

Aisin AW TF-60SN, TF-80SC, TF-81SC, TR-60SN; VW/Audi 09D

Accumulator Piston Kit

Part No.
39741-42K

- Piston
- Sleeve
- O-Ring
- Springs (4) Selective (Figure 2)

NOTE: This kit can be modified to fit other variations of the AW 6-speed applications by modifying the sleeve length.

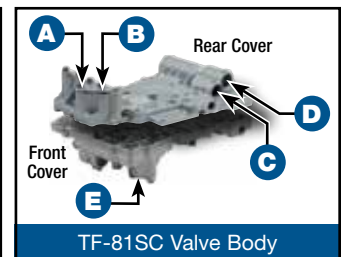
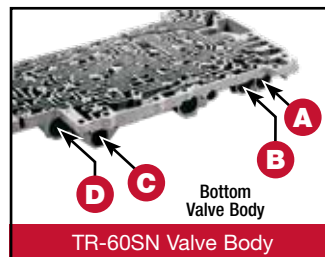
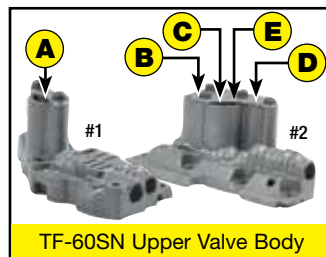
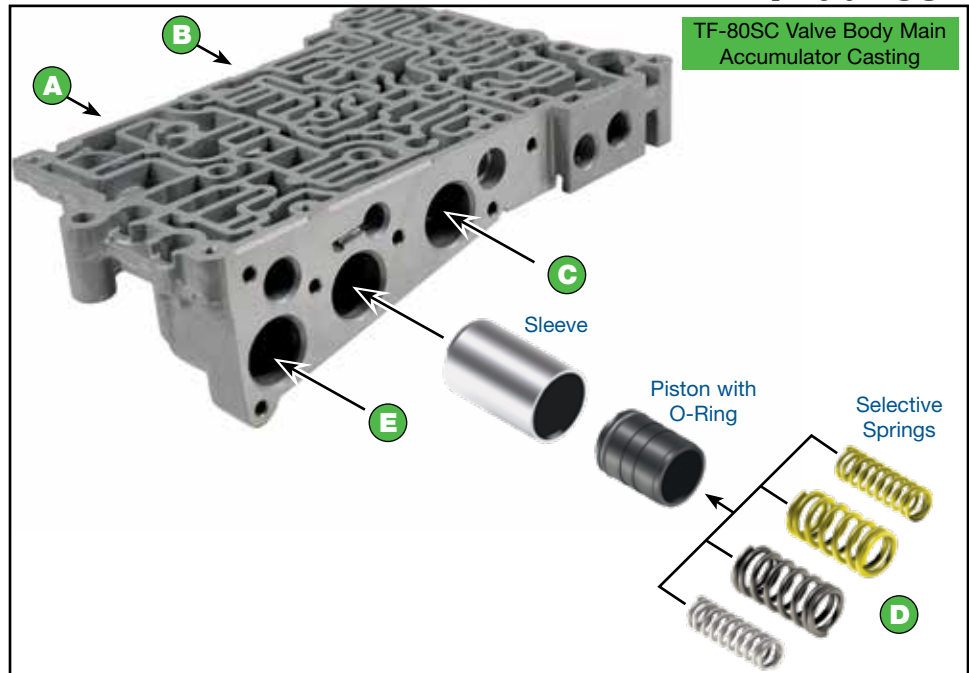


Figure 1

	TF-60SN Upper Valve Body	TR-60SN Bottom Valve Body	TF-80SC Valve Body Main Accumulator Casting	TF-81SC Valve Body
A	N93 Line Pressure	K2 Damper	B1 Damper	C2 Damper
B	B1 Damper	B1 Damper	C3 Damper	SLT Damper
C	K3 Damper	N93 Line Pressure	C1 Damper	C3 Damper
D	K2 Damper	K3 Damper	C2 Damper	C1 Damper
E	K1 Damper	n/a	SLT Damper	B1 Damper

NOTES & CAUTIONS:



1. Test fit sleeve into valve body accumulator bore before final assembly by inserting sleeve fully into bore with the machined cut-out down into the bore and aligned with oil inlet.
2. No part of the sleeve can be allowed to project out of the bore. File the outboard end of the sleeve as necessary. **DO NOT FILE THE END OF THE SLEEVE WITH THE MACHINED CUT-OUT.**
3. Installation of the 39741-42K kit's accumulator piston, sleeve and springs into Aisin AW TF-60SN, TF-80SC, TF-81SC and TR-60SN variants of the AW 6-speed valve body is possible if the sleeve length is shortened.

To shorten the sleeve:

- a. Remove material from the end that does not have the machined cut-out feature. A lathe is recommended for trimming the sleeve. Do not deform the sleeve's circular cross-section. Install the accumulator piston into the sleeve before mounting into a lathe chuck.
- b. The sleeve may not extend beyond flush with the valve body casting. Try to minimize the gap between the outboard end of the sleeve and the casting surface. A .030" (0.76mm) gap is sufficient. All tabulated OE spring dimensions, colors and recommended Sonnax spring substitutions apply to unlisted valve body variants. Never use the OE springs with the Sonnax accumulator piston.

1. Disassembly

- a. Remove fasteners and retaining strap/plate. Set aside for reuse at assembly.
- b. Remove OE accumulator springs and note any paint color, lack of paint (**Figure 2**) and take measurements before discarding.
- c. Remove and discard OE accumulator piston.

2. Bore & Sleeve Preparation

- a. Remove any burrs and/or raised areas from the accumulator bore.
- b. Test fit the sleeve in the bore (**Notes & Cautions**).
- c. Roughen O.D. of sleeve and accumulator bore with emery cloth.
- d. Clean sleeve O.D. and accumulator bore with residue-free cleaner. Sleeve O.D. and bore must be clean and free of oil, grease or residue.
- e. Apply a sleeve retaining compound like Loctite® 609 (green), Loctite® 620, Loctite® 962 or Loctite® 660 (or equivalent) to both the sleeve O.D. and accumulator bore.

3. Installation & Assembly

- a. Place end of sleeve with machined cut-out into bore. Make sure to align the cut-out in the sleeve with the oil inlet at the bottom of the accumulator bore valve. Push the sleeve fully into the bore. The end of the sleeve must be flush or below the machined face of the valve body casting.
- b. Remove any excess sleeve retaining compound from the accumulator bore.
- c. Allow Loctite® or equivalent sleeve retaining compound to fully cure before exposure to any oil or lubricant.
- d. Install the O-ring into the groove closest to the crown of the accumulator piston.
- e. Lubricate the O-ring, piston O.D. and sleeve I.D. with TransJel™ or equivalent assembly grease.
- f. Insert the piston crown-first into the sleeved accumulator bore and push it to the bottom of the sleeved bore.
- g. Select the appropriate springs to install (**Figure 2**). Nest the springs and insert them into the bore of the piston.
- h. Install the OE retaining strap/plate and fasteners.

Figure 2

Selective Spring Usage			
OE Springs		SONNAX Springs	
Paint Color	Dimensions	Paint Color	Dimensions
Yellow	O.D. = .618" (15.7mm) Wire Dia. = .078" (1.98mm)	Yellow	O.D.= .520" (13.21mm) Wire Dia. = .068" (1.73mm)
Yellow	O.D.= .412" (10.46mm) Wire Dia. = .054" (1.37mm)	Yellow	O.D.= .345" (8.76mm) Wire Dia. = .047" (1.19mm)
No Paint	O.D.= .632" (16.05mm) Wire Dia. = .083" (2.11mm)	No Paint	O.D.= .523" (13.28mm) Wire Dia. = .070" (1.78mm)
Gray/Blue	O.D.= .429" (10.90mm) Wire Dia. = .063" (1.60mm)	Gray/Blue	O.D.= .336" (8.53mm) Wire Dia. = .051" (1.30mm)