

Figure 122

Component Rebuild
Continued on Page 81

A VERY LARGE "THANK YOU" TO
Rich & Linda Varjan
Owners Of
EUROPEAN EXCHANGE, INC

Specializing in Transmissions for Fine Imported Automobiles

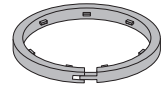
240 Lodi Street - Hackensack, NJ 07601
(201) 489-7770

FOR PROVIDING US WITH THE TRANSMISSION THAT MADE THIS MANUAL POSSIBLE

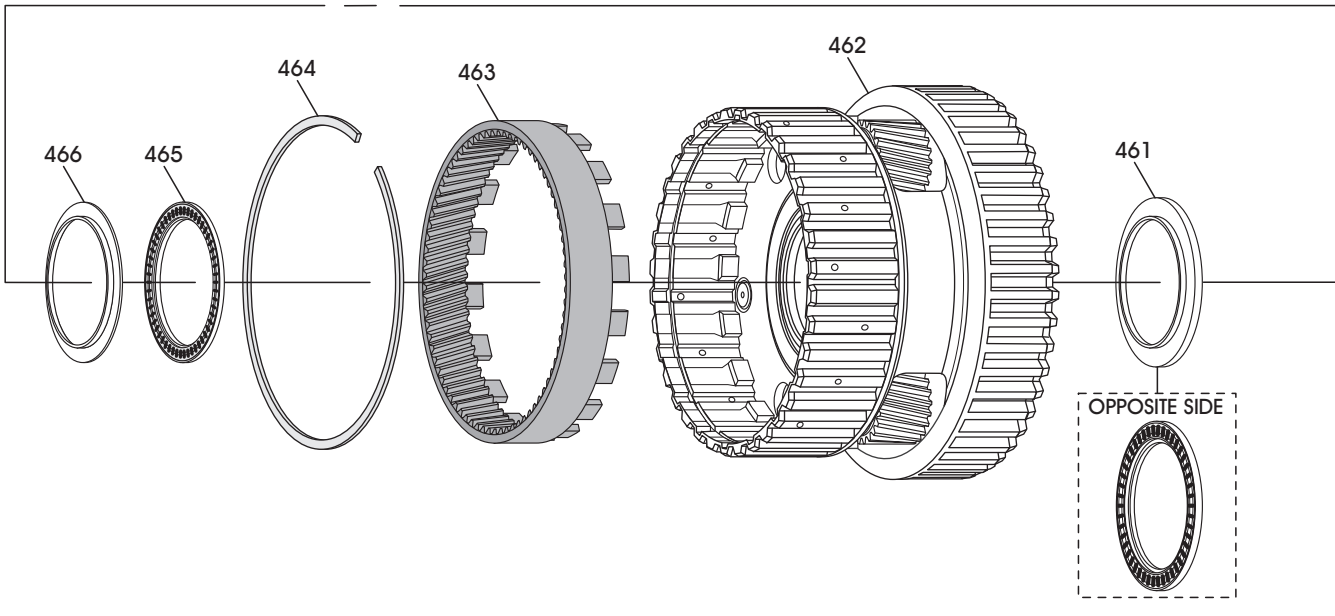
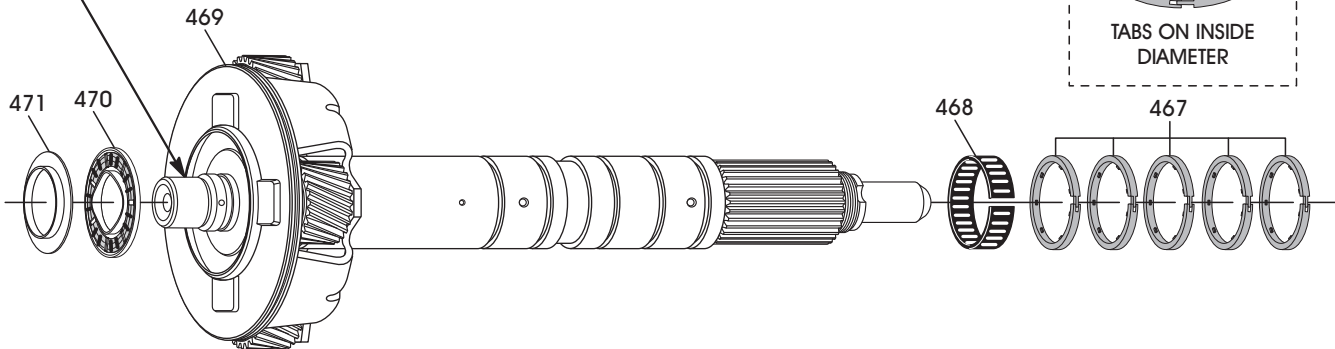
CENTER AND REAR PLANETARY GEARSET, EXPLODED VIEW

OUTPUT SHAFT SNOUT DIAMETER:
 Bushing in K-2 Drum (Early) = 22.97mm (.904").
 Bearing in K-2 Drum (Late) = 21.99mm (.866").

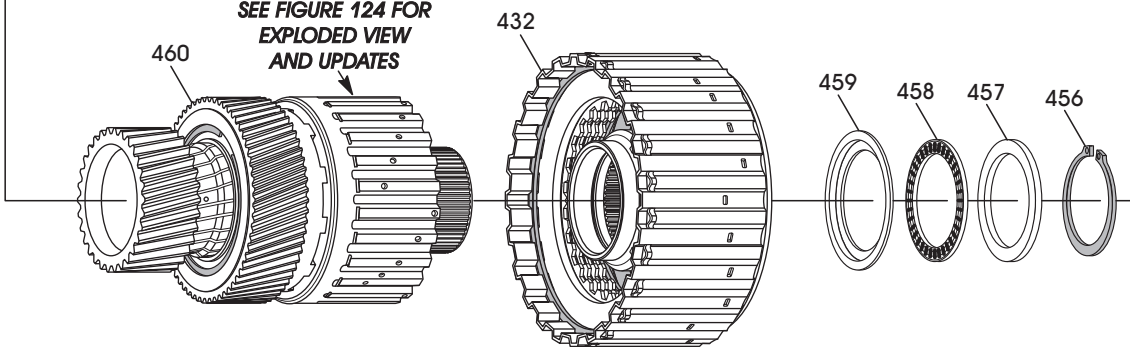
UPDATED SEAL RINGS



TABS ON INSIDE DIAMETER



SEE FIGURE 124 FOR EXPLODED VIEW AND UPDATES



- 432 K-3 CLUTCH HOUSING ASSEMBLY.
- 456 F-2 SPRAG AND SUN GEAR SHAFT RETAINING SNAP RING.
- 457 NUMBER 13 THRUST BEARING RACE.
- 458 NUMBER 12 THRUST BEARING.
- 459 NUMBER 11 THRUST BEARING RACE.
- 460 F-2 SPRAG AND SUN GEAR SHAFT ASSEMBLY.
- 461 NUMBER 8 THRUST BEARING.
- 462 REAR PLANETARY CARRIER AND CLUTCH HUB ASSEMBLY.
- 463 CENTER PLANETARY RING GEAR.

- 464 CENTER PLANETARY RING GEAR RETAINING SNAP RING.
- 465 NUMBER 7 THRUST BEARING.
- 466 NUMBER 6 THRUST BEARING RACE.
- 467 OUTPUT SHAFT SEALING RINGS (5 REQUIRED).
- 468 OUTPUT SHAFT/SUN GEAR SHAFT CAGED NEEDLE BEARING.
- 469 CENTER PLANETARY CARRIER AND OUTPUT SHAFT.
- 470 NUMBER 5 THRUST BEARING.
- 471 NUMBER 4 THRUST BEARING RACE.

Copyright © 2009 ATSG

Figure 123

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset

1. Removing the snap ring (456) from the output shaft, as shown in Figure 123, will allow you to disassemble the geartrain using Figure 123 as a guide.
2. The rear sun gear changed with the bushing being replaced with a ball bearing, as shown in Figure 124.
3. This allowed the elimination of the number 9 thrust bearing and number 10 thrust bearing race, as shown in Figure 124.
4. We will cover the assembly process for both the early and late versions.

Continued on Page 83

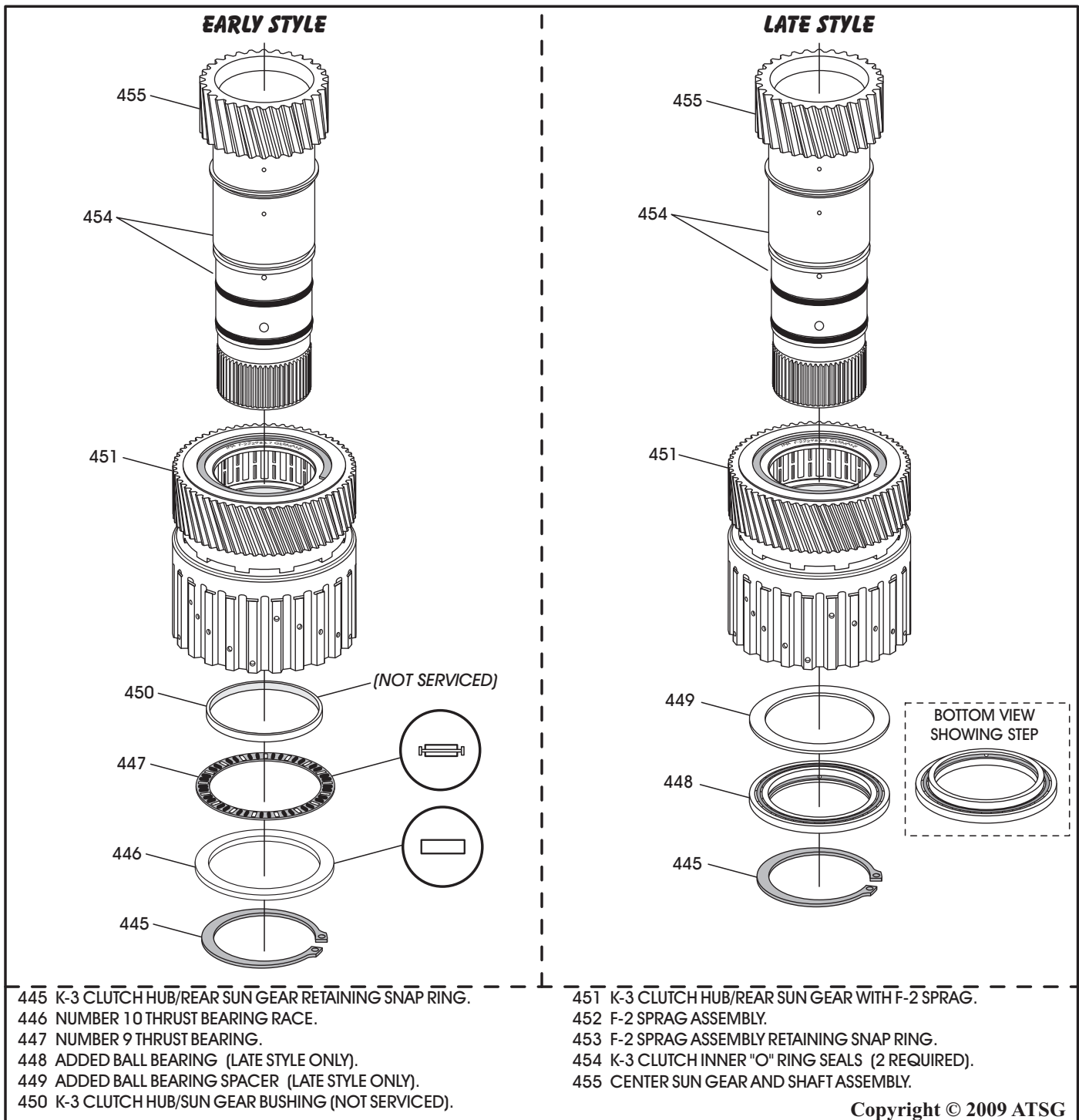


Figure 124

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd) F-2 Sprag & Sun Gear Shaft (Cont'd)

5. The F-2 sprag was upgraded from 14 elements to 20 elements and the Mercedes part number is 220 270 01 31. The F-2 sprag uses 1 brass end bearing that is integral to the cage and uses only one snap ring, as shown in Figure 125. The 14 element sprag is known to slip, which create gear ratio error codes.

Note: Do Not use 14 element sprag.

6. Install new 20 element F-2 sprag into the rear sun gear, as shown in Figure 125.

Note: The elements fall out of the cage very easily. This does not mean that the sprag is defective. Insert the elements back into the cage, as shown in Figure 126.

7. If you have the late ball bearing style, install spacer and ball bearing with the step facing up, as shown in Figure 127.

Note: The ball bearing is pressed into the rear sun gear.

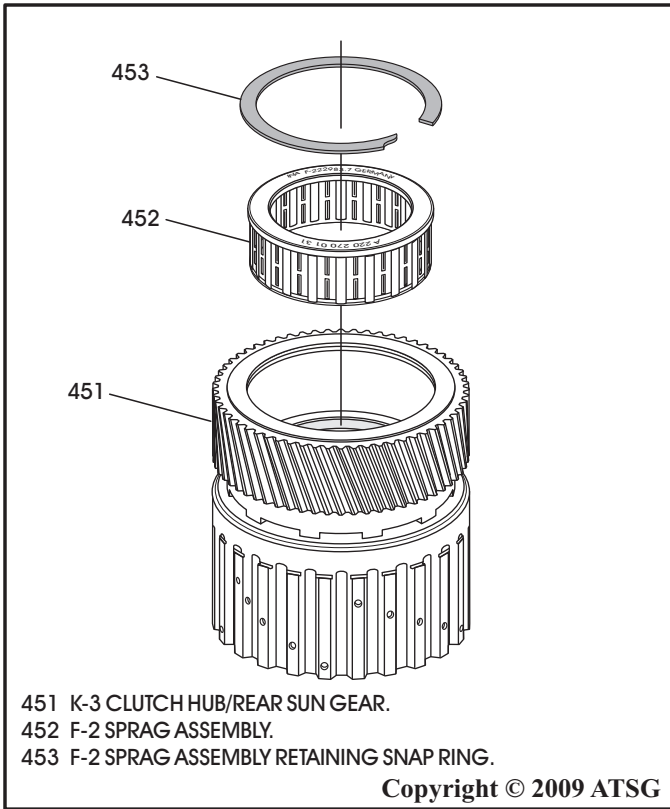


Figure 125

Continued on Page 84

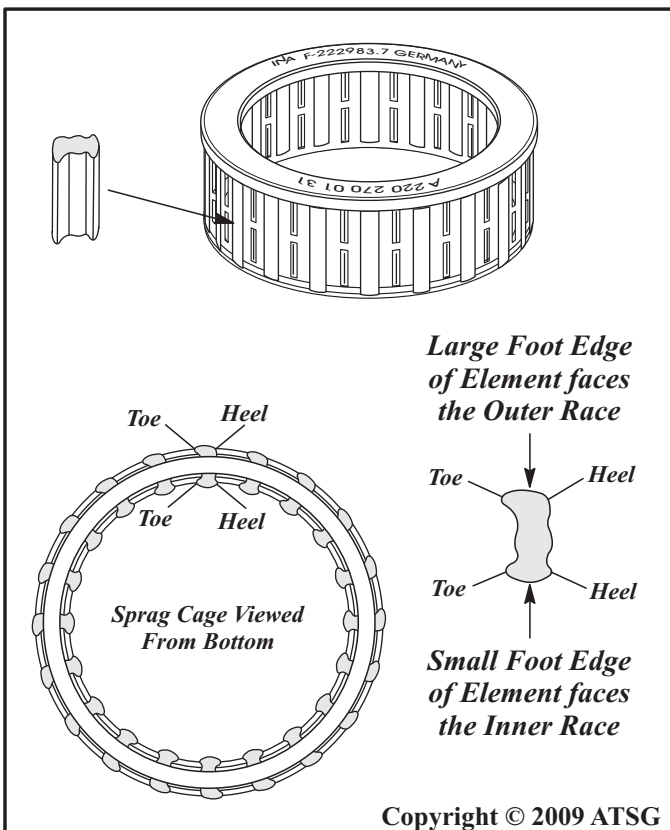


Figure 126

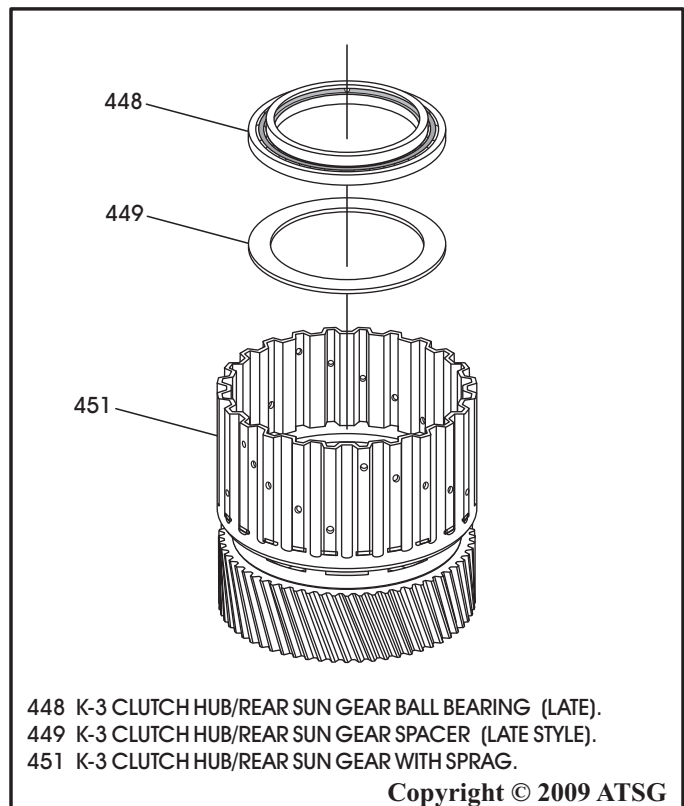


Figure 127

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd) F-2 Sprag & Sun Gear Shaft (Cont'd)

8. Install two new K-3 clutch "O" ring seals into the grooves in the center sun gear and shaft, as shown in Figure 128, and lube with a small amount of Trans-Jel®.
9. Install the K-3 clutch hub/rear sun gear onto sun gear shaft using counter-clockwise motion, as shown in Figure 129.
10. Check for proper sprag rotation, as shown in Figure 130.
11. If you have the late ball bearing style, simply install the snap ring, as shown in Figure 129.

Continued on Page 85

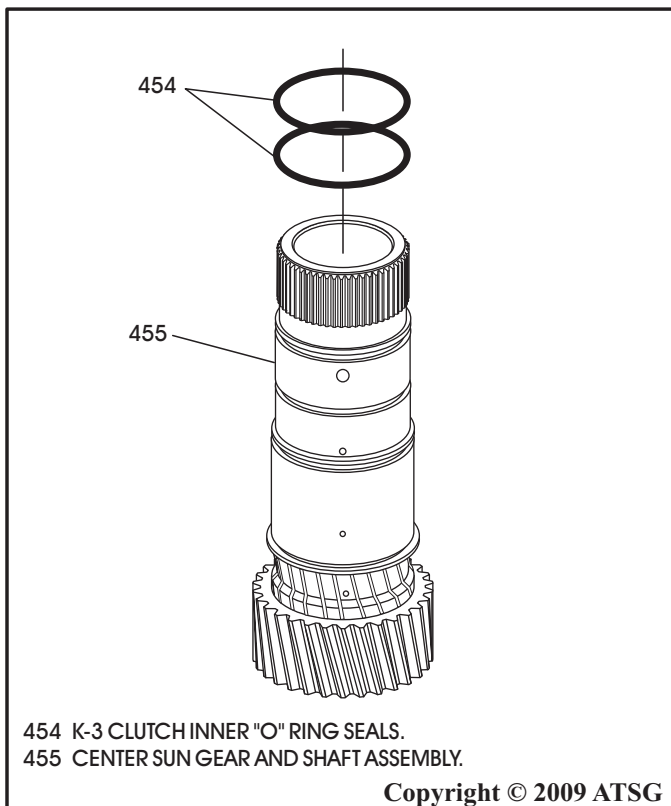


Figure 128

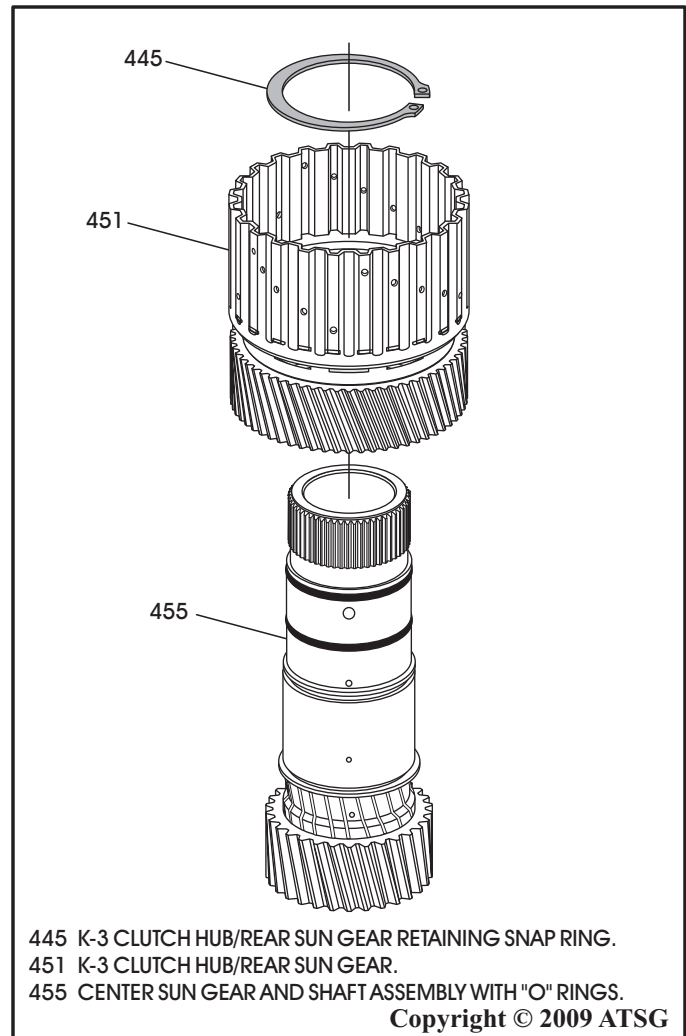


Figure 129

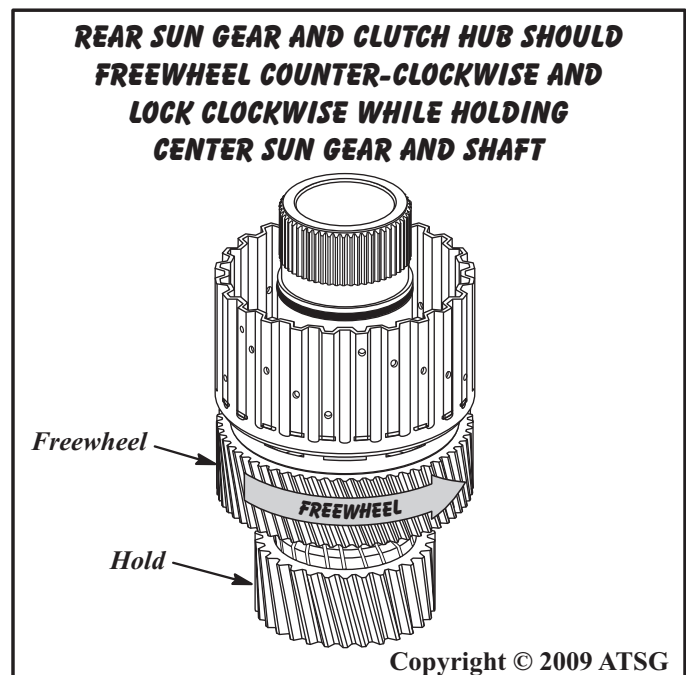


Figure 130

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd) F-2 Sprag & Sun Gear Shaft (Cont'd)

12. If you have the early bushing style, install the No. 9 thrust bearing, as shown in Figure 131.
13. Install the No. 10 thrust bearing race, as shown in Figure 131.
14. Install K-3 clutch hub/ rear sun gear retaining snap ring, as shown in Figure 131.
15. Set the F-2 sprag and sun gear shaft assembly aside for gearset assembly process.

Continued on Page 86

A VERY LARGE "THANK YOU" TO

Rich & Linda Varjan

Owners Of

**EUROPEAN
EXCHANGE, INC**

Specializing in Transmissions for Fine Imported Automobiles

240 Lodi Street - Hackensack, NJ 07601

(201) 489-7770

**FOR PROVIDING US WITH THE
TRANSMISSION THAT MADE THIS
MANUAL POSSIBLE**

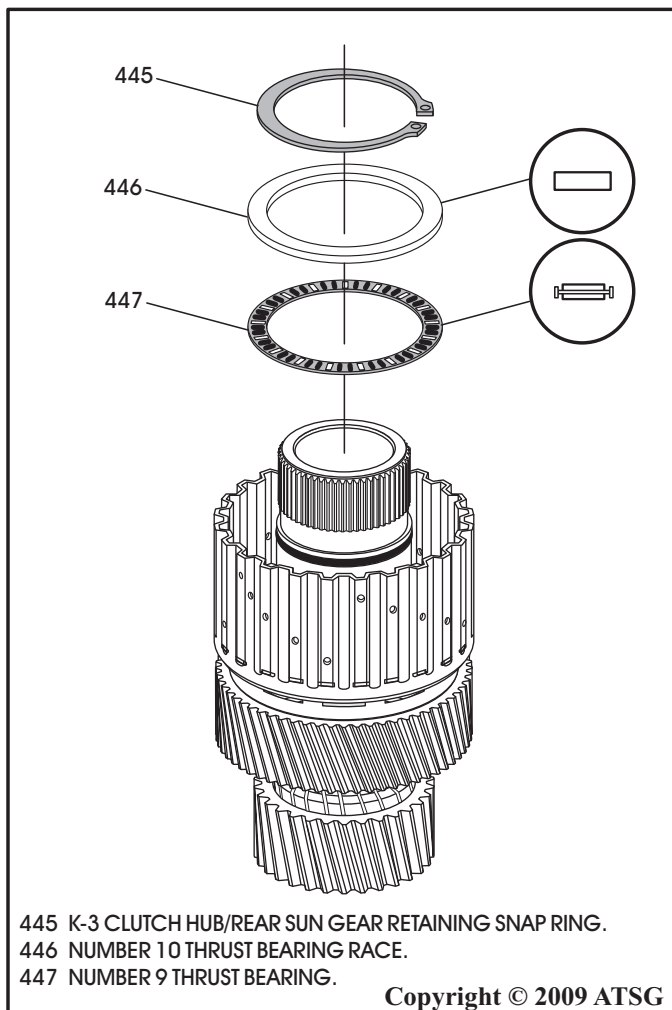


Figure 131

Copyright © 2009 ATSG

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

K-3 Clutch Housing Assembly

16. The K-3 clutch housing is also a component of the center and rear planetary gearset, as shown in Figure 123.
17. Disassemble the K-3 clutch housing assembly, using Figure 132 as a guide.
18. Clean all K-3 clutch housing parts thoroughly and dry with compressed air.
19. Inspect all K-3 clutch housing parts thoroughly for any wear and/or damage.

Continued on Page 87

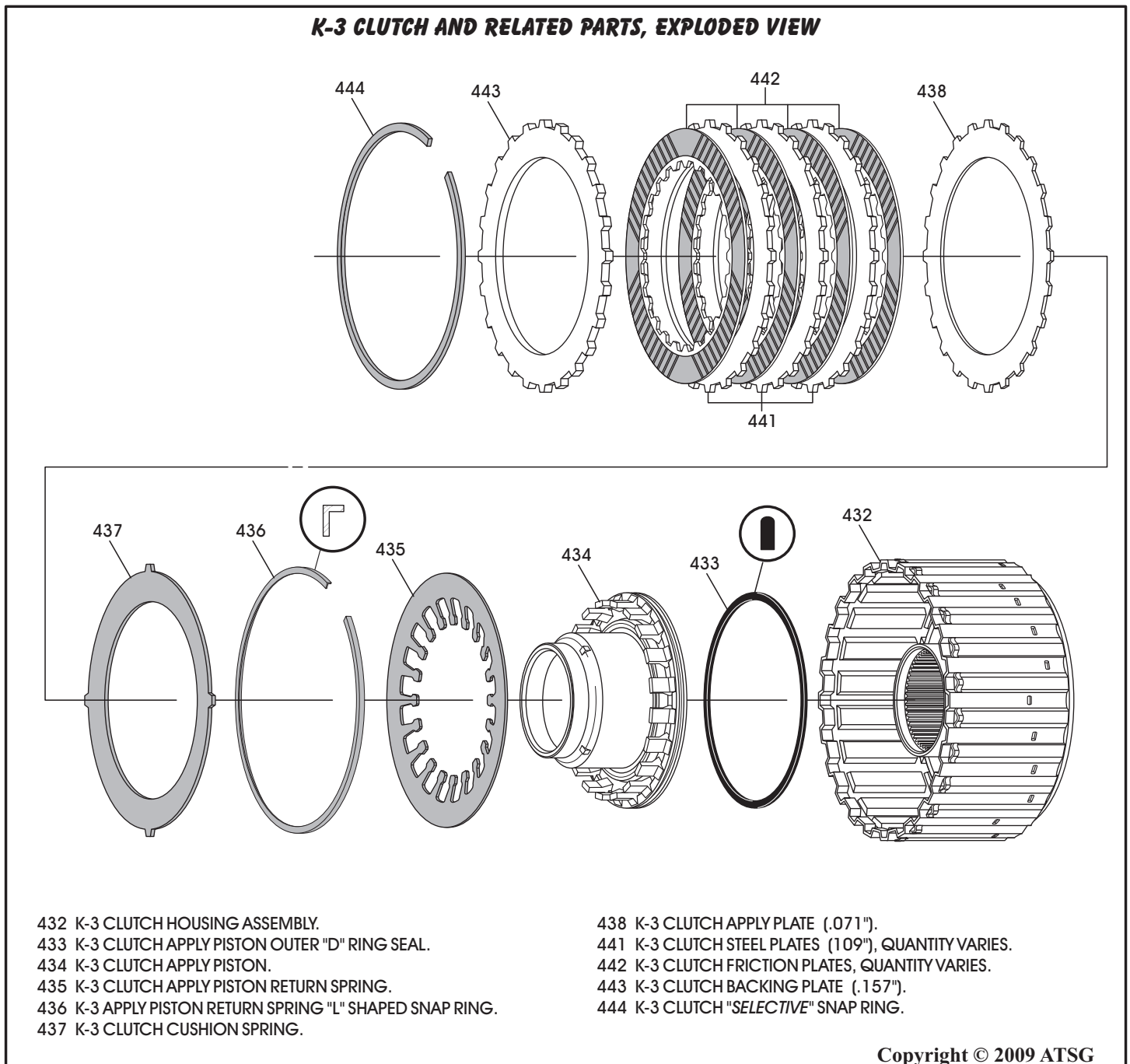


Figure 132

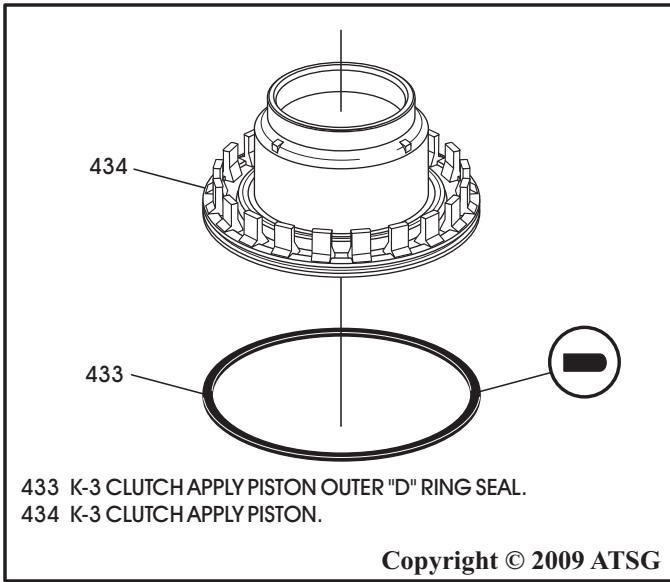


Figure 133

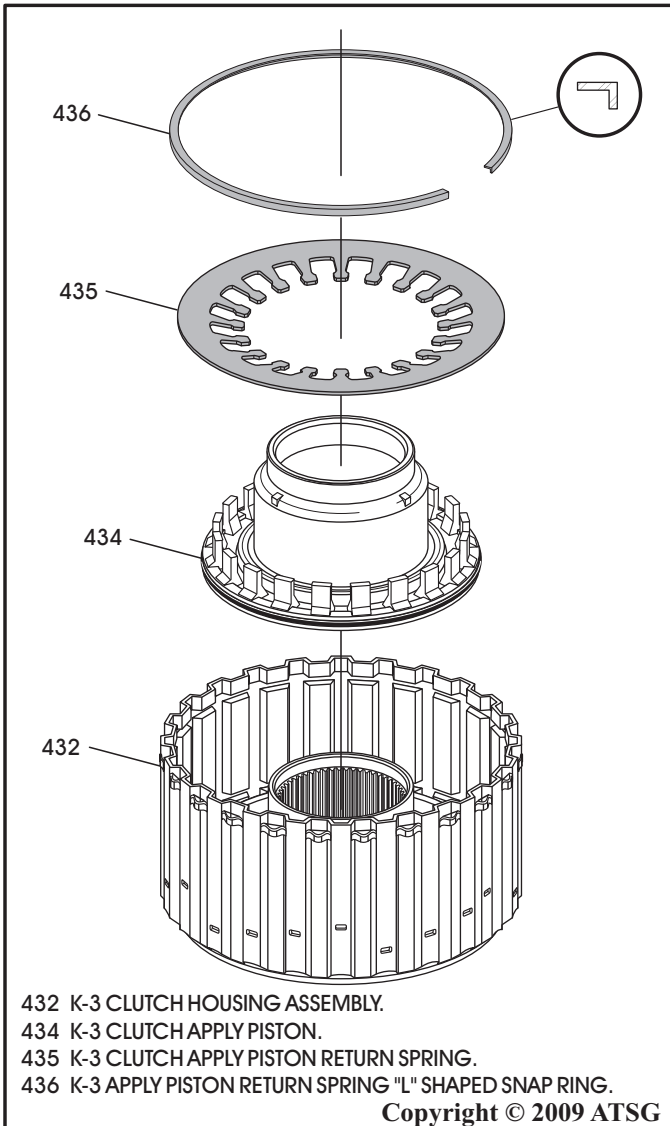


Figure 133

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd) K-3 Clutch Housing Assembly (Cont'd)

20. Install new "D" ring seal into the groove on the K-3 clutch piston, as shown in Figure 133, and lube with small amount of Trans-Jel®.
21. Install the completed K-3 clutch apply piston into the housing, as shown in Figure 134.
22. Install the return spring on top of apply piston, as shown in Figure 134.
23. Install the "L" shaped snap ring by pressing into position until you hear it snap.

Note: Snap ring is "L" shaped to keep return spring centered on piston.

24. Use caution when installing K-3 clutch plates. **Caution:** The K-3 clutch may have 3, 4, or 5 "double-sided" friction plates depending on the model. Refer to the chart in Figure 134 for reference. Later models may also use the "single-sided" friction plates. We will cover the assembly process for both. All friction plates should be soaked in proper fluid for 30 minutes before installation.

Continued on Page 88

K-3 DOUBLE-SIDED CLUTCH QUANTITY CHART

TRANSMISSION MODEL	LINED PLATE	STEEL PLATE	BACK PLATE	THIN APPLY PLATE
722.600/660	3	2	1	1
722.601/602/603/610	3	2	1	1
722.604/606/609/617	4	3	1	1
722.605/607/608/611/614 618/662/664/699	4	3	1	1
722.665	4	3	1	1
722.620/621/624/626/627 628/630/633/636/666	5	4	1	1
722.622/623/625 631/632/663/669	4	3	1	1
722.629/634/661	4	3	1	1

The number of K-3 friction plates used is model dependant and determined by the backing plate snap ring location and the thickness of the steel plates.

Copyright © 2009 ATSG

Figure 134

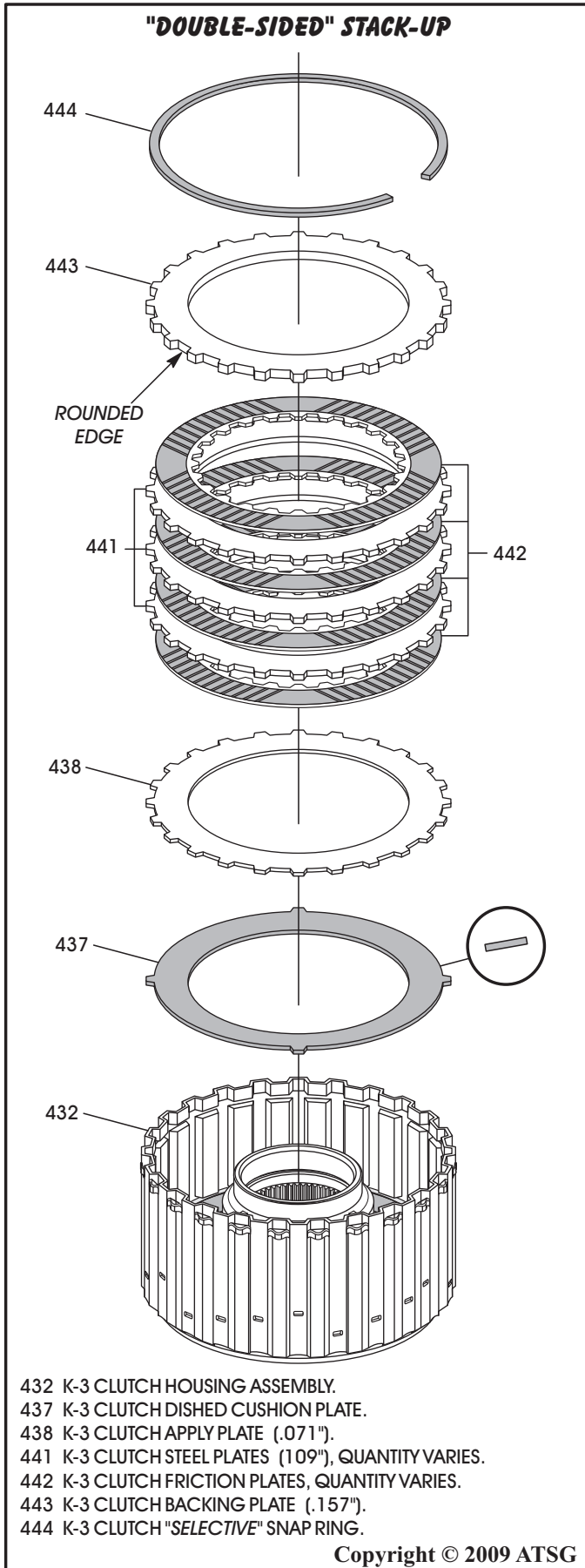


Figure 135

K-3 Clutch Housing Assembly (Cont'd) "Double-Sided" Clutch Plates

25. Install the K-3 clutch dished cushion plate in the direction shown in Figure 135.
26. Install the K-3 clutch .071" thick apply plate, as shown in Figure 135.
27. Install "double-sided clutches beginning with a friction plate and alternating with steel plates, as shown in Figure 135, until you have proper number of plates installed.

Note: Steel plate thickness will vary depending on snap ring groove location and number of frictions required (See chart in Figure 136).

28. Install the K-3 clutch backing plate, as shown in Figure 135, with rounded edge down.
29. Install the K-3 clutch selective snap ring, as shown in Figure 135.

Continued on Page 89

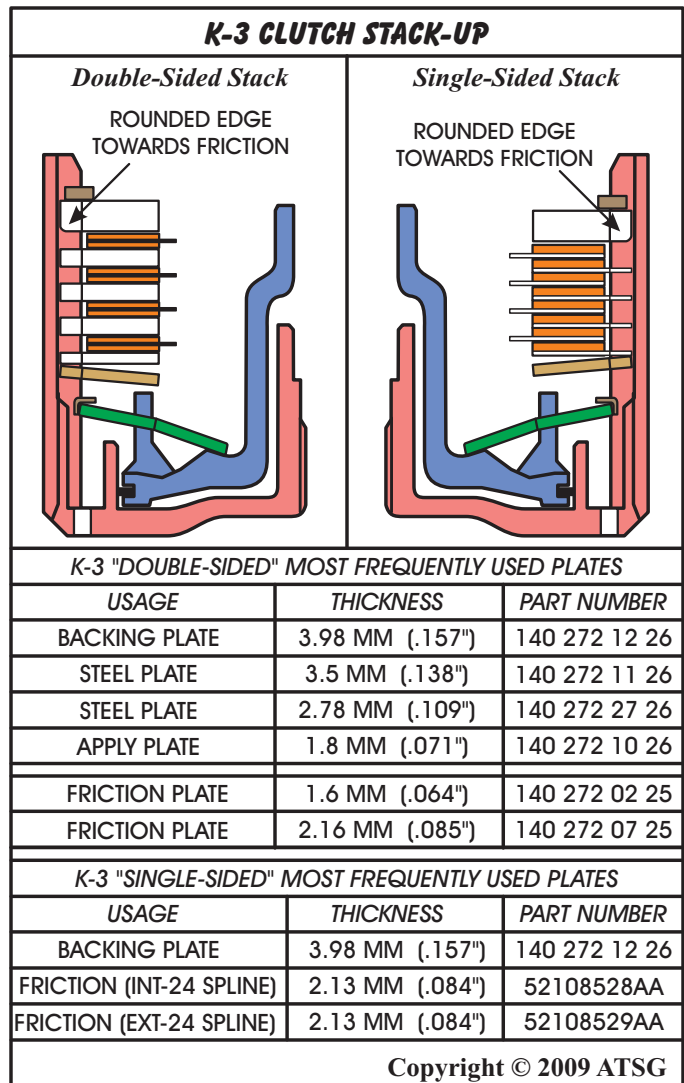
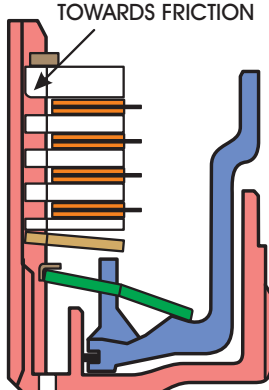
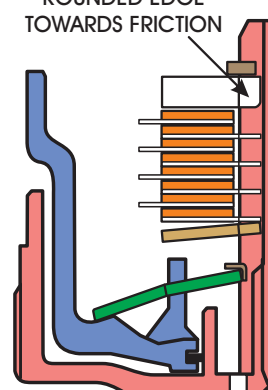


Figure 136

K-3 Clutch Housing Assembly (Cont'd) "Single-Sided" Clutch Plates

30. Install the K-3 clutch dished cushion plate in the direction shown in Figure 138.
Note: The .071" apply plate is not used in the "Single-Sided" stack-up.
31. Install the "single-sided" frictions beginning with an external spline plate and alternating with an internal spline plate, as shown in Figure 138, until you have the proper amount of plates installed.
32. Install the K-3 clutch backing plate, as shown in Figure 138.
33. Install the K-3 clutch *selective* snap ring, as shown in Figure 138.

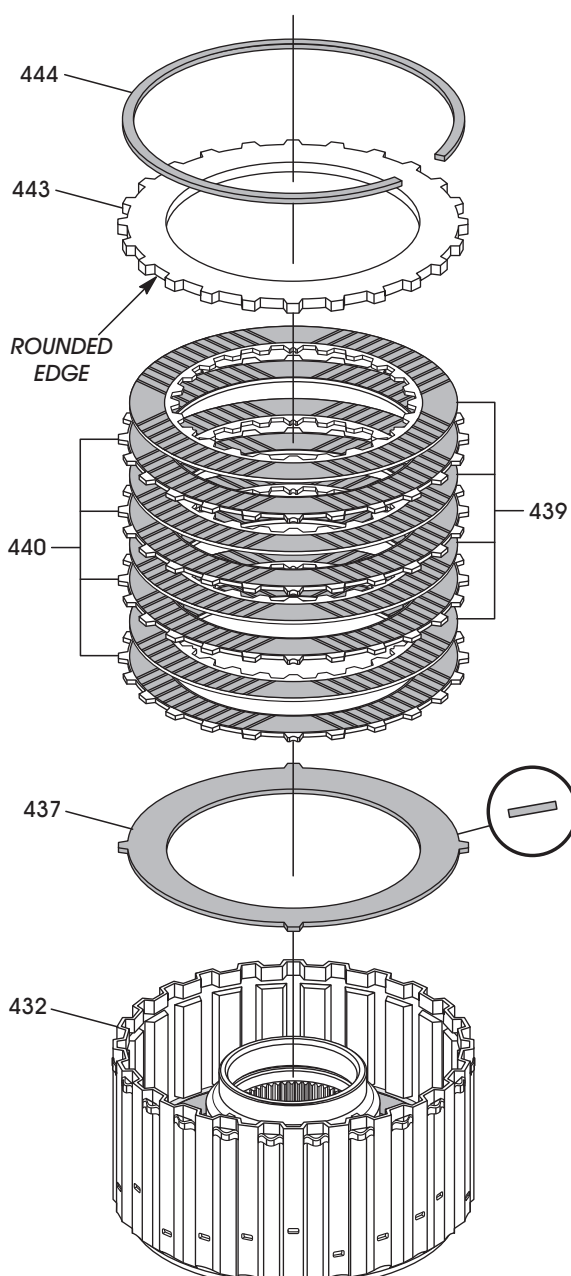
Continued on Page 90

K-3 CLUTCH STACK-UP		
Double-Sided Stack ROUNDED EDGE TOWARDS FRICTION 	Single-Sided Stack ROUNDED EDGE TOWARDS FRICTION 	
K-3 "DOUBLE-SIDED" MOST FREQUENTLY USED PLATES		
USAGE	THICKNESS	PART NUMBER
BACKING PLATE	3.98 MM (.157")	140 272 12 26
STEEL PLATE	3.5 MM (.138")	140 272 11 26
STEEL PLATE	2.78 MM (.109")	140 272 27 26
APPLY PLATE	1.8 MM (.071")	140 272 10 26
FRICTION PLATE	1.6 MM (.064")	140 272 02 25
FRICTION PLATE	2.16 MM (.085")	140 272 07 25
K-3 "SINGLE-SIDED" MOST FREQUENTLY USED PLATES		
USAGE	THICKNESS	PART NUMBER
BACKING PLATE	3.98 MM (.157")	140 272 12 26
FRICTION (INT-24 SPLINE)	2.13 MM (.084")	52108528AA
FRICTION (EXT-24 SPLINE)	2.13 MM (.084")	52108529AA

Copyright © 2009 ATSG

Figure 137

SINGLE SIDED STACK-UP



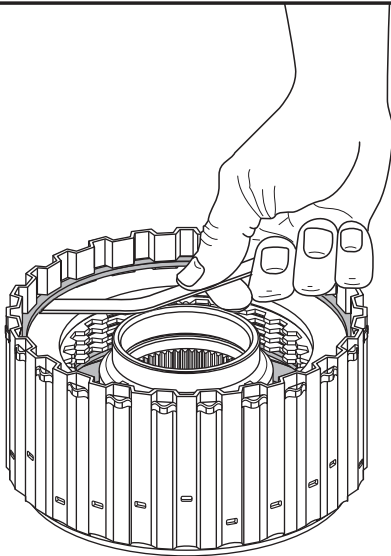
444 K-3 CLUTCH "SELECTIVE" SNAP RING.
 443 K-3 CLUTCH BACKING PLATE (.157").
 440 K-3 SINGLE SIDED "EXTERNAL SPLINE" FRICTION PLATES.
 439 K-3 SINGLE SIDED "INTERNAL SPLINE" FRICTION PLATES.
 437 K-3 CLUTCH DISHED CUSHION PLATE.
 432 K-3 CLUTCH HOUSING ASSEMBLY.

Copyright © 2009 ATSG

Figure 138

K-3 Clutch Housing Assembly (Cont'd)

34. Measure K-3 clutch clearance using a feeler gauge between the selective snap ring and the backing plate, as shown in Figure 139.
35. K-3 clutch clearance will depend on how many friction plates are used in the pack. The proper clearances for each are listed in Figure 139.
Note: ATSG clutch clearances vary from the Mercedes specification, as Mercedes uses a rather costly tool to compress the cushion plate in the clutch pack.
36. Change the selective snap ring as necessary to obtain the proper clutch clearance. There are 5 different snap ring thickness' available and are listed in Figure 139.



K-3 "Double-Sided" Clutch Clearance Should Be;
 3 Frictions = 0.7 - 0.9mm (.028" - .035")
 4 Frictions = 1.0 - 1.3mm (.039" - .051")
 5 Frictions = 1.3 - 2.0mm (.051" - .059")

K-3 "Single-Sided" Clutch Clearance Should Be;
 6 Frictions = 0.7 - 0.9mm (.028" - .035")
 8 Frictions = 1.0 - 1.3mm (.039" - .051")
 10 Frictions = 1.3 - 1.5mm (.051" - .059")

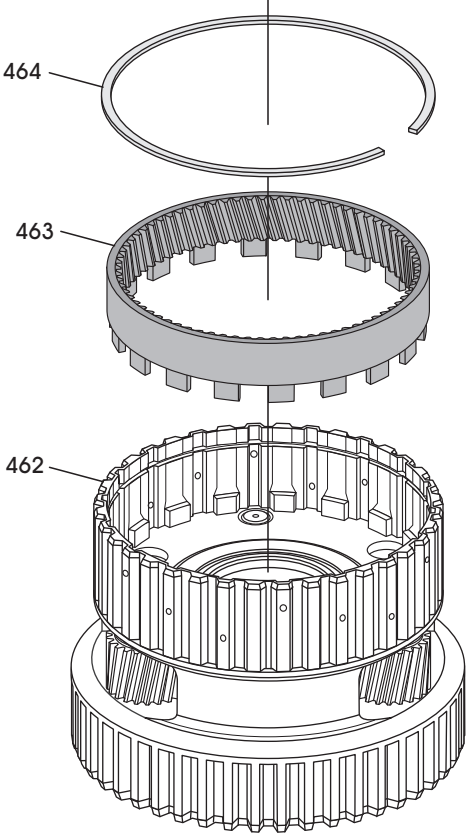
K-3 CLUTCH SELECTIVE SNAP RINGS	
THICKNESS	PART NUMBER
1.9 MM (.075")	140 994 99 40
2.2 MM (.086")	140 994 10 35
2.5 MM (.098")	140 994 11 35
2.8 MM (.110")	140 994 35 35
3.1 MM (.122")	140 994 36 35

Copyright © 2009 ATSG

Figure 139

37. We have provided you with frequently used part numbers for the clutches in Figure 137. Keep in mind that part numbers can change without notice.
38. Set completed K-3 clutch housing assembly aside for gearset assembly process.
39. Install the center planetary ring gear into the rear planetary carrier and clutch hub assembly, as shown in Figure 140.
Note: This ring gear does not need to be removed unless damaged.
40. Install the ring gear retaining snap ring into the rear planetary carrier, as shown in Figure 140, and ensure it is fully seated.

Continued on Page 91



462 REAR PLANETARY CARRIER AND CLUTCH HUB ASSEMBLY.
 463 CENTER PLANETARY RING GEAR.
 464 CENTER PLANETARY RING GEAR RETAINING SNAP RING.

Copyright © 2009 ATSG

Figure 140

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

41. Install the number 7 thrust bearing, as shown in Figure 141, by hand pressing into place. *Note: The number 7 and number 8 thrust bearings have been updated with three small protrusions stamped into the outer bearing race and spaced equally around the outside diameter, as shown in Figure 142. This was done to prevent the outer race from turning in the rear carrier and clutch hub assembly. This increased durability by decreasing the planetary failures seen in the past.*
42. Ensure the number 7 thrust bearing is fully seated.
43. Install the number 8 thrust bearing, as shown in Figure 143, by hand pressing into place, and ensure that it is full seated.

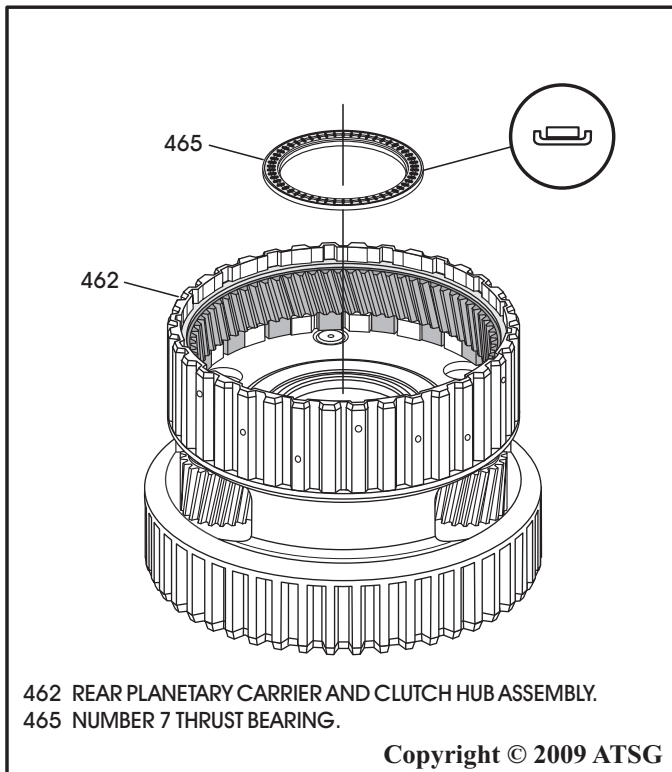


Figure 141

Continued on Page 92

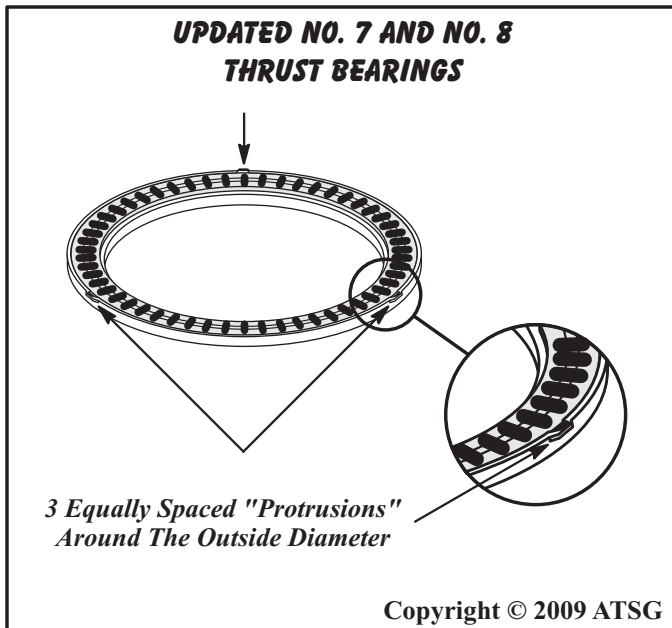


Figure 142

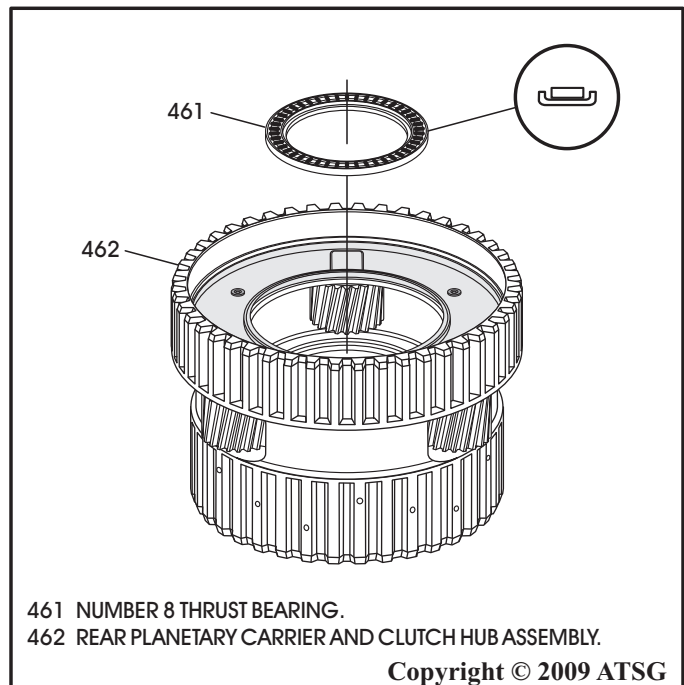


Figure 143

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

44. Position the center planetary carrier and output shaft, as shown in Figure 144.
45. Install five new updated output shaft sealing rings into the five grooves of the output shaft, as shown in Figure 144.
Note: Updated seal rings have "tabs" on the inside diameter and a step joint.
46. Ensure the step joints are properly engaged.
47. Install the number 6 thrust bearing race, as shown in Figure 145, and retain with a small amount of Trans-Jel®.

48. Install the caged needle bearing into the output shaft groove, as shown in Figure 145, by gently spreading just enough to get it over the output shaft.
49. Ensure that it spins freely in the groove after installation and apply some fluid.

Continued on Page 93

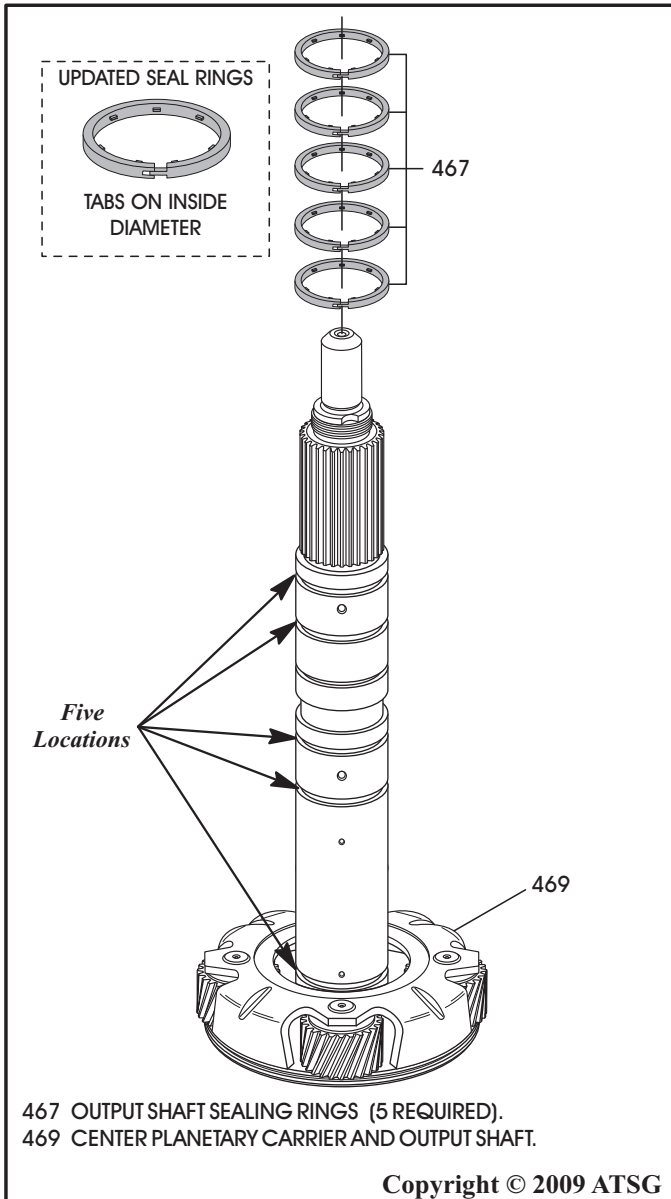


Figure 144

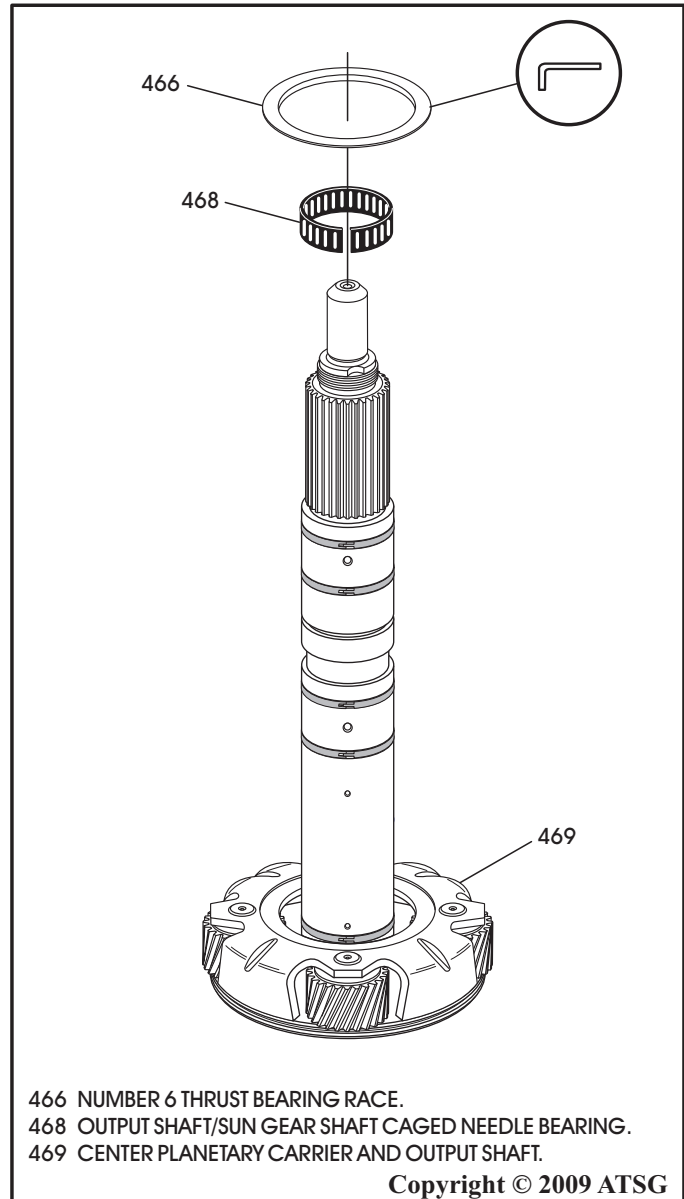


Figure 145

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

50. Install the rear carrier and clutch hub assembly as shown in Figure 146, by rotating to engage the center ring gear to the planetary pinions.

Note: This would be a good time for one last check of the F-2 sprag assembly. Refer to Figure 130 on Page 84.

51. Install the completed F-2 sprag and sun gear shaft assembly, as shown in Figure 147.

Continued on Page 94

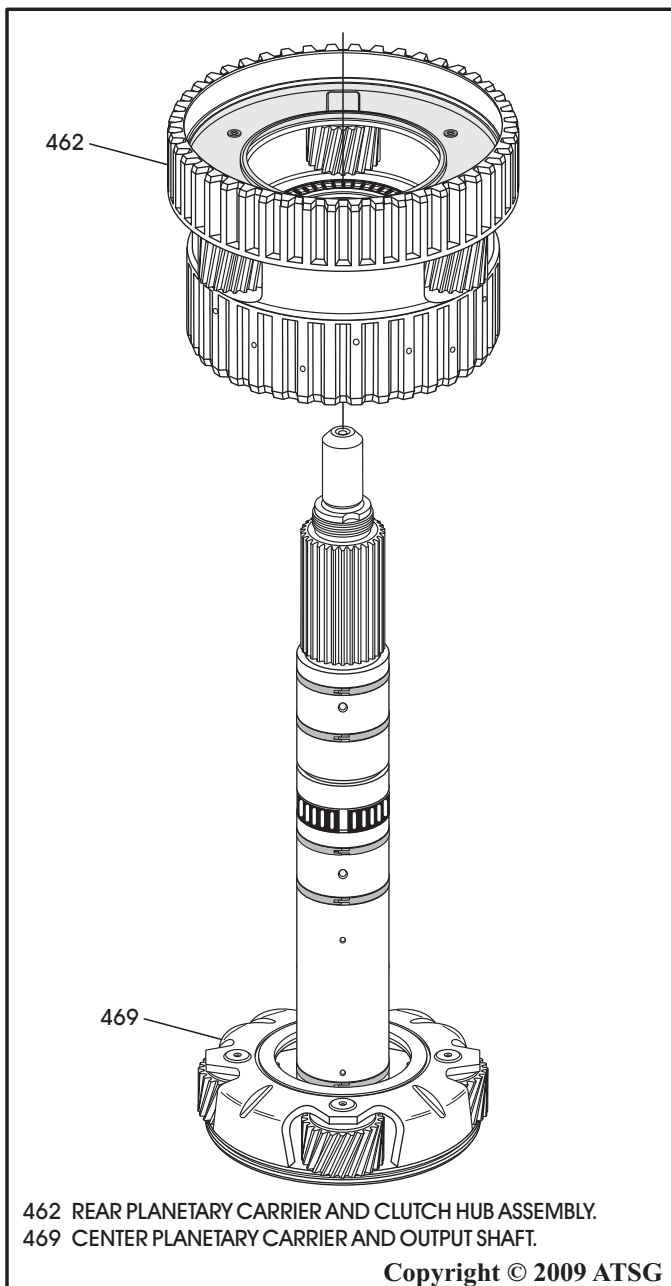


Figure 146

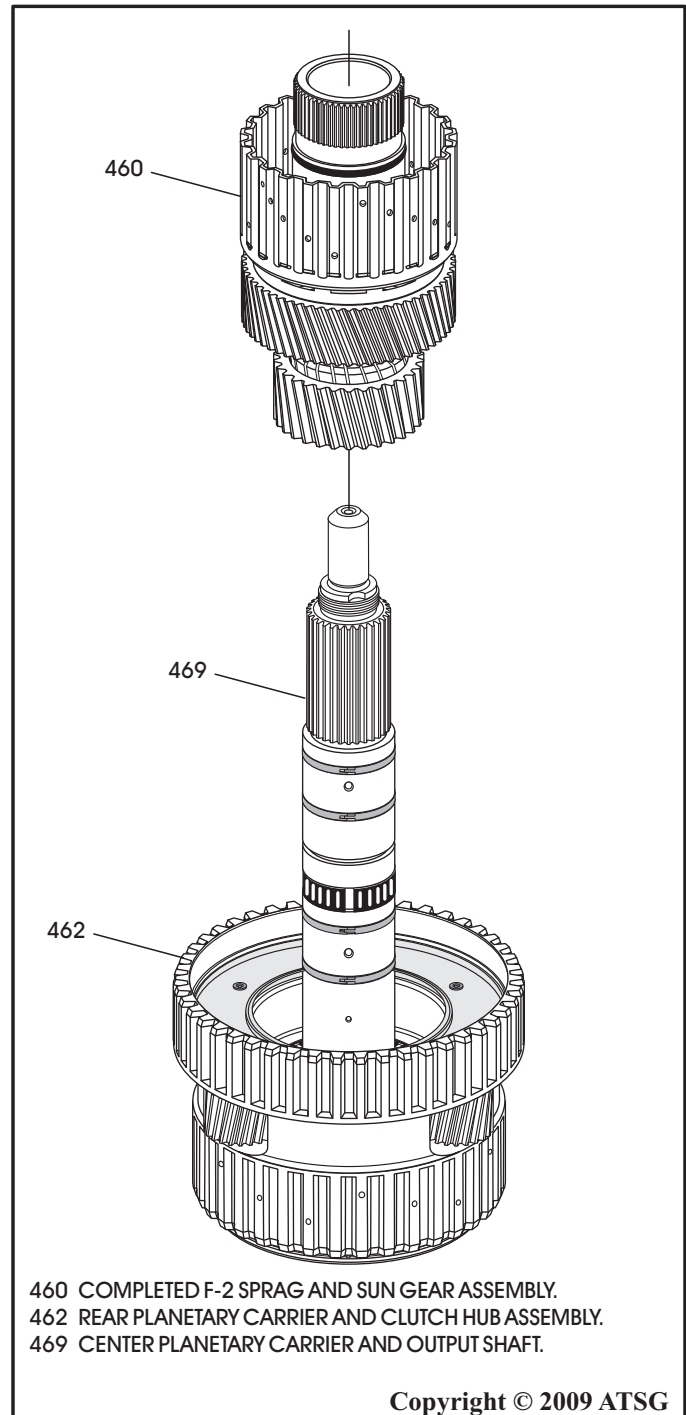


Figure 147

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

52. Lubricate the inside diameter of the K-3 piston in completed K-3 clutch housing with a small amount of Trans-Jel® (See Figure 148).
53. Install the completed K-3 clutch housing, as shown in Figure 148, rotating back and forth until fully seated.

Note: *There should be approximately 1/4 inch of sun gear shaft spline showing when fully seated, as shown in Figure 149.*

54. Install the number 11 thrust bearing race, as shown in Figure 149.
55. Install the number 12 thrust bearing, as shown in Figure 149.
56. Install the number 13 thrust bearing race, as shown in Figure 149.
57. Install the sun gear shaft retaining snap ring, as shown in Figure 149.

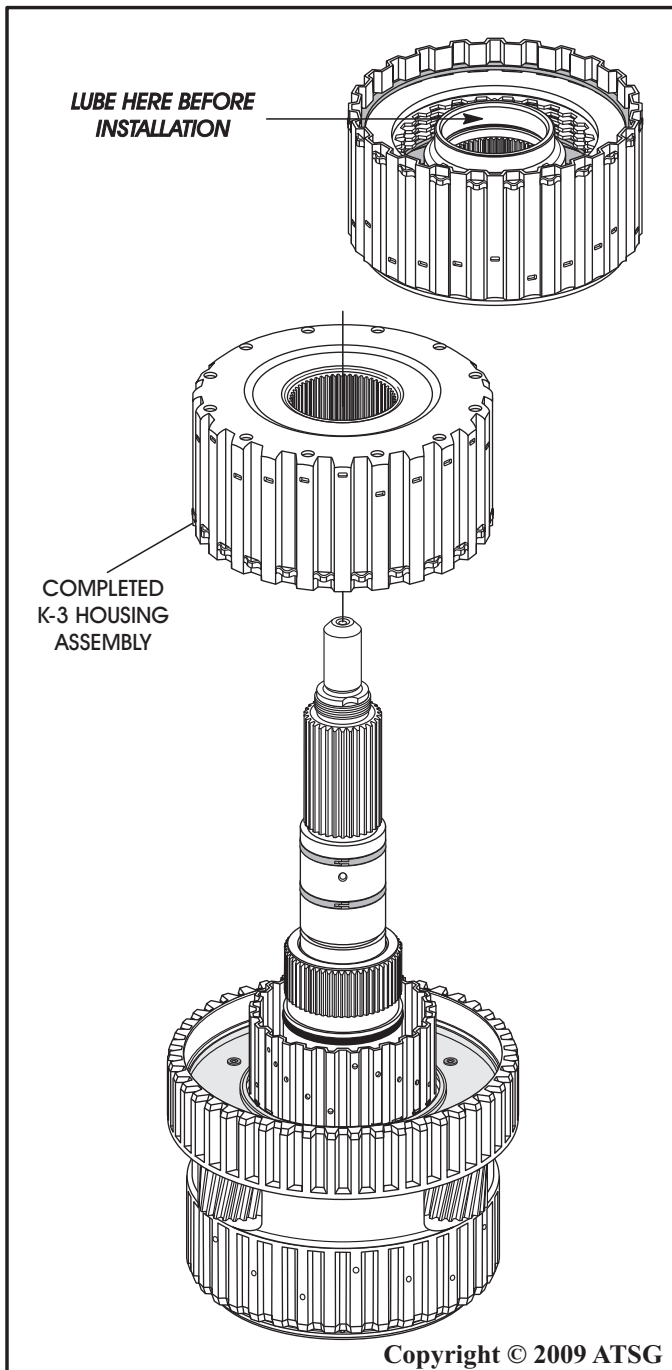


Figure 148

Continued on Page 95

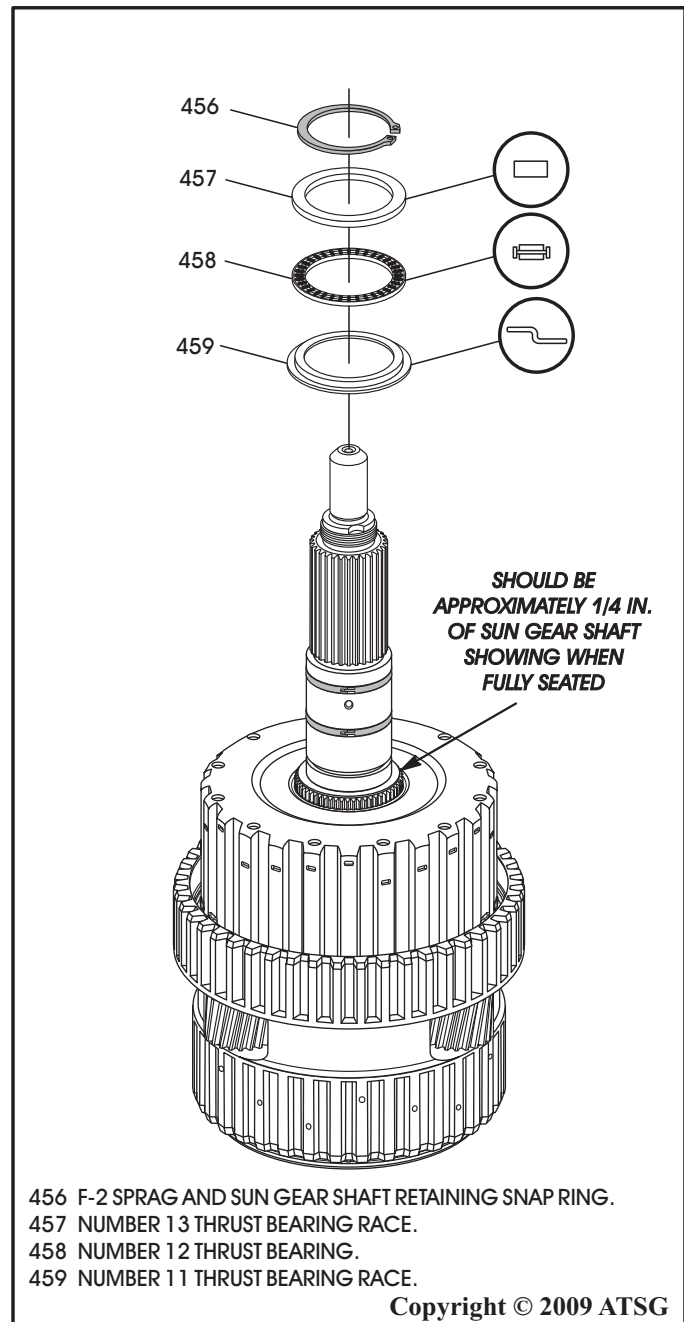


Figure 149

COMPONENT REBUILD (CONT'D)

Center & Rear Planetary Gearset (Cont'd)

58. Measure clearance using feeler gauge between snap ring and number 13 thrust bearing race, as shown in Figure 150.
 59. The planetary gearset axial clearance should be 0.15mm - 0.6mm (.006" - .024"), as shown in Figure 150.
 60. Change the number 13 thrust bearing race to obtain the proper clearance. There are three selectives for this location and are listed in Figure 150.
61. Turn the center and rear planetary gearset over and install number 5 thrust bearing, as shown in Figure 151.
- Note: Number 4 thrust bearing race was installed on K-2 clutch housing.*
62. Set the completed center and rear planetary gearset aside for the final assembly process.

**Component Rebuild
Continued on Page 96**

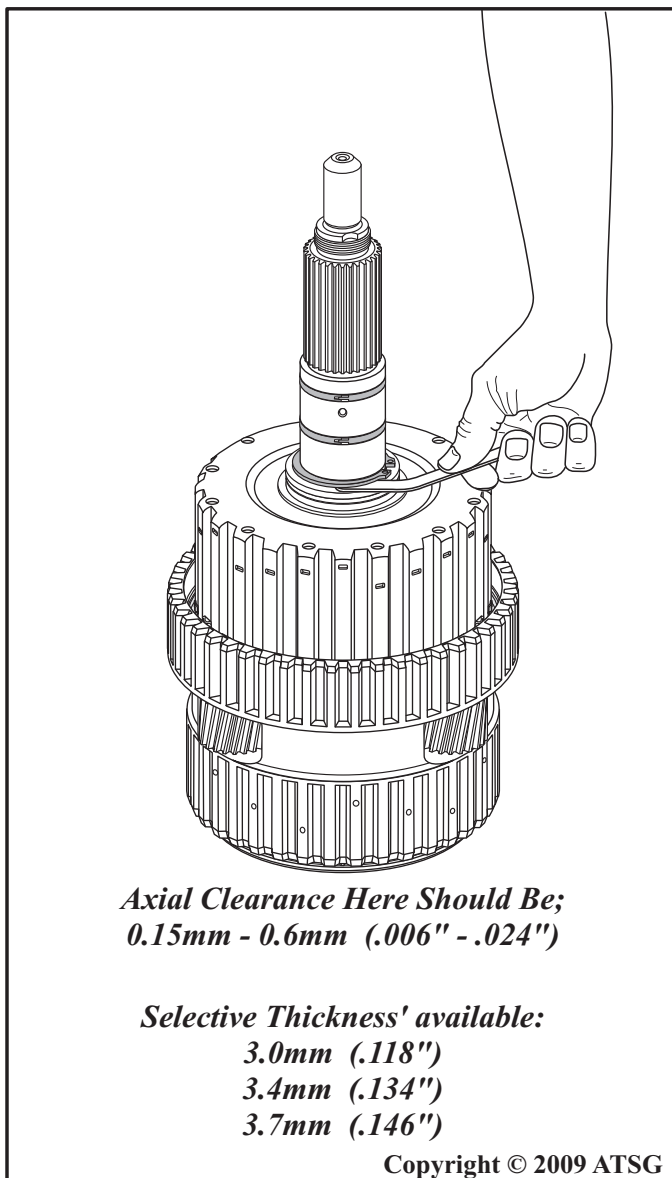


Figure 150

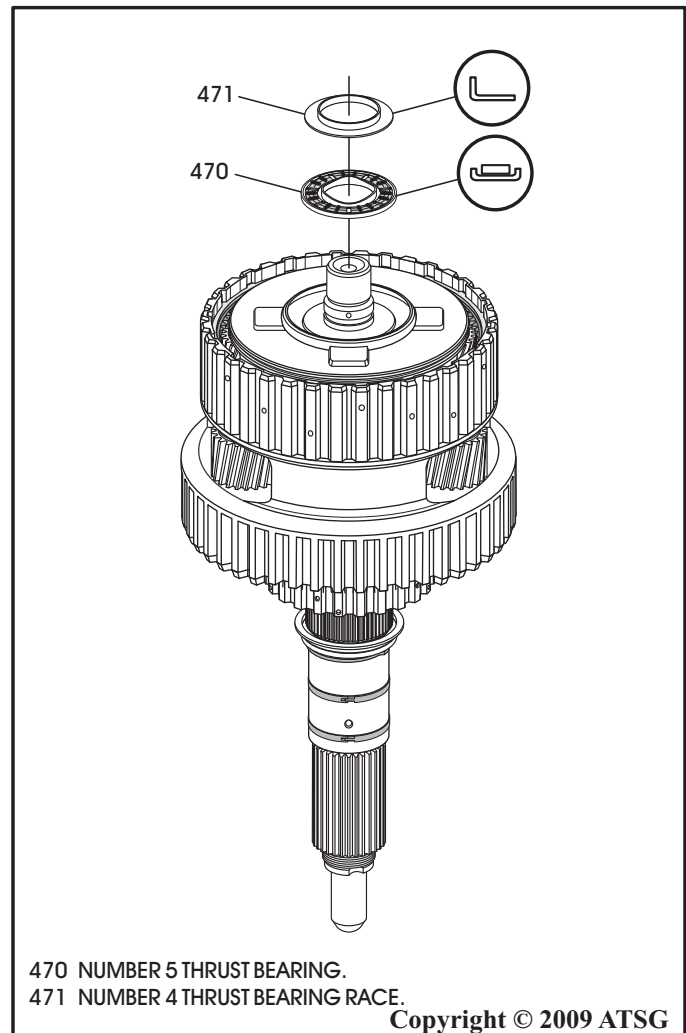
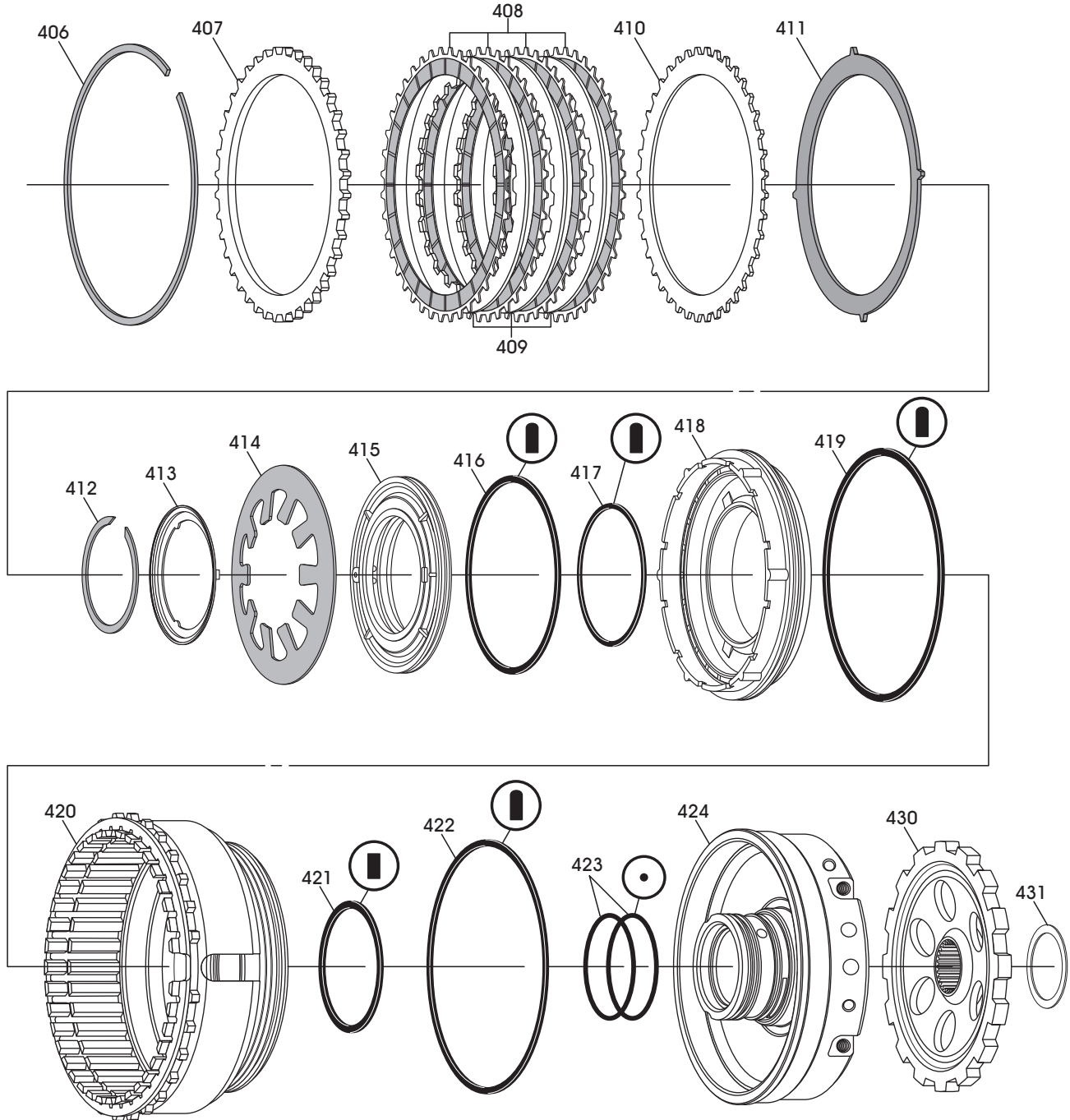


Figure 151

B-2 CLUTCH AND RELATED PARTS, EXPLODED VIEW



- 406 B-2 CLUTCH BACKING PLATE "SELECTIVE" SNAP RING.
- 407 B-2 CLUTCH BACKING PLATE.
- 408 B-2 CLUTCH FRICTION PLATES (EXTERNAL SPLINE).
- 409 B-2 CLUTCH STEEL PLATES (INTERNAL SPLINE).
- 410 B-2 CLUTCH APPLY PLATE (.071").
- 411 B-2 CLUTCH CUSHION PLATE.
- 412 B-2/B-3 APPLY PISTON SPRING RETAINER SNAP RING.
- 413 B-2/B-3 APPLY PISTON SPRING RETAINER.
- 414 B-2/B-3 APPLY PISTON RETURN SPRING.
- 415 B-2 APPLY PISTON GUIDE WITH 1-WAY CHECK VALVE.
- 416 B-2 APPLY PISTON GUIDE LARGE "D" RING SEAL.

- 417 B-2 APPLY PISTON GUIDE SMALL "D" RING SEAL.
- 418 B-2 CLUTCH APPLY PISTON.
- 419 B-2 CLUTCH APPLY PISTON OUTER "D" RING SEAL.
- 420 B-3 CLUTCH APPLY PISTON.
- 421 B-3 CLUTCH APPLY PISTON INNER SEAL (SQUARE-CUT).
- 422 B-3 CLUTCH APPLY PISTON OUTER "D" RING SEAL.
- 423 B-2/B-3 CLUTCH HOUSING INNER "O" RING SEALS (2 REQ).
- 424 B-2/B-3 CLUTCH PISTON HOUSING ASSEMBLY.
- 430 PARKING GEAR.
- 431 PARKING GEAR TO REAR BEARING SHIM (END-PLAY).

Copyright © 2009 ATSG

Figure 152

COMPONENT REBUILD (CONT'D)

B-2 Clutch Housing Assembly

1. Disassemble the B-2 clutch housing assembly using Figure 152 for a guide.
2. Clean all B-2 clutch housing parts thoroughly and dry with compressed air.
3. Inspect all B-2 clutch housing parts thoroughly for any wear and/or damage.

4. Install new square cut inner seal in B-3 clutch apply piston, as shown in Figure 153.
5. Install new "D" ring outer seal on B-3 clutch apply piston, as shown in Figure 153.
6. Lubricate both B-3 apply piston seals with a small amount of Trans-Jel®.
7. Install a new "D" ring seal on the small portion of the B-2 apply piston guide with the 1-way check valve, as shown in Figure 154.
8. Install a new "D" ring seal on the large portion of the B-2 apply piston guide with the 1-way check valve, as shown in Figure 154.
9. Lubricate both B-2 apply piston guide seals with a small amount of Trans-Jel®.
10. Install a new outer "D" ring seal on B-2 clutch apply piston, as shown in Figure 155, and lube with a small amount of Trans-Jel®.

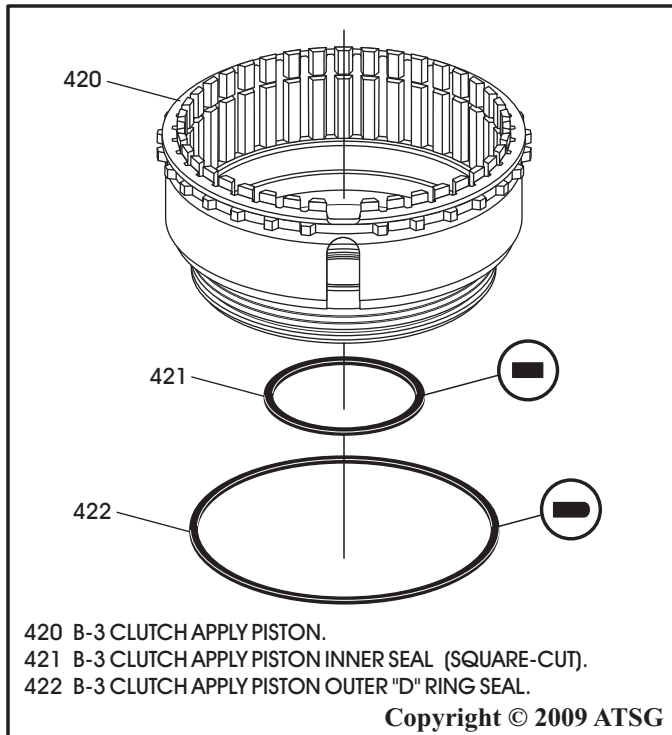


Figure 153

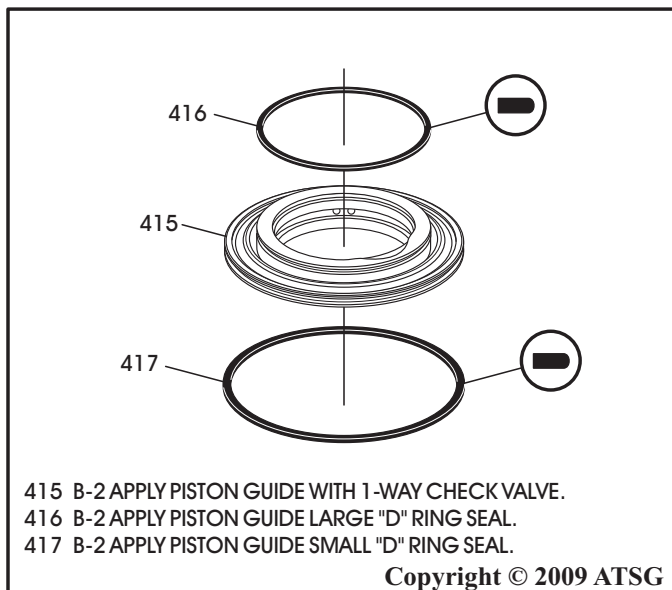


Figure 154

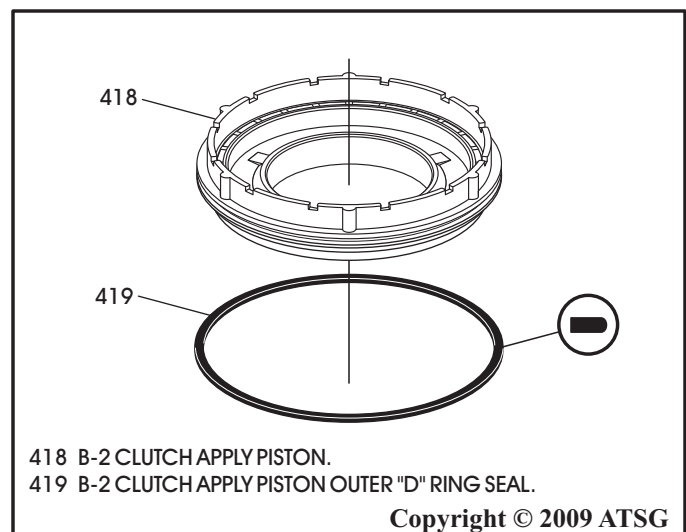


Figure 155

Continued on Page 98

COMPONENT REBUILD (CONT'D)

B-2 Clutch Housing Assembly (Cont'd)

11. Install two new "O" ring seals into the grooves of the B-2/B-3 clutch piston housing, as shown in Figure 156, and lubricate with small amount of Trans-Jel®.

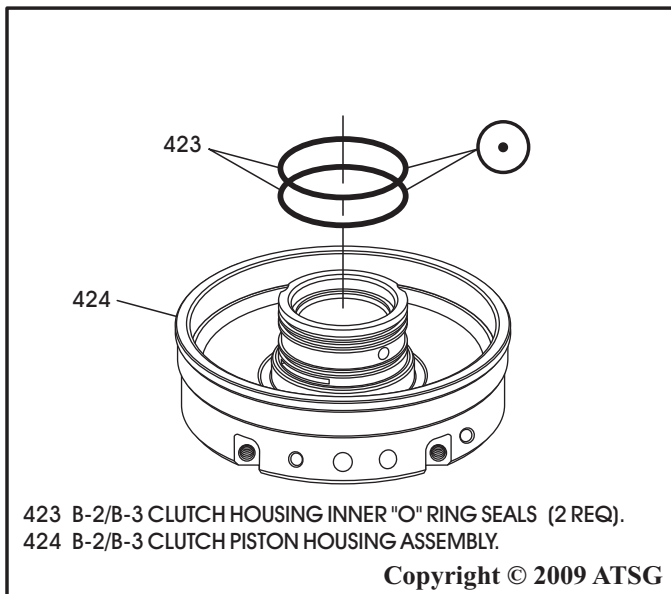


Figure 156

12. Place the B-2 apply piston on flat work surface with one of the "tabs" at **exactly** the 6-O'clock position, as shown in Figure 157.
13. Install B-2 apply piston guide with the 1-way check valve into the B-2 apply piston with the 1-way check **exactly** at the 12-O'clock position as shown in Figure 157.

Caution: Step 12 and 13 must be followed "exactly" as written. This is to ensure that when we are ready to install the return spring retainer it will fit without complications.

14. The return spring retainer (413) has two off-set tabs on the inside diameter, that align with two off-set slots in the hub of the B-2/B-3 clutch piston housing assembly (424). Refer to Figure 158.

15. The return spring retainer also has a square tab on bottom of the retainer at 6-O'clock position that must align with a slot in B-2 apply piston guide at the 6-O'clock position. Refer to Figure 157 and 158.

Note: All of this is designed so that it ensures the 1-way check valve is installed correctly, at the 12-O'clock position.

Continued on Page 99

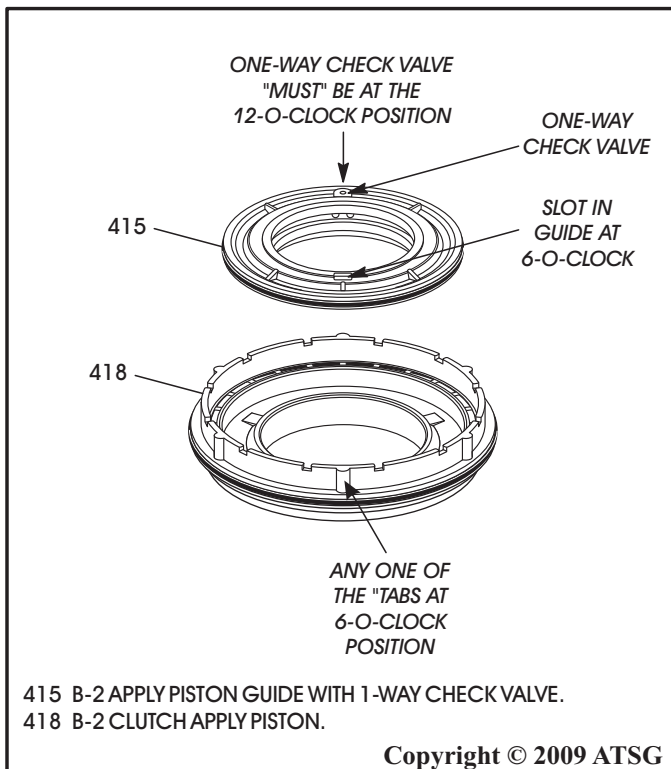


Figure 157

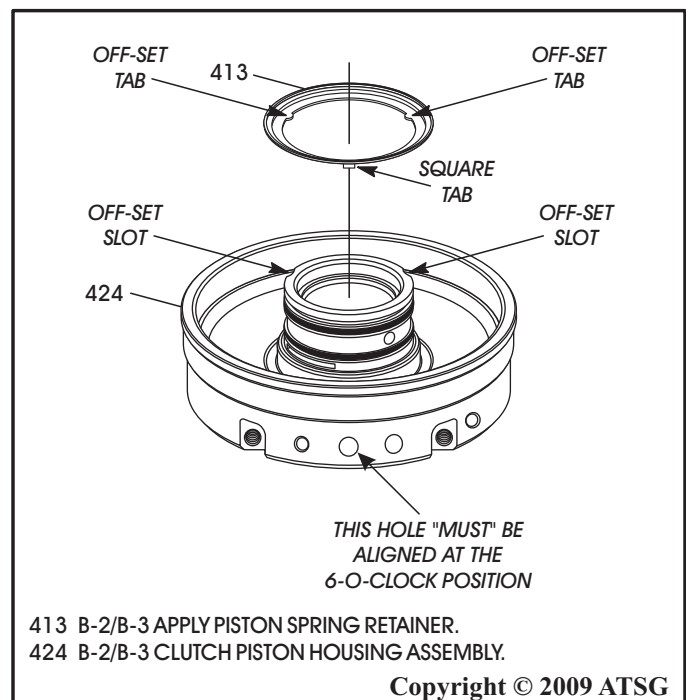


Figure 158

COMPONENT REBUILD (CONT'D)

B-2 Clutch Housing Assembly (Cont'd)

16. Place B-2/B-3 clutch piston housing assembly on a flat work surface with the hole shown in Figure 159 at **exactly** the 6-O'clock position.
17. Install B-3 clutch apply piston with opening at **exactly** the 6-O'clock position, as shown in Figure 159.

Note: Steps 16 and 17 must be followed "exactly" as written. Align perfectly after piston is installed, if necessary.

18. Install the B-2 apply piston with B-2 piston guide installed, as shown in Figure 160.
Note: 1-way check valve must be installed "exactly" at the 12-O'clock position and is shown in Figure 160.
19. Install the B-2/B-3 piston return spring in the direction shown in Figure 161.
20. Install B-2/B-3 piston return spring retainer, as shown in Figure 161.
21. Compress the return spring and retainer and install the snap ring, as shown in Figure 161. Everything done properly, it goes right on.

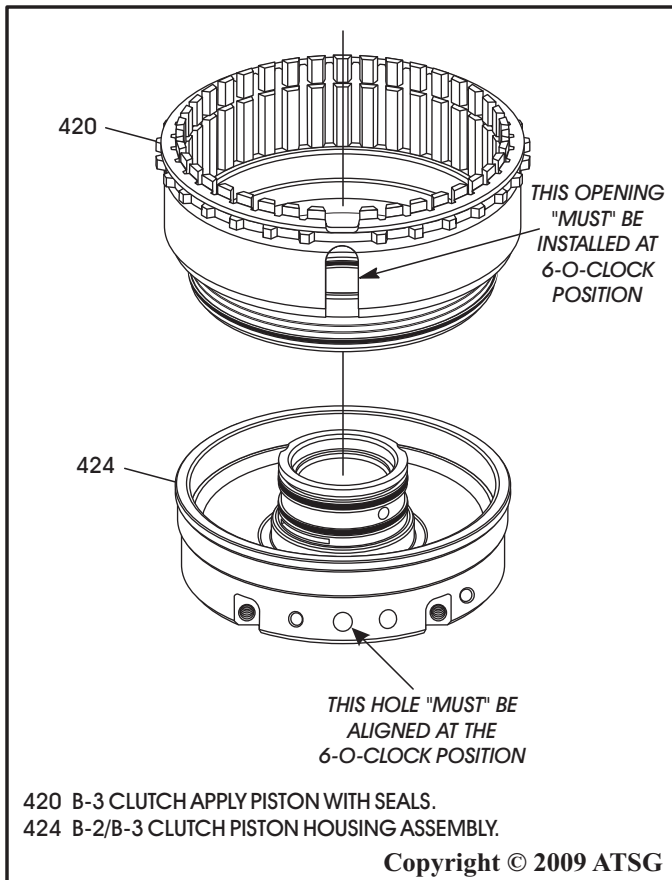


Figure 159

Continued on Page 100

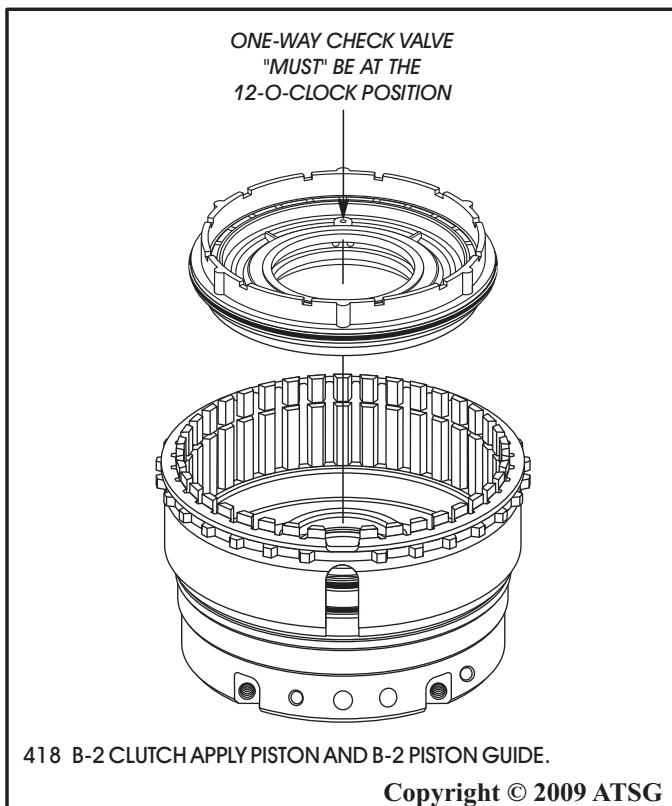


Figure 160

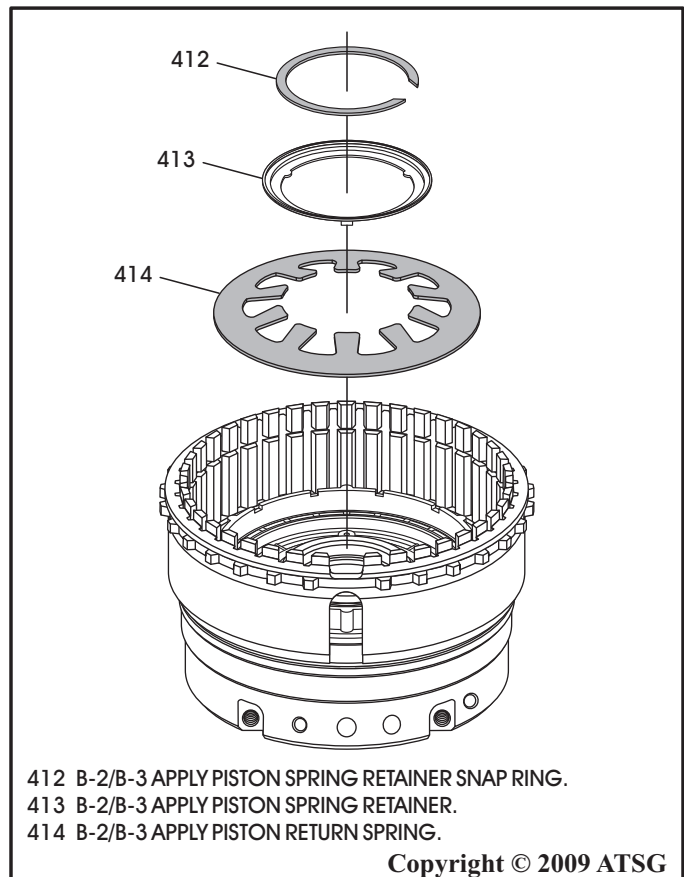


Figure 161

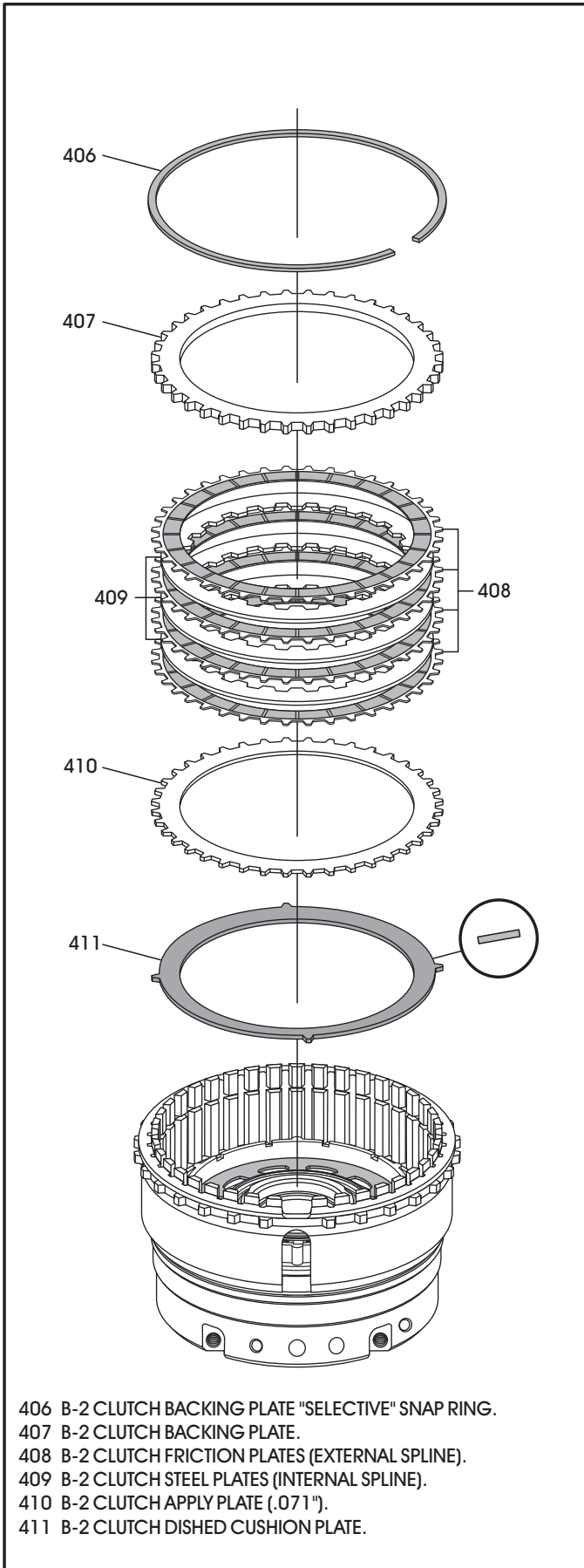


Figure 162

COMPONENT REBUILD (CONT'D)

B-2 Clutch Housing Assembly (Cont'd)

22. Use caution when installing B-2 clutch plates.
Caution: The B-2 clutch may have 4, or 5 "double-sided" friction plates depending on the model. Refer to the chart in Figure 163. All friction plates should be soaked in proper fluid for 30 minutes before installation.
23. Install the B-2 clutch dished cushion plate in the direction shown in Figure 162.
24. Install the B-2 clutch .071" thick apply plate, as shown in Figure 162.
25. Install "double-sided" clutches beginning with a friction plate and alternating with steel plates, as shown in Figure 162, until you have proper number of plates installed.
Note: Steel plate thickness will vary depending on snap ring groove location and number of frictions required (See Figure 163). Also unique to the B-2 clutch, steel plates are inside spline and frictions are external spline.
26. Install the B-2 clutch backing plate, as shown in Figure 162.
27. Install the B-2 clutch selective snap ring, as shown in Figure 162.

Continued on Page 101

B-2 CLUTCH QUANTITY CHART BY MODEL

TRANSMISSION MODEL	LINED PLATE	STEEL PLATE	BACK. PLATE	THIN APPLY PLATE
722.600/660	4	3	1	1
722.601/602/603/610	4	3	1	1
722.604/606/609/617	4	3	1	1
722.605/607/608/611/614 618/662/664/699	5	4	1	1
722.665	4	3	1	1
722.620/621/624/626/627 628/630/633/636/666	5	4	1	1
722.622/623/625 631/632/663/669	5	4	1	1
722.629/634/661	5	4	1	1

The number of B-2 friction plates used is model dependant and determined by the backing plate snap ring location and the thickness of the steel plates.

Copyright © 2009 ATSG

Figure 163

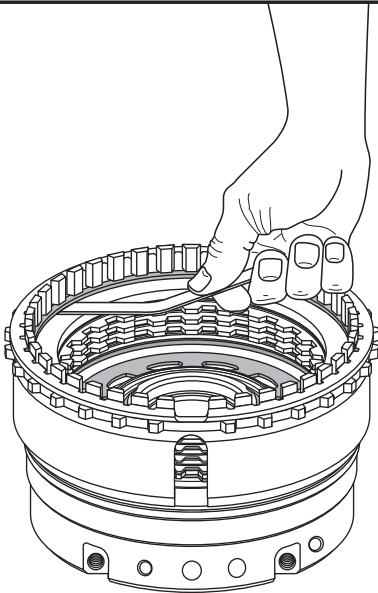
COMPONENT REBUILD (CONT'D)

B-2 Clutch Housing Assembly (Cont'd)

28. Measure B-2 clutch clearance using a feeler gauge between the selective snap ring and the backing plate, as shown in Figure 164.
29. B-2 clutch clearance will depend on how many friction plates are used in the pack. The proper clearances for each are listed in Figure 164.
Note: ATSG clutch clearances vary from the Mercedes specification, as Mercedes uses a rather costly tool to compress the cushion plate in the clutch pack.
30. Change the selective snap ring as necessary to obtain the proper clutch clearance. There are 5 different snap ring thickness' available and are listed in Figure 164.

31. We have provided you with frequently used part numbers for the clutches in Figure 165. Keep in mind that part numbers can change without notice.
32. Set completed B-2 clutch housing assembly aside for the final assembly process.

Component Rebuild Continued on Page 102

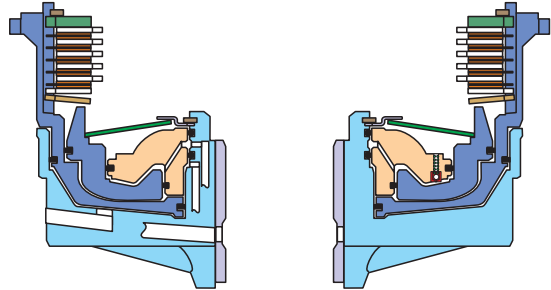


B-2 Clutch Clearance Should Be;
4 Frictions = 0.2 - 1.3mm (.008" - .051")
5 Frictions = 0.2 - 1.4mm (.008" - .055")

B-2 CLUTCH SELECTIVE SNAP RINGS	
THICKNESS	PART NUMBER
2.8 MM (.110")	140 994 63 35
3.1 MM (.122")	140 994 62 35
3.4 MM (.134")	140 994 61 35
3.7 MM (.146")	140 994 60 35
4.0 MM (.157")	140 994 59 35

Figure 164

B-2 CLUTCH CUT-AWAY

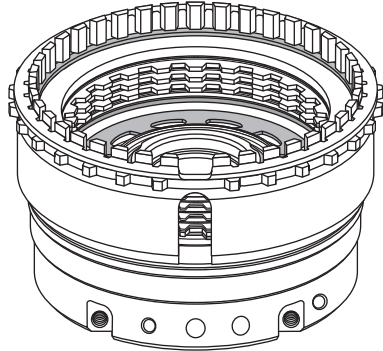


B-2 CLUTCH MOST FREQUENTLY USED PLATES		
USAGE	THICKNESS	PART NUMBER
BACKING PLATE	6.47 MM (.255")	140 272 23 26
STEEL (INT-24 SPLINE)	1.8 MM (.071")	140 272 04 25
APPLY (EXT-40 SPLINE)	1.8 MM (.071")	140 272 14 26
FRICITION (EXT-40 SPLINE)	1.6 MM (.064")	140 272 00 26

NOTE: PARTIAL LIST!

Figure 165

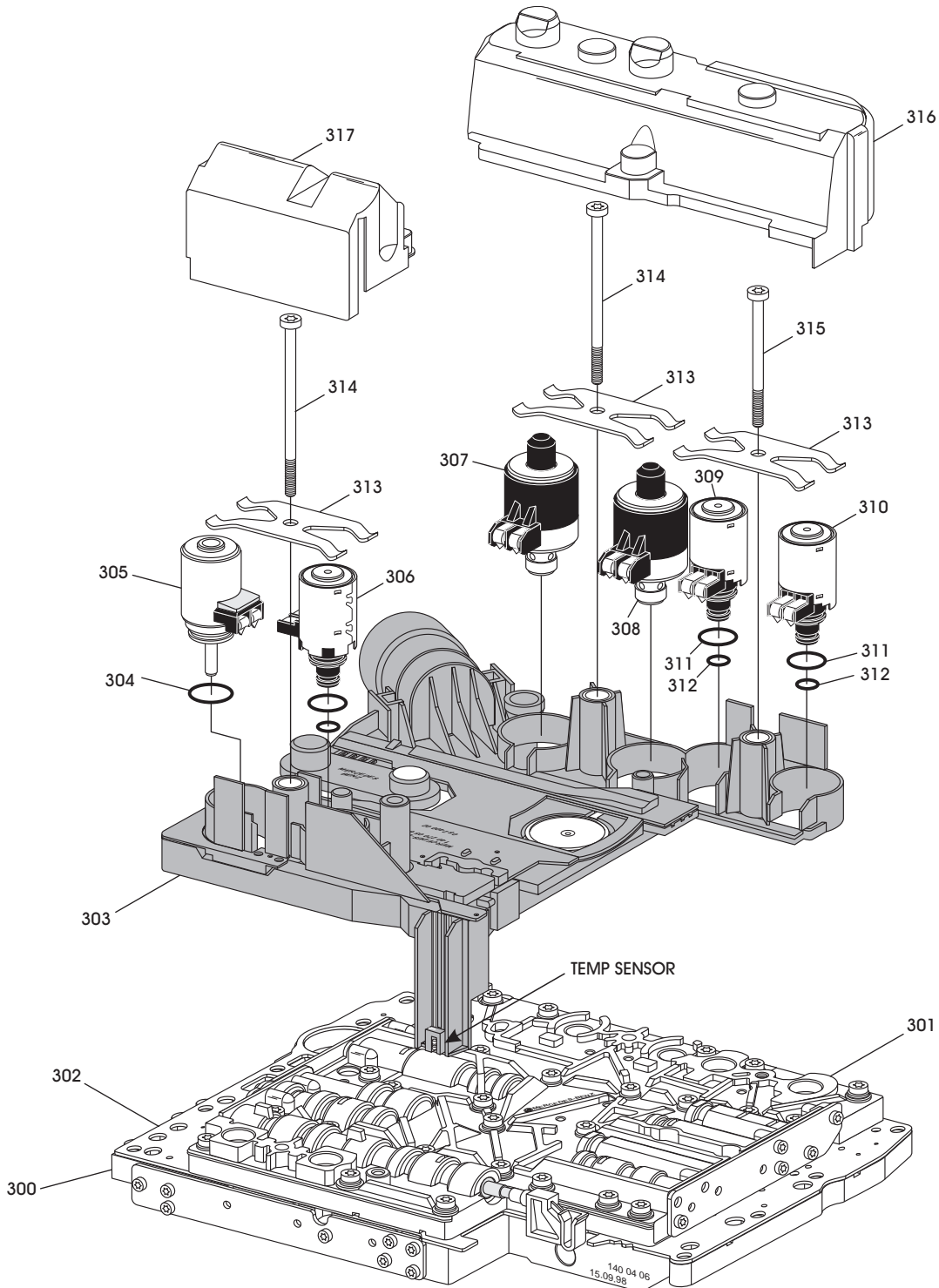
COMPLETED B-2 CLUTCH ASSEMBLY



Copyright © 2009 ATSG

Figure 166

MERCEDES 722.6 VALVE BODY ASSEMBLY, EXPLODED VIEW



- 300 LOWER VALVE BODY ASSEMBLY.
- 301 UPPER VALVE BODY ASSEMBLY.
- 302 VALVE BODY SPACER PLATE.
- 303 ELECTRICAL CONDUCTOR PLATE.
- 304 TCC CONTROL SOLENOID "O" RING.
- 305 TCC CONTROL SOLENOID.
- 306 2-3 SHIFT SOLENOID.
- 307 MODULATING PRESSURE CONTROL SOLENOID (MPC).
- 308 SHIFT PRESSURE CONTROL SOLENOID (SPC).

- 309 1-2/4-5 SHIFT SOLENOID.
- 310 3-4 SHIFT SOLENOID.
- 311 SHIFT SOLENOID LARGE "O" RING (3 REQUIRED).
- 312 SHIFT SOLENOID SMALL "O" RING (3 REQUIRED).
- 313 SOLENOID HOLD DOWN BRACKETS (3 REQUIRED).
- 314 SOLENOID RETAINING BOLT, 79.50MM LENGTH (2 REQUIRED).
- 315 SOLENOID RETAINING BOLT, 55.50MM LENGTH (1 REQUIRED).
- 316 LARGE PLASTIC SOLENOID COVER.
- 317 SMALL PLASTIC SOLENOID COVER.

Copyright © 2009 ATSG

Figure 167

COMPONENT REBUILD (CONT'D)

Valve Body Assembly

1. Place the valve body assembly on a flat work surface, with the filter side facing, as shown in Figure 167.

2. Remove the two white plastic solenoid covers, as shown in Figure 167.

Note: They just snap into place.

3. Remove the three solenoid retaining bracket bolts, as shown in Figure 167.

Note: Notice that 1 is shorter than the other two, and its location.

4. Remove all of the solenoids from the electrical conductor plate, as shown in Figure 167, and set them aside for now.

5. Remove electrical conductor plate by gently prying out the temp sensor support where it snaps under the spacer plate tab, and release the push thru tab by the case connector. Refer to Figure 169.

6. Remove the inside detent spring and retaining bolt, as shown in Figure 169.

Continued on Page 104

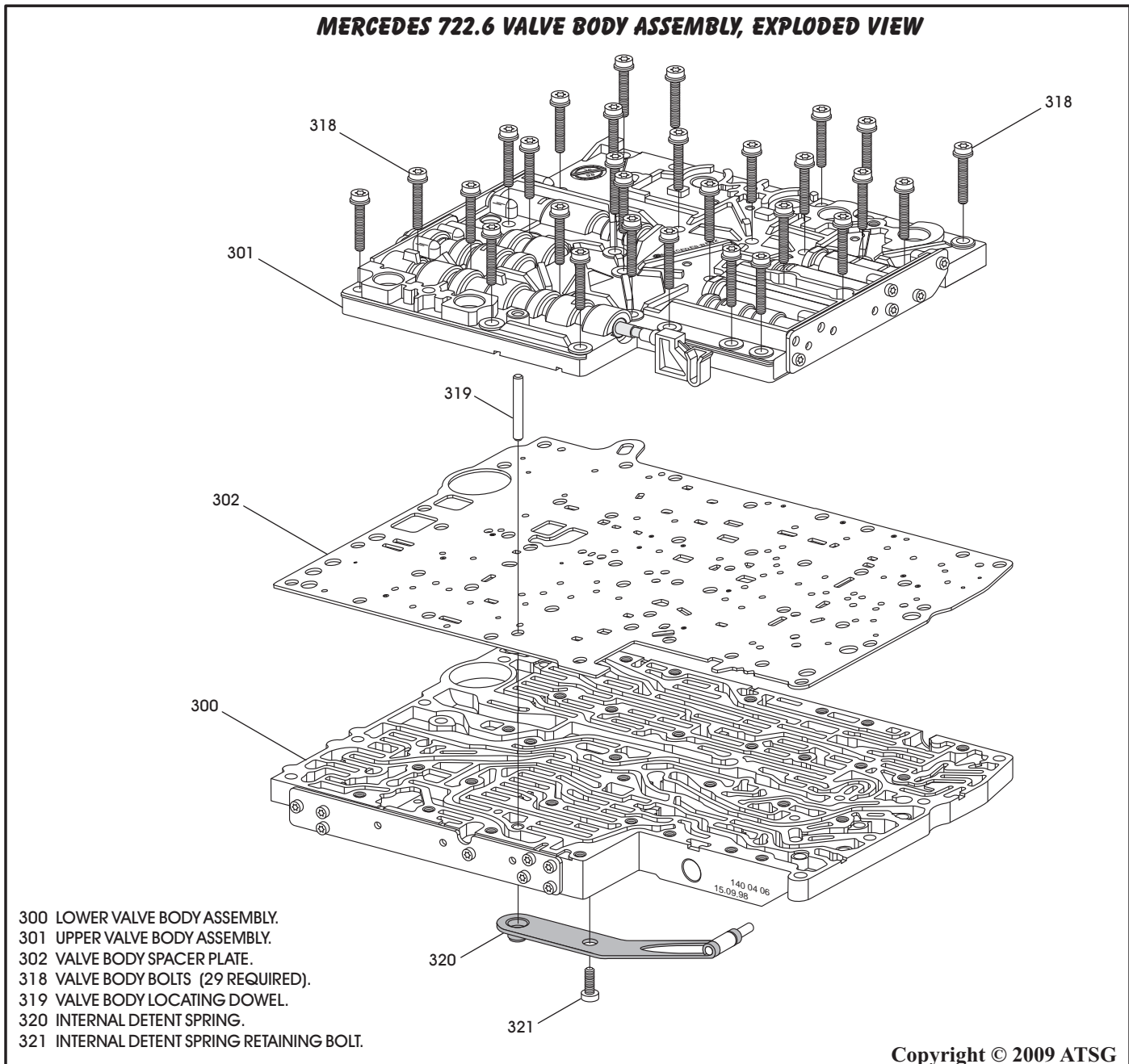


Figure 168

COMPONENT REBUILD (CONT'D)

Valve Body Assembly (Cont'd)

7. Remove the alignment dowel pin, as shown in Figure 168.
- Note: This is a free floating dowel captured on one side by the detent spring and electrical conductor plate on the other side. It will fall out if you do not remove it now.**
8. Remove the 29 valve body bolts, as shown in Figure 168, using a 30 Torx bit.
9. Separate the upper and lower valve bodies and spacer plate, as shown in Figure 168.
10. Remove the 12 check balls (4 plastic - 8 steel), 2 solenoid screens and 1 check valve from the lower valve body, as shown in Figure 172.
11. Remove the manual valve from upper valve body, as shown in Figure 171.
12. Remove the 2 pressure solenoid screens from upper valve body, as shown in Figure 171.
13. Remove the screws retaining the front and rear cover plates on the upper valve body, as shown in Figure 171.
14. Disassemble the upper valve body and place the springs, valves and sleeves on trays **exactly** as they were removed, using Figure 171 as a reference and guide.

Note: The sleeves and valves of the overlap regulator vales must not be mixed up as they have different inside diameters. Refer to Figure 170.

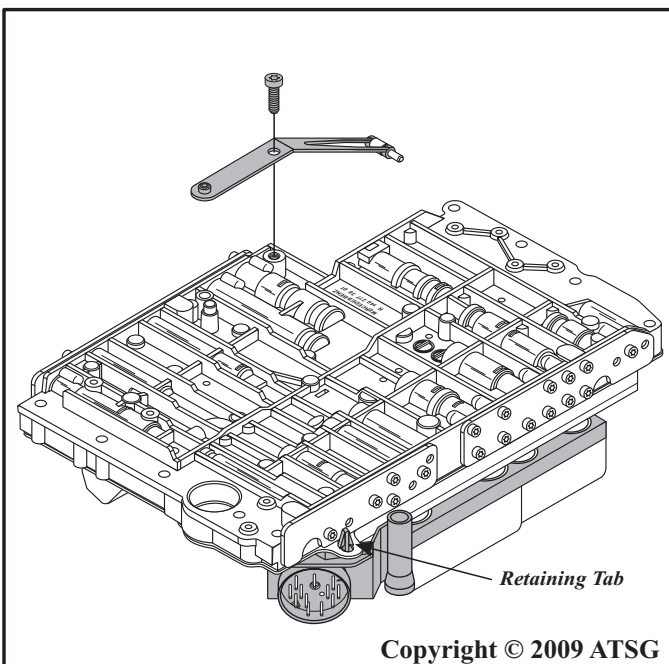


Figure 169

15. Remove the screws retaining the left and right cover plates on the lower valve body, as shown in Figure 172.
16. Disassemble the lower valve body and place the springs, valves and sleeves on trays exactly as they were removed, using Figure 172 as a reference and guide.
17. Clean all valve body parts thoroughly and dry with compressed air.
18. Inspect all valve body parts thoroughly for any wear and/or damage.

Note: An "Update Handbook" with the familiar Green cover, is available from ATSG and includes much more information on the valve body variations that are found in the 722.6 transmission.

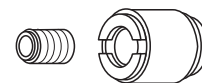
Valve Body Wear & Damage Concerns

Concern 1: Notice in Figure 172 that there are two different designs of the Control Valve Pressure Regulator Line-Up (352). The 1st design spring is known to break and creates delayed engagements and soft or flared shifts. Mercedes part number for a new OEM spring is 140 993 58 01.

Concern 2: Inspect the inside diameter of the overlap regulator valve sleeves for signs of wear. Shiny patches indicate excessive wear. These sleeves are available from Sonnax® under part number 68942-05K in a kit that includes all three of them. Refer to Figure 170. They are also available individually.

Continued on Page 105

SHIFT OVERLAP REGULATING VALVE AND SLEEVE



Three Different Inside Diameters
 1-2/4-5 Overlap Regulator
 2-3 Overlap Regulator
 3-4 Overlap Regulator

Sonnax® Part Number
 68942-05K



Includes 1 For Each Location

Copyright © 2009 ATSG

Figure 170



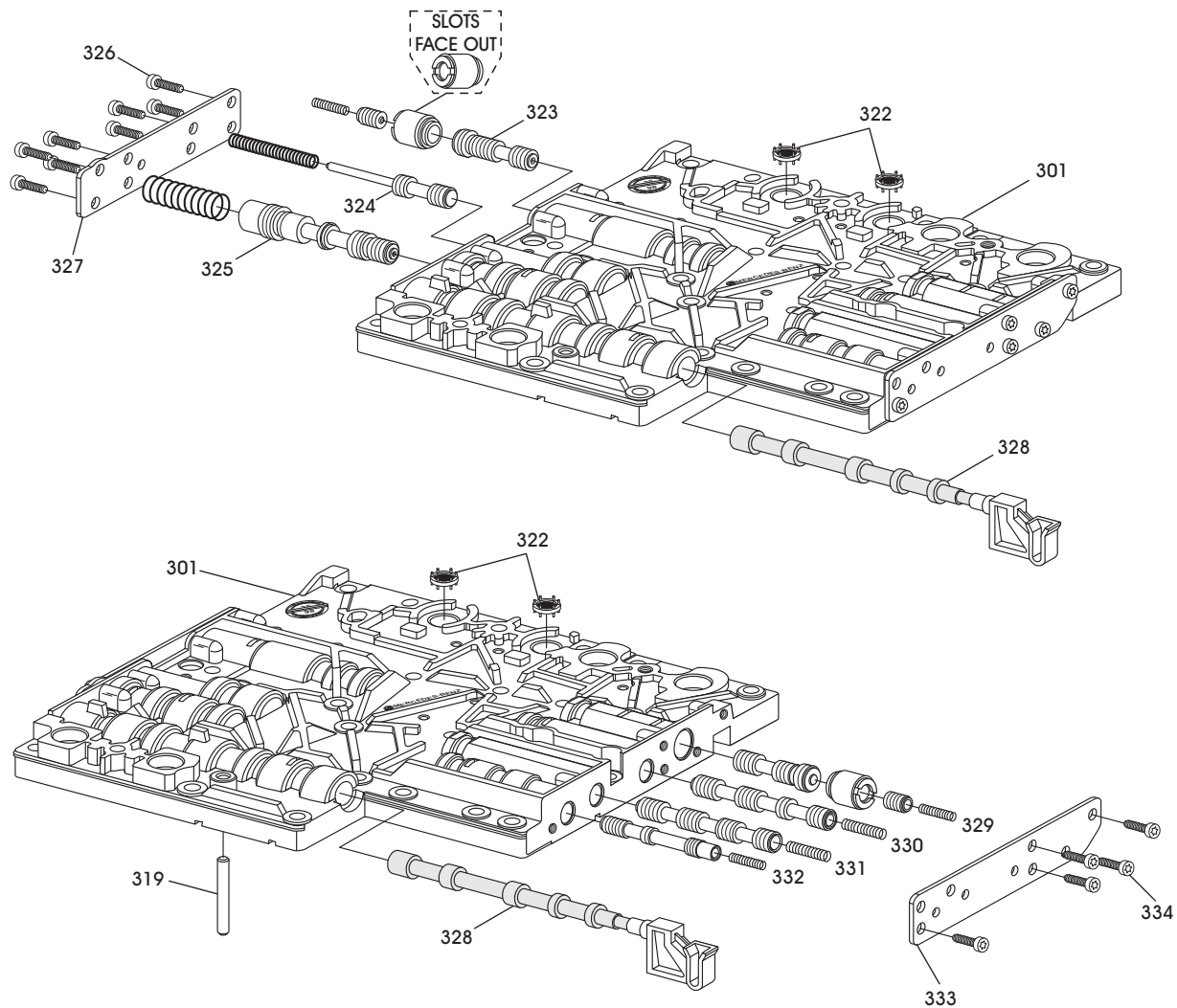
Technical Service Information

COMPONENT REBUILD (CONT'D)

Valve Body Assembly (Cont'd)

19. Install the valves, springs and sleeves into the upper valve body casting *exactly* as they were removed, using Figure 171 as a guide, and lube with the proper fluid as they are installed.
Note: Sleeves, valves and springs of overlap regulator valves must not be mixed. Overlap sleeves are installed with slots facing out.
20. Install upper valve body front and rear cover plates, as shown in Figure 171, and torque the bolts to 4 N·m (35 in.lb.).
Note: The number of bolts in each cover plate will vary depending on model.
21. Install the manual valve into the upper valve body, as shown in Figure 171.
Note: Manual valve cannot be installed after the valve bodies are bolted together, as there is a tab on the spacer plate that prevents it from falling out.
22. Install the valves, springs, sleeves, bore plugs and retainers into the lower valve body casting exactly as removed, and lube with the proper fluid as installed. Use Figure 172 as a guide. Overlap sleeve installed with slots facing out.
23. Install lower valve body left and right cover plates, as shown in Figure 172, and torque the bolts to 4 N·m (35 in.lb.).
Note: The number of bolts in each cover plate will vary depending on model.
24. Lay the lower valve body on flat work surface with the worm tracks facing up, as shown in Figure 172, and install the inside detent spring on the bottom side of the lower valve body.
25. Install the retaining bolt and hand tighten only.
26. Install the 12 check balls (4 plastic - 8 steel) in the proper locations, as shown in Figure 173.
27. Install the 2 solenoid screens in their proper locations, as shown in Figure 173.
28. Install plastic check valve in its proper location as shown in Figure 173.
Note: Install as shown in Figure 173. Some publications are wrong.
29. Install the alignment dowel and move detent spring so that dowel engages the pocket in the detent spring so that dowel cannot fall out.
30. Install the spacer plate onto lower valve body and over the alignment dowel, as shown in Figure 172.
31. Install completed upper valve body over the alignment dowel and onto the spacer plate, as shown in Figure 168.
Note: Again, make sure the manual valve is in place in the upper valve body.
32. Install 29 required valve body bolts, as shown in Figure 168, and torque valve body bolts to 8 N·m (71 in.lb.).
33. Install the two pressure solenoid screens into the upper valve body, as shown in Figure 171.
34. Install the electrical conductor plate onto the upper valve body, as shown in Figure 167.
Note: Electrical Conductor Plate snaps into position on spacer plate tab and through a hole in spacer plate. Refer to Figure 169.
35. Check all solenoids using the resistance specs on Page 23 of this manual.
36. Install the two pressure control solenoids (307) and (308) as shown in Figure 167.
Note: These two solenoids do not use any "O" ring seals.
37. Install new "O" ring seals on the three shift solenoids (306), (309), and (310), as shown in Figure 167.
38. Install the three shift solenoids in their proper positions, as shown in Figure 167.
39. Install new "O" ring on the TCC solenoid (305) as shown in Figure 167.
40. Install the TCC solenoid in its proper position, as shown in Figure 167.
41. Install the three solenoid hold down brackets, as shown in Figure 167, and the three hold down bracket bolts.
Note: Notice the position of the short bolt.
42. Torque the three solenoid hold down bracket bolts to 8 N·m (71 in.lb.).
43. Snap the two white solenoid covers into place over the solenoids, as shown in Figure 167.
44. Set completed valve body aside for the final assembly process.

MERCEDES 722.6 "UPPER" VALVE BODY, EXPLODED VIEW

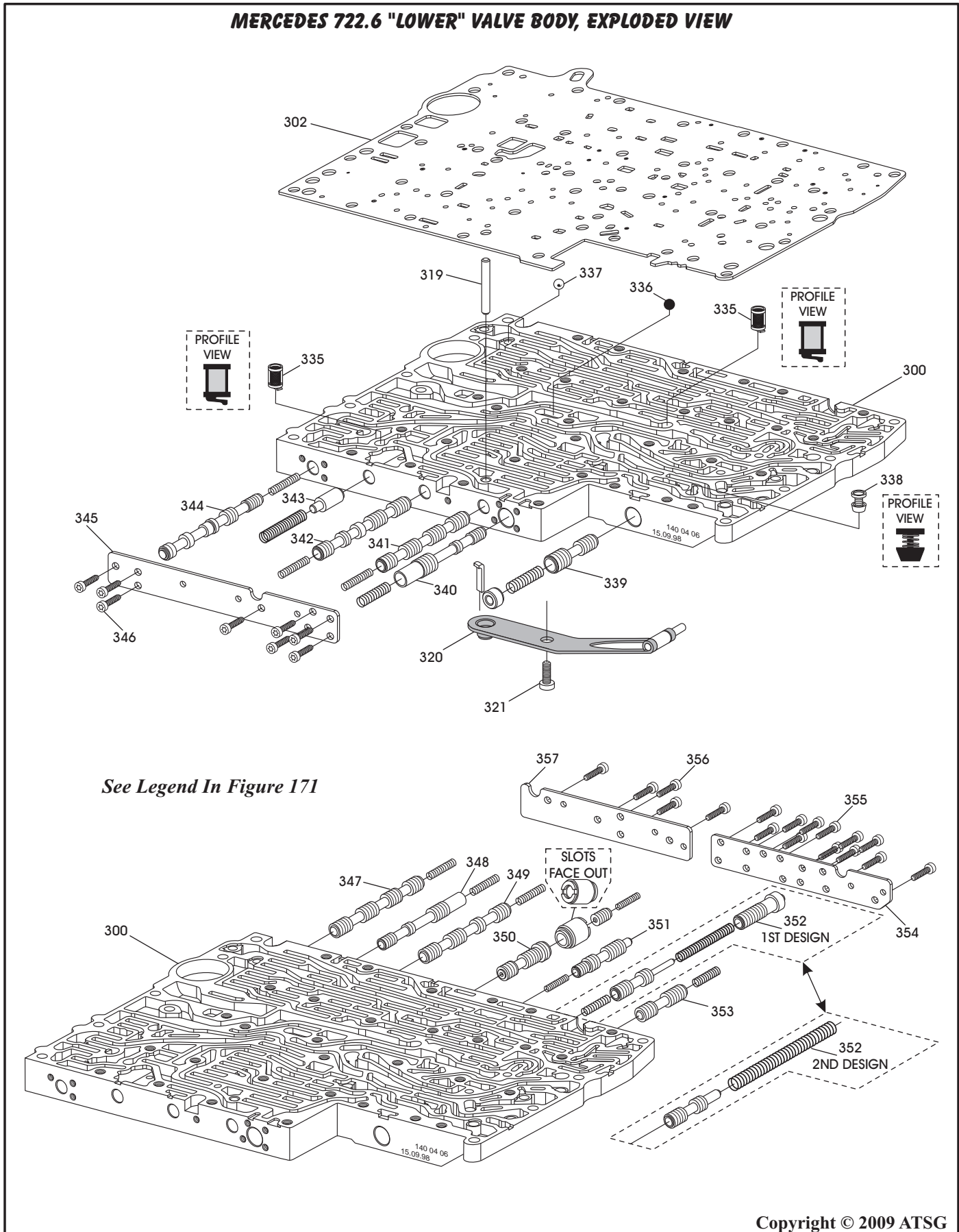


- | | |
|--|---|
| 300 LOWER VALVE BODY CASTING. | 339 B-2 SHIFT VALVE LINE-UP. |
| 301 UPPER VALVE BODY CASTING. | 340 2-3 HOLDING PRESSURE SHIFT VALVE LINE-UP. |
| 302 VALVE BODY SPACER PLATE. | 341 2-3 SHIFT COMMAND VALVE LINE-UP. |
| 319 VALVE BODY LOCATING DOWEL. | 342 2-3 PRESSURE SHIFT VALVE LINE-UP. |
| 320 INTERNAL DETENT SPRING. | 343 TCC DAMPER VALVE LINE-UP (IF EQUIPPED). |
| 321 INTERNAL DETENT SPRING RETAINING BOLT. | 344 TCC LOCK-UP REGULATOR VALVE LINE-UP. |
| 322 PRESSURE SOLENOID SCREENS (2 REQUIRED). | 345 LOWER VALVE BODY RIGHT SIDE COVER PLATE. |
| 323 2-3 OVERLAP REGULATOR VALVE LINE-UP. | 346 COVER PLATE RETAINING BOLTS (QUANTITY VARIES). |
| 324 LUBRICATION PRESSURE REGULATOR VALVE LINE-UP. | 347 1-2/4-5 SHIFT COMMAND VALVE LINE-UP. |
| 325 OPERATING PRESSURE REGULATOR VALVE LINE-UP. | 348 1-2/4-5 HOLDING PRESSURE SHIFT VALVE LINE-UP. |
| 326 FRONT COVER PLATE RETAINING BOLTS (QUANTITY VARIES). | 349 1-2/4-5 PRESSURE SHIFT VALVE LINE-UP. |
| 327 UPPER VALVE BODY FRONT COVER PLATE. | 350 1-2/4-5 OVERLAP REGULATING VALVE LINE-UP. |
| 328 MANUAL VALVE. | 351 SHIFT PRESSURE REGULATOR VALVE LINE-UP. |
| 329 3-4 OVERLAP REGULATOR VALVE LINE-UP. | 352 CONTROL VALVE PRESSURE REGULATOR VALVE LINE-UP. |
| 330 3-4 PRESSURE SHIFT VALVE LINE-UP. | 353 SHIFT VALVE PRESSURE REGULATOR VALVE LINE-UP. |
| 331 3-4 SHIFT COMMAND VALVE LINE-UP. | 354 LOWER VALVE BODY LEFT REAR COVER PLATE. |
| 332 3-4 HOLDING PRESSURE SHIFT VALVE LINE-UP. | 355 COVER PLATE RETAINING BOLTS (QUANTITY VARIES). |
| 333 UPPER VALVE BODY REAR COVER PLATE. | 356 COVER PLATE RETAINING BOLTS (QUANTITY VARIES). |
| 334 REAR COVER PLATE RETAINING BOLTS (QUANTITY VARIES). | 357 LOWER VALVE BODY LEFT FRONT COVER PLATE. |
| 335 LOWER VALVE BODY SCREENS (2 REQUIRED). | |
| 336 PLASTIC CHECK BALLS (4 REQUIRED). | |
| 337 STEEL CHECK BALLS (8 REQUIRED). | |
| 338 CHECK VALVE (NOTICE DIRECTION). | |

Copyright © 2009 ATSG

Figure 171

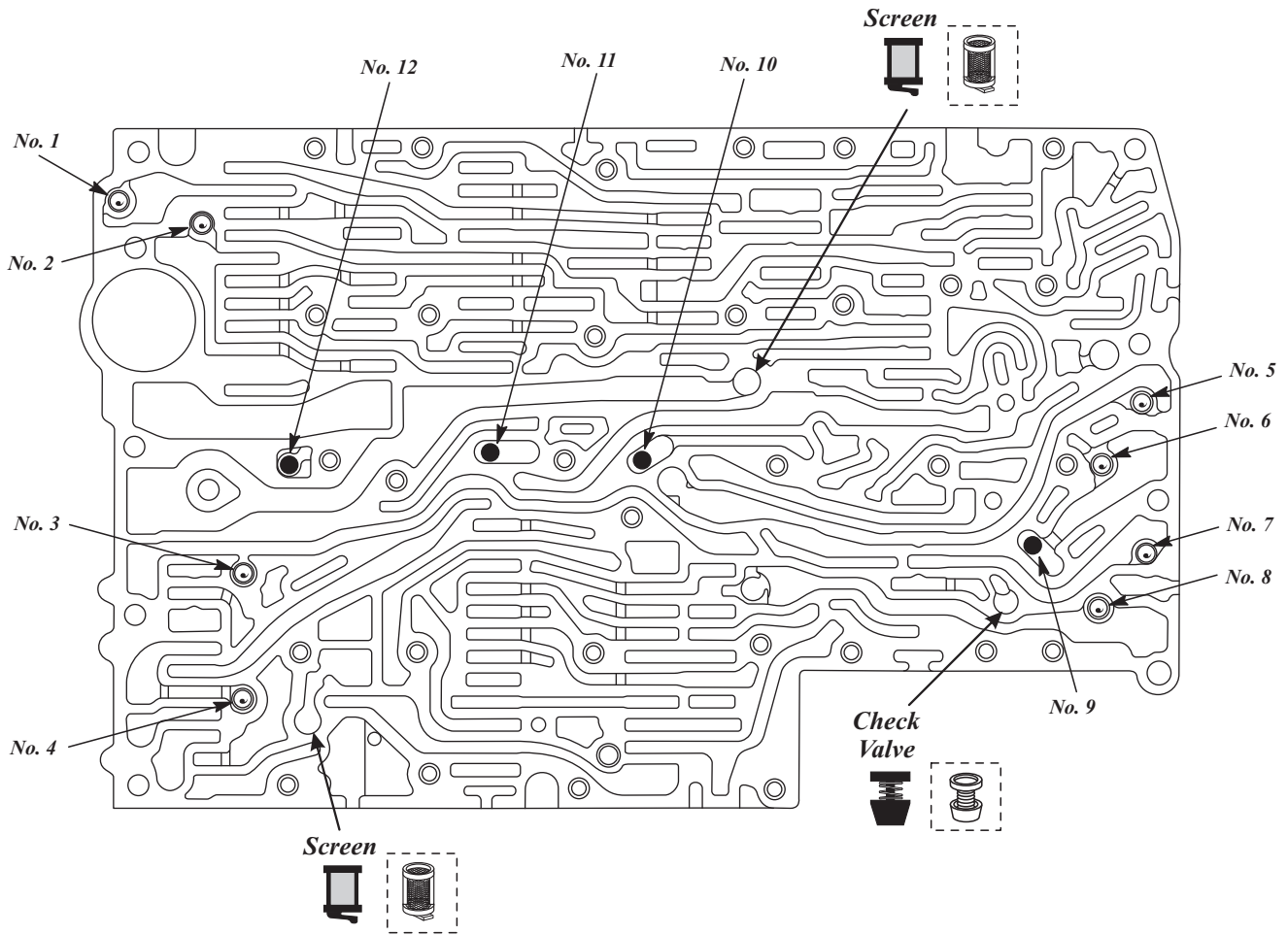
MERCEDES 722.6 "LOWER" VALVE BODY, EXPLODED VIEW



Copyright © 2009 ATSG

Figure 172

CHECK BALL LOCATION AND IDENTIFICATION



Number	Function	Size	Material
1	K1 Clutch Exhaust	5.4 MM (.215")	Steel
2	B1 Clutch Exhaust	5.4 MM (.215")	Steel
3	K2 Clutch Exhaust	5.4 MM (.215")	Steel
4	Torque Converter Clutch	5.4 MM (.215")	Steel
5	B2 Clutch Exhaust	5.4 MM (.215")	Steel
6	K3 Clutch Exhaust	5.4 MM (.215")	Steel
7	B2 Clutch Counter Exhaust	5.4 MM (.215")	Steel
8	B3 Clutch Exhaust	5.4 MM (.215")	Steel
9	K3 Shuttle Ball	5.4 MM (.215")	Plastic
10	3-4 Shift Group Shuttle Ball	5.4 MM (.215")	Plastic
11	Pressure Reducing Shuttle Ball	5.4 MM (.215")	Plastic
12	Modulator Pressure Shuttle Ball	5.4 MM (.215")	Plastic

Figure 173

TRANSMISSION FINAL ASSEMBLY

1. Install the parking gear into the bottom of the case, as shown in Figure 174.
2. Install completed B-2 clutch housing assembly into the case, as shown in Figure 175.

Note: *The feed holes must face the valve body side of the case.*

3. Install the two B-2 clutch housing retaining bolts, as shown in Figure 176, and hand tighten only at this time.

Continued on Page 110

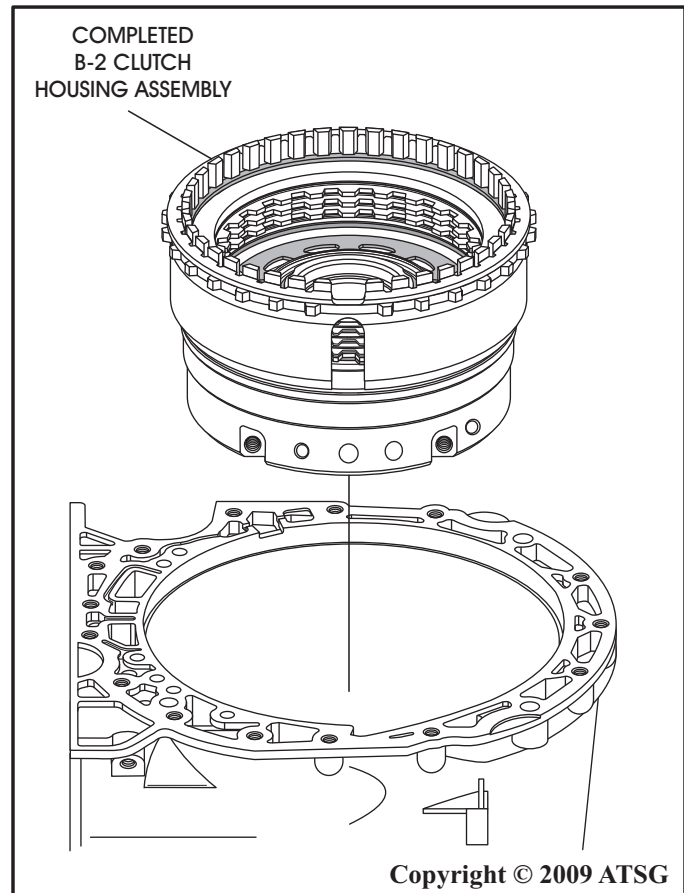


Figure 175

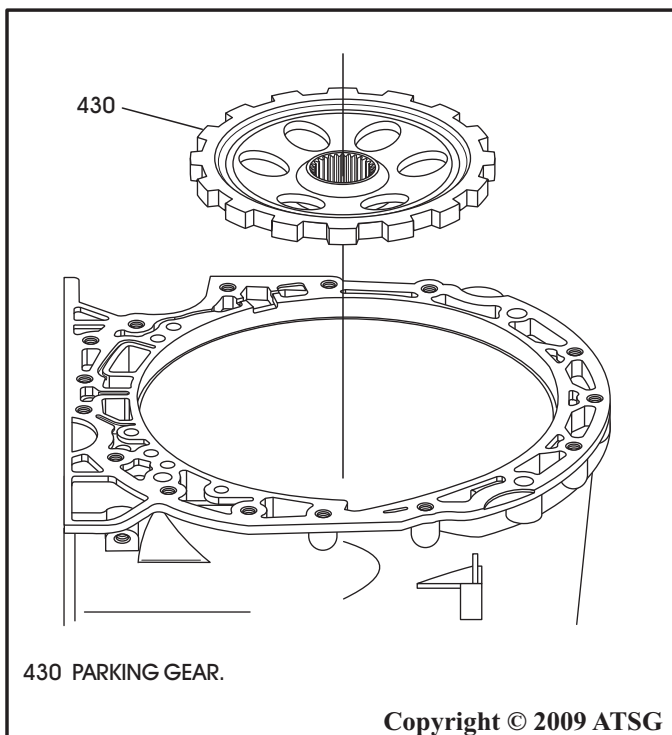


Figure 174

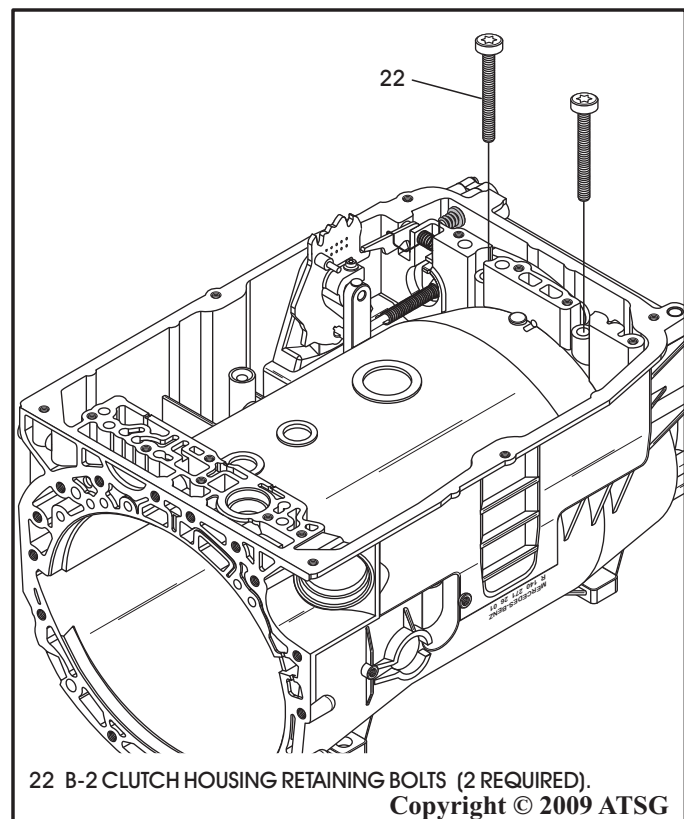


Figure 176

TRANSMISSION FINAL ASSEMBLY (CONT'D)

4. Use caution when installing B-3 clutch plates.

Caution: *The B-3 clutch may have 3, 4, or 5 "double-sided" friction plates depending on the model. Refer to the chart in Figure 177. All friction plates should be soaked in proper fluid for 30 minutes before installation.*
5. Install the B-3 clutch dished cushion plate, in the direction shown in Figure 178.
6. Install the B-3 clutch plates beginning with a steel plate and alternating with friction plates, as shown in Figure 178, until you have proper number of plates installed.

Note: *Only one thickness of B-3 steel plate is listed. Number of friction plates controlled by height of B-3 clutch piston.*
7. Install the B-3 clutch backing plate, as shown in Figure 178.
8. Install the B-3 clutch selective snap ring, as shown in Figure 178.

Continued on Page 111

B-3 CLUTCH QUANTITY CHART BY MODEL				
TRANSMISSION MODEL	LINED PLATE	STEEL PLATE	BACK. PLATE	THIN APPLY PLATE
722.600/660	3	2	1	1
722.601/602/603/610	3	2	1	1
722.604/606/609/617	4	3	1	1
722.605/607/608/611/614 618/662/664/699	4	3	1	1
722.665	4	3	1	1
722.620/621/624/626/627 628/630/633/636/666	5	4	1	1
722.622/623/625 631/632/663/669	5	4	1	1
722.629/634/661	5	4	1	1

The number of B-3 friction plates used is model dependant and determined by the backing plate snap ring location and the thickness of the steel plates.

Copyright © 2009 ATSG

Figure 177

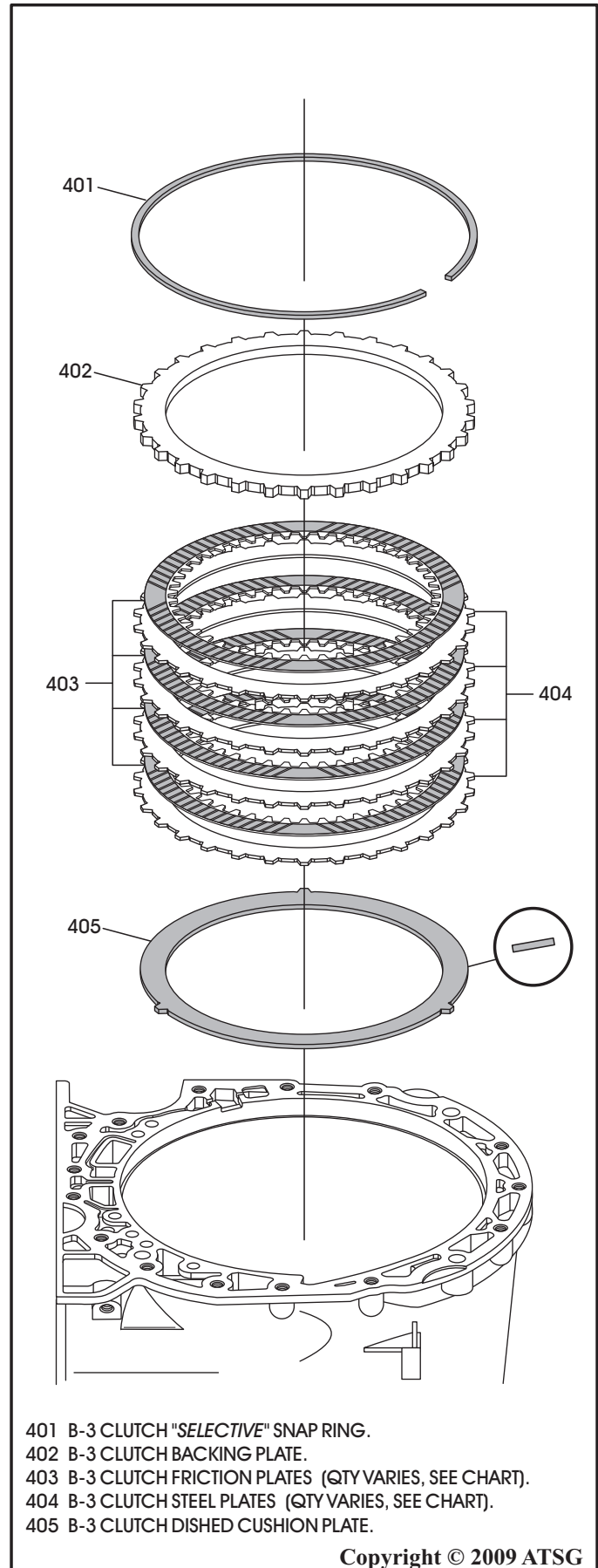


Figure 178

TRANSMISSION FINAL ASSEMBLY (CONT'D)

9. Measure B-3 clutch clearance using a feeler gauge between the selective snap ring and the backing plate, as shown in Figure 179.
10. B-3 clutch clearance is the same for all models and should be 1.0 - 1.4mm (.039" - .055"), as shown in Figure 179.
11. Change the selective snap ring as necessary to obtain the proper clutch clearance. There are 6 different snap ring thickness' available and are listed in Figure 179.
12. Install the completed center and rear planetary gearset, as shown in Figure 180, by rotating back and forth as you have 2 sets clutches to engage.

13. Slide yoke on the output shaft splines to assist in rotating the assembly, if necessary.

Note: Ensure number 5 thrust bearing is still in place, as shown in Figure 180. The number 4 thrust bearing race was installed on the K-2 clutch housing.

Continued on Page 112

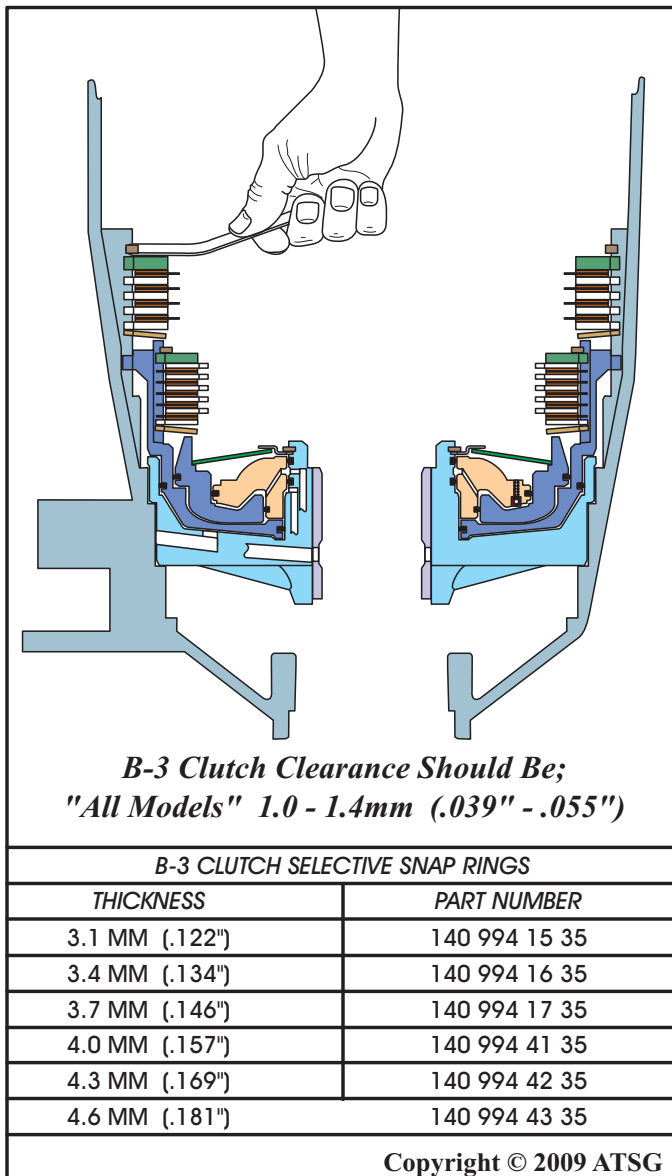


Figure 179

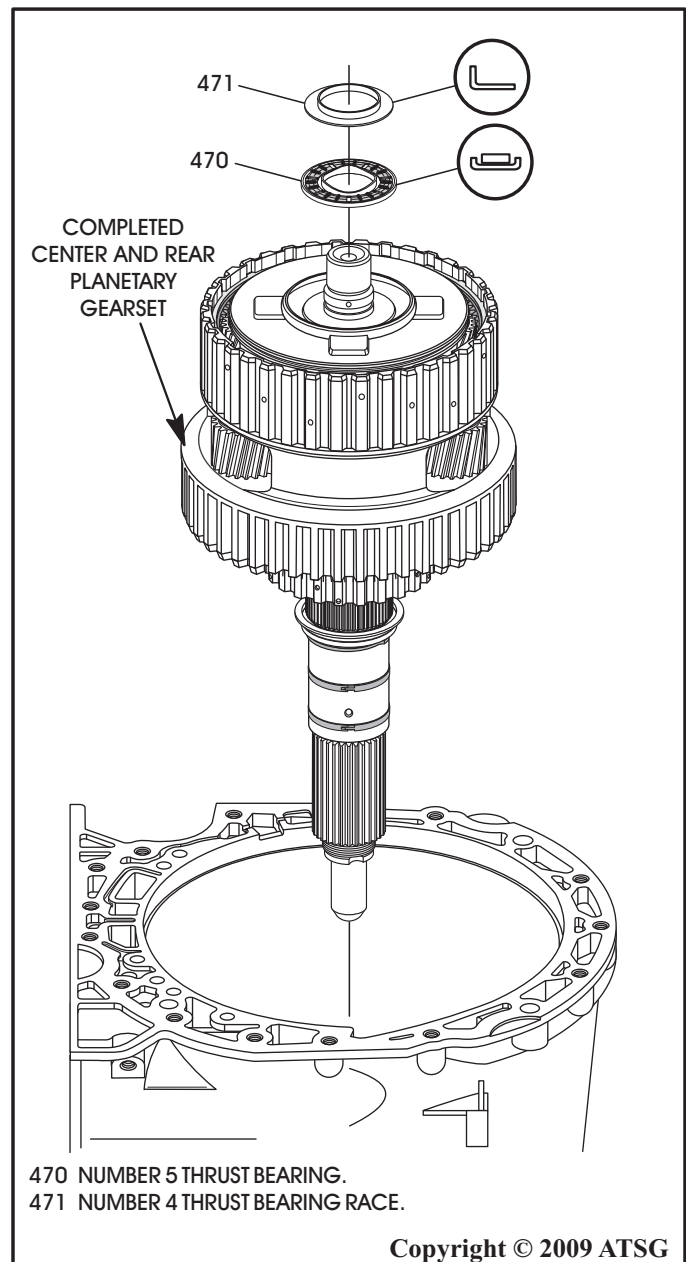


Figure 180

TRANSMISSION FINAL ASSEMBLY (CONT'D)

14. Lay completed converter housing, oil pump and B-2 clutch on work bench face down, as shown in Figure 181, on blocks, as the turbine shaft protrudes past the face of converter housing.
 15. Ensure No 2 & 3 thrust bearings are still in place and install completed K-1 clutch housing into the B-1 clutches, as shown in Figure 181, by rotating back and forth until fully seated.
 16. Install completed K-2 clutch housing into the K-1 clutches, as shown in Figure 181, by rotating back and forth until fully seated.
- Note: Ensure number 4 thrust bearing race is still stuck to back side of K-2 clutch housing.**
17. Gently roll the complete assembly over on the bench and install a small pair of vice grips on the turbine shaft just above the stator, as shown in Figure 182, carefully so as not to damage the turbine splines.

Continued on Page 113

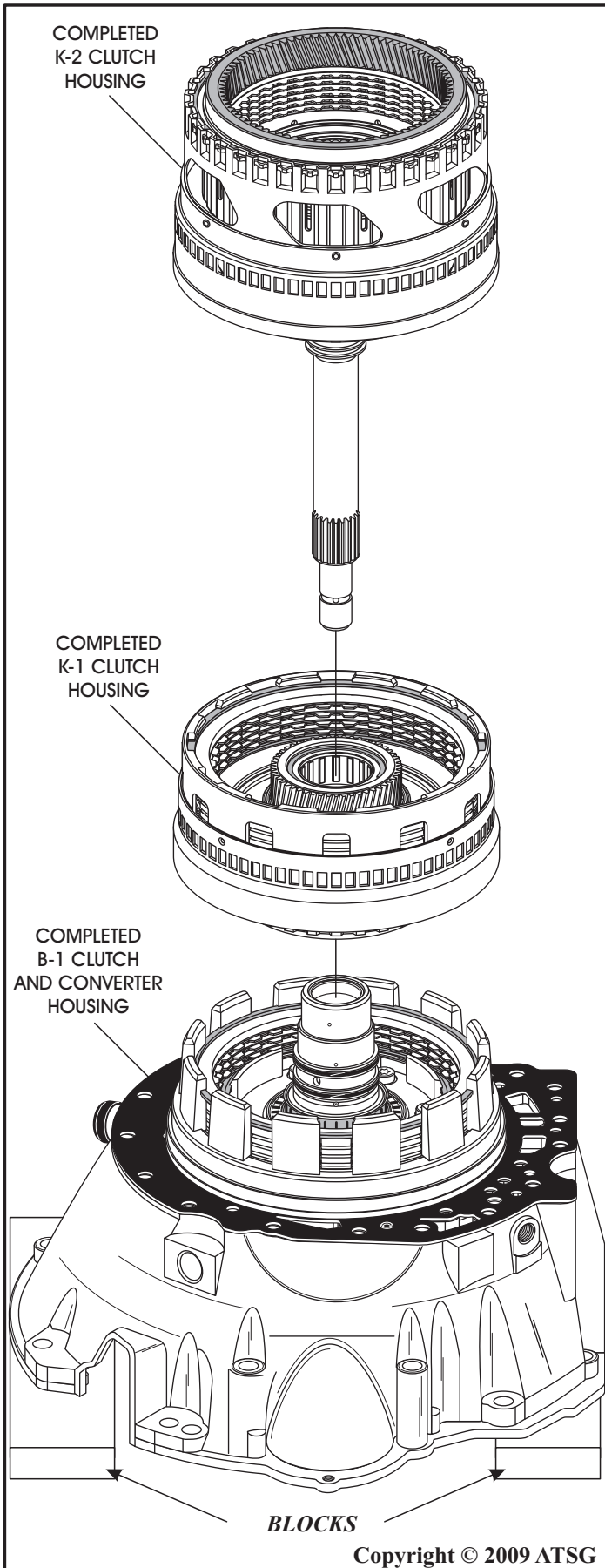


Figure 181

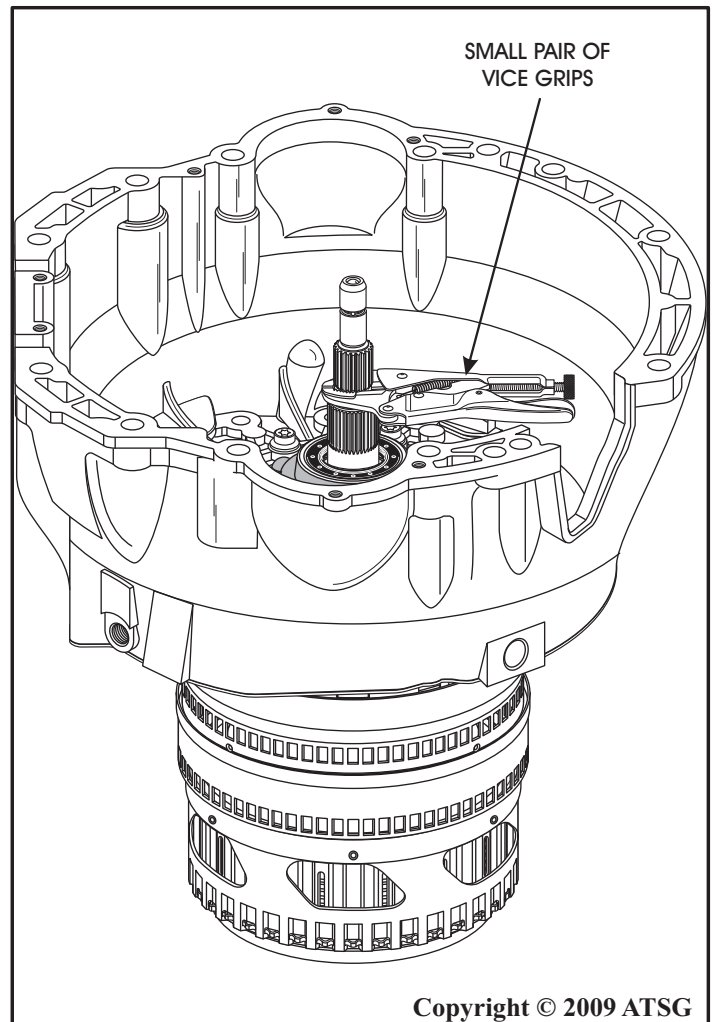


Figure 182

TRANSMISSION FINAL ASSEMBLY (CONT'D)

18. Using a helper if necessary, install the completed assembly into the transmission case, as shown in Figure 183.
19. Rotate the vice grips until fully seated, usually less than 1 turn, and then remove vice grips.
20. Install the 15 required converter housing to case retaining bolts, as shown in Figure 184, torque bolts to 20 N·m (14.7 ft.lb.) (See Figure 185).

Many thanks to "Dino" of Lee-Myles Transmission for the "Vice-Grip" tip. It works very well.

Continued on Page 114

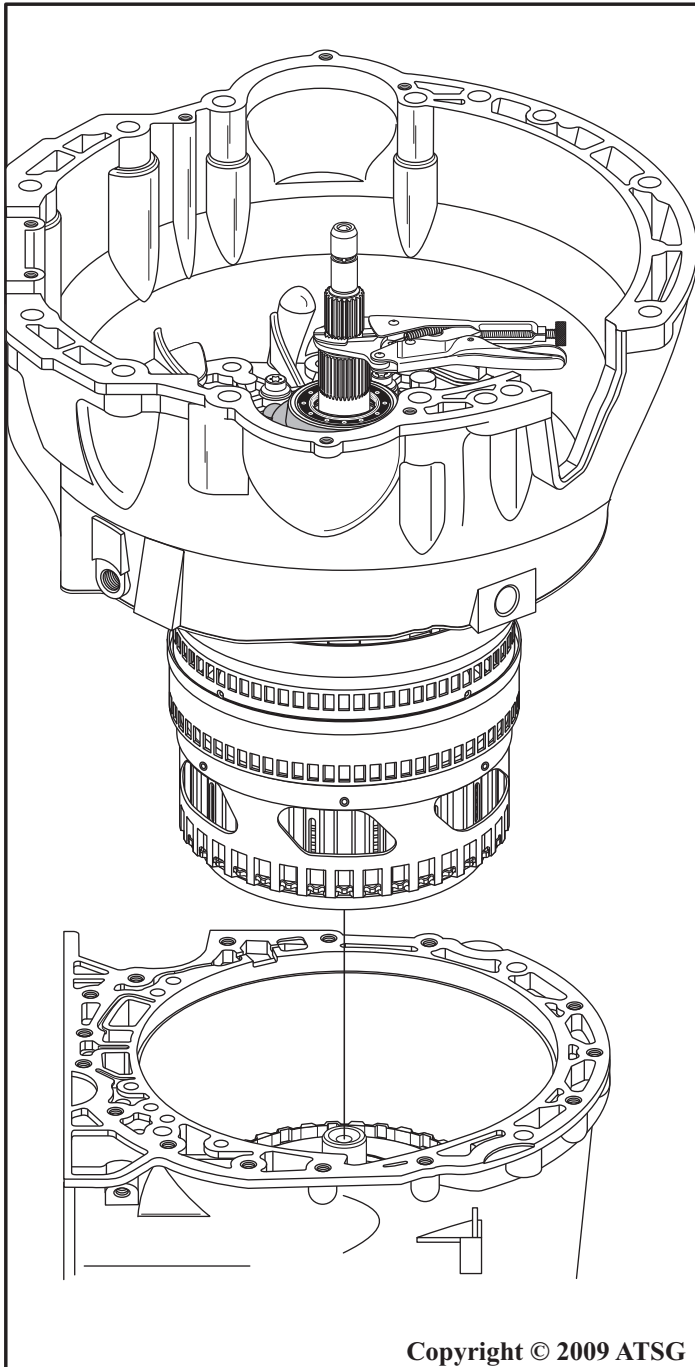


Figure 183

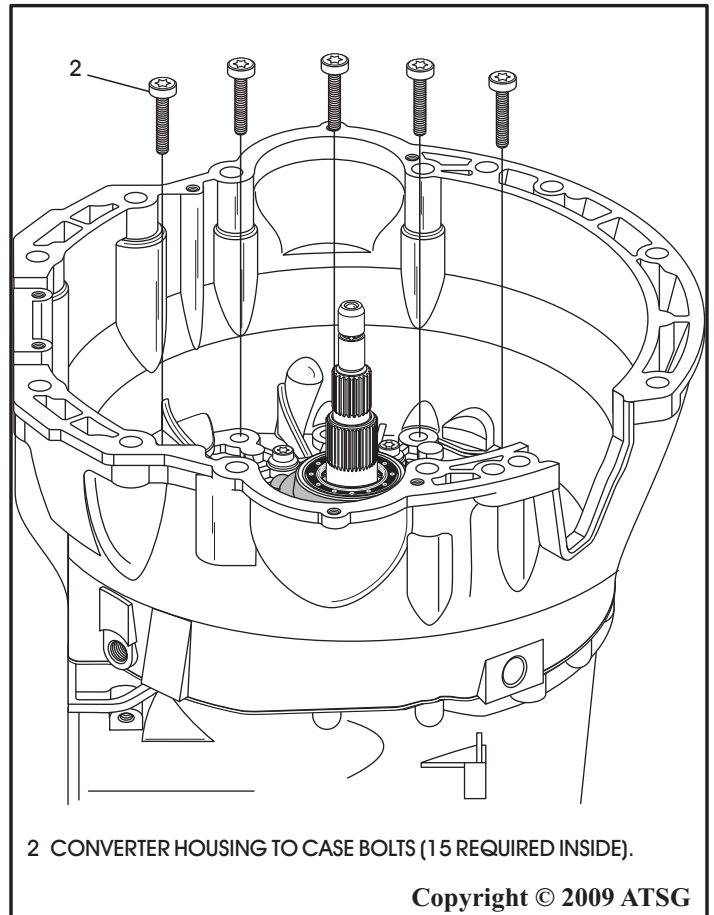


Figure 184

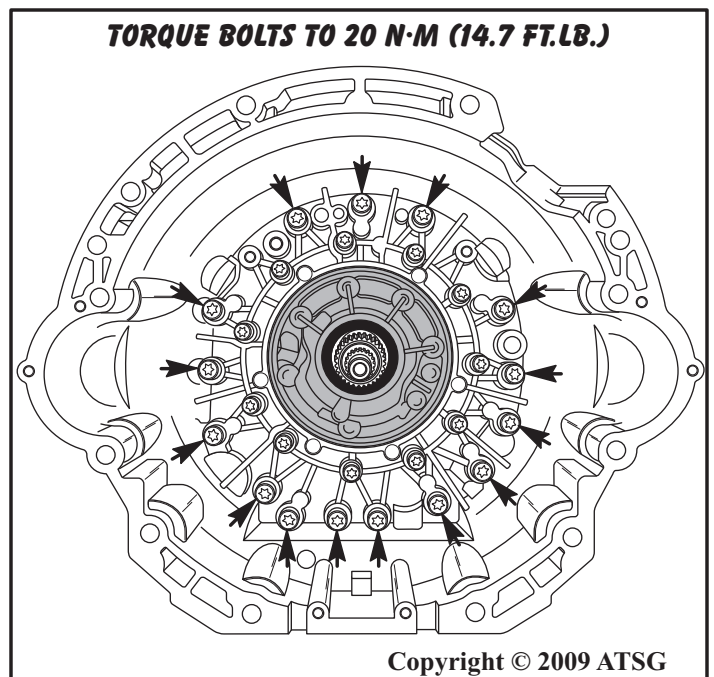


Figure 185

**TORQUE B-2 HOUSING BOLTS TO
16 N·M (141 IN.LB.)**

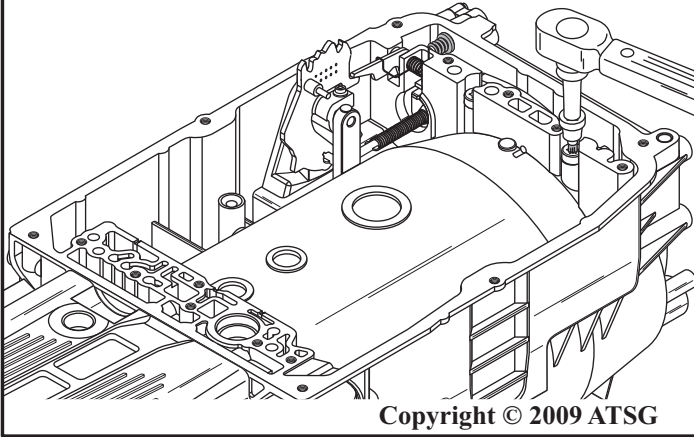


Figure 186

TRANSMISSION FINAL ASSEMBLY (CONT'D)

21. Rotate transmission in fixture so pan surface is facing up, as shown in Figure 186, and torque the B-2 clutch housing retaining bolts to 16 N·m (141 in.lb.).
22. Rotate transmission in fixture so output shaft is facing up, as shown in Figure 187, and ensure transmission is *not* in the Park position and no shims installed.
23. Using a cross-bar and dial caliper, measure from the cross-bar to the surface of the hub on parking gear, as shown in Figure 187, and record this as Measurement "A".
24. Measure from the cross-bar to bottom of the ball bearing pocket in case, as shown in Figure 188, and record this as Measurement "B".

Continued on Page 115

MEASUREMENT "A"

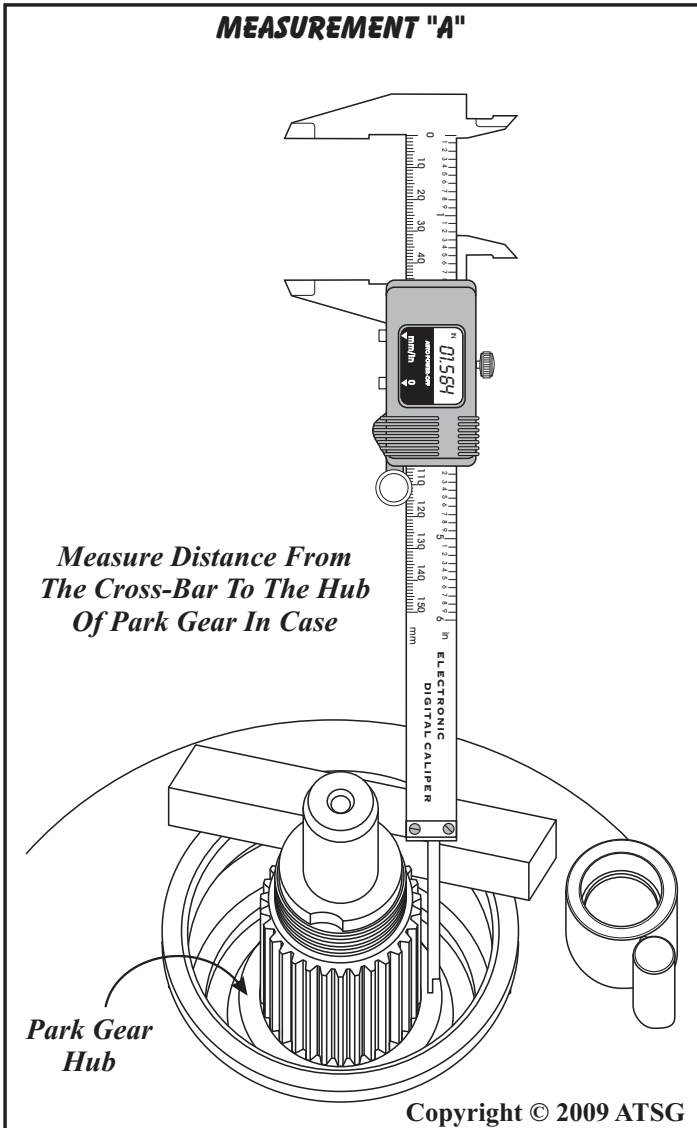


Figure 187

MEASUREMENT "B"

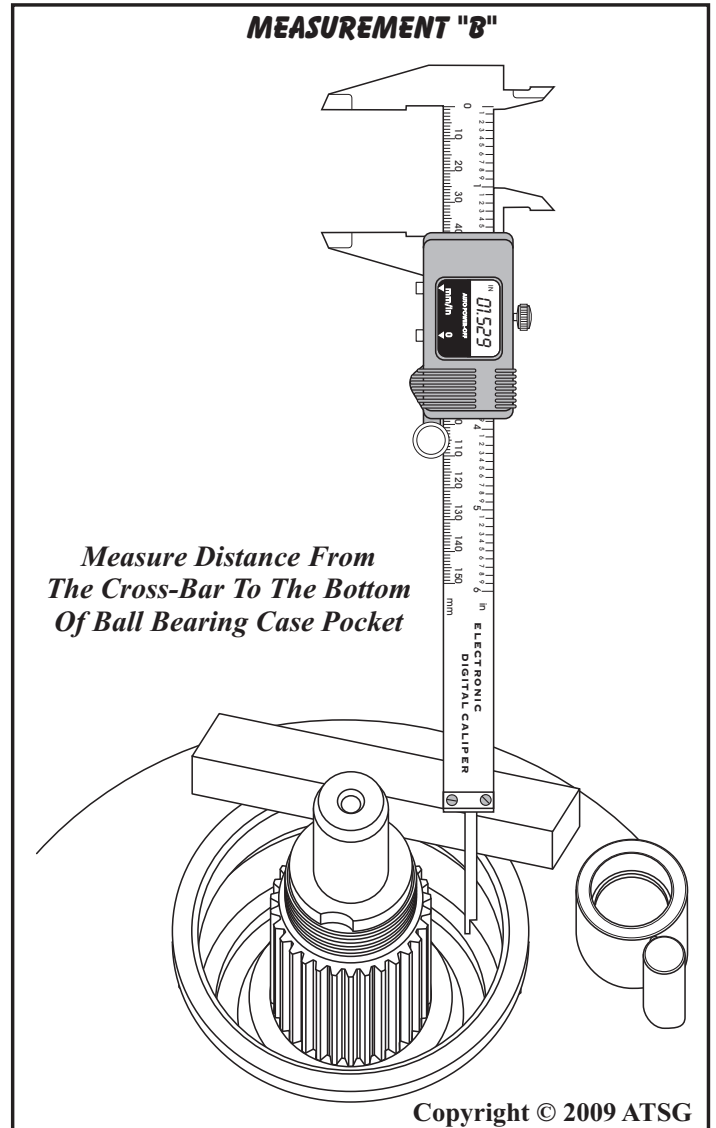


Figure 188

TRANSMISSION FINAL ASSEMBLY (CONT'D)

25. To calculate end-play subtract Measurement "B" from Measurement "A".

Example:

Measurement "A" = 39.72mm (1.564")

Minus

Measurement "B" = 38.83mm (1.529")

Equals 0.90mm (.035")

26. End-play must be 0.3-0.5mm (.012"-.020") and you have a measurement of .035" in the example used above, so you will need a 0.5mm (.020") shim to obtain proper end-play 0.4mm (.015").

27. There are 4 different thickness shims available and are listed in Figure 189.

28. Install the proper shim from your calculation, into transmission on top of parking gear hub, as shown in Figure 189.

29. Install ball bearing into transmission housing, as shown in Figure 189.

Note: The closed side of the plastic cage faces the parking gear, as shown in Figure 189.

30. Install the ball bearing retaining ring and ensure it is properly seated in the groove.

31. Check with a feeler gauge and ensure there is no play between the bearing and snap ring, as shown in Figure 190.

Note: If the snap ring will not go in, a thinner ring must be used. If there is play between the ring and bearing, a thicker ring must be used.

32. Retaining rings are available in three different thickness' of 2.0mm (.079"), 2.1mm (.083"), and 2.2mm (.087").

Continued on Page 116

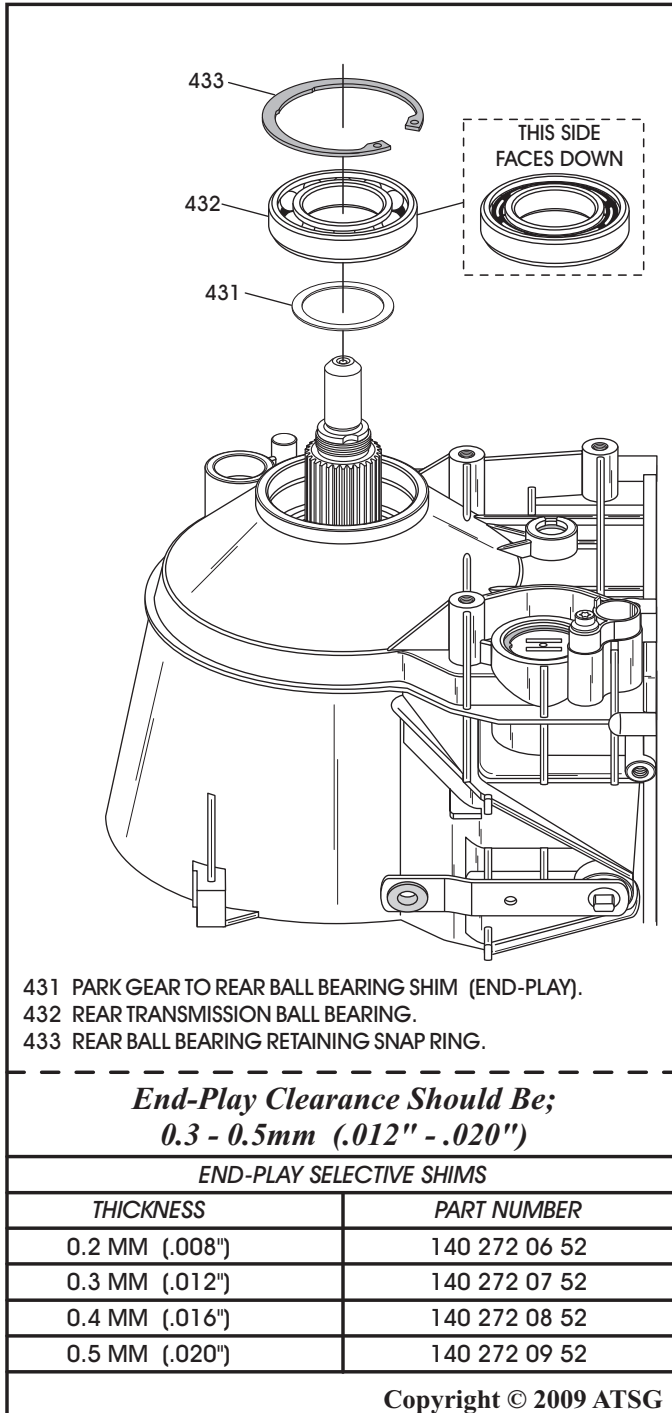


Figure 189

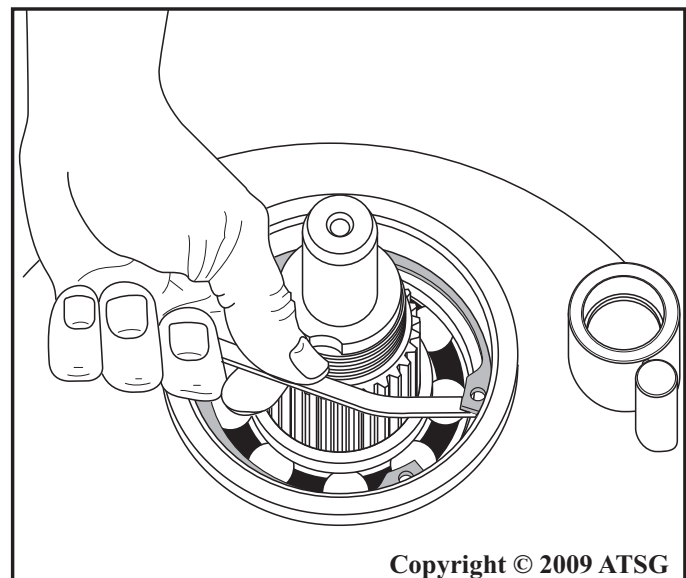


Figure 190

TRANSMISSION FINAL ASSEMBLY (CONT'D)

33. Install output shaft washer in transmission, as shown in Figure 191.
34. Install the rear transmission seal, as shown in Figure 191, using proper seal driver.
35. Lubricate the transmission yoke seal surface with a small amount of Trans-Jel®, and install yoke, as shown in Figure 191.
36. Place the transmission in the Park position and install the nut, as shown in Figure 191, using a 30mm 12 point socket.
37. Torque the nut to 200 N·m (147.5 ft.lb.), and stake shoulder of the nut into key slot of output shaft using a small punch.
38. Install the two case to converter housing bolts and torque to 20 N·m (14.7 ft.lb.), as shown in Figure 192.

39. Rotate transmission, install dial indicator and verify transmission the end-play, as shown in Figure 193.

Continued on Page 117

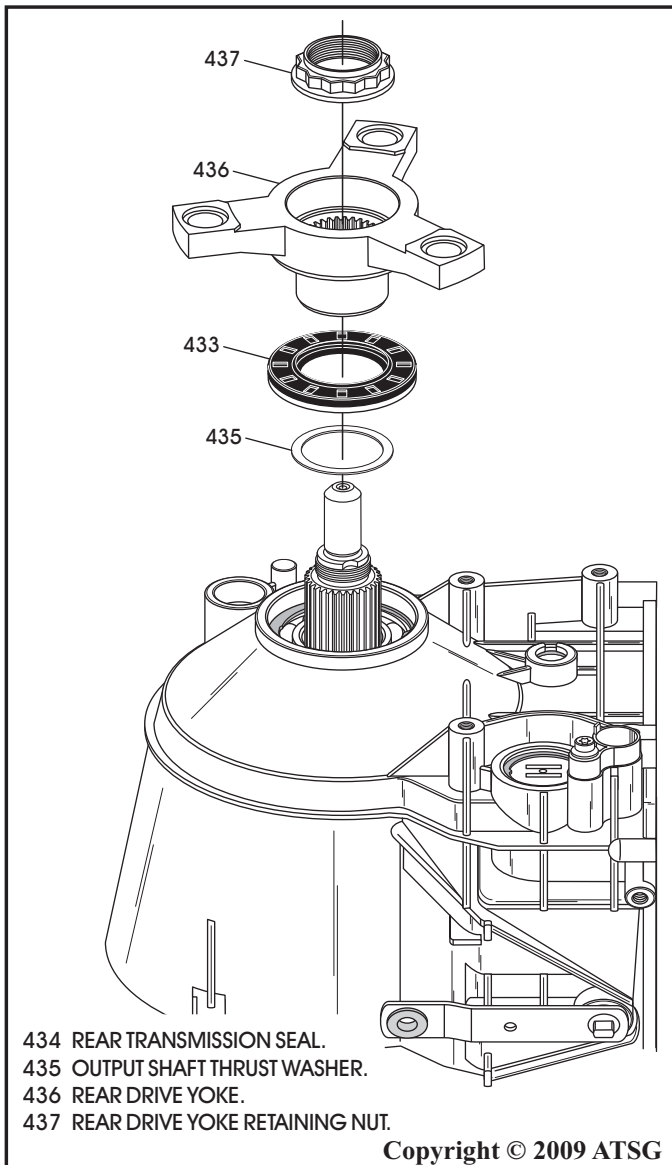


Figure 191

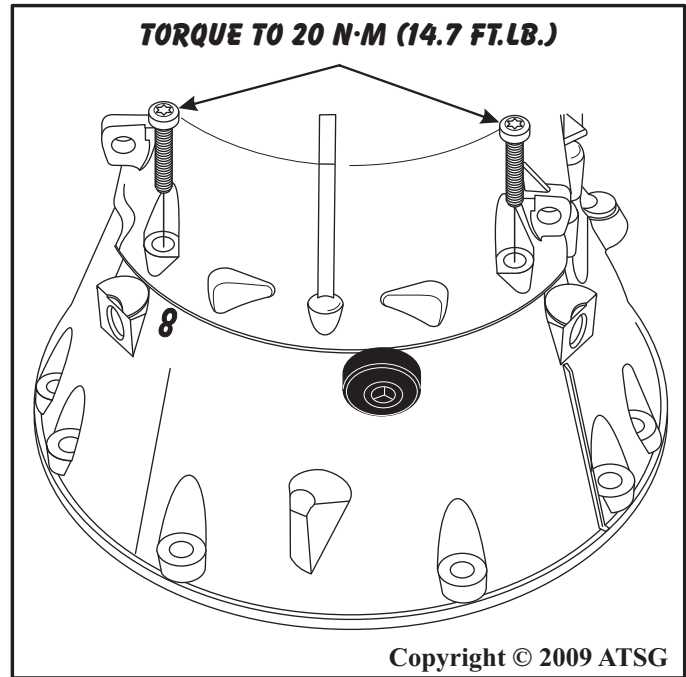


Figure 192

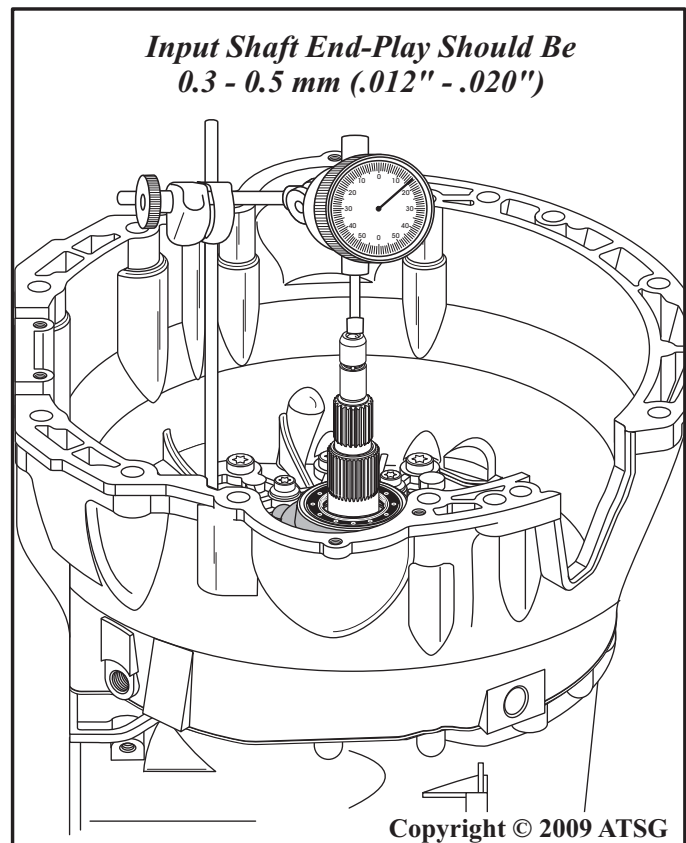


Figure 193

TRANSMISSION FINAL ASSEMBLY (CONT'D)

40. Rotate transmission so that the pan surface is facing up, as shown in Figure 194.
41. Install the completed valve body assembly, as shown in Figure 194.
Note: Ensure manual valve engages on the detent lever pin (See inset Figure 194).

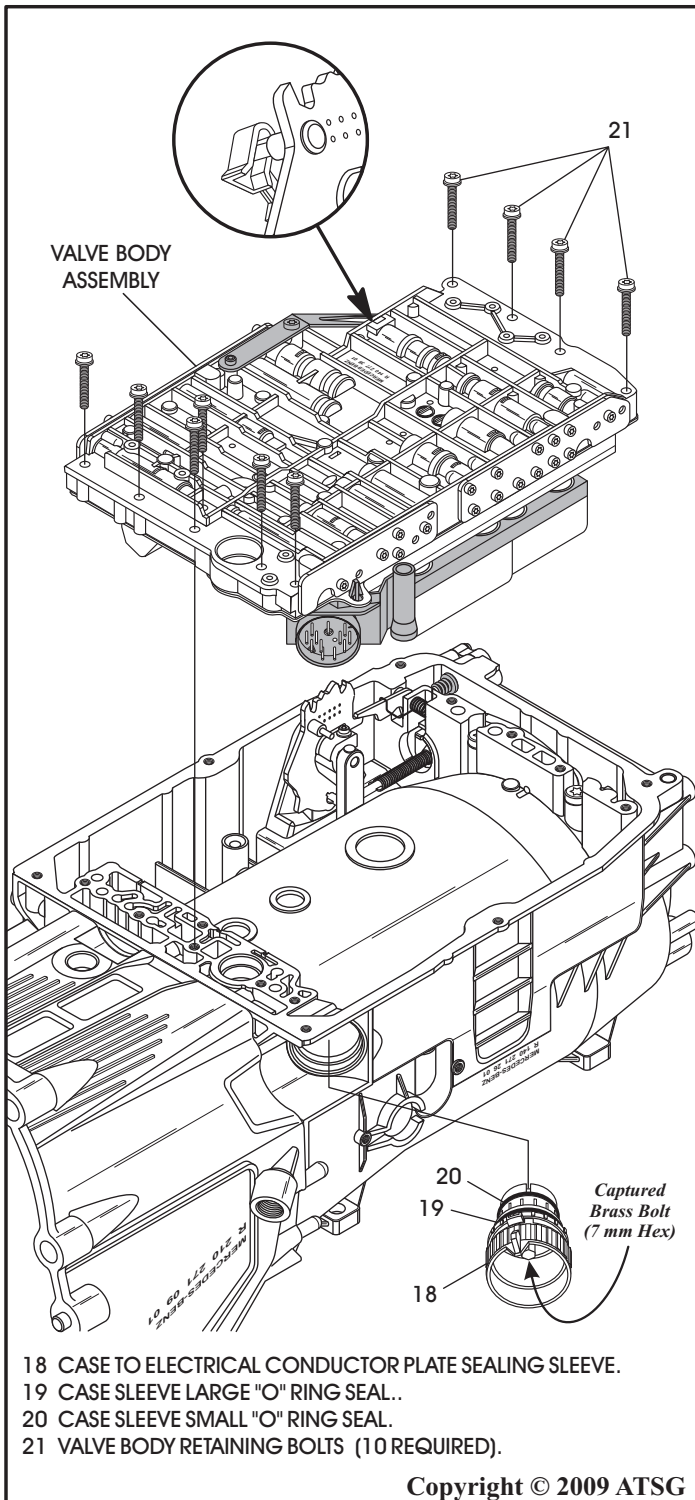


Figure 194

42. Install the ten valve body retaining bolts, as shown in Figure 194, and torque valve body bolts and the inside detent spring bolt to 8 N·m (71 in.lb.).
43. Install new "O" rings on the conductor plate sealing sleeve, as shown in Figure 194.
Note: There have been several changes to the "O" rings for leakage concerns. The latest version is White in color.
44. Install the conductor plate sleeve, as shown in Figure 194, and tighten the 7mm brass screw.
45. Install new "O" ring seal on the oil filter neck, lube with small amount of Trans-Jel® and install oil filter, as shown in Figure 195.
Note: Ensure the oil filter is fully seated, as it goes through valve body and into the case.

Continued on Page 118

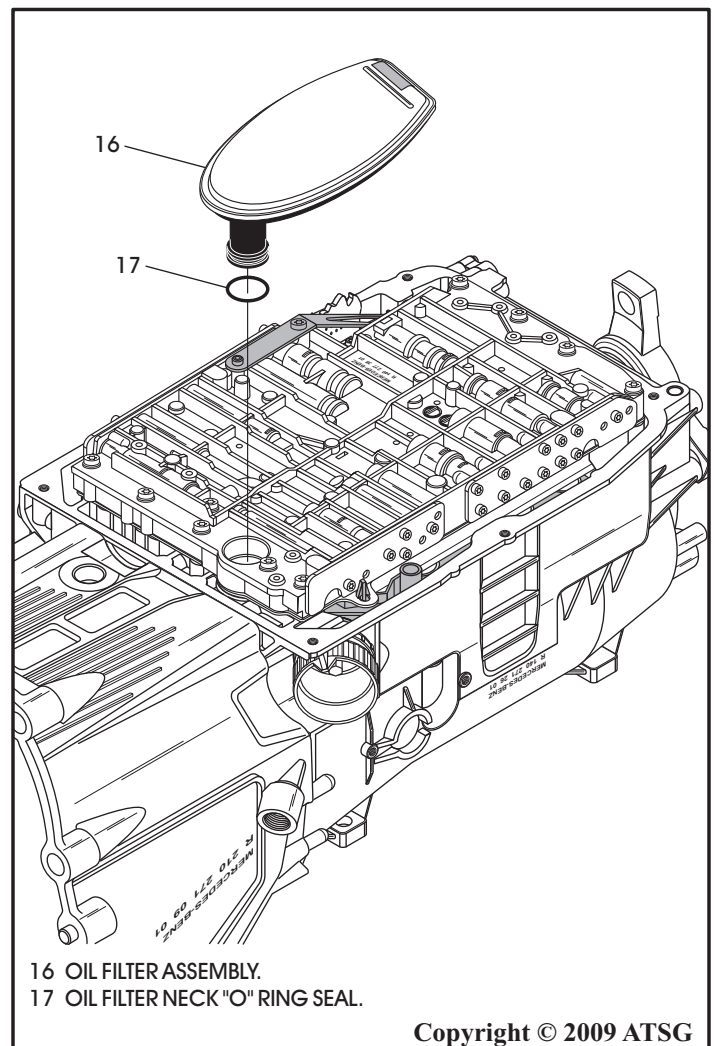


Figure 195

TRANSMISSION FINAL ASSEMBLY (CONT'D)

46. Install new gasket on the oil pan drain plug, as shown in Figure 196, install the drain plug and torque to 20 N·m (14.7 ft.lb.).
 47. Install a new gasket to the oil pan, as shown in Figure 196, and install oil pan onto transmission.
 48. Install the 6 spacers and their bolts, as shown in Figure 196.
- Note: 1 of the spacers has a tab with a threaded hole, for the external heat shield and goes directly above the case connector sleeve.*
49. Torque all oil pan retaining bolts, as shown in Figure 197, to 8 N·m (71 in.lb.).

Continued on Page 119

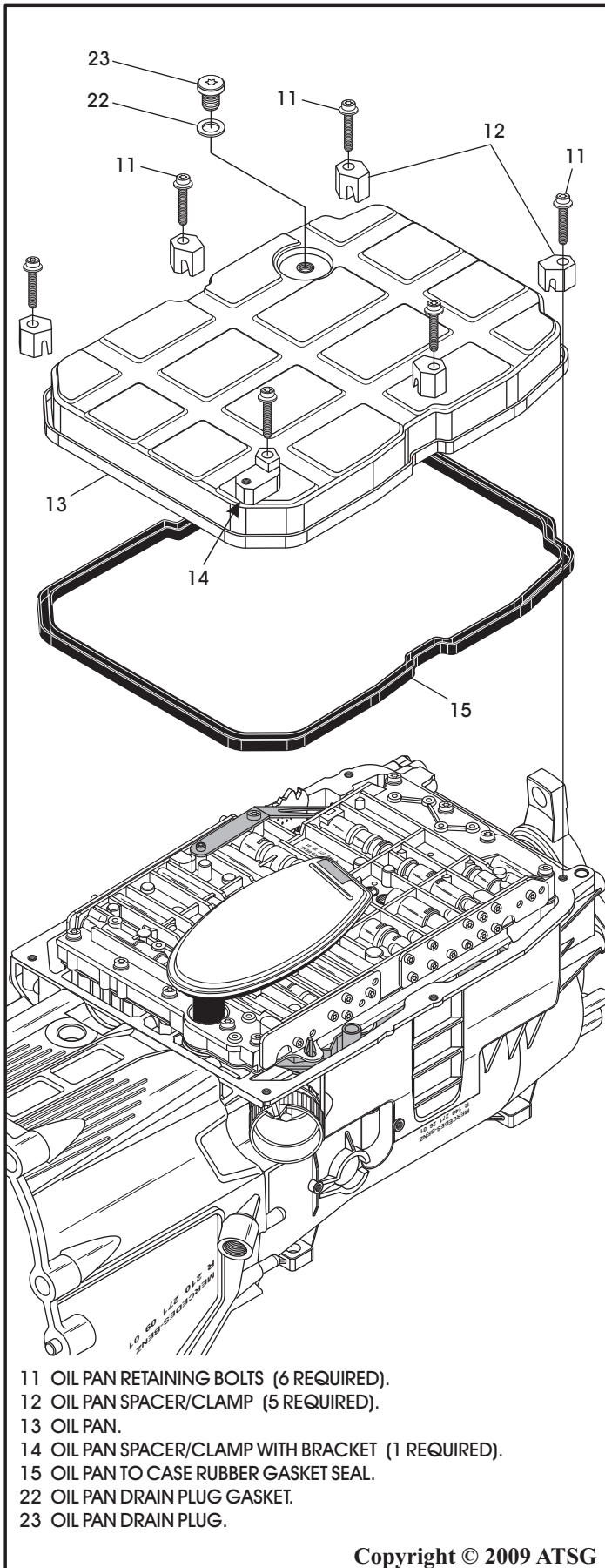


Figure 196

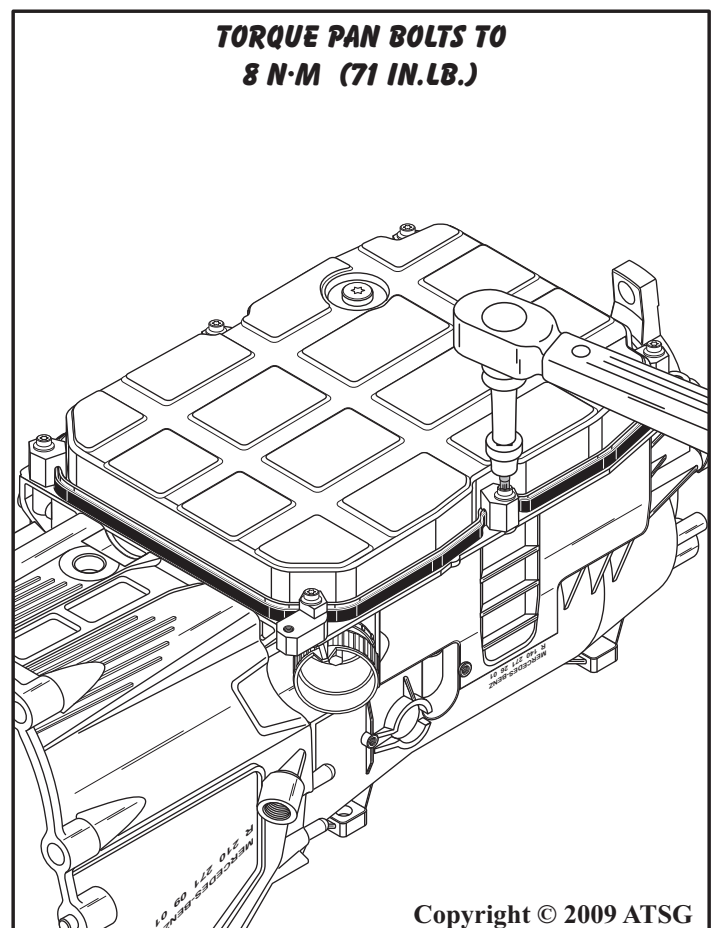


Figure 197

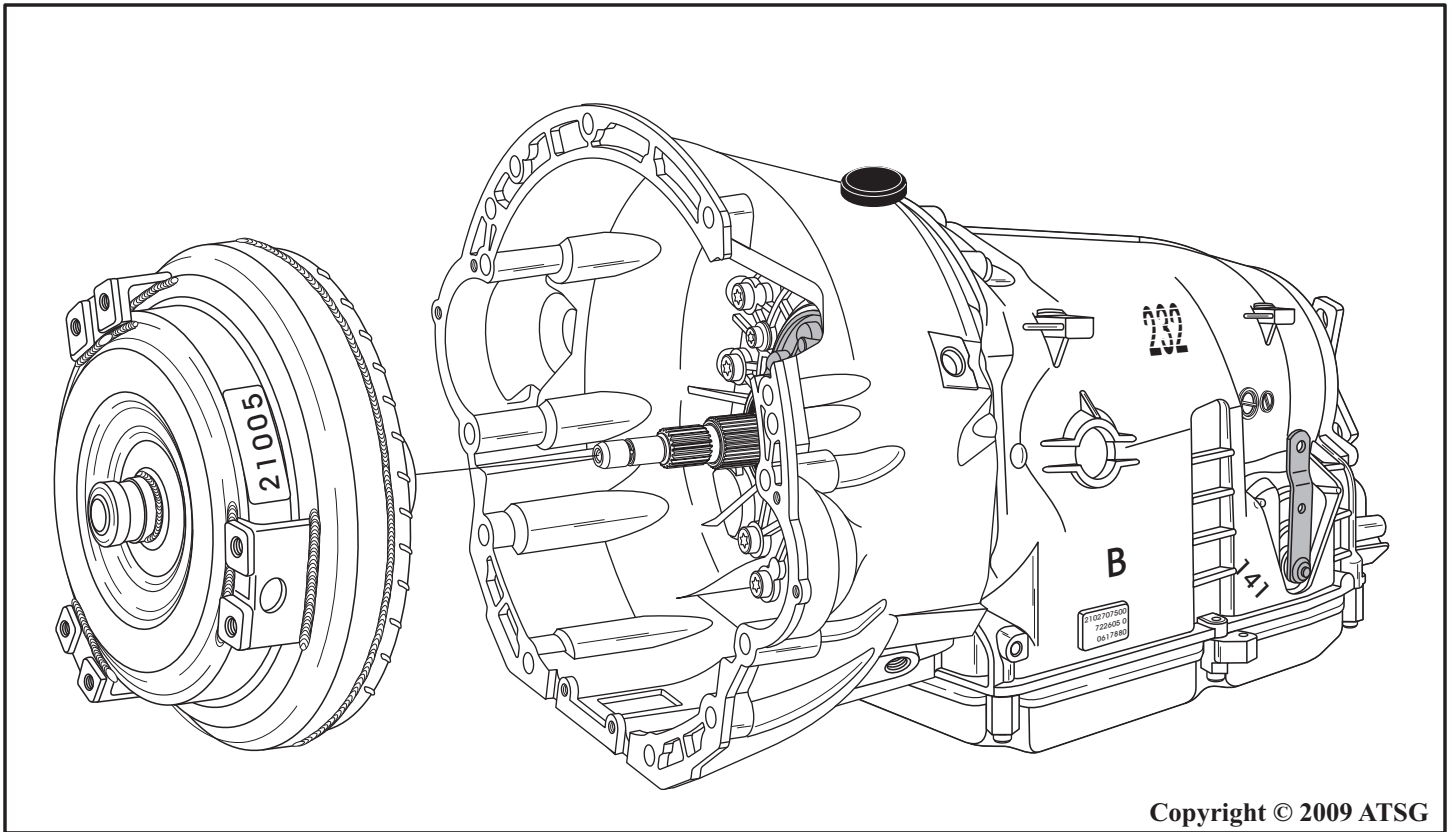


Figure 198

TRANSMISSION FINAL ASSEMBLY (CONT'D)

50. Lubricate the outside diameter of the converter hub with small amount of Trans-Jel®, and install torque converter, as shown in Figure 198.
51. Measure distance "A" from the torque converter pad to the face of converter housing, as shown in Figure 199.
52. If converter is properly installed, distance "A" will be 55mm (2.17 inch).

**CONGRATULATIONS
YOU ARE FINISHED!**

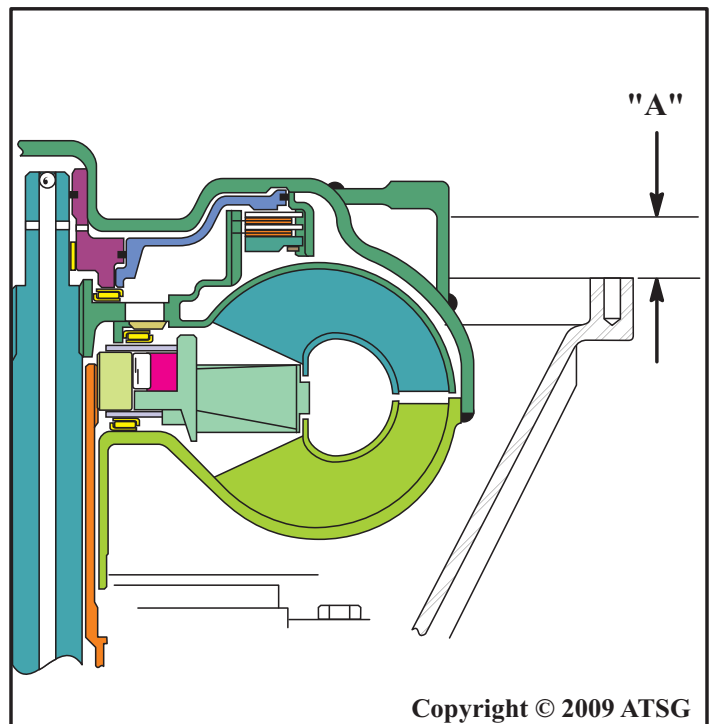


Figure 199



Technical Service Information

TORQUE SPECIFICATIONS			
Component	N•m	Ft.Lb.	In.Lb.
Converter Housing to Case	20	14.7	
Converter Housing to B-1 Clutch Housing	10		88
B-1 Clutch Housing to Pump Body	20	14.7	
Valve Body and Solenoid Bolts	8		71
Valve Body Cover Bolts	4		35
Inside Detent Spring to Valve Body	8		71
Inside Detent Lever Linkage	8		71
Valve Body to Case Bolts	8		71
Case To B-2 Clutch Housing	16		141
Transmission Rear Yoke Nut	200	147.5	
Oil Pan Drain Plug	20	14.7	
Oil Pan to Case	8		71
Transmission to Engine Bolts	38	28	
Torque Converter to Drive Plate	50	37	
Copyright © 2009 ATSG			

Figure 200

*We wish to send out a hearty "Thank You" to
Rich Varhan at European Transmission Exchange
for supplying the transmission that made this manual possible.*

Copyright © 2009 ATSG