



# Technical Service Information

## 2001 & UP FORD 4R70W FAMILY VALVE BODY CHANGE

**CHANGE:** Beginning at the start of production in 2001, Ford Motor Company redesigned the Valve Body for the 4R70W. **NOTE:** This change also carries over to the 4R70E and 4R75E models.

**REASON:** For improved durability.

### PARTS AFFECTED:

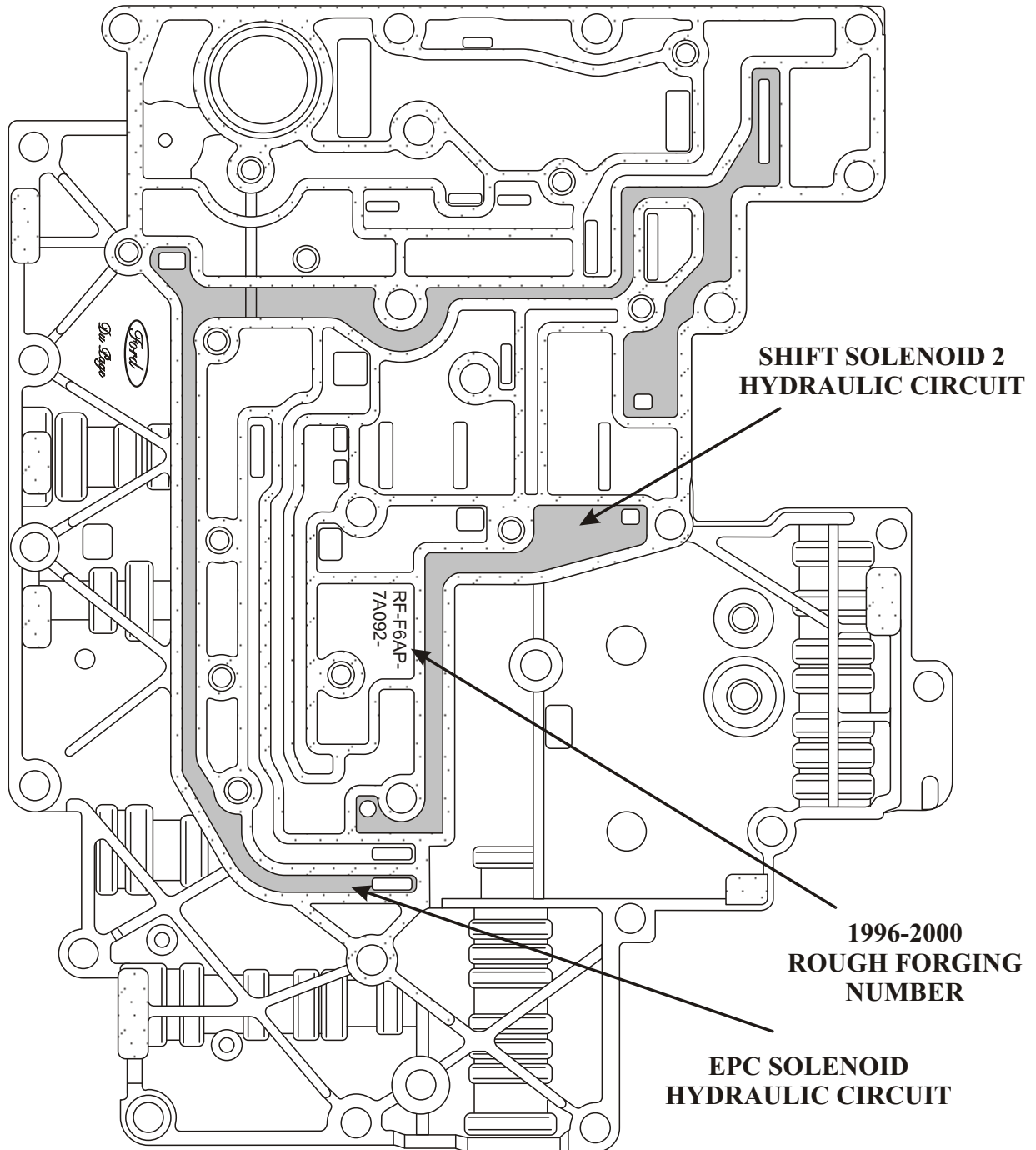
- (1) VALVE BODY CASTING (*Lower side*) - The Lower side of the valve body had casting changes to connect the 2-3 Backout Valve to the Shift Solenoid 2 hydraulic circuit, as shown in Figure 2. Figure 1 shows the previous design casting and identifies the EPC circuit that was connected to the 2-3 Backout Valve on the earlier models.
- (2) SPACER PLATE GASKETS - The 2001 and up design upper and lower spacer plate gaskets had numerous hole configuration changes to accommodate the hydraulic changes with the valve body. The most obvious change is the plate that was eliminated over the Direct Clutch Accumulator, as shown in Figure 3.
- (3) SPACER PLATE - The 2001 and up design spacer plate had hole changes to connect the added Overdrive Servo Regulator Valve Boost Valve and Sleeve to the EPC solenoid circuit, and to accommodate the changes in the 3-4 Capacity Modulator Valve. Figure 5 shows that a change also was made to the cover plate connecting the Forward Clutch Circuit to the 3-4 Capacity Modulator Valve. The bolt holes were removed from the Spacer plate along with the plate over the Direct Clutch Accumulator. Refer to Figure 4 for a view of the previous design Spacer Plate.
- (4) DIRECT CLUTCH ACCUMULATOR RETAINER - The retainer for the accumulator had a dimensional change to accommodate the elimination of the plate over the the Direct Clutch Accumulator. See Figure 6.
- (5) MAIN VALVE BODY - The main valve body had casting changes to accommodate the removal of the Orifice Control Valve and the 2-3 Capacity Modulator Valve as shown in Figures 7, 8 and 9.
- (6) CASE - The Overdrive Servo Bleed orifice, as shown in Figure 10, was eliminated to accommodate the hydraulic circuit changes in the Overdrive Servo Regulator Valve. See Figure 11 for a partial hydraulic circuit diagram identifying the 2001 and up hydraulic circuit.

### SERVICE INFORMATION:

SPACER PLATE GASKET TO CASE.....1L3Z-7C155-AA  
SPACER PLATE GASKET TO VALVE BODY.....1W7Z-7D100-AB

*Special thanks  
to Robert at  
Tri-County Trans*

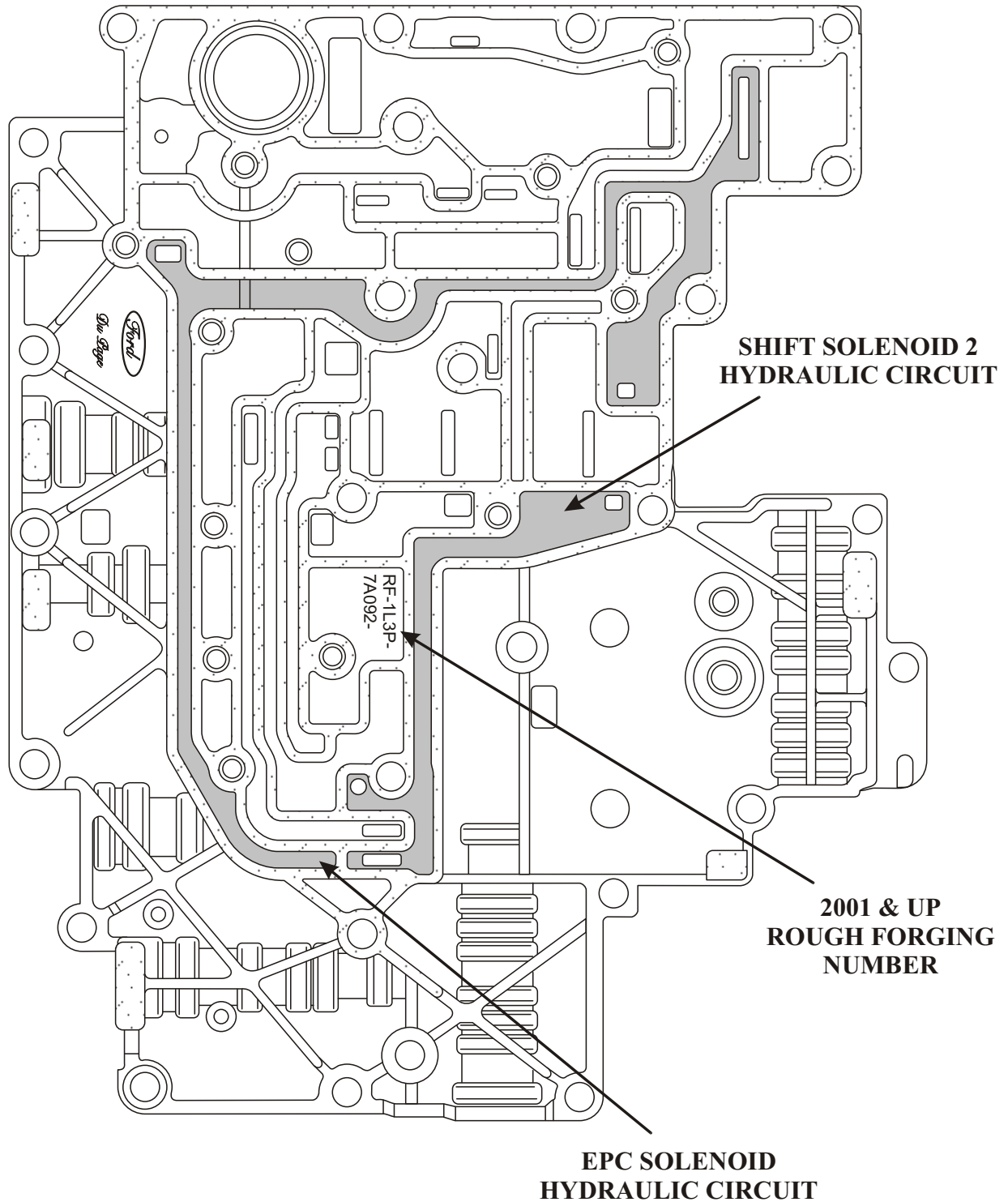
## PREVIOUS DESIGN VALVE BODY LOWER SIDE



Copyright © 2006 ATSG

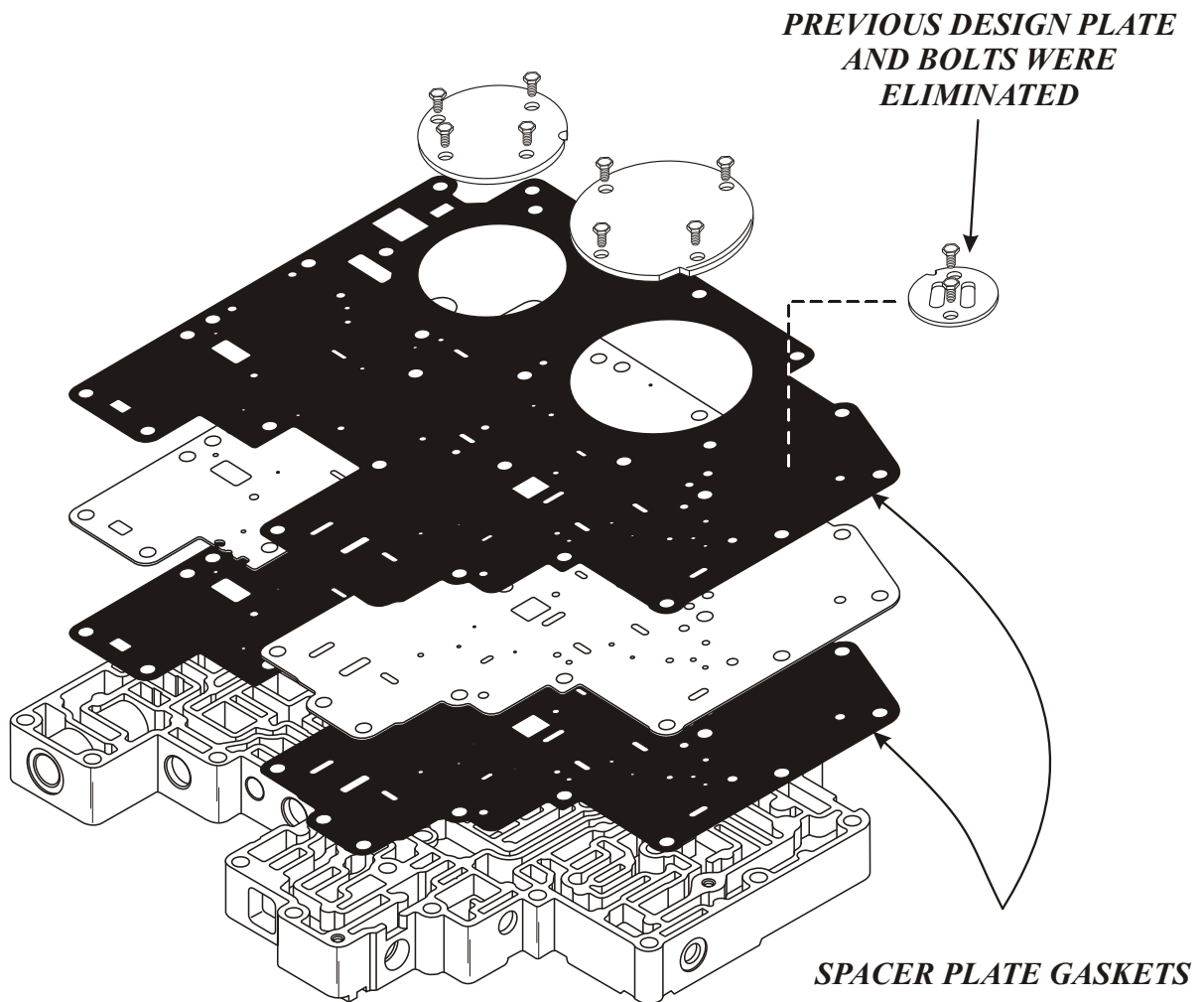
Figure 1

## 2001 & UP DESIGN VALVE BODY LOWER SIDE



Copyright © 2006 ATSG

## 2001 MODEL 4R70W VALVE BODY

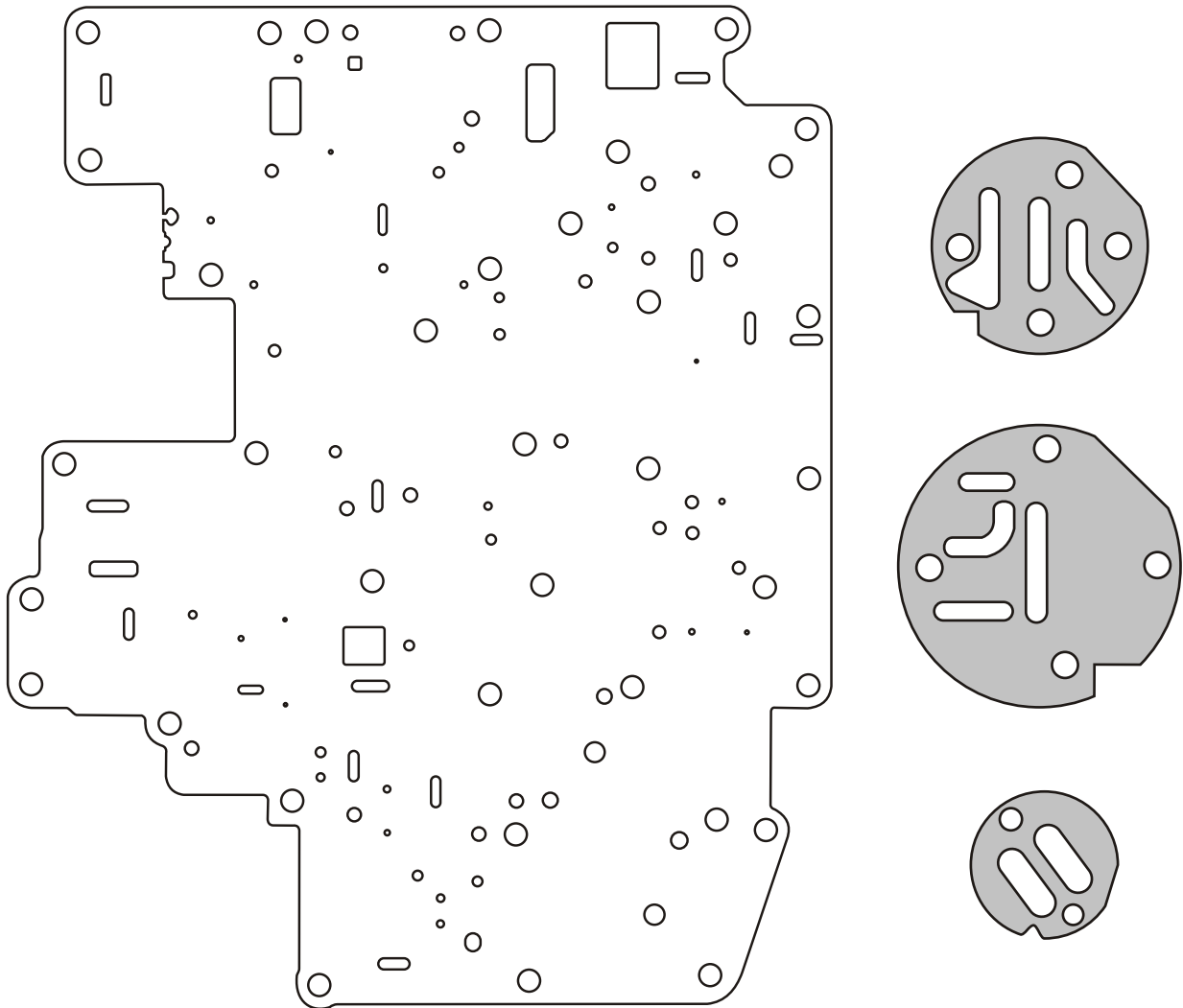


**SPACER PLATE GASKET TO CASE (FORD NUMBER) 1L3Z-7C155-AA**  
**SPACER PLATE GASKET TO VALVE BODY (FORD NUMBER) 1W7Z-7D100-AB**

Copyright © 2006 ATSG

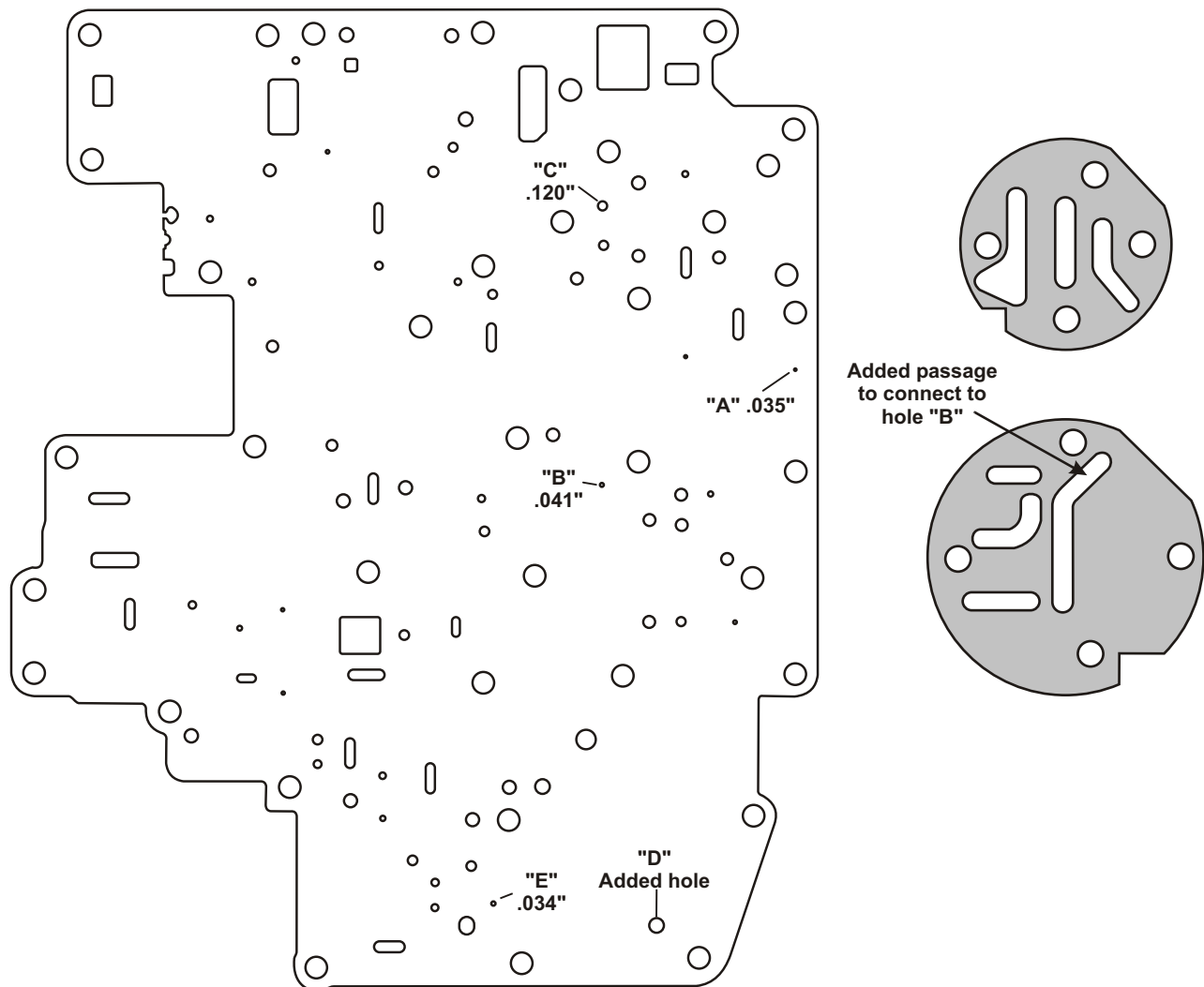
Figure 3

## PREVIOUS DESIGN SPACER PLATE



Copyright © 2006 ATSG

## 2001 & UP SPACER PLATE



**"A"** = Added hole to connect the EPC circuit to the added Overdrive Servo Regulator Valve Boost Valve and Sleeve

**"B"** = Added hole to connect the Forward Clutch to the 3-4 Capacity Modulator Valve

**"C"** = Tcc Signal Pressure from TCC PWM solenoid. Hole was enlarged to .120"

**"D"** = Hole moved to connect the Direct Clutch to the Direct Clutch Accumulator

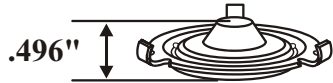
**"E"** = Orifice added to Direct Clutch Accumulator (Forward Clutch side)

Copyright © 2006 ATSG

Figure 5

## DIRECT CLUTCH ACCUMULATOR RETAINER

*PREVIOUS DESIGN  
SPRING RETAINER*



*2001 & UP DESIGN  
SPRING RETAINER*

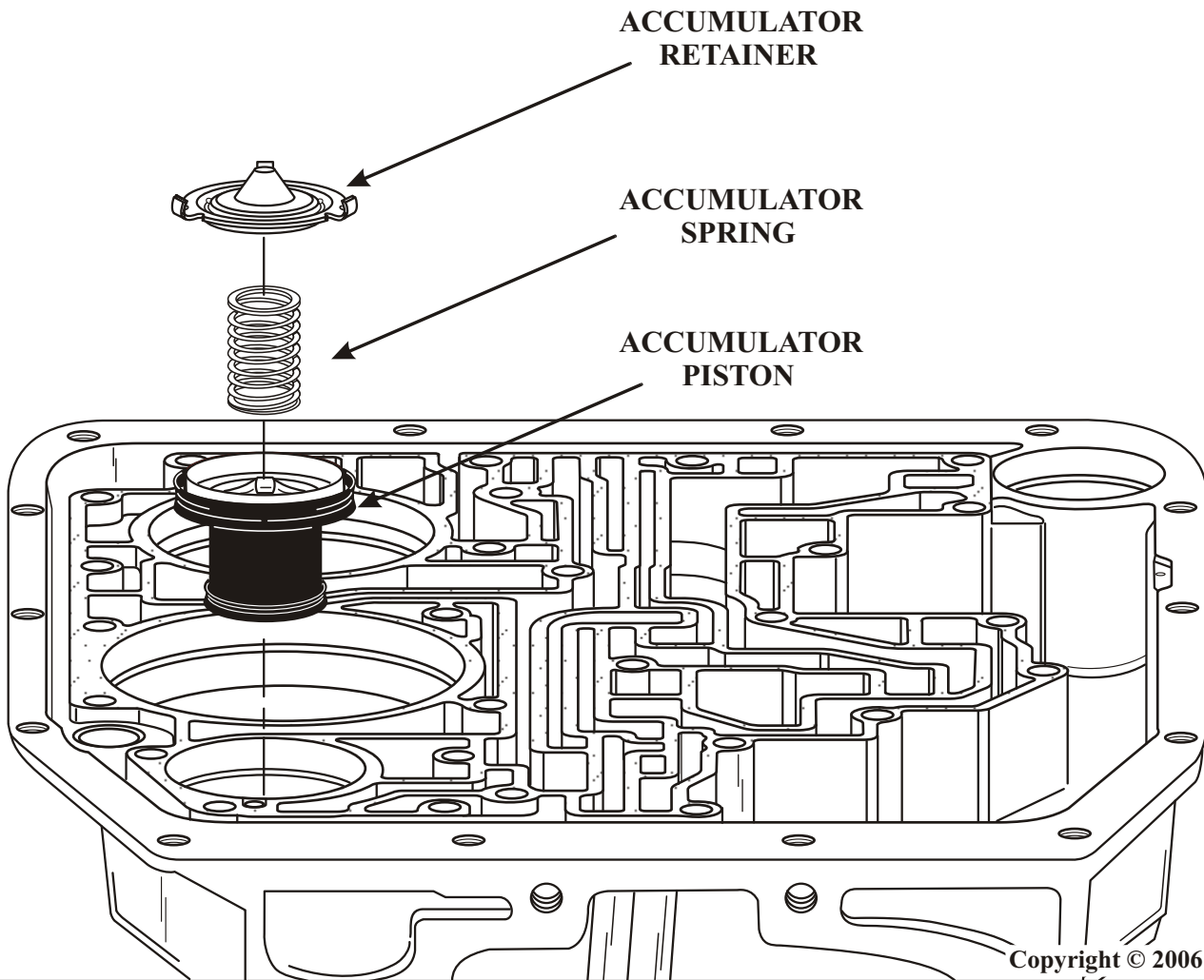
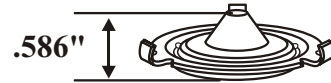
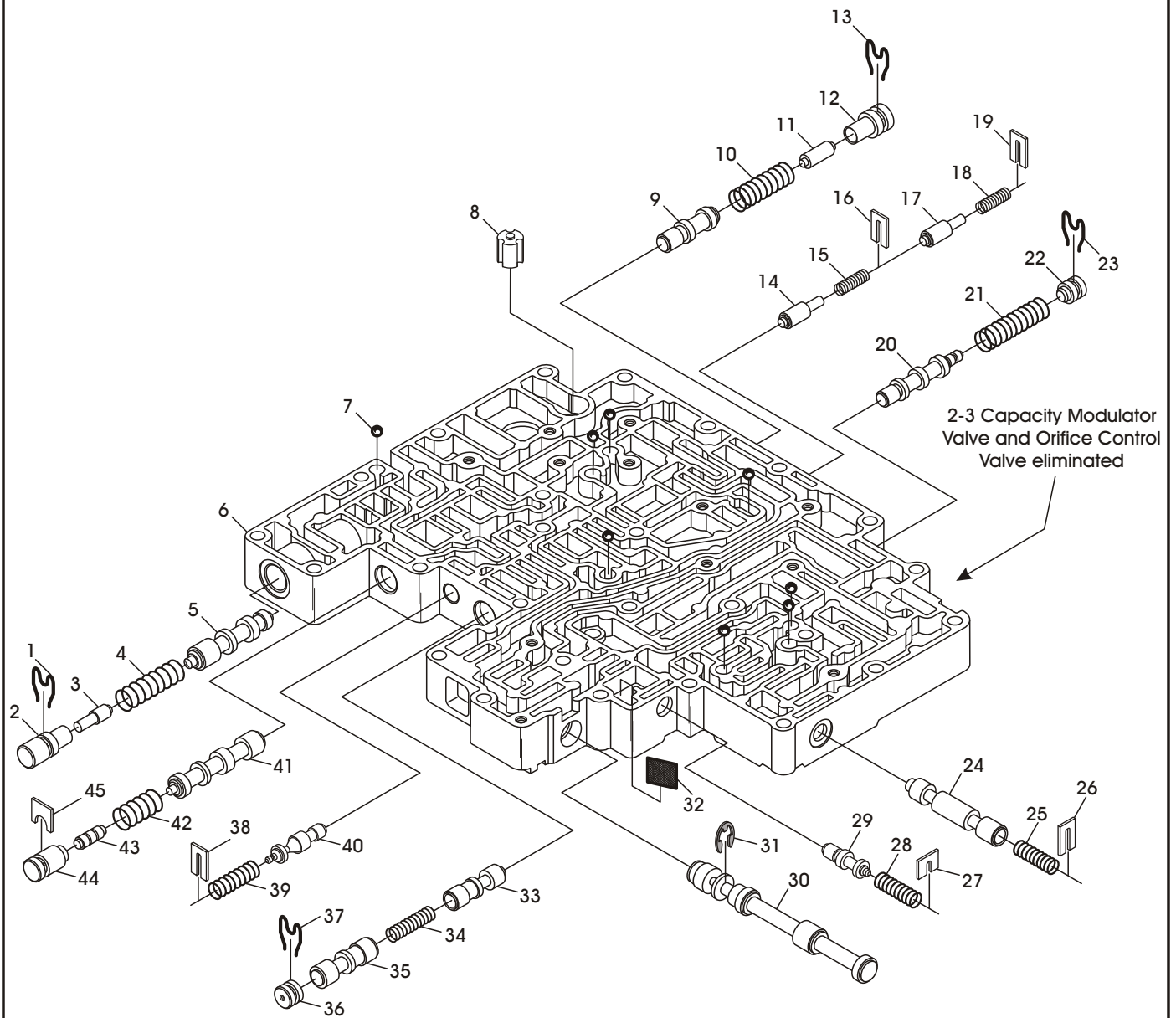


Figure 6

## FORD 4R70W 2001-UP MAIN VALVE BODY EXPLODED VIEW



Copyright © 2006 ATSG

Figure 7  
AUTOMATIC TRANSMISSION SERVICE GROUP





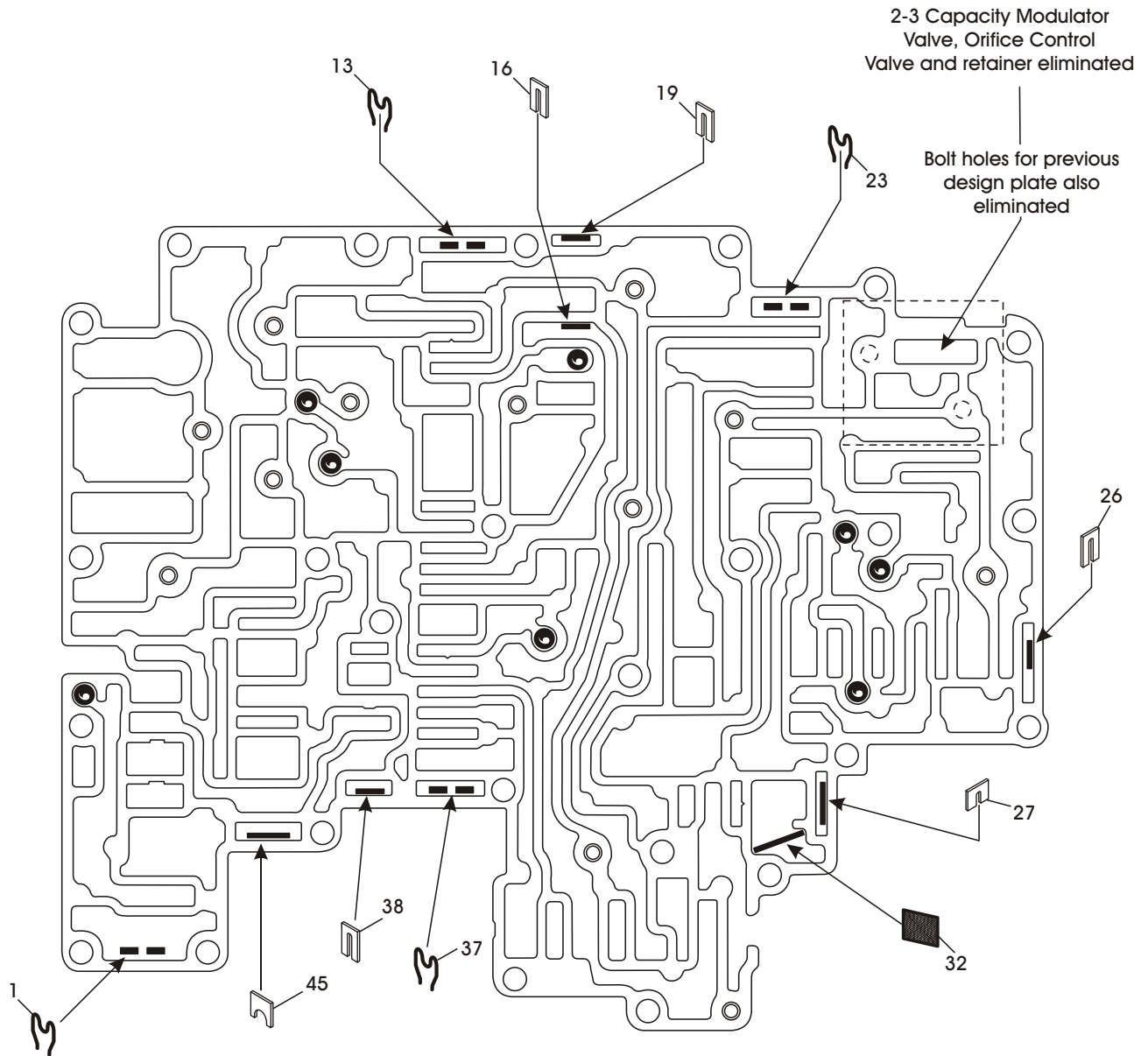
## FORD 4R70W MAIN VALVE BODY LEGEND

- |  |  |
|--|--|
| 1 MAIN PRESSURE REGULATOR BOOST VALVE SLEEVE RETAINER. | 24 2-3 BACKOUT VALVE.                                  |
| 2 MAIN PRESSURE REGULATOR BOOST VALVE SLEEVE.          | 25 2-3 BACKOUT VALVE SPRING.                           |
| 3 MAIN PRESSURE REGULATOR BOOST VALVE.                 | 26 2-3 BACKOUT VALVE SPRING RETAINER.                  |
| 4 MAIN PRESSURE REGULATOR VALVE SPRING.                | 27 SOLENOID PRESSURE REGULATOR VALVE SPRING RETAINER.  |
| 5 MAIN PRESSURE REGULATOR VALVE.                       | 28 SOLENOID PRESSURE REGULATOR VALVE SPRING.           |
| 6 MAIN VALVE BODY CASTING.                             | 29 SOLENOID PRESSURE REGULATOR VALVE.                  |
| 7 CHECK BALL, 1/4" DIAMETER (8 REQUIRED).              | 30 MANUAL CONTROL VALVE.                               |
| 8 CONVERTER DRAIN BACK VALVE.                          | 31 MANUAL CONTROL VALVE "E" CLIP.                      |
| 9 O.D. SERVO PRESSURE REGULATOR VALVE.                 | 32 EPC SOLENOID SCREEN.                                |
| 10 O.D. SERVO PRESSURE REGULATOR VALVE SPRING.         | 33 1-2 SHIFT VALVE.                                    |
| 11 O.D. SERVO PRESSURE REGULATOR BOOST VALVE.          | 34 2-3 SHIFT VALVE SPRING.                             |
| 12 O.D. SERVO PRESSURE REGULATOR BOOST VALVE SLEEVE.   | 35 2-3 SHIFT VALVE.                                    |
| 13 BOOST VALVE SLEEVE RETAINER.                        | 36 2-3 SHIFT VALVE BORE PLUG.                          |
| 14 3-4 CAPACITY MODULATOR VALVE.                       | 37 2-3 SHIFT VALVE BORE PLUG RETAINER.                 |
| 15 3-4 CAPACITY MODULATOR VALVE SPRING.                | 38 CONVERTER PRESSURE REGULATOR VALVE SPRING RETAINER. |
| 16 3-4 CAPACITY MODULATOR VALVE SPRING RETAINER.       | 39 CONVERTER PRESSURE REGULATOR VALVE SPRING.          |
| 17 LOW SERVO CAPACITY MODULATOR VALVE.                 | 40 CONVERTER PRESSURE REGULATOR VALVE.                 |
| 18 LOW SERVO CAPACITY MODULATOR VALVE SPRING.          | 41 BYPASS CLUTCH CONTROL VALVE.                        |
| 19 LOW SERVO CAPACITY MODULATOR VALVE SPRING RETAINER. | 42 BYPASS CLUTCH CONTROL VALVE SPRING.                 |
| 20 3-4 SHIFT VALVE.                                    | 43 BYPASS CLUTCH CONTROL BOOST VALVE.                  |
| 21 3-4 SHIFT VALVE SPRING.                             | 44 BYPASS CLUTCH CONTROL BOOST VALVE SLEEVE.           |
| 22 3-4 SHIFT VALVE SPRING BORE PLUG.                   | 45 BYPASS CLUTCH CONTROL VALVE SLEEVE RETAINER.        |
| 23 3-4 SHIFT VALVE BORE PLUG RETAINER.                 |  |

Copyright © 2006 ATSG

Figure 8

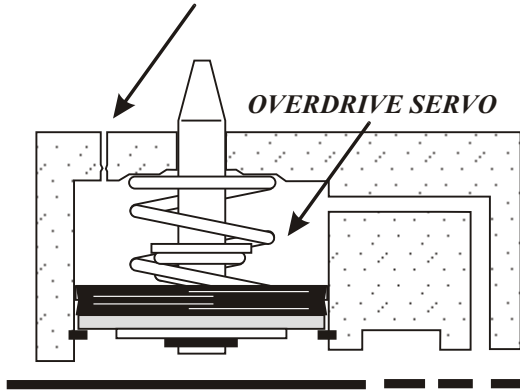
## 2001 & UP FORD 4R70W VALVE BODY CHECKBALL AND RETAINER LOCATIONS



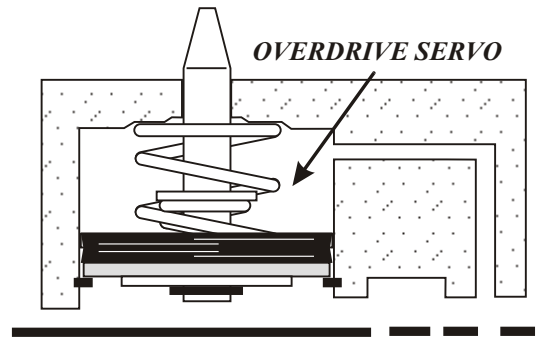
Copyright © 2006 ATSG

## CASE CHANGES

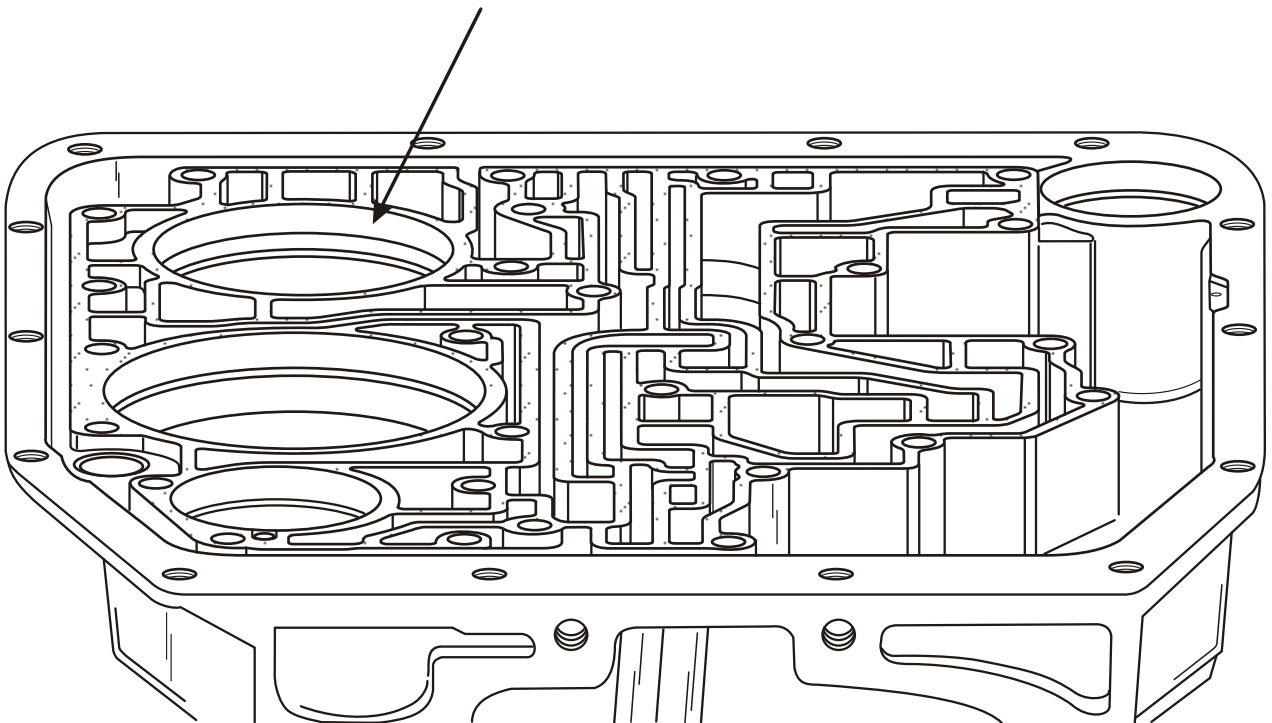
**PREVIOUS DESIGN  
CASE WITH .020" BLEED ORIFICE**



**2001 & UP DESIGN  
CASE WITHOUT BLEED ORIFICE**



**OVERDRIVE SERVO  
BORE**



Copyright © 2006 ATSG

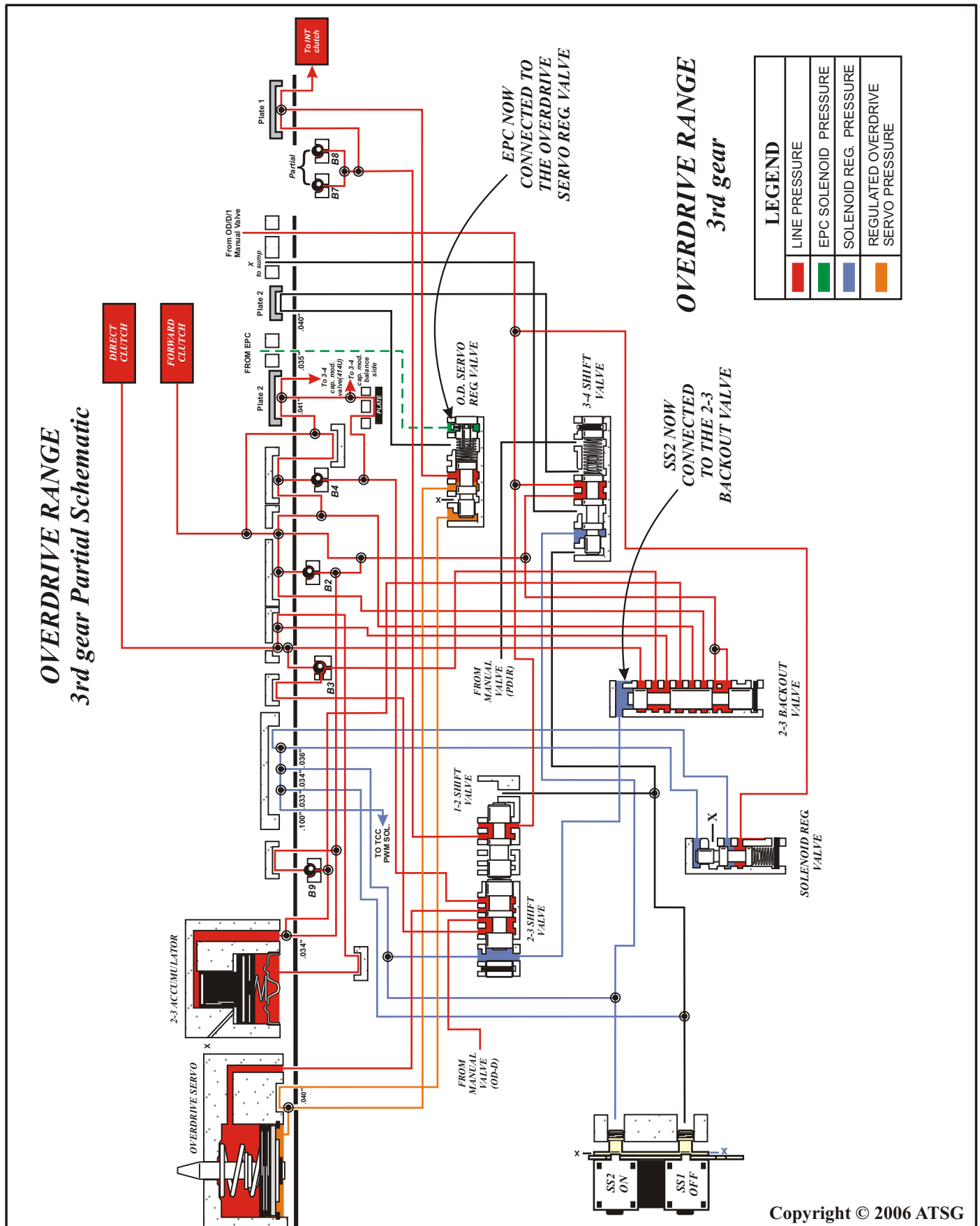


Figure 11  
AUTOMATIC TRANSMISSION SERVICE GROUP