



AISIN AW 60-40LE (AF-13) ZIP KIT

PART NUMBER AW60-40LE-ZIP

INSTALLATION & TESTING BOOKLET

Torque Specifications

| | |
|---|---|
| Transaxle Side Cover Bolt 18 ft-lb | Manual Detent Spring Bolt 90 in-lb |
| Manual Shift Lever Nut 60 in-lb | Front Valve Body Cover Bolt 18 ft-lb |
| Front-Valve-Body-to-Rear-Valve-Body Bolt 60 in-lb | Rear Valve Body Cover Bolt 96 in-lb |
| Solenoid-to-Valve-Body Bolt 60 in-lb | Valve-Body-to-Transaxle Bolt 90 in-lb |

Fluid Chart

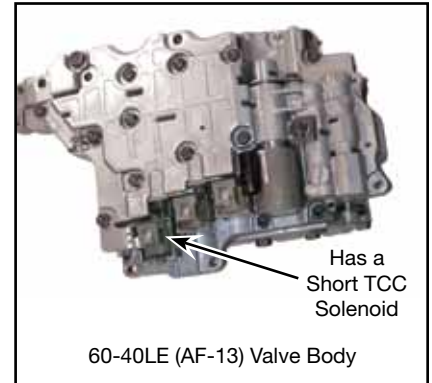
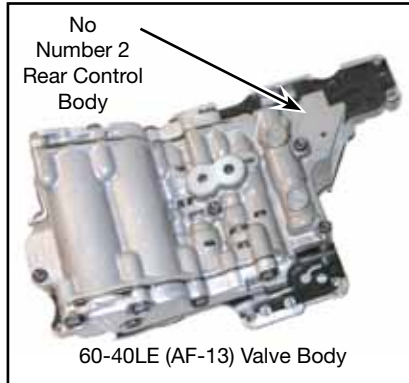
Recommended Capacities: Dexron-III ATF

| | |
|--|---|
| Approximate Capacity, Complete Overhaul 6.0 qt (5.7L) - 1.6L 6.2 qt (5.9L) - 1.8L | Approximate Capacity, Drain and Fill 2.9 qt (2.7L) - 1.6L 2.9 qt (2.7L) - 1.8L |
|--|---|

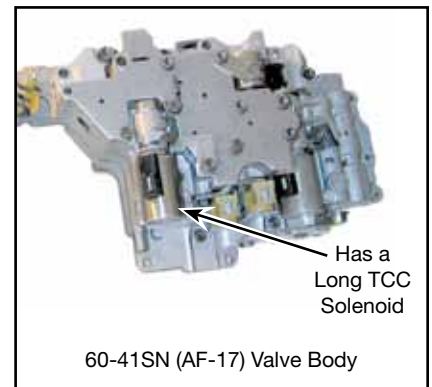
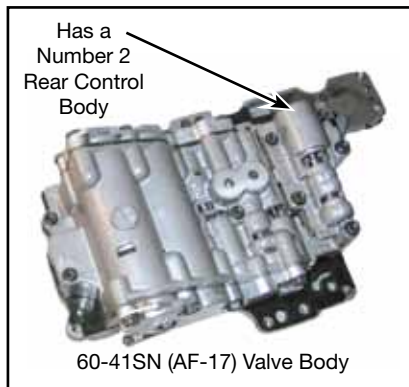
NOTE: This Zip Kit **AW60-40LE-ZIP** is designed for 60-40LE (AF-13) applications only. A separate Zip Kit **AW60-41SN-ZIP** is available for 60-41SN (AF-17) applications.

Valve Body Identification

60-40LE (AF-13) Valve Body: Use this kit.



60-41SN (AF-17) Valve Body: Use AW60-41SN-ZIP kit.



Component Apply Chart

| Position | Clutch | | | | Brake | | 1-Way Clutch | |
|----------|---------|-------|---------|----|-------------|---------|--------------|-------|
| | Forward | Coast | Reverse | OD | 1st-Reverse | 2nd-4th | No. 1 | No. 0 |
| P | | X | | | | | | |
| R | | X | X | | X | | | |
| N | | X | | | | | | |
| D | 1 | X | X | | | | X | X |
| | 2 | X | X | | | X | | X |
| | 3 | X | X | | X | | | X |
| | 4 | X | | | X | X | | |
| 2 | 1 | X | X | | | | X | X |
| | 2 | X | X | | | X | | X |
| L | 1 | X | X | | X | | X | X |

Solenoids

This 60-40LE unit uses four solenoids (Figure 1).

- The S1 (shift solenoid no. 1) and S2 (shift solenoid no. 2) are an on/off style, operated by the TCM to control the various shifts. These two solenoids are interchangeable.
- The TCC control solenoid is an on/off style controlled by the TCM to operate the converter clutch.
- The throttle pressure control liner solenoid is modulated by the TCM to regulate line pressure.

| Bolt Color Code | Bolt Length |
|-----------------|-------------|
| Yellow | 10mm |
| Red | 16mm |
| Orange | 20mm |
| Green | 38mm |
| Blue | 50mm |

Solenoid Apply Chart

| Position | Solenoid | | |
|----------|----------|-------|----------------|
| | No. 1 | No. 2 | TCC |
| P | X | | |
| R | X | | |
| N | X | | |
| D | 1 | X | |
| | 2 | X | X |
| | 3 | | X ¹ |
| | 4 | | X ¹ |
| 2 | 1 | X | |
| | 2 | X | X |
| L | 1 | X | |

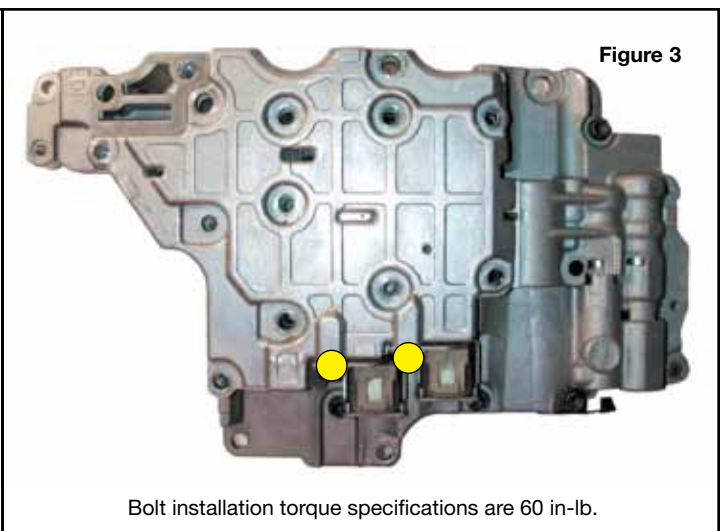
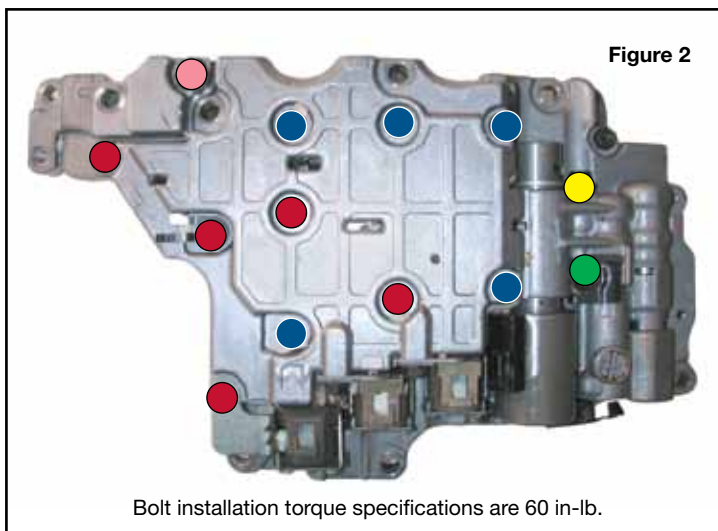
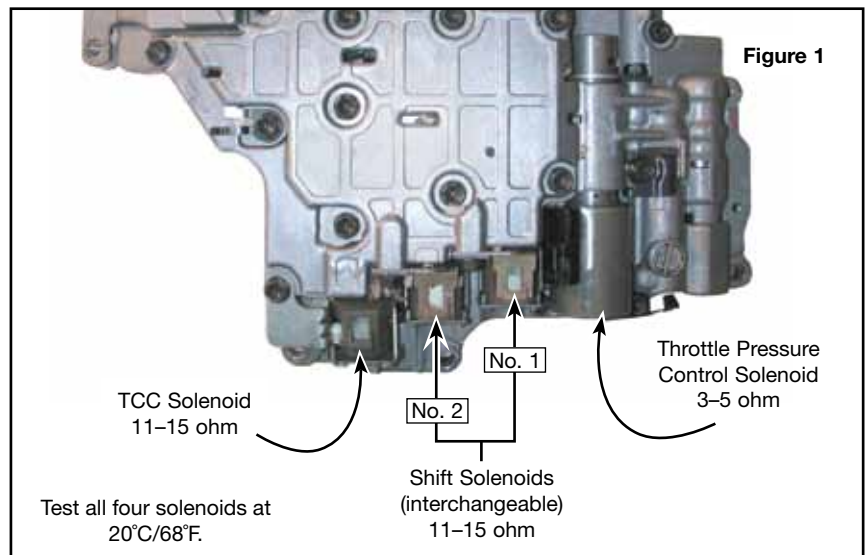
¹On only when TCC is operating.

Zip Kit Instructions

1. Valve Body Disassembly

NOTE: See color charts for bolt lengths.

- Remove the 13 bolts (Figure 2).
- Remove the small cover, TCC control solenoid, throttle pressure control solenoid (Figure 1) and brackets.
- Remove the two bolts (Figure 3), two shift solenoids (Figure 1) and front valve body cover, separator plate and gasket.
- Remove the three checkballs, two oil filters, one check valve and spring, four bolts and one bracket (Figure 4).



1. Valve Body Disassembly (continued)

- e. Flip valve body over and remove five bolts. Lift rear valve body and separator plate off of front valve body (Figure 5).
- f. Remove 11 bolts to access valves retained under the two rear valve body covers (Figure 6).

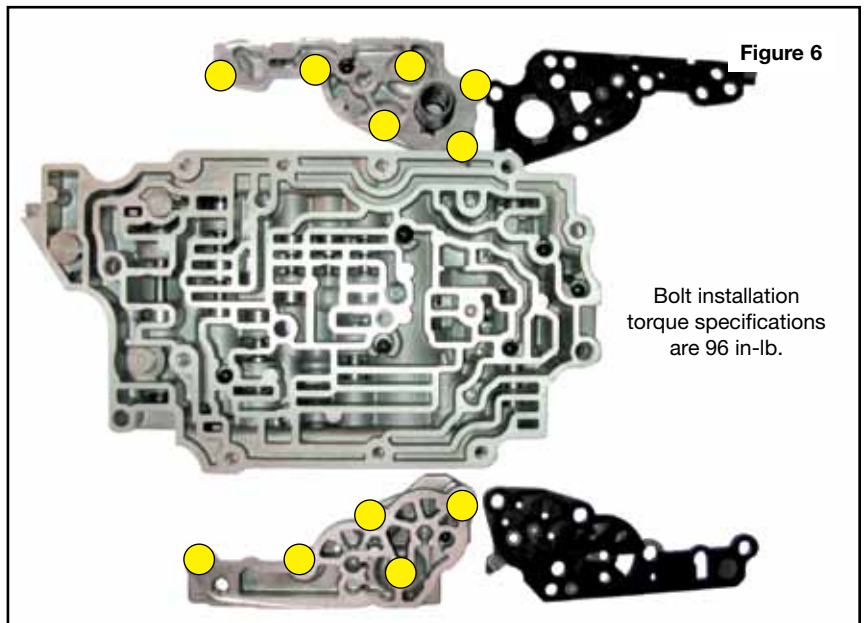
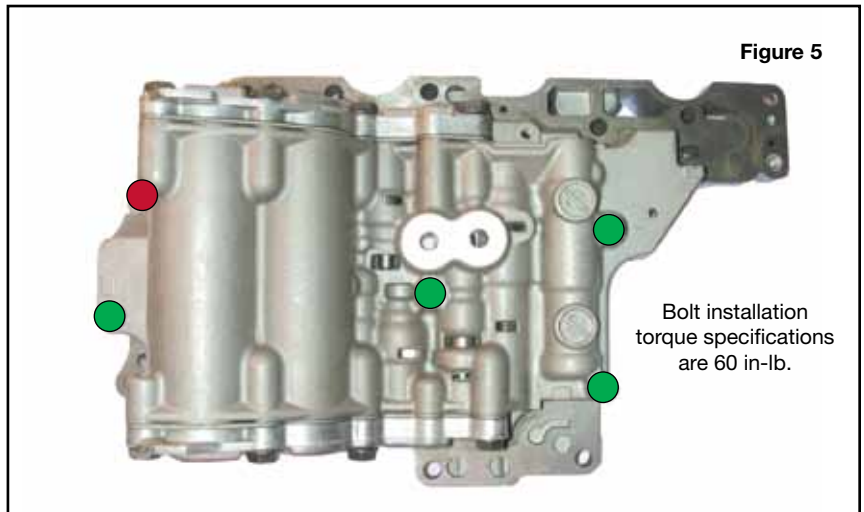
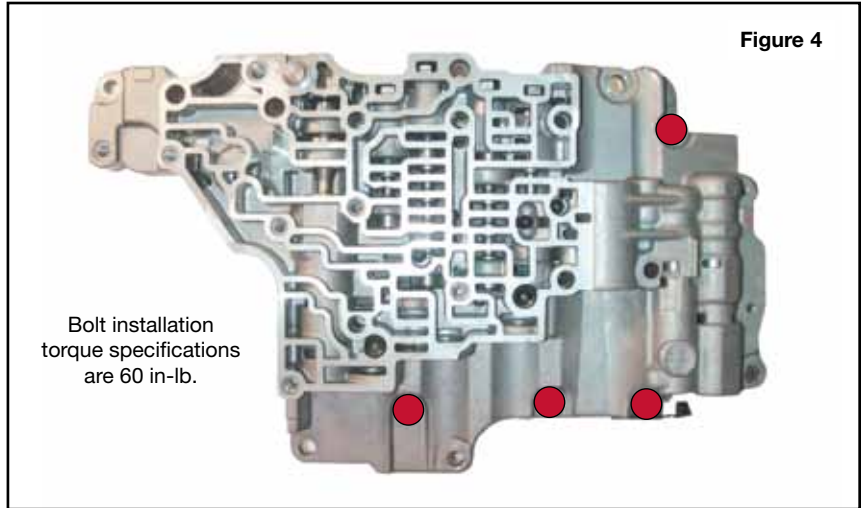
2. Installation

Install Zip Kit parts as shown on diagram of separate quick guide sheet included in this Zip Kit.

3. Valve Body Assembly

- a. Reinstall the two rear valve body covers and loosely install the 11 bolts (Figure 6), then torque to 96 in-lb.
- b. Reinstall the separator plate, gasket and rear valve body onto the front valve body (first ensuring all checkballs, check valves and filters are in proper locations). Loosely install the five bolts (Figure 5), then torque to 60 in-lb.
- c. Flip the valve body over.
- d. Loosely install the four bolts (Figure 4), and torque the four bolts to 60 in-lb.
- e. Place the front valve body cover, gasket and separator plate onto the front valve body. Reinstall the two shift solenoids and loosely install the two bolts (Figure 3).
- f. Reinstall the brackets, throttle pressure control solenoid, TCC control solenoid (Figure 1) and small cover.
- g. Loosely install the 13 bolts (Figure 2) and then torque all 15 bolts to 60 in-lb.

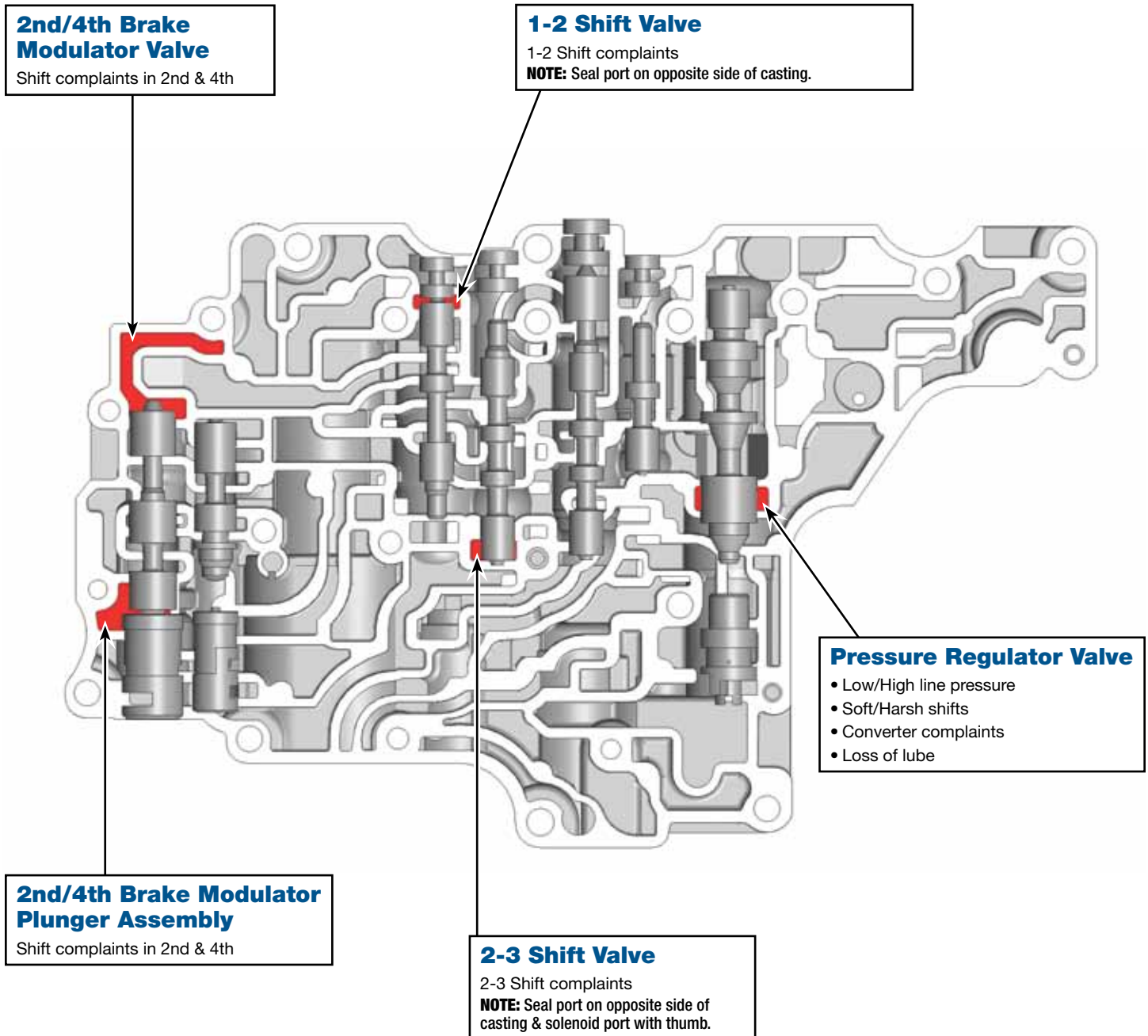
| Bolt Color Code | Bolt Length |
|-----------------|-------------|
| Yellow | 10mm |
| Red | 16mm |
| Orange | 20mm |
| Green | 38mm |
| Blue | 50mm |



Critical Wear Areas & Vacuum Test Locations

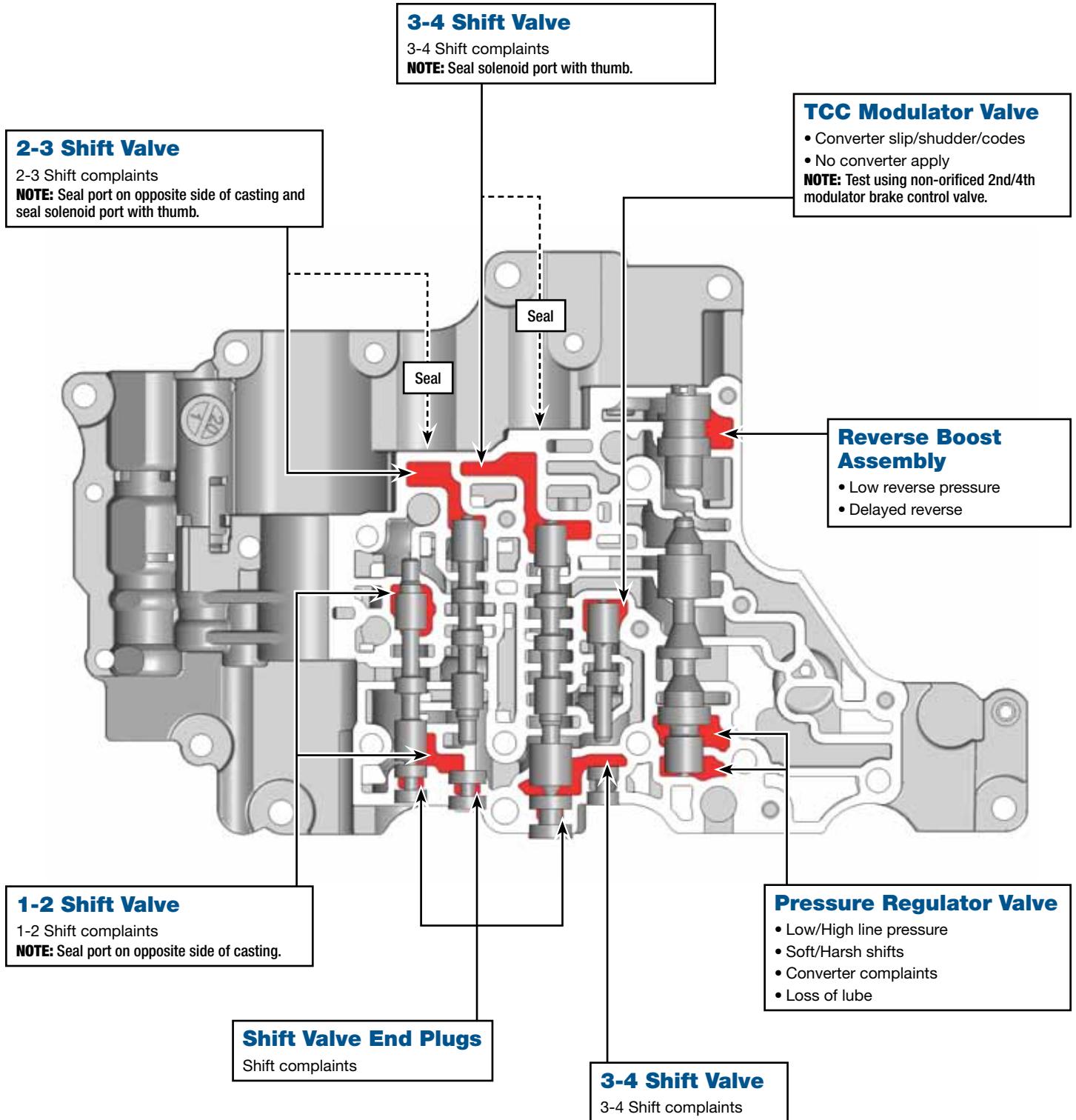
NOTE: OE valves are shown in rest position and should be tested in rest position unless otherwise indicated. Test locations are pointed to with an arrow. Springs are not shown for visual clarity. Low vacuum reading indicates wear.

Front Control Valve Body - Separator Plate Side Shown Here





Front Control Valve Body - Cover Side Shown Here

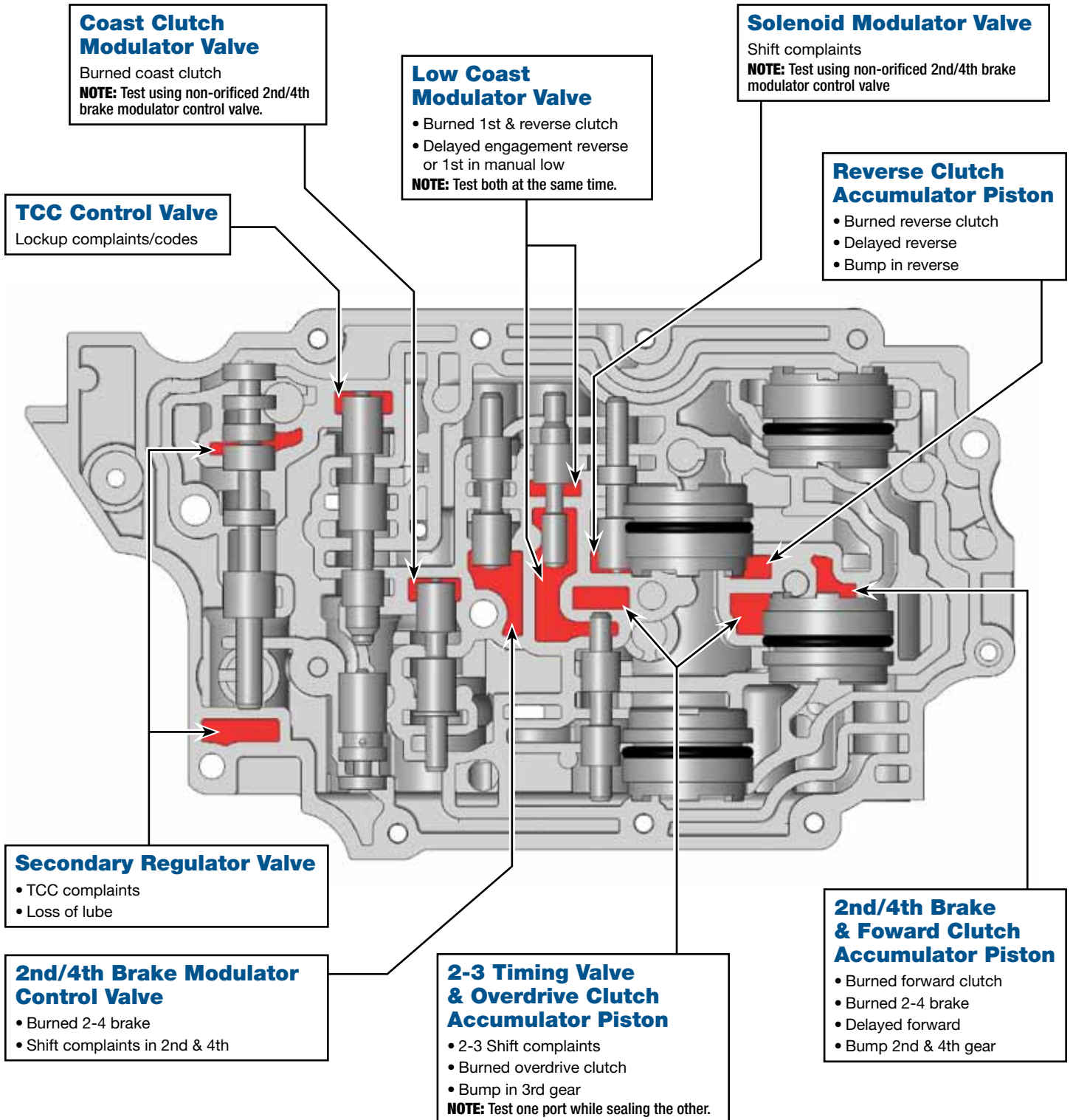


Critical Wear Areas & Vacuum Test Locations



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.

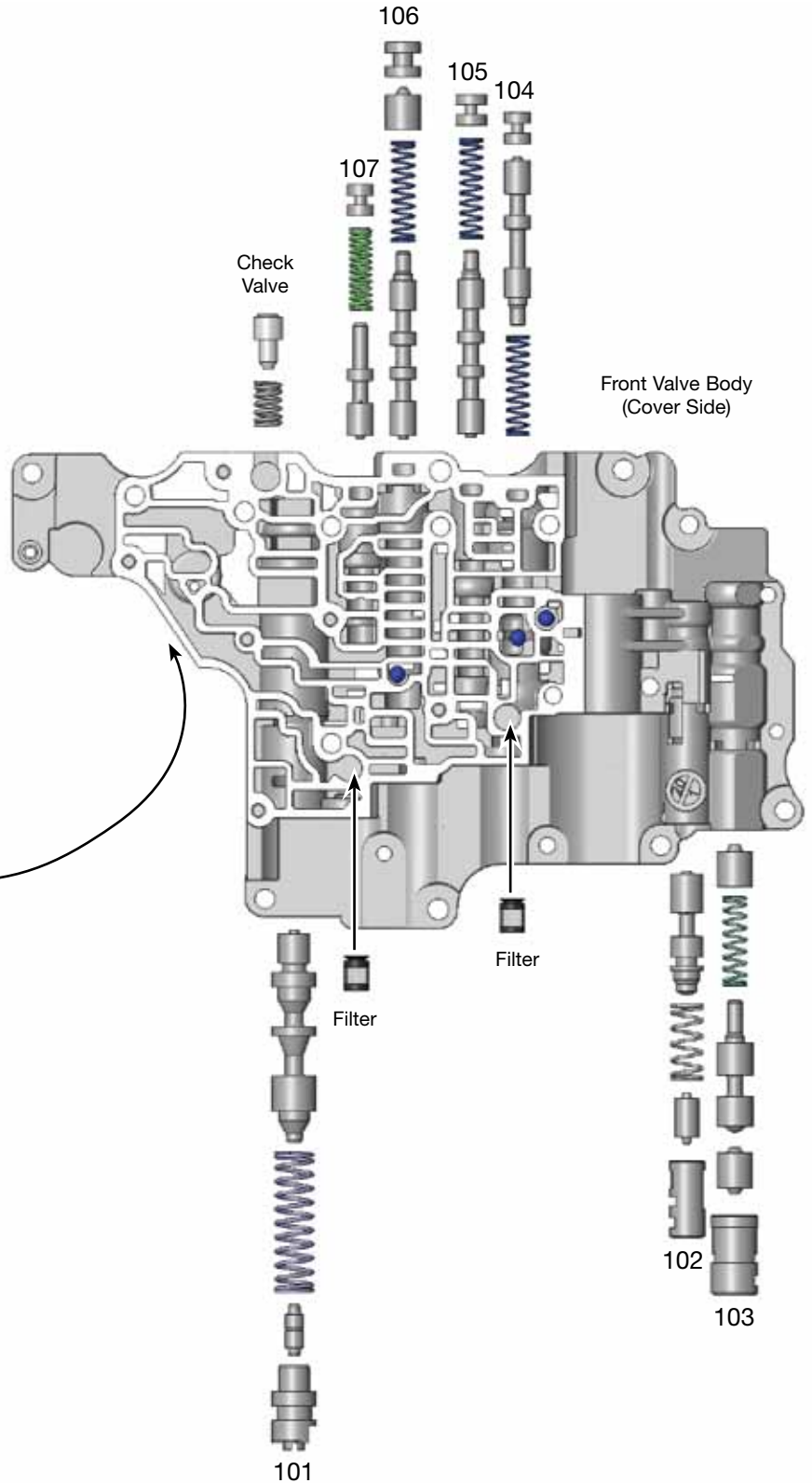
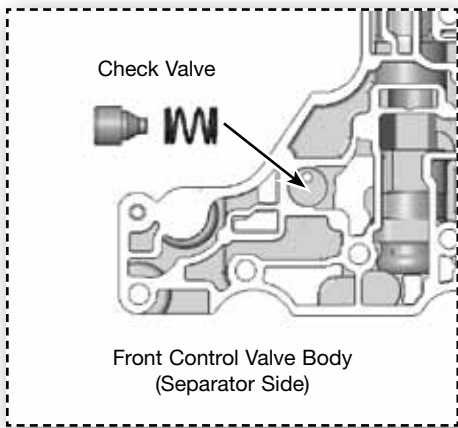
Rear Control Valve Body - Separator Plate Side Shown Here



OE Exploded View

Front Control Valve Body - Cover Side (Separator Side Inset) Shown Here

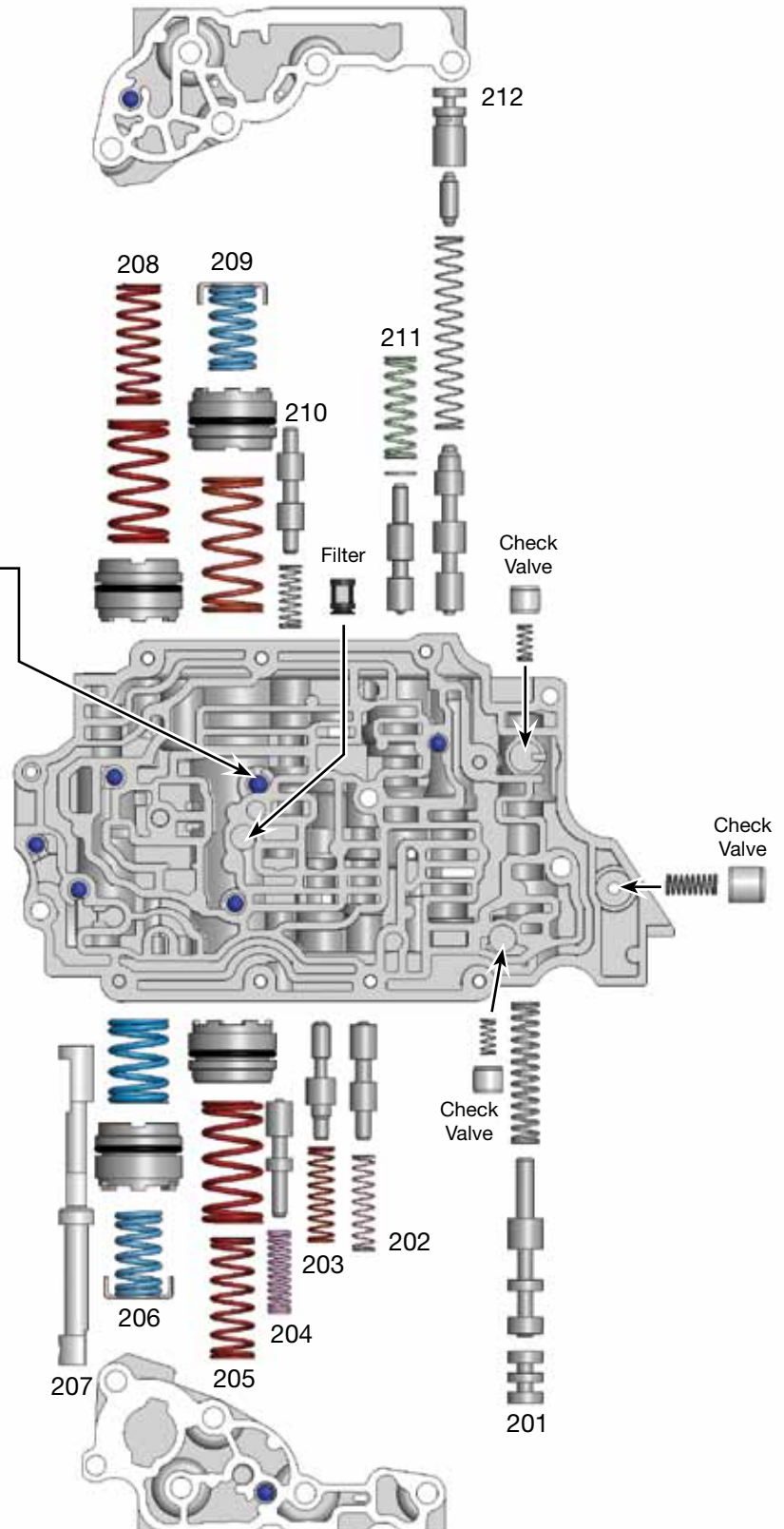
| Front Control Valve Body Descriptions | |
|---------------------------------------|---|
| I.D. No. | Description |
| 101 | Reverse Boost Assembly & Pressure Regulator Valve |
| 102 | Accumulator Control Valve & Plunger Assembly |
| 103 | 2nd/4th Brake Modulator Valve & Plunger Assembly |
| 104 | 1-2 Shift Valve |
| 105 | 2-3 Shift Valve |
| 106 | 3-4 Shift Valve |
| 107 | TCC Modulator Valve |



OE Exploded View

Rear Control Valve Body

Checkball, Large .250" dia.
(All 10 others, Small .218" dia.)



| Rear Control Valve Body Descriptions | |
|--------------------------------------|---------------------------------------|
| I.D. No. | Description |
| 201 | Secondary Regulator Valve |
| 202 | 2nd/4th Brake Modulator Control Valve |
| 203 | Low Coast Modulator Valve |
| 204 | Solenoid Modulator Valve |
| 205 | Reverse Clutch Accumulator Piston |
| 206 | 2nd/4th Brake Accumulator Piston |
| 207 | Manual Valve |
| 208 | Forward Clutch Accumulator Piston |
| 209 | Overdrive Clutch Accumulator Piston |
| 210 | 2-3 Timing Valve |
| 211 | Coast Clutch Modulator Valve |
| 212 | TCC Control Valve & Plunger Assembly |