CHRYSLER A604 (41TE) UPDATE HANDBOOK

GOTO PAGE

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PREVIOUS MENU

AUTOMATIC TRANSMISSION SERVICE GROUP
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INTRODUCTION

Updated
May, 2003

CHRYSLER A604 (41TE)
"UPDATE HANDBOOK"

Since the introduction of the Chrysler A604 (41TE) transaxle in model year 1989, there have been many engineering changes to greatly improve pleaseability, durability and driveability concerns. These changes have affected nearly every part used in the A604 (41TE) transaxle. This "Update Handbook" will explain each change, the reason for the change, any interchangeability concerns created by the change and any part numbers necessary to "Update" your unit. This booklet has been designed to be used in conjunction with the assembly and disassembly manual, also available from ATSG.

We wish to thank the Chrysler Corporation for the illustrations and information that have 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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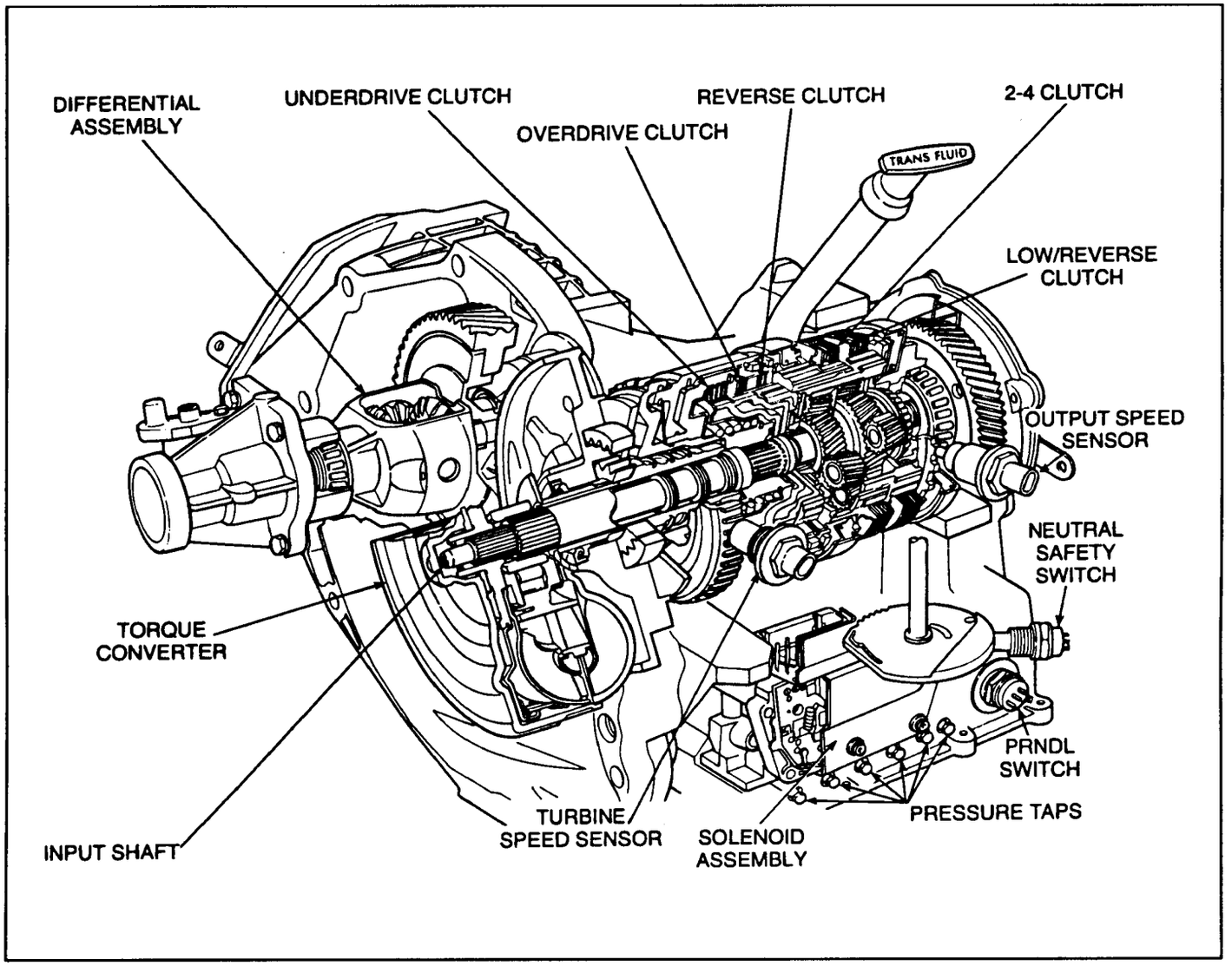
THE A604 TRANSAXLE



CHRYSLER A604
NEW 4 RING STATOR

CHANGE: Beginning in April, 1989 a new Reaction Shaft Support (Stator) was introduced, with the addition of another ring groove and sealing ring. The old support has 3 sealing rings, and the new support has 4 sealing rings (See Figure 1).

REASON: Improved control of oil flow to the Underdrive (Forward) Clutch, the Overdrive (3-4) Clutch, and the Reverse Clutch.

PARTS AFFECTED:

(1) REACTION SHAFT SUPPORT - The new support is longer, and has 4 sealing rings, where the old support only has three (See Figure 1).

(2) INPUT SHAFT/CLUTCH HUB - The new Input Clutch Hub bore is machined deeper to accommodate the additional length of the reaction shaft, created by the added sealing ring (See Figure 2). The "O" Ring grooves are also cut shallower than the old input clutch hub, which increases the groove diameter, and provides improved compression or "Crush", between the "O" rings and the input clutch retainer. (See Figure 3).

(3) INPUT SHAFT/CLUTCH HUB "O" RINGS - The new "O" Rings are "Teflon Coated" for greater tear resistance during the assembly process. The coatings also identify the locations for the "O" Rings. The orange ring goes to the front, and the green one goes to the rear (See Figure 3). The early "O" rings were black.

(4) INPUT CLUTCH RETAINER - The Input Clutch Retainer was modified, by machining off the "Lip" (See Figure 4), to allow more travel of the overdrive/reverse piston. The old Input Clutch Retainer can be machined at the local machine shop if necessary.

(5) SPACER PLATE - The new Spacer Plate has a larger (.105") overdrive clutch feed orifice to provide increased oil flow to the overdrive clutch circuit (See Figure 5).

INTERCHANGEABILITY:

ALWAYS UPDATE to the four ring reaction shaft support. There is now available a repair package, OEM part number 4549248, that includes the following:

1. Reaction Shaft Support.
2. Input Clutch Hub.
3. Input Clutch Hub "O" Rings.
4. Spacer Plate.

SERVICE INFORMATION:

Repair Package	4549248
Gasket Package	4504558
"O" Ring (Orange)	6502272
"O" Ring (Green)	6502270
Input Clutch Retainer (No Lip)	4431609

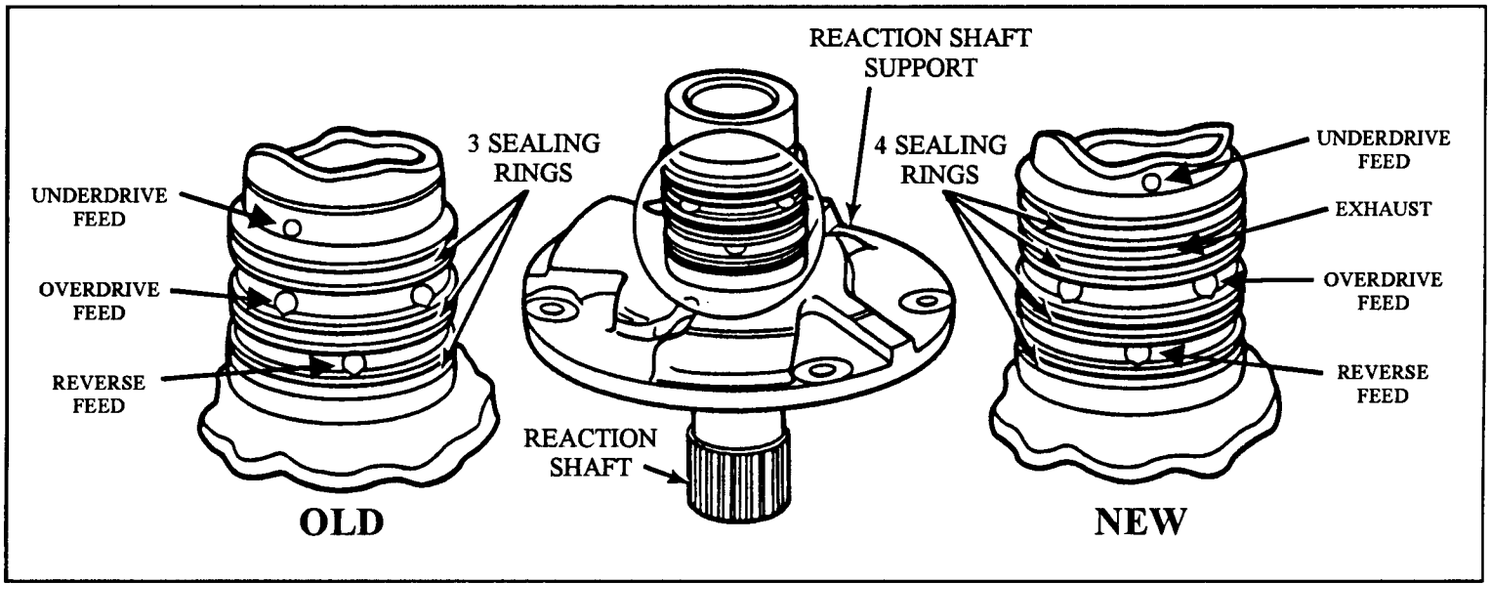
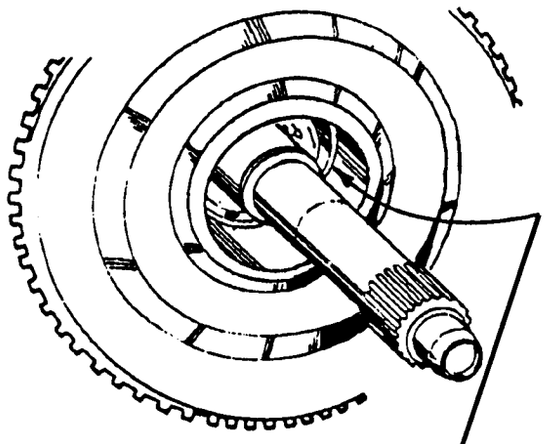


Figure 1

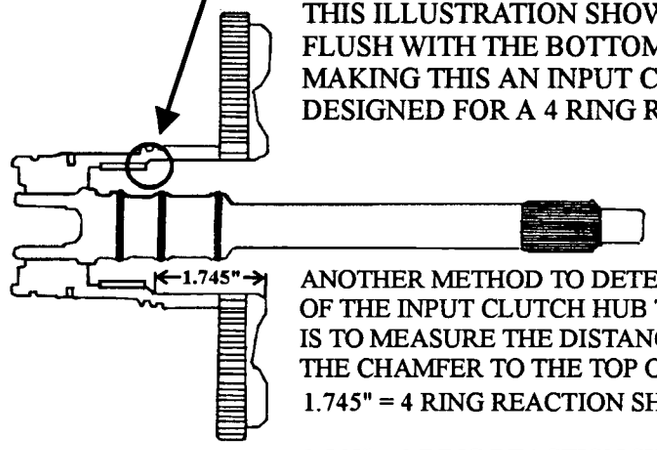


BORE IS MACHINED DEEPER TO ACCOMMODATE THE ADDITIONAL SEALING RING ADDED TO THE REACTION SHAFT.

NOTE: IF THE BUSHING IS APPROXIMATELY .200" BELOW THE CHAMFER, THE INPUT CLUTCH HUB IS DESIGNED FOR A 3 RING REACTION SHAFT.

IF THE BUSHING IS FLUSH WITH THE CHAMFER, THE INPUT CLUTCH HUB IS DESIGNED FOR A 4 RING REACTION SHAFT.

THIS ILLUSTRATION SHOWS THE BUSHING FLUSH WITH THE BOTTOM OF THE CHAMFER MAKING THIS AN INPUT CLUTCH HUB DESIGNED FOR A 4 RING REACTION SHAFT.



ANOTHER METHOD TO DETERMINE A PROPER MATCH OF THE INPUT CLUTCH HUB TO THE REACTION SHAFT IS TO MEASURE THE DISTANCE FROM THE TOP OF THE CHAMFER TO THE TOP OF THE HOUSING.
1.745" = 4 RING REACTION SHAFT

1.565" = 3 RING REACTION SHAFT

Figure 2

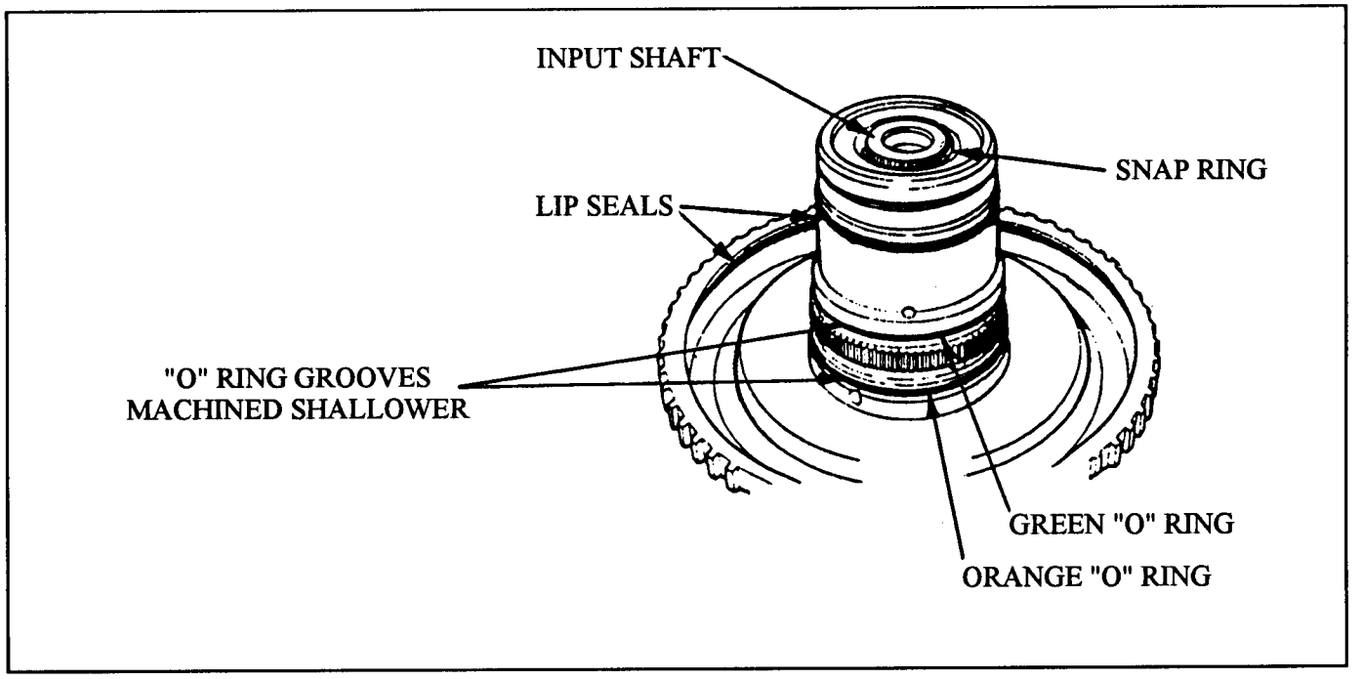


Figure 3

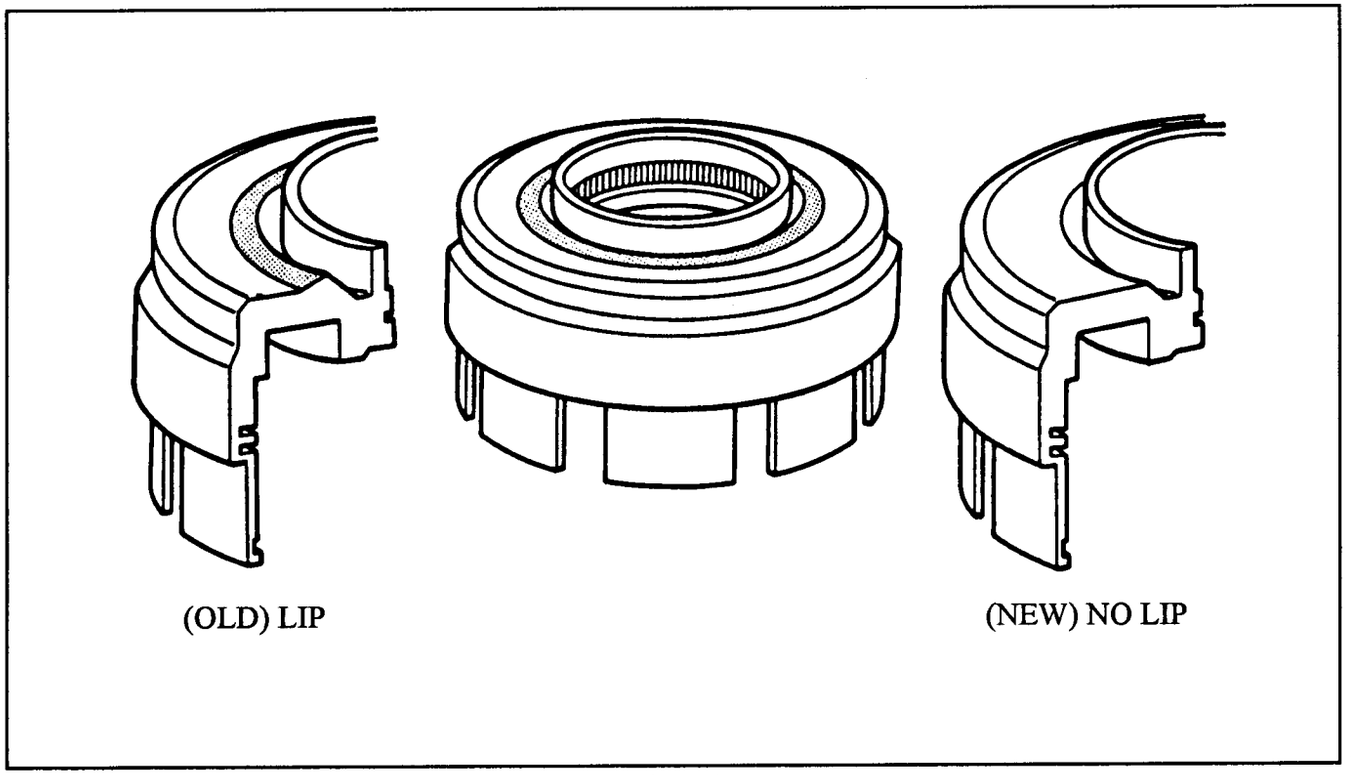


Figure 4

A604 SPACER PLATE

THE HOLE INDICATED BY THE ARROW BELOW HAS BEEN ENLARGED TO .105" FOR INCREASED OIL FLOW TO THE OVERDRIVE CLUTCH CIRCUIT.

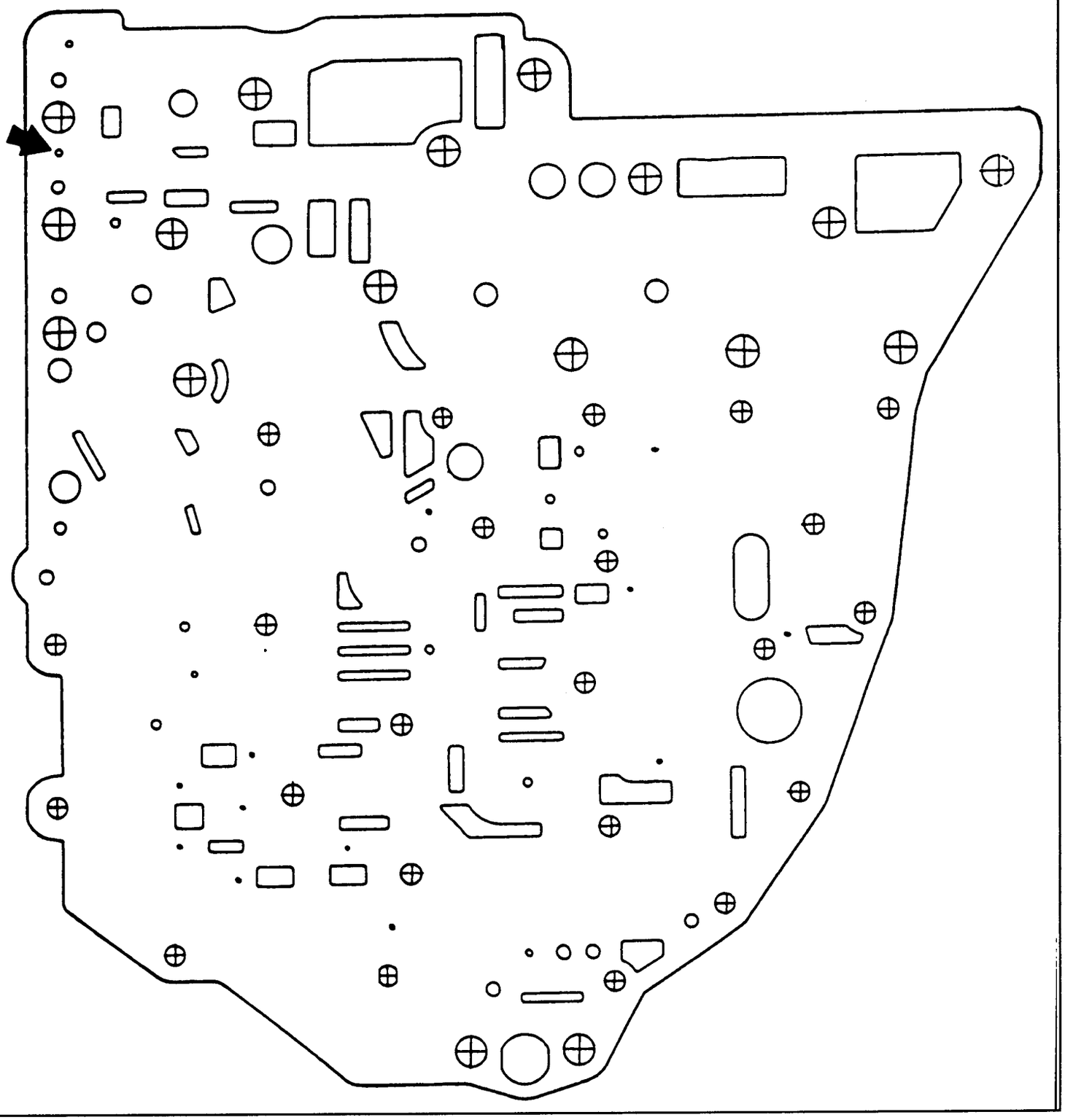


Figure 5

CHRYSLER A604

NEW LIP SEALS

CHANGE: The lip seals in the Overdrive/Reverse Clutch Piston and the Input Shaft/Clutch Hub are now replaced with lip seals made of different material (See Figure 6).

REASON: Improved reliability of the Overdrive and Reverse clutch packs.

PARTS AFFECTED:

(1) OD/REVERSE PISTON LIP SEAL - No dimensional changes, but the material changes, and the new lip seals can be identified by the code "FF" embossed into the seal. The old lip seal is embossed with the code "IPC", and should not be used (See Figure 6).

(2) INPUT CLUTCH HUB OUTER LIP SEAL - No dimensional changes, but the material changes, and the new lip seals can be identified by the code "FF" embossed into the seal. The old lip seal is embossed with the code "IPC", and should not be used (See Figure 6).

INTERCHANGEABILITY:

THE NEW LIP SEALS EMBOSSED WITH THE CODE "FF" WILL RETROFIT BACK TO ALL PREVIOUS MODELS, AND SHOULD BE USED DURING OVERHAUL.

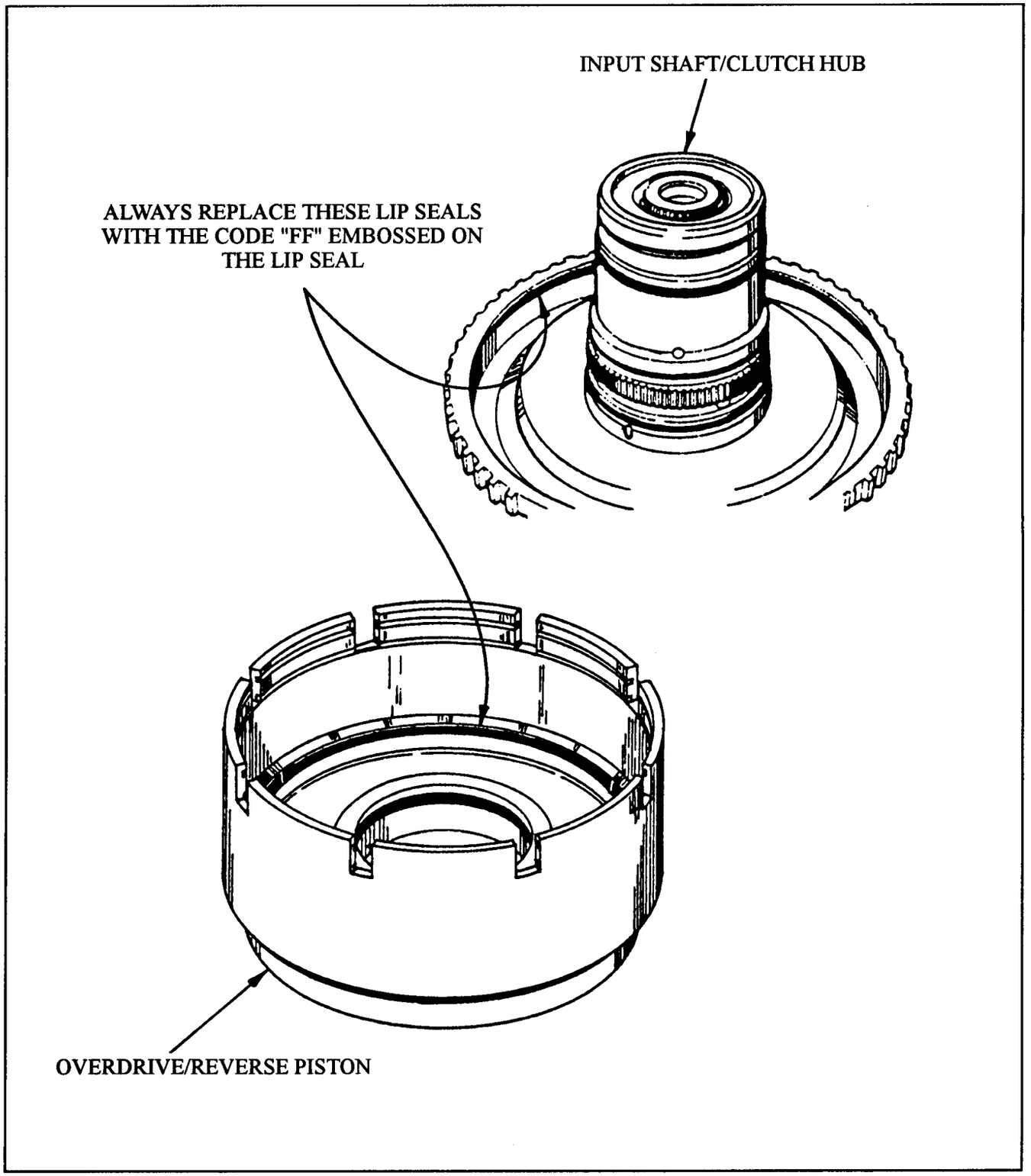

INPUT SHAFT/CLUTCH HUB
ALWAYS REPLACE THESE LIP SEALS WITH THE CODE "FF" EMBOSSED ON THE LIP SEAL
OVERDRIVE/REVERSE PISTON

Figure 6

CHRYSLER A604
NEW PARKING GUIDE BRACKET AND PAWL

CHANGE: A new Parking Sprag Guide Bracket and Parking Pawl has been introduced as a 1989 running change (See Figure 7).

REASON: Reduced effort required to pull the shift lever out of "Park" to the other drive ranges.

PARTS AFFECTED:

(1) PARKING GUIDE BRACKET - Previously the Parking Guide Bracket was a stamped steel unit, and has been replaced by a high quality casting, along with dimensional changes. See Figure 7 for identification.

(2) PARKING PAWL - The new Parking Pawl, or "Boot", also required some dimensional changes. The heel of the new "Boot" is wider than the previous models, as shown in Figure 7.

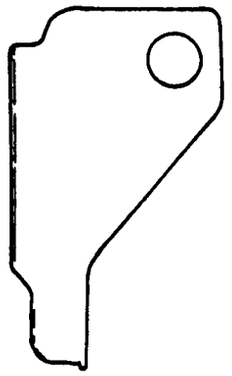
INTERCHANGEABILITY:

The new parts will retrofit back to all previous models, but both pieces must be replaced as an assembly. (See Figure 7).

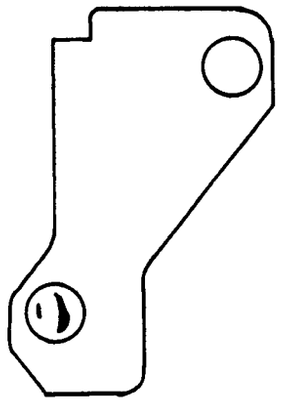
SERVICE INFORMATION:

Parking Pawl Service Package 4549239
Includes the following:

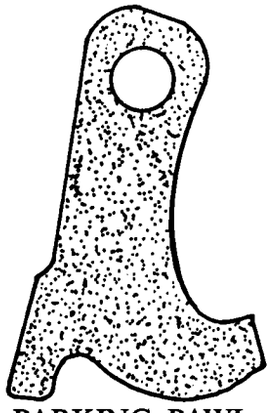
(1) Parking Guide Bracket (New Style)
(2) Parking Pawl or "Boot" (New Style)



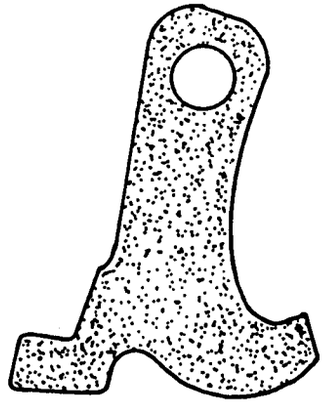
PARKING GUIDE BRACKET



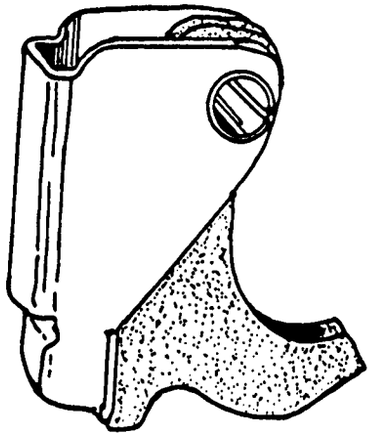
PARKING GUIDE BRACKET



PARKING PAWL

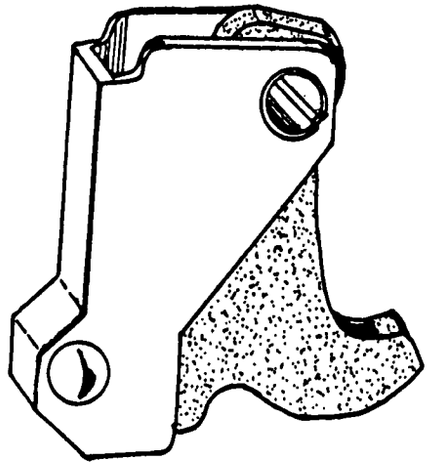


PARKING PAWL



COMPLETE ASSEMBLY

PREVIOUS



COMPLETE ASSEMBLY

NEW

Figure 7

CHRYSLER A604
CONTROLLER UPDATES

CHANGE : Running changes made to the transaxle controllers.

REASON : 1989 to 1991 transaxle controllers received several software upgrades through the years which improved on driveability concerns such as sequential closed throttle downshifts, highway anticycling logic, earlier kickdown shifts for improved acceleration, high altitude compensation to improve loss of engine power at upper elevations, and other refinements in the computer strategy to improve driveability.

1992 controllers changed to accommodate alterations made to the Chrysler Collision Detection Bus system (CCD) for improved communications between controllers that are on the Bus system. In other words, the language the controllers use to communicate to each was changed to improve data transfer.

1993 to present controllers received a logic change to use the output shaft speed sensor as the source for vehicle speed. Refer to figure 10 which shows the elimination of the speedometer from the extension housing in 1993.

PARTS AFFECTED :

(1) TRANSAXLE CONTROLLER - Controllers can be identified by the OEM part number that is printed on a sticker. This sticker can be located on the bottom of the transaxle controller as shown in figure 8. If the sticker is missing, scanners will also provide controller identification by providing the OEM part number of the controller that is in the vehicle. Refer to the chart on the following page for a brief overview of past controllers.
The locations of the controllers will vary depending on the model of the vehicle. Refer to figure 8 for the different locations. Figures 8 and 9 also shows the locations of the EATX relay, as their location will vary depending on the model of the vehicle.

(2) TRANSAXLE EXTENSION HOUSING - 1993 extension housings no longer have a speedometer bore. The speedometer assembly is no longer needed since the transaxle controller will now look at the output shaft speed sensor for this information (See Figure 10).

SERVICE INFORMATION :

(1)1989 TO 1991 TRANSAXLE CONTROLLERS :
(A) 3.0 L.....4761846
(B) 3.3 L.....4761847

(2) 1992 TRANSAXLE CONTROLLERS :
(A) Fits all 1992 models.....4672216

(3) 1993 TO PRESENT TRANSAXLE CONTROLLERS :
(A) Fits all 1993 and present models.....4686478
NOTE : All 1993 to present transaxle controllers that are replaced will be required to have a pinion factor programmed into the controller before the speedometer and transaxle will function properly. At the time of printing, only Chrysler DRB II or III scanners will provide this service.

SPECIAL NOTE: All of the above transaxle controller part numbers are the most recent part numbers at the time of printing. These part numbers change frequently due to continued transaxle controller updates. Be sure to check with your dealer for any updates.

INTERCHANGEABILITY :

(1) 1989 to 1991 transaxle controllers have been updated to either a 3.0 liter or 3.3 liter applications and will not interchange one with another. Nor will these controllers work on 1992 and newer vehicles.

(2) 1992 transaxle controllers are designed for all 1992 model vehicles only. This controller will not interchange on earlier or later model vehicles.

(3) 1993 to present controllers will not interchange with any earlier model year.

PAST 1989 TO 1991 CONTROLLERS :

PART NUMBER: 5234623, 5234649, 5234678.
These are all early 1989 controllers, used on all models, and would allow only a 3-1 closed throttle downshift.

PART NUMBER: 4557120.
This controller was introduced as a running change during 1989 model tear. It featured sequential downshifts (3-2-1) instead of 3-1 downshifts as the previous controllers. Another improvement incorporated is less 3-4 shift business under load at highway speeds, or with the cruise control engaged. This controller will replace all previous controllers.

PART NUMBER: 4557585.
This controller was introduced as a running change during 1990 model year. It has further refinements of the logic to eliminate the 3-4 shift business under load at highway speeds, or with the cruise control engaged. It also allowed the converter clutch to release in 4th gear for more available engine torque when it was required. This controller will replace all previous model controllers.

PART NUMBER: 4672104.
This controller was introduced for the 1991 model year with further refinement of the logic. This controller will replace all previous controllers.

PART NUMBER: 4672002.
This controller was introduced as a running change during 1991 model year. This controller will replace all previous model controllers.

PART NUMBER: 4672105.
This controller was introduced as another running change during 1991 model year. This controller will replace all previous model controllers.

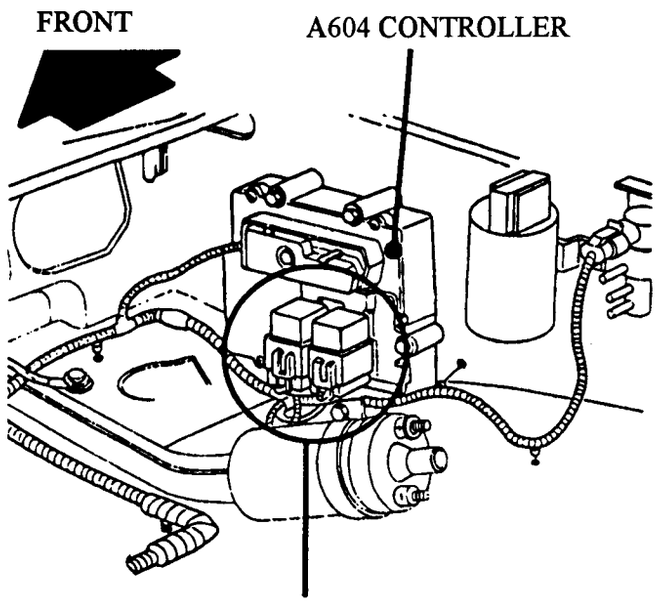
PART NUMBER: 4728600.
This controller replaces all previous 1989-1991 controllers on vehicles equipped with 3.0L engines.

PART NUMBER: 4728598.
This controller replaces all previous 1989-1991 controllers on vehicles equipped with 3.3L engines.

PAST 1992 CONTROLLERS

PART NUMBER: 4672203.
This controller fits all 1992 models EXCEPT, New Yorker, 5th Avenue, and Imperial. This controller WILL NOT replace ANY previous models. It fits 1992 models ONLY.

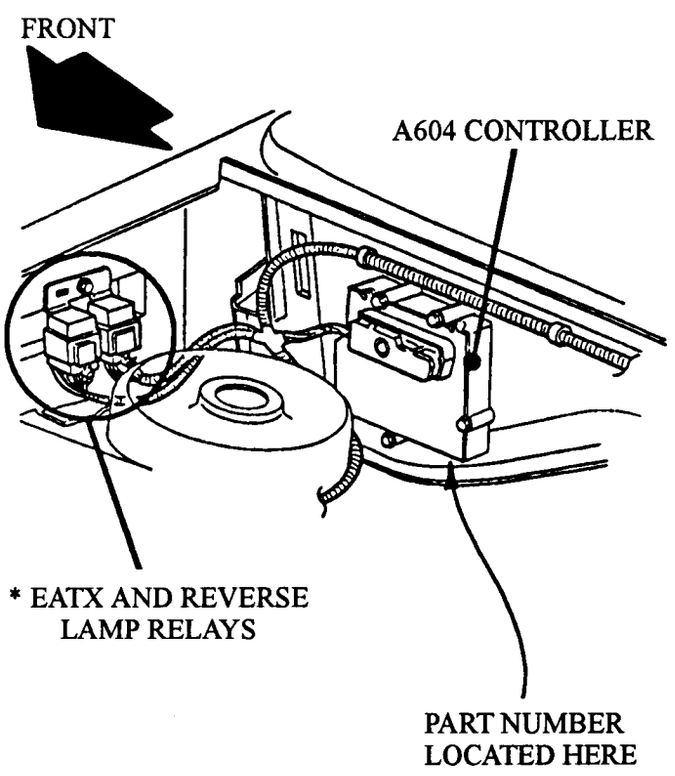
PART NUMBER: 4672216.
This controller fits all 1992 New Yorker, 5th Avenue, and Imperial. This controller WILL NOT replace ANY previous models. It fits 1992 models ONLY.



A, C, G, J, P, Y, BODY

A = SPIRIT, ACCLAIM
C = NEW YORKER, DYNASTY
G = DAYTONA
J = LEBARON
P = SHADOW, SUNDANCE
Y = IMPERIAL

CONTROLLER LOCATION
RIGHT FRONT ENGINE COMPARTMENT



S BODY (MINIVAN)

S = CARAVAN, VOYAGER

CONTROLLER LOCATION
RIGHT FRONT ENGINE COMPARTMENT

Figure 8

* NOTE: Since the EATX and the reverse Lamp Relay connectors could be installed in either position, you must use the wire colors in the connectors to identify the correct relay.

(1) The EATX relay has a Red and a Light Green wire in its connector.

(2) The Reverse Lamp Relay has a White and a Violet wire in its connector.

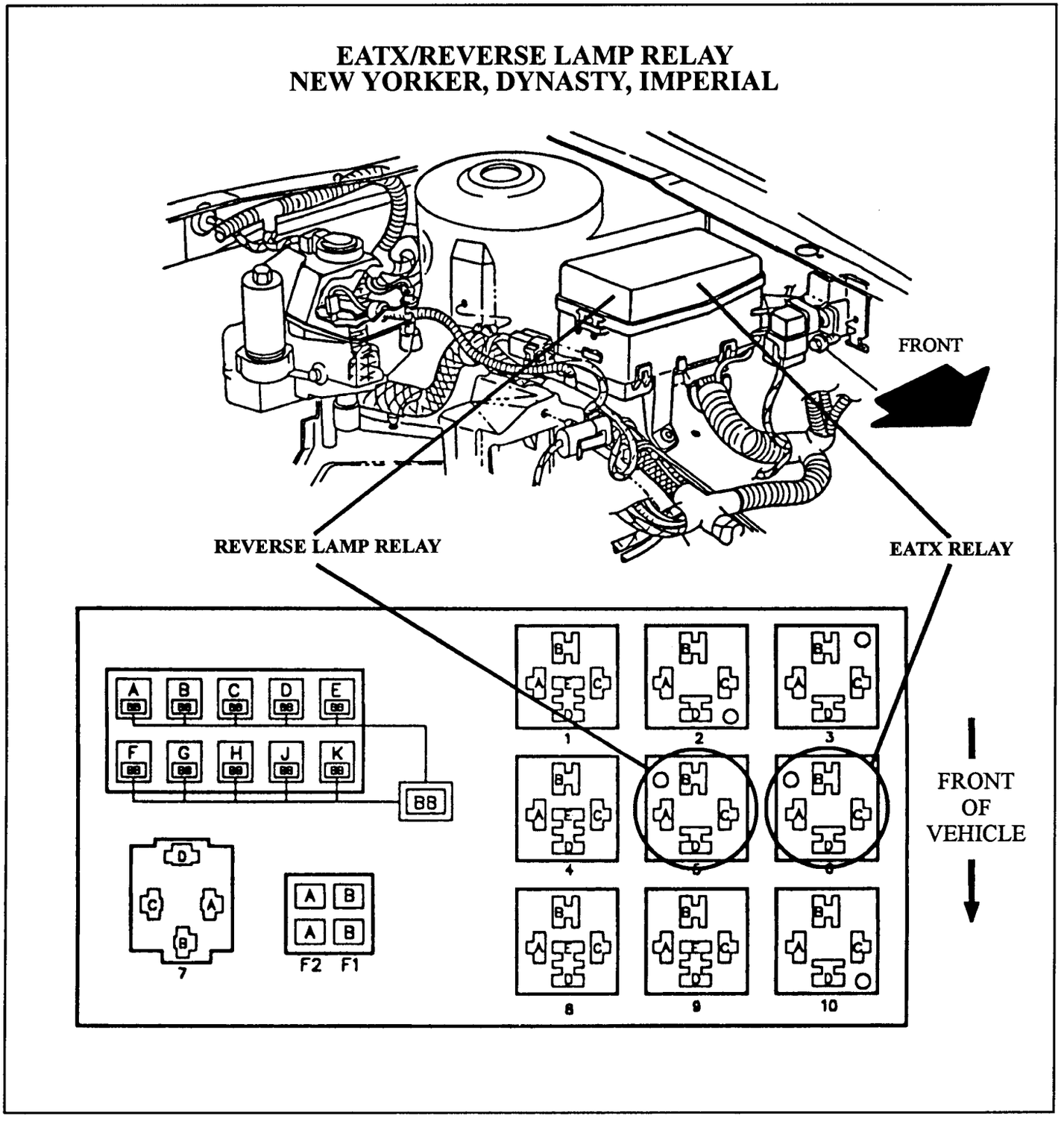
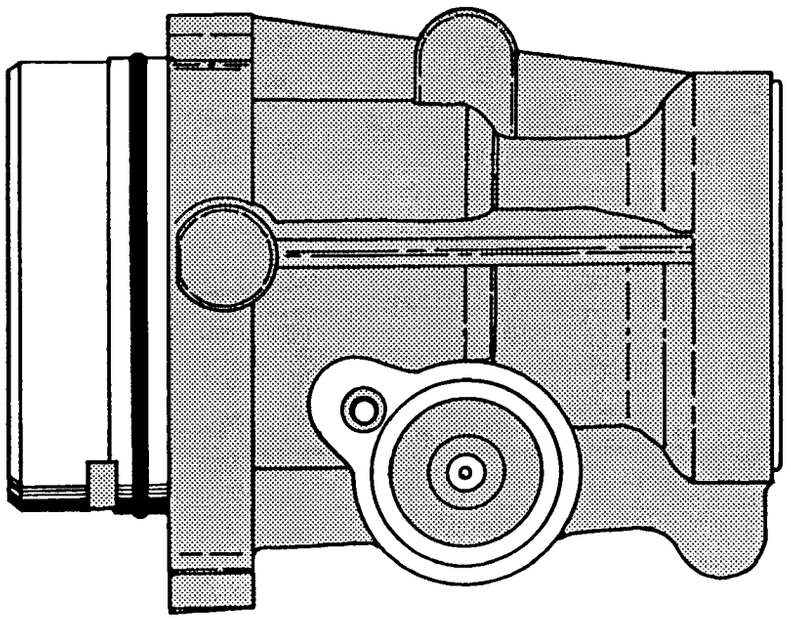
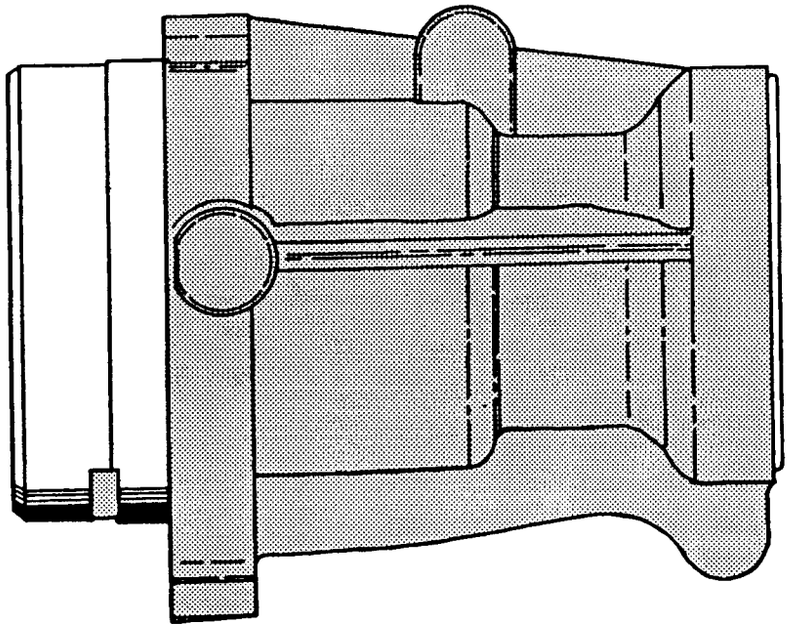

EATX/REVERSE LAMP RELAY
NEW YORKER, DYNASTY, IMPERIAL
FRONT
REVERSE LAMP RELAY
EATX RELAY
A B C D E
F G H J K
BB
D C A B
7
A B A B
F2 F1
1 2 3 4 5 6 8 9 10
FRONT OF VEHICLE

Figure 9



1989 TO 1992 A604 EXTENSION HOUSING WITH SPEDOMETER BORE



1993 AND UP A604 EXTENSION HOUSING WITHOUT SPEEDOMETER BORE

Figure 10

CHRYSLER A604

NEW BELL HOUSING PATTERNS

CHANGE: The A-604 now has three different bell housing patterns, 2.5L (4 Cyl), 3.0L (V-6), and 3.3L (V-6).

REASON: Expanded model coverage.

PARTS AFFECTED:

(1) TRANSAXLE CASE - Because of the three different engines that are now used, it requires three different bell housing bolt patterns.
For the 2.5 Litre Bell Housing pattern, refer to Figure 11.
For the 3.0 Litre Bell Housing pattern, refer to Figure 12.
For the 3.3 Litre Bell Housing pattern, refer to Figure 13.

(2) TURBINE SHAFT SPLINES - 1989-1990 2.5 Litre engine uses a turbine shaft with 22 splines for the torque converter, and the 1989-1990 3.0 and 3.3 Litre engines will use the a 24 spline turbine shaft (See Figure 14).
NOTE: All 1991 and up A604 transaxles will use a 22 spline input shaft to fit a new torque converter with a torsional vibration damper (See Figure 14).

INTERCHANGEABILITY:

(1) CASE - Not Interchangeable.

(2) TURBINE SHAFT - It is possible to install a 24 spline converter onto a 22 spline turbine shaft, but obviously the vehicle would not move.

SERVICE INFORMATION:

2.5 Litre Case (573 Cast on Bell)	4505572
3.0 Litre Case (631 Cast on Bell)	4446652
3.3 Litre Case (577 Cast on Bell)	4505576
22 Spline Input Shaft (1989-90 2.5L Only and all 1991 and up)	4505579
24 Spline Input Shaft (1989-90 3.0L and 3.3L Only)	4412210

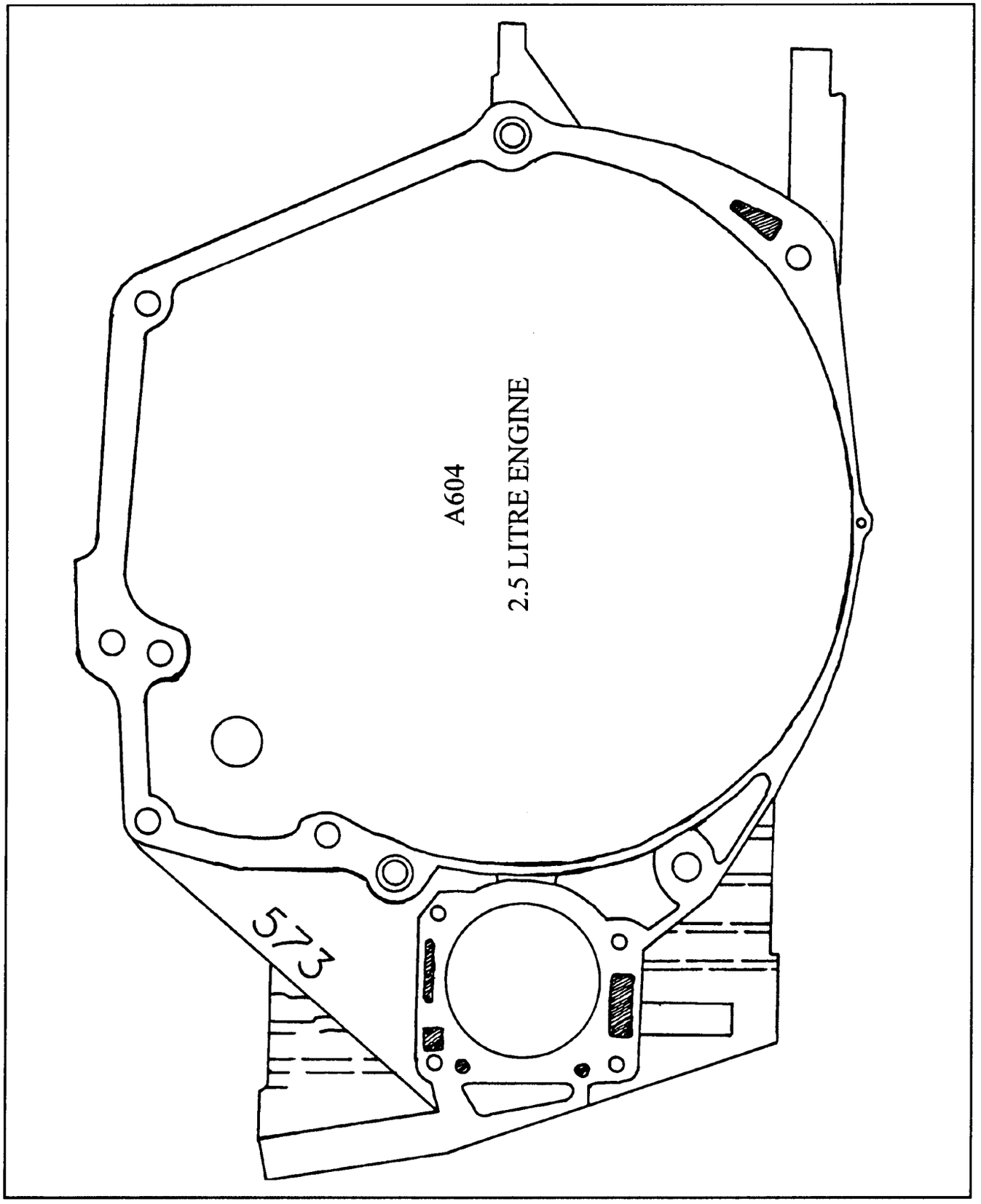


Figure 11

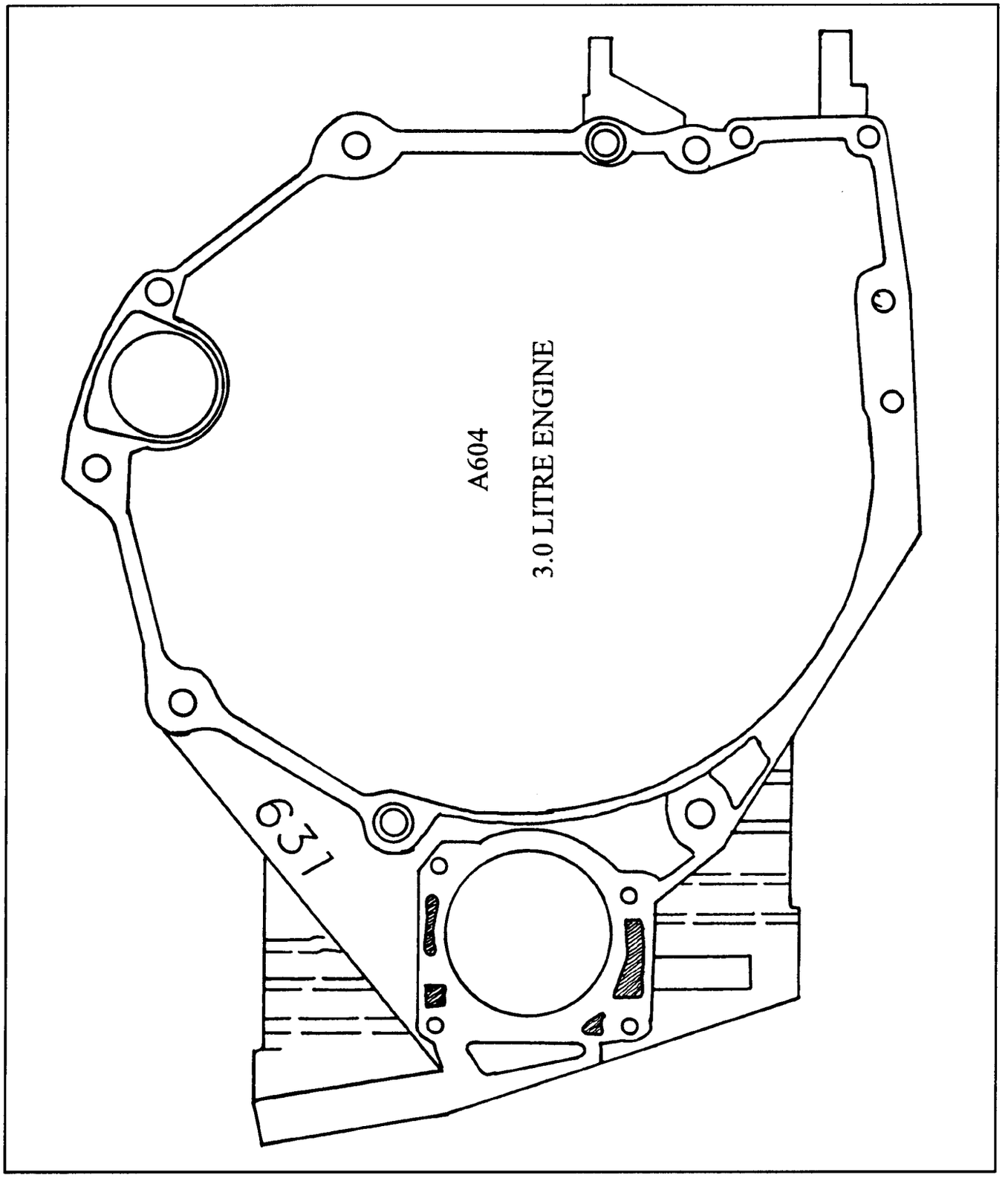


Figure 12

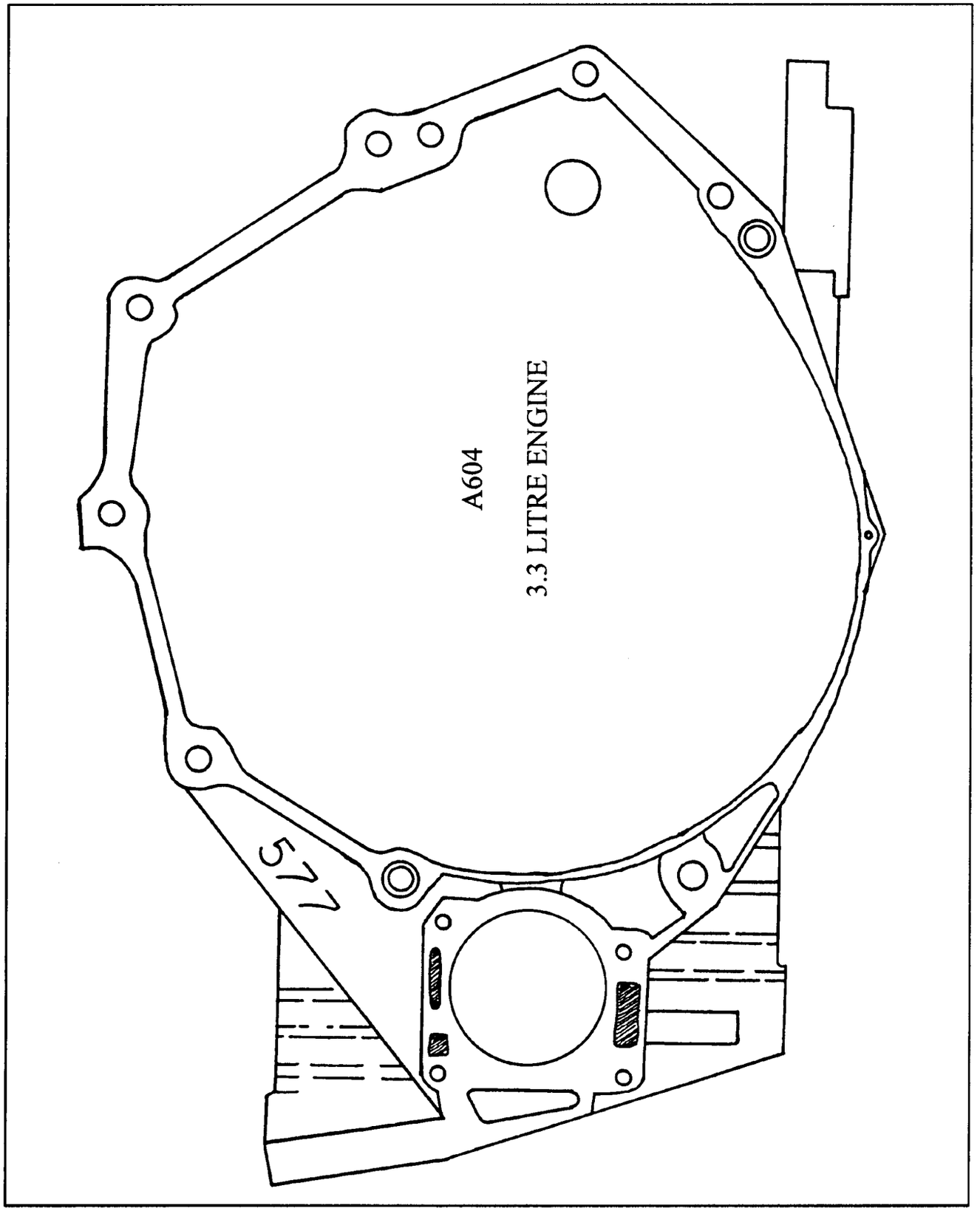


Figure 13

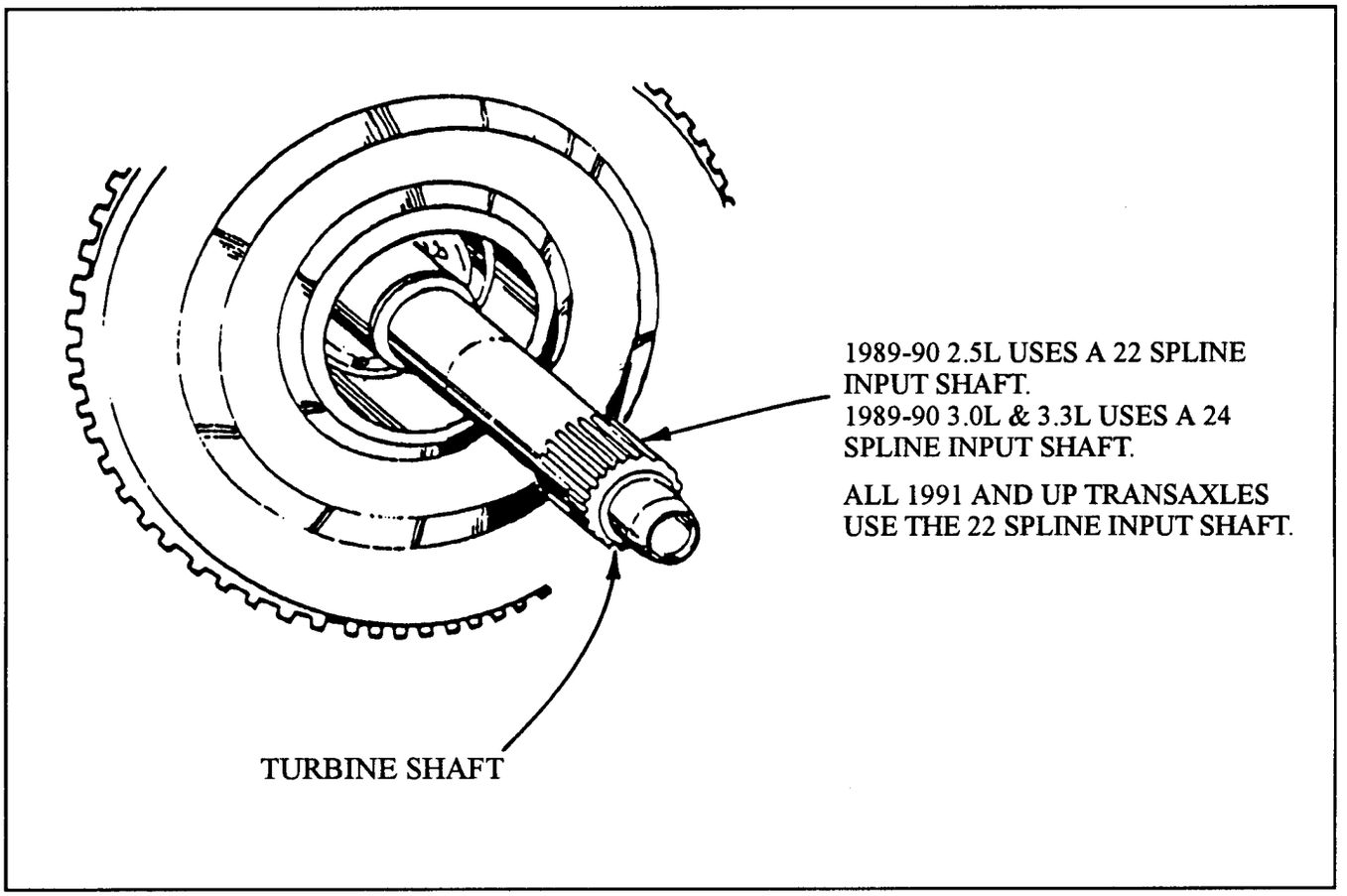

1989-90 2.5L USES A 22 SPLINE INPUT SHAFT.
1989-90 3.0L & 3.3L USES A 24 SPLINE INPUT SHAFT.
ALL 1991 AND UP TRANSAXLES USE THE 22 SPLINE INPUT SHAFT.
TURBINE SHAFT

Figure 14

CHRYSLER A604
FOUR DISC OVERDRIVE CLUTCH ASSEMBLY

CHANGE: A running change for 1990 model A604 transaxles was the introduction of a four (4) disc Overdrive Clutch Assembly, to replace the previous three (3) disc clutch assembly (See Figure 15).

REASON: Higher horsepower (3.3L V-6) engines introduced in New Yorker, Dynasty, Imperial, Caravan, and Voyager models.

PARTS AFFECTED:

(1) OVERDRIVE LINED PLATES - Now uses 4 lined plates instead of the previous 3 lined plates, and the lined plates for 1990 models are .014" thinner than the 1989 lined plates (See Figure 15), to help accommodate the extra lined plate. The 1989 lined plates measure .083"-.088" thick, and the new lined plates will measure .069"-.074" thick (See Figure 15).

(2) OVERDRIVE STEEL PLATES - Now uses 3 steel plates instead of the previous 2 steel plates. The new steel plates are .030" thinner, and measure .068"- .072" thick. The previous steel plates measure .098"- .102" thick (See Figure 15).

(3) INPUT CLUTCH RETAINER - The underdrive/overdrive reaction plate tapered snap ring groove was moved "Down" by .040" (Can be detected visually) to make room for the added lined and steel plates (See Figure 16). This also necessitated a change to be made to the underdrive/overdrive reaction plate as explained below. Another change that occurred at the same time is the underdrive clutch outer lip seal groove depth is .040" "Shallower" to accommodate a new underdrive clutch outer lip seal (See Figure 17).

(4) UNDERDRIVE CLUTCH OUTER LIP SEAL - The lip seal cross section has been reduced by .040" (Smaller in Overall Diameter) to accommodate the change in the depth of the groove in the input clutch retainer (See Figure 17). The OEM part number is printed on the seals for identification. The 1989 (Large) is 4377173, and the 1990 (Small) is 4531408. This will confirm that you have the proper seal for this location (See Figure 17).

(5) UNDERDRIVE/OVERDRIVE REACTION PLATES - The underdrive/overdrive Reaction Plates have always been available in 4 different thicknesses to adjust the Underdrive Clutch to proper specifications. For 1990, each plate was reduced in thickness by .040" to accommodate the new tapered snap ring location . Refer to the chart in Figure 18 for both 1990 and up selective reaction plate sizes with part numbers. The actual dimension change that took place can be seen by measuring just the lug thickness of the reaction plate. The 1989 reaction plate had a lug thickness of .196". When the tapered snap ring groove was moved down .040" in the Input Clutch Retainer to accommodate the extra lined and steel plate in the Overdrive Clutch pack,the lug on the reaction plate was also be reduced by .040" making the lug thickness .156" (See Figure 19). Then in 1993, the reaction plate had a redesign where a relief cut was placed across the top of the lug making the lug thickness .141". This was done to accommodate a change made to the tapered snap ring. Refer to the tapered snap ring changes on the following page and Figure 19. The selective drive/overdrive reaction plate chart in figure 18 for 1990 and up, provide part numbers for this new style reaction plate to be used only in 4 overdrive clutch drums. An updated tapered snap ring is included with each selective plate.

Continued on next page

(6)UNDERDRIVE/OVERDRIVE TAPERED SNAP RING - The thickness of this snap ring was originally .070" in thickness and could be easily recognizable as the snap ring would be Blue in color (See Figure 19). When the extra lined and steel plate was added to the overdrive clutch pack, the thickness of this snap ring was reduced by .010" because the friction that laid along side of this snap ring was also reduced in thickness as explained on the previous page. The 1990 snap ring for the 4 overdrive clutch pack became .060" in thickness and could be easily identified with either Green or White paint. In 1993, this tapered snap ring went from .060" in thickness to .075" to prevent excessive snap ring breakage. The color black was originally used to identify this .075" tapered snap ring but was soon changed to white due to a material change in the snap ring. This snap ring has also been known to be either Green or Blue in color. Caution should be used when selecting an underdrive/overdrive tapered snap ring as color identification may be confusing and none of these tapered snap rings can be interchanged. The .070" tapered snap ring is only used in the 3 overdrive clutch drum with a reaction plate that has a lug thickness of .196". The .060" tapered snap ring was used in 4 overdrive clutch drums with a reaction plate that has a lug thickness of .156". The .075" thick tapered snap ring is an update to the 4 overdrive clutch drums ONLY and should ONLY be used with reaction plates that have a lug thickness of .141" (See Figure 19).

INTERCHANGEABILITY:

None of the parts listed above will interchange with one another between 1989 and 1990 and up model years. It is imperative that you "Positively" I.D. each part to insure that you are assembling with compatible parts.

SERVICE INFORMATION:

1989 MODEL YEAR:

Overdrive Lined Plates	4377167
Overdrive Steel Plates	4377190
Underdrive/Overdrive Reaction Plates (Selective)	
.254"-.258" Thick	4377185
.274"-.277" Thick	4377186
.293"-.297" Thick	4377187
.312"-.316" Thick	4377188
Input Clutch Retainer	4431609
Underdrive/Overdrive Tapered Snap Ring (.070")	4377189
Underdrive Clutch Outer Lip Seal	4377173

1990 AND UP:

Overdrive Lined Plates	4505629
Overdrive Steel Plates	4377183
*Underdrive/Overdrive Reaction Plates (Selective)	
.215"-.219" Thick	4723684
.234"-.238" Thick	4723683
.253"-.257" Thick	4723682
.273"-.277" Thick	4723681
* Each selective plate comes with the updated tapered snap ring	
Input Clutch Retainer	4505623
Underdrive Clutch Outer Lip Seal	4531408

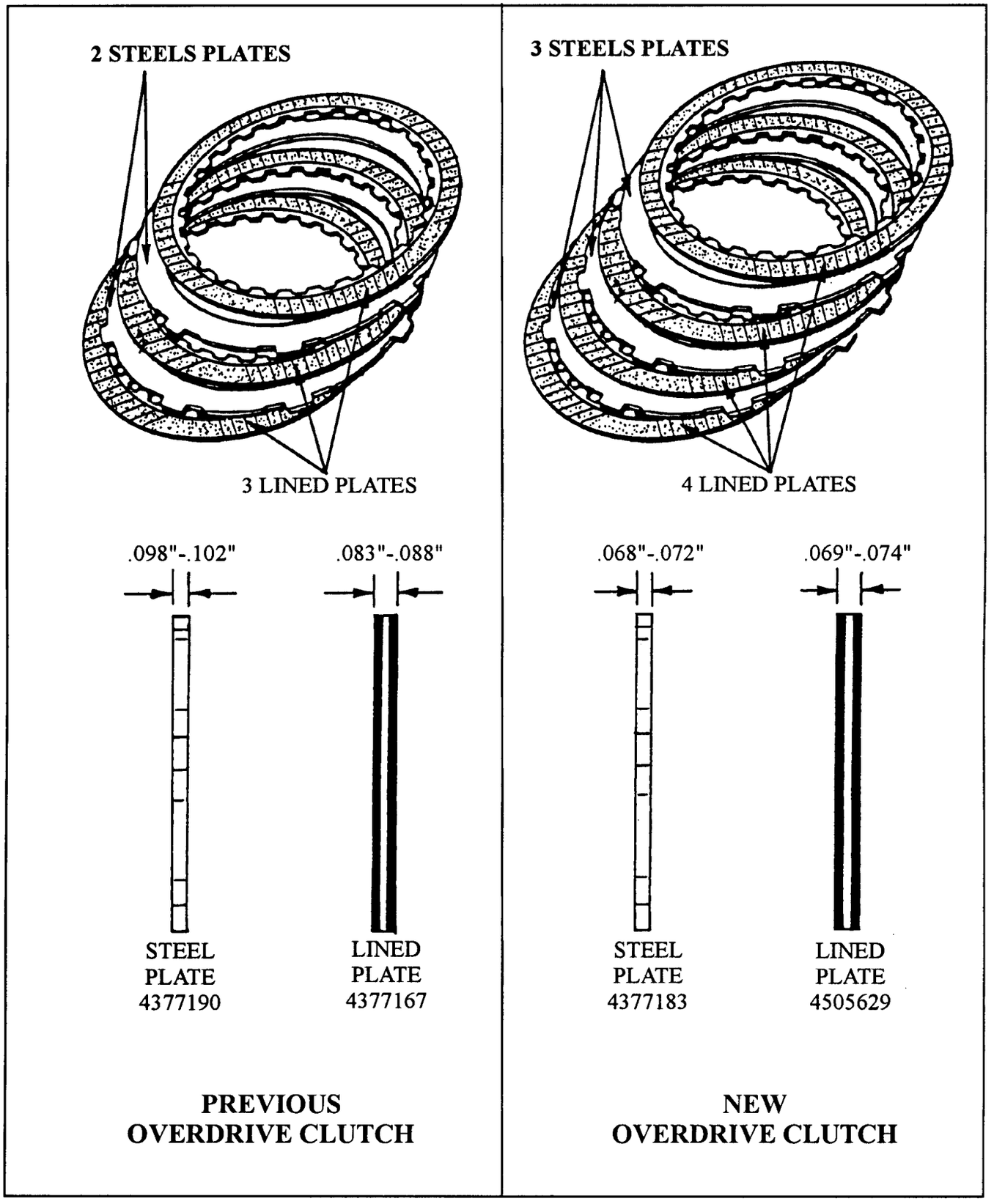
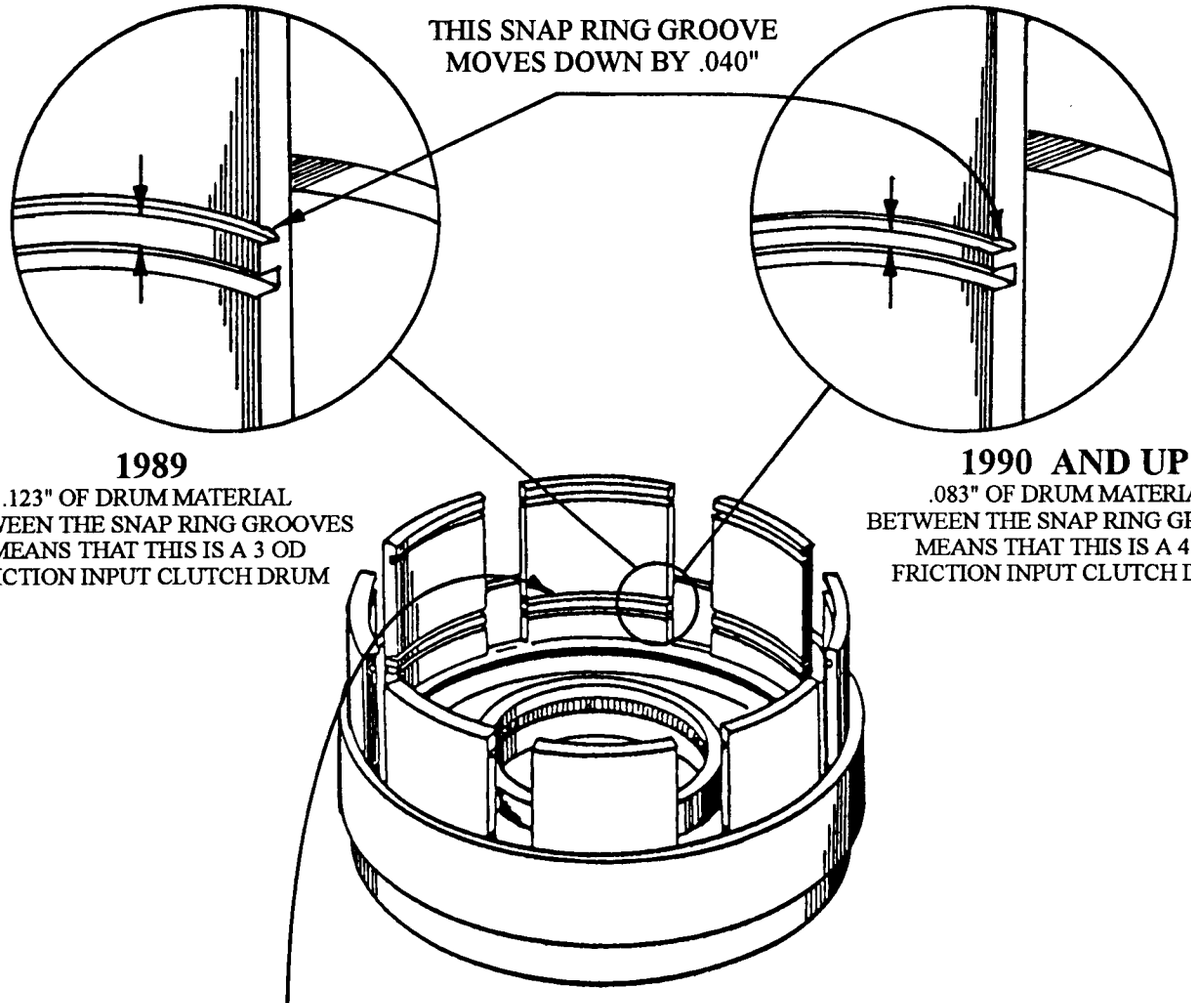

2 STEELS PLATES
3 LINED PLATES
.098"-.102"
.083"-.088"
STEEL PLATE 4377190
LINED PLATE 4377167
PREVIOUS OVERDRIVE CLUTCH
3 STEELS PLATES
4 LINED PLATES
.068"-.072"
.069"-.074"
STEEL PLATE 4377183
LINED PLATE 4505629
NEW OVERDRIVE CLUTCH

Figure 15

INPUT CLUTCH RETAINER



1989
.123" OF DRUM MATERIAL
BETWEEN THE SNAP RING GROOVES
MEANS THAT THIS IS A 3 OD
FRICTION INPUT CLUTCH DRUM

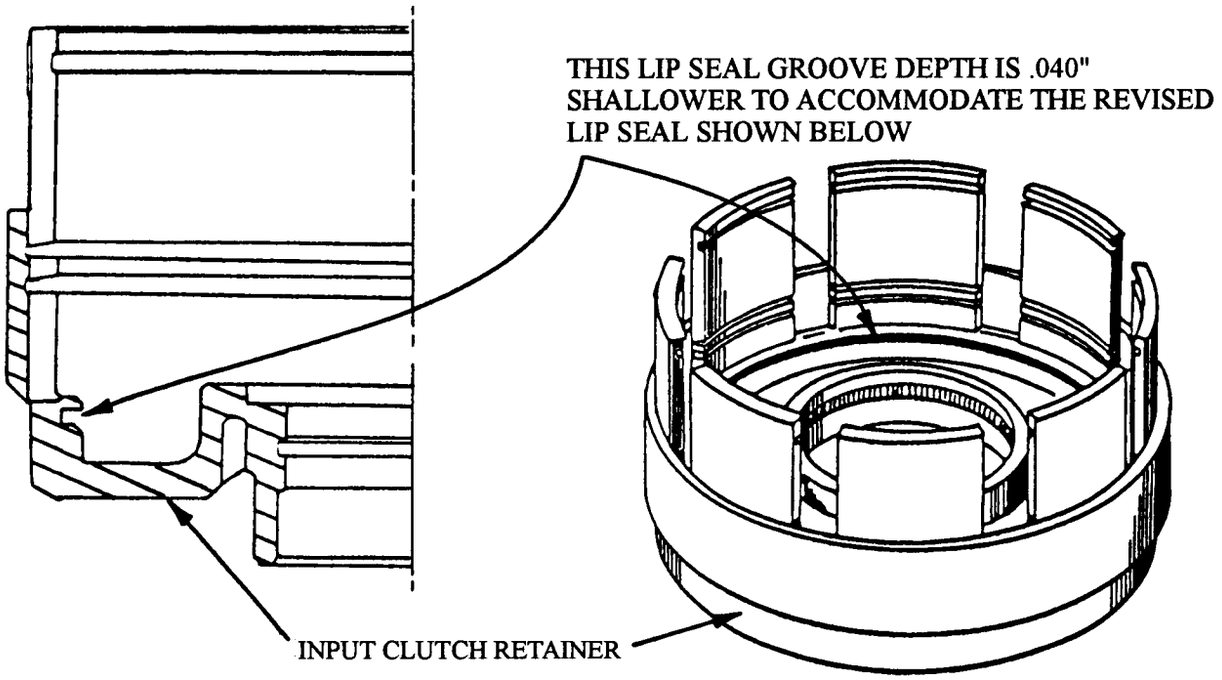
1990 AND UP
.083" OF DRUM MATERIAL
BETWEEN THE SNAP RING GROOVES
MEANS THAT THIS IS A 4 OD
FRICTION INPUT CLUTCH DRUM

THE UPPER SNAP RING GROOVE WAS MOVED DOWN .040" AS A PART OF A
DIMENSIONAL CHANGE TO ACCOMMODATE THE EXTRA STEEL AND LINED PLATE

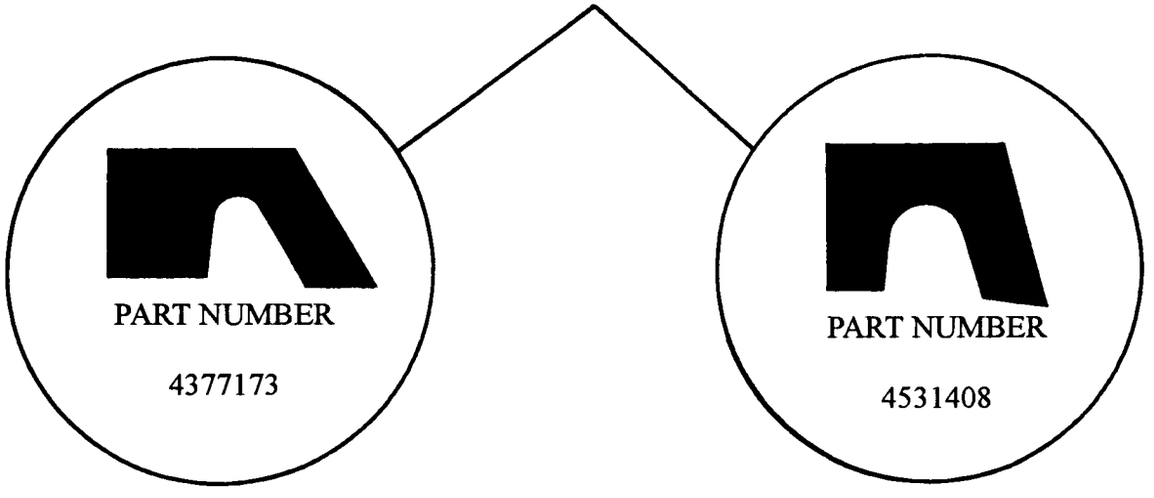
1989 INPUT CLUTCH RETAINER.....4431609
1990 INPUT CLUTCH RETAINER.....4505623

Figure 16

INPUT CLUTCH RETAINER



UNDERDRIVE CLUTCH OUTER LIP SEAL



1989 MODEL

3 OD CLUTCH DRUM

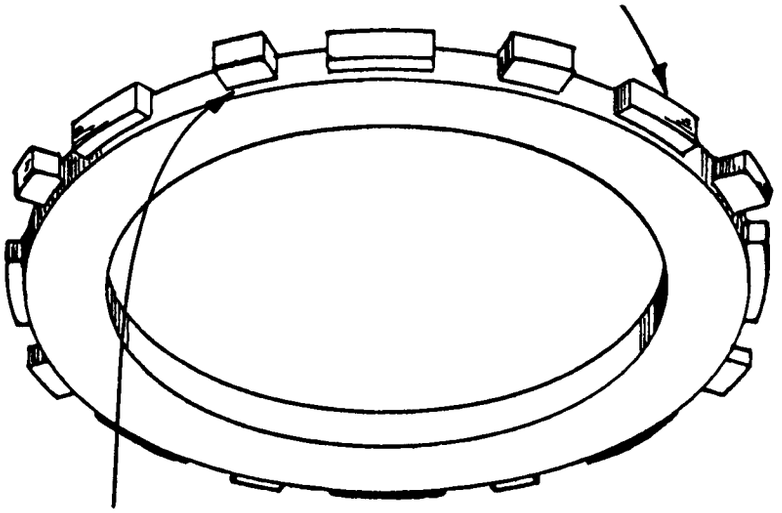
1990 AND UP MODEL

4 OD CLUTCH DRUM

Figure 17

UNDERDRIVE/OVERDRIVE REACTION PLATE

RELIEF CUT ON UPDATED REACTION PLATE FACES UP TOWARD TAPERED SNAP RING



SQUARE CUT FACES DOWN TOWARD FLAT SNAP RING

REACTION PLATE FOR 3 OD INPUT CLUTCH RETAINER

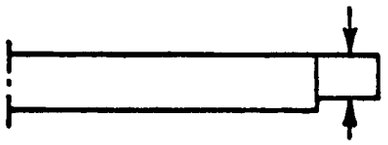
.254"-.258" Total thickness.....4377185
.274"-.277" Total thickness.....4377186
.293"-.297" Total thickness.....4377187
.312"-.316" Total thickness.....4377188
.070 Tapered snap ring.....4377189

UPDATED REACTION PLATE AND TAPERED SNAP RING FOR 4 OD INPUT CLUTCH RETAINER

.215"-.219" Total thickness.....4531570
.234"-.238" Total thickness.....4531569
.253"-.257" Total thickness.....4531568
.273"-.277" Total thickness.....4531567
*.075 Tapered snap ring.....4567602
*THE UPDATED SNAP RING COMES WITH THE REACTION PLATE

Figure 18

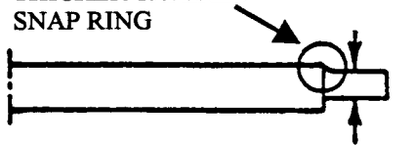
UNDERDRIVE/OVERDRIVE REACTION PLATE LUG THICKNESS



.196" THICK LUG REACTION PLATE GOES TO AN INPUT CLUTCH RETAINER WITH 3 OVERDRIVE CLUTCH PLATES ONLY WITH A .070" TAPERED SNAP RING.

.156" THICK LUG REACTION PLATE GOES T O AN INPUT CLUTCH RETAINER WITH 4 OVERDRIVE CLUTCH PLATES ONLY WITH A .060" TAPERED SNAP RING.

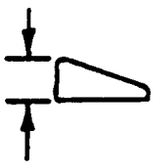
RELIEF CUT ACROSS THE TOP OF THE LUG MAKES ROOM FOR A THICKER TAPERED SNAP RING



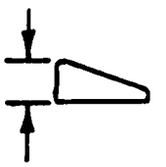
.141" THICK LUG REACTION PLATE GOES TO AN INPUT CLUTCH RETAINER WITH 4 OVERDRIVE CLUTCH PLATES ONLY WITH A .075" TAPERED SNAP RING.

UNDERDRIVE/OVERDRIVE TAPERED SNAP RING

.070" TAPERED SNAP GOES INTO AN INPUT CLUTCH RETAINER THAT IS DESIGNED TO ACCOMMODATE 3 OVERDRIVE CLUTCH PLATES AND A REACTION PLATE WITH A LUG THICKNESS OF .196"..



.060" TAPERED SNAP GOES INTO AN INPUT CLUTCH RETAINER THAT IS DESIGNED TO ACCOMMODATE 4 OVERDRIVE CLUTCH PLATES AND A REACTION PLATE WITH A LUG THICKNESS OF .156".



.075" TAPERED SNAP GOES INTO AN INPUT CLUTCH RETAINER THAT IS DESIGNED TO ACCOMMODATE 4 OVERDRIVE CLUTCH PLATES AND A REACTION PLATE WITH A LUG THICKNESS OF .141".

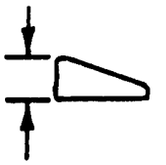


Figure 19

CHRYSLER A604

NEW PRNODL AND NEUTRAL SAFETY SWITCHES

CHANGE: PRNODL Switch and Neutral Safety Switch have been changed for the 1990 model year, as well as the vehicle wiring harness connectors. Refer to Figure 20 for location of switches on the transaxle.

REASON: Positive locking mechanism, with a weather tight seal, to prevent the connection from becoming loose.

PARTS AFFECTED:

(1) PRNODL SWITCH AND CONNECTOR - The PRNODL Switch and its wiring harness connector have changed for 1990, and can be identified visually (See Figure 21). These PRNODL Switches WILL NOT interchange with one another.

(2) NEUTRAL SAFETY SWITCH AND CONNECTOR - The Neutral Safety Switch and it wiring harness connector have changed for 1990, and can be identified visually (See Figure 22). These Neutral Safety Switches WILL NOT interchange with one another.

INTERCHANGEABILITY:

The 1989 and 1990 Switches are not compatible with one another and WILL NOT interchange between these model years.

NOTE: Each of the new for 1990 switches may look similar at first glance, but the PRNODL switch features a "Coarse" thread, while the Neutral Safety switch is black and features "Fine" threads. (See Figures 21 and 22).

SERVICE INFORMATION:

PRNODL Switch (1989 Model)	5234022
PRNODL Switch (1990 Model)	5234393
Neutral Safety Switch (1989 Model)	3747361
Neutral Safety Switch (1990 Model)	5234319
Repair Harness Kit	4638996

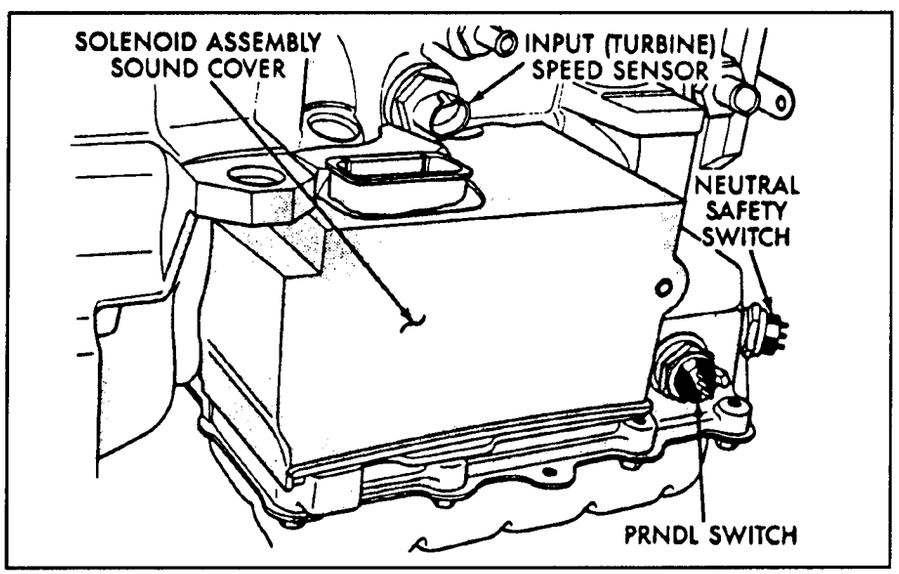
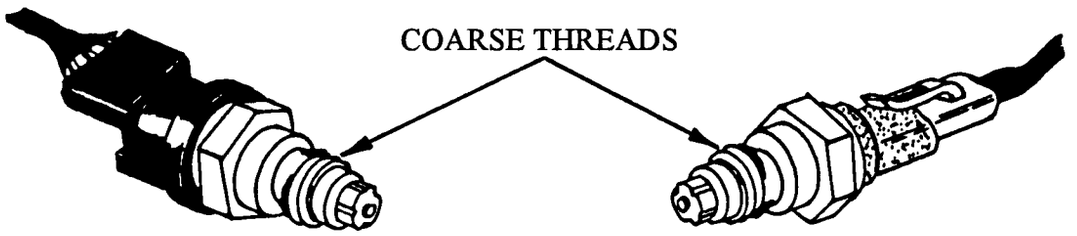


Figure 20

PRNODL SWITCH AND CONNECTOR

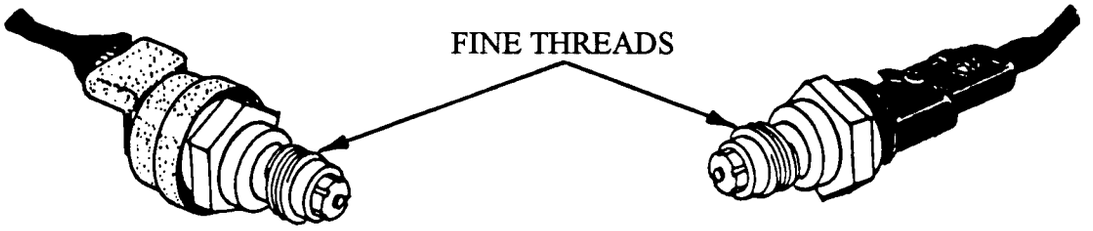


1989	1990 AND UP
PART NUMBER	PART NUMBER
5234022	5234393

THESE PRNODL SWITCHES WILL NOT INTERCHANGE

Figure 21

NEUTRAL SAFETY SWITCH AND CONNECTOR



1989	1990 AND UP
PART NUMBER	PART NUMBER
3747361	5234319

THESE NEUTRAL SWITCHES WILL NOT INTERCHANGE

Figure 22

CHRYSLER A604

NEW OVERALL GEAR RATIOS

CHANGE: For 1990 there are 3 different overall gear ratios, depending on the model and engine size. They have added a new final drive ratio, and a new output/transfer gear ratio.

REASON: Greatly expanded model coverage.

PARTS AFFECTED:

(1) OUTPUT AND TRANSFER GEARS - There are now 2 different gear combinations, (New) 55T-58T, and (Previous) 59T-54T, depending on model and engine size. "Shot Peened" output and transfer gears are used in 3.3 litre, 2.5 litre turbo, and transaxles exported to Mexico. Refer to the chart in Figure 23.

(2) TRANSFER SHAFT AND RING GEAR - There are now 2 different final drive combinations, (New) 17T-59T, and (Previous) 16T-60T, depending on model and engine size. Refer to the chart in Figure 23.

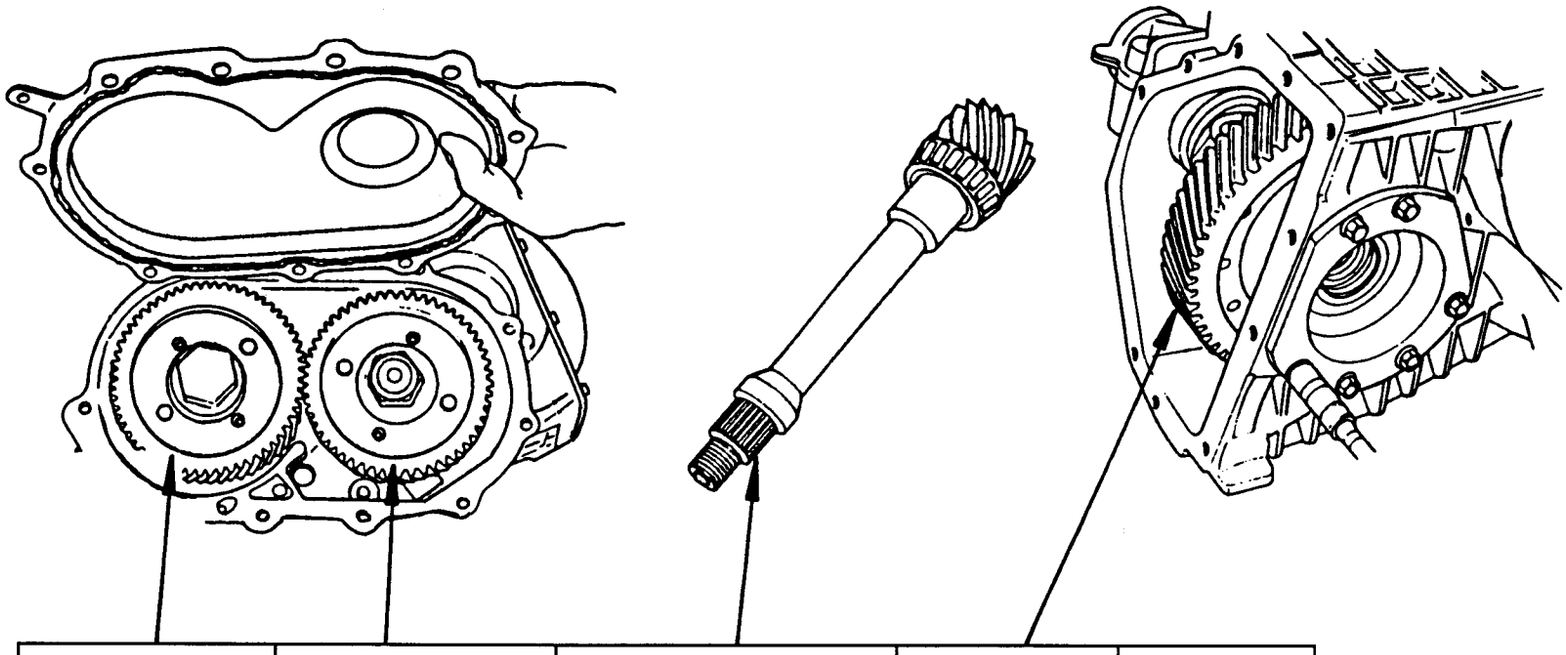
INTERCHANGEABILITY:

NOT INTERCHANGEABLE. It will be imperative that you identify the transaxle properly. 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 24). Then refer to the chart in Figure 27 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 25).
The most permanent form of identification is an etching, in the case, located near the rear gear cover (See Figure 26). 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 Figure 27, for proper applications.

SERVICE INFORMATION:

Output Shaft Gear, 55T	4377112
Output Shaft Gear, 55T (Shot Peened)	4531579
Output Shaft Gear, 59T	4377113
Output Shaft Gear, 59T (Shot Peened)	4531577
Transfer Shaft Gear, 58T	4412276
Transfer Shaft Gear, 58T (Shot Peened)	4531578
Transfer Shaft Gear, 54T	4412277
Transfer Shaft Gear, 54T (Shot Peened)	4531576
Transfer Shaft, 17T	4377126
Transfer Shaft, 16T	4377128
Ring Gear, 59T	4431665

27½° Transfer Gears



OUTPUT SHAFT GEAR	TRANSFER SHAFT GEAR	TRANSFER SHAFT	RING GEAR	OVERALL GEAR RATIO
55T 4377112	58T 4412276	17T 4377126	59T 4431655	2.52
55T 4377112 4531579 SP	58T 441226 4531578 SP	16T 4377128	60T 4431660	2.72
59T 4377113 4531577 SP	54T 4412277 4531576 SP	16T 4377128	60T 4431660	2.36
59T 4377113 4531577 SP	54T 4412277 4531576 SP	17T 4377126	59T 4431655	2.19

SP = SHOT PEENED

Figure 23

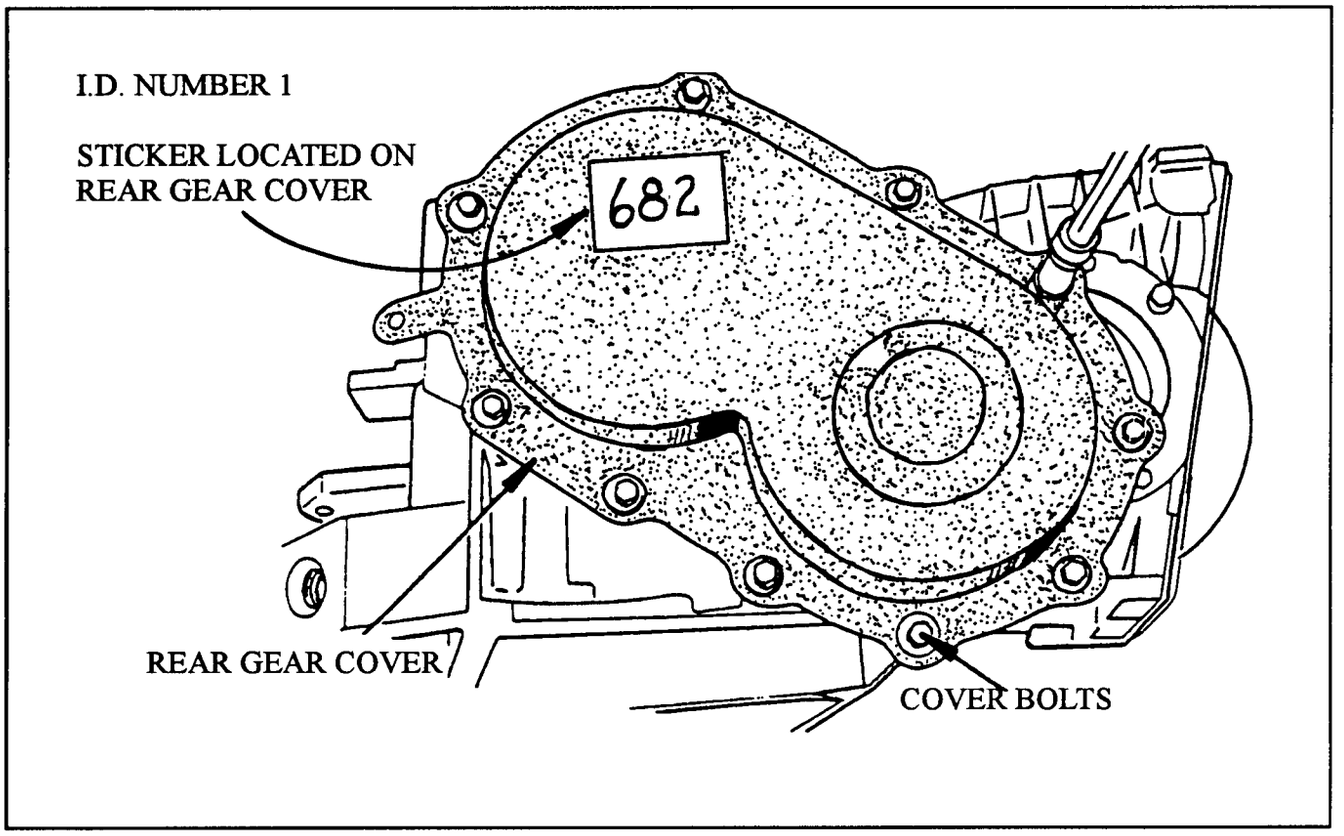


Figure 24

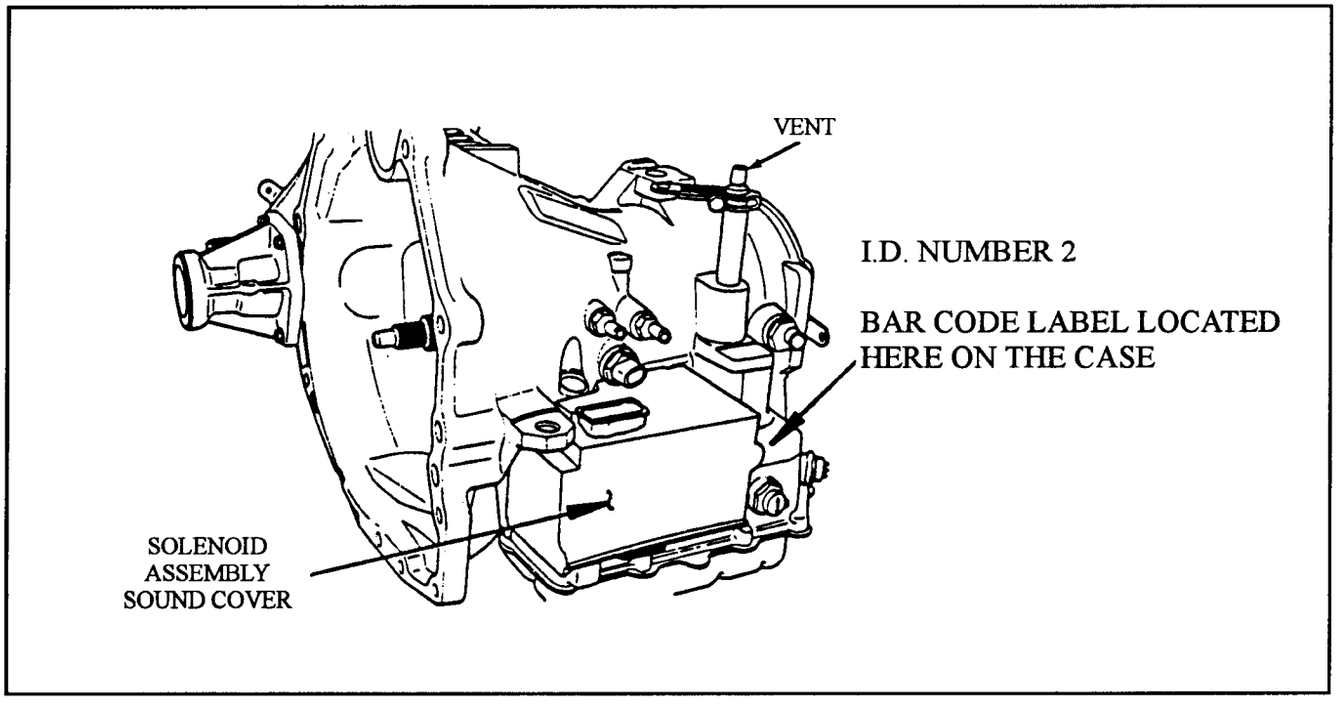


Figure 25

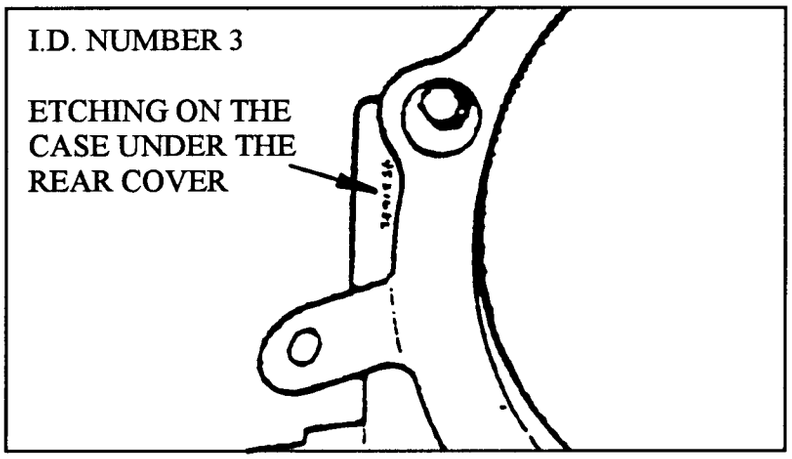


Figure 26

1989	1989 1/2	1990	1990 1/4	APPLICATION
4446 (659)	4531 (664)	4531 (551)	4531 (681)	3.0L 2.36 RATIO
———	———	4531 (630)	4531 (682)	3.3L 2.36 RATIO
———	———	4531 (553)	4531 (683)	2.5L 2.52 RATIO
———	———	4531 (554)	4531 (684)	2.5L 2.72 RATIO
———	———	4531 (555)	4531 (685)	2.5L TURBO 2.36 RATIO
———	———	4531 (635)	4531 (686)	2.5L TURBO 2.52 (MEX)

1991	APPLICATION
4567 (848)	3.0L 2.52 RATIO
4567 (849)	3.3L 2.52 RATIO
4567 (847)	3.8L 2.19 RATIO
4567 (846)	2.5L 2.52 RATIO
4567 (850)	3.3L 2.36 RATIO 4x4

Figure 27

CHRYSLER A604
NEW TRANSFER SHAFT

CHANGE: A thicker transfer shaft was made as a running change in 1990 and continues through to current production (See Figure 28).

REASON: Early transfer shafts were showing signs of torsional deflection under load in lab tests.

PARTS AFFECTED:

(1) TRANSFER SHAFT - The transfer shaft between the transfer gear end and the threaded end of the shaft increased in diameter to accommodate torque transfer (See Figure 28).

INTERCHANGEABILITY:

The new transfer shaft will retrofit back to all models providing the appropriate tooth count is selected.

SERVICE INFORMATION:

Transfer shaft, 17 T was part number 4377126 and was superseded to part number.....4531978
Transfer shaft, 16 T did not receive a part number change.....4377128

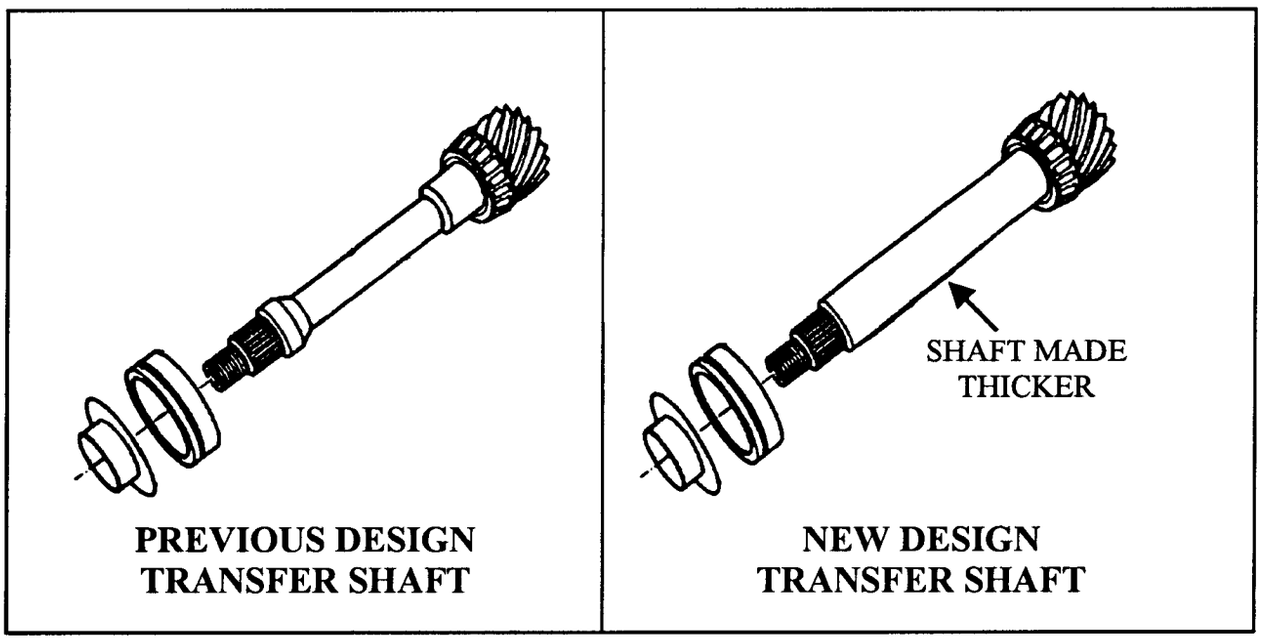


Figure 28

CHRYSLER A604
TRANSFER GEAR CHANGES
REDUCED GEAR WHINE

CHANGE: Introduced as a running change, late in the 1991 model year, Chrysler changed the helix angle of the teeth on the transfer gears to 32 degrees instead of the previous 27.5 degrees.

REASON: To reduce a whining concern while the vehicle was in motion.

PARTS AFFECTED:

(1) TRANSFER GEARS - The helix angle of the teeth on both transfer gears changed from 27.5 degrees to 32 degrees. The new design transfer gears can be easily identified by the removal of the washer recess area in the center of the gears, as shown in Figure 29. This was done to create more spline engagement, to accommodate higher torque engines.

(2) REAR PLANETARY CARRIER - The spline area of the output shaft was increased by 1/8" to accommodate the increased spline area in the transfer gear, as shown in Figure 30.

(3) OUTPUT SHAFT BOLT - New output shaft bolt was introduced at the same time with a Locktite patch added to the thread area, and the bolt was cadium plated. The new design bolt has a 5/16" head thickness instead of the previous 1/4" head thickness, as shown in Figure 31. All of this was done for a more stable torque retention.

(4) TRANSFER SHAFT NUT - Added Locktite patch to the thread area and cadium plated for a more stable torque retention.

(5) TRANSFER GEAR COVER - Has an added dimple in the cover to accommodate the increased head thickness of the output shaft bolt as shown in Figure 32.

(6) OVERALL GEAR RATIO - New gear ratios come with the upgrade to the 32 degree transfer gears (See Figure 33).

INTERCHANGEABILITY:

Individually the new design parts listed above ARE NOT interchangeable with previous design level parts. However, by using the new parts in kit form, a 1991 model transaxle can be upgraded to the new design 32 degree transfer gears (See "Service Information" on next page).

The only kit available for 1989-1990 model transaxles is a special "Low Lead Crown" 27.5 degree Transfer Gear Service Package. This kit is the only way to reduce gear whine concerns on these models. (See "Service Information" on next page).

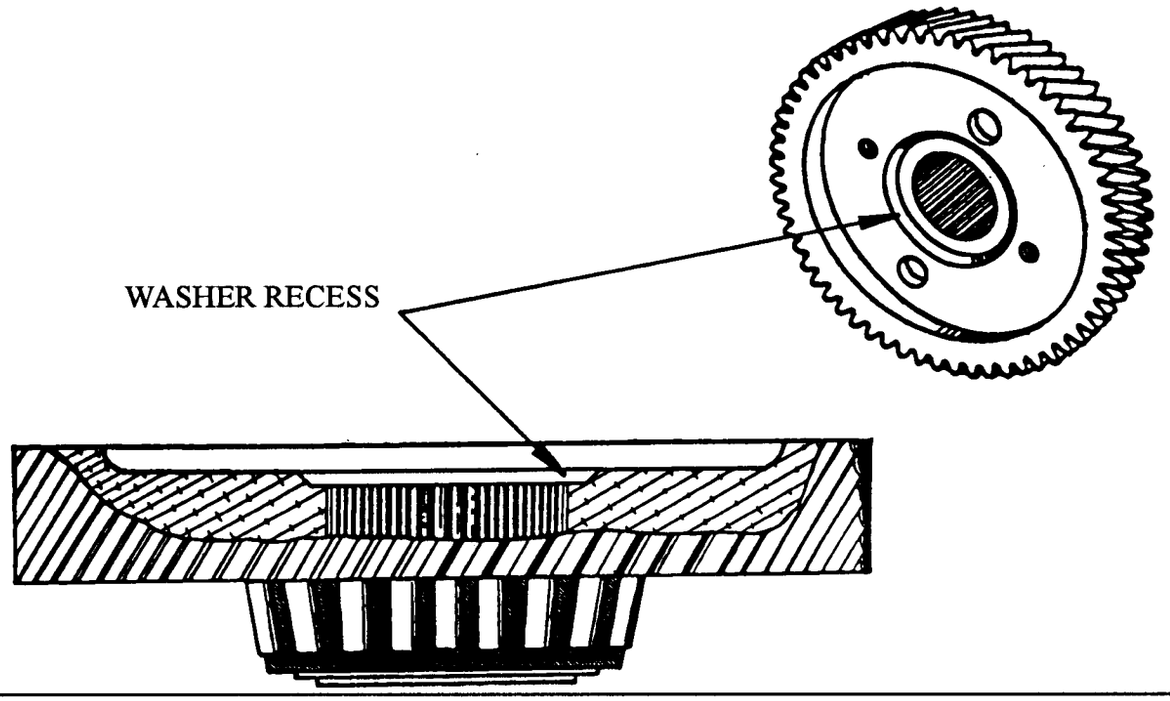
SERVICE INFORMATION:

89-90 Models, Special "Low Lead Crown" Service Package
54/59 Tooth Gear Set (2.36 Overall Gear Ratio ONLY) 4638737

1991 Models, 32 Degree Service Package
46/50 Tooth Gear Set (2.36/2.19 Overall Gear Ratio ONLY) 4713139

1991 Models, 32 Degree Service Package
49/47 Tooth Gear Set (2.52 Overall Gear Ratio ONLY) 4713140
50 Tooth Output Gear and Bearing 4713141
46 Tooth Transfer Gear and Bearing 4713142
49 Tooth Transfer Gear and Bearing 4713143
47 Tooth Output Gear and Bearing 4713144
Rear Planetary Carrier (New Design) 4713145
Output Gear Washer 6501832
Output Gear Bolt (New Design) 6503548
Transfer Gear Nut (New Design) 6502611
Transfer Gear Washer 6501833
Transfer Gear Cover (New Design) 4567255

CHRYSLER A 604 TRANSFER GEARS
27.5 DEGREES HELIX



CHRYSLER A 604 TRANSFER GEARS
32 DEGREES HELIX

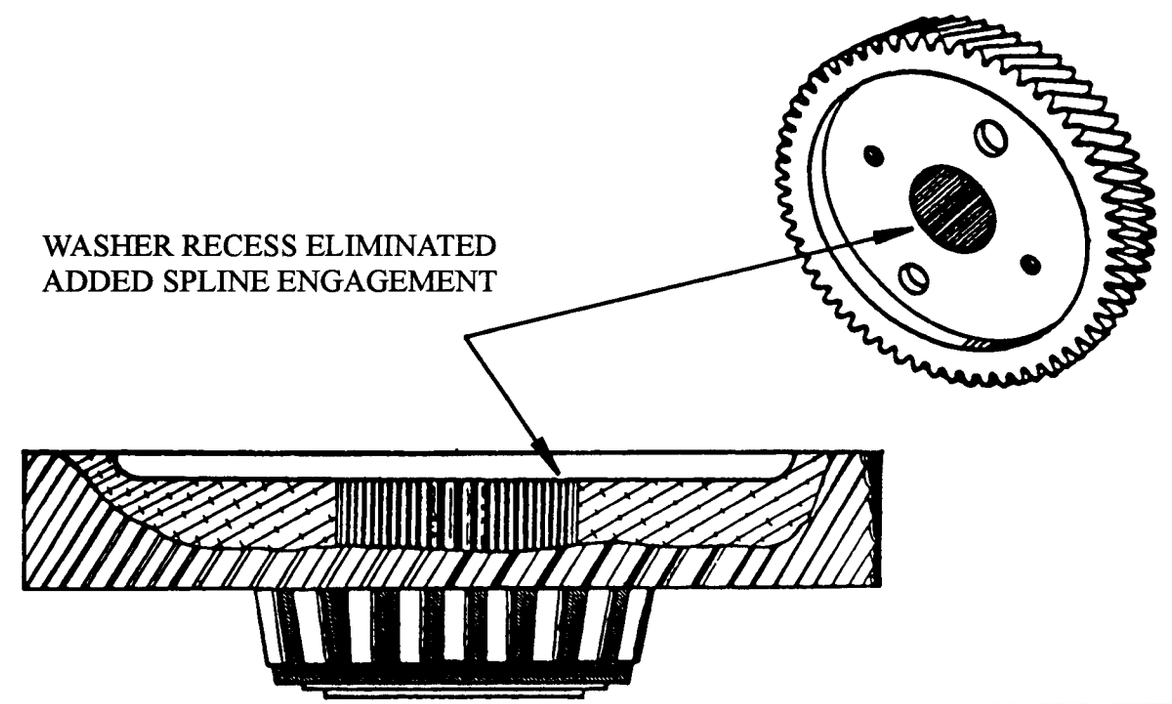


Figure 29

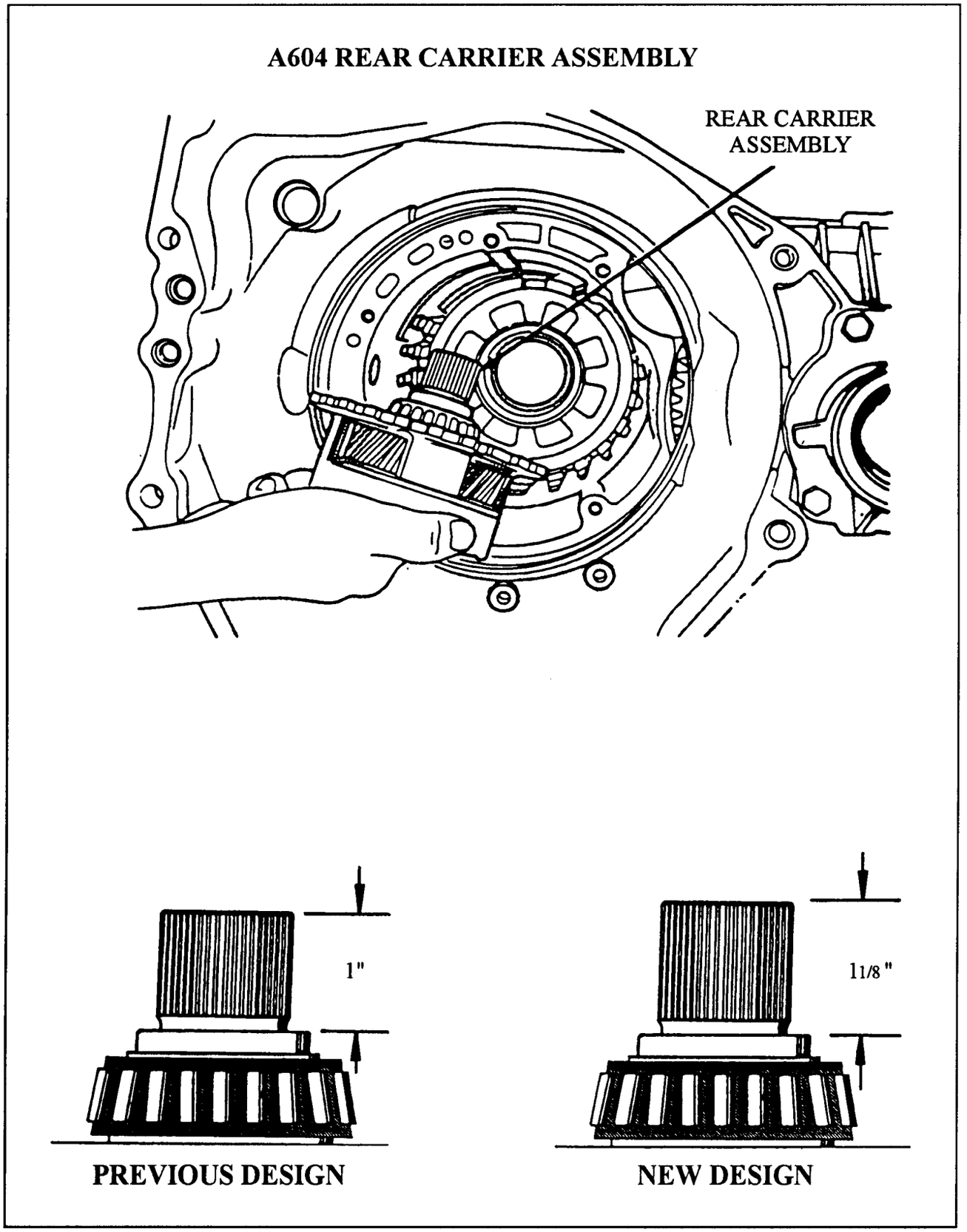
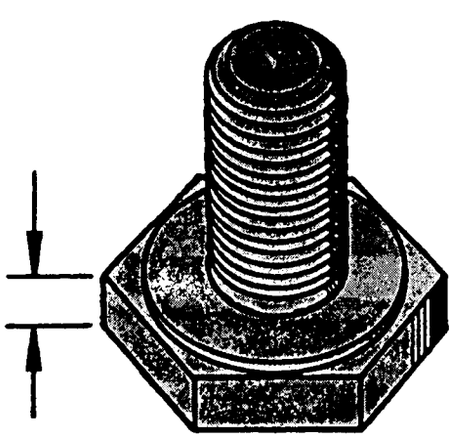

A604 REAR CARRIER ASSEMBLY
REAR CARRIER ASSEMBLY
1"
11/8"
PREVIOUS DESIGN
NEW DESIGN

Figure 30

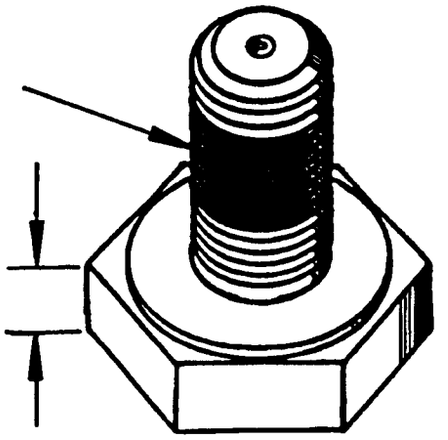
OUTPUT SHAFT BOLT



1/4"

PREVIOUS DESIGN

LOCKTITE
PATCH

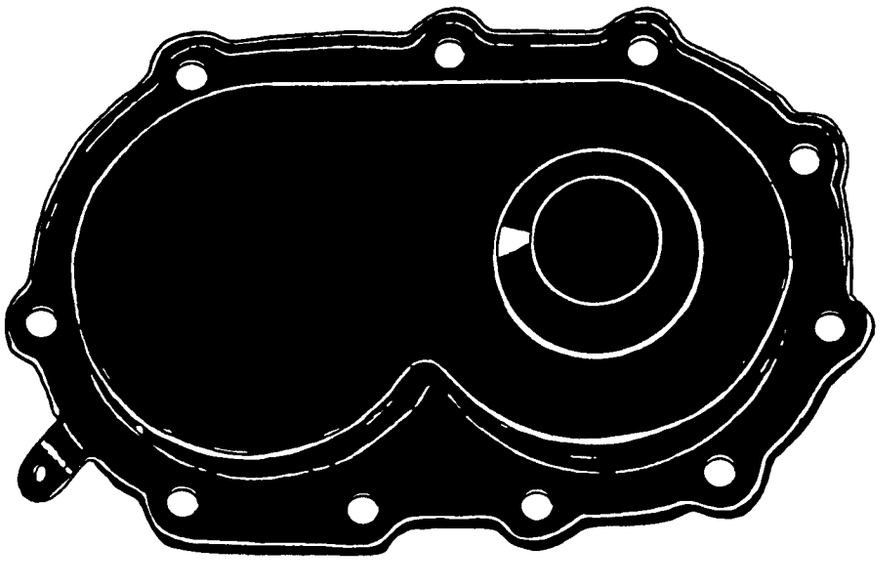


5/16"

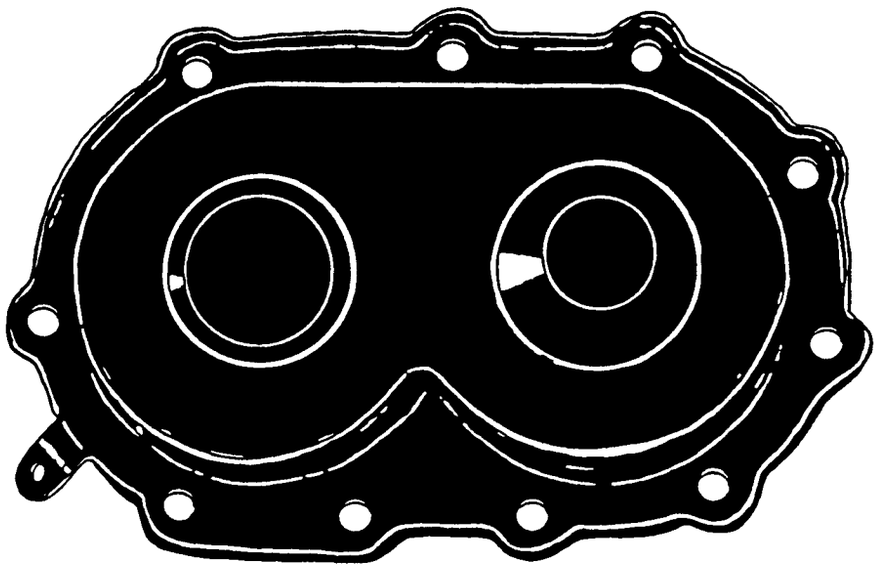
NEW DESIGN

Figure 31

TRANSFER GEAR COVER



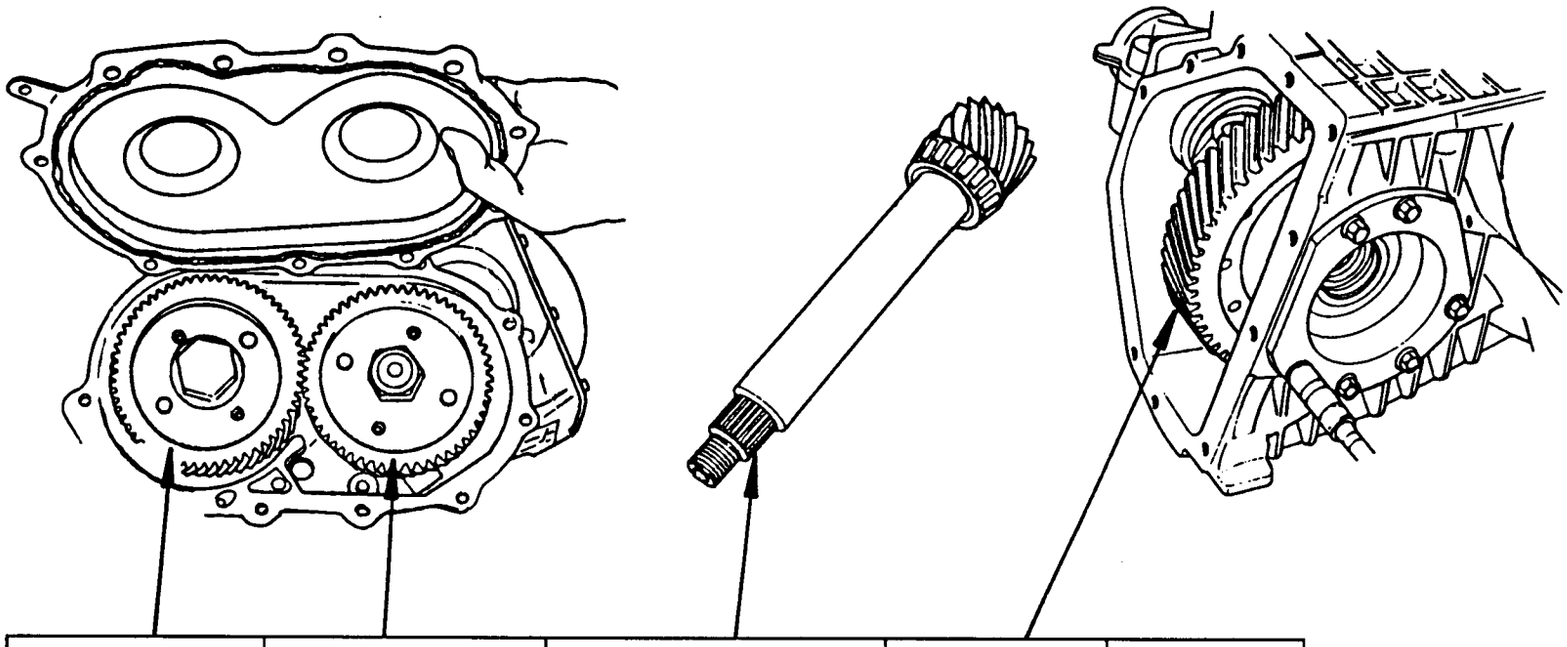
PREVIOUS DESIGN



NEW DESIGN

Figure 32

32° Transfer Gears



OUTPUT SHAFT GEAR	TRANSFER SHAFT GEAR	TRANSFER SHAFT	RING GEAR	OVERALL GEAR RATIO
47T 4567380	49T 4567377	17T 4377126	59T 4431655	2.49
50T 4567374	46T 4567371	16T 4377128	60T 4431660	2.38
50T 4567374	46T 4567371	17T 4377126	59T 4431655	2.20

Figure 33

CHRYSLER A604
OVERDRIVE/REVERSE PISTON CHANGE #1

CHANGE: A new Overdrive/Reverse Piston has been introduced for 1990 1/4 model transaxles, and features four reaction plate slots instead of eight slots (See Figure 34).

REASON: By using four slots, it leaves more material intact between the slots on the piston compared to the eight slot piston. This added material makes the piston stronger and more rigid.

PARTS AFFECTED:

(1) OVERDRIVE/REVERSE PISTON - The new Overdrive/Reverse Piston has four slots, for the pressure plate lugs, instead of the previous eight slots and can be identified visually (See Figure 34). The inside diameter of the new pistons bottom corner also has a larger radius to accommodate a new 1990 1/4 Input Clutch Retainer dimensional change (See Figure 35).

(2) OVERDRIVE/REVERSE PRESSURE PLATE - The new Overdrive/Reverse Pressure Plate has only four lugs on the outside diameter, instead of the previous eight, and can be identified visually (See Figure 36).

(3) INPUT CLUTCH RETAINER - The new Input Clutch Retainer has a new radius on the outside diameter, to reduce the chance of damage to the lip seal during assembly (See Figure 37). This retainer has no identification marks, and is tough to identify visually. The OEM part number did not change.

INTERCHANGEABILITY:

The new Overdrive/Reverse Piston, and four lug pressure plate will retrofit back to all previous models, if it is used as an assembly. The piston and pressure plate must BOTH be used in these instances. The revised Input Clutch Retainer WILL NOT work with the previous style 8 lug overdrive/reverse piston. Since the part number did not change, to replace an input clutch retainer built in 1990, before the change to the 4 lug overdrive/reverse piston, you MUST also change to the 4 lug design piston and pressure plate.

SERVICE INFORMATION:

Overdrive/Reverse Piston, 4 Slot	4531492
Overdrive/Reverse Pressure Plate, 4 Lug	4531556
Service Package, 4 Lug (Includes Both of the Above)	5241063
Overdrive/Reverse Piston, 8 Slot	4431613
Overdrive/Reverse Pressure Plate, 8 Lug	4377191

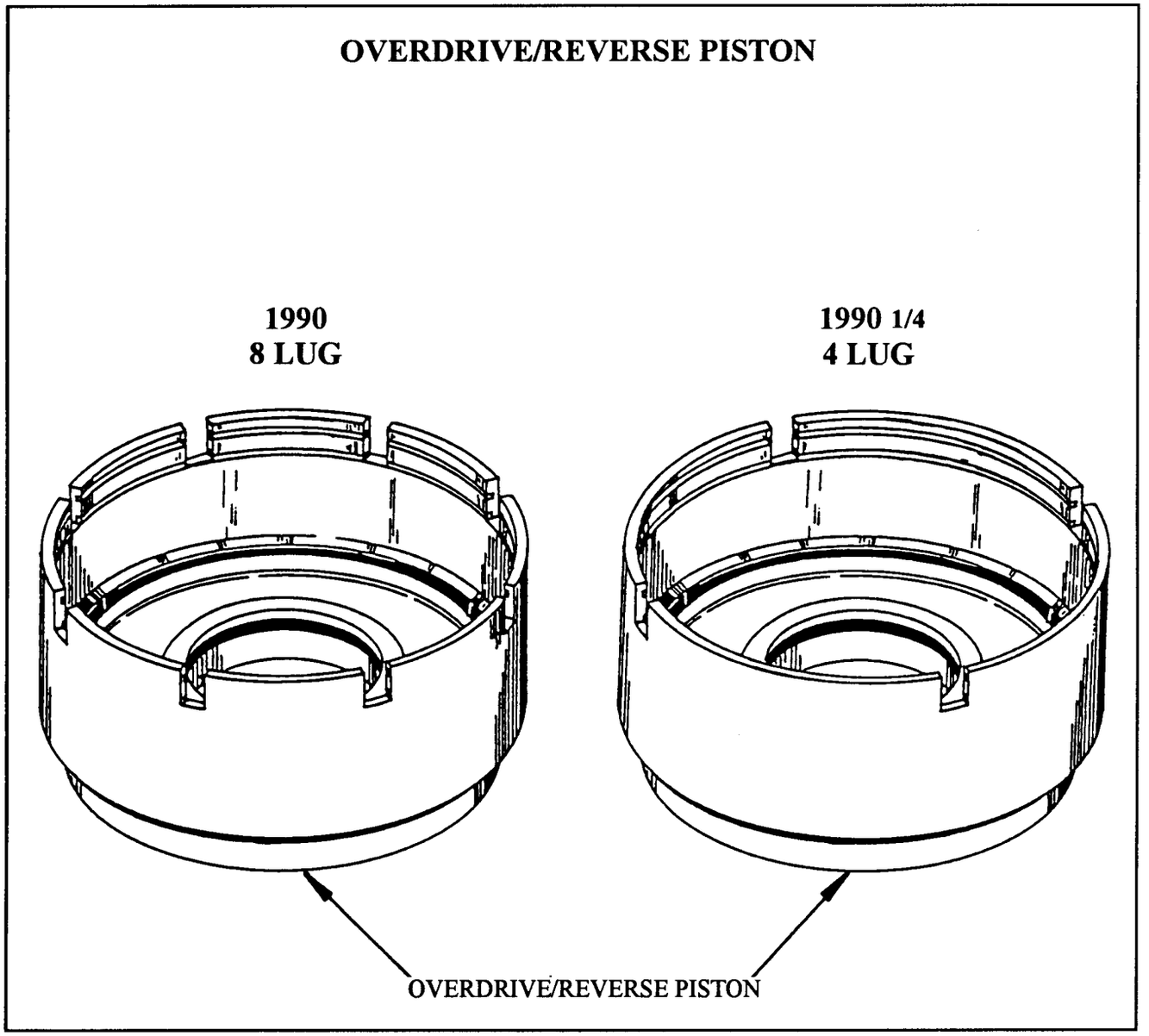

OVERDRIVE/REVERSE PISTON
1990
8 LUG
1990 1/4
4 LUG
OVERDRIVE/REVERSE PISTON

Figure 34

1990 1/4 OVERDRIVE/REVERSE PISTON WITH FOUR SLOTS

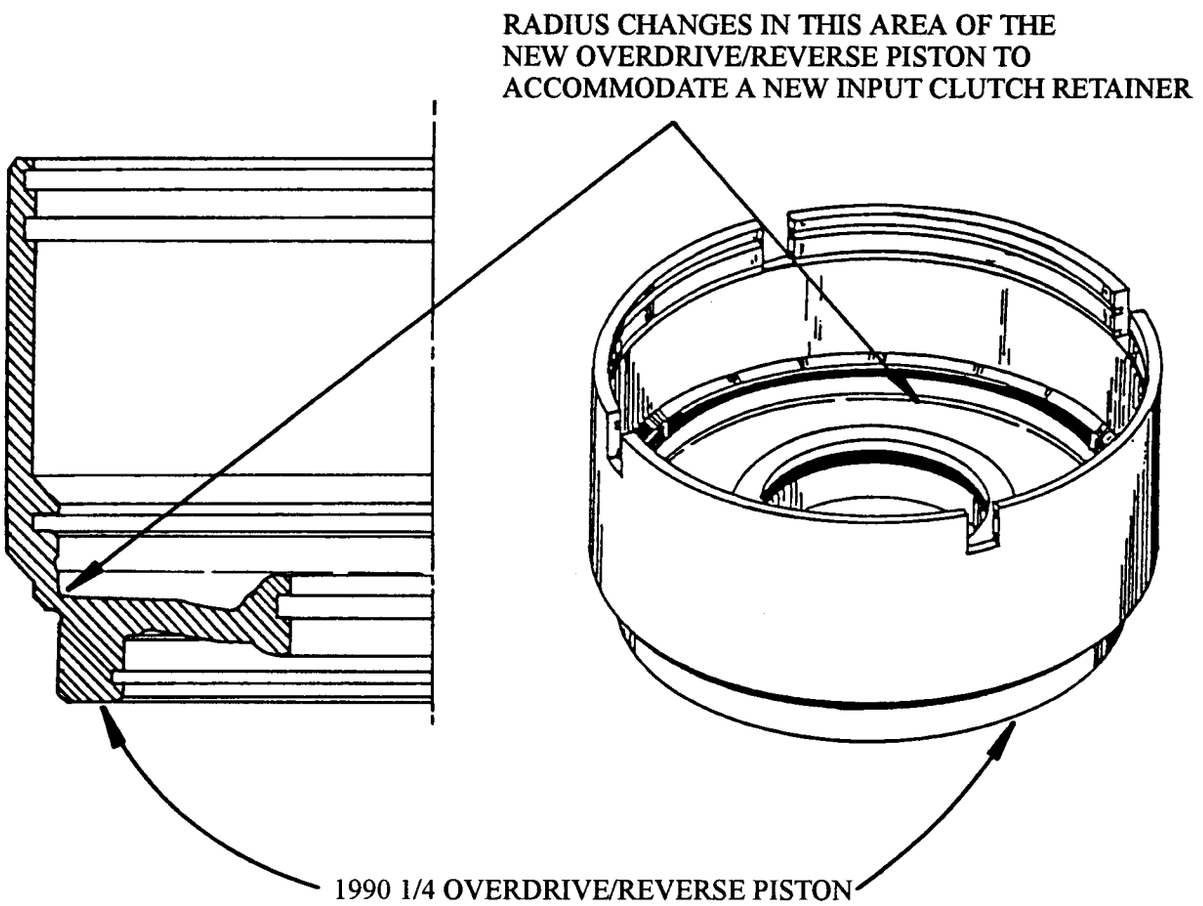


Figure 35

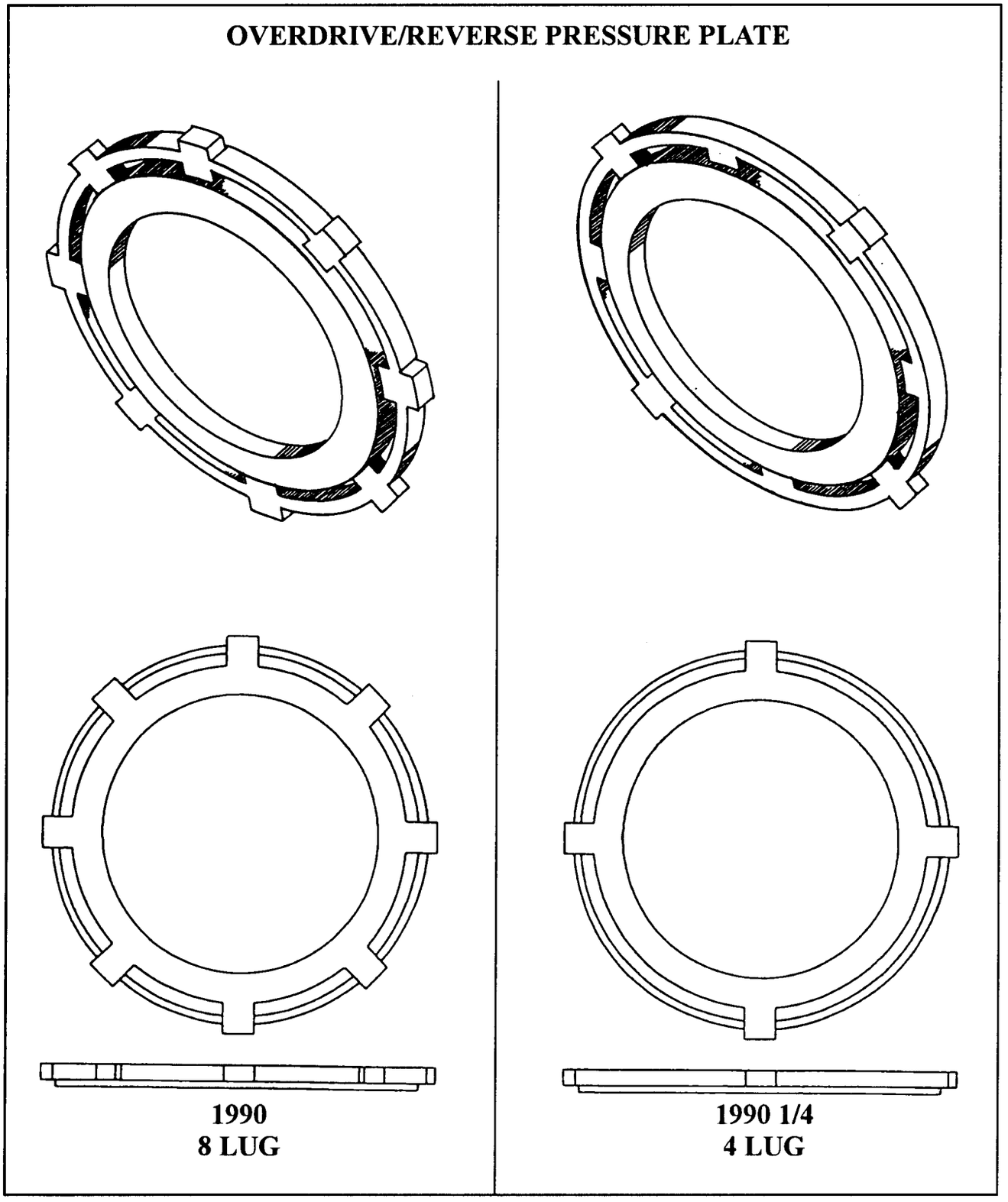


Figure 36

1990 1/4 INPUT CLUTCH RETAINER

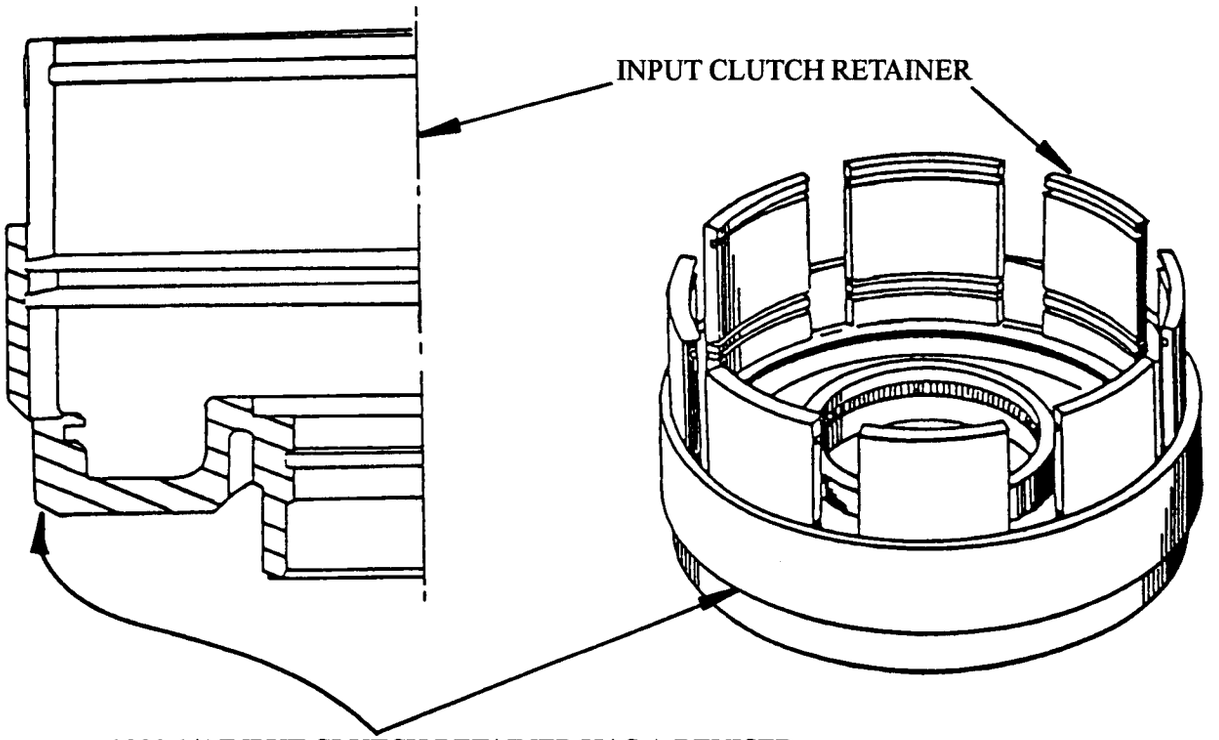


Figure 37

CHRYSLER A604
OVERDRIVE/REVERSE PISTON CHANGE #2

CHANGE: A 1991 running change was made to the overdrive/reverse piston, eliminating the material between the two snap ring grooves (See Figure 38).

REASON: To prevent the possibility of the overdrive/reverse reaction plate from binding in the overdrive/reverse drum, since it is also piloted on the outside diameter (See Figure 38).

PARTS AFFECTED:

(1) OVERDRIVE/REVERSE PISTON - The drum material between the previous two snap ring grooves has been eliminated, as the Overdrive/Reverse Reaction Plate is also piloted on the outside diameter (See Figure 38). The snap ring and plate "Stack-Up" is **EXACTLY** the same as previous models with the new design level piston.

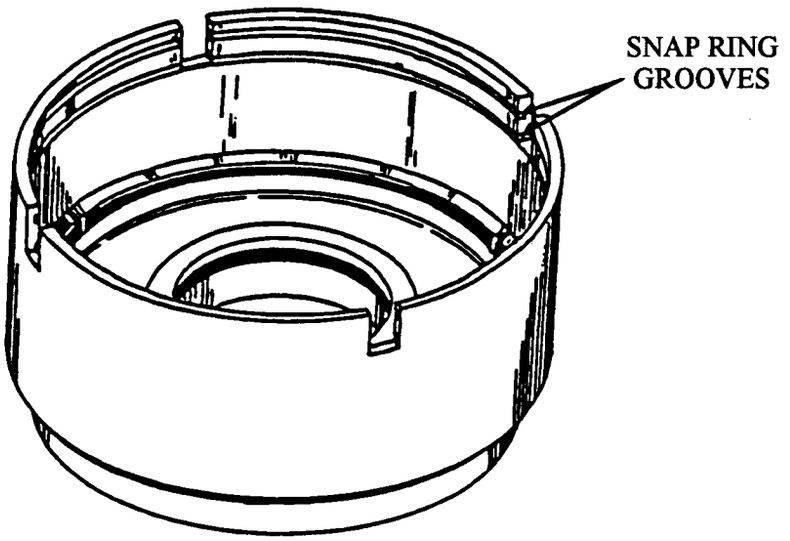
INTERCHANGEABILITY:

The new overdrive/reverse piston will retrofit back to all models.

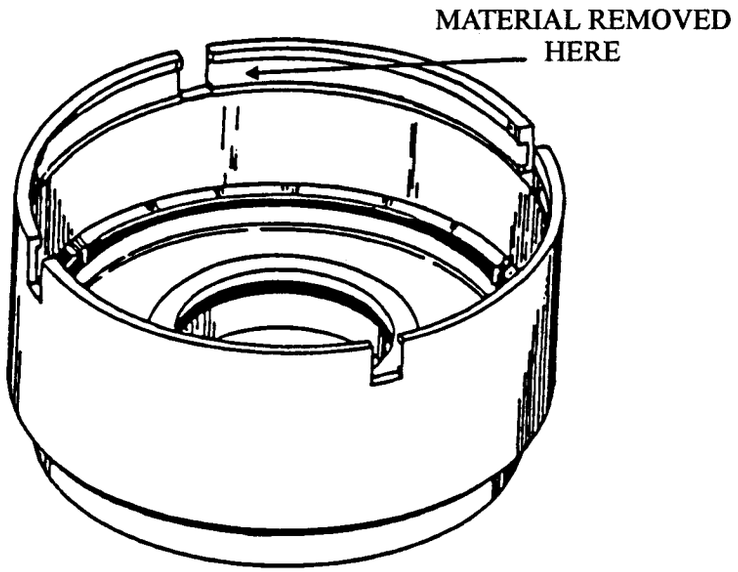
SERVICE INFORMATION:

Overdrive/Reverse Piston (New Design).....4566310

OVERDRIVE/REVERSE PISTON



PREVIOUS 4 LUG OVERDRIVE/REVERSE PISTON



NEW 4 LUG OVERDRIVE/REVERSE PISTON

Figure 38

CHRYSLER A604
1990 1/4 INPUT CLUTCH HUB AND "O" RINGS

CHANGE: For all 1990 1/4 model transaxles, the Input Clutch Hub, and the color coded "O" rings have once again been upgraded.

REASON: Improved overdrive and reverse clutch durability.

PARTS AFFECTED:

(1) INPUT CLUTCH HUB - The "O" ring grooves on the Input Clutch Hub are cut deeper and wider to accommodate the larger cross section color coded "O" rings (See Figure 39).

(2) FRONT INPUT CLUTCH HUB "O" RING - This "O" ring now has a larger, .103" cross section and is color coded BLUE for identification purposes. Remember that this is the 3rd change on this "O" ring. The original "O" ring was BLACK with a .070" cross section, the 2nd design "O" ring was ORANGE with a .070" cross section, and the 3rd design "O" ring is BLUE with a .103" cross section (See Figure 40).

(3) REAR INPUT CLUTCH HUB "O" RING - This "O" ring now has a larger, .103" cross section and is color coded RED for identification purposes. Remember that this is the 3rd change on this "O" ring. The original "O" ring was BLACK with a .070" cross section, the 2nd design "O" ring was GREEN with a .070" cross section, and the 3rd design "O" ring is RED with a .103" cross section (See Figure 41).

INTERCHANGEABILITY:

You CANNOT interchange the 1990 1/4 Input Clutch Hub "O" Rings (BLUE and RED) with the 89-90 "O" rings (ORANGE and GREEN), nor with the original (BLACK) "O" rings. The new Input Clutch Hub with the deeper "O" ring grooves, and the BLUE and RED "O" rings will retrofit back to all previous models, but you MUST also use the 1990 input clutch retainer as well.

SERVICE INFORMATION:

Input Clutch Hub, 90 1/4 (Deeper Grooves)	4531637
Input Clutch Hub, 1990 (Shallow Grooves)	4531655
Input Clutch Retainer, 1990	4505623
Front "O" Ring, BLACK .070" (Original)	6501574
Rear "O" Ring, BLACK .070" (Original)	6501548
Front "O" Ring, ORANGE .070" (89-90)	6502272
Rear "O" Ring, GREEN .070" (89-90)	6502270
Front "O" Ring, BLUE .103" (90 1/4)	6502271
Rear "O" Ring, RED .103"(901/4)	6502269

1990 1/4 INPUT CLUTCH HUB

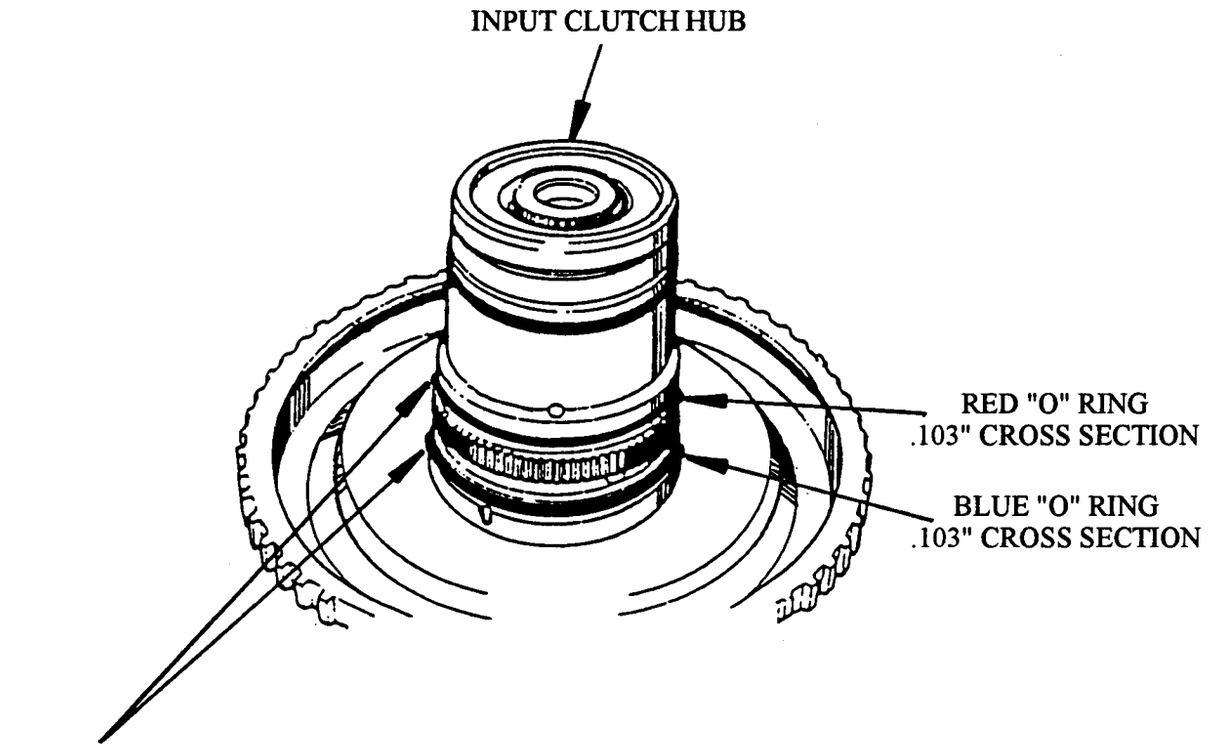


Figure 39

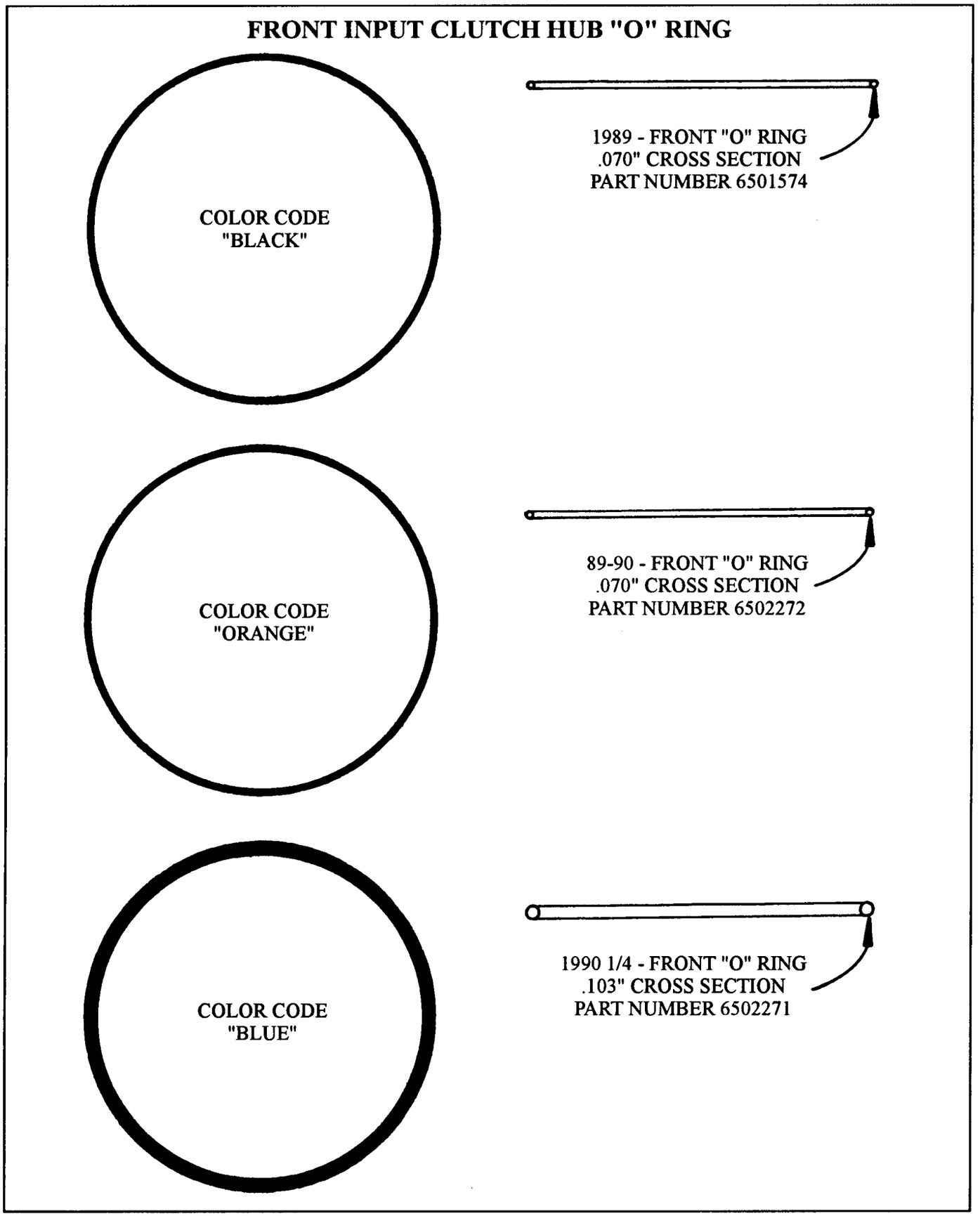
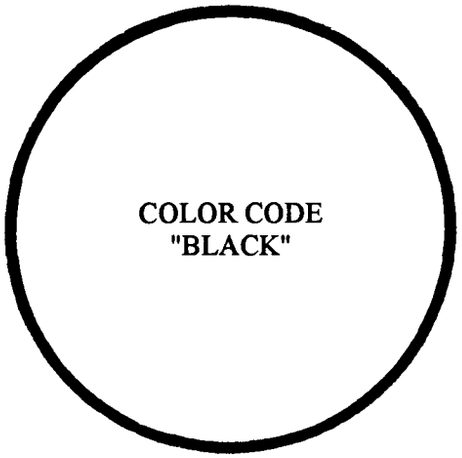

FRONT INPUT CLUTCH HUB "O" RING
COLOR CODE
"BLACK"
1989 - FRONT "O" RING
.070" CROSS SECTION
PART NUMBER 6501574
COLOR CODE
"ORANGE"
89-90 - FRONT "O" RING
.070" CROSS SECTION
PART NUMBER 6502272
COLOR CODE
"BLUE"
1990 1/4 - FRONT "O" RING
.103" CROSS SECTION
PART NUMBER 6502271

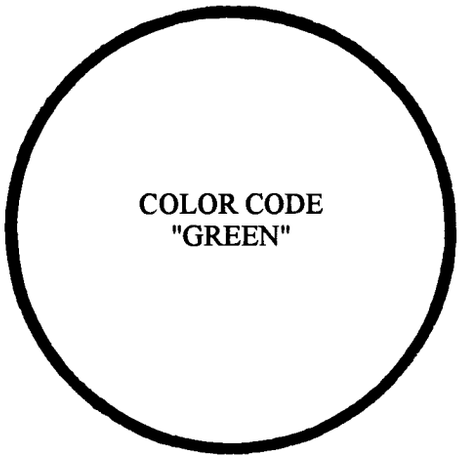
Figure 40

REAR INPUT CLUTCH HUB "O" RING

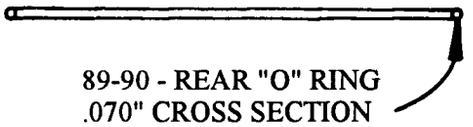


COLOR CODE
"BLACK"

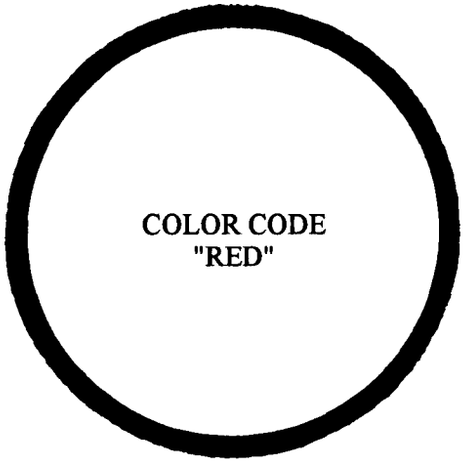
1989 - REAR "O" RING
.070" CROSS SECTION
PART NUMBER 6501548



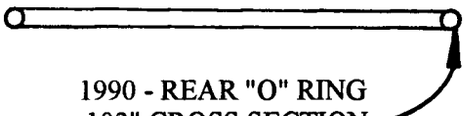
COLOR CODE
"GREEN"



89-90 - REAR "O" RING
.070" CROSS SECTION
PART NUMBER 6502270



COLOR CODE
"RED"



1990 - REAR "O" RING
.103" CROSS SECTION
PART NUMBER 6502269

Figure 41

CHRYSLER A604
COOLER BYPASS CHECK VALVE ASSEMBLY

CHANGE: Beginning in 1991 model A604 transaxles, there has been a "Cooler Bypass Check Valve Assembly" added in the transaxle case behind the oil pump. (See Figures 42 and 43).

REASON: Lack of cooler oil flow in extreme cold climates, because of transaxle fluid "Jelling" 0° Fahrenheit or Below).

PARTS AFFECTED:

(1) COOLER BYPASS CHECK VALVE - added into the case cooler passage behind the oil pump (See Figure 43). If cooler oil flow is restricted, or blocked, the new check valve will open, and allow cooler feed oil direct into the lube circuit to prevent transaxle damage. Normal operation is resumed after oil temperature is warm enough to again flow through the cooler. (See Figure 42).
NOTE: Customers should be advised to let the vehicle warm-up thoroughly before attempting to drive the vehicle, especially in the colder climates.

(2) TRANSAXLE CASE - The new case has added material between the two cooler line fittings, to accommodate the machining process needed for the new cooler bypass check valve assembly (See Figure 43).

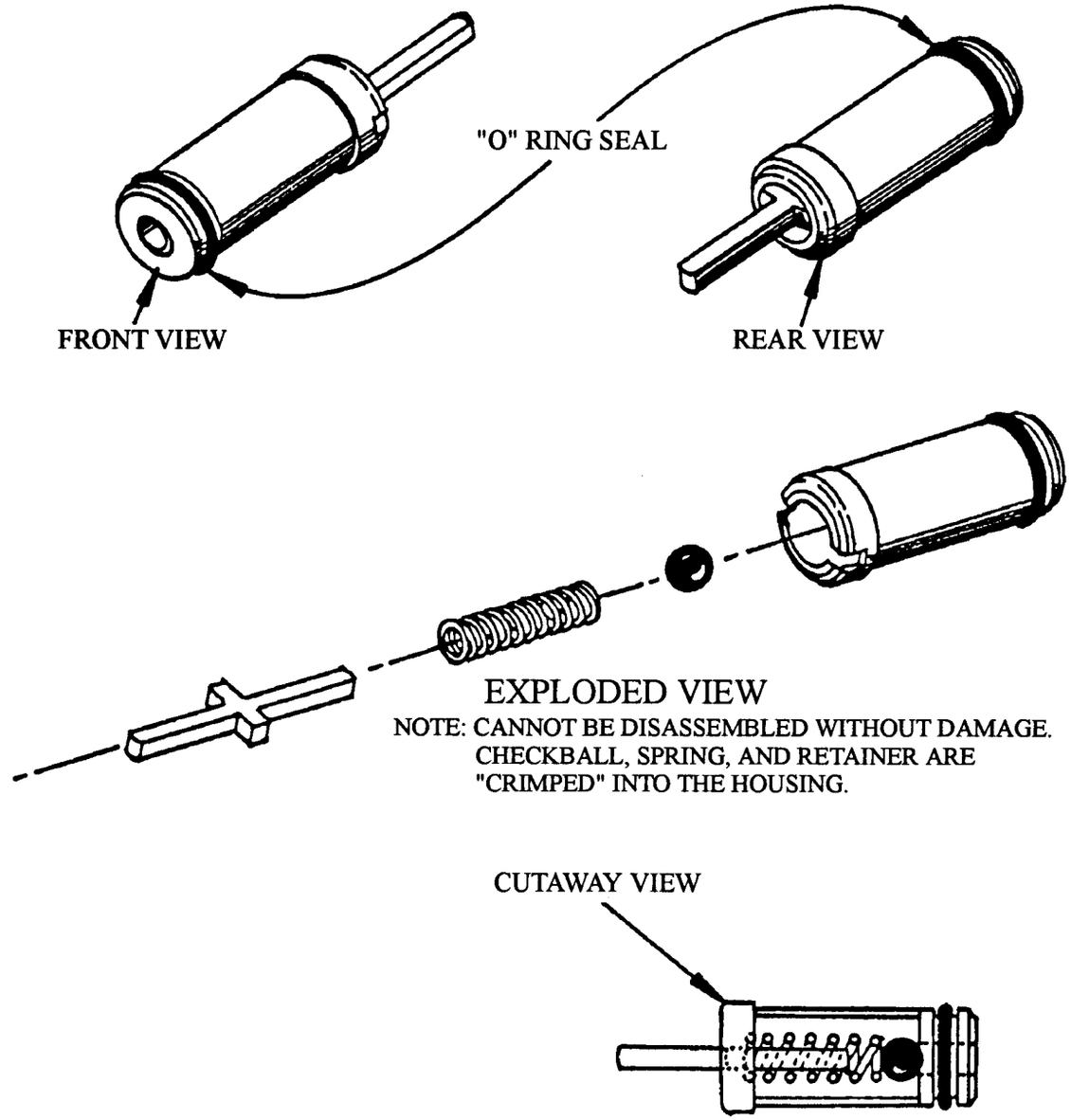
(3) VALVE BODY SPACER PLATE - Lube feed hole in spacer plate has been enlarged to .112", as shown in Figure 44.

INTERCHANGEABILITY:

Cooler bypass check valve assembly "WILL NOT" retrofit back to previous models, unless the new transaxle case is installed at the same time. The lube feed hole in the spacer plate can be drilled to .112" on all models to improve lube oil flow (See Figure 44).

SERVICE INFORMATION:

Cooler Bypass Check Valve Assembly	4539880
Transaxle Case Assembly, 3.0L (1991)	4567015
Transaxle Case Assembly, 3.3L (1991)	4567016
Transaxle Case Assembly, 2.5L (1991)	4567017



COOLER BYPASS CHECK VALVE ASSEMBLY

Figure 42

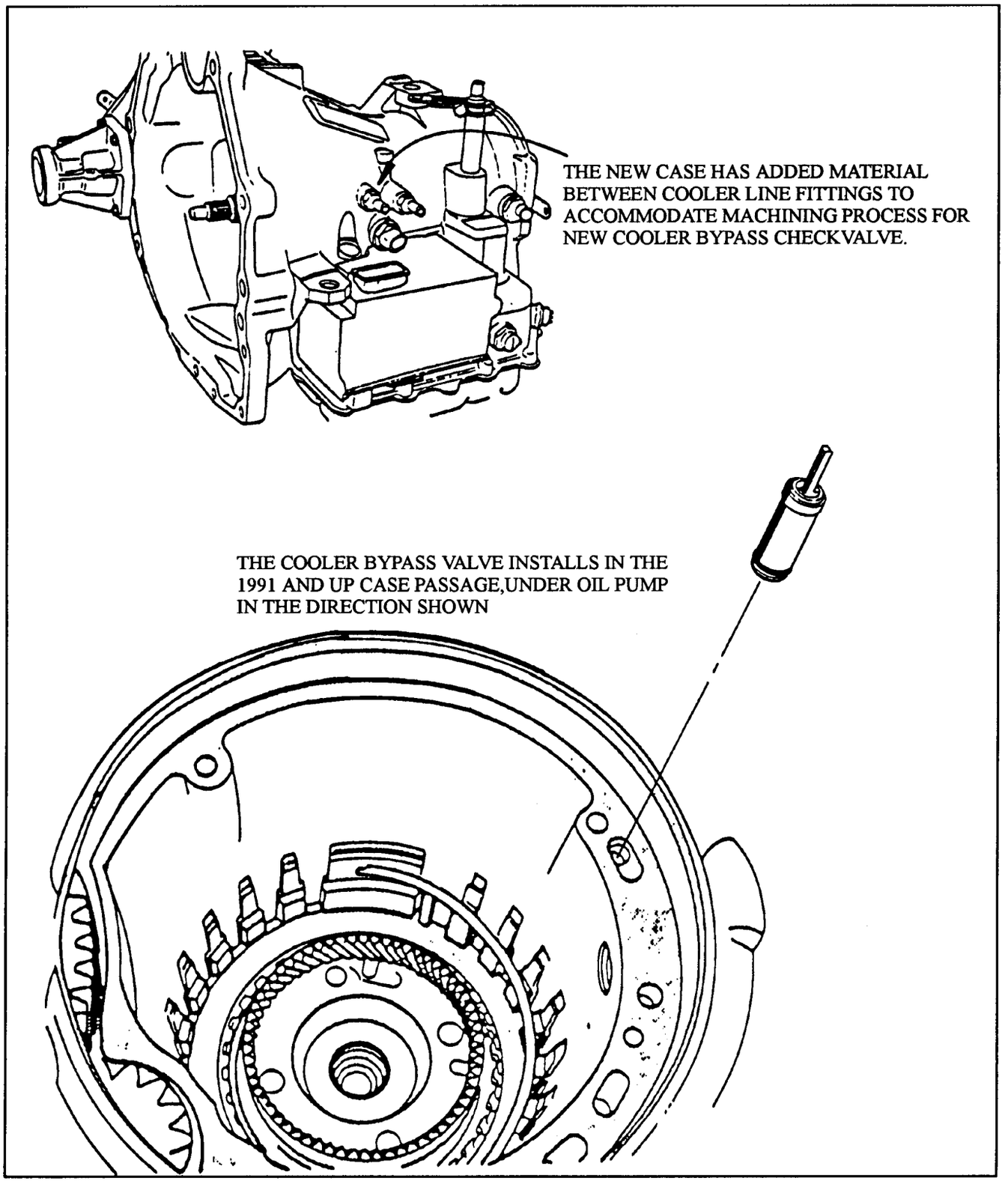

THE NEW CASE HAS ADDED MATERIAL BETWEEN COOLER LINE FITTINGS TO ACCOMMODATE MACHINING PROCESS FOR NEW COOLER BYPASS CHECKVALVE.
THE COOLER BYPASS VALVE INSTALLS IN THE 1991 AND UP CASE PASSAGE,UNDER OIL PUMP IN THE DIRECTION SHOWN

Figure 43

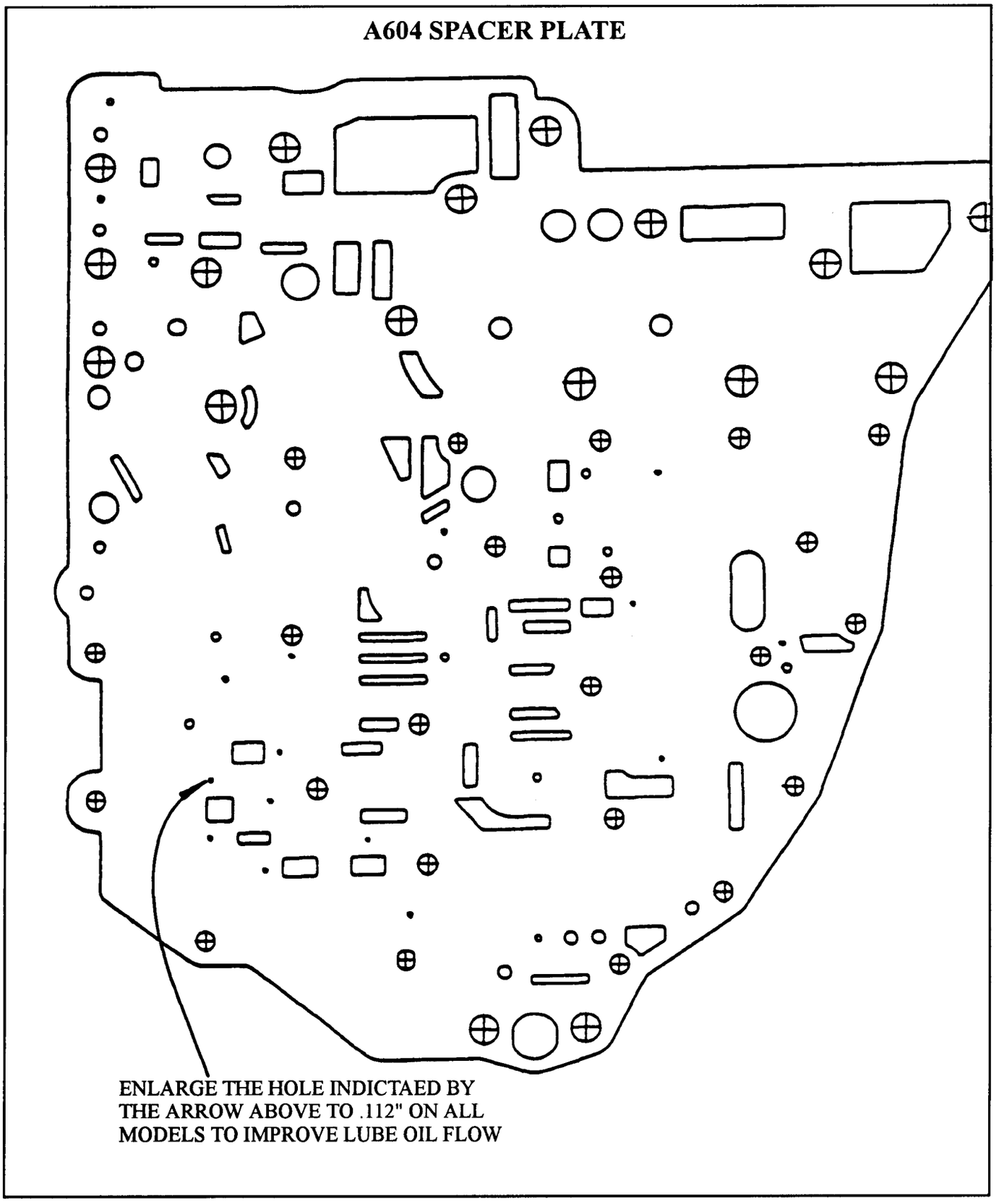

A604 SPACER PLATE
ENLARGE THE HOLE INDICTAED BY
THE ARROW ABOVE TO .112" ON ALL
MODELS TO IMPROVE LUBE OIL FLOW

Figure 44

CHRYSLER A604
FAILURE DUE TO LACK OF LUBE

COMPLAINT: On 1989 and 1990 Chrysler models, equipped with the A604 transaxle,under extremely cold ambient operating temperatures (0°F or Below), transmission fluid may get cold enough to resist flow through the transmission oil cooler. The transaxle may fail prematurely due to lack of lubrication.

CAUSE: Not enough lube flow to the transaxle because of the restriction.

CORRECTION:

(1) Install a pressure actuated bypass cooler valve assembly, now available from OEM under part number 5252836, that will bypass the transmission cooler if it becomes restricted (See Figure 45). On all 1991 models a cooler bypass valve was added to the transaxle internally (See Pages 54-57).

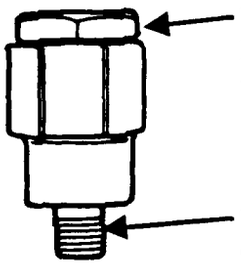
(2) Enlarge lube hole in the spacer plate to .112" as shown in Figure 44 on page 57. This can be done on all models regardless of bypass valve installation, to improve lube flow to the transaxle.

(3) Refer to the appropriate instruction sheet, included in this bulletin, as installation procedures vary depending on vehicle model.

NOTE: THE BYPASS VALVE (5252836) 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. (SEE FIGURE 45).

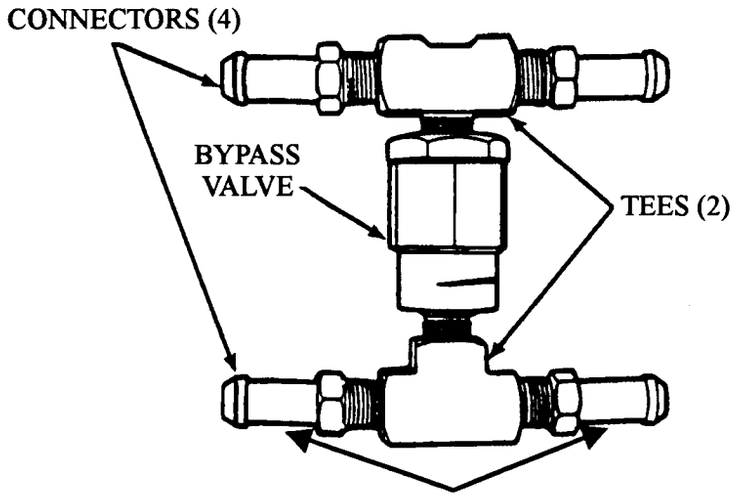
SERVICE INFORMATION:

Pressure Actuated Cooler Bypass Valve Package.....5252836
Mounting Bracket (Mini-Vans Only) 4333568



THE FEMALE (THREADED HOLE) END OF THE VALVE MUST BE CONNECTED TO THE TRANSMISSION OIL COOLER "OUT" (FROM COOLER) HOSE.

THE MALE (PIPE NIPPLE) END OF THE VALVE MUST BE CONNECTED TO THE TRANSMISSION OIL COOLER "IN" (TO COOLER) HOSE.



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.

Figure 45

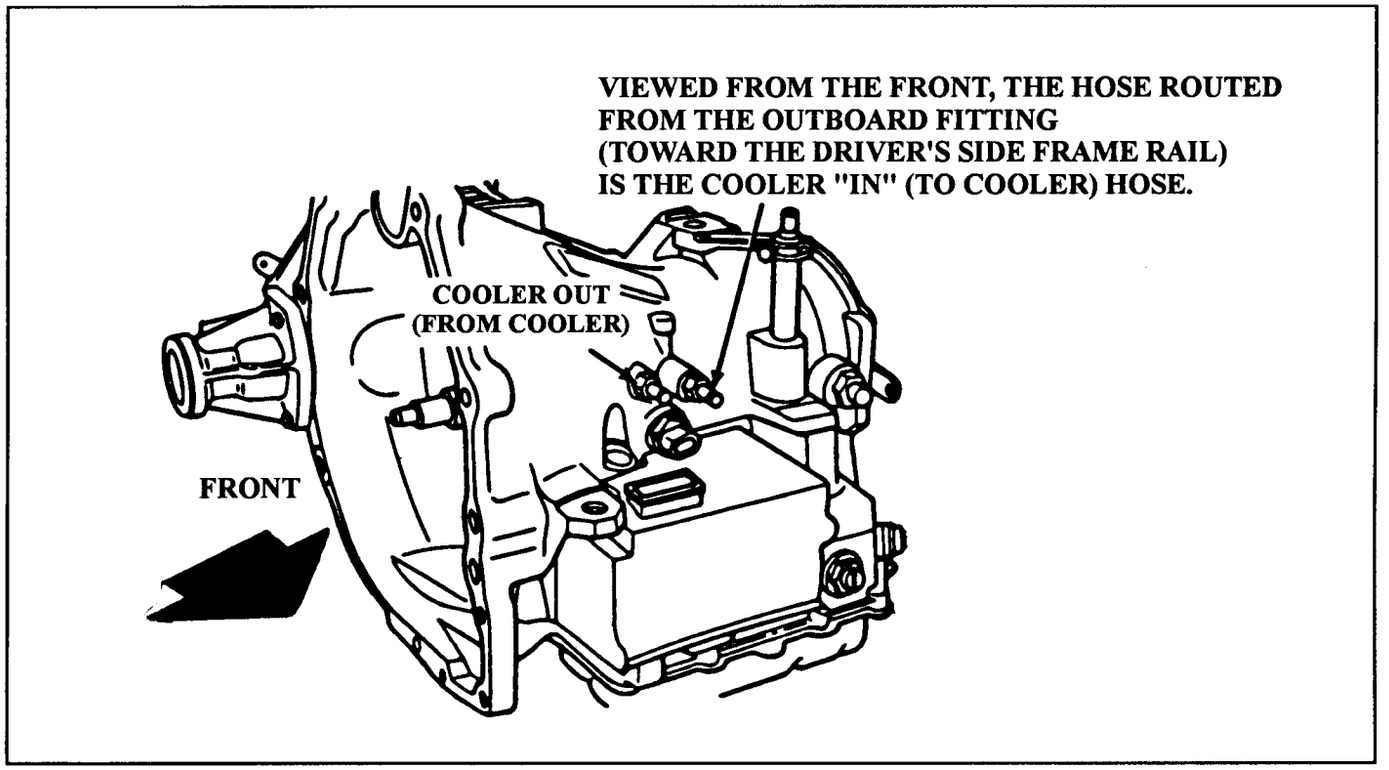


Figure 46

INSTALLATION INSTRUCTION
(GENERAL)

1. Using thread sealer on all connections, assemble the supplied bypass valve, tees, and hose connectors as shown in Figure 45.

2. Raise the vehicle on a hoist for working access to the transmission oil cooler hoses, that are routed along the inboard side of the left front frame rail.

3. Place an oil drain pan under the vehicle to catch oil leakage. Oil loss will be very minimal.

4. Referring to Figure 46, follow the cooler hoses routed from the transaxle to CLEARLY IDENTIFY THE COOLER "IN" (TO COOLER) HOSE.

5. Install the bypass valve assembly as per the following instruction sheets, as installation procedures vary depending on vehicle model.

INSTALLATION INSTRUCTIONS
PASSENGER CAR BODIES WITHOUT BENDIX ABS

1. Measure up 9 ½ inches from the bottom of the frame rail, as shown in Figure 47, and drill a ¼ inch hole in the frame rail.

2. Pushing the cooler hoses against the frame, identify and cut the cooler "in" (to cooler) hose at the drilled hole (Figure 47) and allow oil to drain. Cut only one hose at a time so as not to get them mixed.

3. The hoses are banded together with tape at several locations. Unwrap tape bands, as required, to allow hose flexibility for connection to the bypass valve assembly.

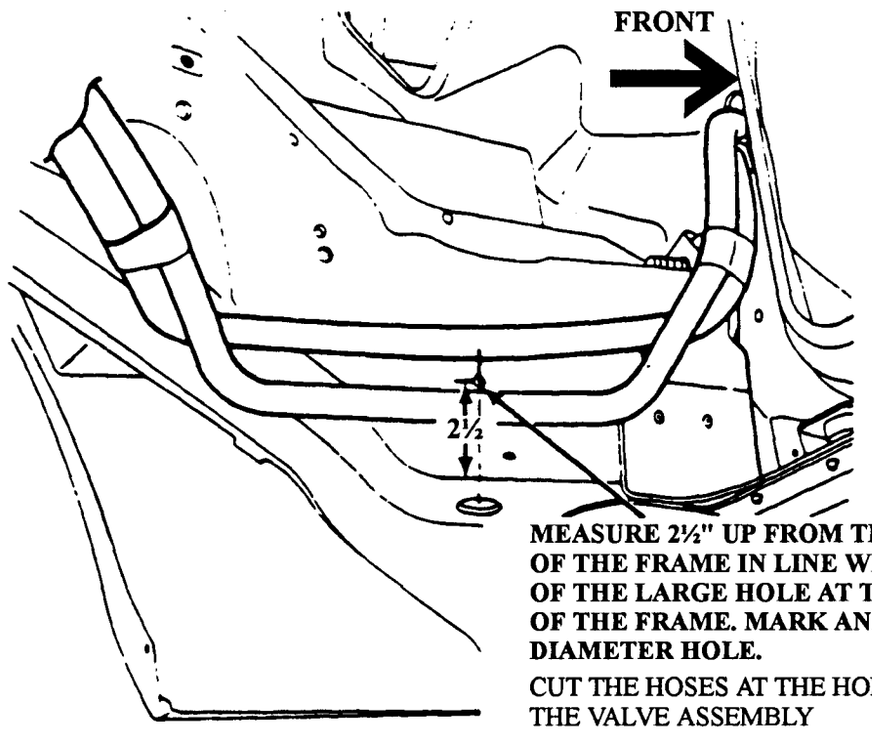
4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly (Refer to Figure 45).

5. REFER TO FIGURE 45, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.

6. Now cut the other hose, cooler "out" (from cooler) at the drilled hole (Figure 47), allow oil to drain, and connect the hose ends to the bypass valve assembly connectors in the same manner as above.

7. Cut the supplied foam tube and wrap it around the bypass valve (Figure 48).

8. Tighten the supplied "Push-in" tie strap around the foam tubing and cut off the excess strap (See Figure 48).



MEASURE 2½" UP FROM THE BOTTOM OF THE FRAME IN LINE WITH THE CENTER OF THE LARGE HOLE AT THE BOTTOM OF THE FRAME. MARK AND DRILL A ¼" DIAMETER HOLE.

CUT THE HOSES AT THE HOLE TO INSTALL THE VALVE ASSEMBLY

Figure 47

INSTALLATION INSTRUCTIONS
PASSENGER WITHOUT BENDIX ABS (Continued)

9. Engage the "Push-in" tie strap into the drilled 1/4 inch hole (See Figure 48).

10. The bypass valve assembly MUST be positioned vertically (See Figure 48).

11. Tighten all hose clamps.

12. Install the other supplied tie strap to secure the bypass valve assembly to the frame rail, as shown in Figure 48, and cut off excess tie strap.

13. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary.

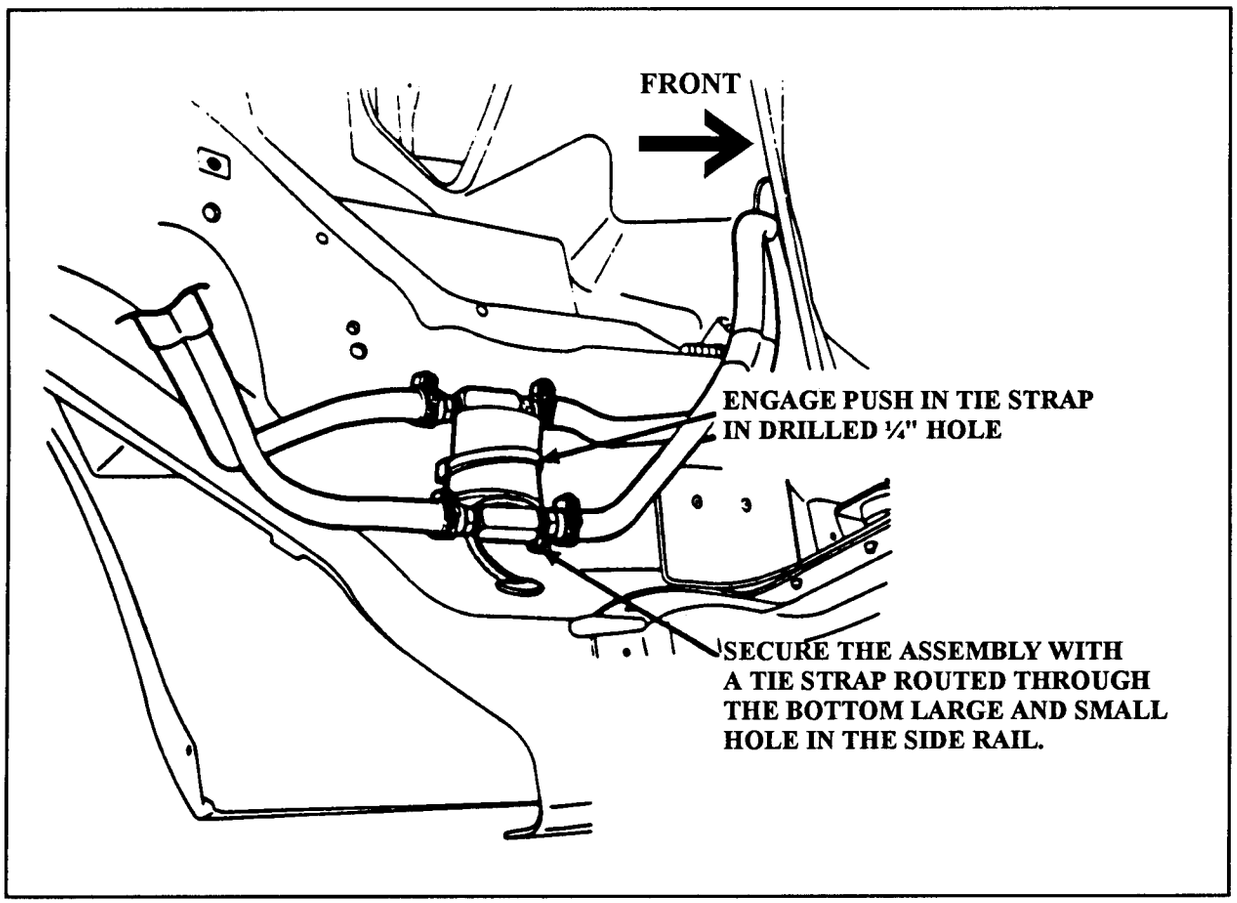


Figure 48

INSTALLATION INSTRUCTIONS
PASSENGER CAR BODIES WITH BENDIX ABS

1. The existing cooler hoses are retained by a clip at the ABS Module, as shown in Figure 49. Drilling of a hole is not required on this model.

2. Mark the hoses at the rear edge of the clip at the ABS Module, and then remove the retaining clip.

3. Identify and cut the cooler "in" (to cooler) hose at your mark, and allow the oil to drain. Cut only one hose at a time so as not to get them mixed.

4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly (Refer to Figure 45).

5. REFER TO FIGURE 45, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.

6. Now cut the other hose, cooler "out" (from cooler) at your mark, and allow the oil to drain, and connect the hose ends to the bypass valve assembly in the same manner as above.

7. Reinstall the retaining clip to support the bypass valve assembly, as shown in Figure 49, and tighten all hose clamps and retaining clip.

8. The bypass valve assembly MUST be positioned vertically (See Figure 49).

9. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary.

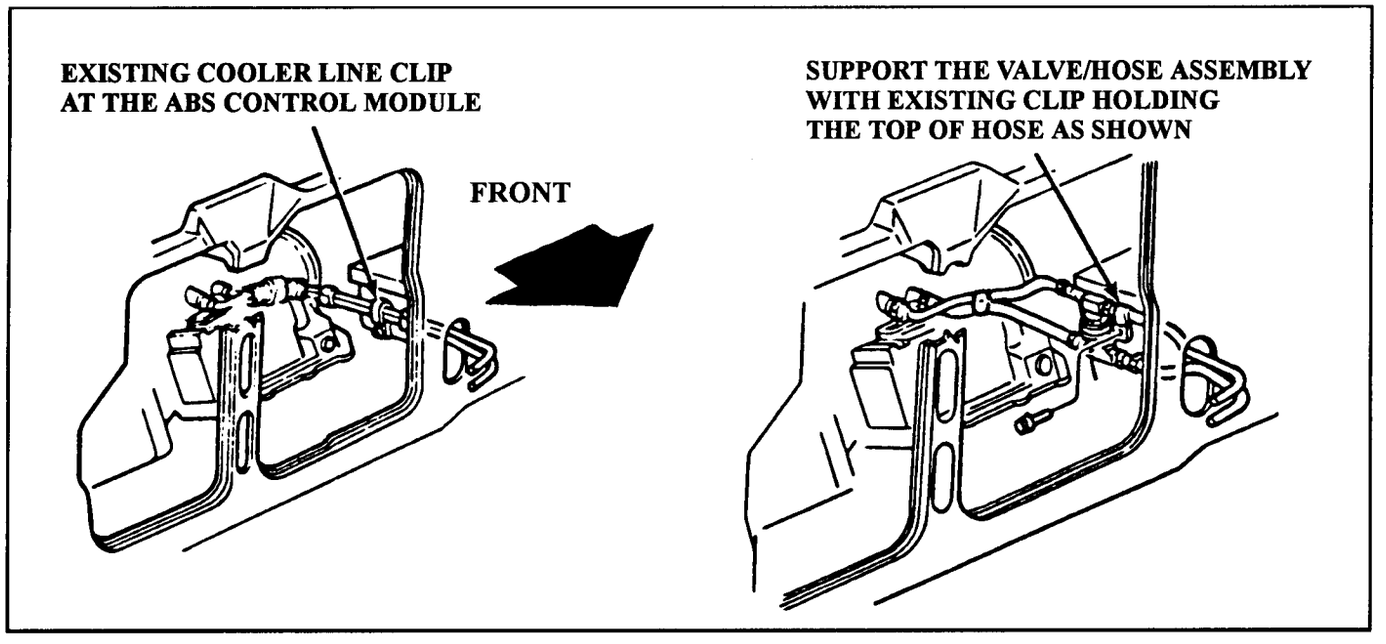


Figure 49

INSTALLATION INSTRUCTIONS
ALL MINI-VANS ONLY

1. All Mini-Vans require the purchase of an additional bracket, OEM part No. 4333568, as well as the cooler bypass valve package.

2. Mark the cooler hoses in line with the center of the large hole in the bottom of the frame rail, as shown in Figure 50.

3. Identify and cut the cooler "in" (to cooler) hose at your mark, and allow the oil to drain. Cut only one hose at a time so as not to get them mixed.

4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly. (Refer to Figure 50).

5. REFER TO FIGURE 45, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.

6. Now cut the other hose, cooler "out" (from cooler) at your mark, and allow the oil to drain.

7. Install bracket, OEM part number 4333568, to retain the upper cooler hose, using the existing lower battery tray bolt, as shown in Figure 50.

8. Connect the other hose ends to the bypass valve assembly in the same manner as above.

9. Tighten all clamps, and position the valve and hose assembly in the clip as shown in Figure 50.

10. Since the bypass valve assembly will be clear of the frame rail with this installation, the anti-rattle foam tape and tie strap are not required.

11. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary.

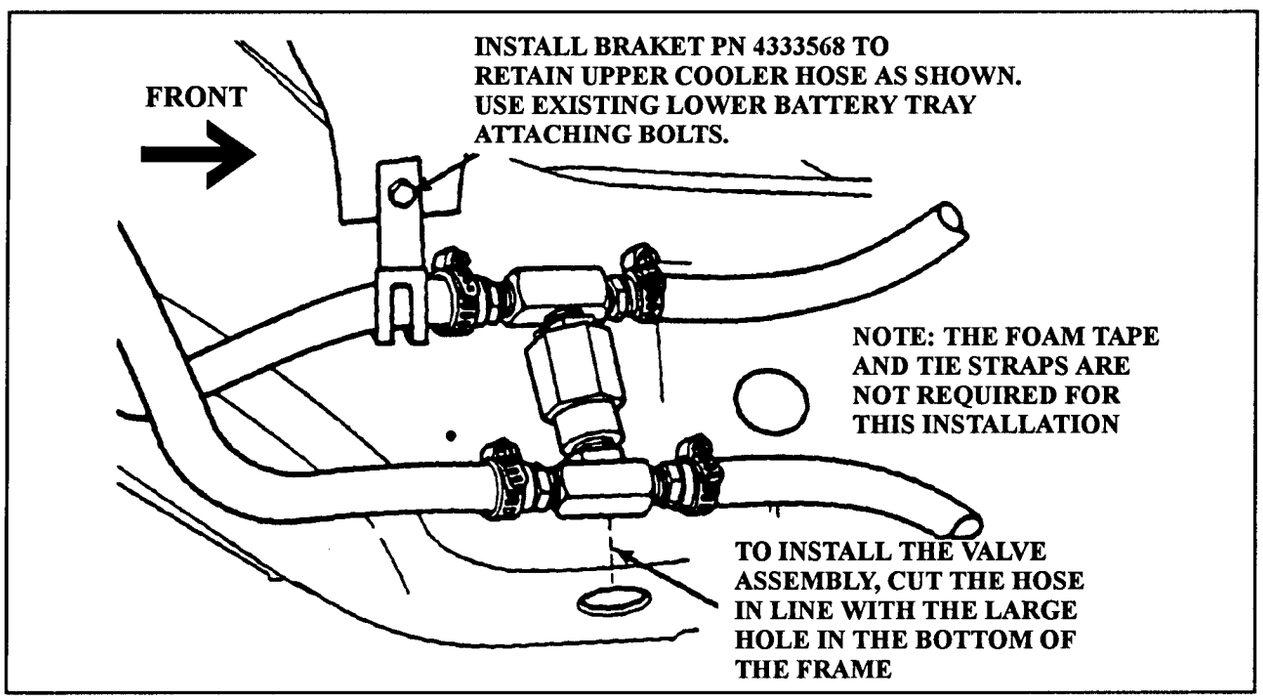


Figure 50

CHRYSLER A604
VALVE BODY CHANGES

CHANGE NO.1: Beginning at the start of production 1992 on all A604 transaxles, there is a completely different (2nd Design) Valve Body Assembly.

CHANGE NO 2: Beginning at the start of production 1993 on all A604 transaxles, there is another completely different (3rd Design) Valve Body Assembly.

REASON FOR CHANGE NO. 1: The 1992 (2nd Design) valve body assembly, along with the appropriate software (Computer), allows "Partial Lockup" of the converter clutch in 3rd or 4th gear depending on conditions. This change is for improved driveability and fuel economy.

REASON FOR CHANGE NO . 2: The 1993 (3rd Design) valve body assembly reduces a reverse "Buzz" complaint.

PARTS AFFECTED BY CHANGE NO. 1:

(1) VALVE BODY CASTING - 2nd design required machining and casting changes to accommodate new lockup valve and torque converter control valve components. For positive identification, 2nd design valve body casting number is 4511644, and the previous (lst Design) valve body casting number is 4446639 (See Figures 51 and 52).

(2) TRANSFER PLATE - 2nd design required machining and casting changes to accommodate new lockup valve and torque converter control valve components. For positive identification, 2nd design transfer plate casting number is 4511645, and the previous (1st Design) transfer plate casting number is 4446640 (See Figures 53 and 54).

(3) TORQUE CONVERTER CONTROL VALVE - 2nd design valve is made of aluminum instead of steel, and the land configuration is different than the 1st design (See Figure 58 and 59).

(4) TORQUE CONVERTER CONTROL VALVE SPRING - 2nd design is calibrated different than the 1st design.

(5) VALVE BODY SPACER PLATE - 2nd design is identified with "46" stamped in the spacer plate and 1st design being identified with "33" stamped in the plate. 2nd design "46" plate is TOTALLY different to accommodate new TCC control valve and casting changes (See Figures 55 and 56).

(6) VALVES, PLUGS AND SLEEVES - Made of aluminum, replacing most of the current steel components. The P.R. Valve is still made of steel.

(Continued on next Page)

PARTS AFFECTED BY CHANGE NO. 1:

(1) TORQUE CONVERTER CONTROL VALVE - 3rd design valve has two of the lands made .020" thicker than the previous, and has "Groove" cut into stem for I.D. (See Figure 59).

(2) TORQUE CONVERTER CONTROL VALVE SPRING - Calibration changes to accommodate the new design TCC Control valve.

(3) VALVE BODY SPACER PLATE - 3rd design is identified with "96" stamped in plate, and 2nd design is identified with "46" stamped in plate. The 3rd design "96" spacer plate has calibration changes to the new TCC control valve. (See Figures 56 and 57).

INTERCHANGEABILITY: 1st design parts and 2nd design parts ARE NOT INTERCHANGEABLE AND WILL CREATE FUNCTIONAL PROBLEMS.

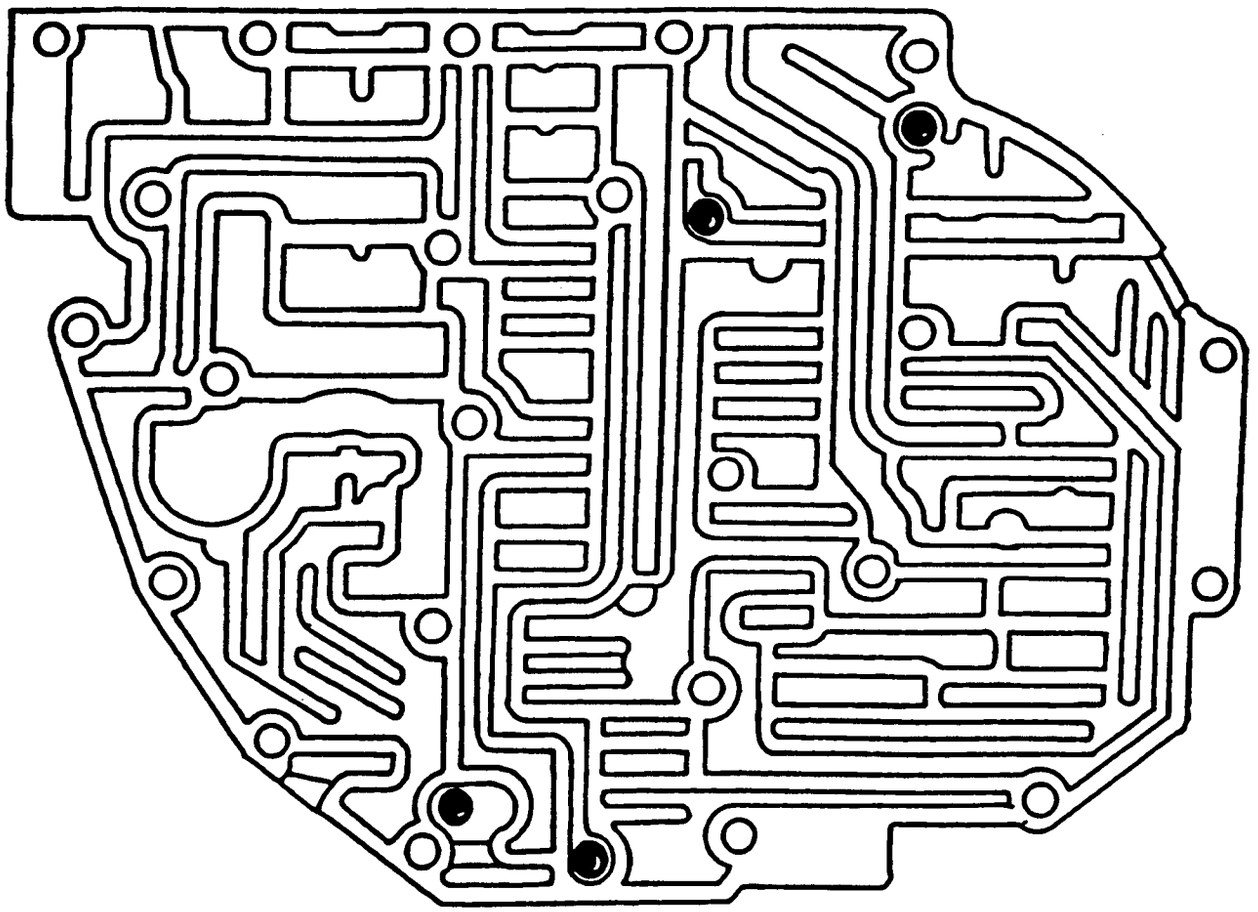
2nd design parts and 3rd design parts will fit, but WILL create calibration and/or noise problems.

3rd design complete valve body assembly will fit all previous model transaxles regardless of whether the software (Computer) change was made or not. If the software (Computer) update was not made then the valve body will perform just like the previous version.

SERVICE INFORMATION:

Valve Body Assembly Complete (3rd Design) 4659044
NOTE: This valve body assembly will reduce reverse "Buzz" noise on 1992 model A604 transaxles.

CHRYSLER A604

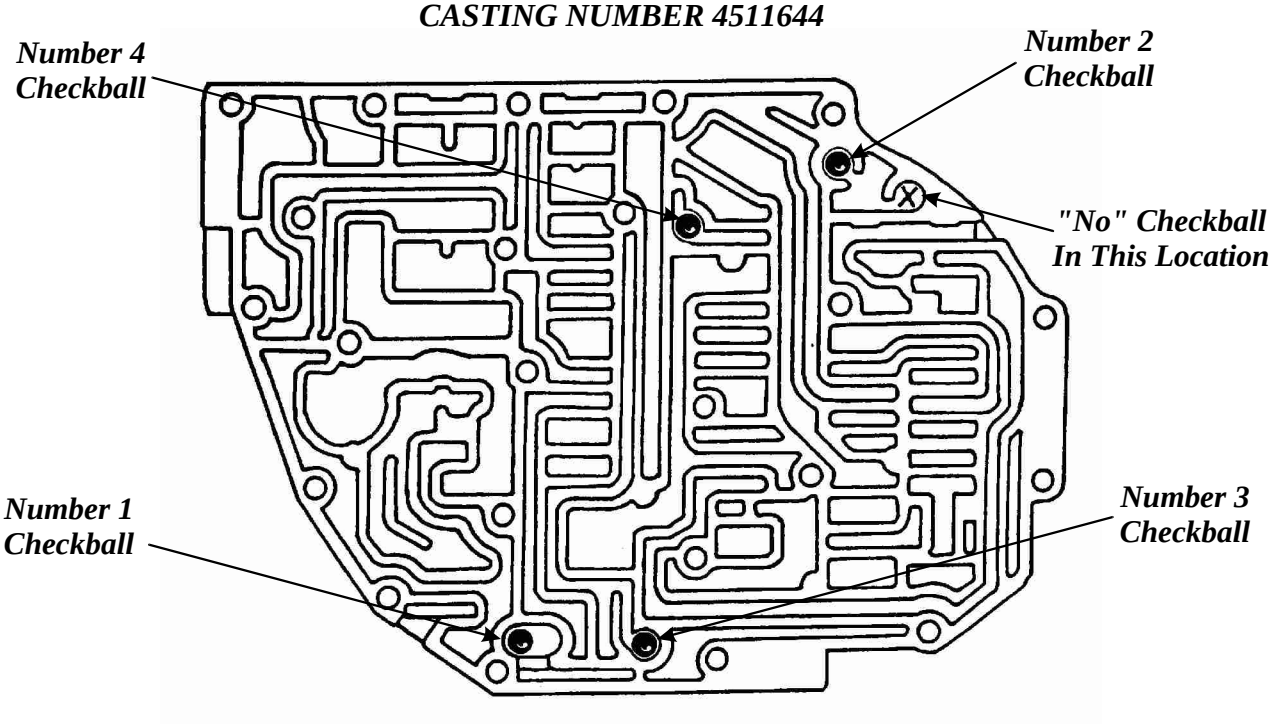


VALVE BODY CASTING NUMBER 4446639
(FITS MODEL YEARS 1989-1991)

NOTE: REQUIRES FOUR CHECK BALLS IN THE LOCATIONS SHOWN ABOVE.

Figure 51

1992-94 VALVE BODY CHECKBALL LOCATIONS
CASTING NUMBER 4511644



1995 A604 VALVE BODY CHANNELS AND CHECKBALL LOCATIONS
CASTING NUMBER 4659463

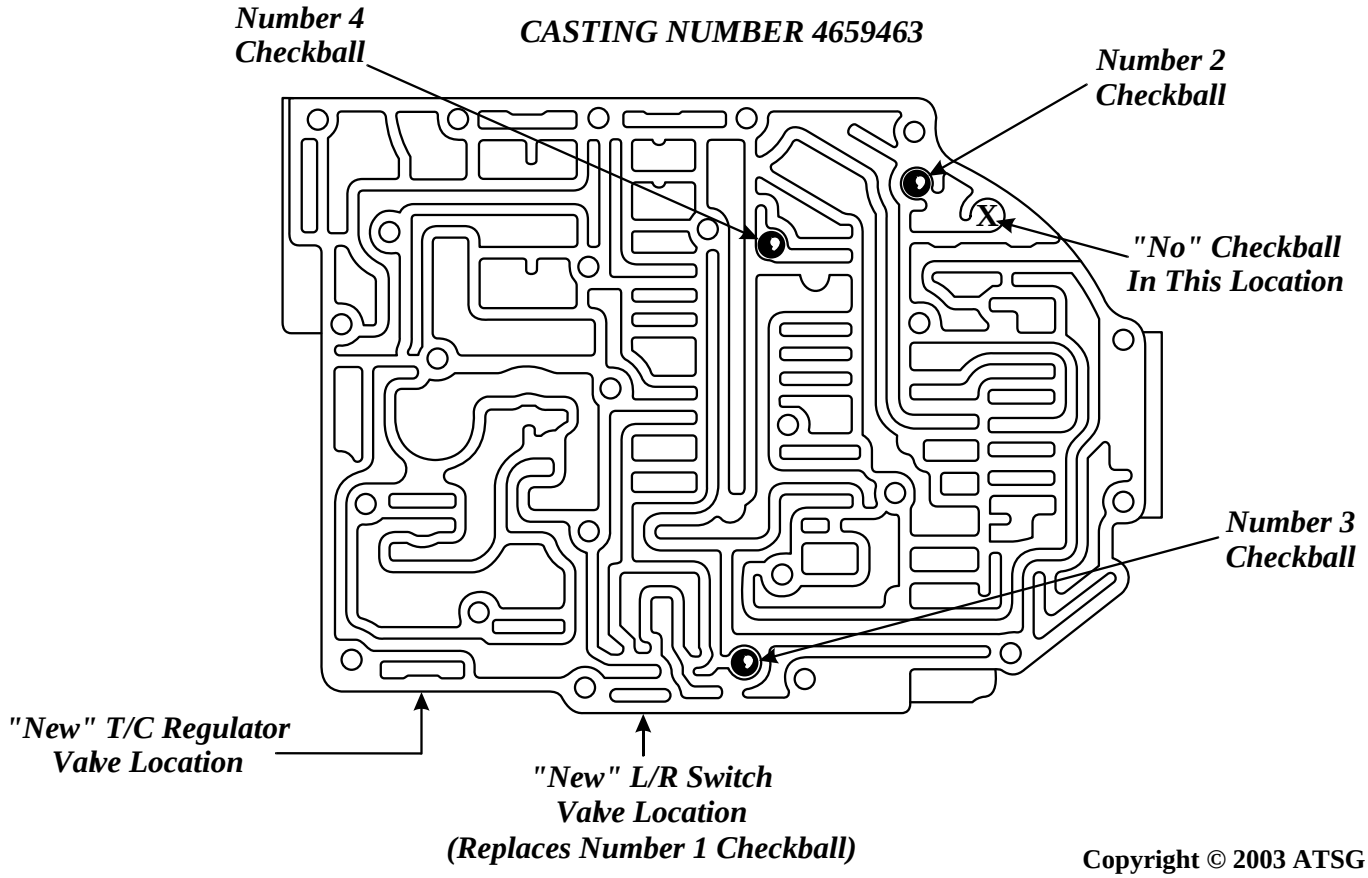
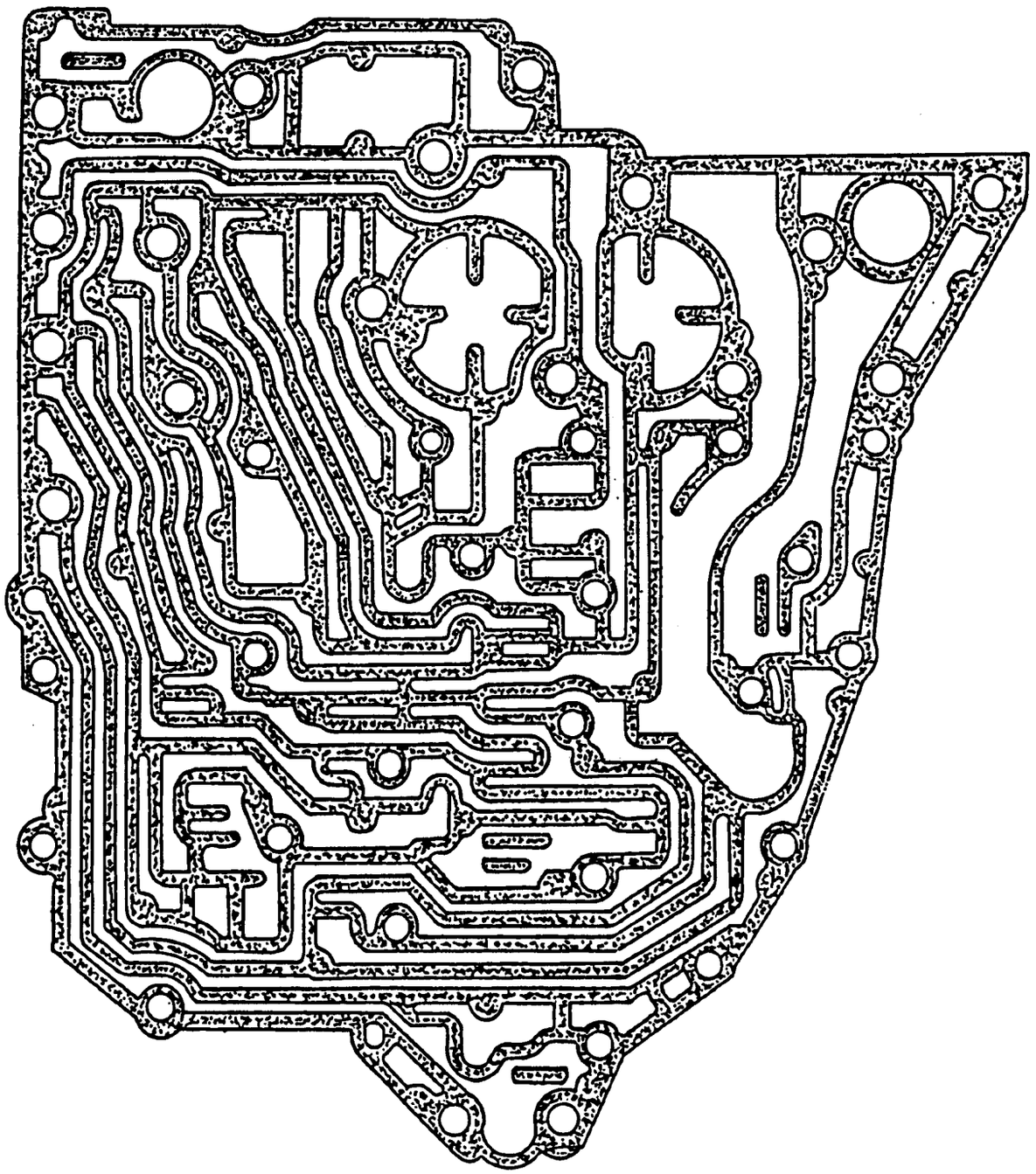


Figure 52

CHRYSLER A604

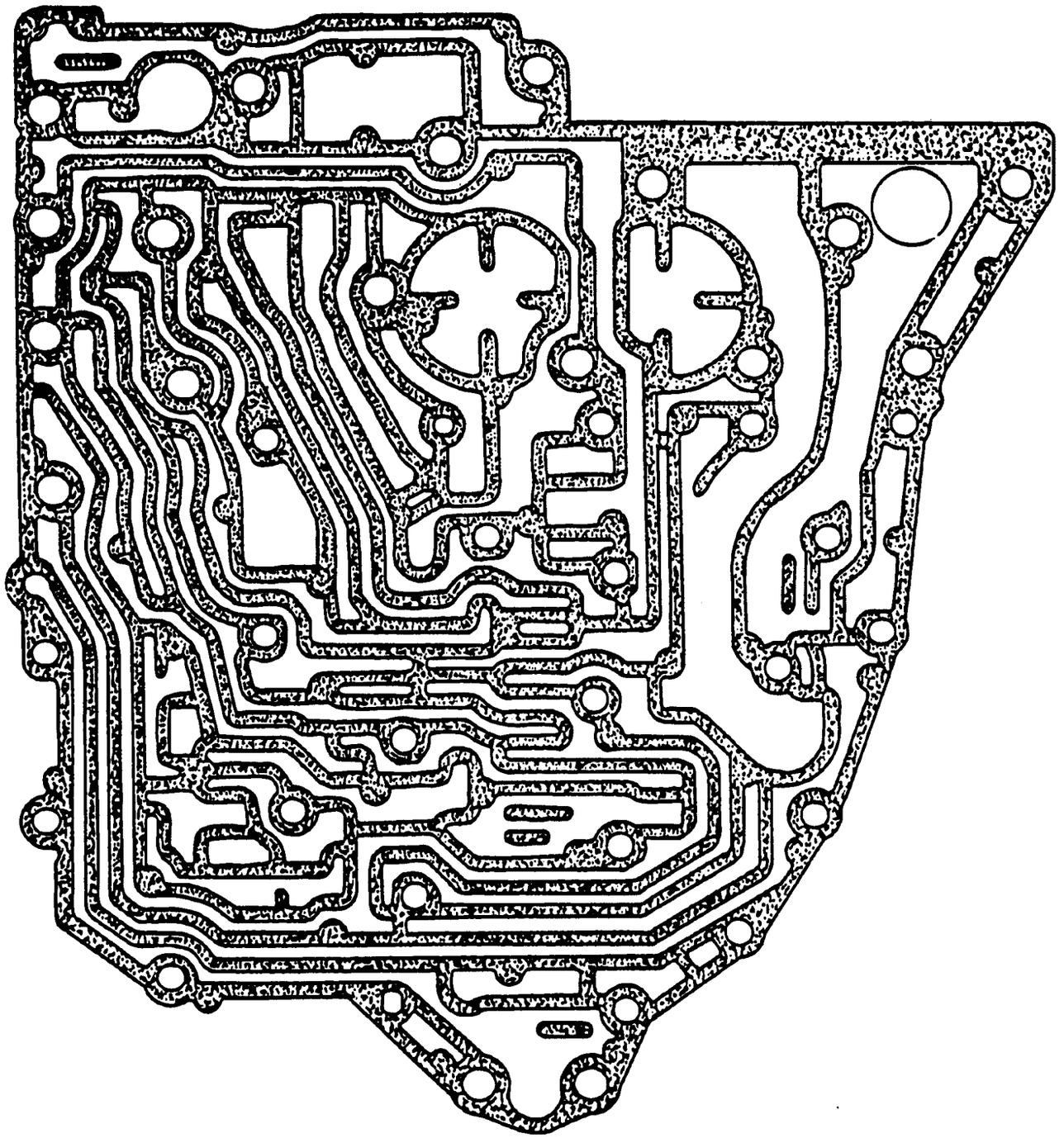
TRANSFER PLATE



CHRYSLER A604 TRANSFER PLATE
CASTING NUMBER 4446640
(FITS MODEL YEARS 1989-1991)

Figure 53

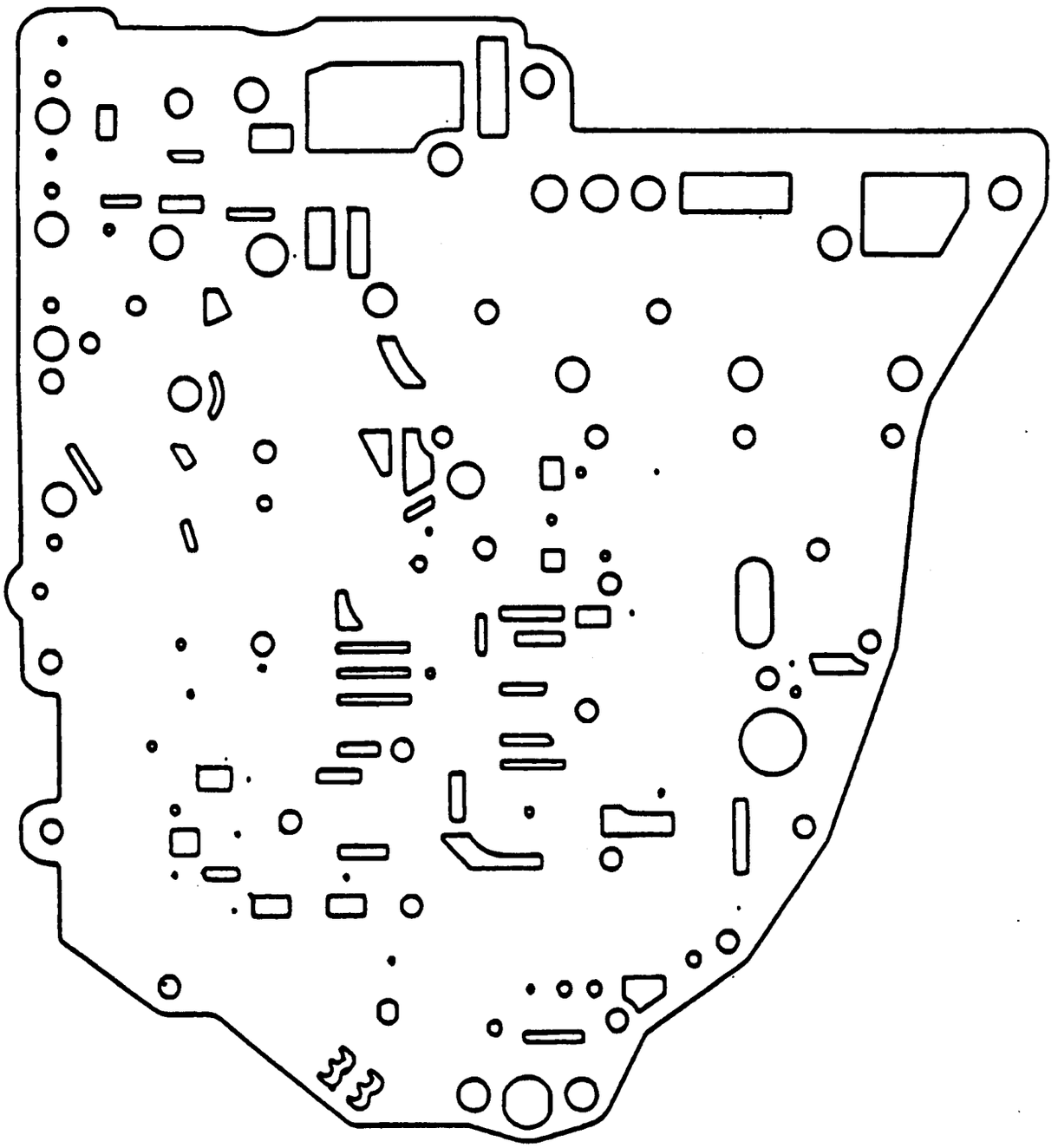
CHRYSLER A604
TRANSFER PLATE



CHRYSLER A604 TRANSFER PLATE
CASTING NUMBER 4511645
(IMPLEMENTED 1992 MODEL YEAR)

Figure 54

CHRYSLER A604
1ST DESIGN "33" SPACER PLATE



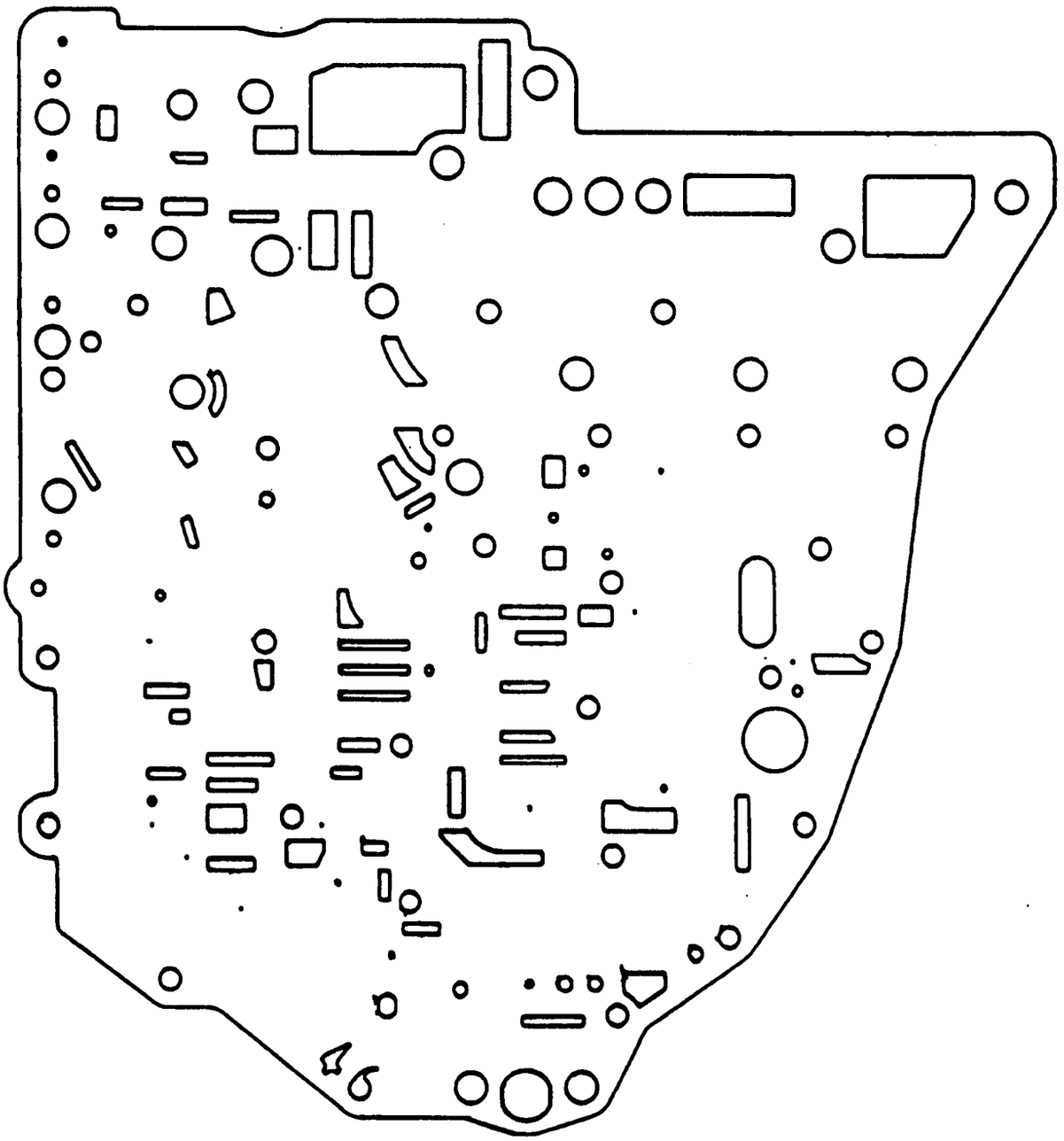
FITS ONLY VALVE BODY CASTING NUMBER 4446639

FITS ONLY TRANSFER PLATE CASTING NUMBER 4446640

FITS ONLY 1989-1991 MODEL YEAR VEHICLES

Figure 55

CHRYSLER A604
2nd DESIGN "46" SPACER PLATE



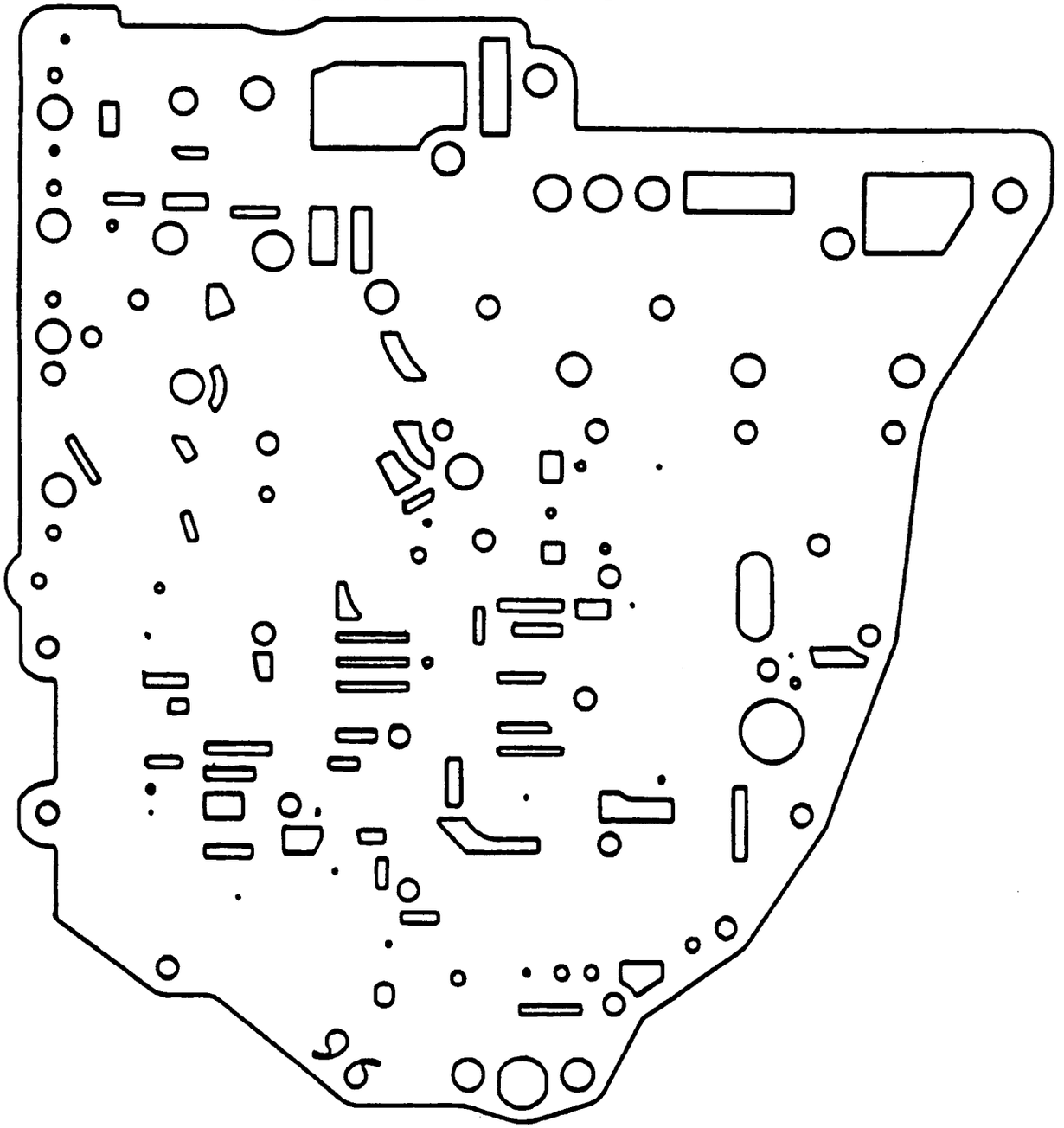
FITS ONLY VALVE BODY CASTING NUMBER 4511644

FITS ONLY TRANSFER PLATE CASTING NUMBER 4511645

IMPLEMENTED IN 1992 MODEL YEAR VEHICLES

Figure 56

CHRYSLER A604
3rd DESIGN "96" SPACER PLATE



FITS ONLY VALVE BODY CASTING NUMBER 4511644

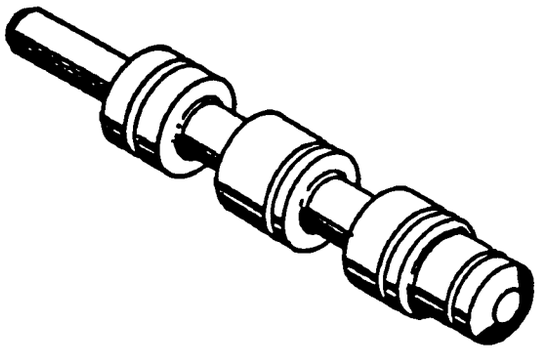
FITS ONLY TRANSFER PLATE CASTING NUMBER 4511645

IMPLEMENTED IN 1993 MODEL YEAR VEHICLES AND

WILL INTERCHANGE WITH "46" SPACER PLATE

Figure 57

CHRYSLER A604
TORQUE CONVERTER CONTROL VALVE

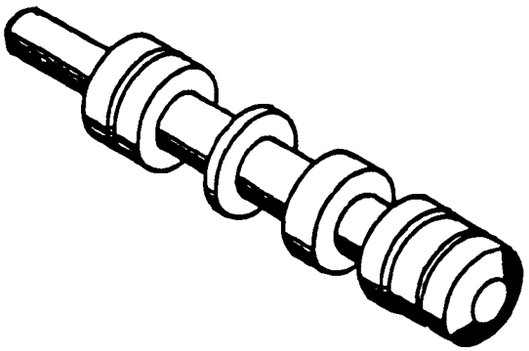


1ST DESIGN

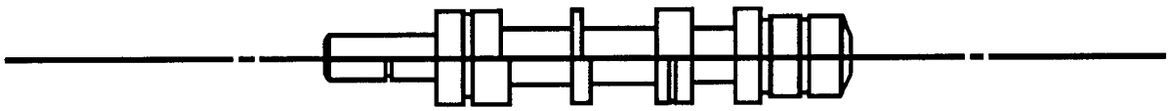
1ST DESIGN USES "33" SPACER PLATE

Figure 58

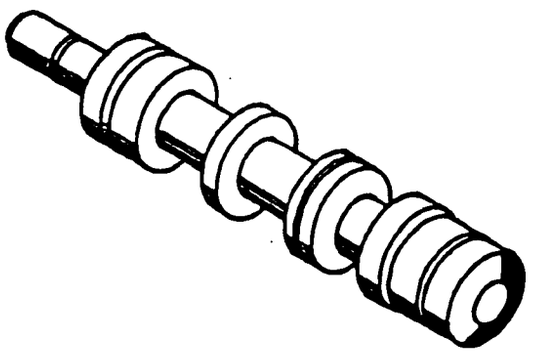
CHRYSLER A604
T/C CONTROL VALVE CHANGES
(TO REDUCE REVERSE BUZZ)



2ND DESIGN



3RD DESIGN



2ND DESIGN USES "46" SPACER PLATE
3RD DESIGN USES "96" SPACER PLATE

Figure 59

CHRYSLER A604

NEW PRESSURE REGULATOR VALVE AND SPACER PLATE "Valve Body Whistle"

CHANGE : A running change in 1994 was made to the spacer plate (See Figure 60) and to the Pressure Regulator Valve (See Figure 61).

REASON : To eliminate a field complaint of a "Valve Body Whistle".

PARTS AFFECTED :

(1) : SPACER PLATE: The "X1 Orifice" in the spacer plate has been eliminated as shown in figure 62. The plate can be easily identified by the number "82" that is punched through the plate (See Figure 62).

(2) : PRESSURE REGULATOR VALVE: A ground step has been machined to the inner land on the Pressure Regulator Valve causing two different diameters to exist on one land (See Figure 63). There are no obvious or visible signs or identification marks to indicate the updated Pressure Regulator Valve. Careful measurement of the valve land is needed to properly identify the valve (See Figure 63). The spring side of the land measures approximately .6255". The opposite end of the same land will measure approximately .6245" (See Figure 63).

INTERCHANGEABILITY :

The new "82" spacer plate replaces the previous "96" spacer plate and can retrofit back to all valve bodies and Transfer Plates that use the # 96 spacer plate **provided that the new pressure regulator valve is used together with the # 82 spacer plate.** Valve bodies that use a 96 spacer plate has a casting number of 4511644 (See Figure 52 on Page 68).
Transfer Plates that use the # 96 spacer plate has a casting number of 4511645 (See Figure 54 on Page 70).
The # 82 Spacer Plate and new Pressure Regulator Valve cannot be used separately and can only retrofit back to the above casting numbers for both the Valve Body and Transfer Plate.

SERVICE INFORMATION :

(1) "82" SPACER PLATE..... 4659082
(2) PRESSURE REGULATOR VALVE..... 4659081

NEW A604 SPACER PLATE

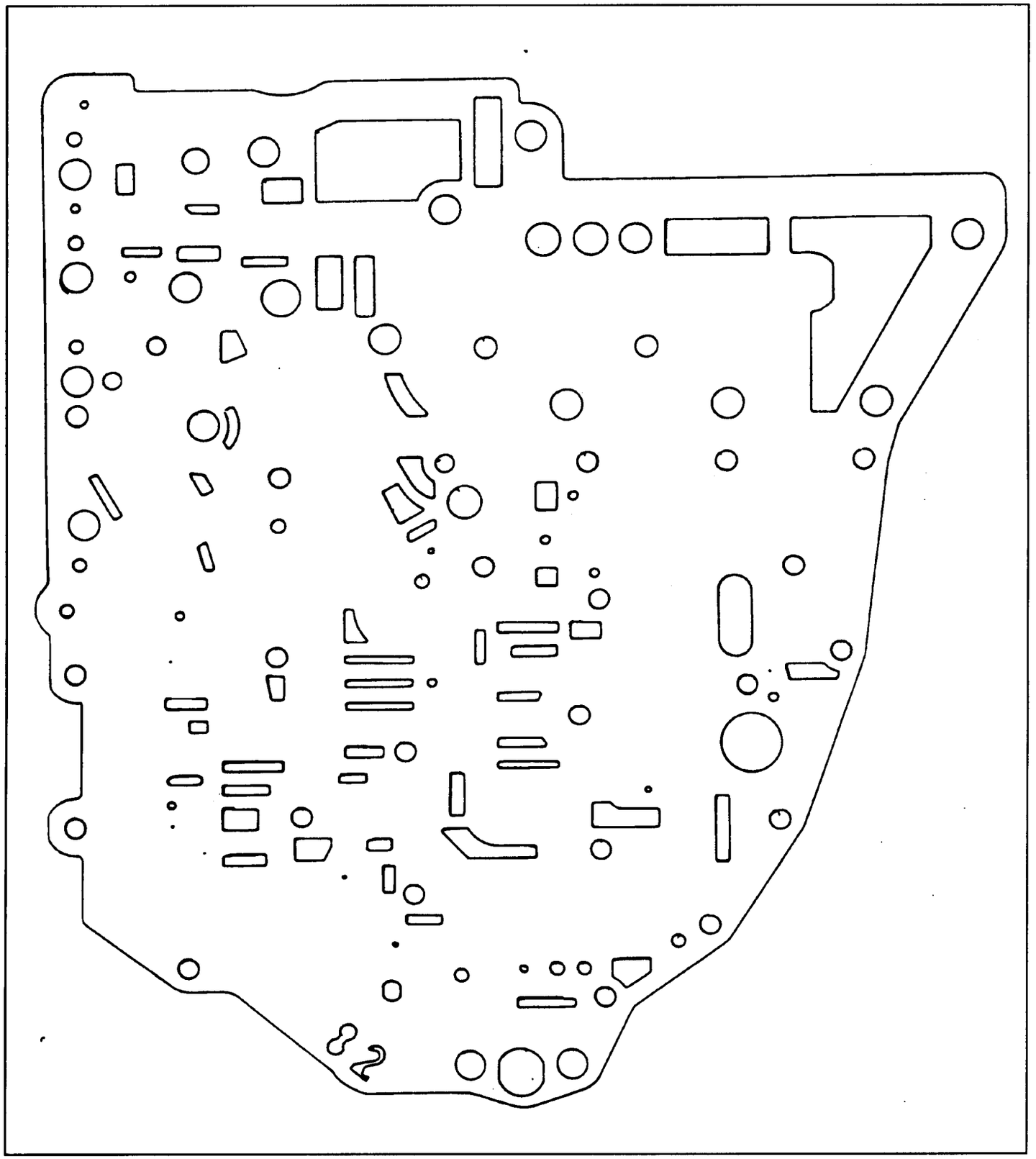


Figure 60

PRESSURE REGULATOR VALVE

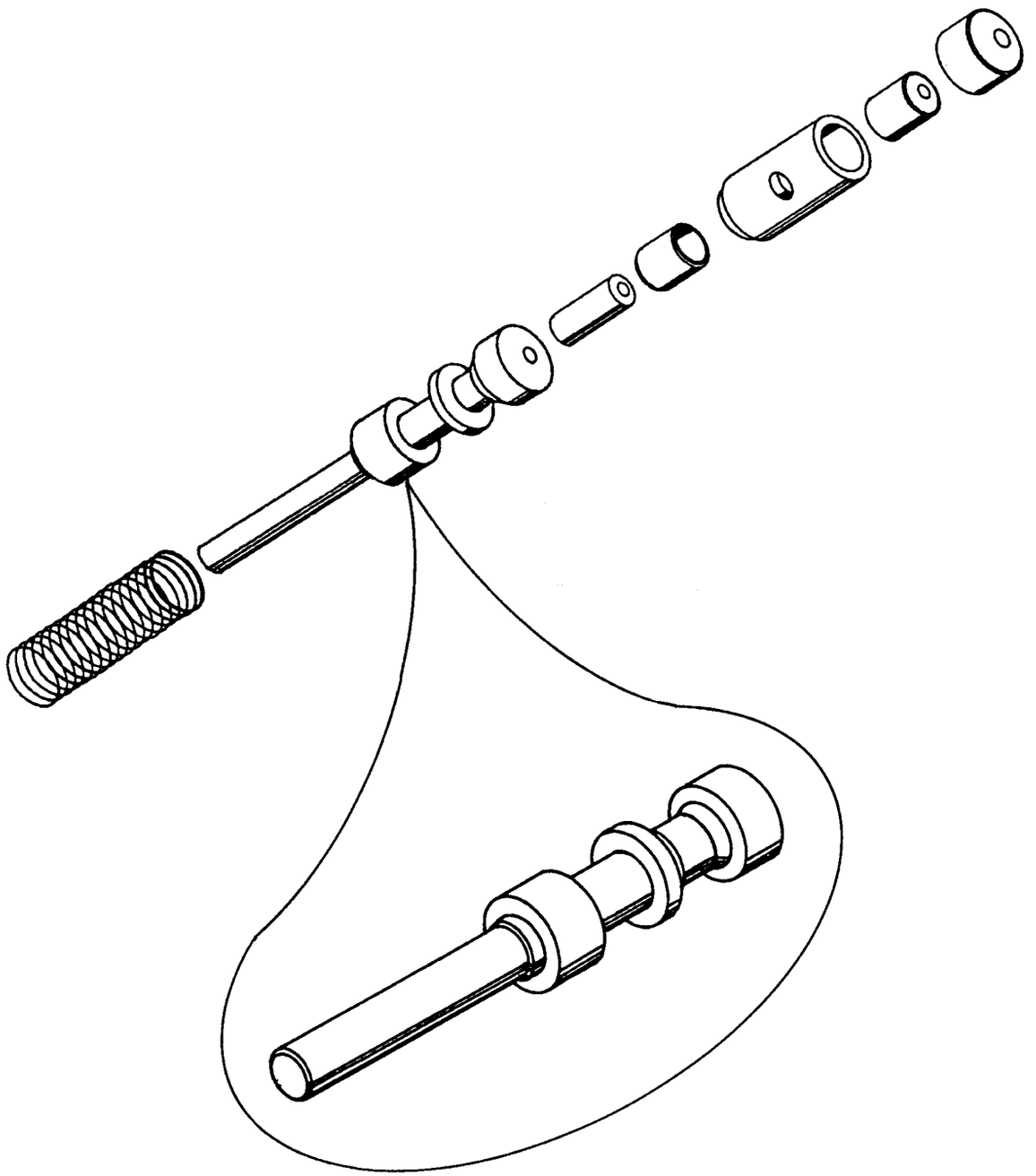
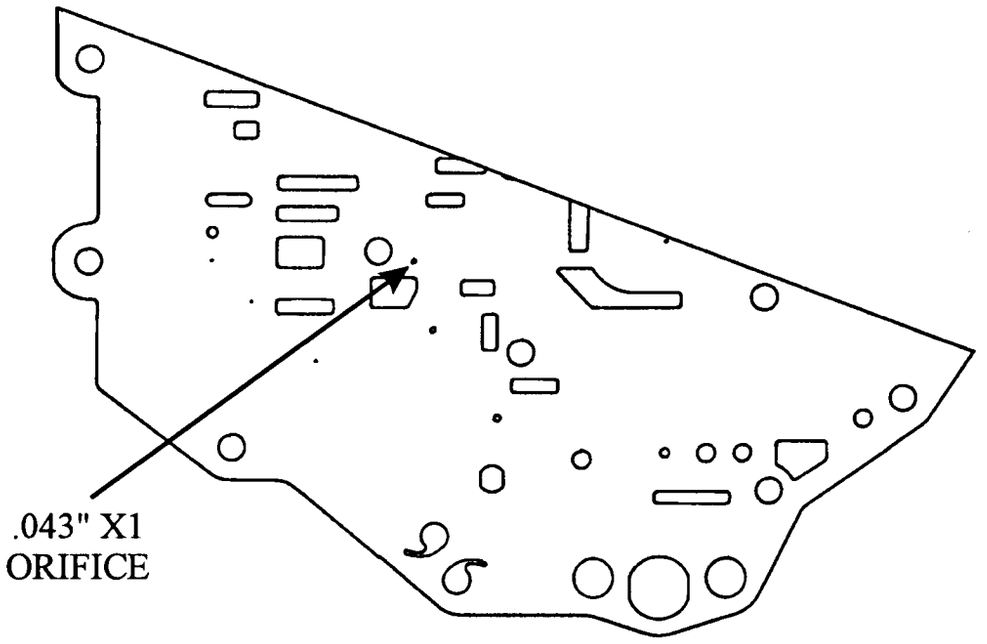
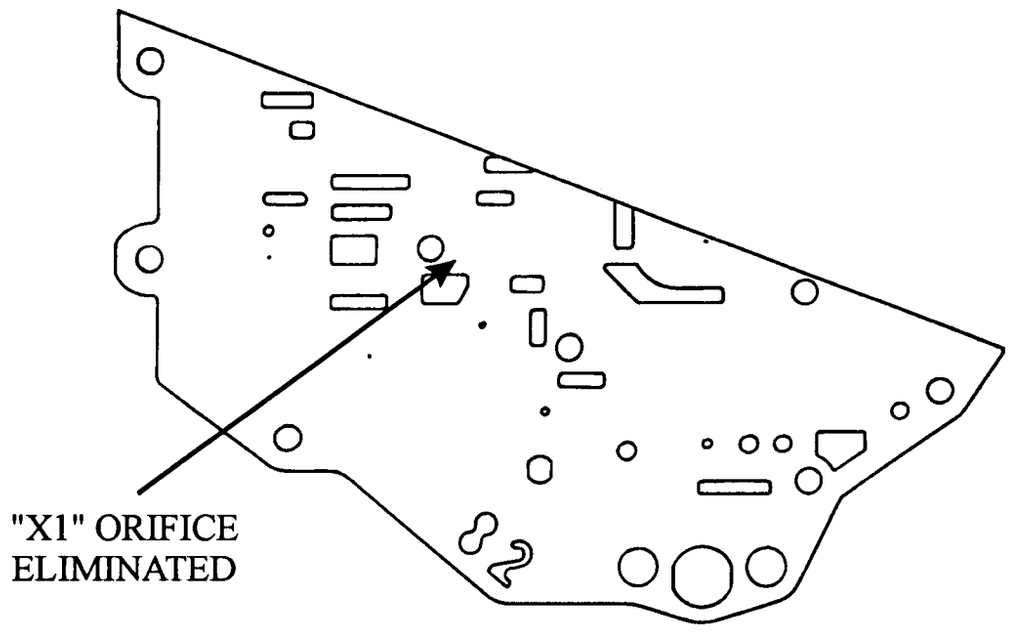


Figure 61



PREVIOUS # 96 SPACER PLATE WITH THE "X1" (.042") ORIFICE



NEW # 82 SPACER PLATE WITH THE "X1" ORIFICE ELIMINATED

Figure 62

PRESSURE REGULATOR VALVE

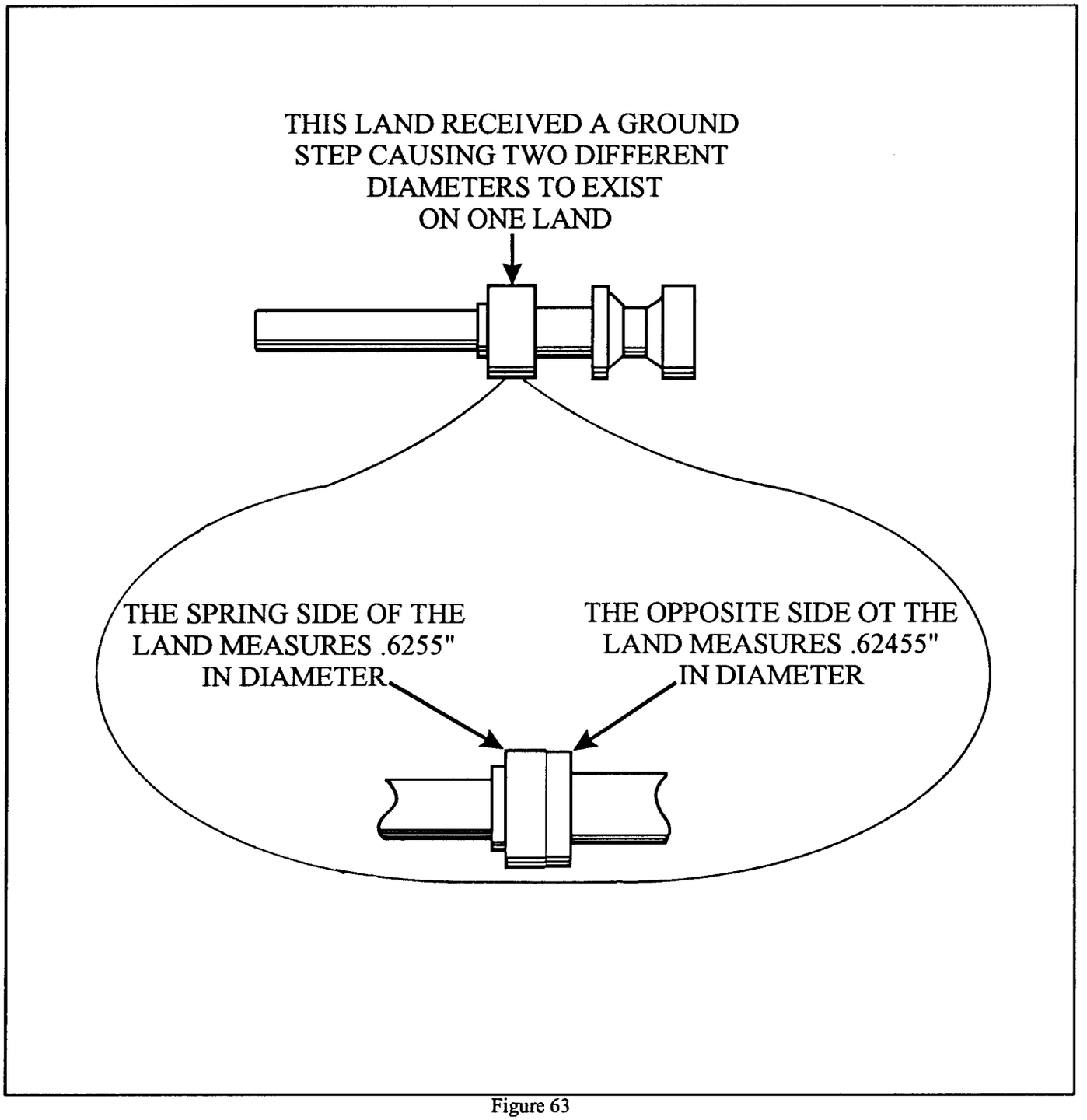


Figure 63

CHRYSLER A604
REVISED SOLENOID SOUND COVER AND SPACER PLATE

CHANGE : A running change for 1994 and all 1995 and up model years was made to the solenoid sound cover and spacer plate (See Figure 64).

REASON : For improved sound sheild attachment in order to reduce the sound level of solenoid operation.

PARTS AFFECTED:

(1): SOLENOID SOUND COVER - An additional locking tab was added to the sound cover for a more secure fit to the solenoid spacer plate.

(2): SOLENOID SPACER PLATE - The solenoid spacer plate received an added slot to accommodate the additional locking tab made to the solenoid sound cover. There were also subtle changes made to the venting holes and slots found in the spacer plate (See Figure 64).

INTERCHANGEABILITY:

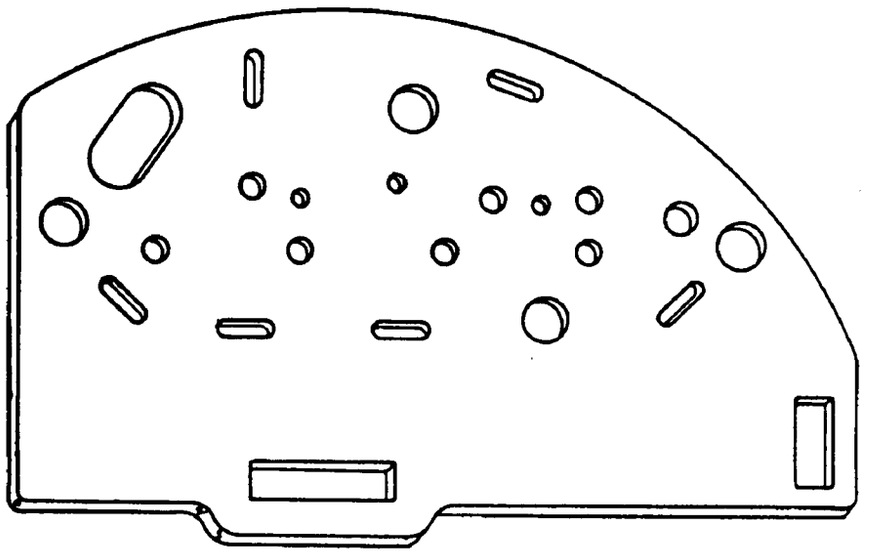
(1): SOLENOID SOUND COVER - The solenoid sound cover will retrofit back to all models.

(2): SOLENOID SPACER PLATE - The solenoid spacer plate will retrofit back to all models ONLY if the new design sound cover is used with the plate.

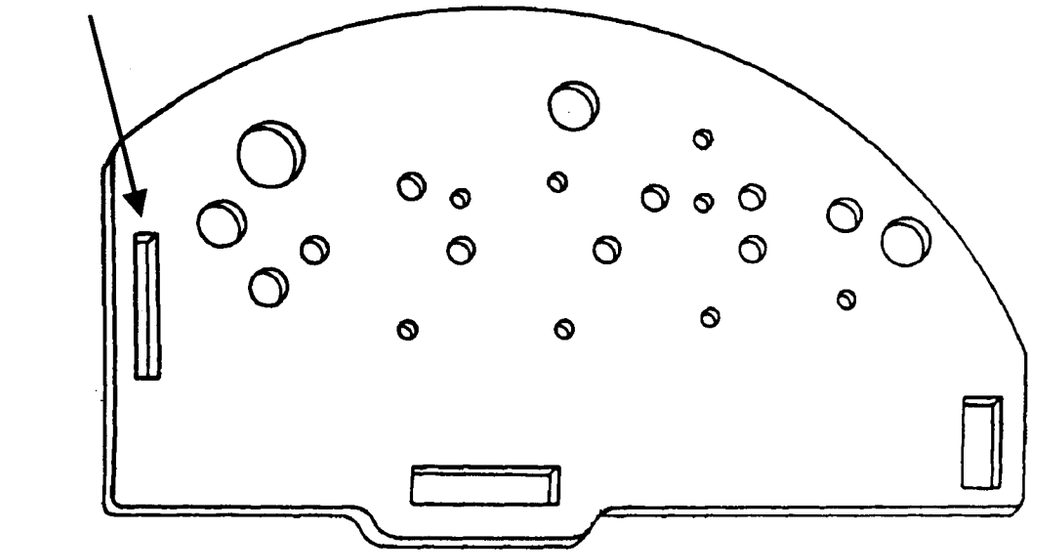
SERVICE INFORMATION:

SOLENOID SOUND COVER..... 4505589
SOLENOID SPACER PLATE..... 4659043

CHRYSLER A604
REVISED SOLENOID PLATE



PREVIOUS DESIGN



NEW DESIGN

Figure 64

CHRYSLER A604 AND A606

REVISED LOW/REVERSE PISTON SEALS

CHANGE: Beginning at the start of production for 1995 model year, all Chrysler A604 (41TE) and A 606 (42LE) transaxles were produced using revised seals for the Low/Reverse piston. The previous "Lip" type seals have been replaced by a "D" Ring type seal for both inner and outer seals, as shown in Figure 65.

REASON: Improved durability and coast downshift quality.

PARTS AFFECTED:

(1) LOW/REVERSE PISTON SEALS - Both the inner and outer lip seals have been replaced by a "D" Ring type seal, as shown in Figure 65. There were no dimensional changes necessary to the Low/Reverse piston to accommodate the new "D" Ring seals. The seals are available under OEM part number 4659185 for the outer seal, and 4659184 for the inner seal.

INTERCHANGEABILITY:

The new "D" Ring type seals will back service ALL previous models of the Chrysler A604 (41TE) and A606 (42LE) transaxles, without any additional modifications or changes.

SERVICE INFORMATION: (95MY)

Low/Reverse Piston Outer Seal ("D" Ring) 4659185
Low/Reverse Piston Inner Seal ("D" Ring) 4659184

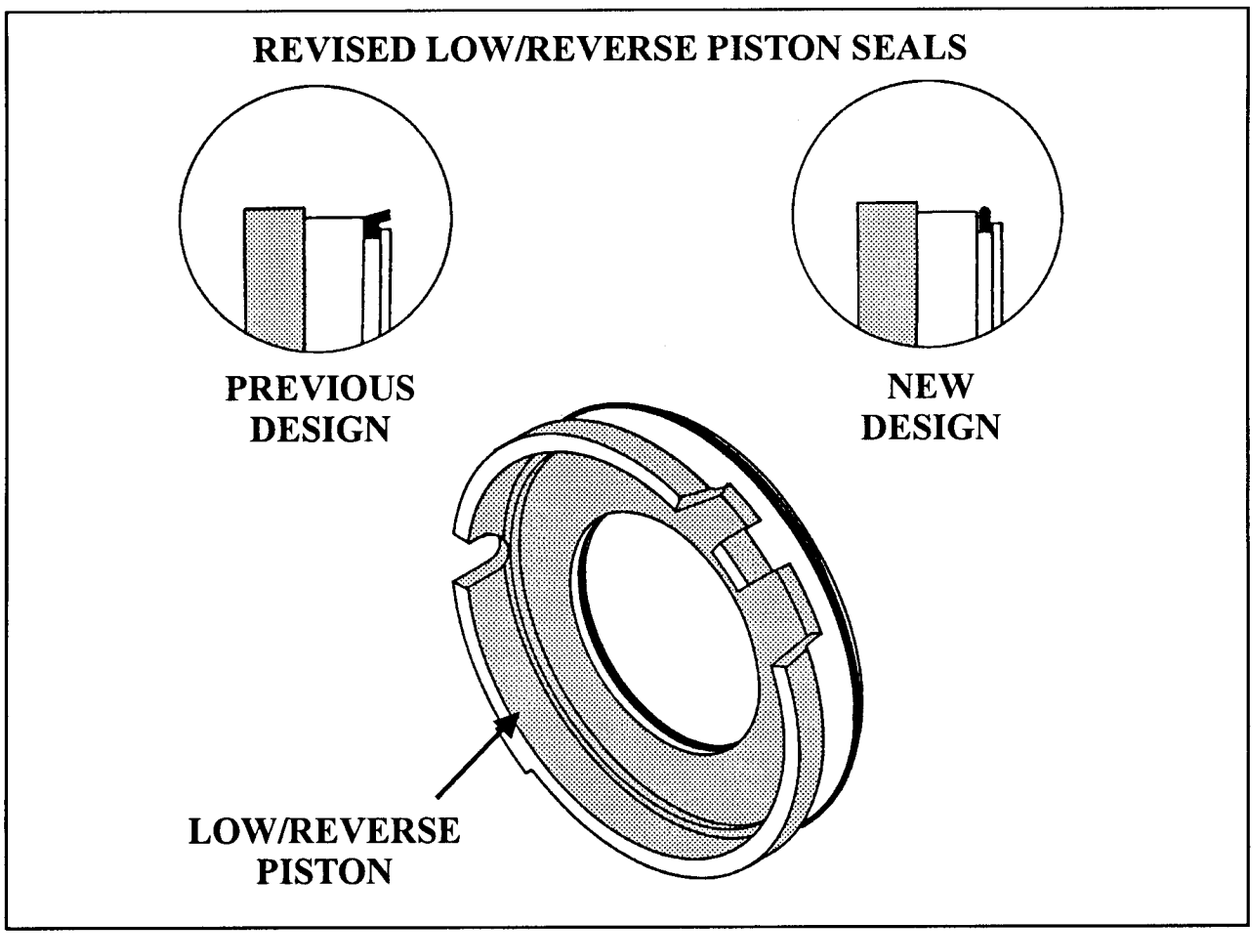


Figure 65

CHRYSLER A604 AND A606
REVISED 2-4 CLUTCH PISTON RETAINER

CHANGE: Beginning at the start of production for the 1995 model year, all Chrysler A604 (41TE) and A606 (42LE) transaxles were produced using a revised 2-4 Clutch Piston Retainer with an added lanced bleed orifice (See Figure 66).

REASON: Improved shift quality.

PARTS AFFECTED:

(1) 2-4 CLUTCH PISTON RETAINER - Lanced bleed orifice added to the retainer in the location shown in Figure 66.

INTERCHANGEABILITY:

The revised 2-4 Clutch Piston Retainer with the added lanced bleed orifice will back service ALL previous models of Chrysler A606 (41TE) and A606 (42LE) transaxles. There was not a part number change, so the revised retainer is available under OEM part number 4431650.

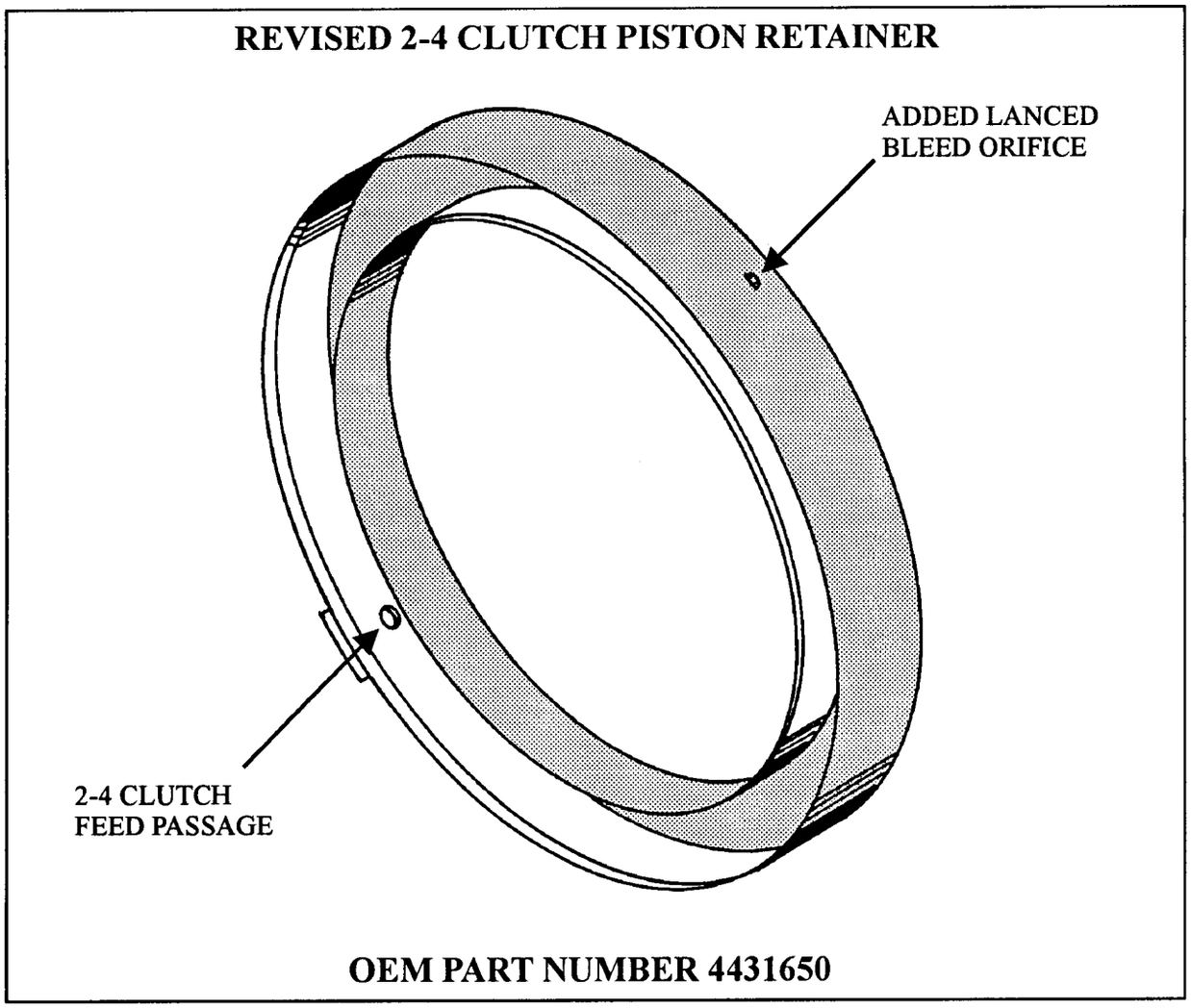


Figure 66

CHRYSLER A604
ASSEMBLY OF 2/4 AND L/R CLUTCH PACKS

Extra attention is needed when assembling the Low/Reverse clutch pack and the Two/Four clutch pack into the case, as both of the clutch packs are very similar, but are not compatible with one another.

THINGS TO WATCH FOR:

(1) Both clutch packs, on the steel plates, have the same tooth profile, but the thicknesses are different (See Figure 67).
   A. 2/4 STEEL PLATE THICKNESS IS .100" (4 Required).
   B. L/R STEEL PLATE THICKNESS IS .070" (5 Required).

(2) Both clutch packs, on the lined plates, have the same tooth count and the same lining, but the thicknesses are different (See Figure 67).
   A. 2/4 LINED PLATE THICKNESS IS .085" (4 Required).
   B. L/R LINED PLATE THICKNESS IS .070" (5 Required).

There are 5 lined plates and 5 steel plates in the Low/Reverse clutch pack.
There are 4 lined plates and 4 steel plates in the Two/Four clutch pack.
There is also a common pressure plate used between the clutch packs.

We have provided you with the correct clutch plate arrangment to assist you with proper assembly of the 2/4 and L/R clutch packs. Refer to Figure 68 for proper assembly procedures.

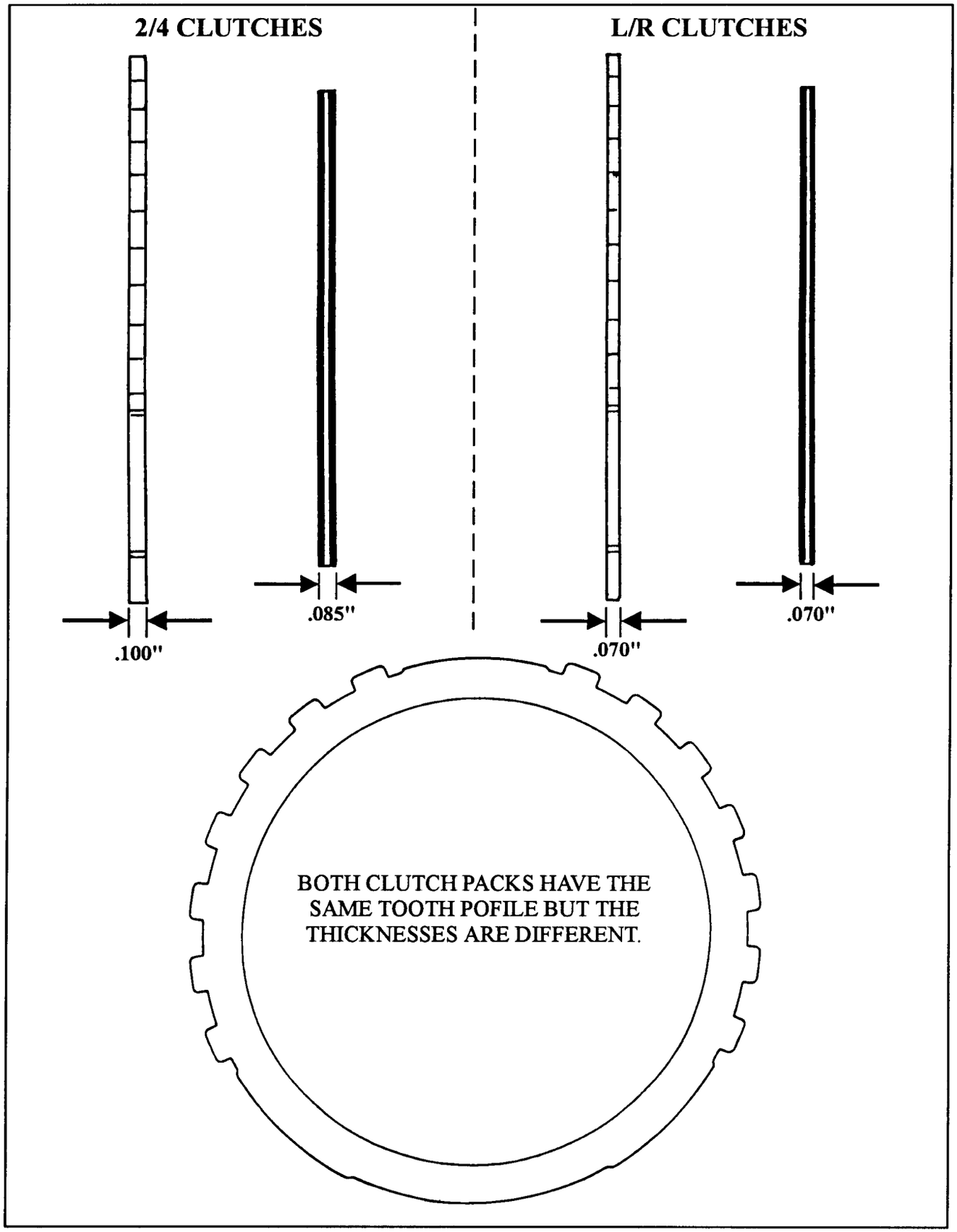
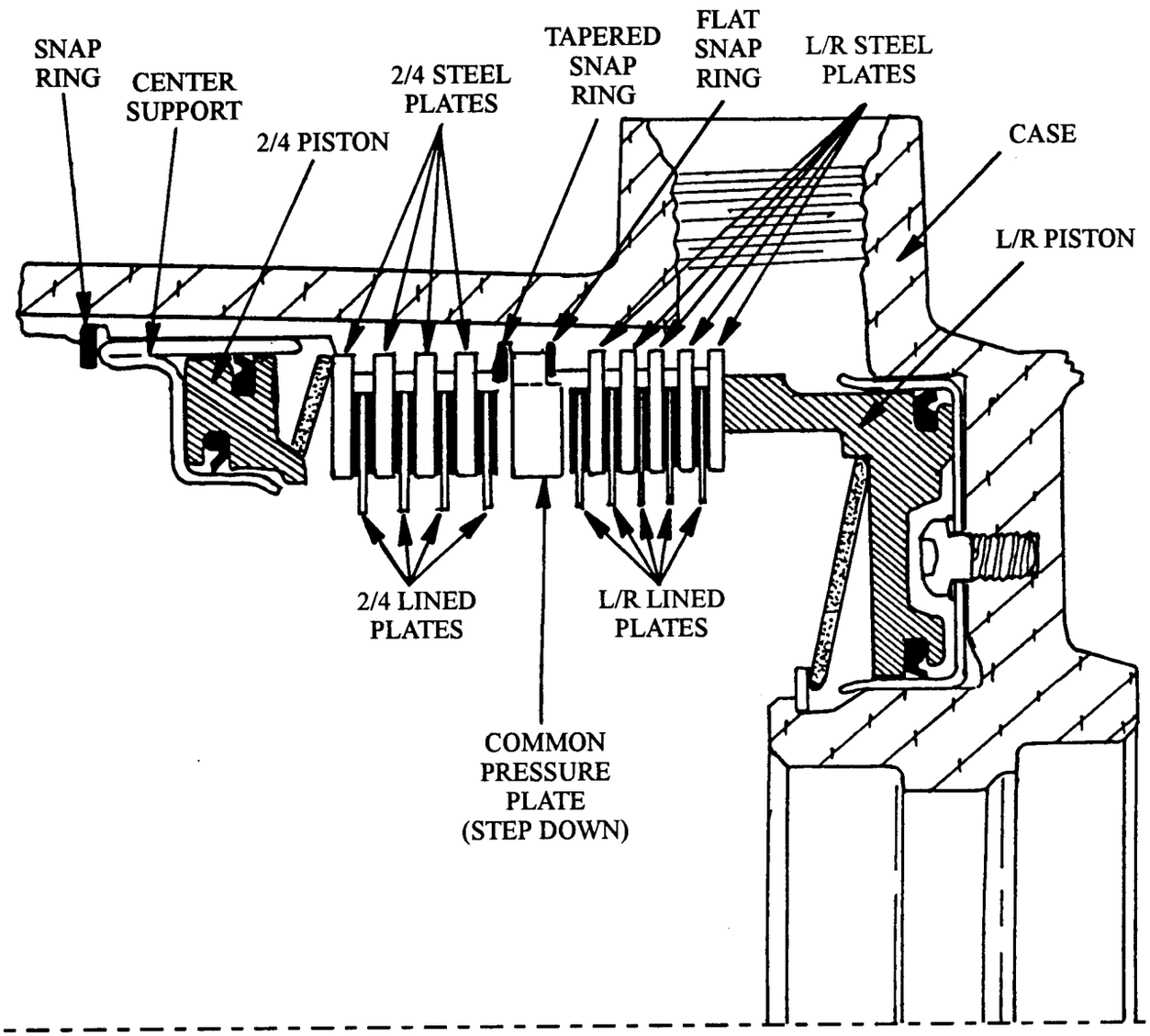

2/4 CLUTCHES
L/R CLUTCHES
.100"
.085"
.070"
.070"
BOTH CLUTCH PACKS HAVE THE SAME TOOTH POFILE BUT THE THICKNESSES ARE DIFFERENT.

Figure 67

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 68

CHRYSLER A604

INPUT CLUTCH RETAINER SNAP RING LOCATION AND IDENTIFICATION

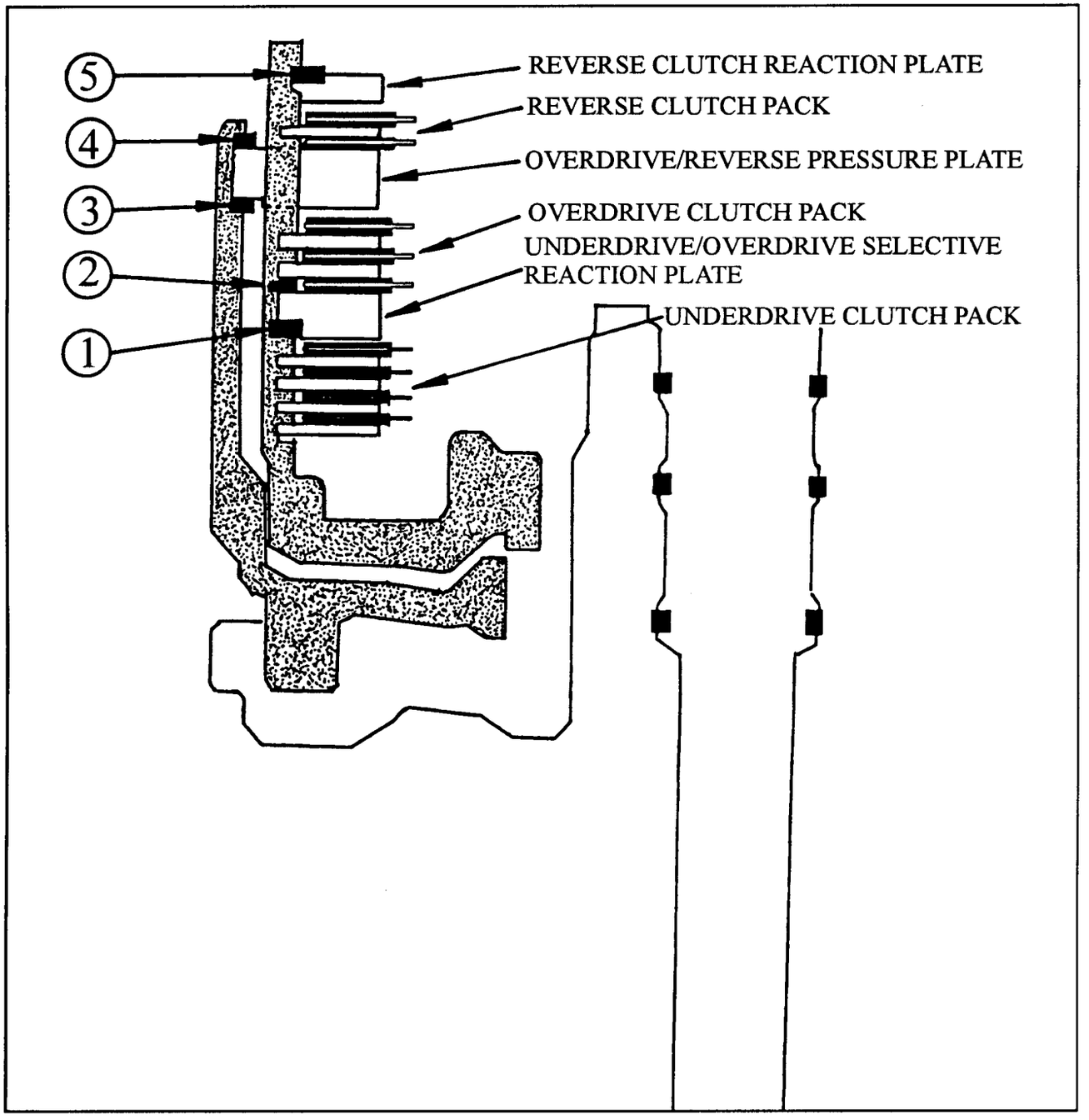
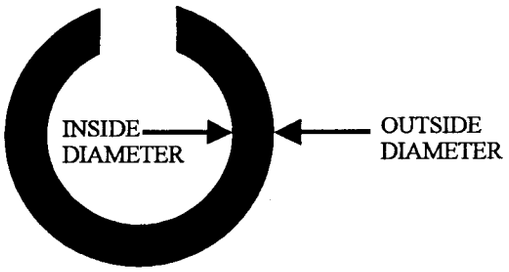


Figure 69

SNAP RING NO. 1:

This is a FLAT "Non-Selective" snap ring used on the bottom side of Underdrive/ Overdrive Selective Reaction Plate, and is approximately .060" thick. This snap ring is often confused with the Reverse Clutch reaction Plate "Selective" Snap Ring (Snap Ring No. 5). Refer to the selective chart under snap ring No. 5, and notice that the the snap ring could be .061" thick, so both snap rings could be installed in the wrong locations. TO IDENTIFY THE PROPER SNAP RING - Measure the width of the snap ring from the inside diameter to the outside diameter (See Illustration Below).



Ring No. 1, Underdrive/Overdrive Non-Selective Snap Ring is approximately .173"
Ring No. 5, Reverse Clutch Selective Snap Ring is approximately..... .153"

SNAP RING NO. 2:

This is a color coded "Tapered" snap ring that goes on top of the Underdrive/ Overdrive Selective Reaction Plate. There are currently 3 different design levels of this snap ring, because of "Updates" that have occurred since the start of production in 1989, and also affects the design level of the Underdrive/Overdrive Selective Reaction Plate.

Refer to Figure 70 **TO IDENTIFY WHICH DESIGN LEVEL THAT YOU HAVE!**

We recommend the 3RD DESIGN LEVEL for all models, which REQUIRES a four friction overdrive clutch pack, the Black .075" snap ring, and the "Undercut" Underdrive/ Overdrive Selective Reaction Plate, as shown in Figure 70. Service Package part numbers listed below include the latest design level of the Underdrive/Overdrive Selective Reaction Plate, and the latest design level of the Tapered Snap Ring (.075" Black).

.215"-.219" Thickness.....	4723684
.234"-.238" Thickness.....	4723683
.253"-.257" Thickness.....	4723682
.273"-.277" Thickness.....	4723681

SNAP RING NO. 3:

This is a "Waved" snap ring used on the bottom side of the Overdrive/Reverse Selective Pressure Plate and IS USED even when you have one "Wide" groove in the Overdrive/Reverse Housing, instead of the previous two grooves (See Figure 71).

SNAP RING NO. 4:

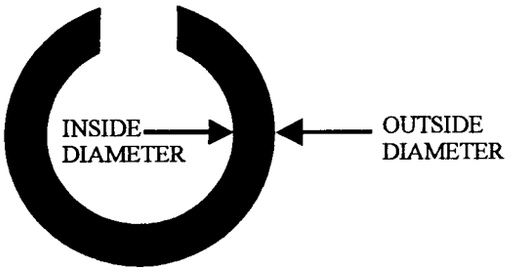
This is a "Flat" snap ring used on the top of the Overdrive/Reverse Selective Pressure Plate and IS USED even when you have one "Wide" groove in the Overdrive/Reverse Housing, instead of the previous two grooves (See Figure 71).

Continued on next Page.

SNAP RING NO. 5:

This is a FLAT "Selective" snap ring used on top of the Reverse Clutch Reaction Plate. There are 4 different selective thickness snap rings to set the reverse clutch pack clearance, and are listed in the chart below along with their part numbers. This flat snap ring is often confused with the flat snap ring used on the bottom side of the Underdrive/Overdrive Reaction Plate (Snap Ring No. 1), which is approximately .060" thick. Refer to the chart below, and notice that the reverse clutch selective snap ring could be .061" thick, so both snap rings could be installed in the wrong locations.

TO IDENTIFY THE PROPER SNAP RING - Measure the width of the snap ring from the inside diameter to the outside diameter (See Illustration Below).



PART NUMBES	THICKNESS
4377195	.061"
4412871	.071"
4412872	.081"
4412873	.090"

Ring No. 5, Reverse Clutch Selective Snap Ring is approximately..... .153"
Ring No. 1, Underdrive/Overdrive Non-Selective Snap Ring is approximately .173"

CLUTCH PACK CLEARANCES

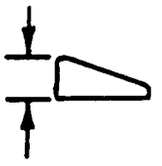
Underdrive Clutch Pack ..... .036" - .058"
Overdrive Clutch Pack ..... .042" - .096"
Reverse Clutch Pack ..... .030" - .039"

UNDERDRIVE/OVERDRIVE TAPERED SNAP RING IDENTIFICATION

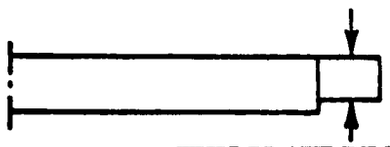
THICKNESS	COLOR CODE	APPLICATION	PART NO.
.070"	BLUE *	3 O.D. PLATE ONLY	4377189
.060"	GREEN/WHITE *	4 O.D. PLATE ONLY	4531411
.075"	GREEN *	4 O.D. PLATE ONLY	4567602

* = ALWAYS MEASURE THE SNAP RING AS COLOR CODES HAVE BEEN KNOWN TO CHANGE.

MEASURE SNAP RING ACROSS THE THICKEST DIMENSION AS SHOWN AT RIGHT



UNDERDRIVE/OVERDRIVE REACTION PLATE MEASURE THICKNESS OF LONGEST TANGS FOR IDENTIFICATION



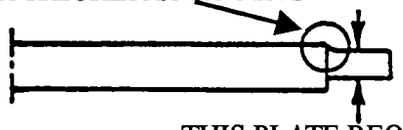
.196" THICK LUG = 3 0VERDRIVE PLATE ONLY

THIS PLATE REQUIRES .070" BLUE TAPERED SNAP RING, AND IS INSTALLED WITH STEP FACING DOWN.

.156" THICK LUG = 4 0VERDRIVE PLATE ONLY

THIS PLATE REQUIRES .060" GREEN/WHITE TAPERED SNAP RING, AND IS INSTALLED WITH STEP FACING DOWN.

RADIUS RELIEF CUT TO MAKE ROOM FOR THICKER SNAP RING



.141" THICK LUG = 4 0VERDRIVE PLATE ONLY

THIS PLATE REQUIRES .075" GREEN TAPERED SNAP RING, AND IS INSTALLED WITH STEP FACING DOWN.

THE "UPDATED" GREEN SNAP RING AND THE "UPDATED" RELIEF CUT REACTION PLATE WILL RETROFIT BACK ON 4 O.D. PLATE ONLY.

Figure 70

Automatic Transmission Service Group

CHRYSLER 41TE (A604)
CHECKBALL LOCATION CHANGES FOR THE 1995 MODEL YEAR

CHANGE: Beginning at the start of production for all 1995 models of the A604 transaxle, Chrysler made changes to the valve body that will affect service, and includes checkball changes in the valve body. Refer to Figures 72.

REASON: Improved the coast downshift clunk concerns, and converter clutch durability.

PARTS AFFECTED:

(1) VALVE BODY - New valve body casting with the Number 1 checkball eliminated, as shown in Figure 1. Two new valves were added to the valve body, first was a L/R Switch Valve to serve the same function as the number 1 checkball, and second was a T/C Regulator Valve to limit converter clutch apply pressure to a maximum of 95 PSI. Refer to Figure 72 for the locations of these new valves and the new checkball locations.

(2) TRANSFER PLATE - New transfer plate casting to accommodate the changes in the new design valve body. Refer to Figure 72 for the new transfer plate.

(3) SPACER PLATE - New spacer plate stamping to accommodate the changes in the new valve body, as shown in Figure 72.

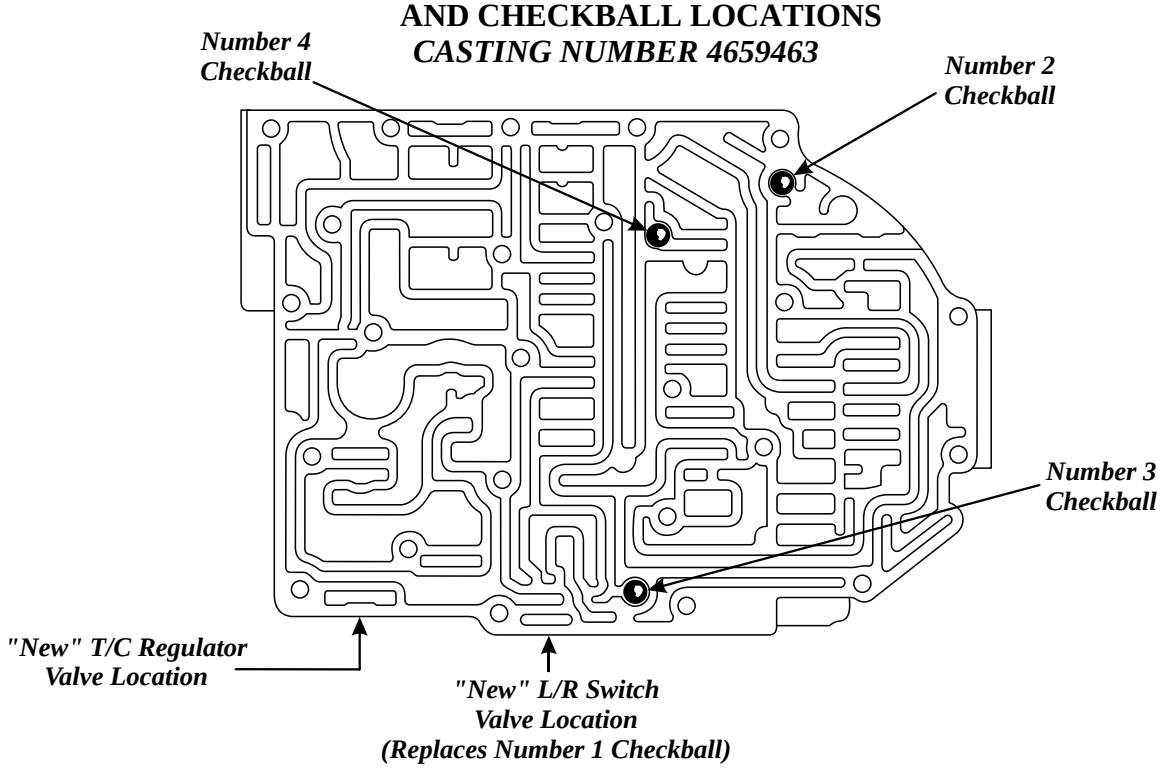
INTERCHANGEABILITY:

Currently not recommended to retro-fit back to previous models, but new design service valve bodies will soon be available.

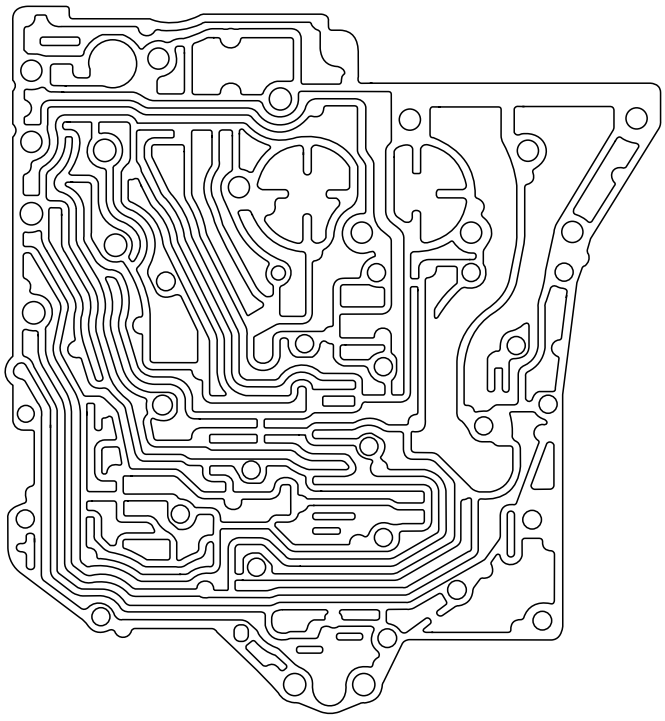
SERVICE INFORMATION:

Casting number for identification on new valve body is 4659463.
Casting number for identification on new transfer plate is 4659465.
Number stamped for identification into new spacer plate is "66" (See Figure 72).

1995 A604 VALVE BODY CHANNELS AND CHECKBALL LOCATIONS
CASTING NUMBER 4659463



1995 A604 TRANSFER PLATE OIL CHANNELS
CASTING NUMBER 4659465



1995 A604 SPACER PLATE

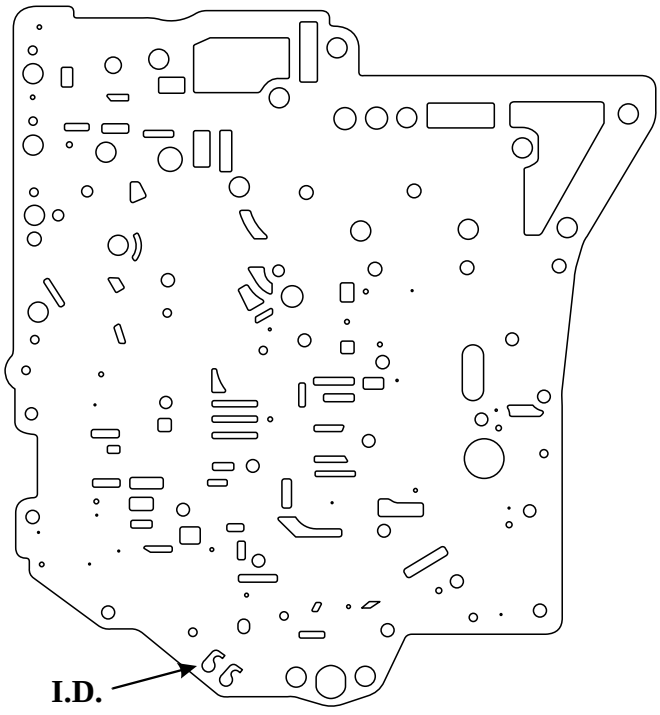


Figure 72

CHRYSLER 41TE (A604)

NEW TRANSMISSION RANGE SENSOR

CHANGE: Beginning at the start of production 1996, some models equipped with the 41TE (A604) transaxle replaced the PRNODL and Neutral Safety Switch with a Transmission Range Sensor as seen in Figure 73.

REASON: To provide a common shift lever position sensor and Transmission Control Module (TCM) logic system with that used in the 42LE (A606) transaxle for durability and reliability.

PARTS AFFECTED:

(1) PRNODL SWITCH - The previously used Park, Reverse, Neutral, Overdrive, Drive, Low Switch PRNODL) has been eliminated and replaced with the new Transmission Range Sensor (See Figure 73).

(2) NEUTRAL SWITCH - The previously used Neutral Switch has been eliminated and replaced with the new Transmission Range Sensor (See Figure 73).

(3) TRANSAXLE CASE - The casting of the case change with the elimination of the two threaded holes for the PRNODL and Neutral Safety Switch. An access hole has been added to accommodate the new TRS sensor connector as the switch which is mounted on the valve body (See Figure 73).

(4) VALVE BODY - The manual arm shaft and rooster comb assembly and the valve body changed in design to accommodate the mounting of the new TRS sensor (See Figure 74).

(5) TCM - The logic system flashed into the computer program changed to accept the open and closed state of the new Transmission Range Sensor. With the PRNODL and Neutral switches having been integrated into the one Transmission Range Sensor, the new logic system now has to utilize the one sensor to determine start up functions, reverse lamp operation, as well as forward drive range shift and converter clutch strategies.

INTERCHANGEABILITY:

None of the updated parts listed above will interchange with any of the first design parts used in the previous model vehicles between 1989 and 1995. First design parts must be used with first design models and second design parts must be used with second design models, 1996 and above.

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS

A scanner can be used to observe the OPEN/CLOSED state of the C1/T41, C2/T42, C3/T3 and the C4/T1 circuits. This can be especially helpful in determining which exact circuit is malfunctioning. Refer to Figure 75 for the Open/Closed status chart and circuit identification. Refer to Pages 99 and 100 for diagnostic routines for the new TRS.

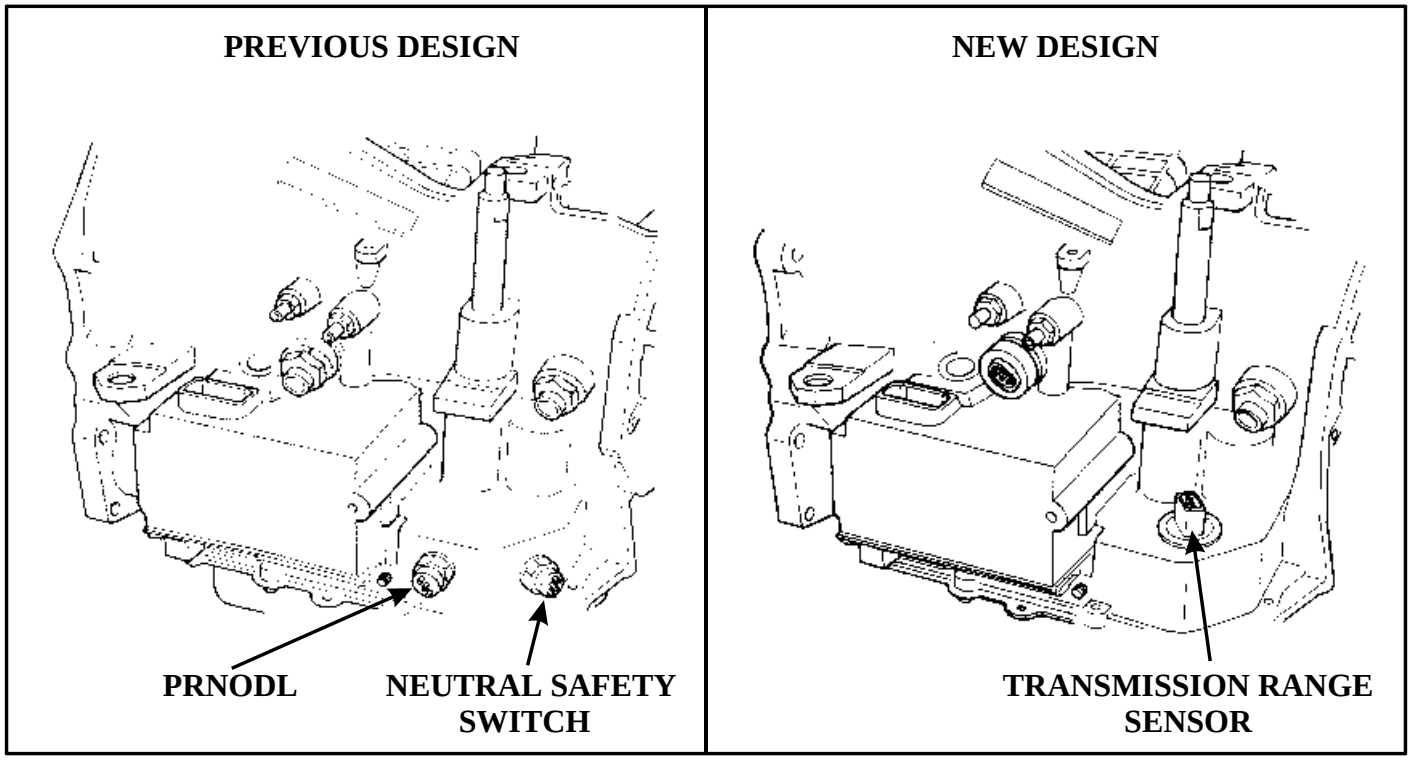


Figure 73

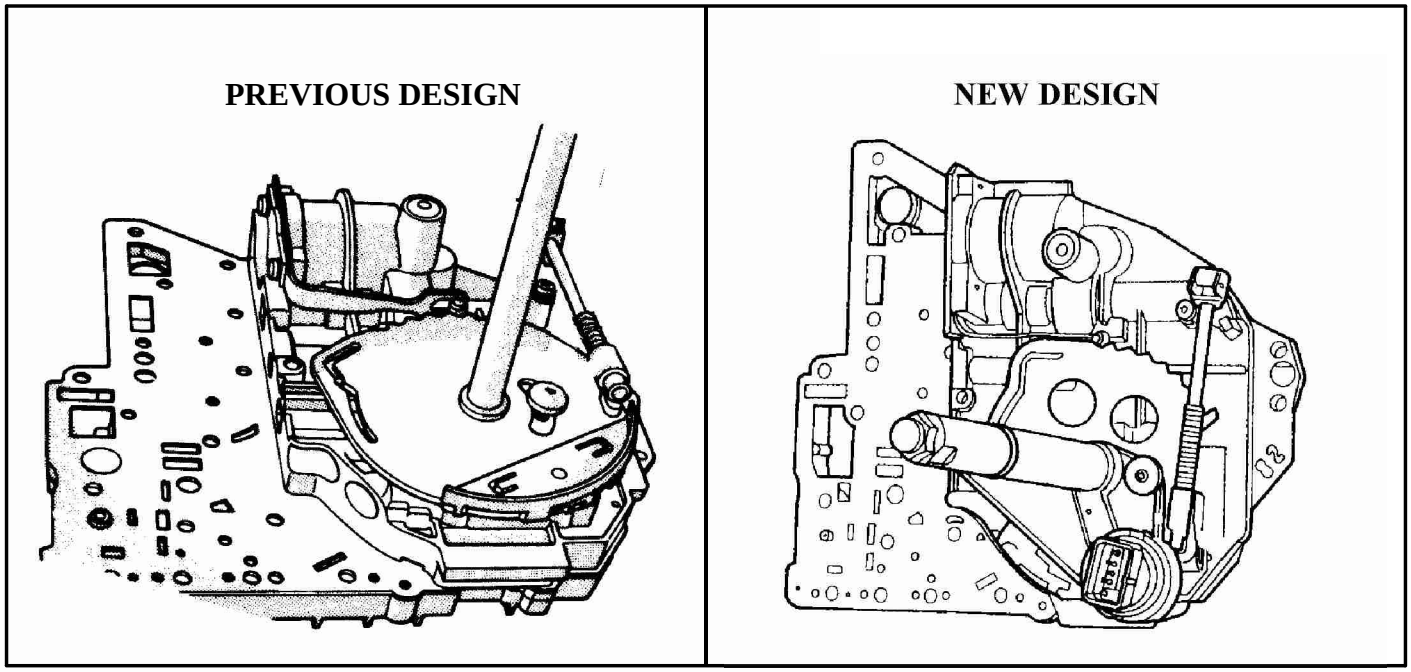


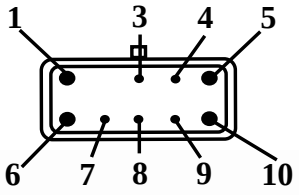
Figure 74

CAVITY	COLOR	FUNCTION
1	WHITE	FUSED IGNITION SWITCH OUTPUT
3	DKB/BLK *	SPEED SENSOR GROUND
4	VIOLET *	TRANS. TEMP. SENSOR SIGNAL
5	BLK/LTG	PARK/NEUT. POSITION SWITCH SENSE
6	VLT/BLK	REVERSE LAMP SENSE
7	LTG/BLK	TRS T1 SENSE
8	VIOLET	TRS T3 SENSE
9	VLT/WHT	TRS T42 SENSE
10	BRN/YEL	TRS T41 SENSE

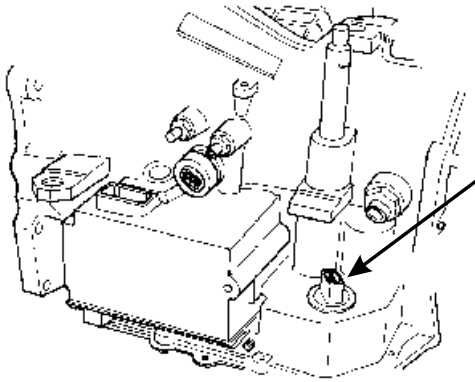
*** 1996-97 LH**

RANGE		T42 (C2)	T41 (C1)	T3 (C3)	T1 (C4)
P	P	CL	CL	CL	OP
R	R	CL	OP	OP	OP
N	N	CL	CL	OP	CL
OD	D	OP	OP	OP	CL
3	2	OP	OP	CL	OP
1	1	CL	OP	CL	CL

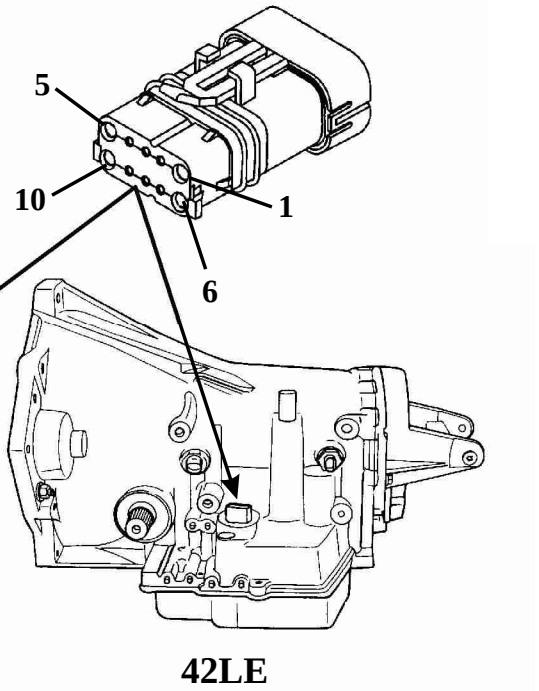
OP = SWITCH IS OPEN
CL = SWITCH IS CLOSED



TRANSMISSION RANGE SENSOR (TRS)



41TE



42LE

Figure 75

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS *(Continued)*

Once the circuit which malfunctioned has been identified, a continuity check should be made on that circuit. Use the chart found in Figure 75 to assist in identifying the specific circuit or circuits in question. For example, if the scanner reveals that the T3 (C3) circuit does not close when the selector lever is placed in Park, 3 or 1, that specific circuit will need to be checked. In the chart below circuit T3 is the wire which runs from the number eight cavity in the TRS connector to the number three cavity in the TCM connector.

CIRCUIT NAME	TRANSMISSION RANGE SENSOR	CONTROLLER TERMINAL NO.	POSSIBLE CODES
C1/T41	10	41	28
C2/T42	9	42	28
C3/T03	8	3	28
C4/T01	7	1	28

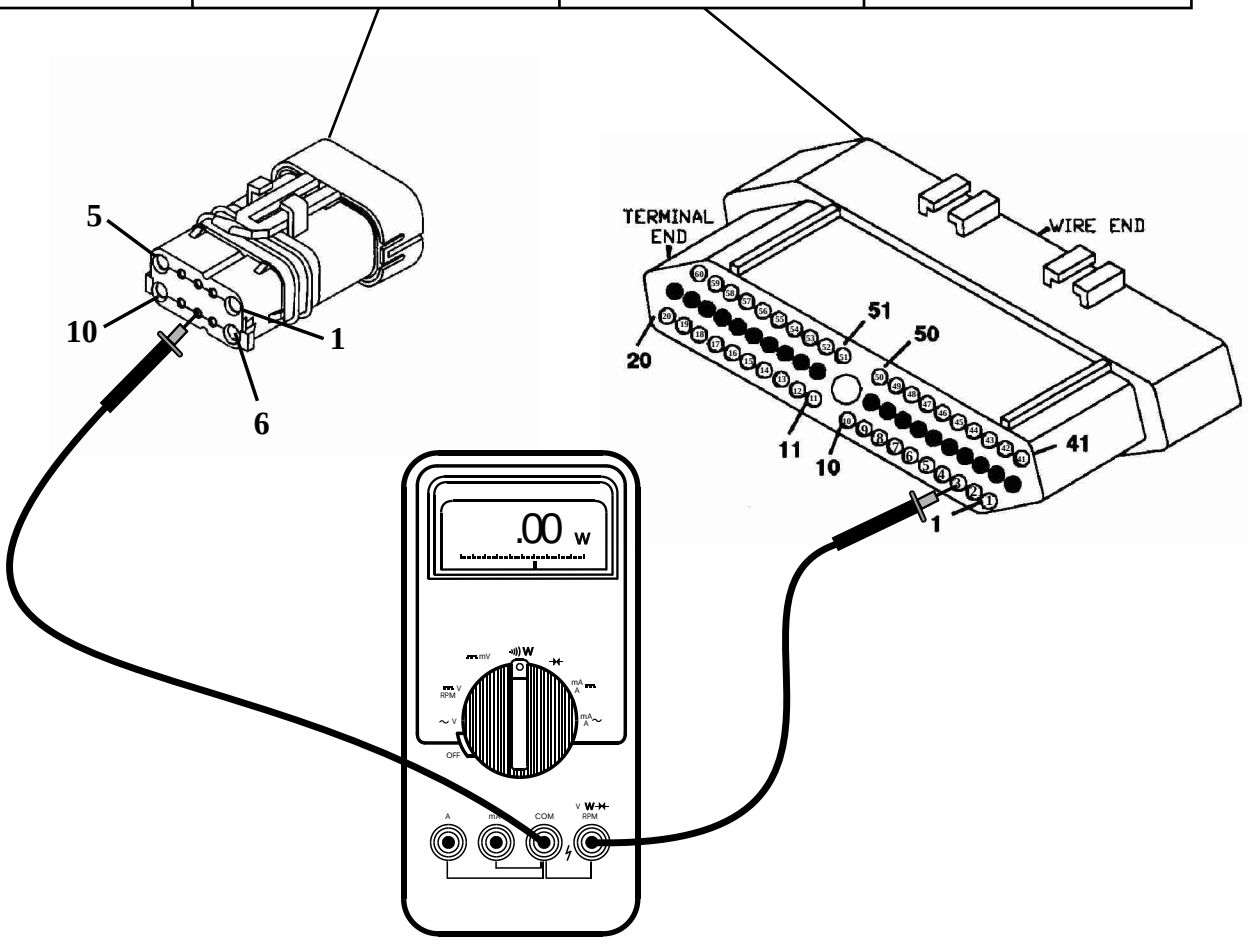


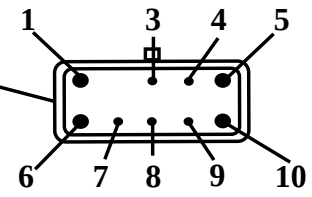
Figure 75

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS *continued*

If an open circuit is seen when checking for continuity across any one of the Transmission Range Sensor wires, repair or replace the wire or wires. If continuity is seen, inspect both the TCM and TRS connector cavities for drag and that they have not been pushed back into the connector. The shank end of a drill bit may be employed to check for pin drag in the TRS connector. For cavities 7, 8 and 9, use a .035" wire gauge or a # 65 drill bit. For cavity 10, use an .089" wire gauge or a # 43 drill bit. If pin cavities are not pushed back and they have a good drag on the wire gauge test remove the valve body from the transmission. With the TRS still mounted to the valve body, place the manual valve in the park position. Fasten the negative meter lead to the metal portion of the rooster comb (See Figure 5). While pushing the switch down onto the rooster comb with one hand, use the positive meter lead to make contact with pins 7, 8, 9 and 10 individually. Approximately .05 to 1.5 ohms should be seen on each pin except # 7, it should read open. Use the chart in Figure 76 to check the TRS in each manual valve selection. Replace the TRS sensor if necessary. If all ranges test good, replace the TCM.

RANGE		10	9	8	7
P	P	CL	CL	CL	OP
R	R	CL	OP	OP	OP
N	N	CL	CL	OP	CL
OD	D	OP	OP	OP	CL
3	2	OP	OP	CL	OP
1	1	CL	OP	CL	CL

OP = SWITCH IS OPEN
CL = SWITCH IS CLOSED



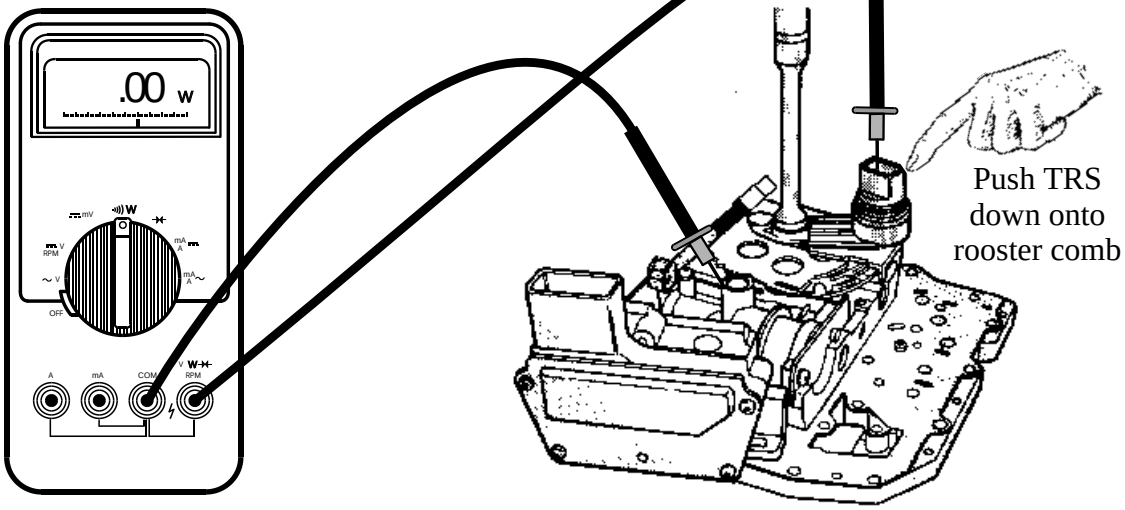


Figure 76

CHRYSLER 41TE
2-4 / LOW REVERSE
REACTION PLATE CHANGE

CHANGE: Some time in 1999, four of the previous 2-4/Low Reverse Reaction Plate selectives were changed to acommodate a new Tapered Snap Ring as shown in Figure 77.

REASON: For increased durability of the Tapered Snap Ring.

PARTS AFFECTED:

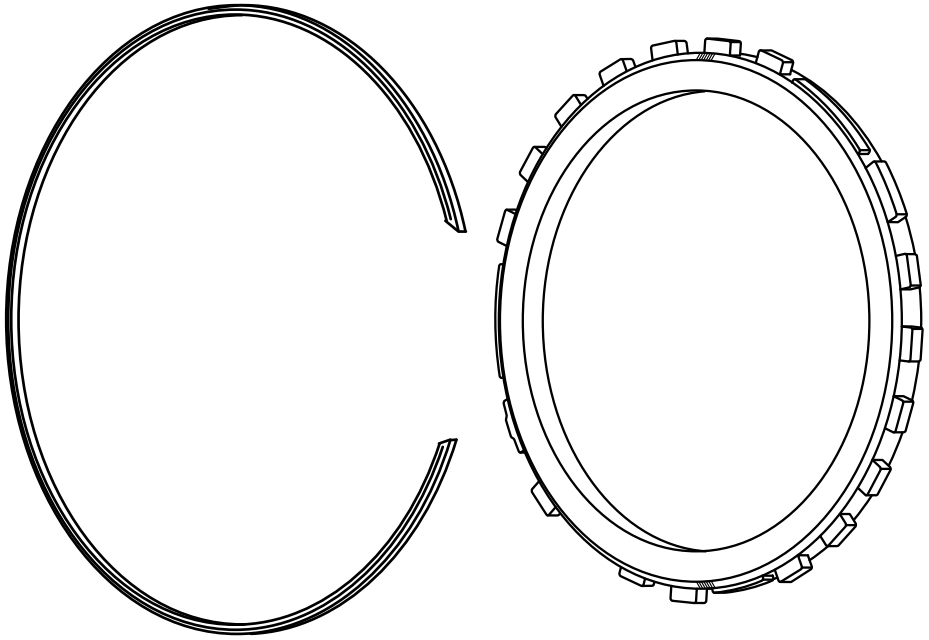
(1)**The 2-4/Low Reverse Reaction Plate:** was machined to accept a new Tapered Snap Ring.
(2)**The Tapered Snap Ring:** was made .010 " thicker to avoid breakage.

SERVICE INFORMATION:

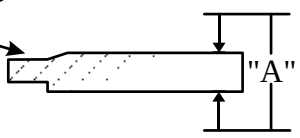
Part No. 4377149 (.262" thickness).....Now Part No. 4897455AA
Part No. 4377148 (.252" thickness).....Now Part No. 4897454AA
Part No. 4412268 (.242" thickness).....Now Part No. 4897453AA
Part No. 4412267 (.232" thickness).....Now Part No. 4897452AA

NOTE: The thicker tapered snap ring is included in the new 2-4/Low Reverse Reaction Plate package when the Part Number ends with "AA."

2-4/LOW REVERSE REACTION PLATE AND TAPERED SNAP RING



The 2-4/L.R. reaction plate was machined to accept the new thicker Tapered snap ring



Dimension "A" is the selective thickness of the 2-4/L.R. reaction plate

Figure 77

CHRYSLER A604
NEW SOLENOID PACK

CHANGE: A new design Solenoid Pack has been introduced as a running change in the 1999 model year for ***all*** 41TE (A604) transaxles, as shown in Figure 78. This new design Solenoid Pack, available under OEM part number 5015646AB, will also be used for service, as the previous design solenoid pack is no longer available from Chrysler.

REASON: Greatly reduced operational noise by using internal solenoids with the needles and seats incorporated inside the solenoids. The "Buzzing" noise normally associated with this unit is gone.

PARTS AFFECTED:

(1) SOLENOID PACK - Totally re-designed casting with changes in the worm track area and is illustrated in Figure 79. The new design Solenoid Pack, available under OEM part number 5015646AB, is now the only one available for service.

(2) SOLENOID GASKET - Changed to accomodate the changes in the new design solenoid pack, as shown in Figure 80.

(3) SOLENOID SPACER PLATE - Eliminated, with the new design solenoid pack.

(4) SOLENOID SOUND COVER - Eliminated with the new design solenoid pack, as it is no longer needed to dampen the "Buzzing" noise.

SERVICE INFORMATION:

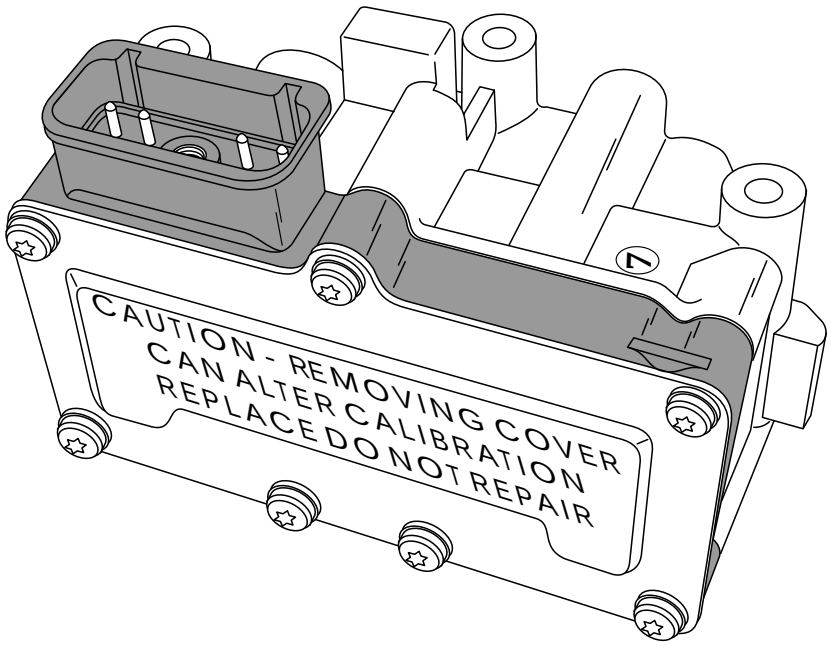
Solenoid Pack (New Design) 5015646AB
Solenoid Gasket (New Design) 4659982

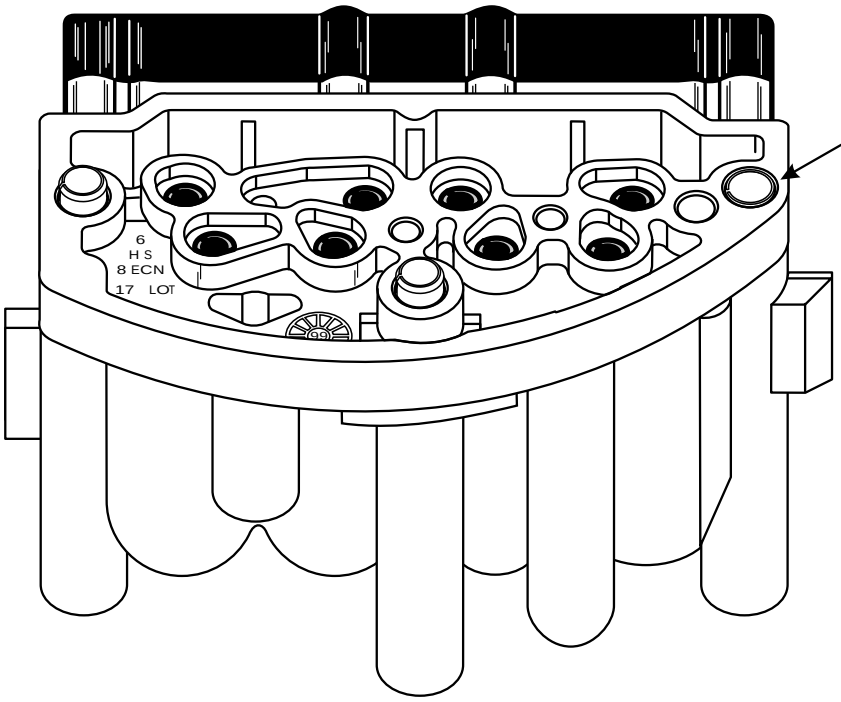
INTERCHANGEABILITY:

The new design Solenoid Pack and gasket will retro-fit back on ***all models*** of the 41TE (A604) transaxle, by following the installation instructions listed below;

1. Remove and discard the previous design solenoid pack, spacer plate, both gaskets, and the sound cover.
2. Install the new design Solenoid Pack with the new design gasket, and torque the three retaining bolts to 105 in.lb.
   Special Note: Most early cases will require that you either press the rear roll pin in so that it is flush with the body, or remove it, as shown in Figure 78, so that new Solenoid Body will bolt down flush with the case surface.

NEW DESIGN SOLENOID PACK



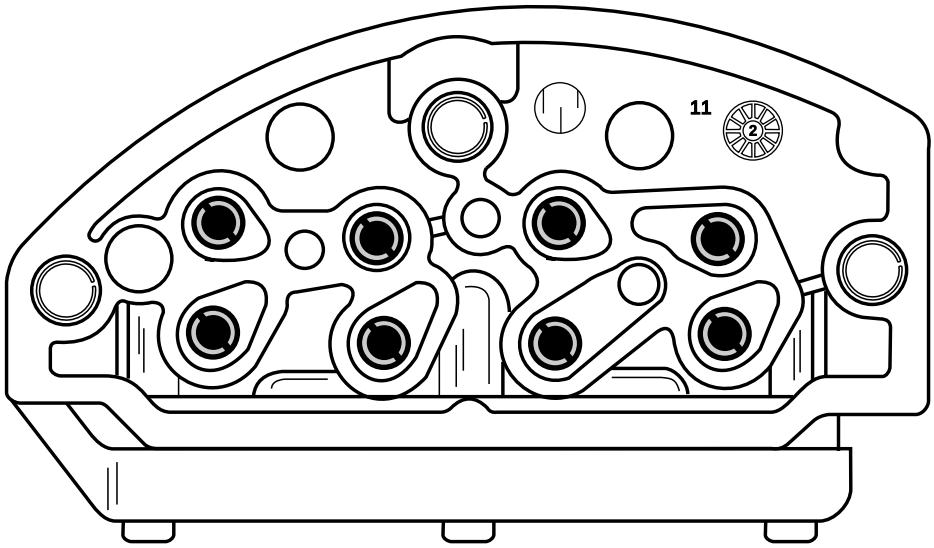


This Roll Pin Must Be Pressed Down Flush Or Removed

NEW DESIGN SOLENOID PACK (BOTTOM VIEW)

Figure 78

Early Solenoid Pack
(Bottom View)



Late Solenoid Pack
(Bottom View)

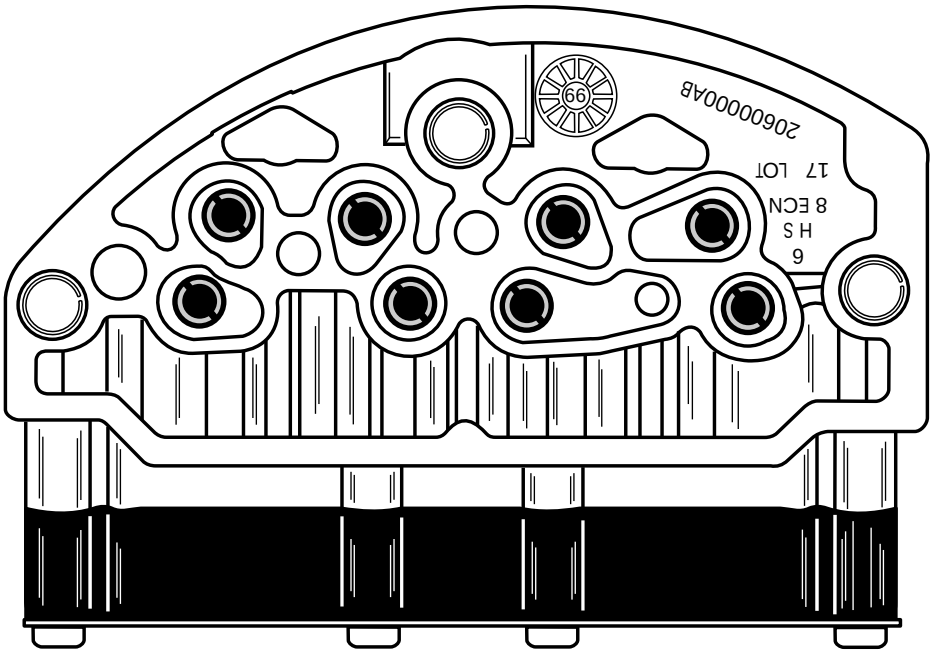
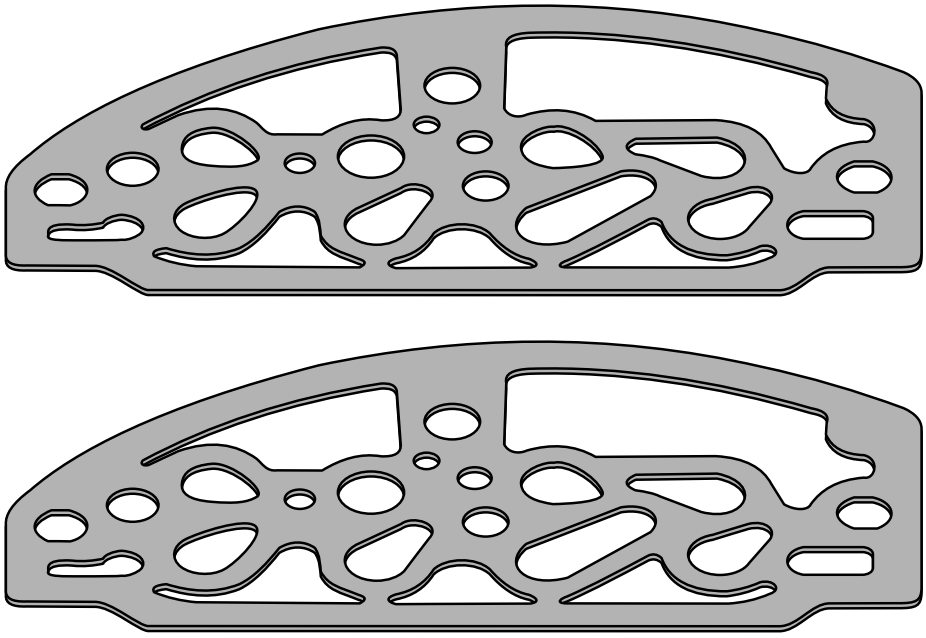


Figure 79

Early Solenoid Gaskets



Late Solenoid Gasket

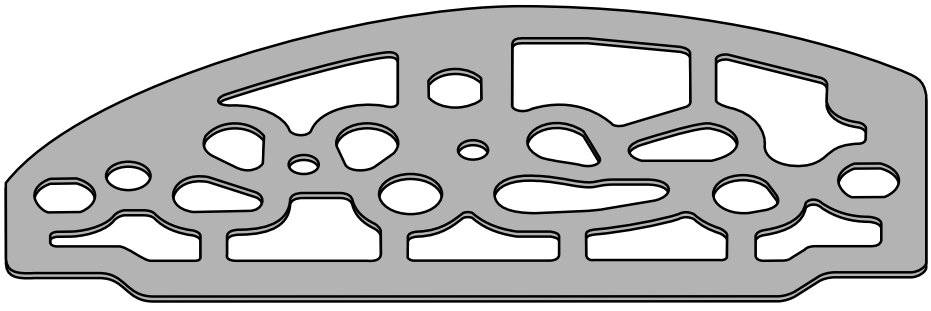


Figure 80

CHRYSLER A670 (31TH) AND A604 (41TE)
NEW DESIGN FINAL DRIVE CROSS SHAFT RETAINERS

CHANGE: Beginning in the model year 2000, as a running change, Chrysler introduced a new design final drive cross shaft retainer and eliminated the retaining pin. The new design retainers are held in place by two of the ring gear retaining bolts (See Figure 81).

REASON: Eliminates the possibility of the cross shaft coming out and breaking the case.

PARTS AFFECTED:

(1) FINAL DRIVE HOUSING - Retaining pin hole eliminated (See Figure 82).

(2) CROSS SHAFT - Retaining pin hole eliminated (See Figure 82).

(3) CROSS SHAFT RETAINER - New design cross shaft retainer to replace the previous design retaining pin (See Figure 82).

INTERCHANGEABILITY:

Chrysler has now made available two service packages to back service previous design levels, one kit for the 31TH and one kit for the 41TE transaxles. The contents of these kits are illustrated in Figure 2 and part numbers are listed below under "Service Information".
The new design retainers are also available individually from the OEM, and are installed as shown in Figures 83 and 84.

SERVICE INFORMATION:

A604 (41TE) Differential Service Package (New Design) 4798858AB
A670 (31TH) Differential Service Package (New Design) 4798859AB
A604 (41TE) Cross Shaft Retaining Brackets (New Design) 4800058AA
A670 (31TH) Cross Shaft Retaining Brackets (New Design) 4800059AA

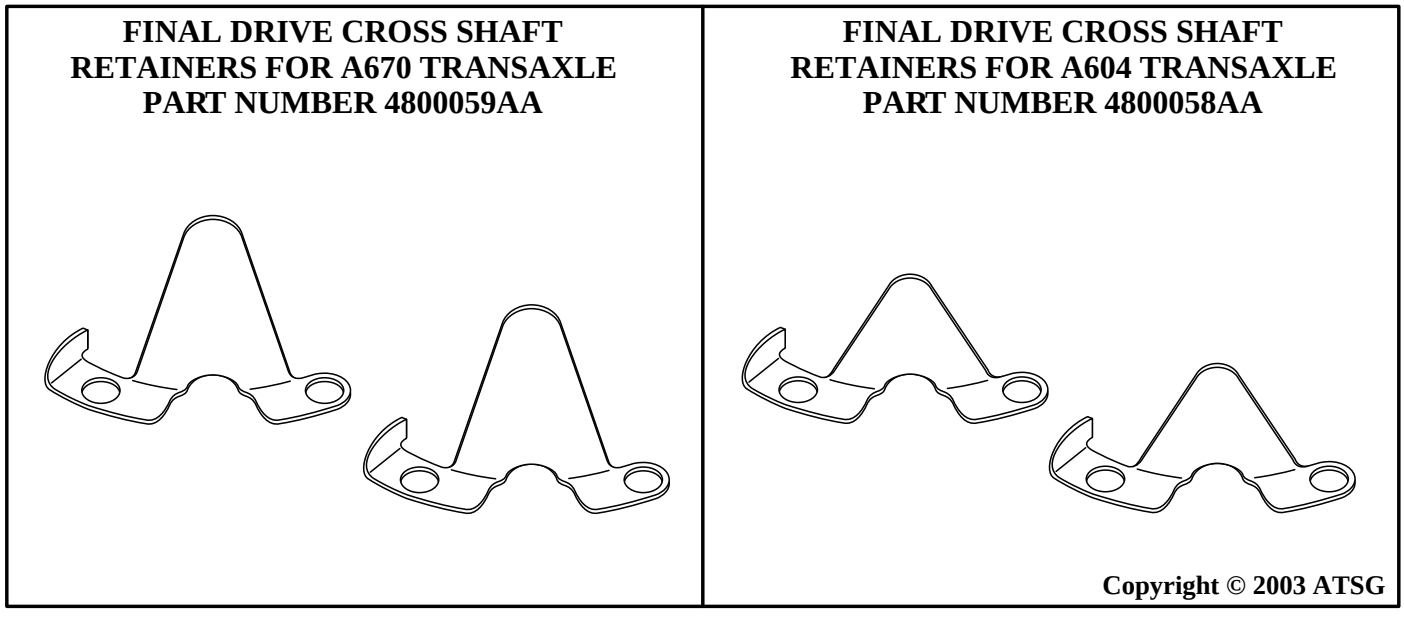
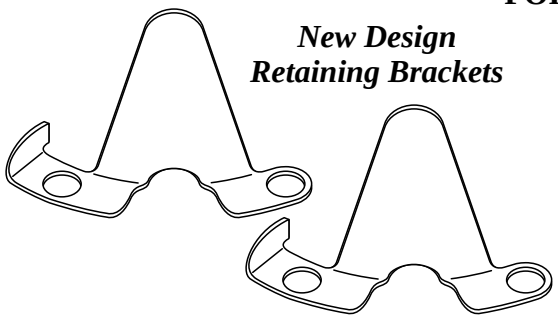
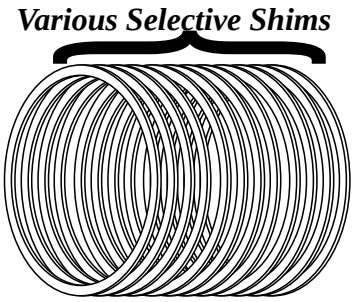
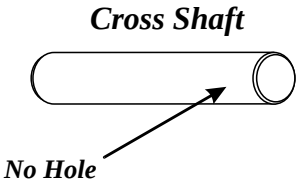


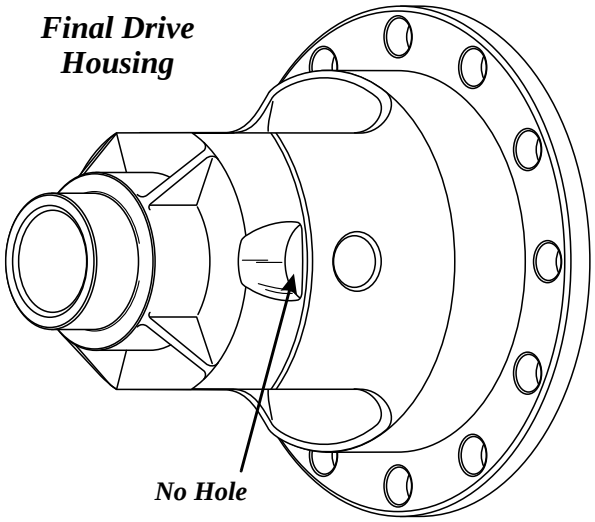
Figure 81

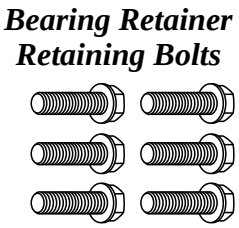
CONTENTS OF KIT NUMBER 4798859AB
FOR A670 FAMILY











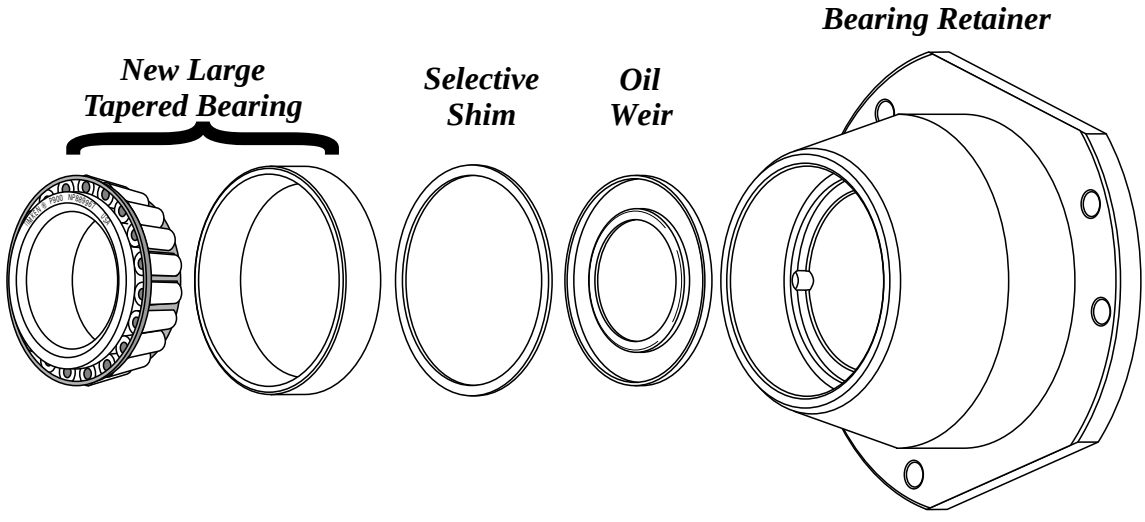


Figure 82

ASSEMBLY PROCEDURE

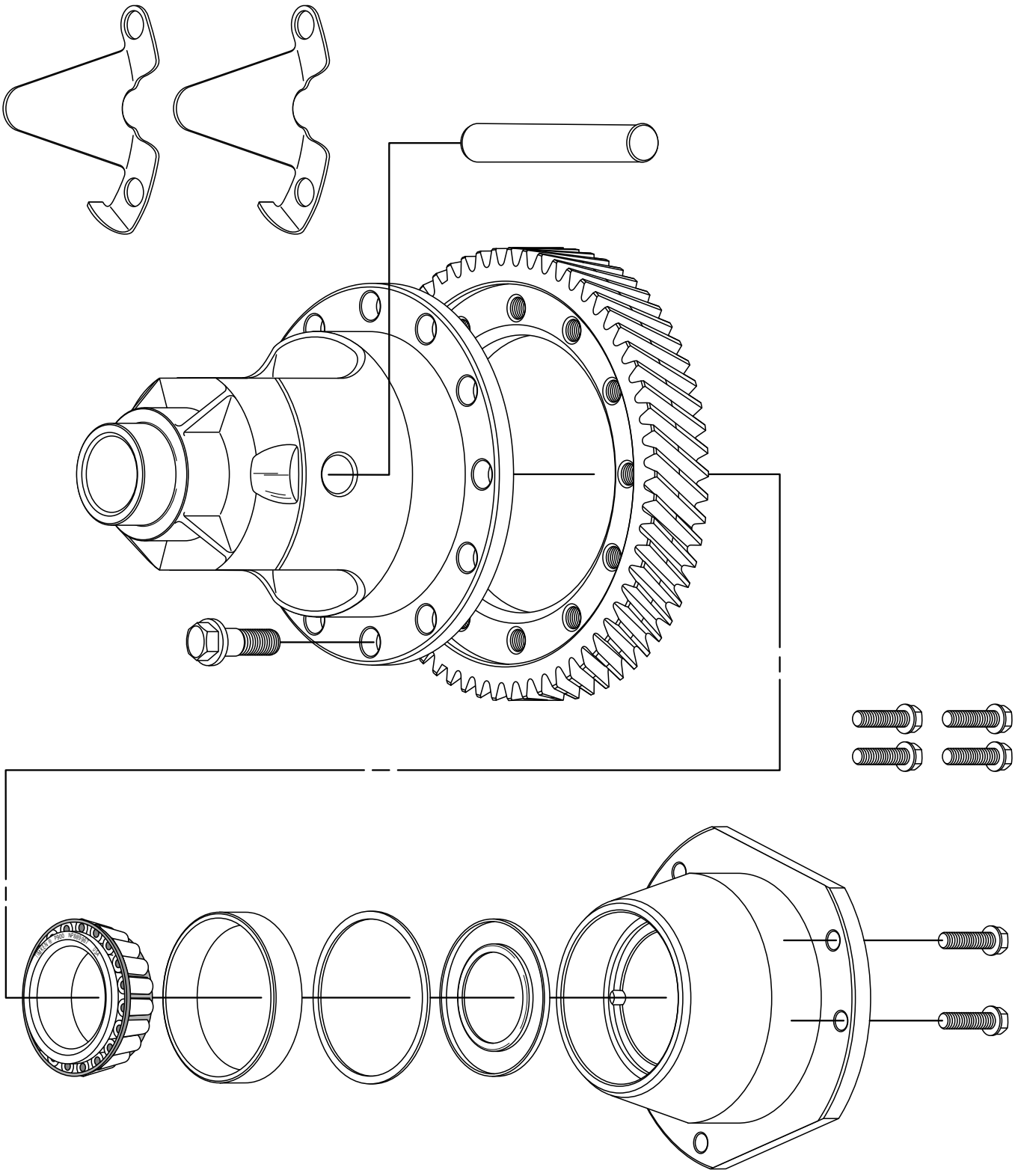


Figure 83

NEW DESIGN CROSS SHAFT RETAINER INSTALLATION

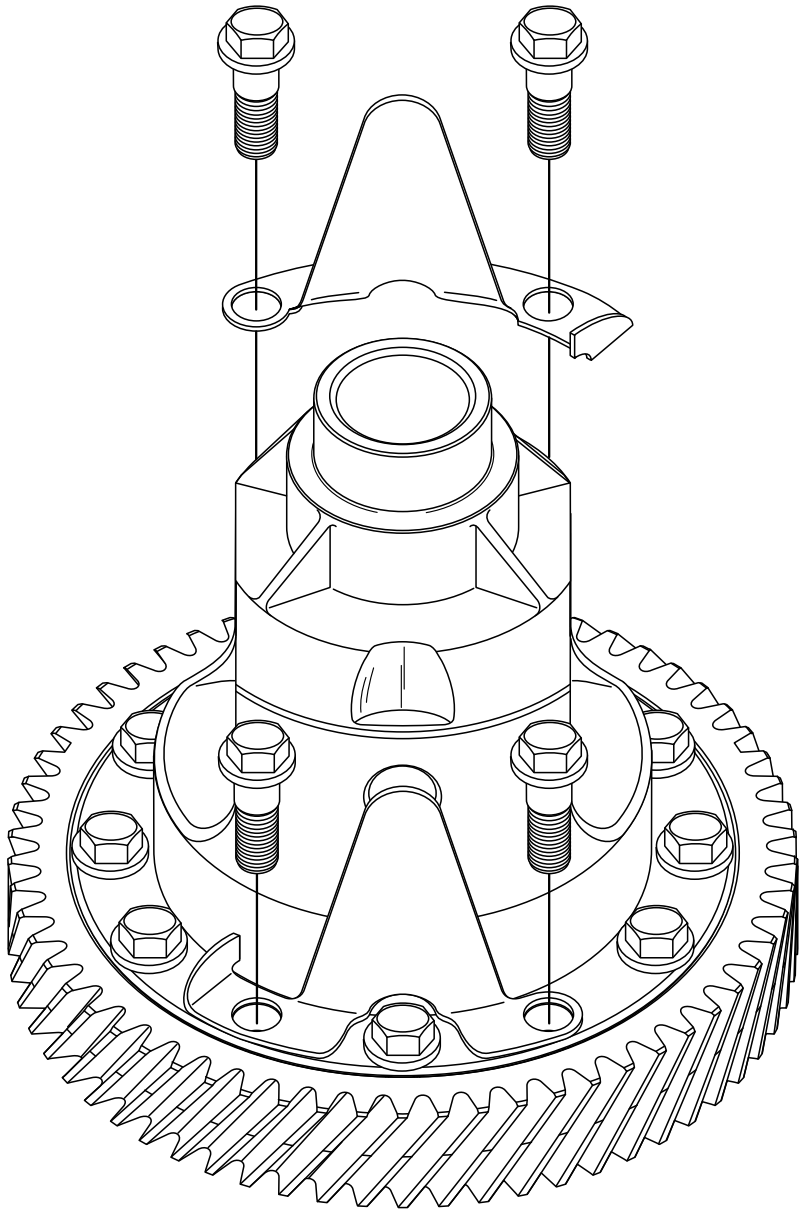


Figure 84

CHRYSLER A604
GEAR RATIO IDENTIFICATION FOR MODEL YEARS 1989 THRU 2002

Proper identification of the transaxle gear ratio is mandatory on the 41TE (A604), as gear ratios are different from model to model and will not interchange. The transaxle is identified by the "Last 3 Digits" of the OEM part number and there are currently four different procedures that may be used to accomplish this.

Procedure No. One:

There is a bar code label located externally on the case directly above the PRNODL and neutral safety switches, as shown in Figure 85. The first three numbers on the bar code label are the last three numbers of the OEM part number, as shown in Figure 85. After you have these numbers, refer to Figures 86 through 94 for the identification of the unit that you have.

Procedure No. Two:

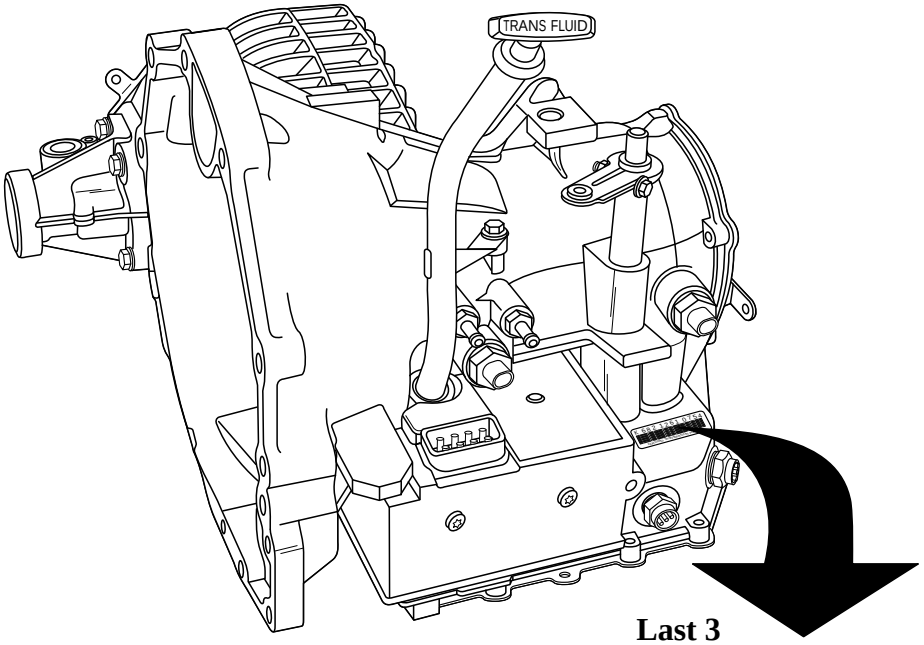
There is also a white label attached to the transfer gear cover, as shown in Figure 85. The three numbers on this label are also the last three numbers of the OEM part number, as shown in Figure 85. After you have these numbers, refer to Figures 86 through 94 for the identification of the unit that you have.

Procedure No. Three:

The most permanent form of external identification is an etching in the case, located near the transfer gear cover, as shown in Figure 85. This etching in the case will include the complete OEM part number, as shown in Figure 85. After you have the complate part number, refer to Figures 86 through 94 for the identification of the unit that you have.

Procedure No. Four:

Disassemble the unit and start counting the teeth for identification.

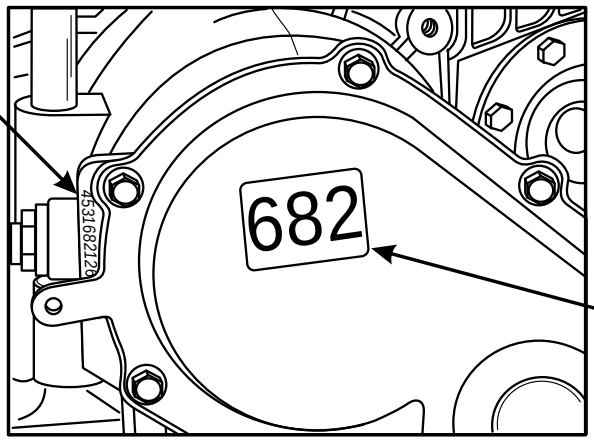


Last 3 Of Part No.	Julian Date	Sequence Number
K 682	1261	0754

KOKOMO TRANSMISSION PLANT

	PART NUMBER	JULIAN DATE	SEQ. NO.
PK#	4531682	1261	0754

(ETCHED ON CASE)



NUMBER ON TAG ON GEAR COVER IS LAST 3 OF PART NUMBER)

Example given reveals a 1990 3.3L transaxle with a 2.36 overall ratio that has 27.5 degree transfer and output gears (54T/59T) and a 16T/60T ring and pinion gear set. (Refer to Figures 2 through 10)

Figure 85

"1989" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4446659	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4471895	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4530030	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531632	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531664	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531687	1989	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4713052	1989	3.0L	2.38	46T/50T (32°)	16T/60T			
4728182	1989	3.0L	2.38	46T/50T (32°)	16T/60T			
4761821	1989	3.0L	2.38	46T/50T (32°)	16T/60T			

"1990" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4446530	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531551	1990	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531552	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531630	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531681	1990	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531682	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531495	1990	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531496	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531671	1990	3.0L	2.36	54T/59T (27.5°)	16T/60T			
4531672	1990	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4713053	1990	3.0L	2.38	46T/50T (32°)	16T/60T			
4713054	1990	3.3L	2.38	46T/50T (32°)	16T/60T			
4728180	1990	3.0L	2.38	46T/50T (32°)	16T/60T			
4728181	1990	3.3L	2.38	46T/50T (32°)	16T/60T			
4728181	1990	3.3L	2.49	49T/47T (32°)	17T/59T			
4741743	1990	3.0L	2.38	46T/50T (32°)	16T/60T			
4741744	1990	3.3L	2.38	46T/50T (32°)	16T/60T			

Figure 86

"1991" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4531689	1991	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4567848	1991	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4567849	1991	3.3L	2.52	58T/55T (27.5°)	17T/59T			
4567850	1991	3.3L 4X4	2.36	54T/59T (27.5°)	16T/60T			
4567857	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4531487	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4531488	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4531688	1991	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4531690	1991	3.3L	2.52	58T/55T (27.5°)	17T/59T			
4531691	1991	3.3L 4X4	2.36	54T/59T (27.5°)	16T/60T			
4531969	1991	3.3L 4X4	2.36	54T/59T (27.5°)	16T/60T			
4531972	1991	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4531973	1991	3.3L	2.36	54T/59T (27.5°)	16T/60T			
4543989	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4543990	1991	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4543992	1991	3.3L	2.52	58T/55T (27.5°)	17T/59T			
4567847	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4638748	1991	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4638749	1991	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4638750	1991	3.3L	2.52	58T/55T (27.5°)	17T/59T			
4659076	91-94	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4723553	1991	3.8L	2.20	46T/50T (32°)	17T/59T			
4723554	1991	3.0L	2.49	49T/47T (32°)	17T/59T			
4728923	1991	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4741746	91-92	3.8L	2.20	46T/50T (32°)	17T/59T			
4741747	91-92	3.0L	2.49	49T/47T (32°)	17T/59T			

Figure 87

"1992" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4659076	91-94	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4659359	1992	3.8L	2.19	54T/59T (27.5°)	17T/59T			
4659360	1992	3.0L	2.52	58T/55T (27.5°)	17T/59T			
4659361	1992	3.3L	2.52	58T/55T (27.5°)	17T/59T			
4659362	92-93	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4723555	1992	3.3L	2.49	49T/47T (32°)	17T/59T			
4741746	91-92	3.8L	2.20	46T/50T (32°)	17T/59T			
4741747	91-92	3.0L	2.49	49T/47T (32°)	17T/59T			
4741748	1992	3.3L	2.49	49T/47T (32°)	17T/59T			
4741749	1992	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			

"1993" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4567645	1993	3.8L	2.20	46T/50T (32°)	17T/59T			
4567646	1993	3.0L	2.49	49T/47T (32°)	17T/59T			
4567647	1993	3.3L	2.49	49T/47T (32°)	17T/59T			
4567989	1993	3.3L 4X4	2.49	49T/47T (32°)	17T/59T			
4659076	91-94	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4659362	92-93	3.3L 4X4	2.38	46T/50T (32°)	16T/60T			
4659764	93-95	3.8L	2.38	46T/50T (32°)	16T/60T			
4713486	1993	3.8L	2.20	46T/50T (32°)	17T/59T			
4713487	1993	3.0L	2.49	49T/47T (32°)	17T/59T			
4713488	1993	3.3L	2.49	49T/47T (32°)	17T/59T			

Figure 88

"1994" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4567500	1994	2.0L	2.69	49T/47T (32°)	16T/60T			
4567692	1994	2.5L	2.69	49T/47T (32°)	16T/60T			
4567981	1994	2.0L	2.81	50T/46T (32°)	16T/60T			
4659071	1994	3.8L	2.20	46T/50T (32°)	17T/59T			
4659072	1994	3.0L	2.49	49T/47T (32°)	17T/59T			
4659073	1994	3.3L	2.49	49T/47T (32°)	17T/59T			
4659074	1994	3.3L 4X4	2.49	49T/47T (32°)	17T/59T			
4659075	1994	3.8L	2.38	46T/50T (32°)	16T/60T			
4659076	91-94	3.8L 4X4	2.38	46T/50T (32°)	16T/60T			
4659764	93-95	3.8L	2.38	46T/50T (32°)	16T/60T			
4740826	1994	3.8L	2.20	46T/50T (32°)	17T/59T			
4740827	1994	3.0L	2.49	49T/47T (32°)	17T/59T			
4740828	1994	3.3L	2.49	49T/47T (32°)	17T/59T			

"1995" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4659764	93-95	3.8L	2.38	46T/50T (32°)	16T/60T			
4659777	1995	3.3L 4X4	2.49	49T/47T (32°)	17T/59T			
4659902	1995	2.0L	2.81	50T/46T (32°)	16T/60T			
4659903	1995	2.0L	2.69	49T/47T (32°)	16T/60T			
4659904	1995	3.0L	2.49	49T/47T (32°)	17T/59T			
4659905	1995	3.3L	2.49	49T/47T (32°)	17T/59T			
4659907	1995	3.8L 4X4	2.38	46T/50T (32°)	16T/60T			
4659908	1995	2.5L	2.69	49T/47T (32°)	16T/60T			
4659902	1995	2.0L	2.81	50T/46T (32°)	16T/60T			
4659906	1995	3.8L	2.38	46T/50T (32°)	16T/60T			
4761822	1995	2.0L	2.69	49T/47T (32°)	16T/60T			
4761823	1995	2.5L	2.69	49T/47T (32°)	16T/60T			
4761824	1995	2.0L	2.81	50T/46T (32°)	16T/60T			
4778903	1995	2.0L	2.69	49T/47T (32°)	16T/60T			
4778904	1995	3.0L	2.49	49T/47T (32°)	17T/59T			
4778908	1995	2.5L	2.69	49T/47T (32°)	16T/60T			

Figure 89

"1996" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4799712	1996	3.3L	2.49	49T/47T (32°)	17T/59T			
4799713	1996	3.8L	2.38	46T/50T (32°)	16T/60T			
4799714	1996	3.8L (4X4)	2.38	46T/50T (32°)	16T/60T			
4799715	1996	2.4L	2.69	49T/47T (32°)	16T/60T			
4799716	1996	2.0L	2.69	49T/47T (32°)	16T/60T			
4799717	1996	2.0L	2.81	50T/46T (32°)	16T/60T			
4799718	1996	2.5L	2.69	49T/47T (32°)	16T/60T			
4799719	1996	2.4L Turbo	2.49	49T/47T (32°)	17T/59T			

Figure 90

"1997" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4800630	1997	2.4L	2.69	49T/47T (32°)	16T/60T			
4800631	1997	3.3L	2.49	49T/47T (32°)	17T/59T			
4800632	1997	3.8L	2.38	46T/50T (32°)	16T/60T			
4800633	1997	3.8L (4X4)	2.38	46T/50T (32°)	16T/60T			
4800634	1997	2.0L/2.4L	2.69	49T/47T (32°)	16T/60T			
4800635	1997	2.5L	2.69	49T/47T (32°)	16T/60T			
4800636	1997	2.0L	2.81	50T/46T (32°)	16T/60T			
4800638	1997	2.4L Turbo	2.49	49T/47T (32°)	17T/59T			
4800857	1997	3.0L	2.49	49T/47T (32°)	17T/59T			
"1997" 41TE (A604) "SERVICE" PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4567624	1997	3.8L (4X4)	2.38	46T/50T (32°)	16T/60T			
4798923	1997	3.0L	2.49	49T/47T (32°)	17T/59T			
4798924	1997	3.3L	2.49	49T/47T (32°)	17T/59T			
4798928	1997	3.8L (4X4)	2.49	49T/47T (32°)	17T/59T			
4883553	1997	2.0L	2.69	49T/47T (32°)	16T/60T			
4883554	1997	2.5L	2.69	49T/47T (32°)	16T/60T			
4883555	1997	3.3L	2.49	49T/47T (32°)	17T/59T			
4883557	1997	3.8L	2.38	46T/50T (32°)	16T/60T			
4883558	1997	3.3L	2.49	49T/47T (32°)	17T/59T			
4883782	1997	3.0L	2.49	49T/47T (32°)	17T/59T			
4883783	1997	3.3L	2.49	49T/47T (32°)	17T/59T			

Figure 91

"1998" 41TE (A604) PRODUCTION PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4800850	1998	2.4L	2.69	49T/47T (32°)	16T/60T			
4800851	1998	3.3L	2.49	49T/47T (32°)	17T/59T			
4800852	1998	3.8L	2.38	46T/50T (32°)	16T/60T			
4800853	1998	3.8L (4X4)	2.38	46T/50T (32°)	16T/60T			
4800854	1998	2.0L/2.4L	2.69	49T/47T (32°)	16T/60T			
4800855	1998	2.5L	2.69	49T/47T (32°)	16T/60T			
4800856	1998	2.0L	2.81	50T/46T (32°)	16T/60T			
4800858	1998	2.4L Turbo	2.49	49T/47T (32°)	17T/59T			
4800859	1998	3.0L	2.49	49T/47T (32°)	17T/59T			
"1998" 41TE (A604) "SERVICE" PART NUMBERS								
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF			
4567624	1998	3.8L (4X4)	2.38	46T/50T (32°)	16T/60T			
4798923	1998	3.0L	2.49	49T/47T (32°)	17T/59T			
4798924	1998	3.3L	2.49	49T/47T (32°)	17T/59T			
4798928	1998	3.8L (4X4)	2.49	49T/47T (32°)	17T/59T			
4883553	1998	2.0L	2.69	49T/47T (32°)	16T/60T			
4883554	1998	2.5L	2.69	49T/47T (32°)	16T/60T			
4883555	1998	3.3L	2.49	49T/47T (32°)	17T/59T			
4883557	1998	3.8L	2.38	46T/50T (32°)	16T/60T			
4883558	1998	3.3L	2.49	49T/47T (32°)	17T/59T			
4883782	1998	3.0L	2.49	49T/47T (32°)	17T/59T			
4883783	1998	3.3L	2.49	49T/47T (32°)	17T/59T			
4883784	1998	3.8L	2.38	46T/50T (32°)	16T/60T			

Figure 92

"1999" 41TE (A604) PRODUCTION PART NUMBERS						
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF	"SERVICE" PART NO.
4800305AA	1999	3.0L	2.49	49T/47T (32°)	17T/59T	5014305AA
4800444AA	1999	2.4L	2.69	49T/47T (32°)	16T/60T	5011444AA
4800445AA	1999	3.3L	2.49	49T/47T (32°)	17T/59T	5011445AA
4800446AA	1999	3.8L	2.37	46T/50T (32°)	15T/56T	5011446AA
4800447AA	1999	3.8L (4X4)	2.37	46T/50T (32°)	15T/56T	5011447AA
4800448AA	1999	2.0L/2.4L	2.69	49T/47T (32°)	16T/60T	5011448AA
4800449AA	1999	2.5L	2.69	49T/47T (32°)	16T/60T	5011449AA
4800450AA	1999	2.0L	2.81	50T/46T (32°)	16T/60T	5011450AA
4800451AA	1999	2.4L Turbo	2.49	49T/47T (32°)	17T/59T	5011451AA

"2000" 41TE (A604) PRODUCTION PART NUMBERS						
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF	"SERVICE" PART NO.
4800305AA	2000	3.0L	2.49	49T/47T (32°)	17T/59T	5014305AA
4800444AA	2000	2.4L	2.69	49T/47T (32°)	16T/60T	5011444AA
4800445AA	2000	3.3L	2.49	49T/47T (32°)	17T/59T	5011445AA
4800446AA	2000	3.8L	2.37	46T/50T (32°)	15T/56T	5011446AA
4800447AA	2000	3.8L (4X4)	2.37	46T/50T (32°)	15T/56T	5011447AA
4800448AA	2000	2.0L/2.4L	2.69	49T/47T (32°)	16T/60T	5011448AA
4800449AA	2000	2.5L	2.69	49T/47T (32°)	16T/60T	5011449AA
4800450AA	2000	2.0L	2.81	50T/46T (32°)	16T/60T	5011450AA
4800451AA	2000	2.4L Turbo	2.49	49T/47T (32°)	17T/59T	5011451AA

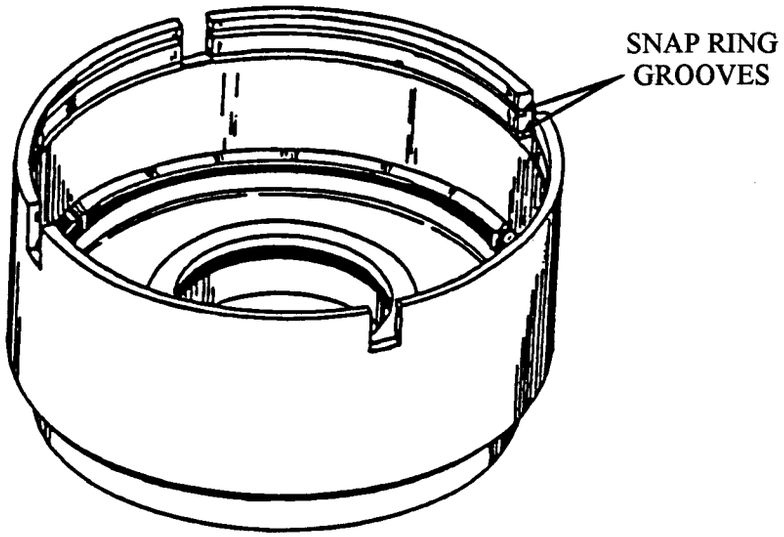
Figure 93

"2001" 41TE (A604) PRODUCTION PART NUMBERS						
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF	"SERVICE" PART NO.
4799922AA	2001	2.7L	2.69	49T/47T (32°)	16T/60T	4886922AA
4800269AA	2001	2.4L	2.69	49T/47T (32°)	16T/60T	5067269AA
4800281AA	2001	2.0L	2.81	50T/46T (32°)	16T/60T	5067281AA
4800707AA	2001	3.3L (4X4)	2.49	49T/47T (32°)	17T/59T	5012707AA
4800918AA	2001	3.8L (4X4)	2.37	46T/50T (32°)	15T/56T	5003918AA
4800930AA	2001	2.4L	2.69	49T/47T (32°)	16T/60T	5010930AA
4800931AA	2001	3.3L	2.49	49T/47T (32°)	17T/59T	5010931AA
4800932AA	2001	3.8L	2.37	46T/50T (32°)	15T/56T	5010932AA
4800956AA	2001	2.4L Turbo	2.49	49T/47T (32°)	17T/59T	5014956AA

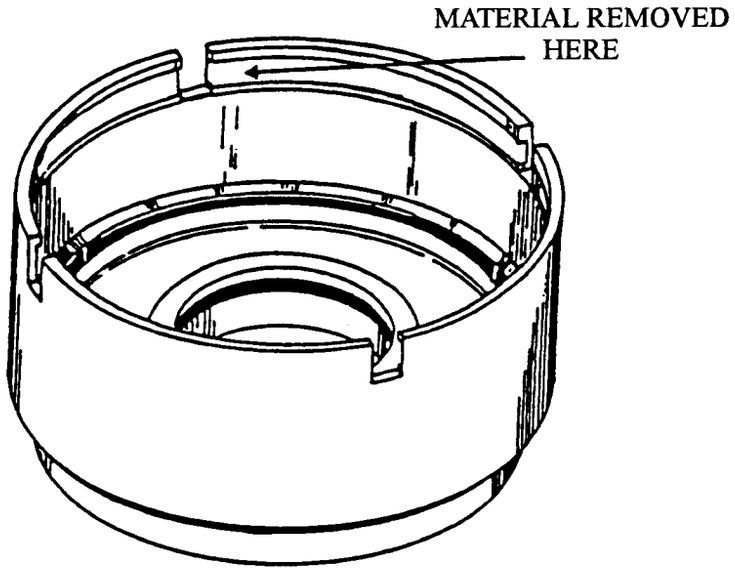
"2002" 41TE (A604) PRODUCTION PART NUMBERS						
PART NO.	YEAR	ENGINE	RATIO	GEARS TR/OP	DIFF	"SERVICE" PART NO.
4799922AB	2002	2.7L	2.69	49T/47T (32°)	16T/60T	NOT AVAILABLE
4800269AB	2002	2.4L	2.69	49T/47T (32°)	16T/60T	NOT AVAILABLE
4800281AB	2002	2.0L	2.81	50T/46T (32°)	16T/60T	NOT AVAILABLE
4800707AB	2002	3.3L (4X4)	2.49	49T/47T (32°)	17T/59T	NOT AVAILABLE
4800918AB	2002	3.8L (4X4)	2.37	46T/50T (32°)	15T/56T	NOT AVAILABLE
4800930AB	2002	2.4L	2.69	49T/47T (32°)	16T/60T	NOT AVAILABLE
4800931AB	2002	3.3L	2.49	49T/47T (32°)	17T/59T	NOT AVAILABLE
4800932AB	2002	3.8L	2.37	46T/50T (32°)	15T/56T	NOT AVAILABLE
4800956AB	2002	2.4L Turbo	2.49	49T/47T (32°)	17T/59T	NOT AVAILABLE

Figure 94

OVERDRIVE/REVERSE PISTON



PREVIOUS 4 LUG OVERDRIVE/REVERSE PISTON



NEW 4 LUG OVERDRIVE/REVERSE PISTON

Figure 71

BOTH SNAP RINGS (RING NO. 3 & RING NO. 4) ARE USED IN THIS HOUSING. REGARDLESS OF DESIGN LEVEL, IN THE LOCATIONS THAT ARE SHOWN IN FIGURE 1.

CHRYSLER A604
DIAGNOSTIC FAULT CODE CHART

FAULT	CODE	LIMP-IN
INTERNAL A604 CONTROLLER	11	YES
BATTERY WAS DISCONNECTED	12	NO
INTERNAL A604 CONTROLLER	13	YES
EATX RELAY OUTPUT ALWAYS ON	14	YES
EATX RELAY OUTPUT ALWAYS OFF	15	YES
INTERNAL A604 CONTROLLER	16	YES
INTERNAL A604 CONTROLLER	17	YES
ENGINE SPEED SIGNAL CIRCUIT	18	YES
BUS COMMUNICATION WITH ENGINE CONTROLLER	19	NO
SWITCHED BATTERY	20	YES
OD PRESSURE SWITCH CIRCUIT	21	YES
2/4 PRESSURE SWITCH CIRCUIT	22	YES
2/4 AND OD PRESSURE SWITCH CIRCUITS	23	YES
L/R PRESSURE SWITCH CIRCUIT	24	YES
L/R AND OD PRESSURE SWITCH CIRCUITS	25	YES
L/R AND 2/4 PRESSURE SWITCH CIRCUITS	26	YES
ALL PRESSURE SWITCH CIRCUITS	27	YES
CHECK PRNODL SIGNAL	28	NO
THROTTLE POSITION SIGNAL	29	NO
OD HYDRAULIC PRESSURE SWITCH	31	YES
2/4 HYDRAULIC PRESSURE SWITCH	32	YES
OD AND 2/4 HYDRAULIC PRESSURE SWITCH	33	YES
FAULT IMMEDIATELY AFTER SHIFT	36	YES
SOLENOID SWITCH VALVE (STUCK IN LU POSITION)	37	NO
LOCKUP CONTROL	38	NO
GEAR RATIO ERROR	39	YES
L/R SOLENOID CIRCUIT ERROR	41	YES
2/4 SOLENOID CIRCUIT ERROR	42	YES
OD SOLENOID CIRCUIT ERROR	43	YES
UD SOLENOID CIRCUIT ERROR	44	YES
INTERNAL A604 CONTROLLER	45	NO
3-4 SHIFT ABORT	46	NO
SOLENOID SWITVH VALVE (STUCK IN THE L/R POSITION)	47*	YES
GEAR RATIO ERROR IN REVERSE	50*	YES
GEAR RATIO ERROR IN 1ST	51*	YES
GEAR RATIO ERROR IN 2ND	52*	YES
GEAR RATIO ERROR IN 3RD	53*	YES
GEAR RATIO ERROR IN 4TH	54*	YES
TURBINE SENSOR ERROR	56*	YES
OUTPUT SENSOR ERROR	57*	YES
SENSORS GROUND ERROR	58*	YES
INADEQUATE L/R ELEMENT VOLUME	60*	NO
INADEQUATE 2/4 ELEMENT VOLUME	61*	NO
INADEQUATE OD ELEMENT VOLUME	62*	NO
INADEQUATE UD ELEMENT VOLUME	63*	NO

* DENOTES NEW FOR 1991