



Technical Service Information

FORD 4R100 SETTING DTC P0715-P0717

COMPLAINT: Ford Motor Company vehicles equipped with the 4R100 transmission may come into the shop exhibiting a fourth gear takeoff, and when scanned, DTC P0715 (Insufficient Input from TSS), and DTC P0717 (TSS Signal Intermittent). It will also be noticed that when monitoring scanner data, that Shift Solenoid 1 is on, and Shift Solenoid 2 is off. This indicates that First Gear is being commanded. Replacing the TSS, wiring, and the PCM have not solved the problem.

CAUSE: The cause in this case is a sticking solenoid regulator valve in the main control body. When the solenoid regulator valve sticks wide open, fluid pressure that goes to the solenoid pack is cut off. With the shift selector in "D" and no pressure to the shift solenoids, results in a fourth gear start. The reason that the TSS codes appear is that when the transmission is taking off in fourth, the overdrive clutches are applied which prevents the coast clutch drum from spinning. In order for the TSS to return a reading to the PCM, the coast clutch drum has to be spinning. The TSS reads off the lugs on the outside of the coast clutch drum. (See Figure 1) In first, second, and third gears, The overdrive clutches are not applied, which allows the coast clutch drum to spin freely. This means that in first, second, or third gears, the PCM expects to see a signal from the TSS. With the transmission taking off in fourth, the PCM does not see a signal from the TSS and will set the DTC's. The location of the TSS (Turbine Shaft Speed Sensor) is shown in(Figure 2).

CORRECTION: Locate and free up the solenoid regulator valve. (See Figures 3 and 4) If the solenoid regulator valve cannot be properly freed up, replace the Valve Body.

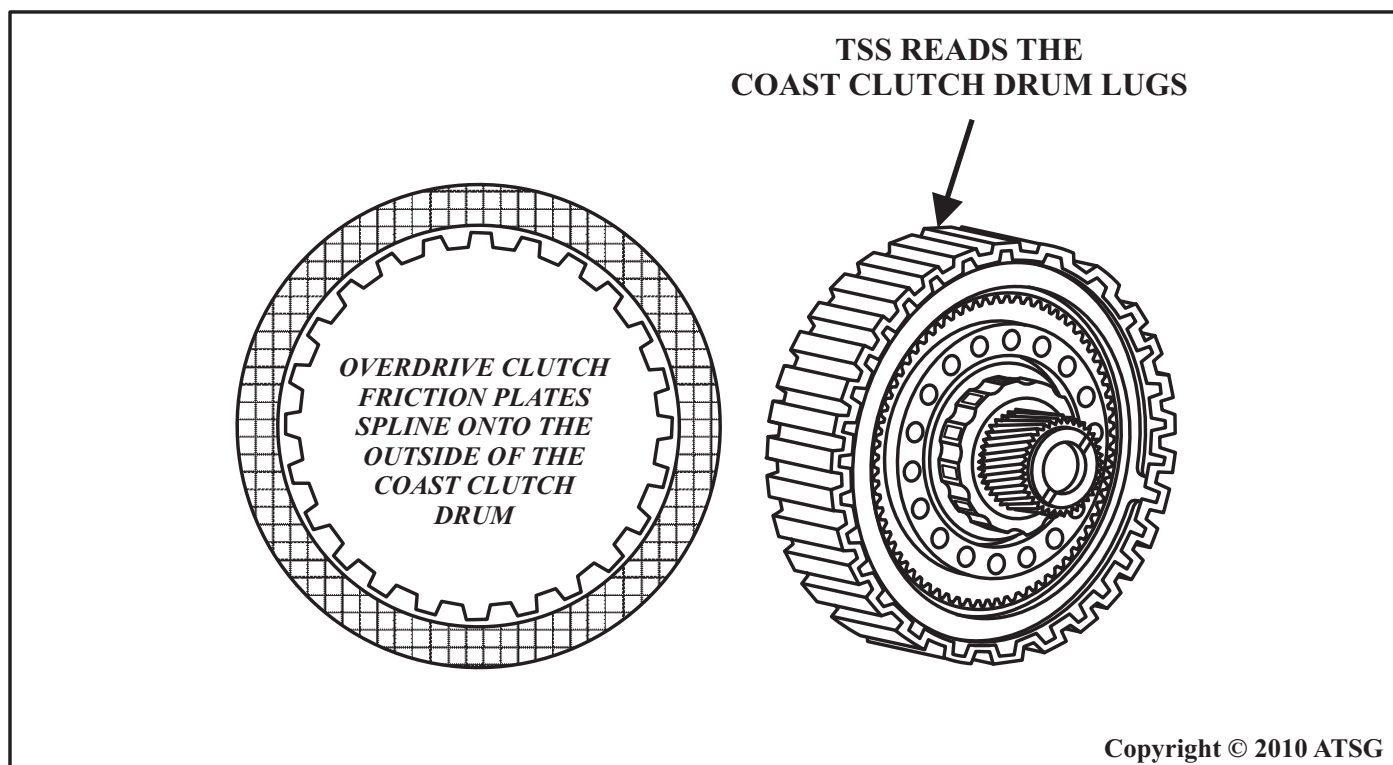
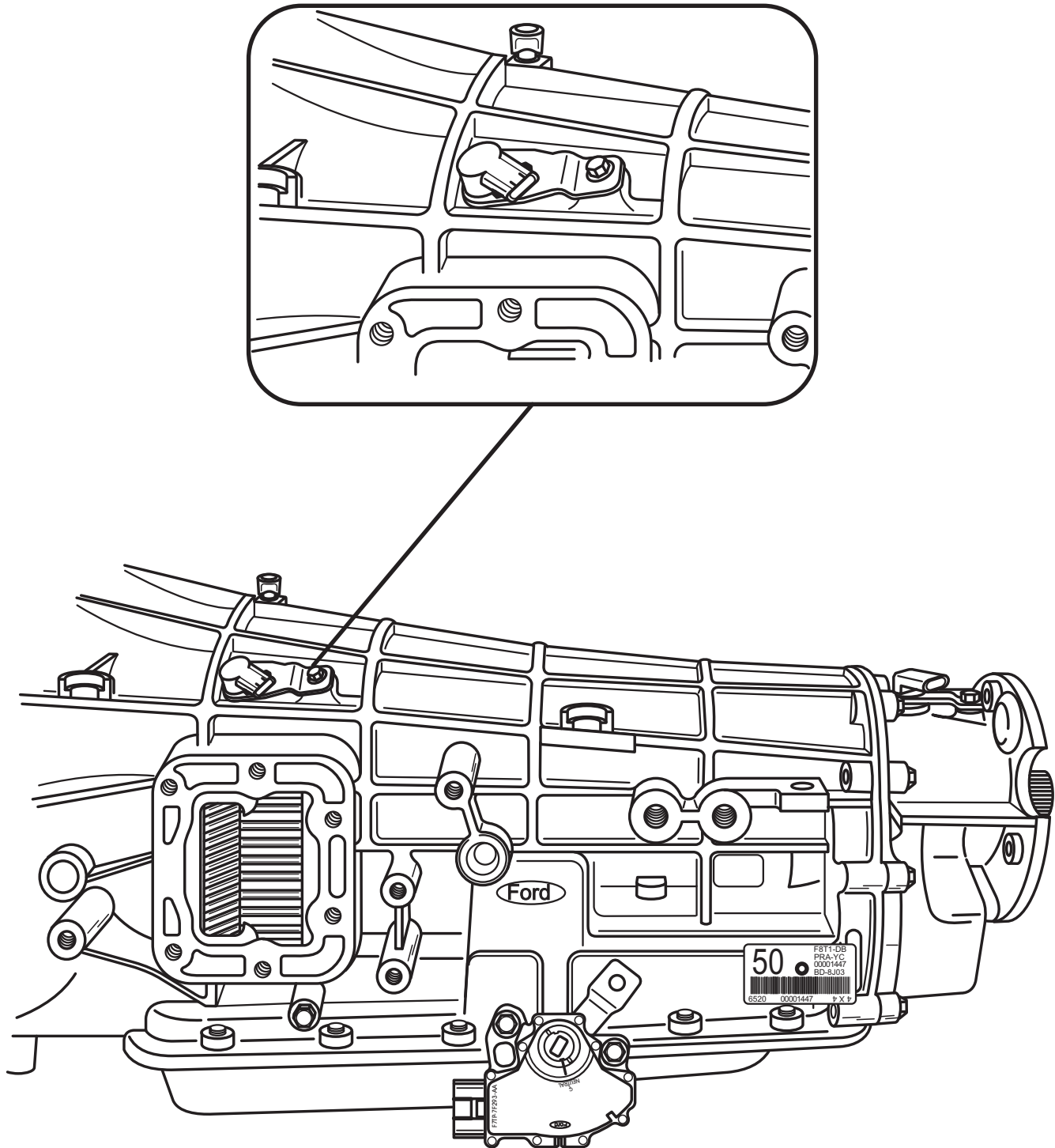


Figure 1

Turbine Shaft Speed Sensor

*PTO Models Only = 496-1244 Ohms Resistance
Part Number F81Z-7M101-BA*

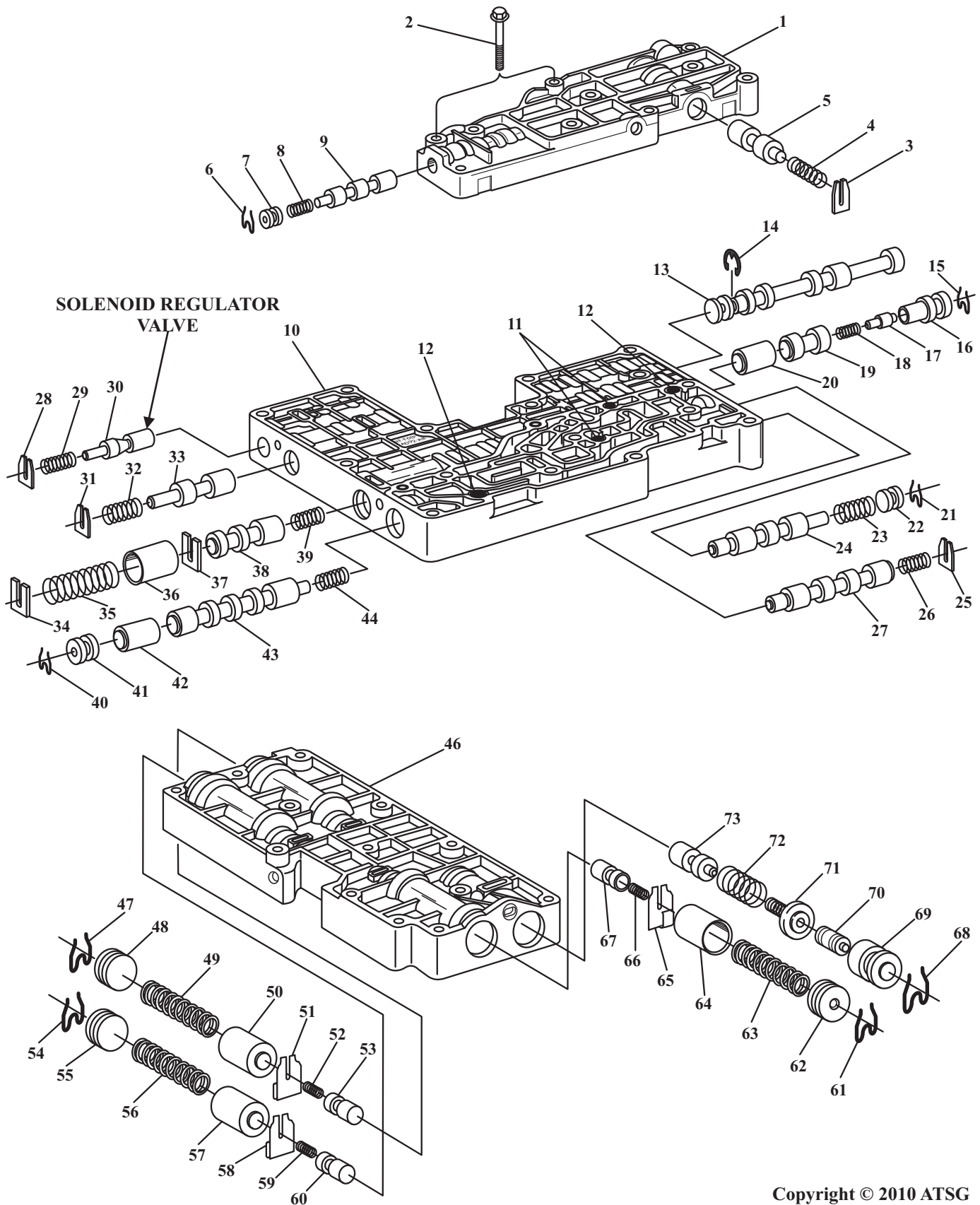
*Non PTO Models Only = 781-1979 Ohms Resistance
Part Number F81Z-7M101-AA*



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Figure 2

FORD 4R100 MAIN, LOWER, AND ACCUMULATOR VALVE BODIES EXPLODED VIEW



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Figure 3



Technical Service Information

FORD 4R100 MAIN, LOWER, AND ACCUMULATOR VALVE BODY LEGEND

<i>Item</i>	<i>Description</i>	<i>Item</i>	<i>Description</i>
1	Lower Valve Body	47	Spring Clip Bore Plug Retainer
2	Hex Head Bolt, M1 X 36 (2 Required)	48	Direct Clutch Accumulator Regulator Plunger Bore Plug
3	Retaining Plate	49	Direct Clutch Accumulator Regulator Plunger Spring
4	Manual 1-2 Transition Valve Spring	50	Direct Clutch Accumulator Regulator Plunger
5	Manual 1-2 Transition Valve	51	Direct Clutch Accumulator Regulator Valve Retainer
6	Spring Clip Bore Plug Retainer	52	Direct Clutch Accumulator Regulator Valve Spring
7	Engagement Valve Bore Plug	53	Direct Clutch Accumulator Regulator Valve
8	Engagement Valve Spring	54	Spring Clip Bore Plug Retainer
9	Engagement Valve	55	O.D. Clutch Accumulator Regulator Plunger Bore Plug
10	Main Valve Body	56	O.D. Clutch Accumulator Regulator Plunger Spring
11	Checkball 1/4", 2 Required (7E195)	57	O.D. Clutch Accumulator Regulator Plunger
12	Checkball 5/16", 2 Required (7E195)	58	O.D. Clutch Accumulator Regulator Valve Retainer
13	Manual Control Valve	59	O.D. Clutch Accumulator Regulator Valve Spring
14	Manual Valve "E" Clip	60	O.D. Clutch Accumulator Regulator Valve
15	Spring Clip Bore Plug Retainer	61	Spring Clip Bore Plug Retainer
16	Low Reverse Modulator Valve Sleeve	62	Int. Clutch Accumulator Regulator Plunger Bore Plug
17	Low Reverse Modulator Valve Plunger	63	Int. Clutch Accumulator Regulator Plunger Spring
18	Low Servo Modulator Valve Spring	64	Int. Clutch Accumulator Regulator Plunger
19	Low Servo Modulator Valve	65	Int. Clutch Accumulator Regulator Valve Retainer
20	Low Reverse Modulator Valve	66	Int. Clutch Accumulator Regulator Valve Spring
21	Spring Clip Bore Plug Retainer	67	Int. Clutch Accumulator Regulator Valve
22	3-4 Shift Valve Bore Plug	68	Spring Clip Bore Plug Retainer
23	3-4 Shift Valve Spring	69	Line Pressure Modulator Plunger Sleeve
24	3-4 Shift Valve	70	Line Pressure Modulator Plunger
25	Retaining Plate	71	Line Pressure Modulator Spring And Retainer Assembly
26	2-3 Shift Valve Spring	72	Line Pressure Modulator Valve Spring
27	2-3 Shift Valve	73	Line Pressure Modulator Valve
28	Retaining Plate		
29	Solenoid Regulator Valve Spring		
30	Solenoid Regulator Valve		
31	Retaining Plate		
32	Coast Clutch Shift Valve Spring		
33	Coast Clutch Shift Valve		
34	Retaining Plate		
35	4-3-2 Shift Timing Control Valve Plunger Spring		
36	4-3-2 Shift Timing Control Valve Plunger		
37	Retaining Plate		
38	4-3-2 Shift Timing Valve		
39	4-3-2 Shift Timing Valve Spring		
40	Spring Clip Bore Plug Retainer		
41	1-2 Shift Valve Bore Plug		
42	1-2 Shift Valve		
43	Drive 2 Valve		
44	1-2 Shift Valve Spring		
46	Accumulator Valve Body (7G422 Model Sensitive)		
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Figure 4