TOYOTA PREVIA A46DE

STACKED SHIFTS/NO PASSING GEAR

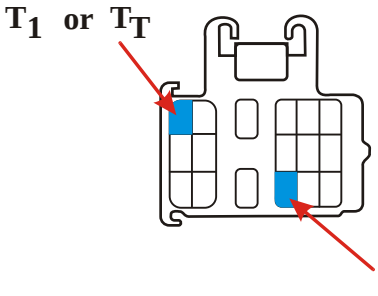
COMPLAINT: Before or after overhaul, some Toyota Previas equipped with 4 cyl. engines and A46DE transmissions, may exhibit stacked shifts and or no passing gear.

CAUSE: The cause may be, a broken wiring harness at the Throttle Position Sensor Connector or a break in the harness from the Throttle Position Sensor where it enters a protective cover as shown in Figure 2, or a faulty Throttle Position Sensor.

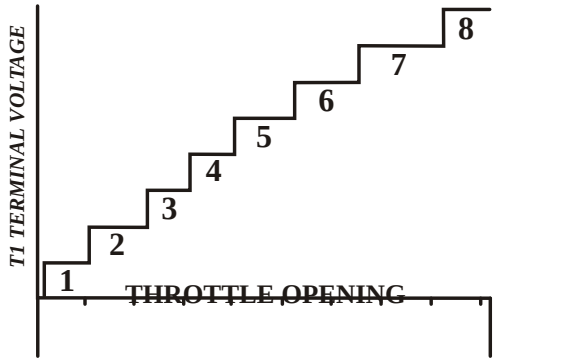
CORRECTION: Refer to Figure 1 to test the Throttle Position Sensor Diagnostic Voltage output at the Diagnostic connector as shown in Figure 1. Locate the break in the harness as shown in Figure 2. If the wires are broken where the harness enters the protective cover, add some length, with some new wire, to the harness and reconnect the harness. If the wires are broken at the connector, where they can not be repaired, replace the connector with a TPS connector with 7 or 8 inches of the harness from a 1.8 L Tercel engine from a salvage yard or a new upper wire harness for the whole upper engine can be purchased from Toyota. If the wire harness is good test the Throttle Position Sensor as shown in Figure 3 and replace as necessary.

T_1 or T_T DIAGNOSTIC TERMINAL VOLTAGE CHECK

DIAGNOSTIC CONNECTOR



LOCATED BELOW DRIVERS SEAT

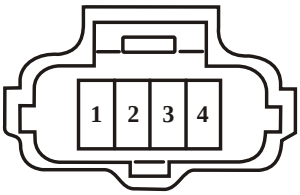


CONNECT POSITIVE LEAD OF VOLT METER TO THE T_1 T_T TERMINAL AND THE NEGATIVE LEAD TO THE E_1 TERMINAL

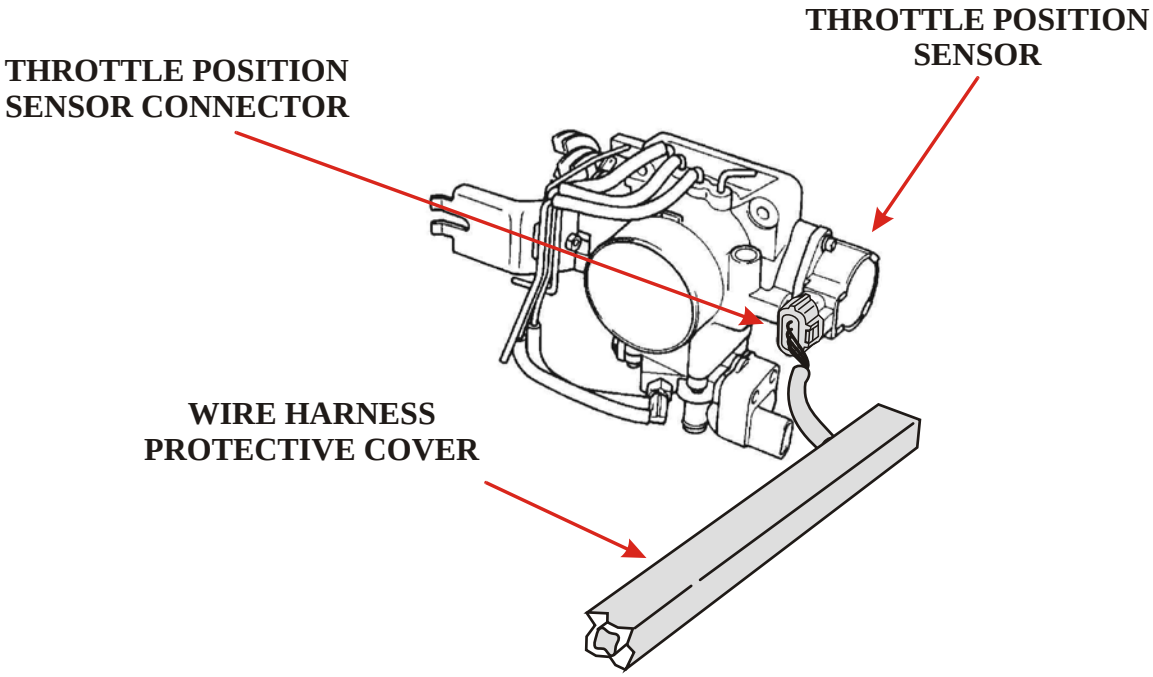
THE VOLT METER SHOULD INDICATE A STEPPED VOLTAGE INCREASE AS SHOWN IN THE CHART LISTED ABOVE

Figure 1

THROTTLE POSITION HARNESS CONNECTOR
FACE VIEW



TERMINAL	WIRE COLOR	FUNCTION
1	*BROWN/BLACK*	*E2-(GROUND)*
2	*BLUE/YELLOW*	*IDL-(IDLE SWITCH)*
3	*YELLOW/RED*	*VTA-(SIGNAL RETURN)*
4	*BLUE/BLACK*	*VC-(5 VOLTS IN)*

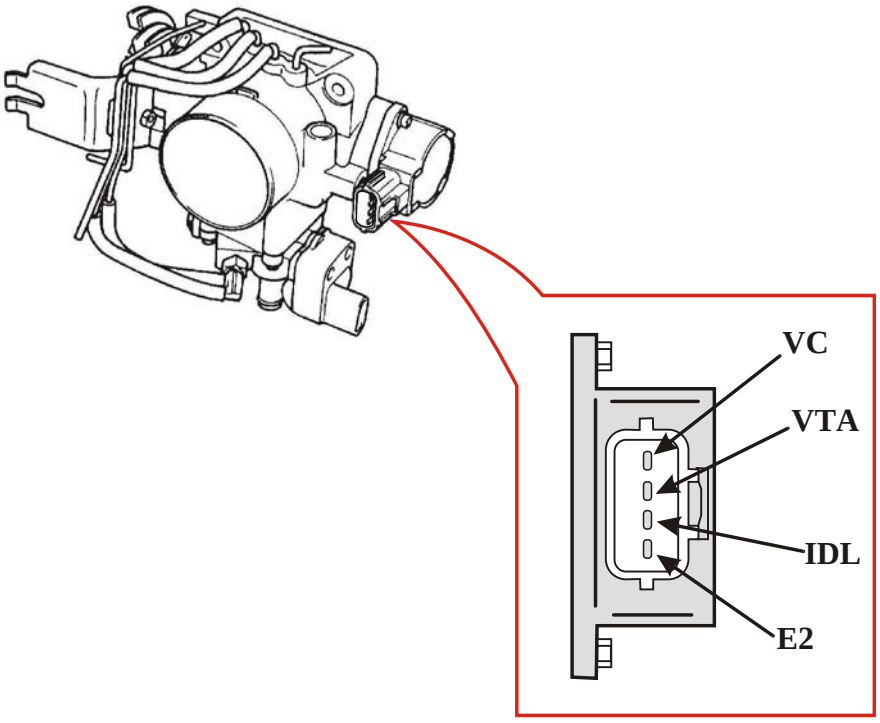


WIRES NORMALLY BREAK AT THE CONNECTOR OR WHERE THE WIRES ENTER THE PROTECTIVE COVER

A TPS CONNECTOR FROM A 1.8L TERCEL FROM A SALVAGE YARD WILL WORK AS A REPAIR KIT TO SAVE THE WIRE HARNESS

Figure 2

THROTTLE POSITION SENSOR OHM CHECK



CONNECT OHM METER TO TERMINALS	THROTTLE OPENING	OHM VALUE (kW)
IDL-E2	FULLY CLOSED	LESS THAN 2.3 W
	OPEN	INFINITY
VTA-E2	FULLY CLOSED	0.2-0.8
	FULLY OPEN	3.3-10

CONNECT AN OHM METER TO THE TERMINALS LISTED ABOVE AND ENSURE THE VALUES ARE WITHIN THE SPECS LISTED ABOVE

WHEN CHECKING VTA-E2 ENSURE THE OHM VALUE CHANGE FROM CLOSED THROTTLE TO FULLY OPEN IS SMOOTH

Figure 3