



Technical Service Information

BMW ZF 5-HP-30 NO REVERSE

COMPLAINT: 1991 and later BMW vehicles equipped with the ZF 5-HP-30 transmission may exhibit a no reverse condition, when selector lever is placed into reverse.

CAUSE: The cause may be, the .236" diameter checkball located in the bathtub in the channel plate has blown through the spacer plate, which will now exhaust "F" clutch (Reverse) oil pressure.

CORRECTION: Install a .250" diameter plastic checkball into the bathtub in the channel plate as shown in Figure 1. The holes in the spacer plate over the bathtub measure .198" and the larger diameter checkball will greatly decrease the probability of this condition occurring again. There is also ample room in the bathtub for the increased diameter checkball to perform its duties. Refer to Figure 1. Figure 2 illustrates the location of the only other checkball in this unit and do not install checkball in the location marked "X".

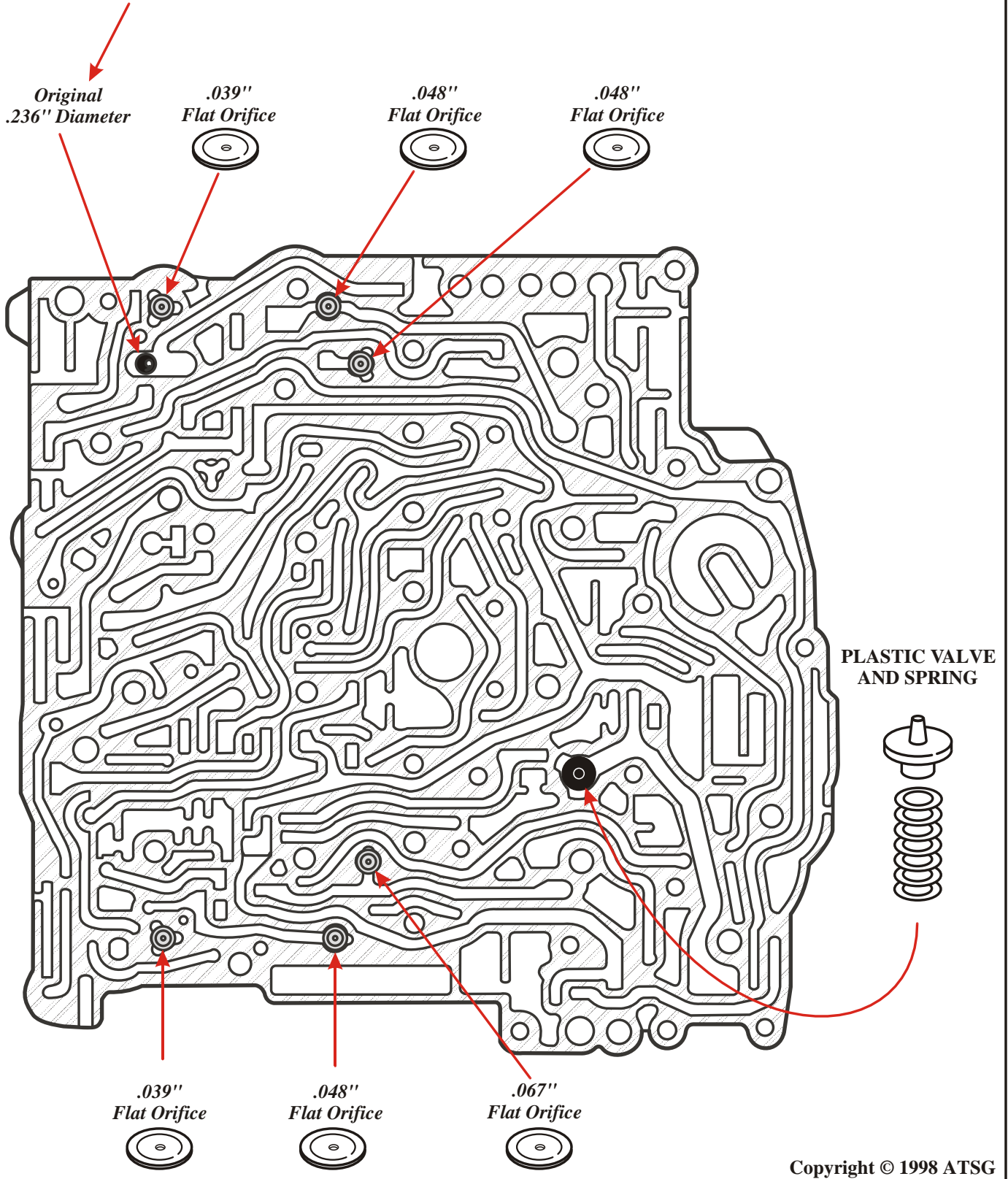
SPECIAL NOTE: The checkball wearing and blowing through the spacer plate causing the loss of reverse, may also have caused some damage to the "C" Clutch which is also on in reverse. This condition has also been known to create damage to the "A"/"C" Clutch Housing as well. If the clutch housing has been severely damaged, aluminum material will be evidenced in the bottom pan upon inspection.

When the unit is removed and the "A"/"C" Clutch Housing is dis-assembled, it is not uncommon for the unit to set for over a week waiting on parts. When re-assembling it is very easy to *mis-assemble* the "B" Clutch Hub on top of the retaining snap ring for the "A" Clutch pack. This mis-assembly will create a neutralizing on the 3-4 upshift, and the Trans light will begin flashing.

Ensure that you assemble the "B" Clutch Hub on top of the "A" Clutch stack, and then install the "A" Clutch Pressure Plate and snap ring, as shown in Figure 3.

ZF-5HP-30 CHANNEL PLATE
LOWER VALVE BODY SIDE

Replace the original ball with
a plastic .250" (6.35mm) ball.

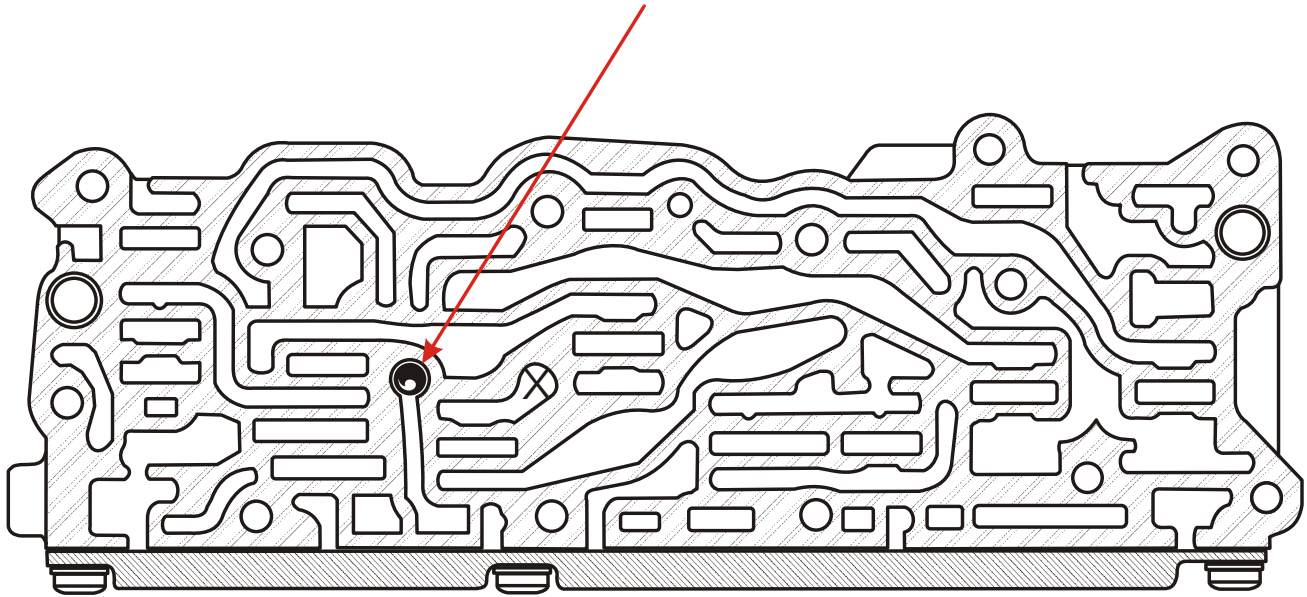


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Figure 1

UPPER REAR VALVE BODY
CHECKBALL LOCATION

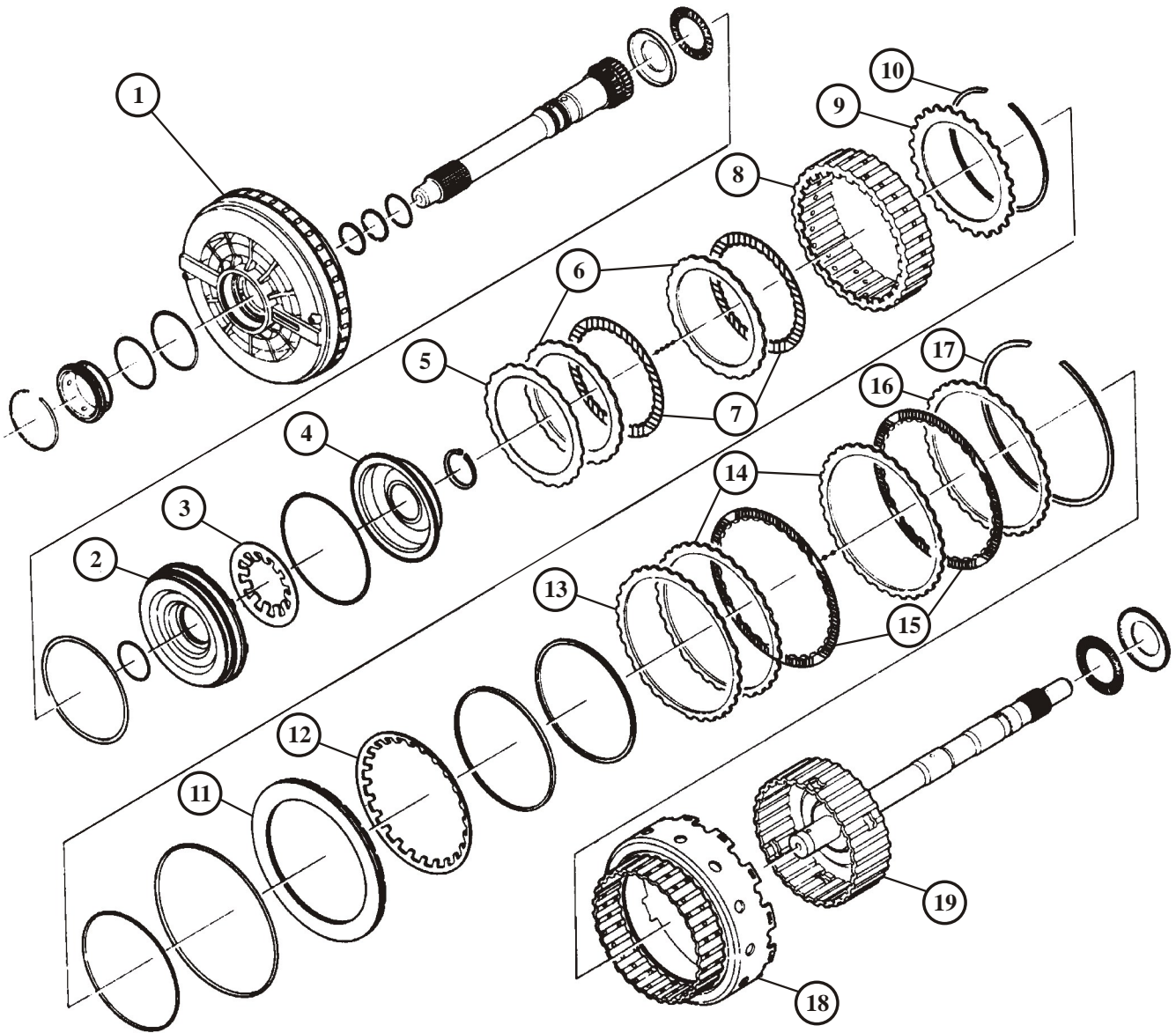
*Only One .250" (6.35mm) ball is located here.
Do Not install a ball in the pocket marked X.*



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Figure 2

"A"/"C" CLUTCH HOUSING COMPONENTS



- 1. "A"/"C" Clutch Housing Assembly
- 2. "A" Clutch Apply Piston
- 3. "A" Clutch Bellville Return Spring
- 4. "A" Clutch Piston Oil Dam
- 5. "A" Clutch Cushion Plate
- 6. "A" Clutch Steel Plates (5 Required)
- 7. "A" Clutch Friction Plates (5 Required)
- 8. "B" Clutch Hub
- 9. "A" Clutch Pressure Plate
- 10. "A" Clutch Pressure Plate Snap Ring

- 11. "C" Clutch Apply Piston
- 12. "C" Clutch Apply Piston Return Spring
- 13. "C" Clutch Cushion Plate
- 14. "C" Clutch Steel Plates (3 Required)
- 15. "C" Clutch Friction Plates (3 Required)
- 16. "C" Clutch Pressure Plate
- 17. "C" Clutch Pressure Plate Snap Ring
- 18. "C" Clutch Hub
- 19. "A" Clutch Hub And Input Shaft

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Figure 3