CHRYSLER 41TE (A604)

NEW TRANSMISSION RANGE SENSOR

CHANGE: Beginning at the start of production 1996, some models equipped with the 41TE (A604) transaxle replaced the PRNODL and Neutral Safety Switch with a Transmission Range Sensor as seen in Figure 1.

REASON: To provide a common shift lever position sensor and Transmission Control Module (TCM) logic system with that used in the 42LE (A606) transaxle for durability and reliability.

PARTS AFFECTED:

(1) PRNODL SWITCH - The previously used Park, Reverse, Neutral, Overdrive, Drive, Low Switch PRNODL) has been eliminated and replaced with the new Transmission Range Sensor (See Figure 1).

(2) NEUTRAL SWITCH - The previously used Neutral Switch has been eliminated and replaced with the new Transmission Range Sensor (See Figure 1).

(3) TRANSAXLE CASE - The casting of the case change with the elimination of the two threaded holes for the PRNODL and Neutral Safety Switch. An access hole has been added to accommodate the new TRS sensor connector as the switch which is mounted on the valve body (See Figure 1).

(4) VALVE BODY - The manual arm shaft and rooster comb assembly and the valve body changed in design to accommodate the mounting of the new TRS sensor (See Figure 2).

(5) TCM - The logic system flashed into the computer program changed to accept the open and closed state of the new Transmission Range Sensor. With the PRNODL and Neutral switches having been integrated into the one Transmission Range Sensor, the new logic system now has to utilize the one sensor to determine start up functions, reverse lamp operation, as well as forward drive range shift and converter clutch strategies.

INTERCHANGEABILITY:

None of the updated parts listed above will interchange with any of the first design parts used in the previous model vehicles between 1989 and 1995. First design parts must be used with first design models and second design parts must be used with second design models, 1996 and above.

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS

A scanner can be used to observe the OPEN/CLOSED state of the C1/T41, C2/T42, C3/T3 and the C4/T1 circuits. This can be especially helpful in determining which exact circuit is malfunctioning. Refer to Figure 3 for the OPEN/CLOSED status chart and circuit identification.

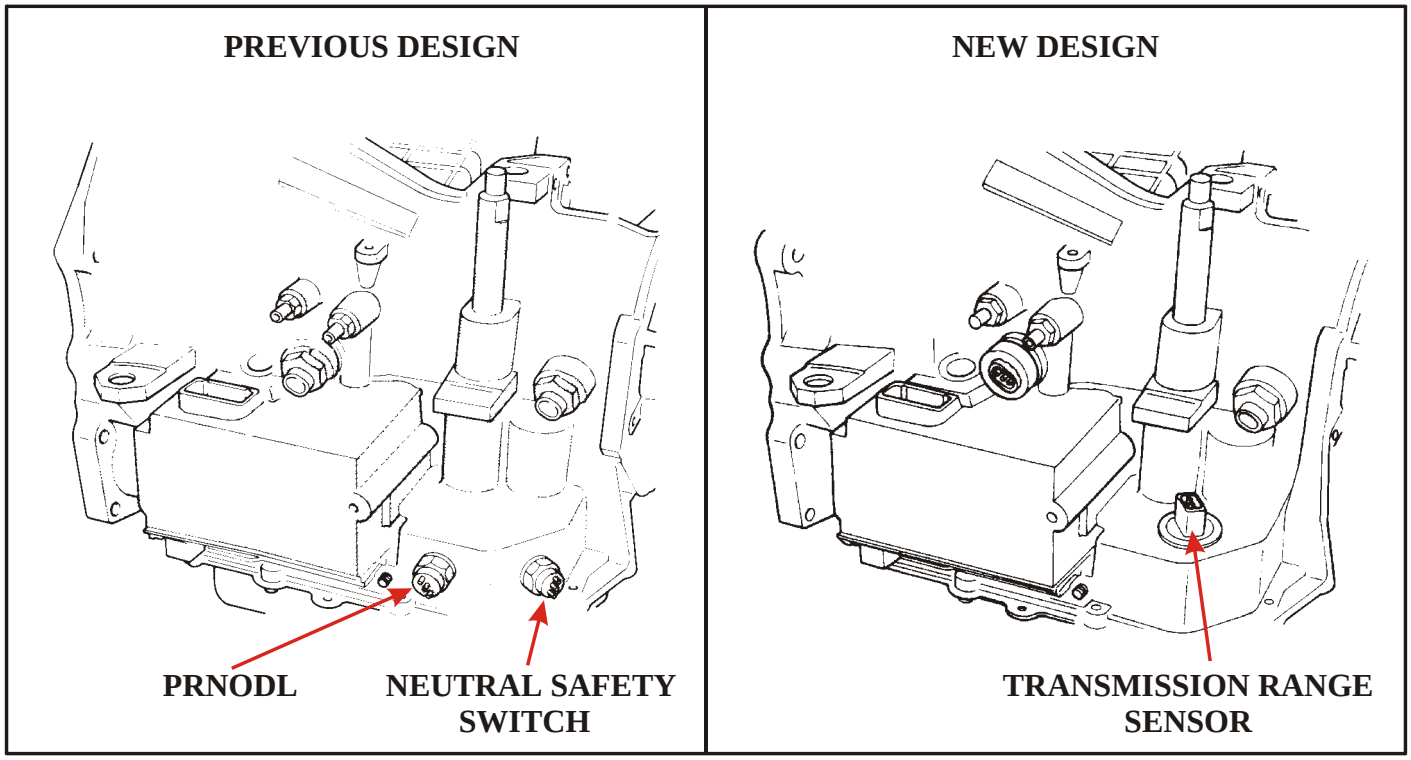


Figure 1

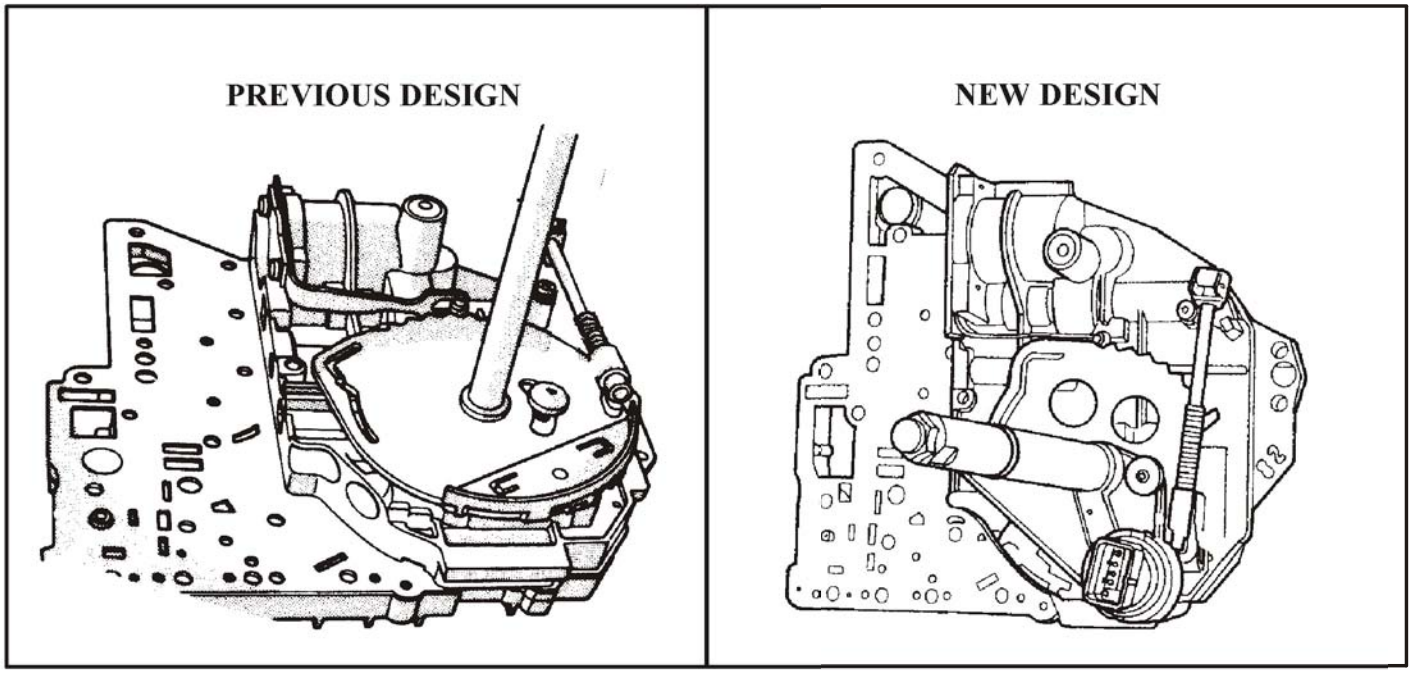


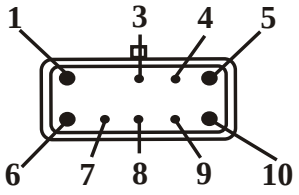
Figure 2

CAVITY	COLOR	FUNCTION
1	WHITE	FUSED IGNITION SWITCH OUTPUT
3	DKB/BLK *	SPEED SENSOR GROUND
4	VIOLET *	TRANS. TEMP. SENSOR SIGNAL
5	BLK/LTG	PARK/NEUT. POSITION SWITCH SENSE
6	VLT/BLK	REVERSE LAMP SENSE
7	LTG/BLK	TRS T1 SENSE
8	VIOLET	TRS T3 SENSE
9	VLT/WHT	TRS T42 SENSE
10	BRN/YEL	TRS T41 SENSE

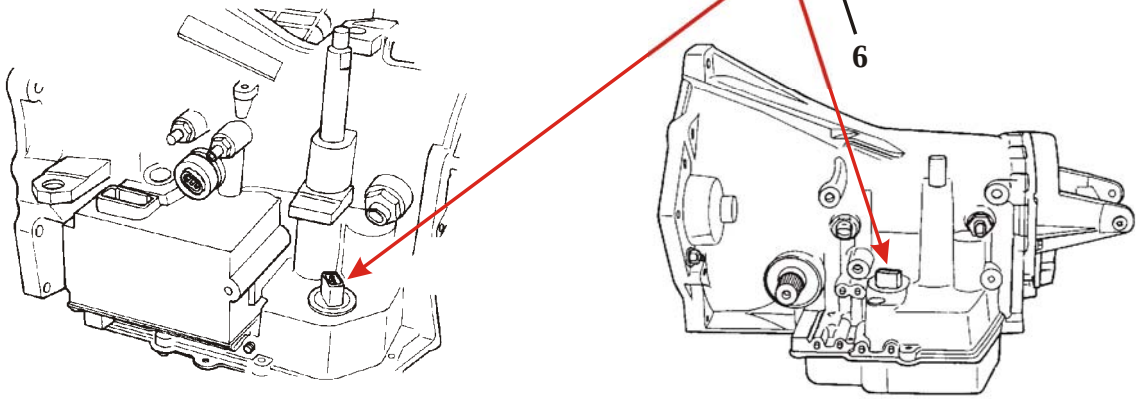
*** 1996-97 LH**

RANGE		T42 (C2)	T41 (C1)	T3 (C3)	T1 (C4)
P	P	CL	CL	CL	OP
R	R	CL	OP	OP	OP
N	N	CL	CL	OP	CL
OD	D	OP	OP	OP	CL
3	2	OP	OP	CL	OP
1	1	CL	OP	CL	CL

OP = SWITCH IS OPEN
CL = SWITCH IS CLOSED



TRANSMISSION RANGE SENSOR (TRS)



41TE **42LE**

Figure 3

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS *(Continued)*

Once the circuit which malfunctioned has been identified, a continuity check should be made on that circuit. Use the chart found in Figure 4 to assist in identifying the specific circuit or circuits in question. For example, if the scanner reveals that the T3 (C3) circuit does not close when the selector lever is placed in Park, 3 or 1, that specific circuit will need to be checked. In the chart below circuit T3 is the wire which runs from the number eight cavity in the TRS connector to the number three cavity in the TCM connector.

CIRCUIT NAME	TRANSMISSION RANGE SENSOR	CONTROLLER TERMINAL NO.	POSSIBLE CODES
C1/T41	10	41	28
C2/T42	9	42	28
C3/T03	8	3	28
C4/T01	7	1	28

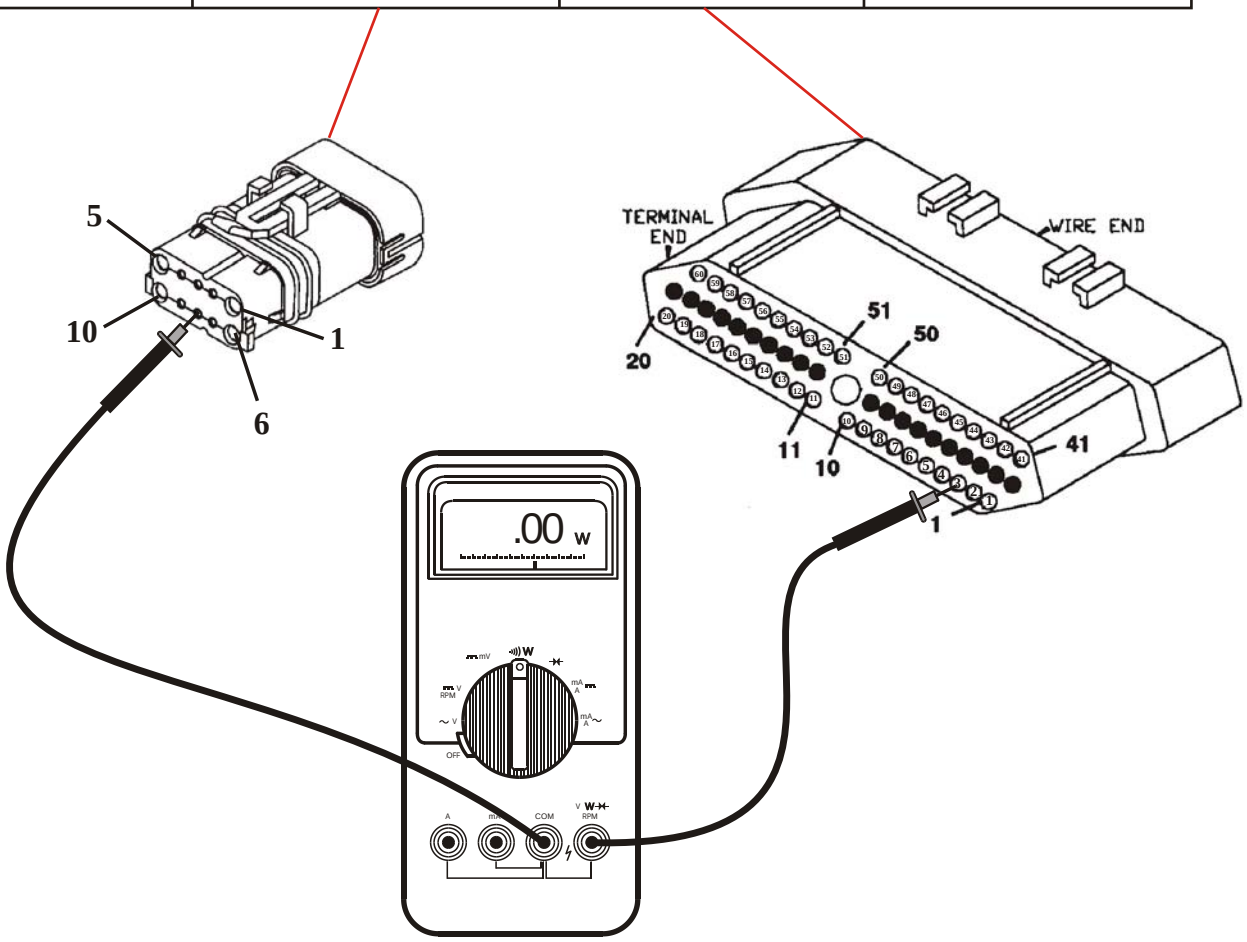


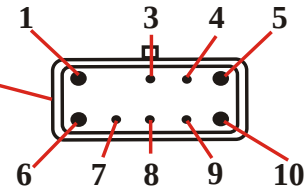
Figure 4

DIAGNOSTIC STEPS FOR VEHICLES WITH A TRS *continued*

If an open circuit is seen when checking for continuity across any one of the Transmission Range Sensor wires, repair or replace the wire or wires. If continuity is seen, inspect both the TCM and TRS connector cavities for drag and that they have not been pushed back into the connector. The shank end of a drill bit may be employed to check for pin drag in the TRS connector. For cavities 7, 8 and 9, use a .035“ wire gauge or a # 65 drill bit. For cavity 10, use an .089” wire gauge or a # 43 drill bit. If pin cavities are not pushed back and they have a good drag on the wire gauge test remove the valve body from the transmission. With the TRS still mounted to the valve body, place the manual valve in the park position. Fasten the negative meter lead to the metal portion of the rooster comb (See Figure 5). While pushing the switch down onto the rooster comb with one hand, use the positive meter lead to make contact with pins 7, 8, 9 and 10 individually. Approximately .05 to 1.5 ohms should be seen on each pin except # 7, it should read open. Use the chart in Figure 5 to check the TRS in each manual valve selection. Replace the TRS sensor if necessary. If all ranges test good, replace the TCM.

RANGE		10	9	8	7
P	P	CL	CL	CL	OP
R	R	CL	OP	OP	OP
N	N	CL	CL	OP	CL
OD	D	OP	OP	OP	CL
3	2	OP	OP	CL	OP
1	1	CL	OP	CL	CL

OP = SWITCH IS OPEN
CL = SWITCH IS CLOSED



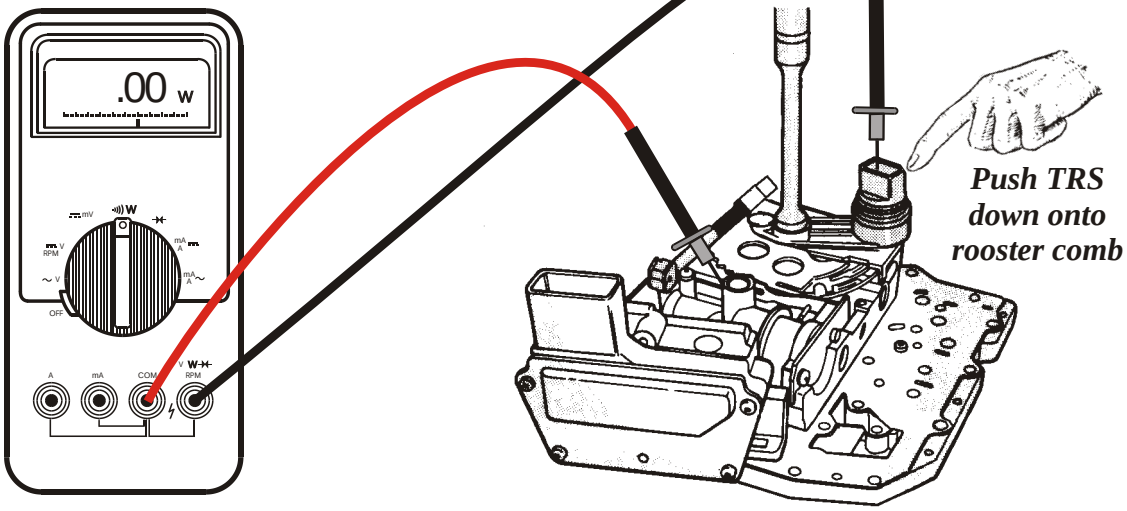


Figure 5