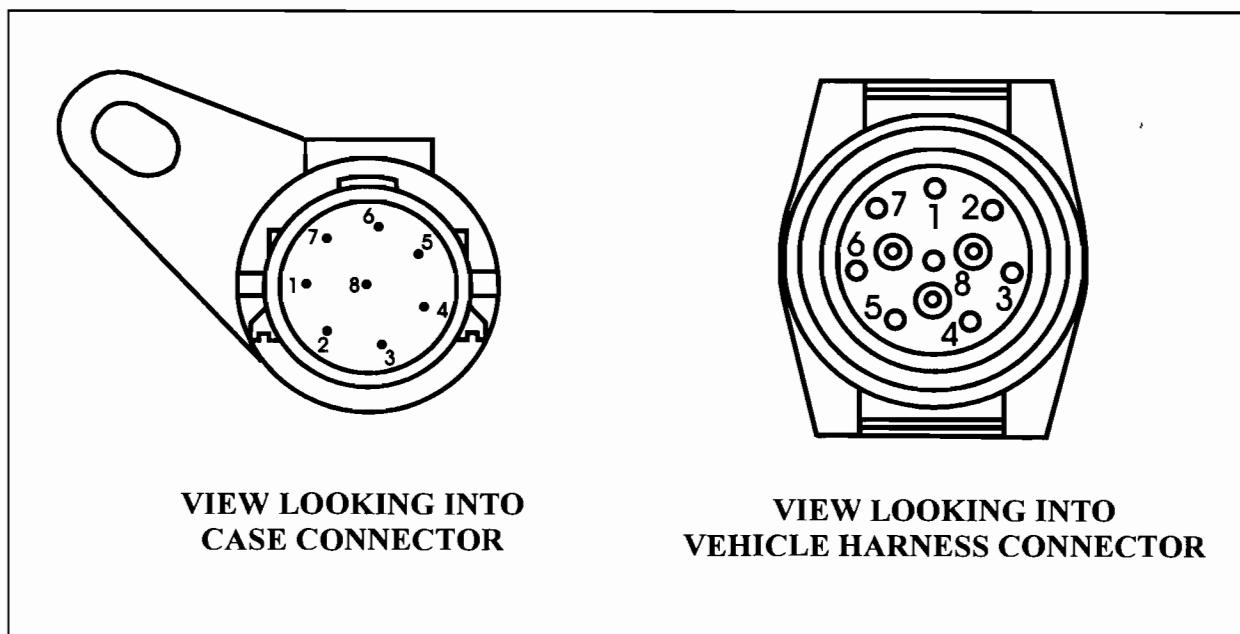


Figure 2

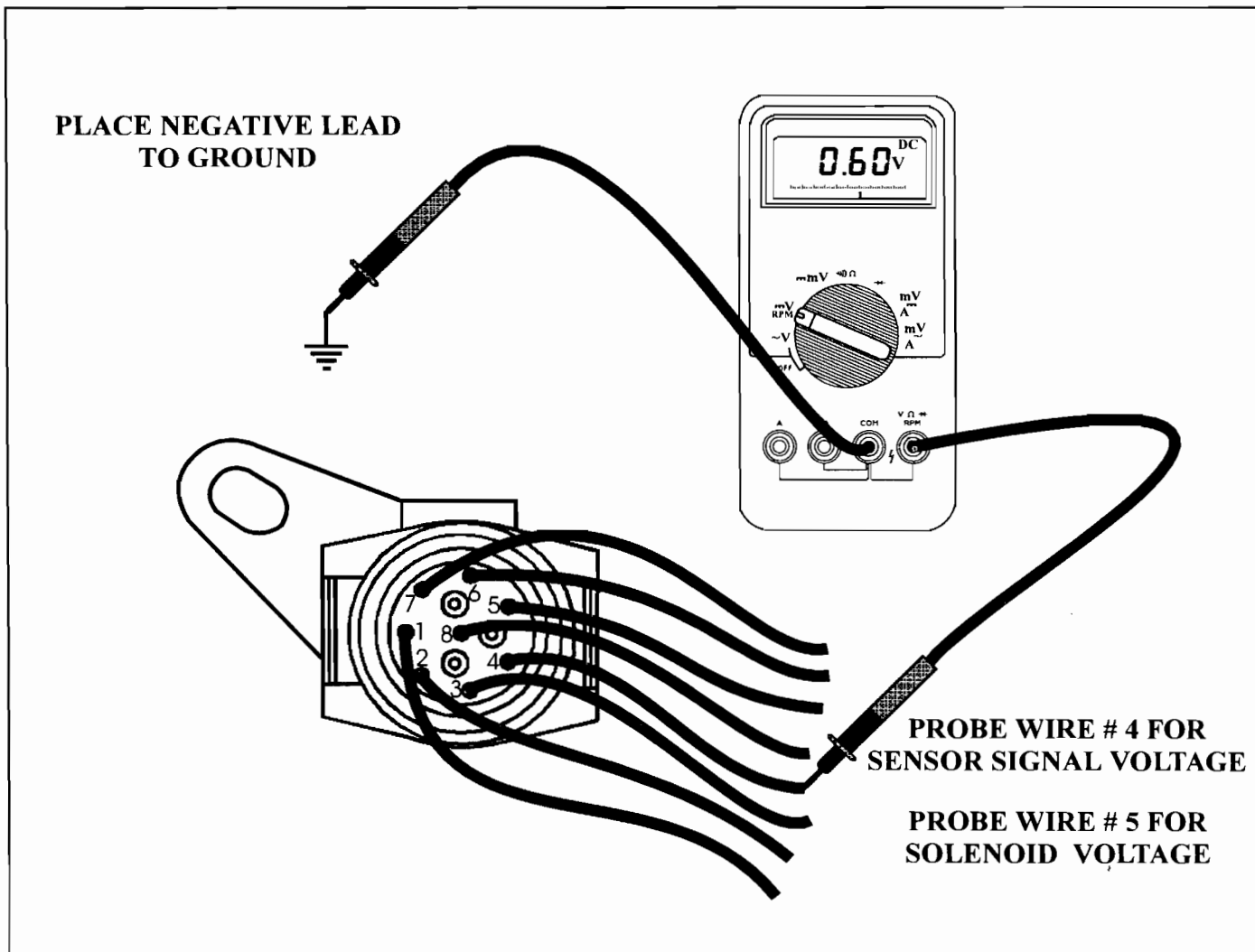


Figure 3

| MPH | 0 | 10 | 20 | 30 | 40 | 50 | 60 |
|--------------------------------|------|------|------|------|-------|-------|-------|
| SENSOR SIGNAL VOLTAGE WIRE # 4 | .66 | .90 | 1.10 | 1.45 | 1.80 | 2.15 | 2.95 |
| SOLENOID VOLTAGE WIRE # 5 | 8.30 | 8.60 | 9.45 | 9.80 | 10.30 | 10.80 | 13.80 |
| APPROXIMATE GOVERNOR PRESSURE | 0 | 10 | 20 | 30 | 40 | 50 | 60 |

Figure 4

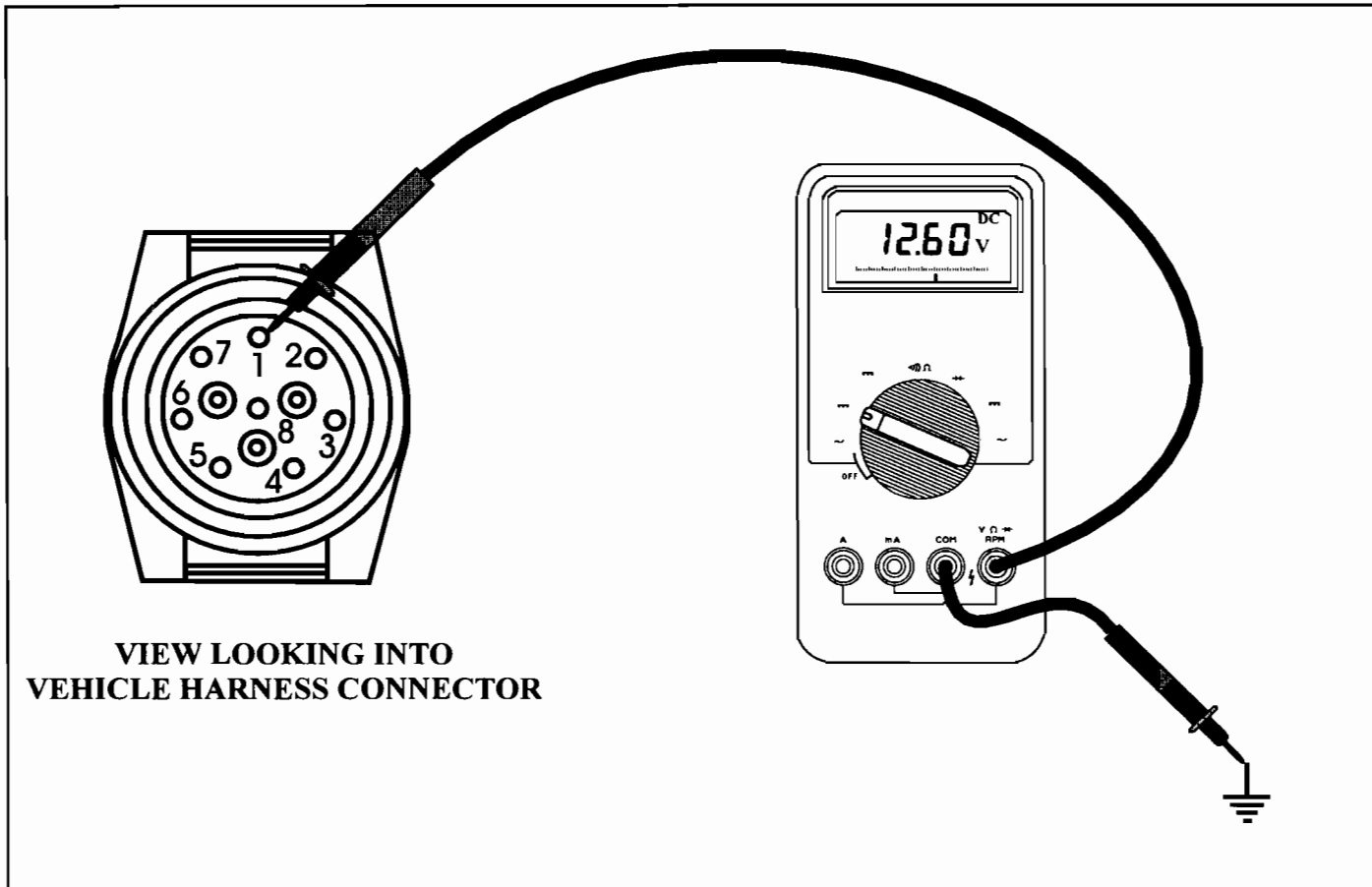


Figure 5

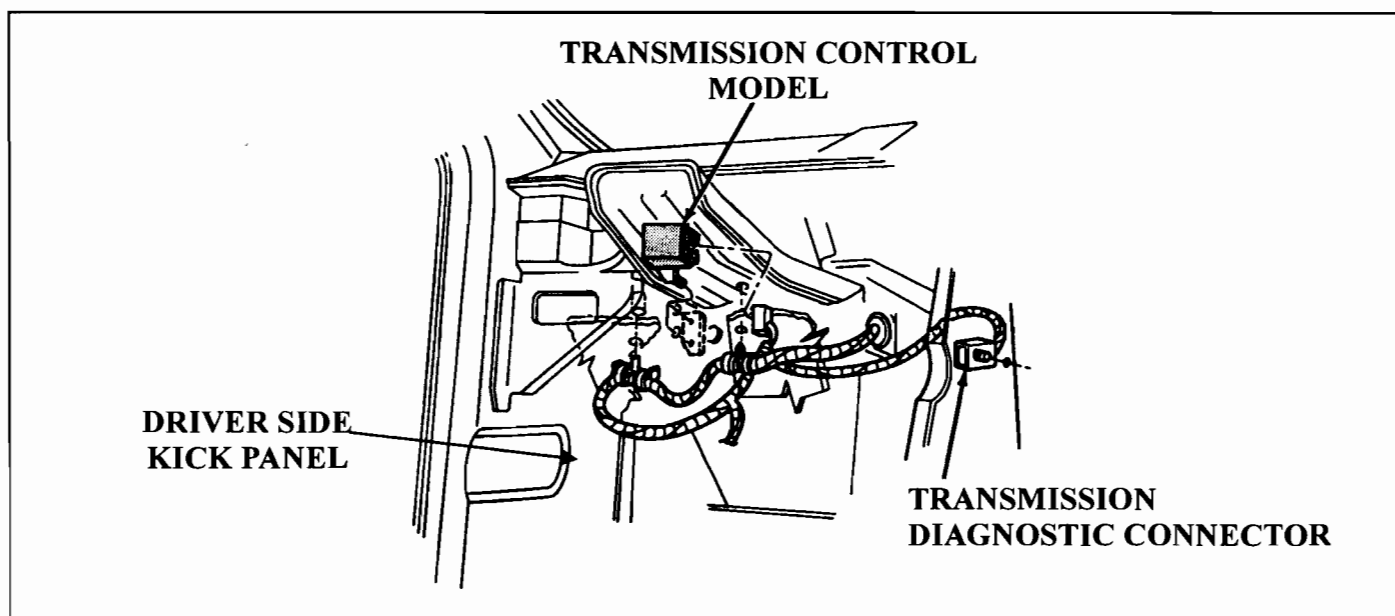


Figure 6

TRANSMISSION CONTROL
MODULE CONNECTOR

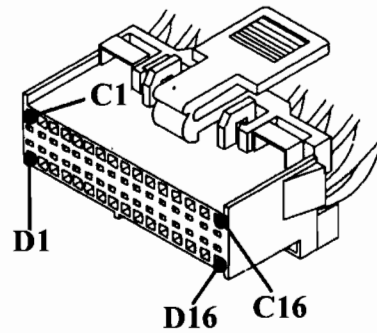


Figure 7

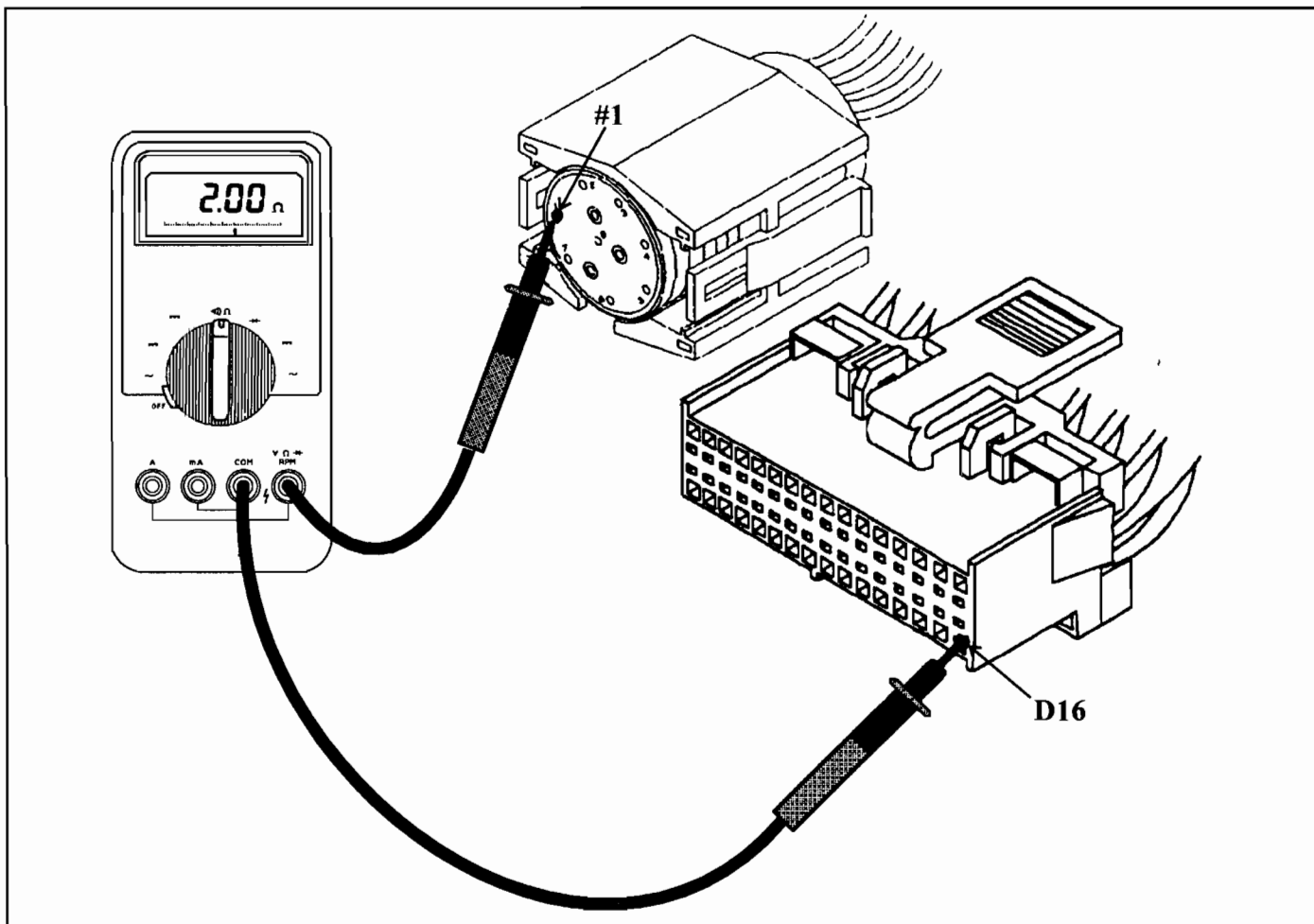


Figure 8

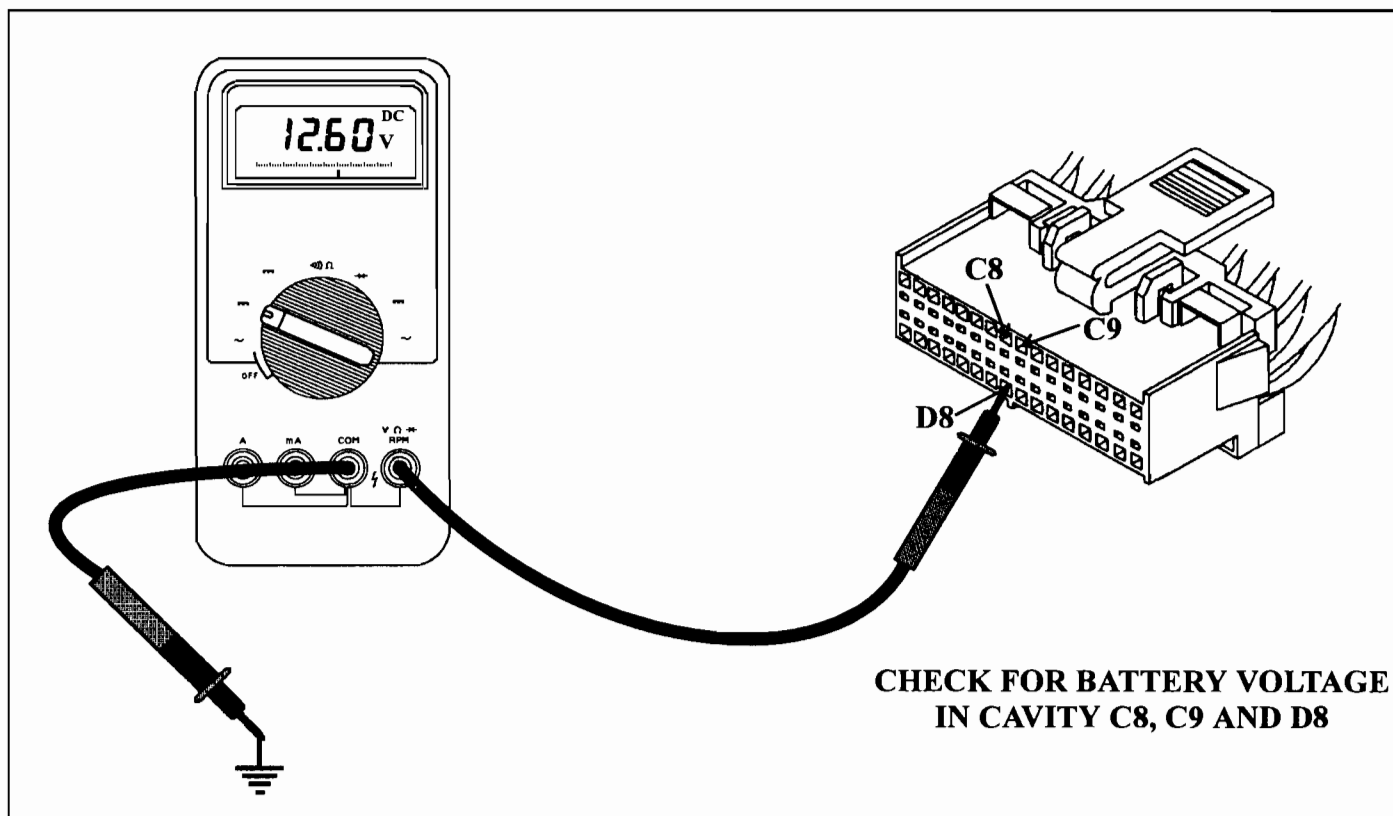


Figure 9

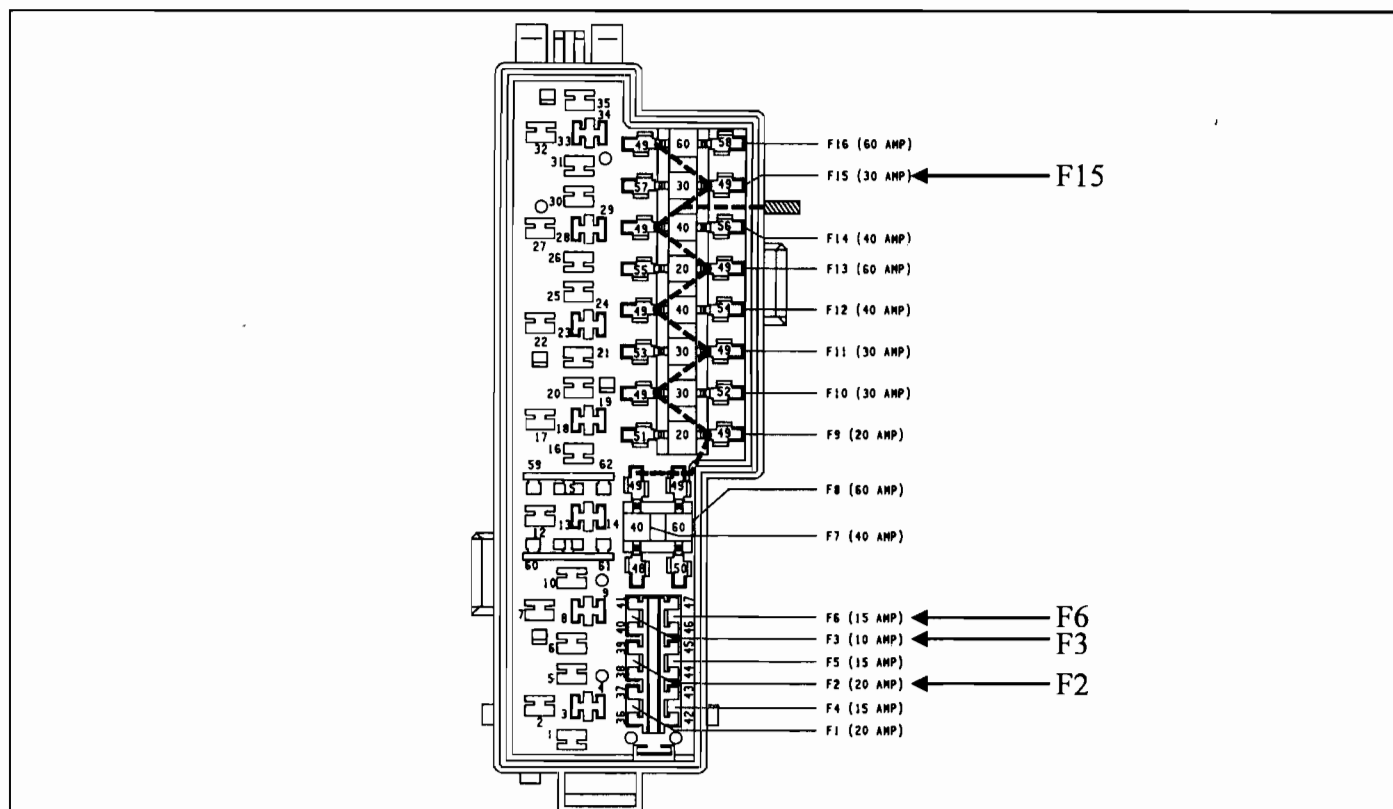


Figure 10

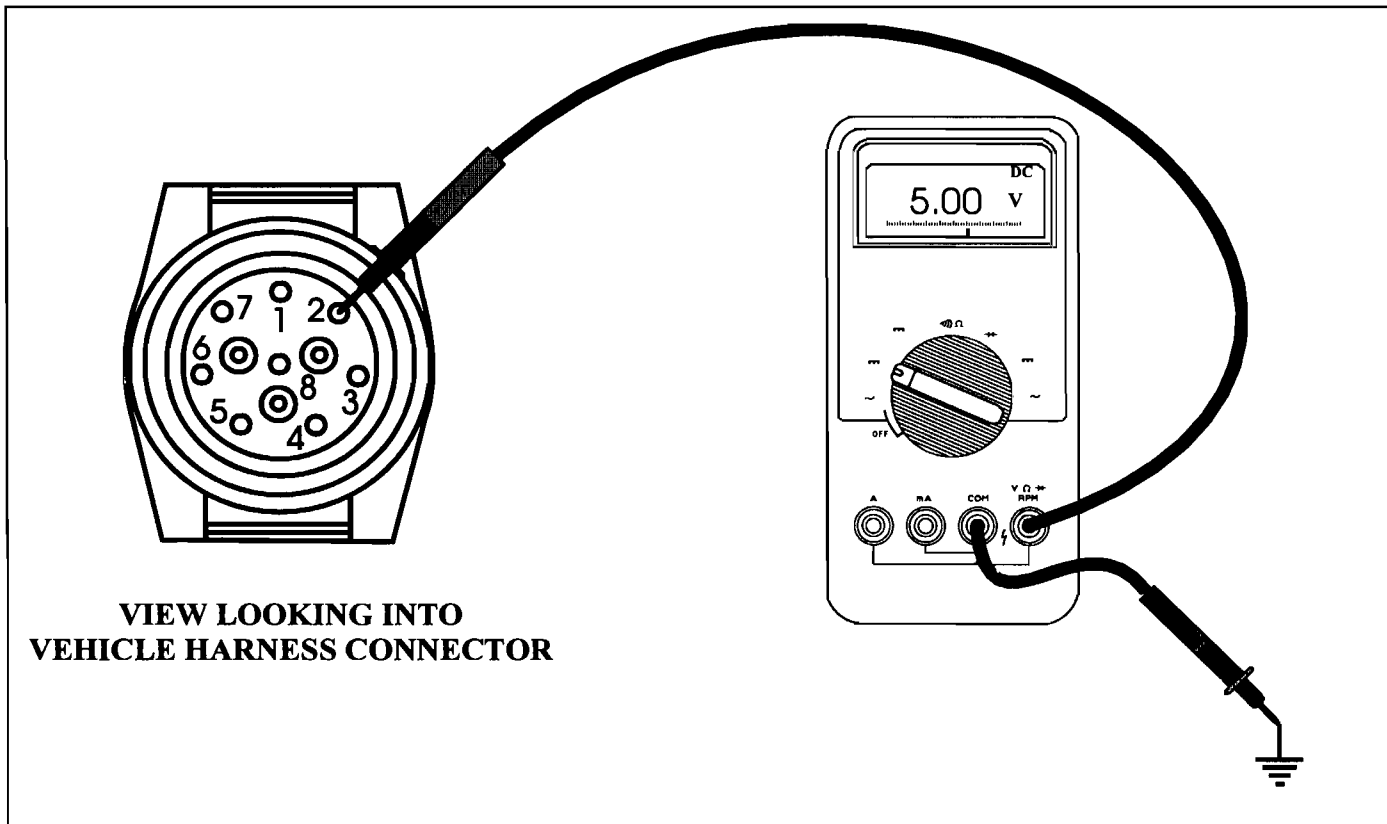


Figure 11

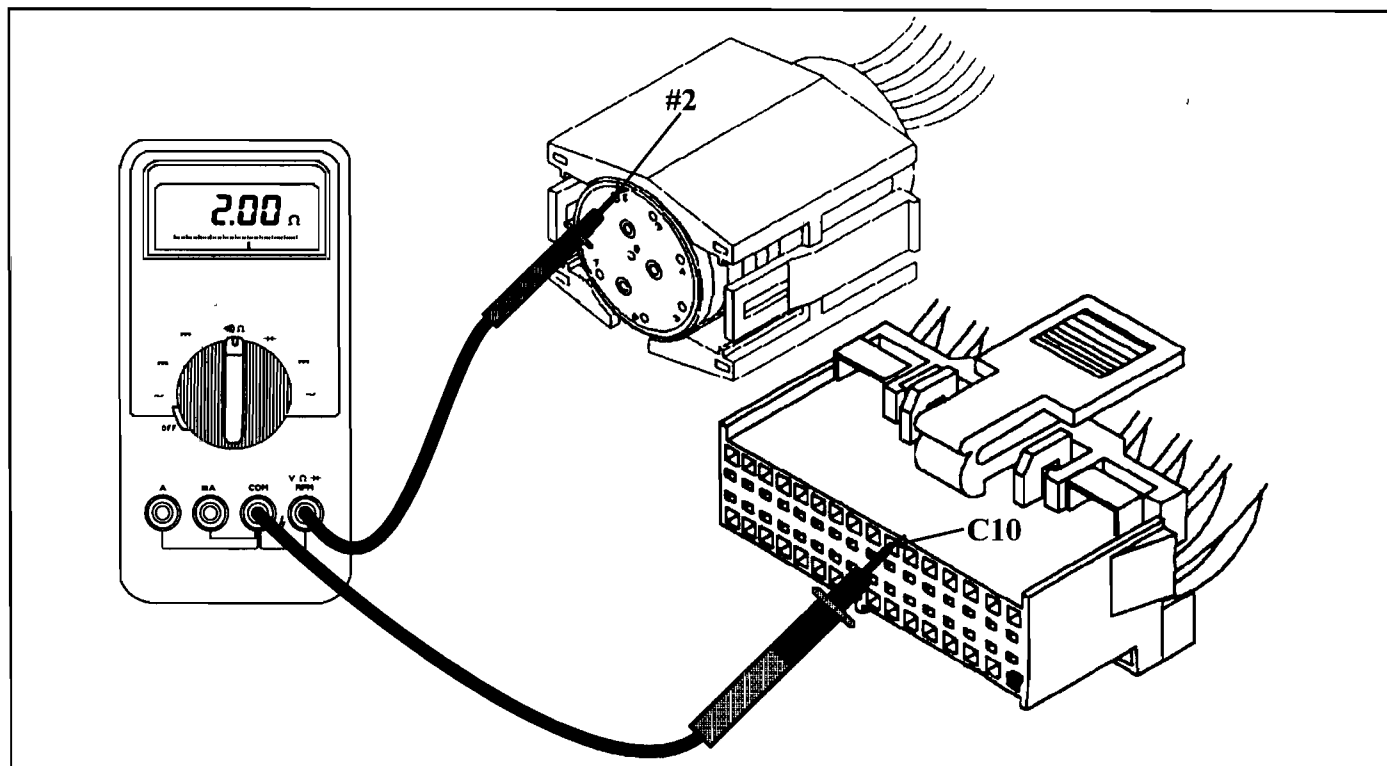


Figure 12



**CHRYSLER A904(30RH), A999(32RH),
CHRYSLER A500(42RH), A500SE(42RE)
VALVE BODY, FRONT PUMP,
AND CASE CHANGES FOR 1995**

CHANGE: Beginning at the start of production for all 1995 model A904(30RH), A999(32RH), A500(42RH), A500SE(42RE) rear drive transmissions, were built with a new design Front Pump, Valve Body, and a new design Main Case.

REASON: To increase pump flow and reduce front pump whine.

PARTS AFFECTED:

- (1) **FRONT PUMP ASSEMBLY** - Has an additional inlet port in the pump cover for the 95/96 model year, as shown in Figure 1, to accommodate the changes in the main case. The pump body also recieved casting changes to enlarge the pump suction flow area.
- (2) **MAIN CASE** - The rib in the case front pump face area, between the inlet ports was removed, as shown in Figure 2.
The inlet port on the valve body side was also enlarged which required casting changes, and is shown in Figure 4.
- (3) **VALVE BODY** - Casting changes were necessary to enlarge the valve body inlet port in the transfer plate, as shown in Figure 3, to accommodate the case changes.
- (4) **SPACER PLATE** - Inlet port made larger to accommodate the valve body transfer plate changes, as shown in Figure 3.
- (5) **PUMP GASKET** - Added hole in the pump gasket to accommodate the changes to the pump assembly and the main case, as shown in Figure 5.

INTERCHANGEABILITY:

None of these components are interchangeable with previous model components!

To ensure that the correct components have been installed, check the valve body to case interface after installation, to ensure that the seam of the valve body and case are identical.

Note: The pump gasket will retro-fit back to all previous models, and the pump body and pump cover will retro-fit back, when used as a complete assembly, with the new gasket.

SERVICE INFORMATION:

| | |
|---|----------|
| Oil Pump Body Assembly (New Design) | 52118267 |
| Reaction Shaft and Support Assembly, L/U (New Design) | 52118297 |
| Reaction Shaft and Support Assembly, NLU (New Design) | 3836511 |
| Oil Pump Assembly Complete, Lock Up (New Design) | 4778552 |
| Oil Pump Assembly Complete, Non Lock Up (New Design) | 4778553 |
| Oil Pump to Case Gasket (New Design) | 52118266 |

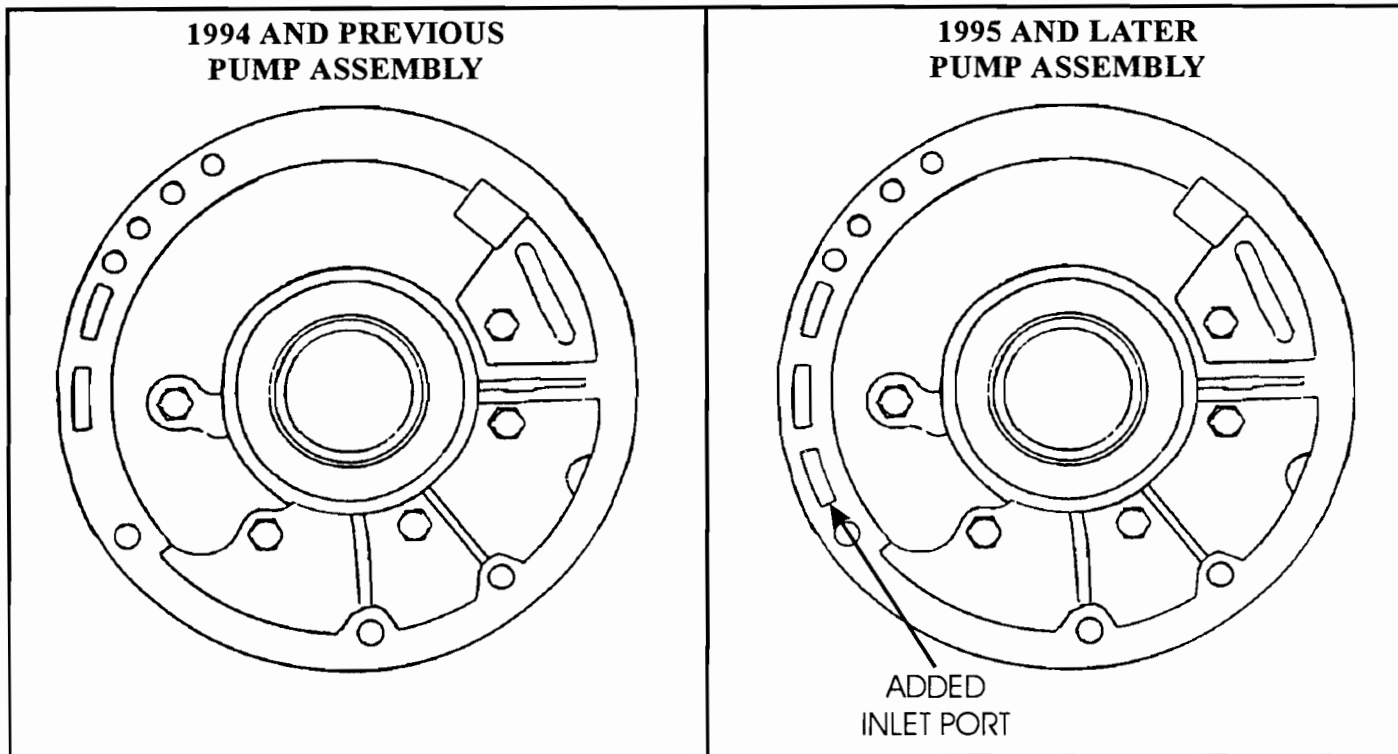


Figure 1

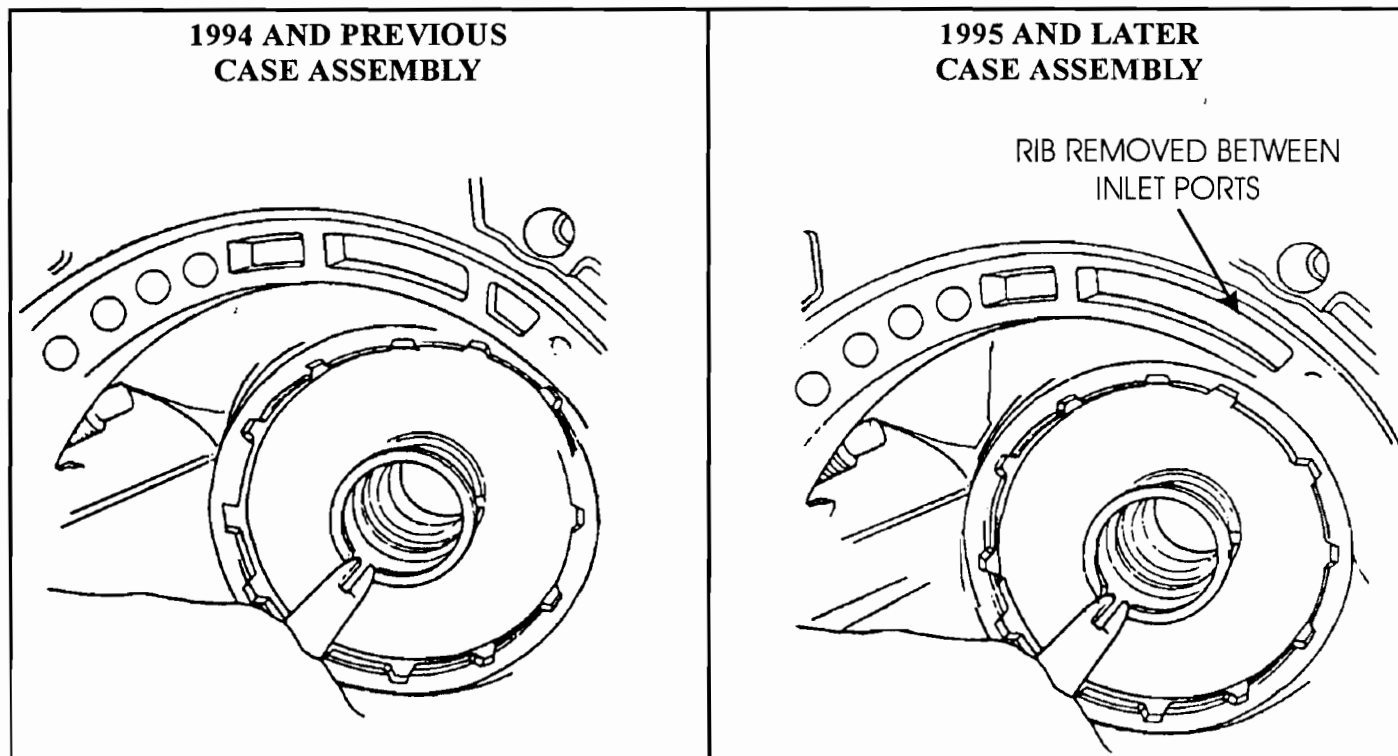


Figure 2

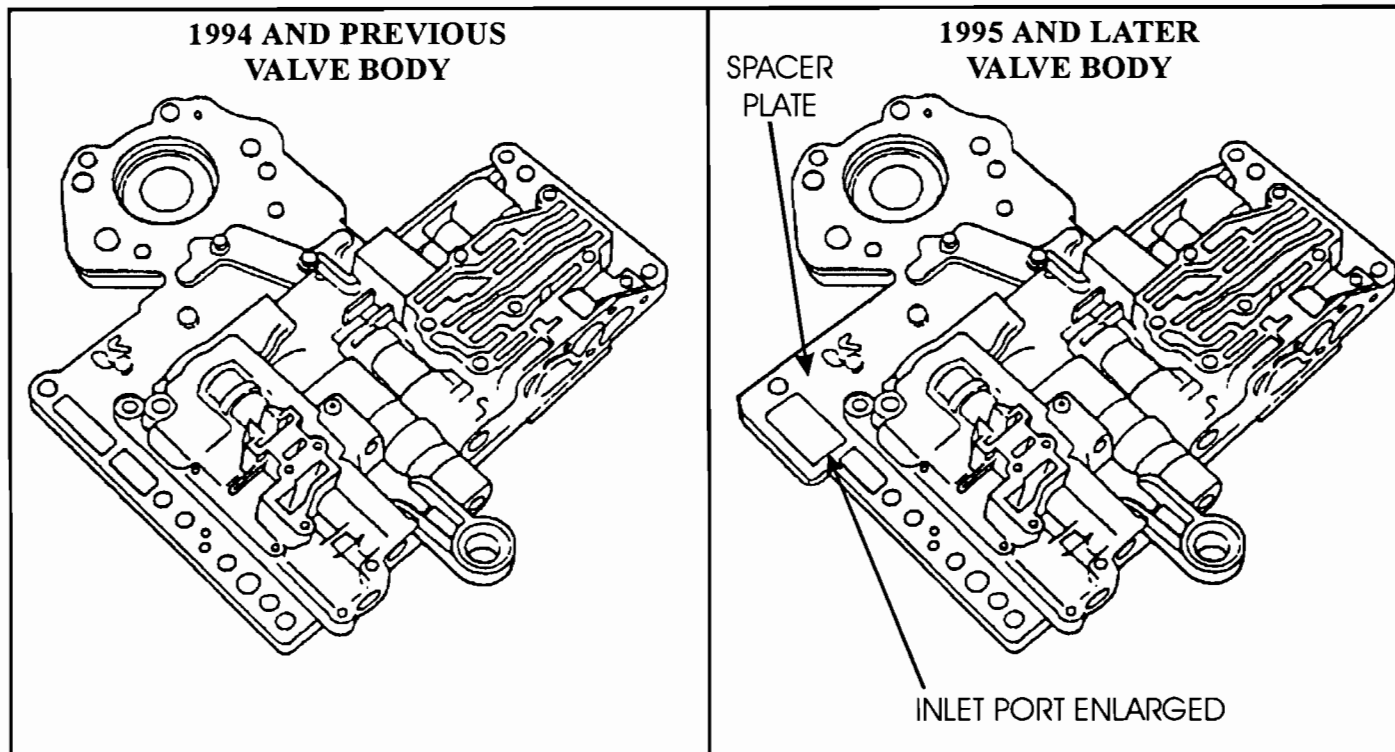


Figure 3

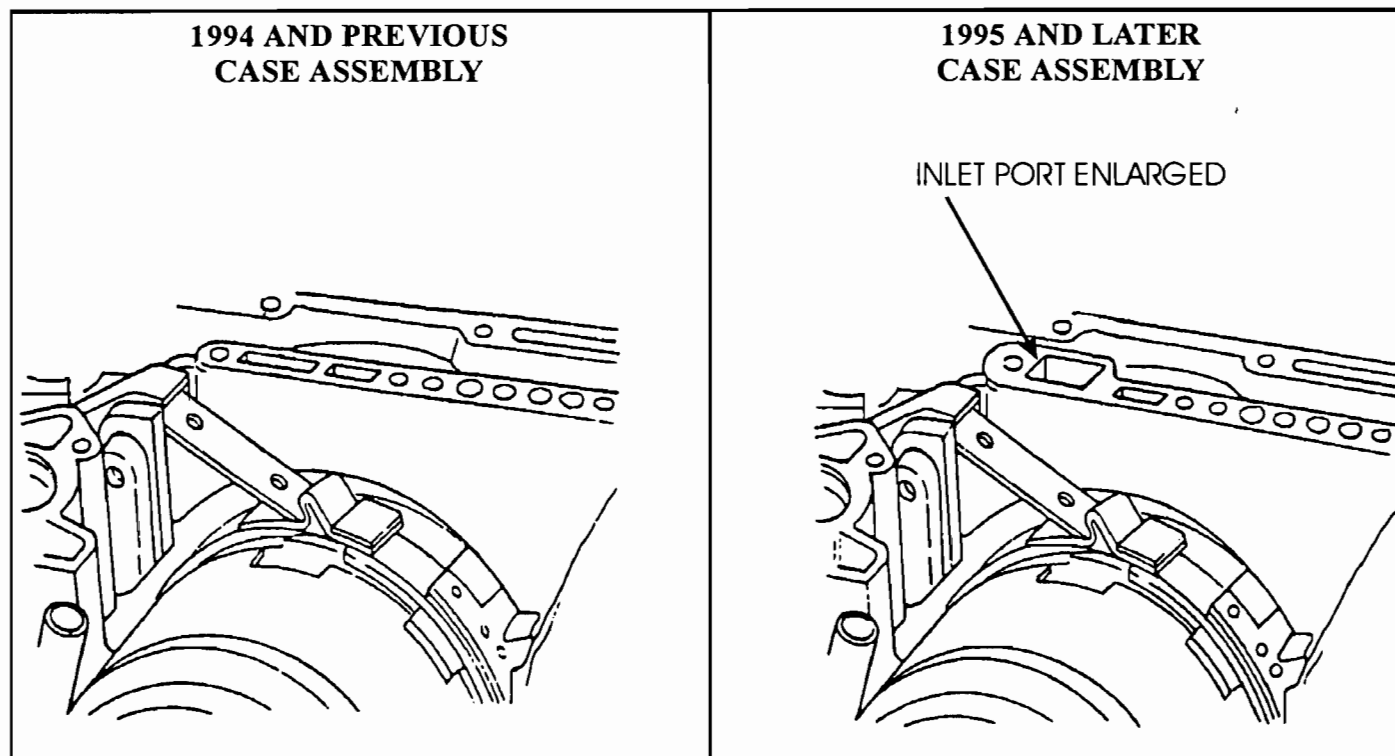


Figure 4

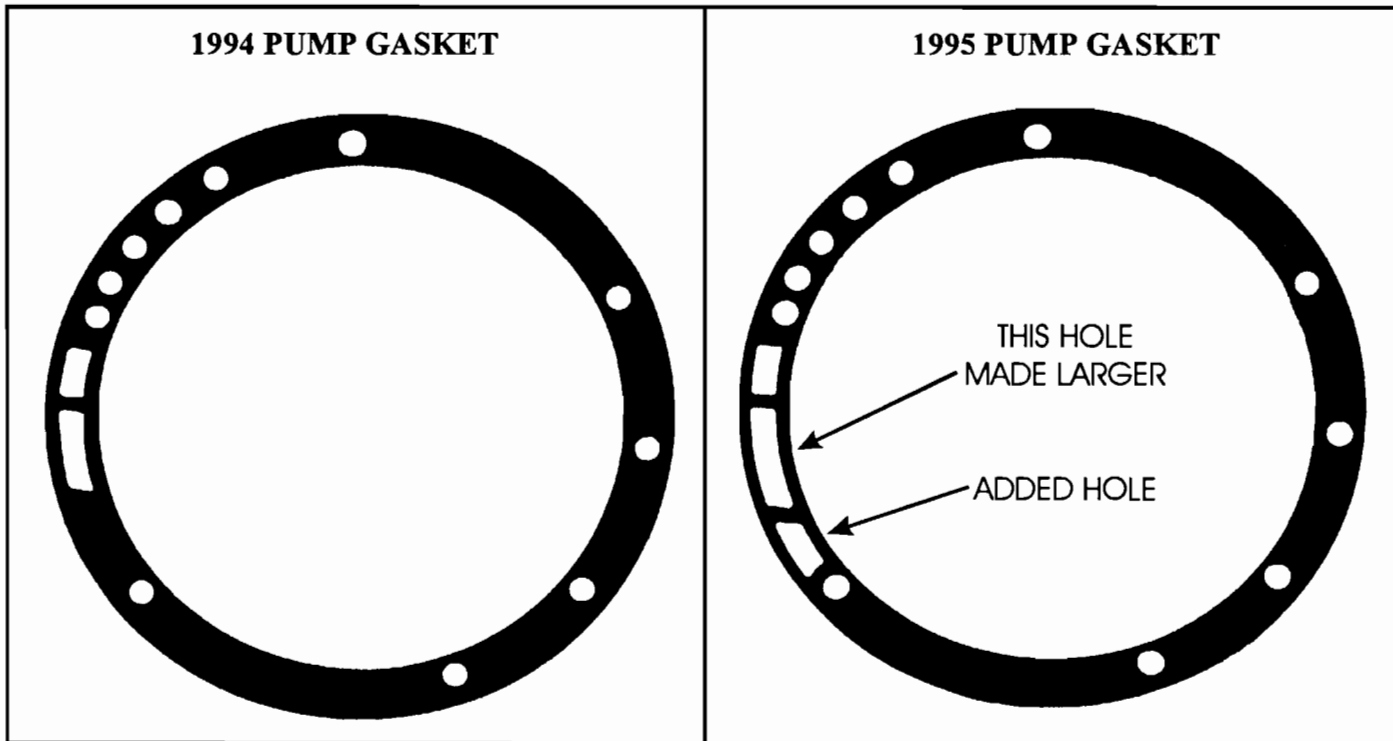


Figure 5



CHRYSLER A500 AND A518 NUMBER 3 THRUST WASHER, THRUST PLATE, INTERMEDIATE SHAFT, AND REAR DRUM CHANGES

CHANGE: Beginning at the Start Of Production (SOP), all 1990 model Chrysler A999, A500, A727, and A518 transmissions were built with a common number 3 thrust washer and thrust plate. Refer to Figure 1 for all design levels.

REASON: Common design level parts for the assembly line, and improved washer durability.

PARTS AFFECTED:

- (1) **NUMBER 3 THRUST WASHER** - Changed in the shape of the washer and the thickness of the washer, and all three design levels are shown in Figure 1.
- (2) **THRUST PLATE** - Changed in the shape of the thrust plate and the thickness of the thrust plate, and all three design levels are shown in Figure 1.
- (3) **REAR (FORWARD) CLUTCH DRUM** - Configuration on the number 3 thrust washer surface inside of the clutch drum changed to accommodate the new design No. 3 thrust washer as shown in Figure 2 thru Figure 5.
- (4) **OUTPUT SHAFT/INTERMEDIATE SHAFT** - The Output Shaft on A999 and A727 models, and the Intermediate Shaft on A500 and A518 models recieved machining changes to accommodate the new design level number 3 thrust washer and it's thrust plate. Refer to Figure 1 for illustrations.

INTERCHANGEABILITY:

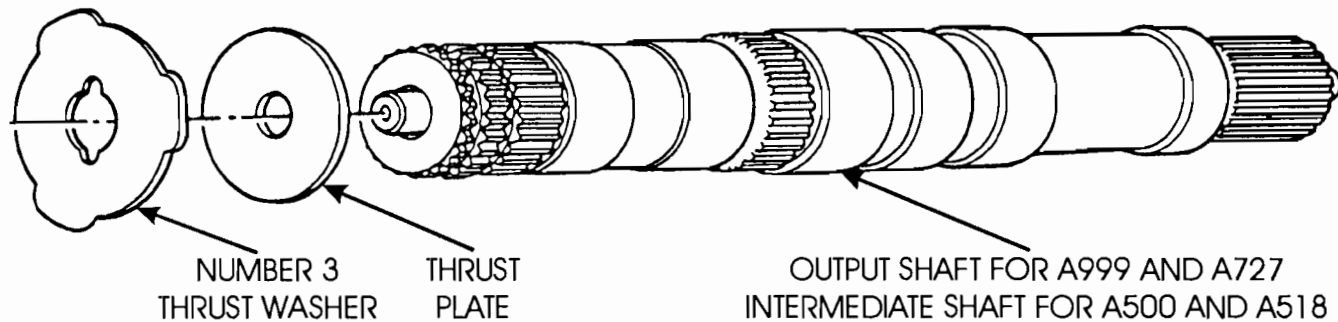
Since the new design level Number 3 Thrust Washer and Thrust Plates are a thicker dimension, it was necessary to remove material from *all* input shafts, and the A727 output shaft.

New design level parts will not retro-fit back to previous model transmissions.

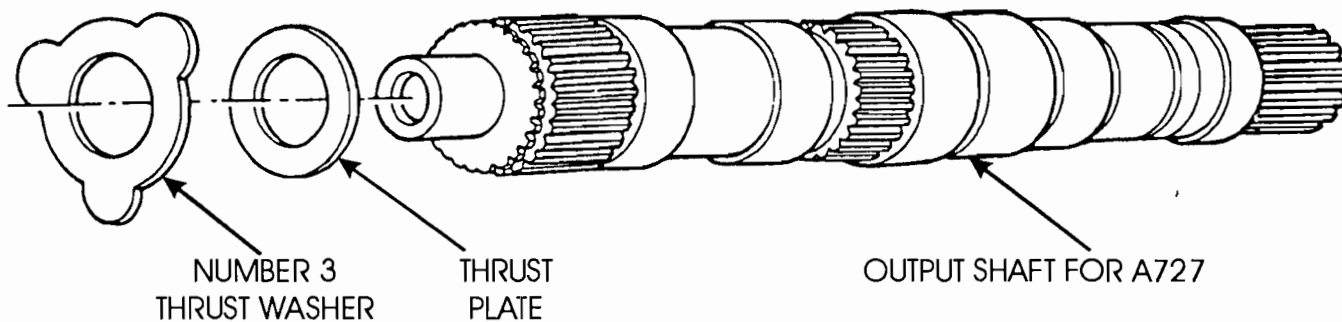
Note: On A999 and A500 models, the number 3 thrust washer is still a three size selective thrust washer.

On A727 and A518 models, the number 3 thrust washer is always the middle size, and is still selective at the number 1 thrust washer.

**NUMBER 3 THRUST WASHER AND THRUST PLATE
FOR 1990-UP A999, A500, A727, A518 MODELS**



**NUMBER 3 THRUST WASHER AND THRUST PLATE
FOR 1989 A727 MODELS**



**NUMBER 3 THRUST WASHER AND THRUST PLATE
FOR 1989 A999, AND A500 MODELS**

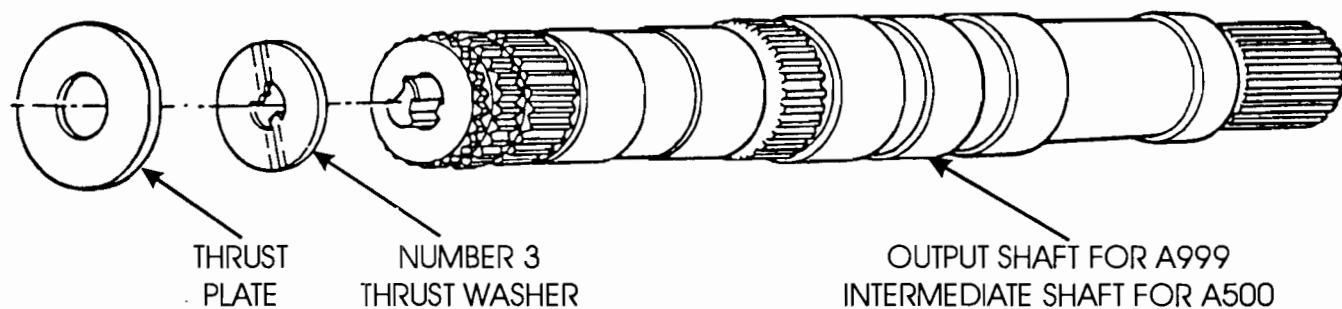


Figure 1
Automatic Transmission Service Group

**1989 MODEL A999, AND A500
REAR (FORWARD) CLUTCH DRUM**

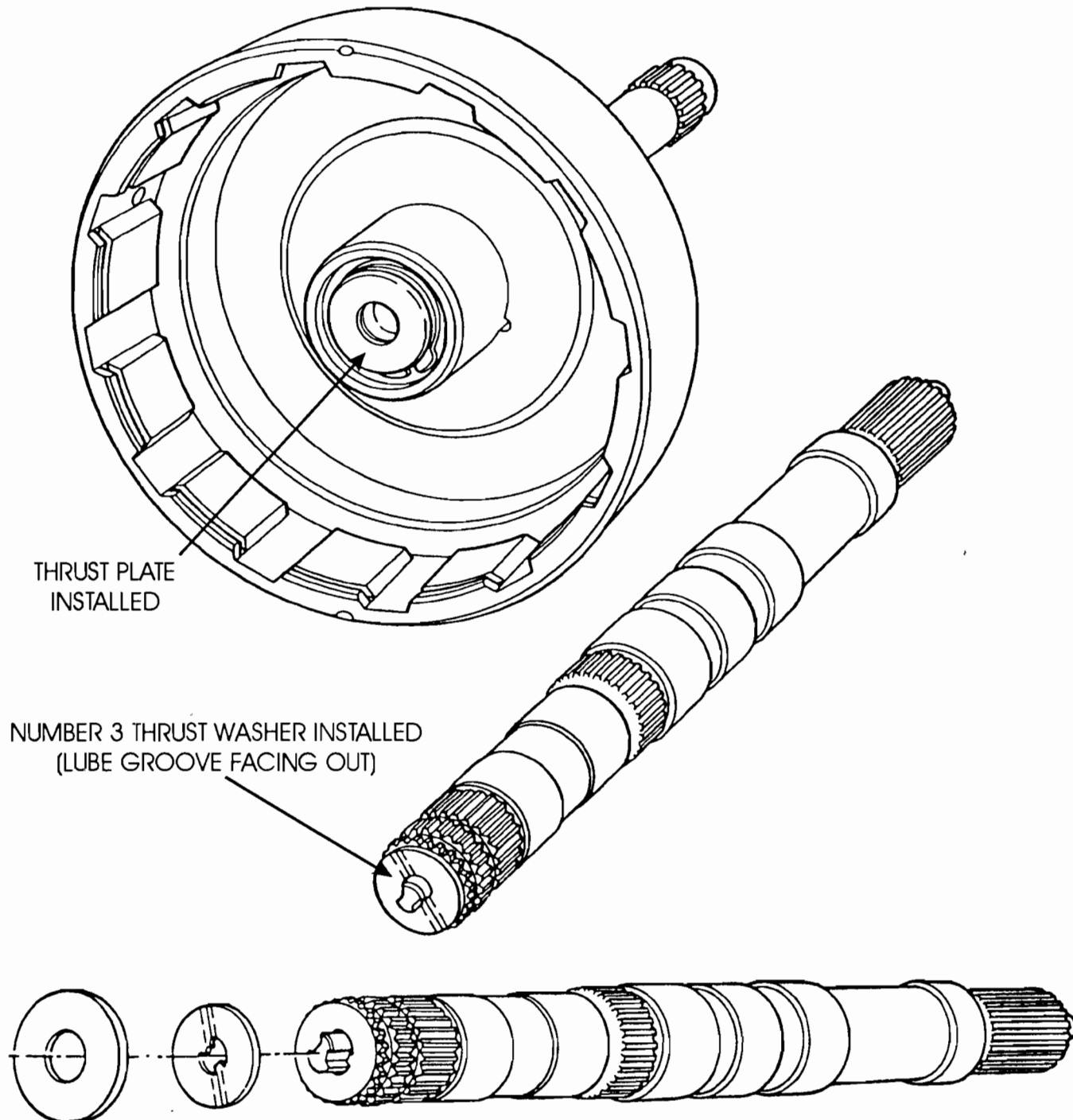


Figure 2
Automatic Transmission Service Group

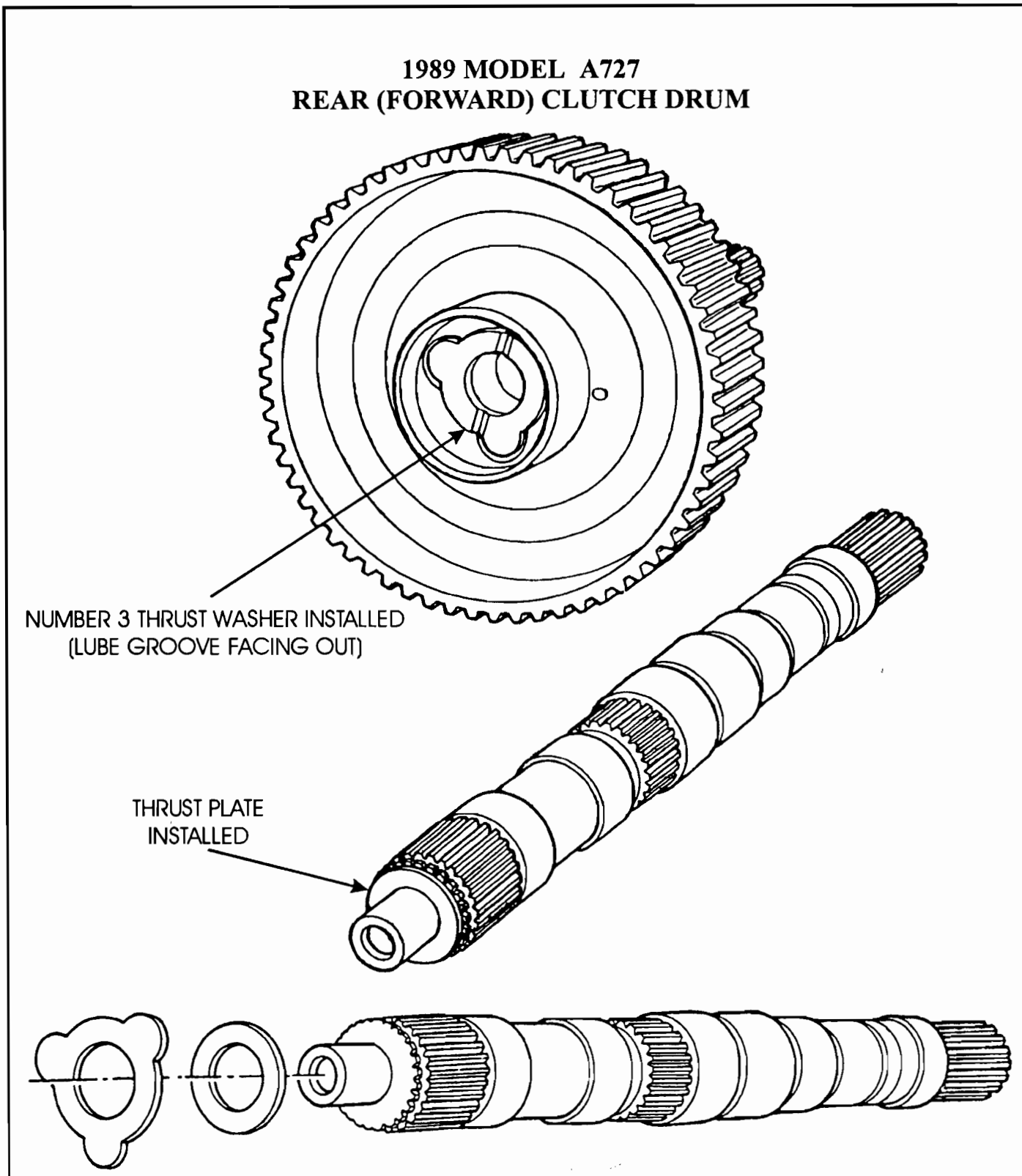


Figure 3

1990 MODEL A727 AND A518
REAR (FORWARD) CLUTCH DRUM

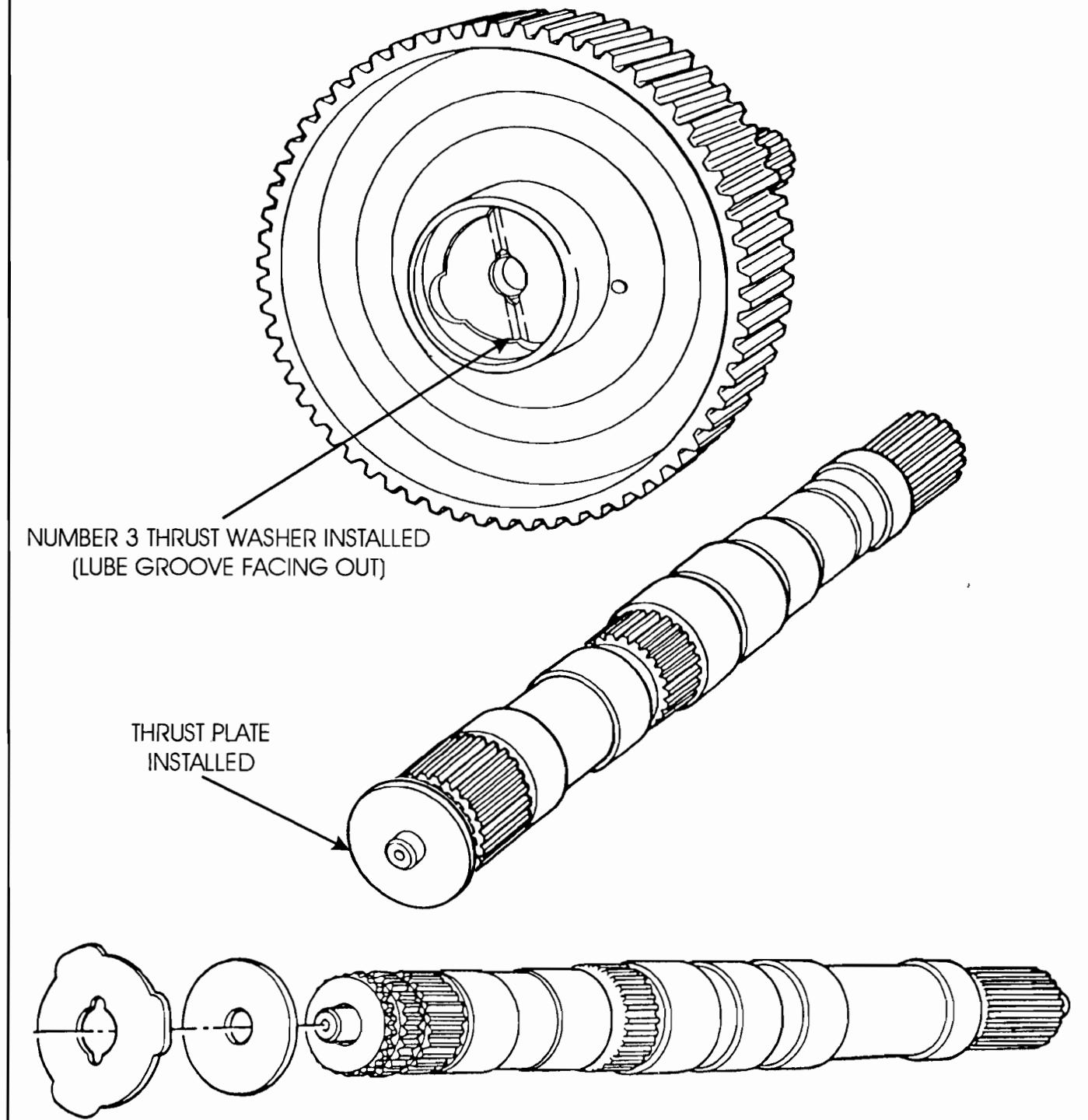


Figure 4

**1990 MODEL A999, AND A500
REAR (FORWARD) CLUTCH DRUM**

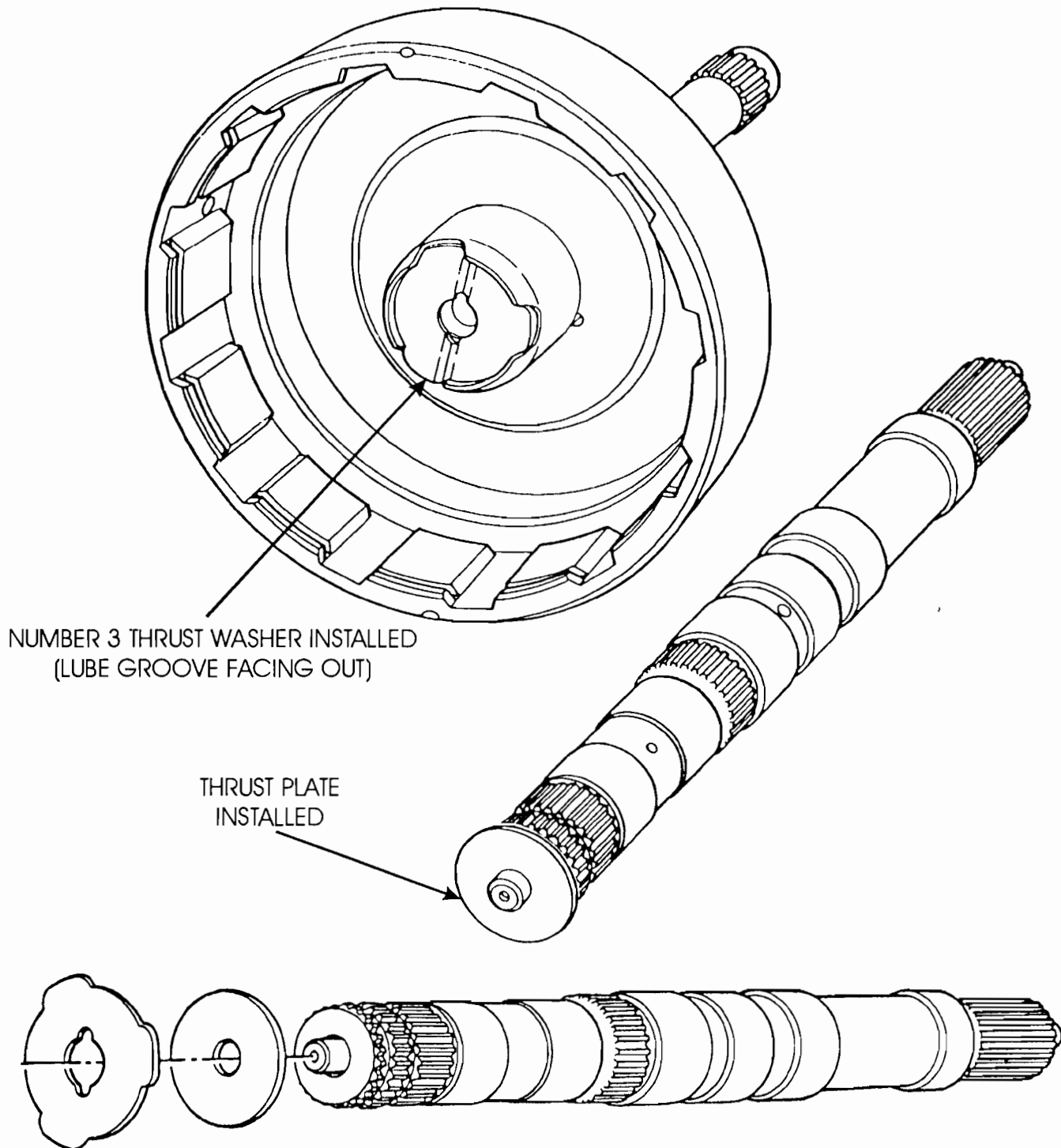


Figure 5

**CHRYSLER A500/A518
NO SHIFT TO 4TH GEAR**

COMPLAINT: Before and/or after rebuild, vehicles equipped with the A500/A518 transmission may exhibit a "No 4th" gear condition. Vehicle Speed, Engine RPM, Throttle Position, Coolant Temperature, MAP sensor and overdrive cancel information have all been verified, and are correct on the scanner.

CAUSE: The cause may be, an internally grounded Park/Neutral switch, a grounded Park/Neutral switch wire, or an internally grounded Starter Relay. These can be easily detected, because the engine will start in ranges other than Park or Neutral. The center terminal of the Park/Neutral switch provides the ground for the starter solenoid circuit through the selector lever in Park and Neutral positions only. The computer monitors this ground circuit from the starter relay. If the Park/Neutral circuit is grounded while in the Drive position, the vehicle may exhibit a no 4th gear condition.

CORRECTION: Refer to Figure 1 for the location of the Park/Neutral switch. Disconnect the three pin harness connector from the switch, and see if the engine will start.

Note: *For safety reasons, perform this test with the rear wheels off the ground.*

If the engine **will not** start, perform the switch test as shown in Figure 1, and replace the Park/Neutral switch as necessary. If the engine **does** start, locate the "Starter Relay", normally found on the "Firewall" or "Fender Well", depending on the model. Check for continuity to ground on the brown with yellow tracer wire on early models, or the black with white tracer wire on late models, and repair or replace as necessary.

Note: *The wire color at the center terminal of the Park/Neutral switch is normally the wire color at the Starter Relay.*

If the Park/Neutral switch wire **does not** have continuity to ground, cut the wire at the starter relay and try again to start the engine. If the engine still starts, replace the relay.

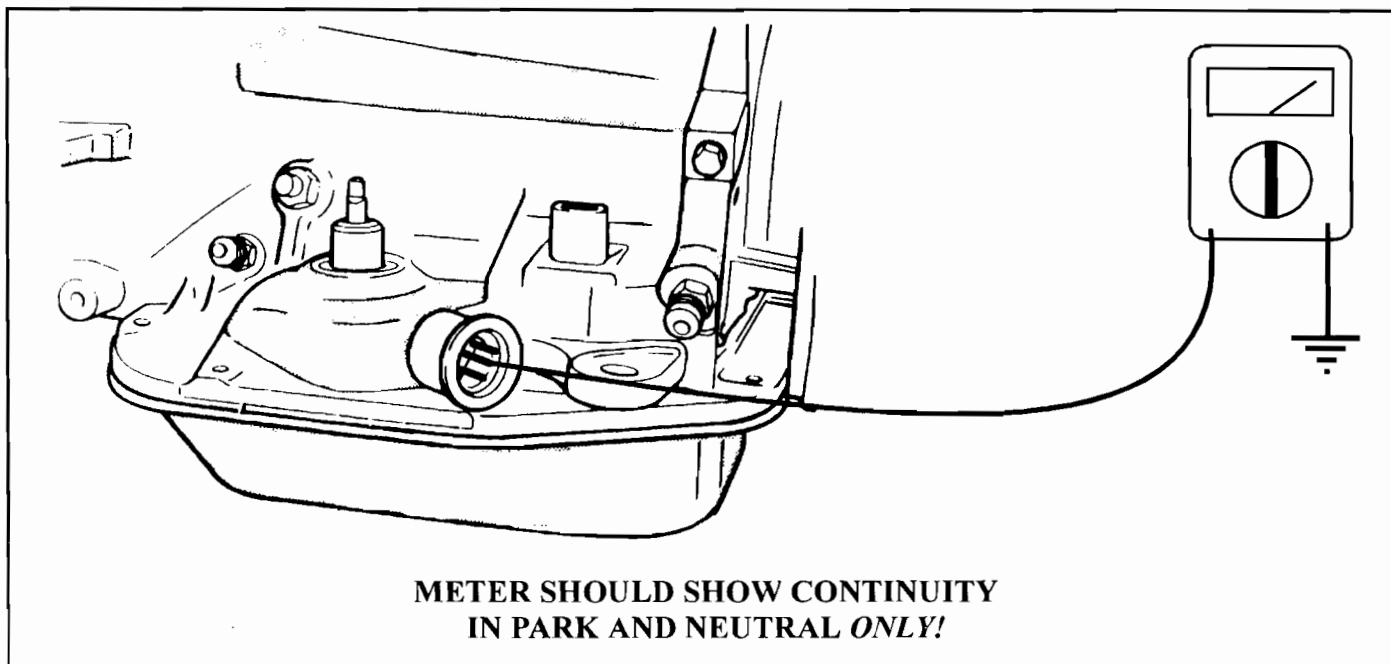


Figure 1

CHRYSLER A470 SERIES REVERSE BAND STRUT BREAKAGE

COMPLAINT: Some vehicles equipped with the Chrysler A404, A413, A470, A670 front wheel drive transaxle, may exhibit a no reverse condition before and/or after rebuild.

CAUSE: The cause may be, a bent or broken reverse band strut (See Figure 1).

CORRECTION: There is now a new design reverse band strut available from Aftermarket Suppliers for the Chrysler A404 Series transaxle, that has a thicker cross-section in the middle to provide much greater resistance to bending, and is manufactured out of a high quality hardened alloy steel that has a much higher yield strength than the original equipment material. This new design reverse band strut is manufactured by Sonnax, and is available under Sonnax part number 32710-01 (See Figure 1).

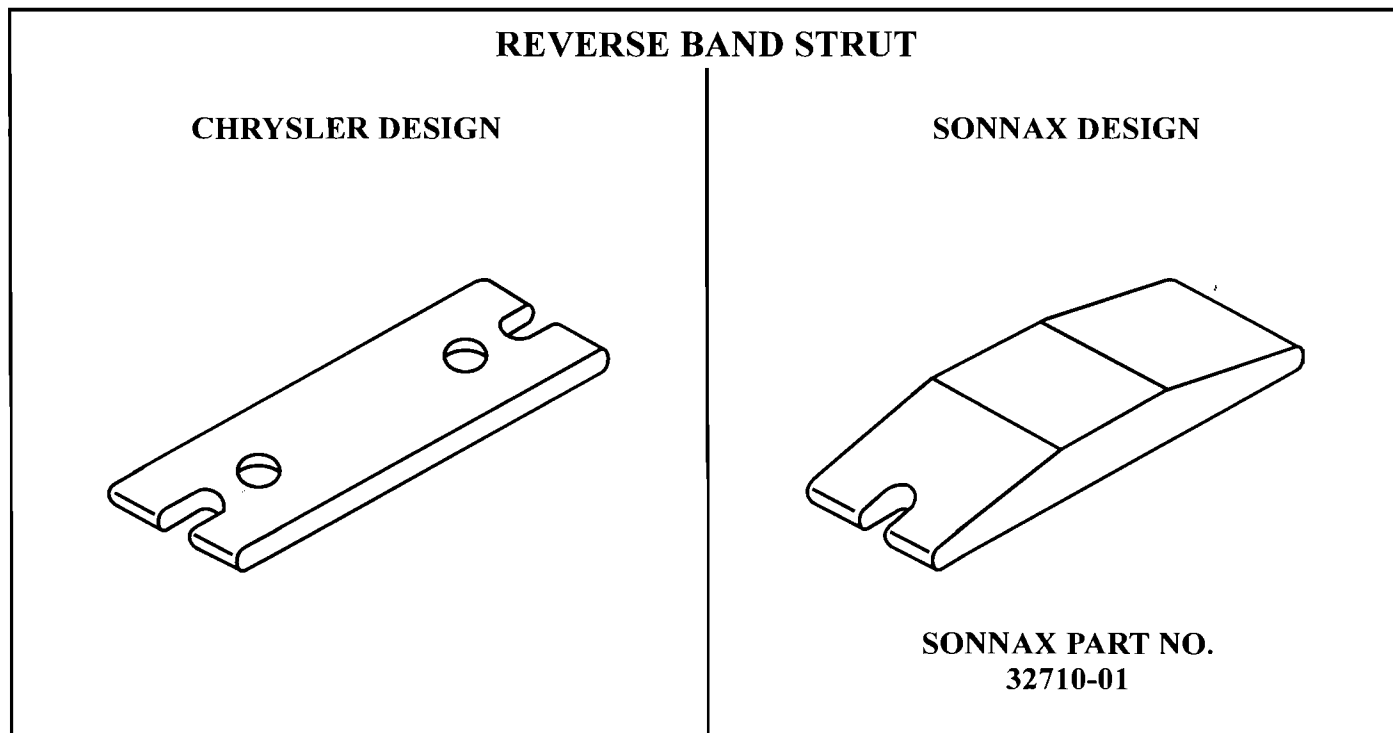


Figure 1