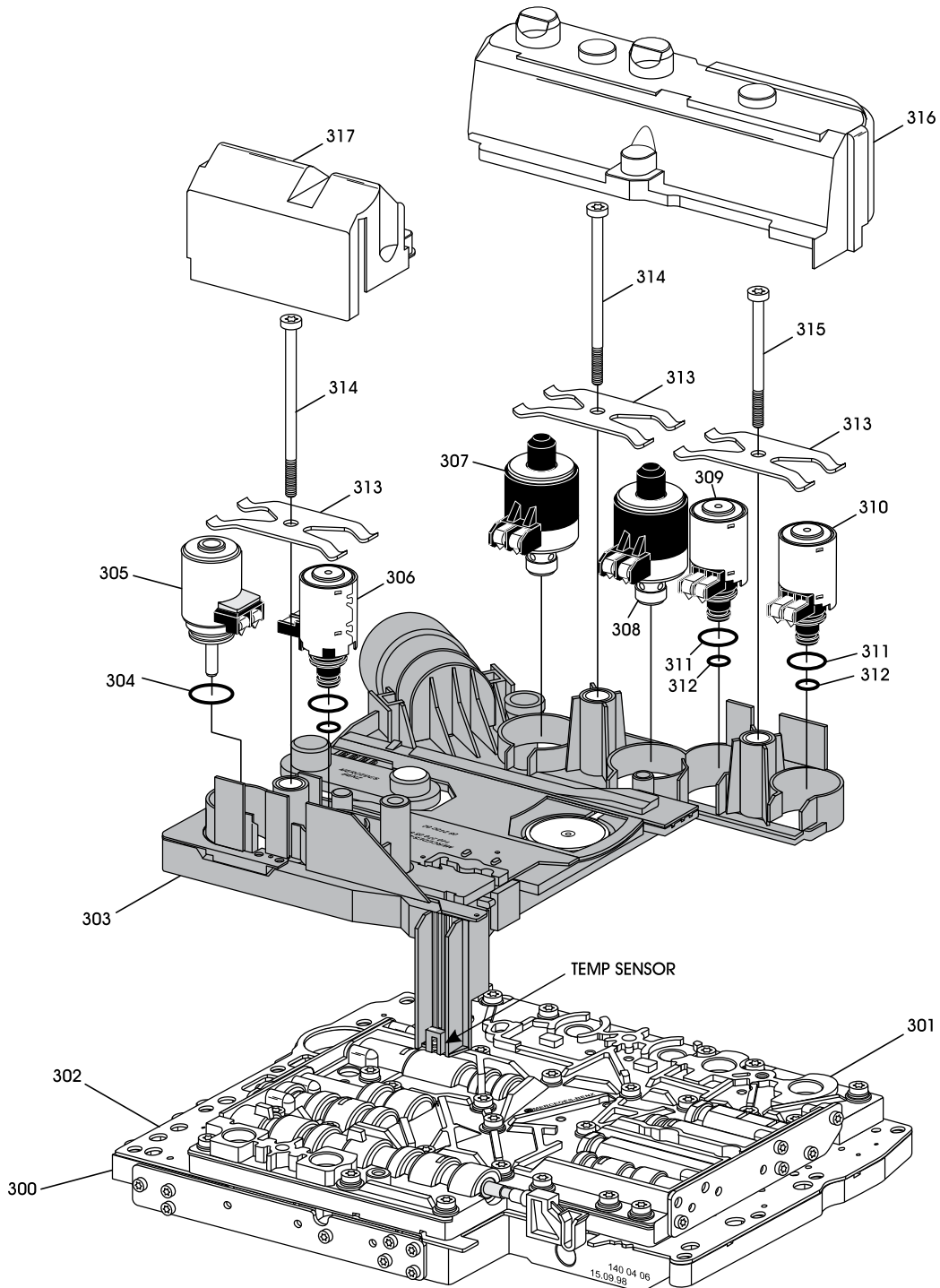


MERCEDES 722.6 VALVE BODY ASSEMBLY, EXPLODED VIEW



- 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.

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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.

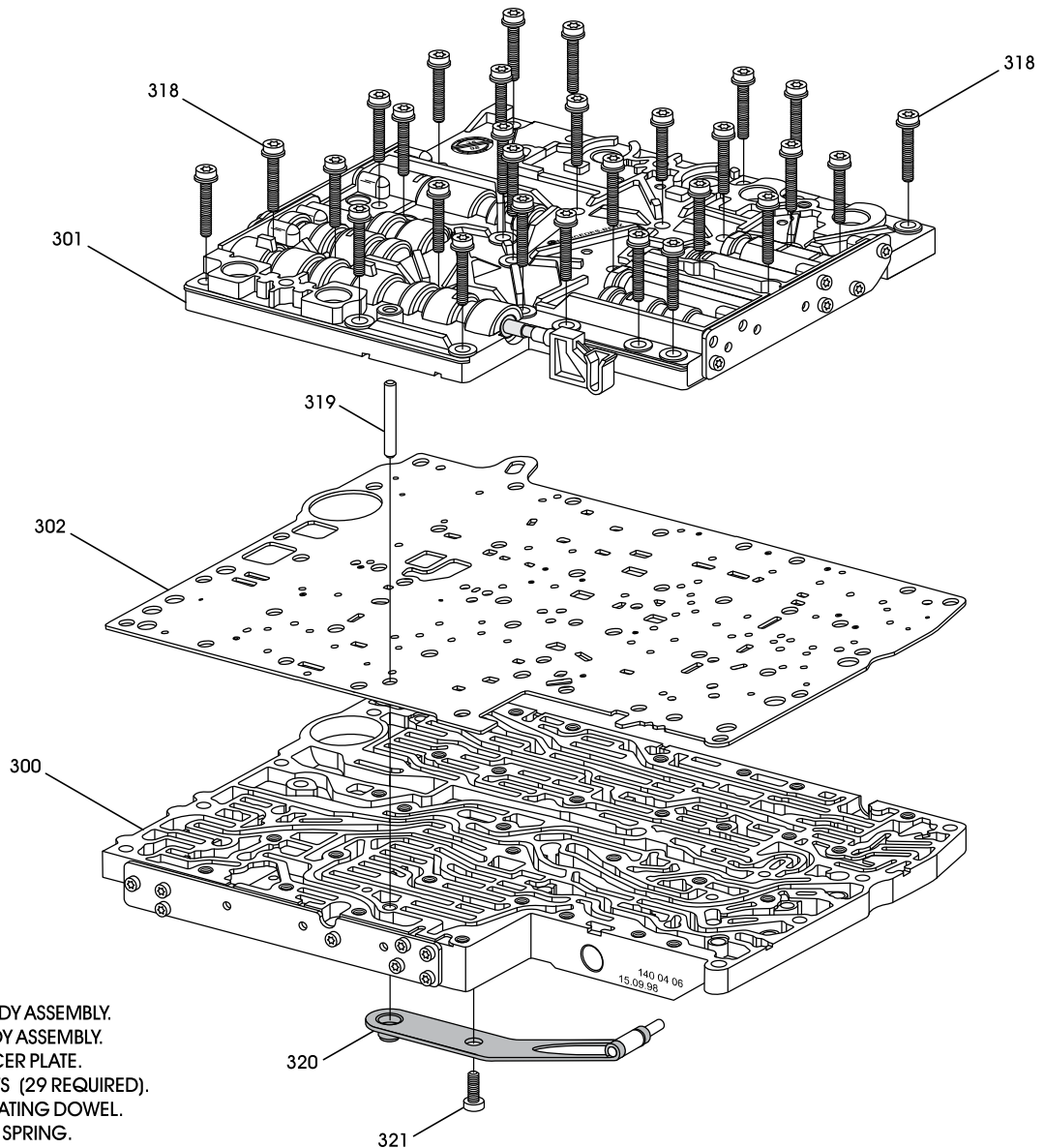
4. Remove all of the solenoids from the electrical conductor plate, as shown in Figure 167, and set them aside for now.

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

MERCEDES 722.6 VALVE BODY ASSEMBLY, EXPLODED VIEW



- 300 LOWER VALVE BODY ASSEMBLY.
- 301 UPPER VALVE BODY ASSEMBLY.
- 302 VALVE BODY SPACER PLATE.
- 318 VALVE BODY BOLTS (29 REQUIRED).
- 319 VALVE BODY LOCATING DOWEL.
- 320 INTERNAL DETENT SPRING.
- 321 INTERNAL DETENT SPRING RETAINING BOLT.

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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.

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.

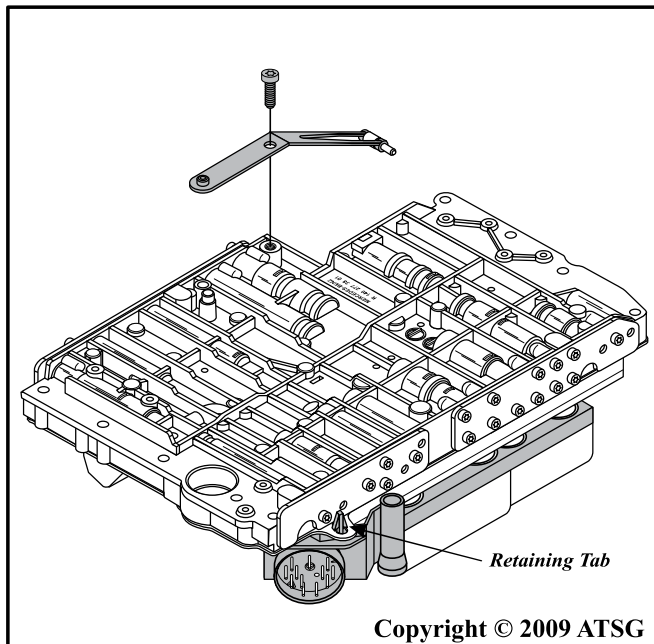
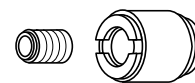


Figure 169

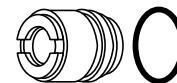
Continued on Page 105

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

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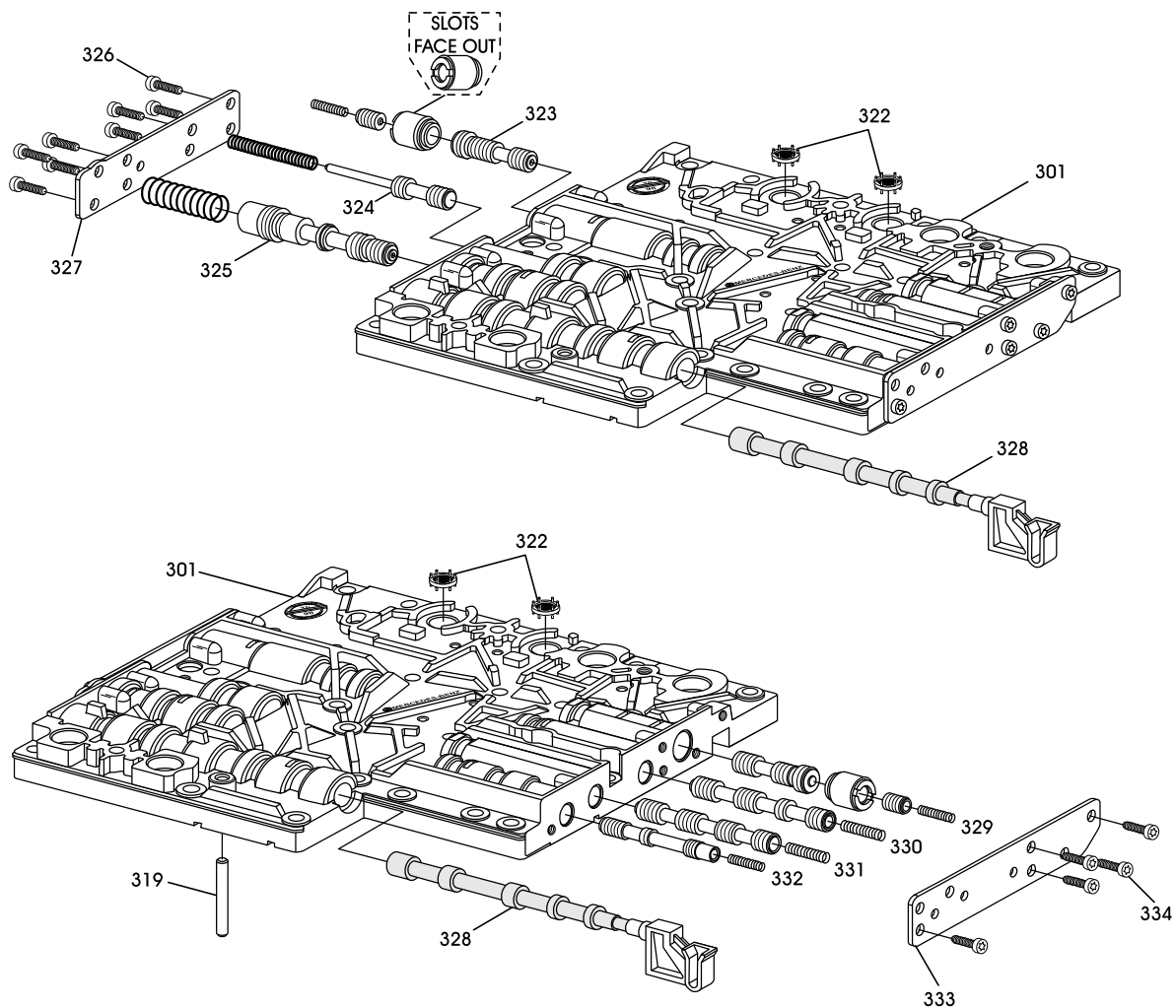
Figure 170

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

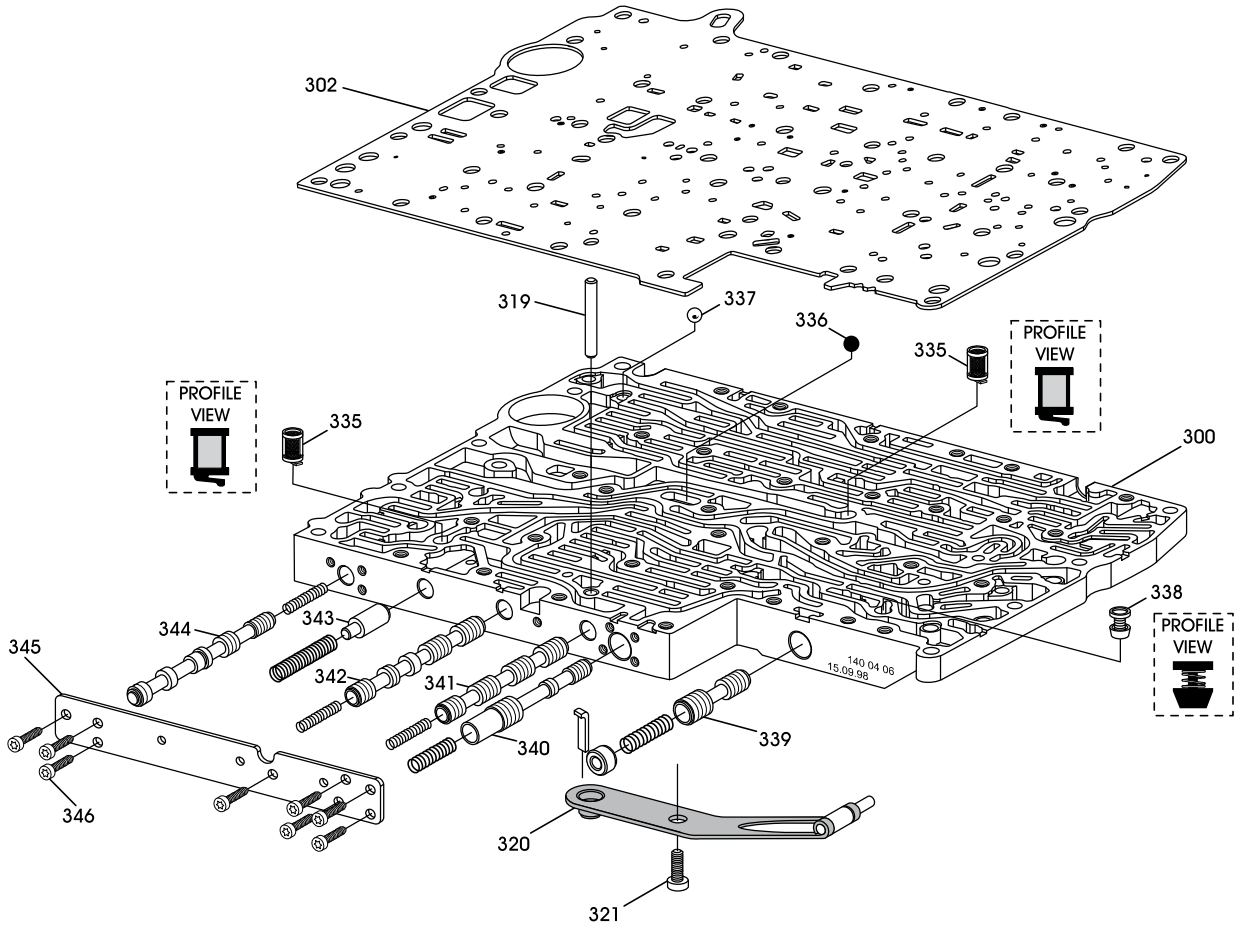


- | | |
|--|---|
| 300 LOWER VALVE BODY CASTING. | 339 B-2 SHIFT VALVE LINE-UP. |
| 301 UPPER VALVE BODY CASTING. | 340 2-3 HOLDING PRESSURE SHIFT VALVE LINE-UP. |
| 302 VALVE BODY SPACER PLATE. | 341 2-3 SHIFT COMMAND VALVE LINE-UP. |
| 319 VALVE BODY LOCATING DOWEL. | 342 2-3 PRESSURE SHIFT VALVE LINE-UP. |
| 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). | |

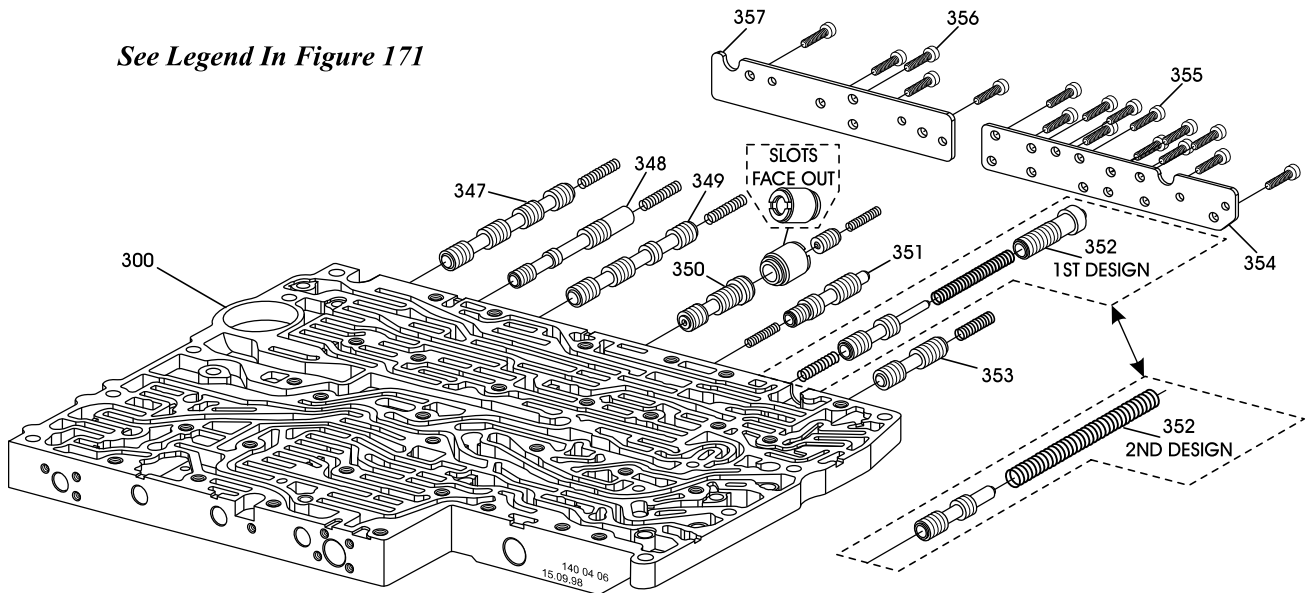
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Figure 171

MERCEDES 722.6 "LOWER" VALVE BODY, EXPLODED VIEW



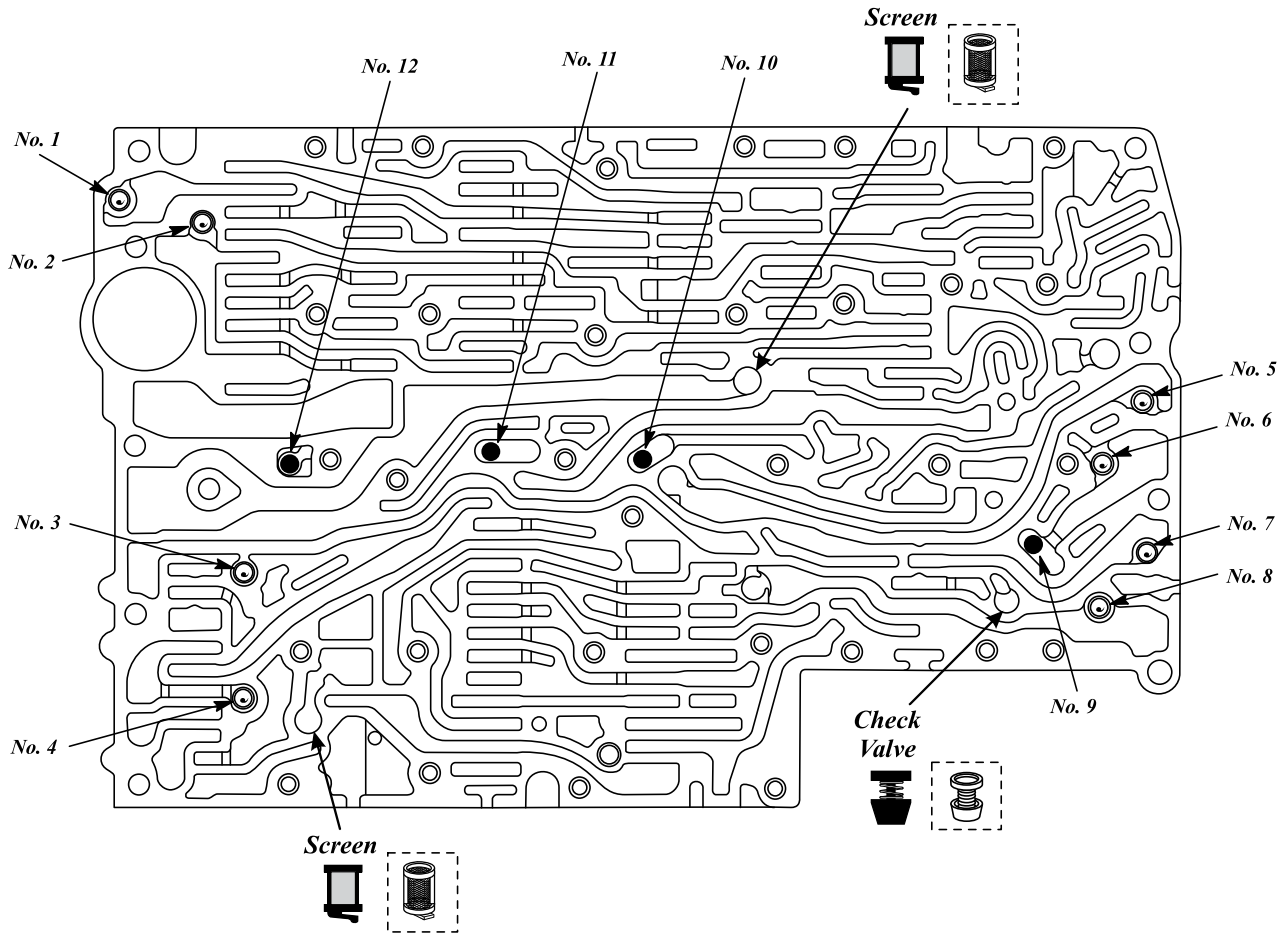
See Legend In Figure 171



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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