

MAZDA / FORD CD4E ERRATIC UPSHIFTS AND DOWNSHIFTS

COMPLAINT: Vehicles equipped with CD4E transaxles may exhibit erratic upshifts or downshifts, wrong gear starts with no upshifts and/or no reverse with or without a flashing M.I.L (Malfunction Indicator Lamp). Upon trouble code retrieval, one or more of the following codes may be present: 522, 634, 659, 667, 668, 675.

CAUSE: The cause may be, a faulty Transmission Range Switch.

CORRECTION: Refer to Figure 1 for the location of the Transmission Range Switch and refer to Figure 2 for terminal I.D. and to test the switch in each range for the correct ohm and voltage value. Replace the switch if it fails this test.

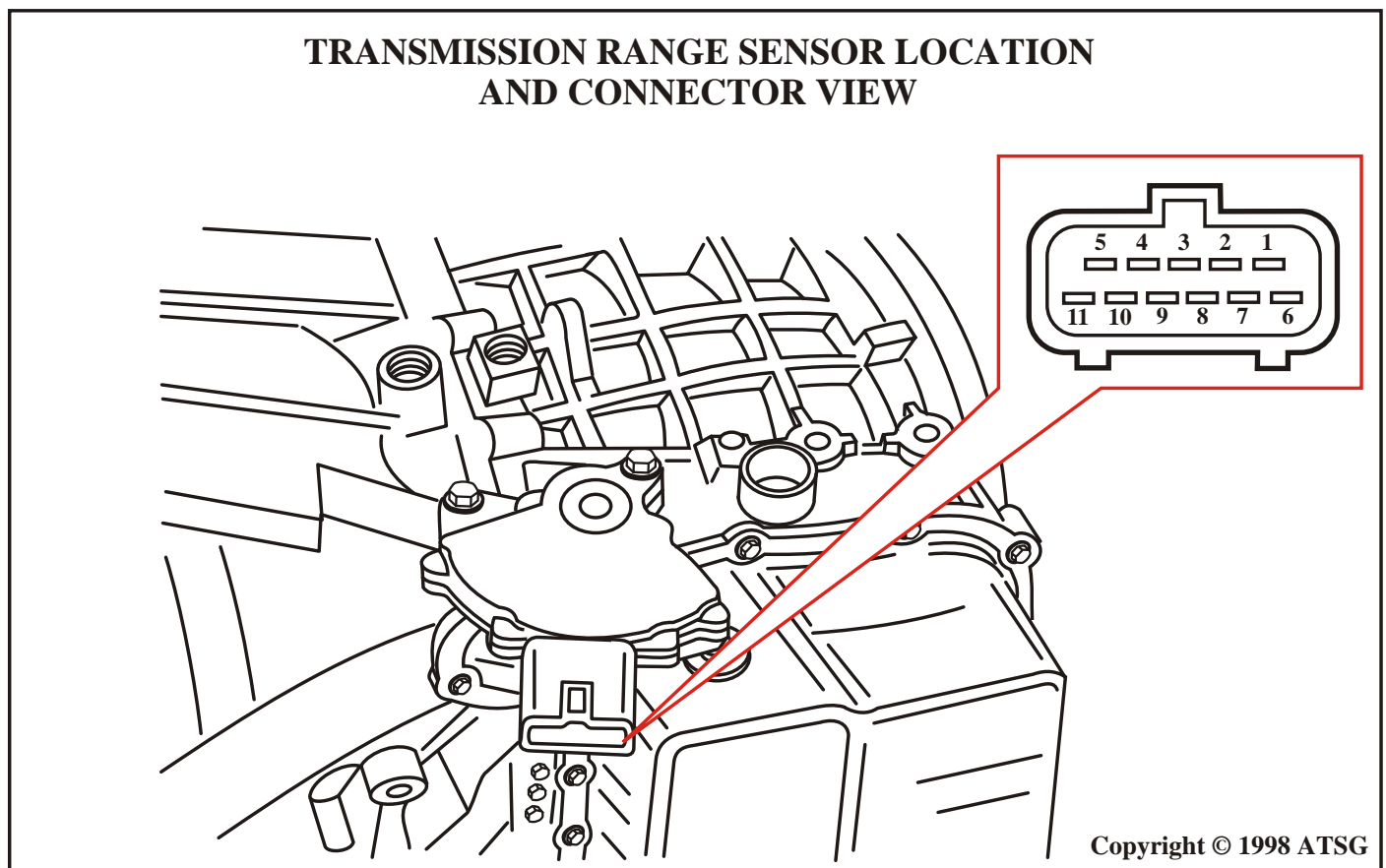
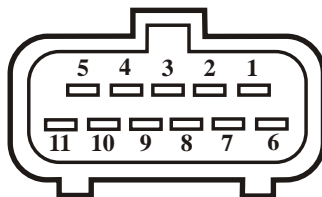


Figure 1

TRANSMISSION RANGE SENSOR CHECK



TERMINAL IDENTIFICATION AND FUNCTION

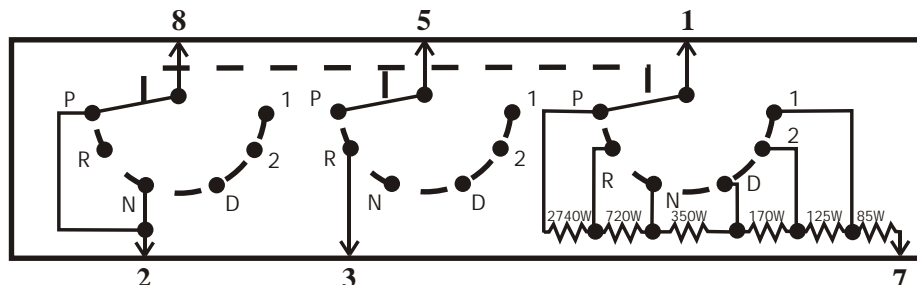
PIN	CIRCUIT FUNCTION
1	SENSOR SIGNAL RETURN
2	STARTER MOTOR OUTPUT
3	BACKUP LAMP OUTPUT
4	NOT USED
5	FUSED ACCESORY FEED
6	NOT USED
7	MANUAL LEVER POSITION SIGNAL
8	STARTER SIGNAL
9	NOT USED
10	NOT USED
11	NOT USED

CONNECT OHM METER BETWEEN TERMINALS 1 & 7 TO CHECK RESISTANCE

RANGE	RESISTANCE		VOLTAGE RANGE
	MIN.	MAX.	
PARK	3770	4607	3.97-4.85 v
REVERSE	1304	1593	3.24-3.46v
NEUTRAL	660	807	2.55-3.11v
DRIVE	361	442	1.88-2.30v
2	190	232	1.23-1.51v
1	78	95	0.61-0.75v

BACK PROBE VOLTMETER LEADS INTO THE TWO WIRES IN TERMINALS 1 & 7 TO CHECK VOLTAGE

TRANSMISSION RANGE SWITCH SCHEMATIC



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Figure 2