

Critical Wear Areas & Vacuum Test Locations

ZIP Drop-In Zip Valve™
Parts Available

ZF8-ZIP
Zip Kit® Available

NOTE: OE valves are shown in rest position and should be tested in rest position unless otherwise indicated. Test locations are pointed to with an arrow. Springs are not shown for visual clarity. Low vacuum reading indicates wear and Sonnax parts are noted for replacement.

Upper Valve Body



For specific vacuum test information, refer to individual part instructions included in kits and available at www.sonnax.com.

Click on Sonnax part numbers to see more information.



NOTE: Do not use this information for ZF8HP45 and ZF8HP70 units as valve locations and porting differ.

Holding Valve B2

- B Clutch burned
- 5-6 Flare

B2 Clutch NIC Valve*

- Delayed engagement
- No Forward
- NIC (Neutral Idle Control) concerns
- Gear ratio & solenoid codes
- No Reverse
- B Clutch burned
- Flare/Harsh shifts

Replace with Sonnax Part No. **35740-22**

Requires F-35740-TL22 & VB-FIX

*NOTE: Only on HIS (Hydraulic Impulse System) models. No valve on non-HIS models.

TC Pressure Valve

- Coastdown clunk
- Harsh TCC apply
- Excess TCC slip
- TCC codes & overheating
- TCC lining failure
- Low lube oil flow
- Low TCC release pressure

Replace with Sonnax Part No.

35740-18K

Requires F-35740-TL5 & VB-FIX

End Plugs

- Soft/Flare/Harsh shifts
- Burnt clutches
- Pressure loss

Replace with Sonnax Part No.

35740-30K

End Plugs (3) =

Internal End Plugs (8) =

Holding Valves A & D

- Bump/Flare shifts
- Burnt clutches
- Gear loss
- Gear ratio & solenoid codes

Replace with Sonnax Part No. **35740-20K**

Requires F-35740-TL20 & VB-FIX

Accumulator Pistons

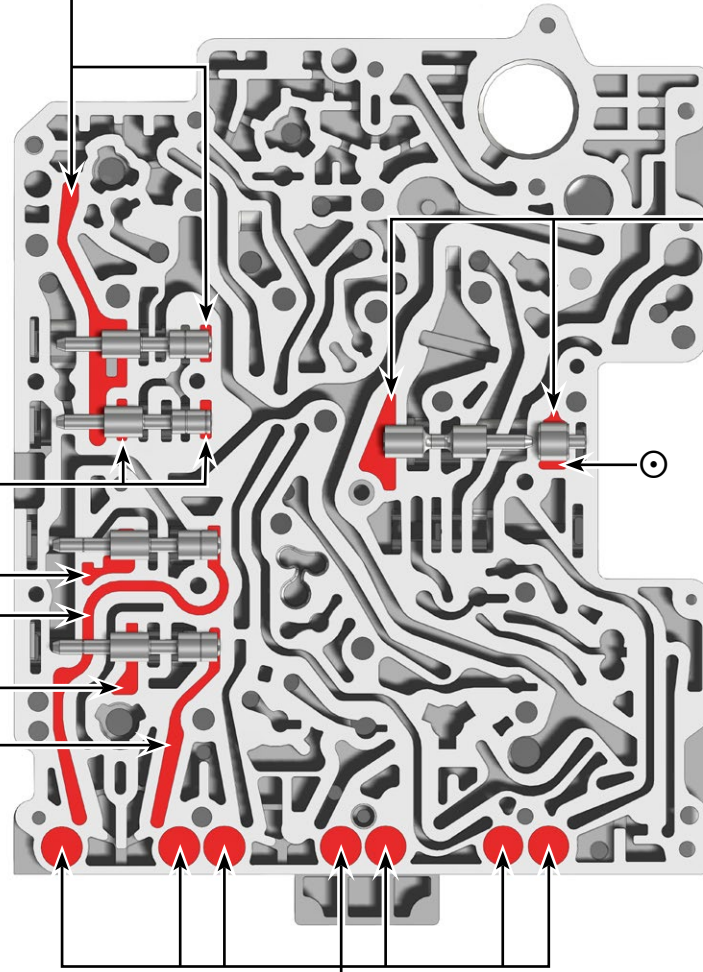
- Downshift clunk
- Firm shifts
- Erratic EDS solenoid control and/or EDS codes

Replace with Sonnax Part No.

95740-15K Contains 7 sets

Patent No. 8,794,108

Test with dampener upside down and test plate orifice off center from rubber piston end




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Lower Valve Body

Pressure Regulator Sleeve 


- Harsh shifts
- Erratic/High line pressure
- Restricted converter/lube flow

Replace with Sonnax Part No. 35740-03



Pressure Regulator Valve

- Harsh/Soft shifts
- Erratic/High line pressure
- Burnt clutches
- Restricted converter/lube flow
- Broken parts due to excessive line pressure

Replace with Sonnax Part No. 35740-01K
Requires F-35740-TL & VB-FIX


End Plugs 

- Soft/Flare/Harsh shifts
- Burnt clutches
- Pressure loss

Replace with Sonnax Part No. 35740-30K
End Plugs (3) = 
Internal End Plugs (8) = 

NOTE: These 2 locations suitable for vacuum testing OE valve & 35740-21K ONLY.
NOT suitable location to check 35740-37K.

Remove spring when testing. Center valve spool in opening.

Priming Valve 

- Delayed engagement • Wrong gear starts • Gear loss
- Flare/Harsh/Neutral shifts • Gear ratio & solenoid codes

Replace with Sonnax Part No. 35740-37K Priming Valve & Seal Kit
35740-21K Oversized Priming Valve
35740-21K Requires F-35740-TL20 & VB-FIX

TC Switch Valve

- No lockup • No TCC release
- Engine stall • TCC codes
- Excess TCC slip
- Premature TCC apply
- Soft/Harsh TCC apply

Replace with Sonnax Part No. 35740-05
Requires F-35740-TL5 & VB-FIX

TCC Valve

- Converter shudder & TCC slip
- Damaged TCC linings • TCC codes
- Overheated converter • Poor fuel economy

Replace with Sonnax Part No. 35740-13K
Requires F-35740-TL13 & VB-FIX

Clutch Valve B1

- Slip on take off
- Gear ratio errors
- B Clutch burned

Holding Valves B1, C & E

- Bump/Flare shifts
- Burnt clutches
- Gear loss
- Gear ratio & solenoid codes

Replace with Sonnax Part No. 35740-20K
Requires F-35740-TL20 & VB-FIX

Clutch Valve A

- Slip in Drive/Reverse
- Gear ratio codes
- A Clutch burned

Clutch Valve D

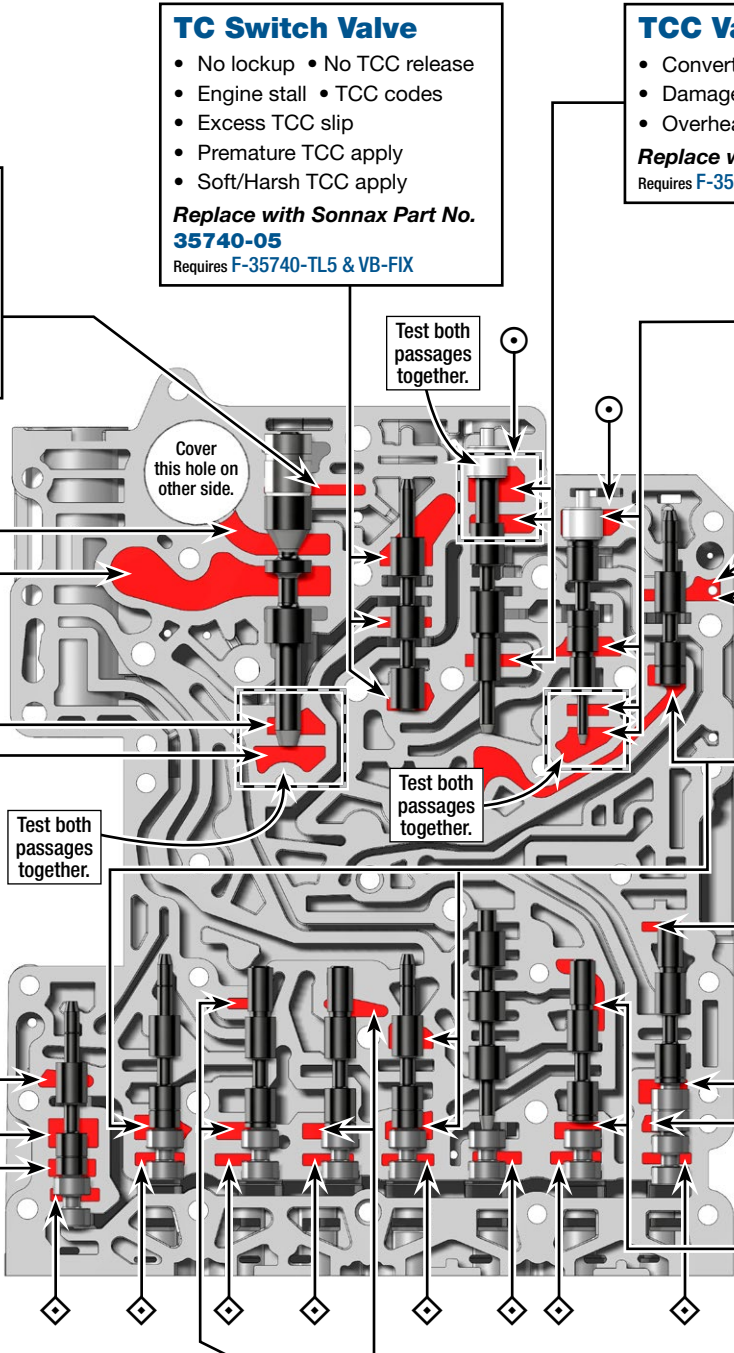
- Gear ratio errors 4-8th Gears
- Slips in Reverse
- D Clutch burned

Clutch Valve E

- Slip on 1-2
- Gear ratio codes
- E Clutch burned

Clutch Valve C

- Slip on take off
- Gear ratio codes
- C Clutch burned



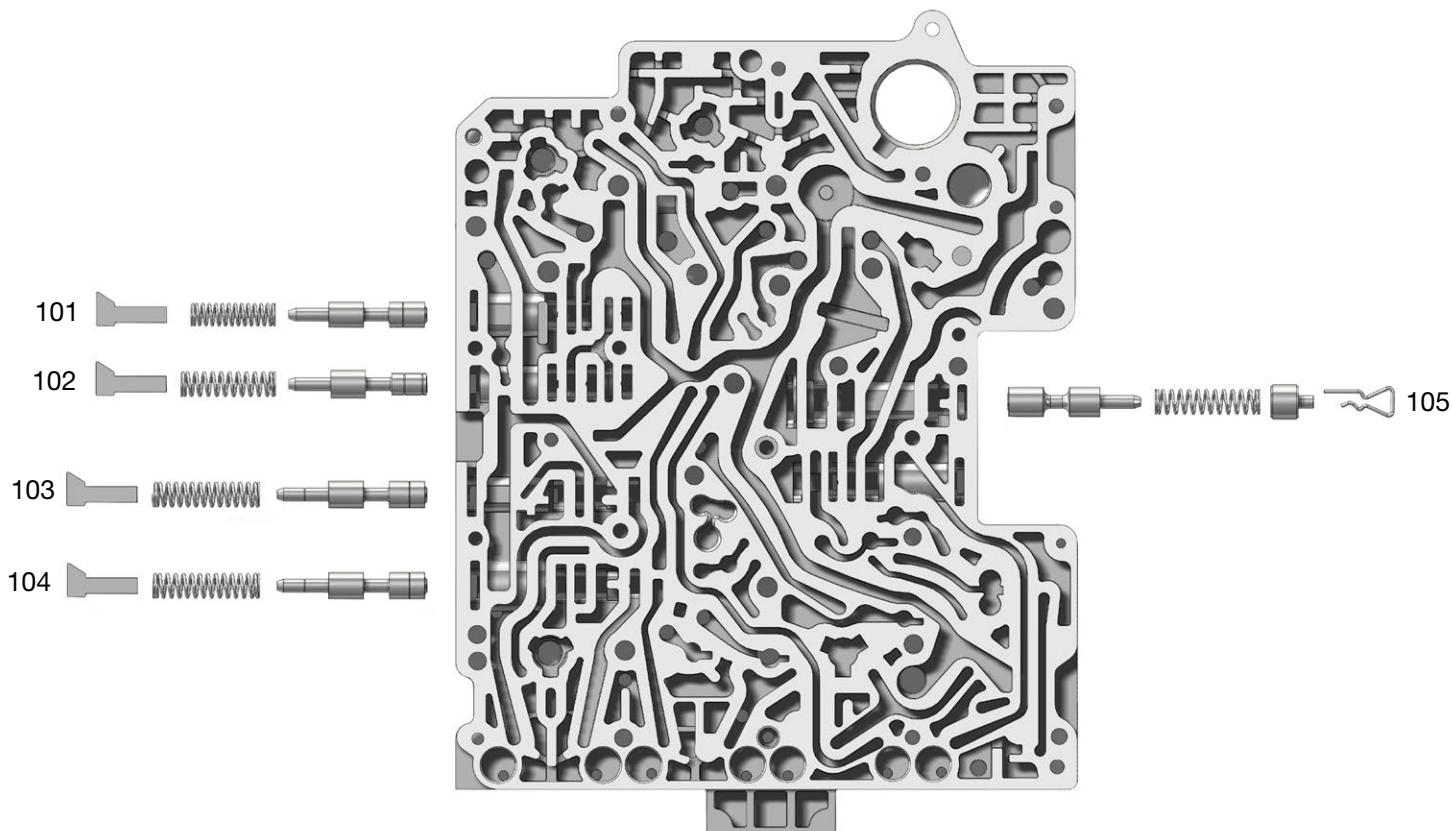
For specific vacuum test information, refer to individual part instructions included in kits and available at www.sonnax.com.

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OE Exploded View

Upper Valve Body

NOTE: Depending upon vehicle application, the OE springs shown may not be present.



Upper Valve Body Descriptions

I.D. No.	Description	ZF Valve Name
101	Holding Valve B2	HV-B2
102	Clutch Valve B2 - B Clutch NIC (Neutral Idle Control)	KV-B2
103	Holding Valve A	HV-A
104	Holding Valve D	HV-D
105	TC Pressure Valve	WD-V

OE Exploded View

Lower Valve Body

NOTE: Depending upon vehicle application, the OE springs shown may not be present.

Lower Valve Body Descriptions

I.D. No.	Description	ZF Valve Name
201	Manual Valve	
202	Pressure Regulator Valve & Sleeve	SYS-DR-V
203	Torque Converter Switch Valve	SV-WD
204	Torque Converter Clutch Valve	WK-V
205	Clutch Valve B1	KV-B1
206	Holding Valve B1	HV-B1
207	Priming Valve	DR-RED-V
208	Holding Valve C	HV-C
209	Clutch Valve C	KV-C
210	Clutch Valve E	KV-E
211	Holding Valve E	HV-E
212	Stationary Valve 1	SV-1
213	Clutch Valve D	KV-D
214	Clutch Valve A	KV-A

