



Technical Service Information

VOLKSWAGEN "O1M" VALVE BODY CHANGES FOR 1998 & UP

CHANGE: Sometime in the model year for 1998, the valve body assembly was redesigned, on vehicles equipped with the O1M transaxle.

REASON: For better reliability and durability.

PARTS AFFECTED:

- (1) UPPER VALVE BODY SPACER PLATE: The new design spacer plate has a hole reduced to provide an orifice in the K1 apply circuit, as shown in Figure 2.
- (2) 2-3 TIMING VALVE: The valve and bore plug were redesigned to move the spring to the opposite side of the valve, as shown in Figures 4 and 5. The spring was also dimensionally changed. See Figure 6 for Spring Specs.
- (3) K1 CLUTCH REGULATING VALVE: The valve was redesigned on the end opposite of the spring to slow down the valves reaction to EV5 solenoid. The bore plug and retainer were changed from a 1 piece plastic, to a plug and retaining pin. See Figures 4 and 5. The spring was also redesigned to accommodate the changes to the valve. See Figure 6 for Spring Specs.
- (4) VALVE BODY UPPER SIDE: The upper valve body casting changed to accommodate the changes in the EV5 solenoid hydraulic circuit, as shown in Figure 7. A checkball was added to the K1 clutch apply circuit, as shown in Figure 8. See Figures 11 and 12 for partial hydraulic schematics which will show the main hydraulic differences between 95-97 and 98& up valve bodies.
- (5) VALVE BODY LOWER SIDE: The lower valve body casting changed to accommodate the 2-3 Timing valve and K1 Clutch regulating valve hydraulic circuit changes. See Figure 9. See Figures 11 and 12 for partial hydraulic schematics which will show the main hydraulic differences between 95-97 and 98& up valve bodies.
- (6) LOWER VALVE BODY SPACER PLATE: The new design spacer plate has one hole added and two holes eliminated to accommodate the changes in the 2-3 timing and the K1 clutch regulating valve line-ups. See Figure 3.
- (7) CHANNEL PLATE: The channel plate has two holes added to it as shown in Figure 10.

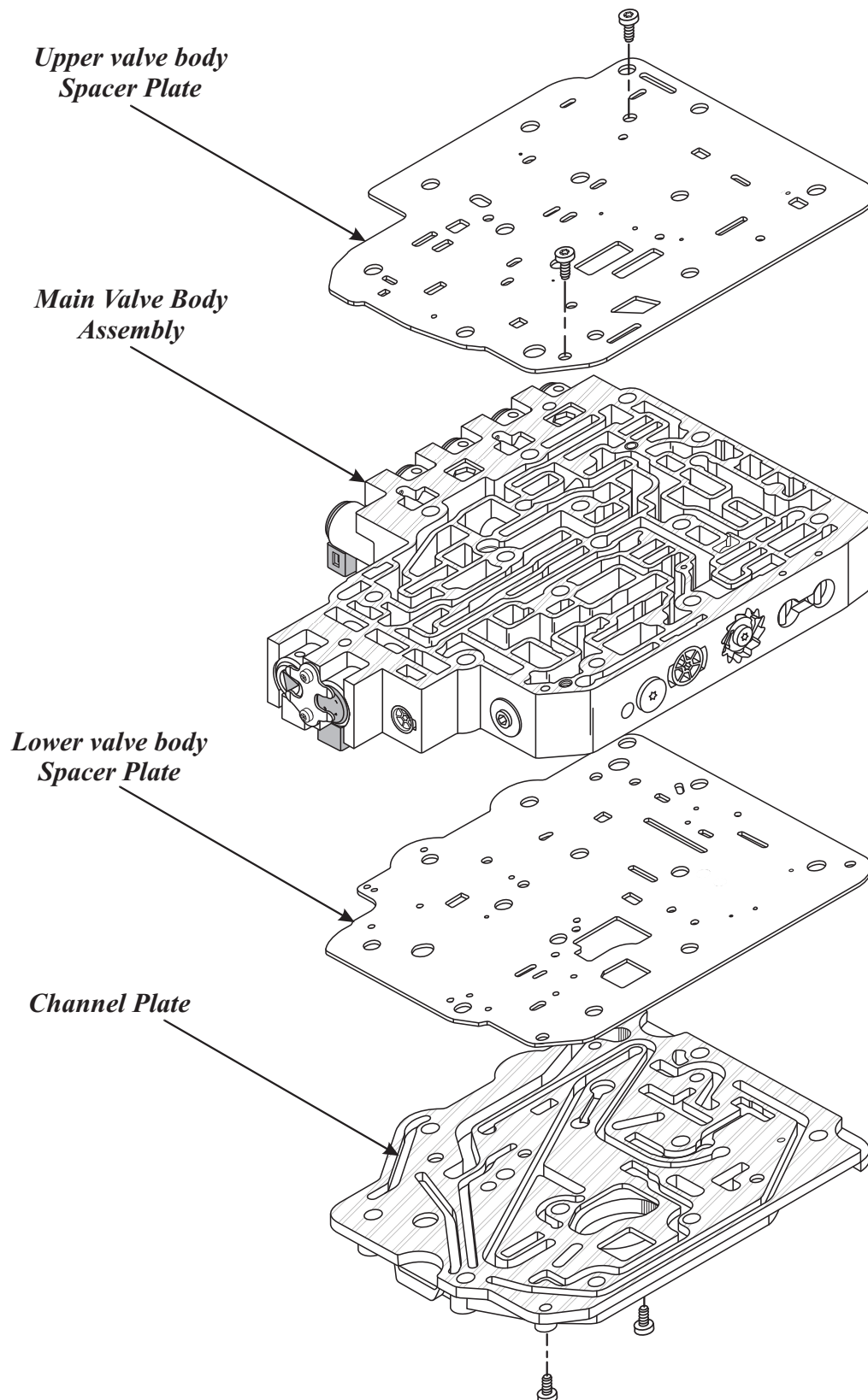
INTERCHANGEABILITY:

The 1998 and up valve body will retro fit back to 1995-97 models, as a complete assembly.

Special note: ATSG has found that when using this valve body on some earlier applications, a flair on the 3-4 upshift may occur. This may be caused by the computer software differences.

Copyright © 2005 ATSG

AUDI AND VOLKSWAGEN 98 & UP 01M VALVE BODY



Copyright © 2005 ATSG

Figure 1

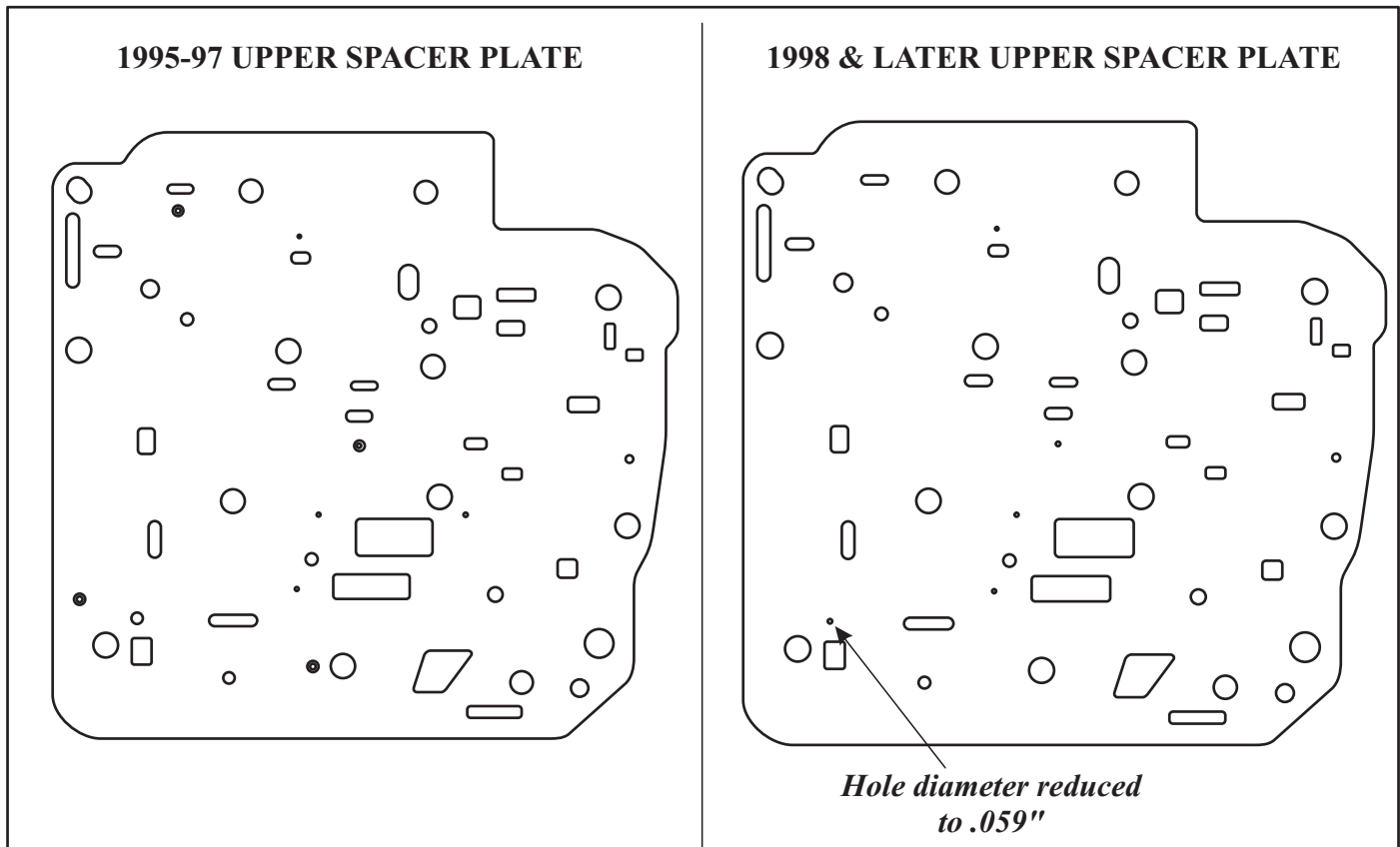


Figure 2

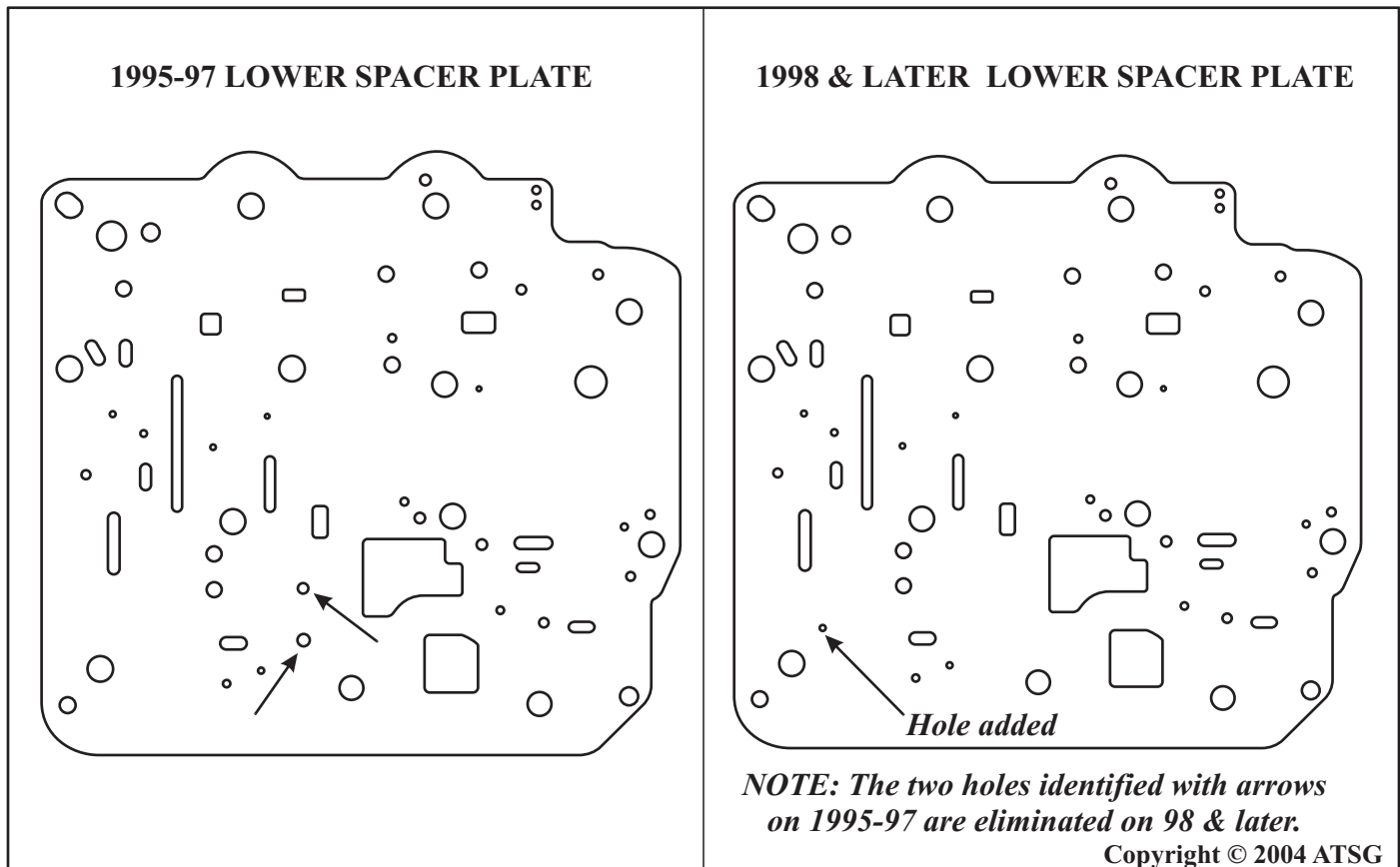
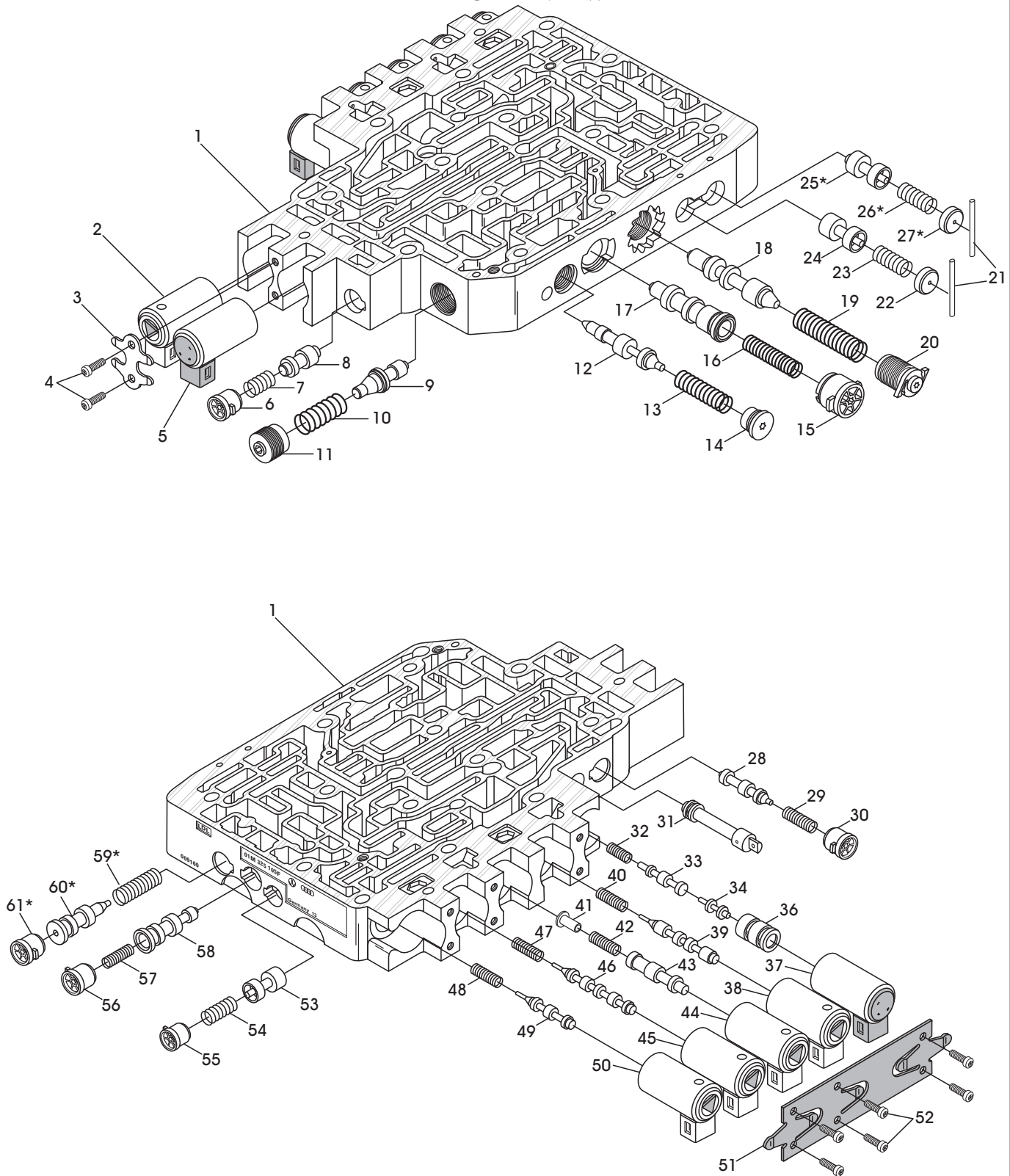


Figure 3

AUDI AND VOLKSWAGEN 98&UP 01M VALVE BODY EXPLODED VIEW



* Changed for 98

Copyright © 2004 ATSG

Figure 4



Technical Service Information

- | | |
|---|---|
| 1. MAIN VALVE BODY CASTING | 32. CONVERTER CLUTCH APPLY VALVE SPRING (SEE SPRING SPEC) |
| 2. EV-7 SOLENOID (N94) | 33. CONVERTER CLUTCH APPLY VALVE |
| 3. SOLENOID RETAINING BRACKET | 34. CONVERTER CLUTCH CONTROL VALVE |
| 4. SOLENOID RETAINING BRACKET BOLTS | 36. CONVERTER CLUTCH CONTROL VALVE SLEEVE |
| 5. EV-6 SOLENOID (N93) | 37. EV-4 SOLENOID, CONVERTER CLUTCH (N91) |
| 6. MANUAL 1ST LOCKING VALVE RETAINER (YELLOW) | 38. EV-3 SOLENOID (N90) |
| 7. MANUAL 1ST LOCKING VALVE SPRING (SEE SPRING SPEC) | 39. K-3 SHIFT VALVE |
| 8. MANUAL 1ST LOCKING VALVE | 40. K-3 SHIFT VALVE SPRING (SEE SPRING SPEC) |
| 9. SOLENOID REGULATOR VALVE | 41. B-1 APPLY VALVE SPRING SEAT |
| 10. SOLENOID REGULATOR VALVE SPRING (SEE SPRING SPEC) | 42. B-1 APPLY VALVE SPRING (SEE SPRING SPEC) |
| 11. SOLENOID REGULATOR VALVE RETAINER | 43. B-1 APPLY VALVE |
| 12. CONVERTER REGULATOR VALVE | 44. EV-5 SOLENOID (N92) |
| 13. CONVERTER REGULATOR VALVE SPRING (SEE SPRING SPEC) | 45. EV-1 SOLENOID (N88) |
| 14. CONVERTER REGULATOR VALVE RETAINER | 46. K-1/B-1 SHIFT VALVE |
| 15. MAIN PRESSURE REGULATOR VALVE RETAINER (BROWN) | 47. K-1/B-1 SHIFT VALVE SPRING (SEE SPRING SPEC) |
| 16. MAIN PRESSURE REG. VALVE SPRING (SEE SPRING SPEC) | 48. B-2 SHIFT VALVE SPRING (SEE SPRING SPEC) |
| 17. MAIN PRESSURE REGULATOR VALVE | 49. B-2 SHIFT VALVE |
| 18. BOOST PRESSURE REGULATOR VALVE | 50. EV-2 SOLENOID (N89) |
| 19. BOOST PRESSURE REG. VALVE SPRING (SEE SPRING SPEC) | 51. SOLENOID RETAINING BRACKET |
| 20. BOOST PRESSURE REGULATOR RETAINER (ADJUSTABLE) | 52. SOLENOID RETAINING BRACKET BOLTS (6) |
| 21. K-3 & K1 REGULATOR VALVE RETAINING PINS | 53. B-2 REGULATOR VALVE |
| 22. K-3 REGULATOR VALVE BORE PLUG | 54. B-2 REGULATOR VALVE SPRING (SEE SPRING SPEC) |
| 23. K-3 REGULATOR VALVE SPRING (SEE SPRING SPEC) | 55. B-2 REGULATOR VALVE RETAINER (YELLOW) |
| 24. K-3 REGULATOR VALVE | 56. K-1 CONTROL VALVE RETAINER (TAN) |
| 25. K-1 REGULATOR VALVE | 57. K-1 CONTROL VALVE SPRING (SEE SPRING SPEC) |
| 26. K-1 REGULATOR VALVE SPRING (SEE SPRING SPEC) | 58. K-1 CONTROL VALVE |
| 27. K-1 REGULATOR VALVE BORE PLUG | 59. 2-3 TIMING VALVE SPRING (SEE SPRING SPEC) |
| 28. MANUAL 1ST/K-3 LOCKOUT VALVE | 60. 2-3 TIMING VALVE |
| 29. MANUAL 1ST/K-3 LOCKOUT VALVE SPRING (SEE SPRING SPEC) | 61. 2-3 TIMING VALVE RETAINER (TAN) |
| 30. MANUAL 1ST/K-3 LOCKOUT RETAINER (YELLOW) | |
| 31. MANUAL VALVE | |

Valves #25 and #60 have changed for 98 & UP



Technical Service Information

VOLKSWAGON 98 & UP"01M" SPRING SPECIFICATIONS

Main Valve Body

"Back Side"

"Front Side"

SPRING ILLUSTRATION NO. 7:
FREE LENGTH = .690"
SPRING DIAMETER = .352"
WIRE DIAMETER = .029"

SPRING ILLUSTRATION NO. 29:
FREE LENGTH = .960"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

SPRING ILLUSTRATION NO. 10:
FREE LENGTH = 1.315"
SPRING DIAMETER = .454"
WIRE DIAMETER = .039"

SPRING ILLUSTRATION NO. 32:
FREE LENGTH = .600"
SPRING DIAMETER = .215"
WIRE DIAMETER = .020"

SPRING ILLUSTRATION NO. 13:
FREE LENGTH = 1.400"
SPRING DIAMETER = .335"
WIRE DIAMETER = .035"

SPRING ILLUSTRATION NO. 40:
FREE LENGTH = .960"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

SPRING ILLUSTRATION NO. 16:
FREE LENGTH = 1.385"
SPRING DIAMETER = .410"
WIRE DIAMETER = .035"

SPRING ILLUSTRATION NO. 42:
FREE LENGTH = .960"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

SPRING ILLUSTRATION NO. 19:
FREE LENGTH = 1.430"
SPRING DIAMETER = .357"
WIRE DIAMETER = .039"

SPRING ILLUSTRATION NO. 47:
FREE LENGTH = .960"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

SPRING ILLUSTRATION NO. 23:
FREE LENGTH = 1.130"
SPRING DIAMETER = .350"
WIRE DIAMETER = .029"

SPRING ILLUSTRATION NO. 48:
FREE LENGTH = .960"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

Changed for 98



SPRING ILLUSTRATION NO. 26:
FREE LENGTH = .860"
SPRING DIAMETER = .350"
WIRE DIAMETER = .026"

SPRING ILLUSTRATION NO. 54:
FREE LENGTH = 1.045"
SPRING DIAMETER = .352"
WIRE DIAMETER = .029"

SPRING ILLUSTRATION NO. 57:
FREE LENGTH = .936"
SPRING DIAMETER = .280"
WIRE DIAMETER = .027"

Changed for 98

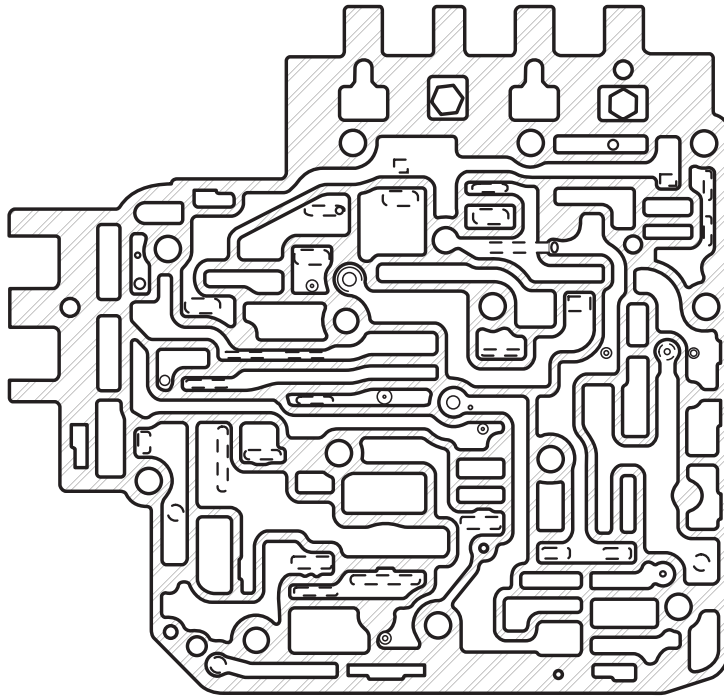


SPRING ILLUSTRATION NO. 59:
FREE LENGTH = 1.057"
SPRING DIAMETER = .355"
WIRE DIAMETER = .029"

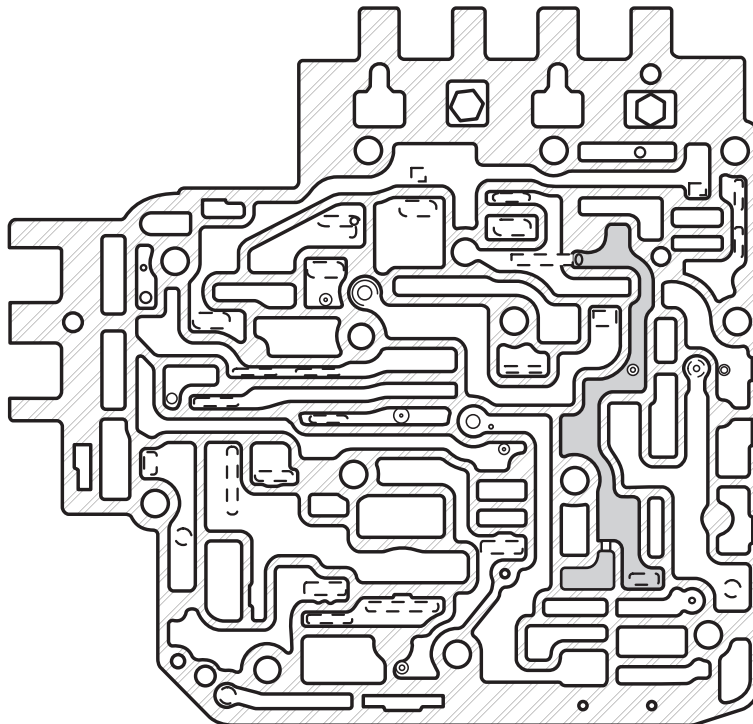
Copyright © 2004 ATSG

Figure 6

1995-97 UPPER VALVE BODY WORM TRACK CONFIGURATION



1998 & UP UPPER VALVE BODY WORM TRACK CONFIGURATION

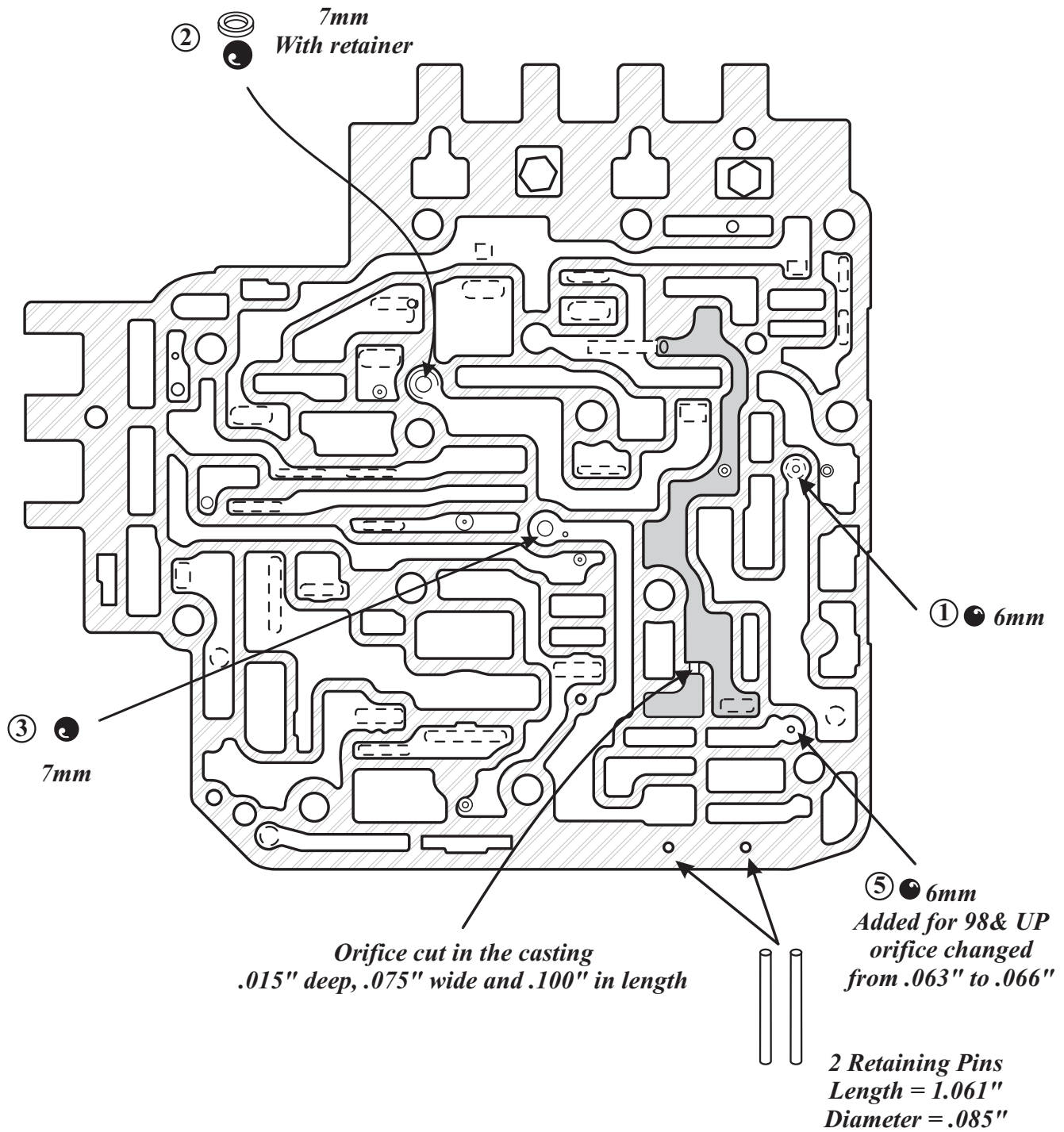


NOTE: Casting changes are highlighted in grey

Copyright © 2004 ATSG

Figure 7

UPPER VALVE BODY CHECKBALL LOCATIONS

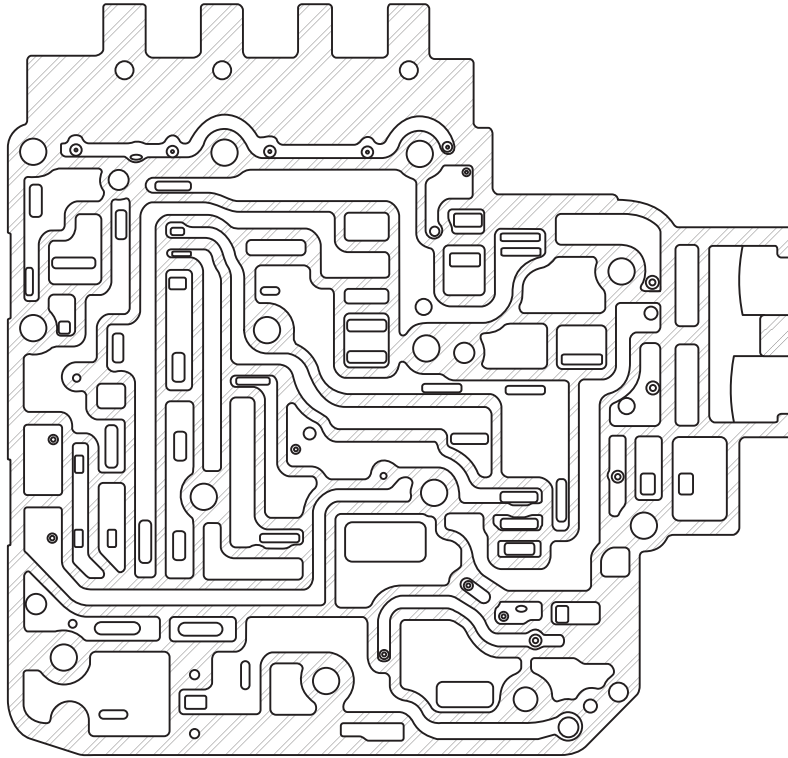


NOTE: Casting changes are highlighted in grey.
This is the EV5 solenoid hydraulic circuit.

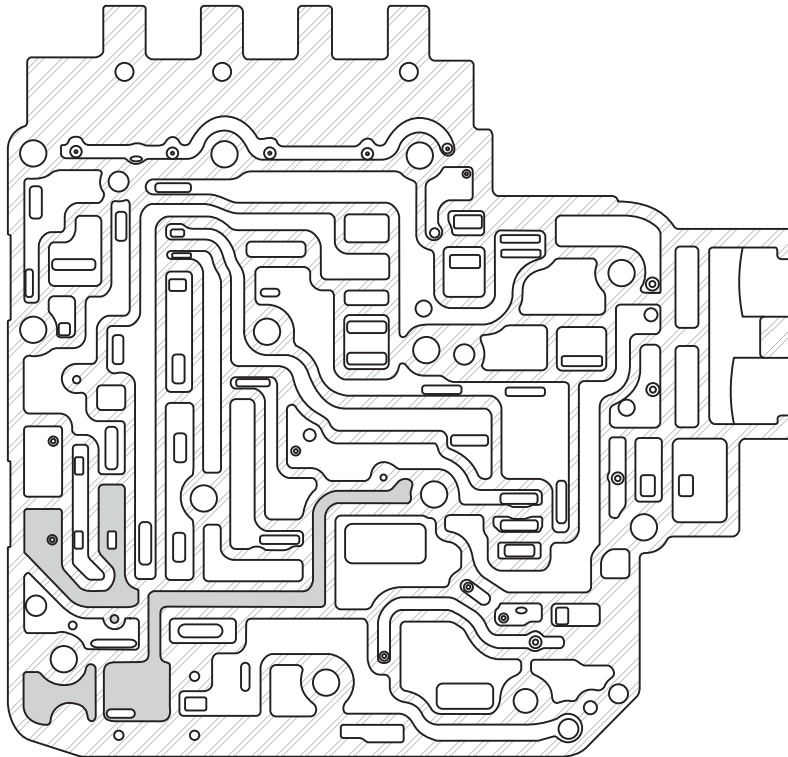
Copyright © 2004 ATSG

Figure 8

1995-97 LOWER VALVE BODY WORM TRACK CONFIGURATION



1998 & UP LOWER VALVE BODY WORM TRACK CONFIGURATION

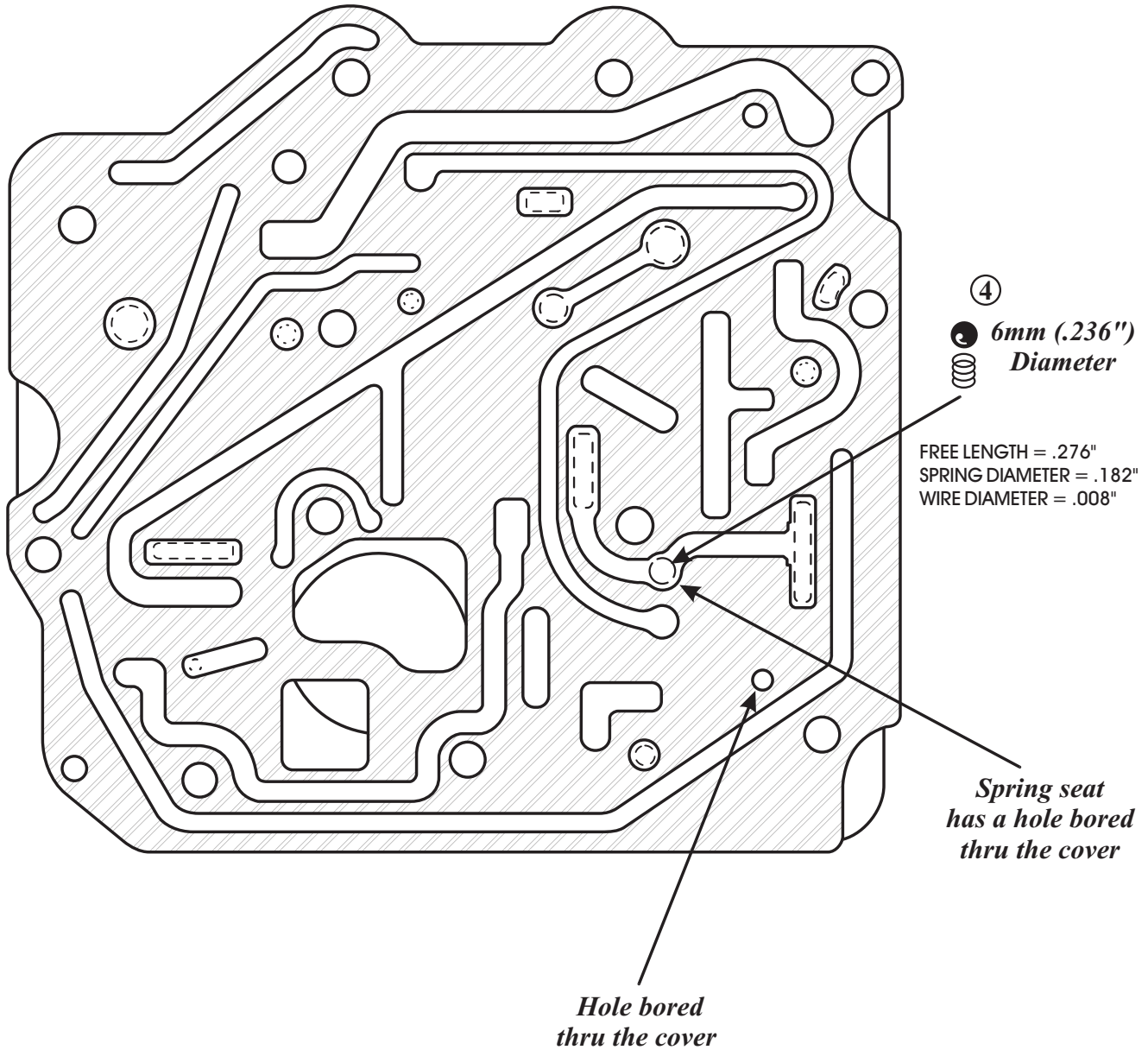


NOTE: Casting changes are highlighted in grey

Copyright © 2004 ATSG

Figure 9

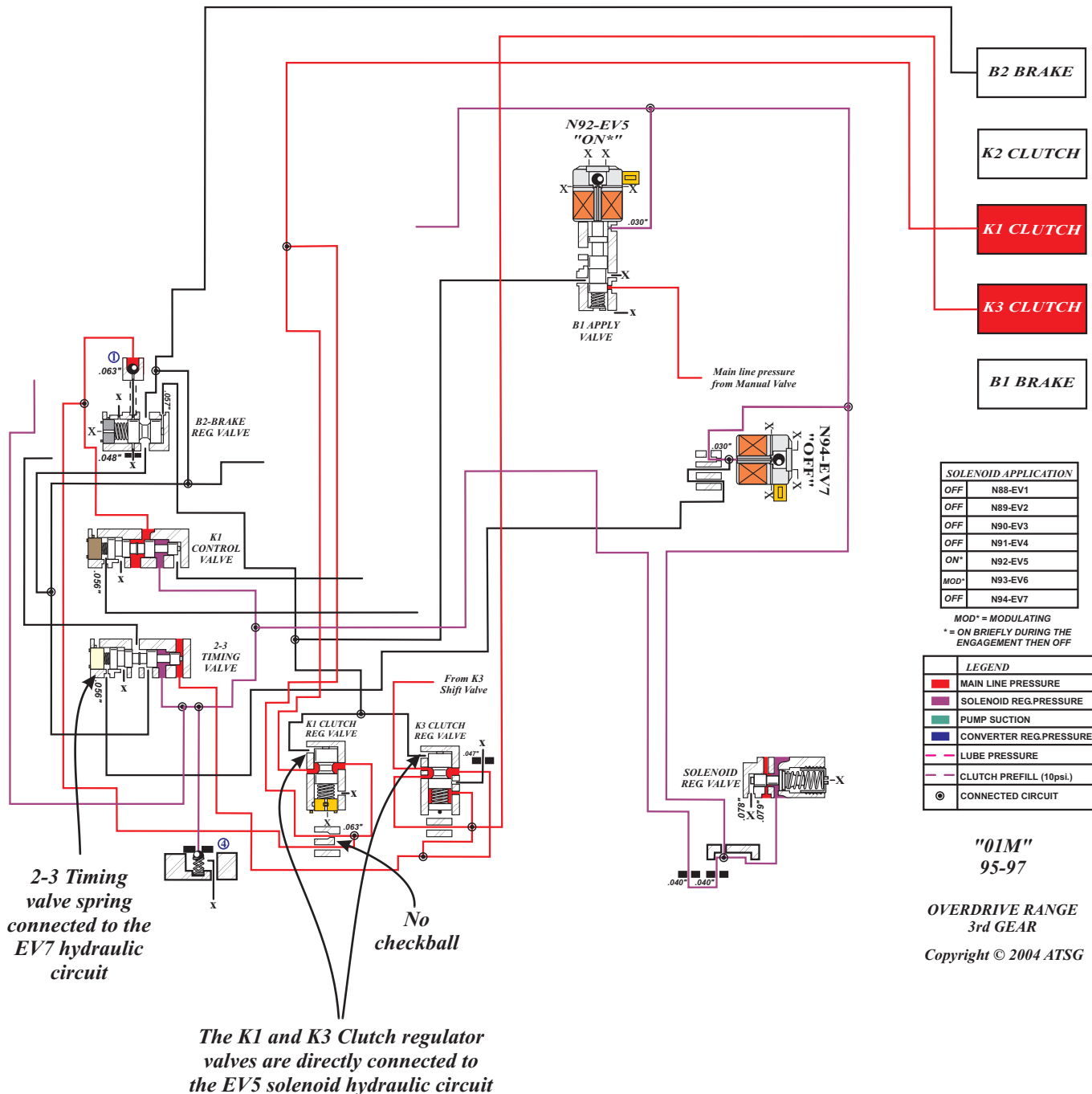
CHANNEL PLATE CHECKBALL LOCATIONS



Copyright © 2004 ATSG

Figure 10

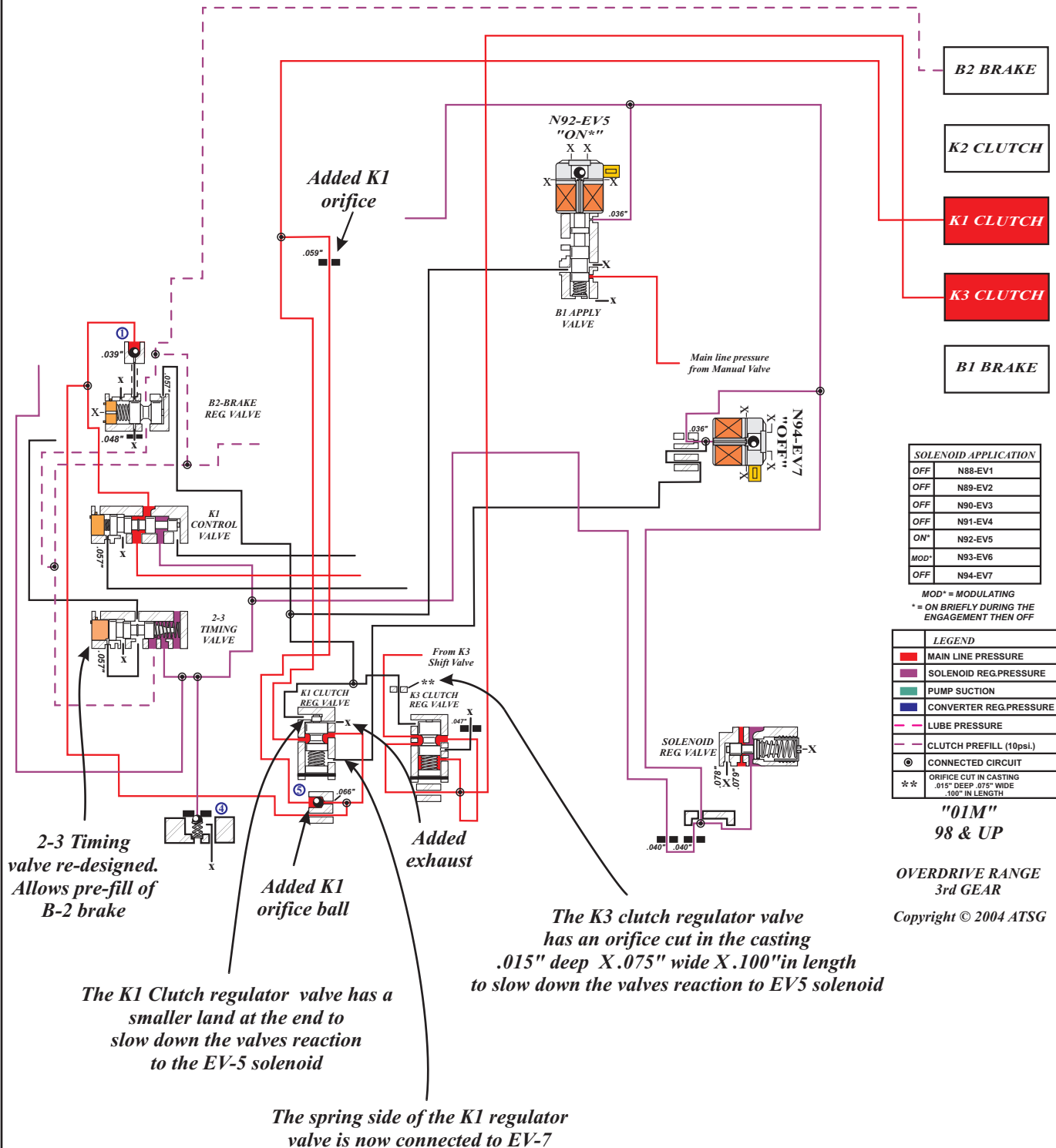
O1M 1995-97 PARTIAL HYDRAULIC SCHEMATIC



Copyright © 2004 ATSG

Figure 11

O1M 1998 & UP PARTIAL HYDRAULIC SCHEMATIC



Copyright © 2004 ATSG

Figure 12