



# Technical Service Information

## FORD MOTOR COMPANY

### 2001-UP VEHICLES EQUIPPED WITH THE 4R70W 4R70E-4R75E TRANSMISSIONS 3-4 NEUTRAL BEFORE OR AFTER REBUILD

**COMPLAINT:** Some Ford Motor Company vehicles 2001- later that are equipped with the 4R70W-4R70E, and 4R75E transmissions may exhibit a 3-4 upshift neutral condition either before, or after rebuild. A no engine braking with the shifter in the manual 2 range may also be noticed as well.

**CAUSE:** One possible cause for this condition may be that pieces of the overdrive servo retaining snap ring, or the overdrive servo piston “E-Clip” may be broken. (See Figure1). When these pieces break off, they may become lodged in the overdrive servo regulator valve and restrict the movement of the valve (See Figures 2 and 3) for valve location and identification. This can cause the overdrive band to not have the ability to make a full apply, resulting in a 3-4 neutral condition, and possibly a no engine braking condition with the shifter in the manual 2 range.

**CORRECTION:** It is recommended that during transmission service, or overhaul, to carefully remove the overdrive servo regulator valve assembly from the valve body, and clean out any debris that may be found.

**Note:** if the OD servo regulator boost valve and sleeve is either worn, or sticking, there is a replacement valve assembly offered from Sonnax, part number 76948-29K.

#### OVERDRIVE SERVO CROSS-SECTION

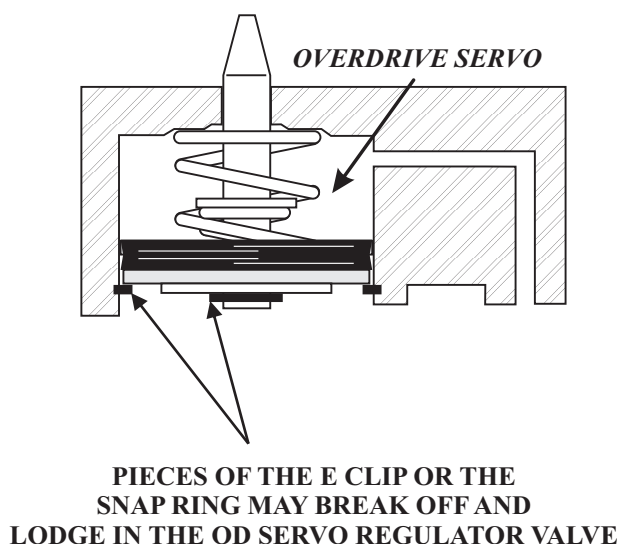
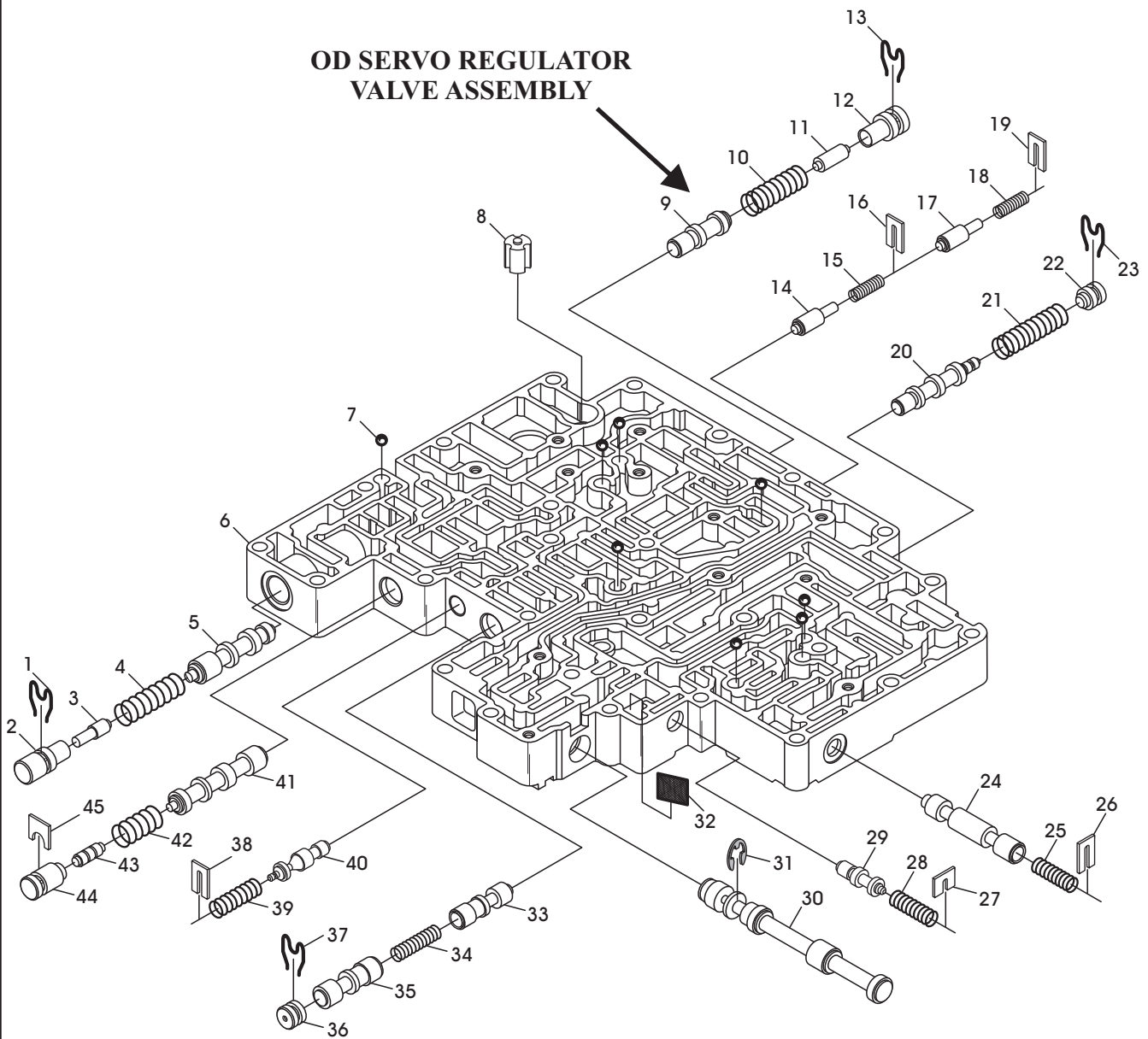


Figure 1

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



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Figure 2



# Technical Service Information

## 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 REGULATOR VALVE.                          | 32 EPC SOLENOID SCREEN.                                |
| 10 O.D. SERVO REGULATOR VALVE SPRING.                  | 33 1-2 SHIFT VALVE.                                    |
| 11 O.D. SERVO REGULATOR BOOST VALVE.                   | 34 2-3 SHIFT VALVE SPRING.                             |
| 12 O.D. SERVO 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.                 |  |

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Figure 3