Plug hole on

other side.



## **Critical Wear Areas & Vacuum Test Locations**



Drop-In Zip Valve<sup>™</sup> Parts 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.

#### **Lower Valve Body • 09G Shown**



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.

#### **Secondary Regulator Valve**

- TCC codes/slip/surge
- TCC apply & release concerns
- · Overheated fluid, bushings & converter

Replace with Sonnax Part No.

15741-11K Requires F-15741-TL11 & VB-FIX

#### **Solenoid Modulator Valve**

- Code 734, 735, 729 Kickdown slip/shock
- 4th, 5th & 6th Slip

Replace with Sonnax Part No. 15741-18K Requires F-15741-TL18 & VB-FIX

#### **Boost Valve**

- Delayed Reverse
- Low line rise in Reverse
- B2 Brake clutches burned
- K3 Clutch burned

#### Main Pressure Regulator Valve

- Low line in Drive/Reverse
- High line pressure in Reverse
- · Overheated fluid & TCC lining
- · Bushing failure

Replace with Sonnax Part No. 15741-01K

Requires F-15741-TL & VB-FIX

#### C1/K1 Clutch Control Valve

- Coastdown Neutral
- Delayed Forward
- Gear ratio & solenoid codes
- K1/C1 Clutch burned
- · Erratic shift timing
- Flare/Harsh shifts

Replace with Sonnax Part Nos. 15741-25K (sleeve/valve style)

Requires F-15741-TL25 & VB-FIX *or* **15741-55K** (oversized valve style) Requires F-15741-TL55 & VB-FIX

# **K2 Clutch Control Valve**

- 3-4 Flare K2 Clutch burned
- · Gear ratio & solenoid codes
- Erratic shift timing Harsh shifts

Replace with Sonnax Part No. 15741-57K (Oversized valve style)

Requires F-15741-TL57 & VB-FIX

# **B1 Clutch Control Valve**

- 1-2, 5-6 Flare
- 2nd, 6th Slip
- Gear ratio & solenoid codes
- B1 Clutch burned
- Erratic shift timing
- Harsh shifts

Replace with Sonnax Part No. 15741-61K Requires

F-15741-TL61 & VB-FIX

## O-Ringed End Plugs 🖟

 Shift concerns associated with circuit pressure loss

Replace with Sonnax Part Nos. 15741-35K (Small, 9mm) = (•)

15741-36K (Small, 9mm) = (5)

**NOTE:** End plugs should be tested at the retainer port. Sealing on opposite side of casting is sometimes required.

## Spring Adjuster Plugs

- Soft/Flare/Long shifts
- Shift quality gets worse as temperature increases
- Intermittent clutch/solenoid codes

#### **Manual Valve**

- Delayed engagement
- Damaged valve body casting
- Low line pressure

## **K3 Clutch Control Valve**

- 2-3, 4-5 Shift concerns Slipping gears
- Delayed Reverse K3 Clutch burned
- Gear ratio & solenoid codes

Replace with Sonnax Part No. 15741-59K Requires F-15741-TL59 & VB-FIX

Lower Side



## **Critical Wear Areas & Vacuum Test Locations**



Drop-In Zip Valve<sup>™</sup> Parts 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.

## **Middle Valve Body • 09G Shown**



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.

## Main Relay Valve

- No 4-5-6
- · Gear ratio codes

#### **K1 Switch Valve**

- Erratic shift timing
  - Failsafe mode
- Harsh shiftsOverheated fluid
- Burnt clutches
- 0" ;
- Ratio codesSoft shifts

• Slipping gears • So

Replace with Sonnax Part No. 15741-63K Requires F-15741-TL63 & VB-FIX

# to seal through passages shown with dotted line.

**B1 Switch** 

Use rubber mat

# **B2 Relay** Valve

Use rubber mat

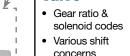
to seal through

passages shown

with dotted line.

- No Manual 1st
- No engine braking in manual 1st

## Upper Side



Valve

No shift

Replace with Sonnax Part No. 15741-50K

Requires F-33741B-TL1 & VB-FIX

#### **K3 Relay Valve**

- Erratic shift timing
- Failsafe mode
- Harsh/Soft shifts
- Burnt clutches
- Overheated fluid
- Ratio codes
- Slipping gears

Replace with Sonnax Part No. 15741-63K Requires F-15741-TL63

Requires F-15741-TL6 & VB-FIX

## K1 Relay Valve

- Gear ratio & solenoid codes
- Various shift concerns
- No shift

Replace with Sonnax Part No. 15741-49K

**15741-49K** Requires F-33741B-TL1 & VB-FIX

#### **K2 Relay Valve**

- Gear ratio & solenoid codes
- Various shift concerns
- No shift

Replace with Sonnax Part No. 15741-49K Requires F-33741B-TL1 & VB-FIX

## B2 M1 Engagement Valve

 No engine braking in Manual 1st

**NOTE:** Be sure the valve is in the rest position as there is no spring.

#### Lockup Relay Valve

- No lockup
- TCC slip
- Engine stall

## **B2 Switch Valve**

- Delayed Reverse
- No Manual 1st

# O-Ringed End

 Shift concerns associated with circuit pressure loss

Replace with Sonnax Part Nos.

15741-35K (Small, 9mm) = () 15741-36K (Large, 11mm) = (>)

NOTE: End plugs should be tested at

the retainer port. Sealing on opposite side of casting is sometimes required.

#### Pressure Cutback Valve

- Harsh/Flare shifts
- · Harsh engagement

Use rubber mat to seal through passages shown with dotted line.



## **Critical Wear Areas & Vacuum Test Locations**



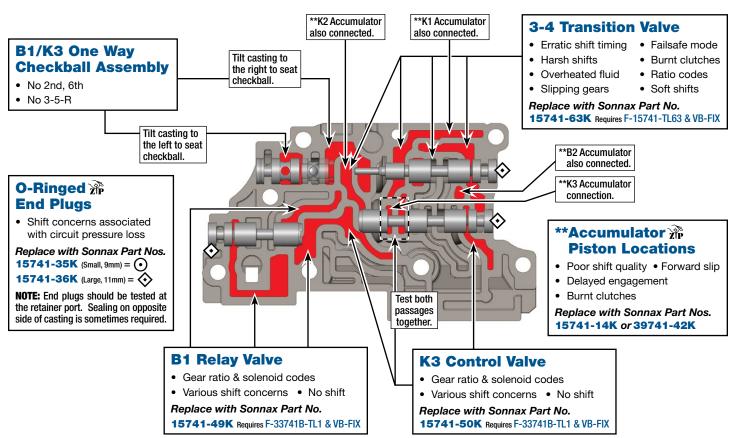
**NOTE:** OE valves are shown in rest position and should be tested in rest position unless otherwise indicated. Test locations are pointed to with an arrow. Springs are not shown for visual clarity. Low vacuum reading indicates wear and Sonnax parts are noted for replacement.

#### **Upper Valve Body #1 • 09G Shown**

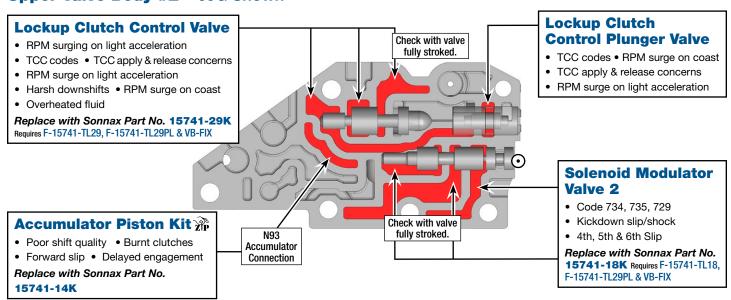


For specific vacuum test information, refer to individual part instructions included in kits and available at www.sonnax.com.

Click on Sonnax part numbers to see more information.



#### **Upper Valve Body #2 • 09G Shown**

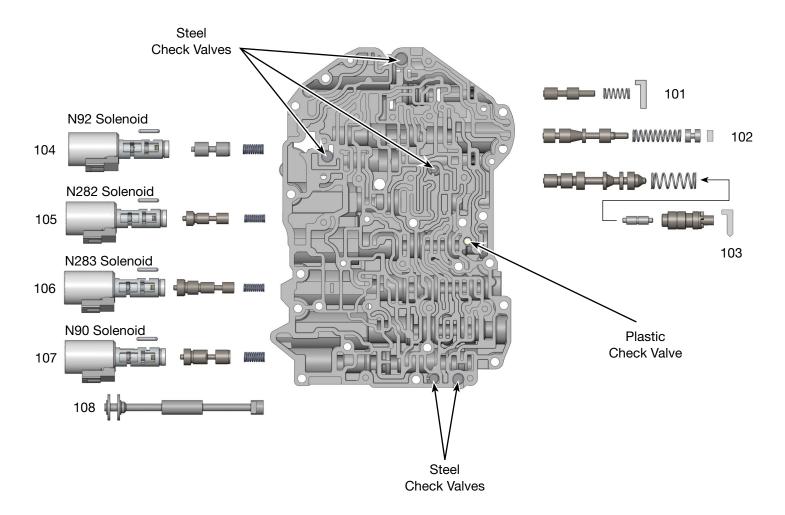


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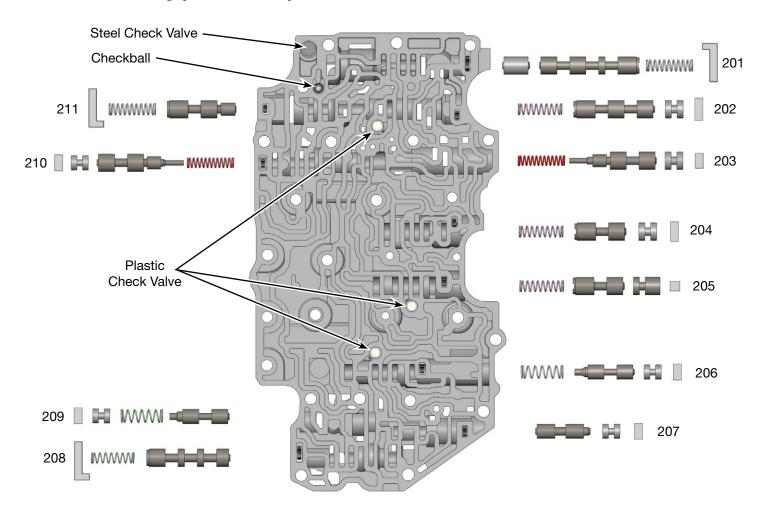
## **Lower Valve Body • 09G Shown**



| Lower Valve Body Descriptions |                                       |  |
|-------------------------------|---------------------------------------|--|
| I.D. No.                      | Description                           |  |
| 101                           | Solenoid Modulator Valve              |  |
| 102                           | Secondary Regulator Valve             |  |
| 103                           | Main Pressure Regulator & Boost Valve |  |
| 104                           | C1/K1 Clutch Control Valve            |  |
| 105                           | K2 Clutch Control Valve               |  |
| 106                           | B1 Clutch Control Valve               |  |
| 107                           | K3 Clutch Control Valve               |  |
| 108                           | Manual Valve                          |  |

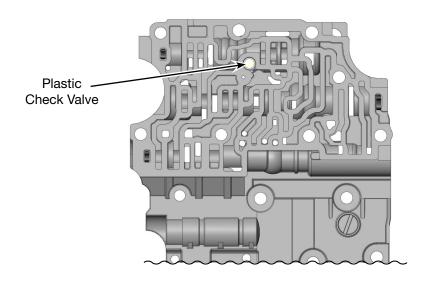


## Middle Valve Body (Bottom Side) • 09G Shown



| Middle Valve Body Descriptions |                        |  |
|--------------------------------|------------------------|--|
| I.D. No.                       | Description            |  |
| 201                            | Main Relay Valve       |  |
| 202                            | B1 Switch Valve        |  |
| 203                            | K1 Switch Valve        |  |
| 204                            | K2 Relay Valve         |  |
| 205                            | K1 Relay Valve         |  |
| 206                            | B2 Switch Valve        |  |
| 207                            | B2 M1 Engagement Valve |  |
| 208                            | Lockup Relay Valve     |  |
| 209                            | Pressure Cutback Valve |  |
| 210                            | K3 Relay Valve         |  |
| 211                            | B2 Relay Valve         |  |

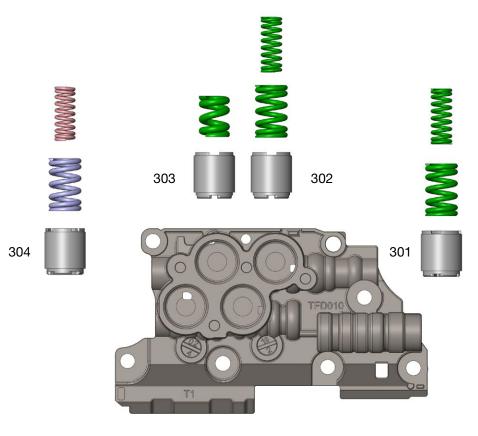
## **Middle Valve Body (Upper Side) •** 09G Shown

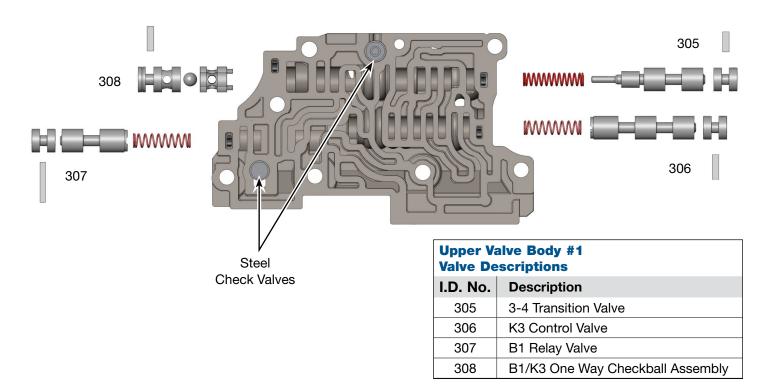




## **Upper Valve Body • #1 Exploded View • 09G Shown**

| Upper Valve Body #1 Accumulator Descriptions |                |  |  |
|--|----------------|--|--|
| I.D. No.                                     | Description    |  |  |
| 301  | K3 Accumulator |  |  |
| 302  | K2 Accumulator |  |  |
| 303  | K1 Accumulator |  |  |
| 304  | B2 Accumulator |  |  |







**Upper Valve Body • #2 Exploded View • 09G Shown** 



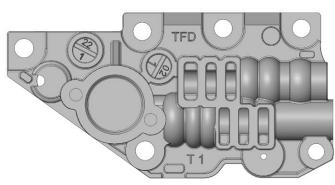


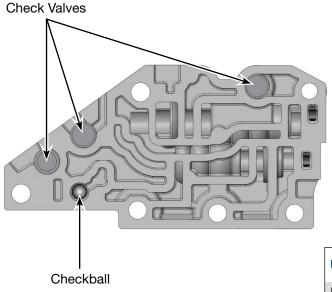


#### **Upper Valve Body #2 Accumulator Description**

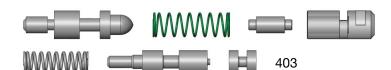
| I.D. No. | Description                           |
|----------|---------------------------------------|
| 401      | N93 Line Pressure Control Accumulator |







Steel



I.D. No. Description

402 Lockup Clutch Control Valve

403 Solenoid Modulator Valve 2

402