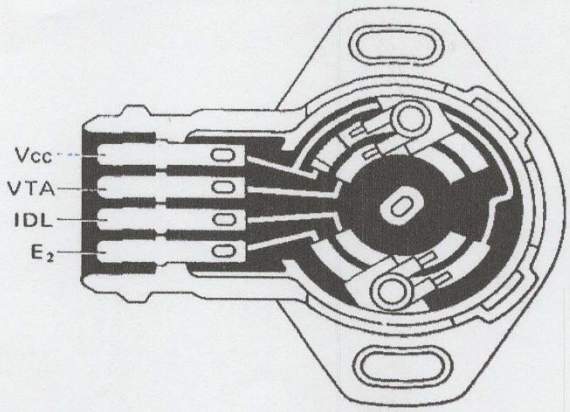

Figure 2: Throttle Position Sensor (TPS)

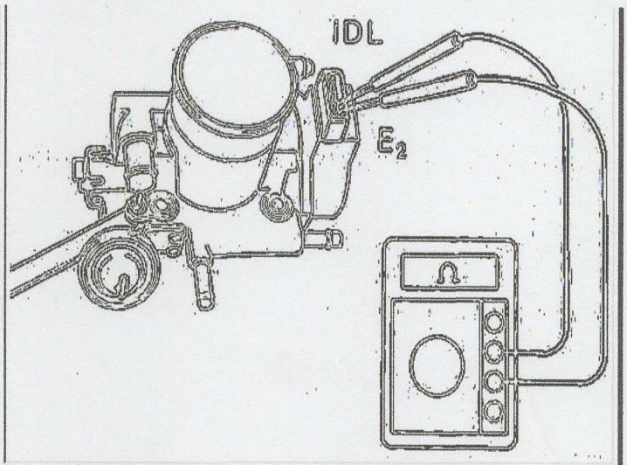

Figure 3: TPS Adjustment

Now, on to testing and adjusting the TPS. Table 1 lists the adjustment specifications for the early (1985-1995) TPS. There are slightly different measurements for the later model units. If someone knows the engine date at which the change below took effect, drop me an e-mail. My guess is the change took place with the change in the throttle body, early trucks TB is angled downwards, later trucks are horizontal. Refer to the above figures for TPS terminal layout and ohm meter connections. If in doubt about the layout of the terminals, an easy way to identify the proper orientation is to identify the VTA-E2 terminal pairs. E2 is at one end of the TPS connector or the other. VTA is one pin in fropm the opposite end. The VTA-E2 signal varies from a few hundred to a few thousand ohms as the TPS moves through it's range or travel. So, try one end of the TPS connector for E2 and see if the resistance varies properly, if not, try the other end. Once the E2 end of the connector is identified, the rest of the pins should be laid out as indicated in Figure 2.

Test	Clearance between lever and stop screw	Between terminals	Resistance / '85-'88* (ohms)	Resistance / '89*-'95 (ohms)
1.	0.00mm (0.000")	VTA - E2	200-800	470-6100
2.	0.57mm (0.0224")	IDL - E2	< 2.3K	< 2.3K
3.	0.85mm (0.0335")	IDL - E2	Open / Infinite	Open / Infinite
4.	Wide Open Throttle	VTA - E2	3.3K-10K	3.1K - 12.1 K
5.	n / a	Vcc - E2	3.0K - 7.0K	3.9K - 9.0K

Table 1: 22RE (2.4L-4 cyl) - TPS Adjustment Specifications
- Early model p/n: 89452-20060
- Late model p/n: 89452-12040

Test	Clearance between lever and stop screw	Between terminals	Resistance / '88 (ohms)	Resistance / '89-'95 (ohms)
1.	0.00mm (0.000") *or 0.50mm**	VTA - E2	200-800	200-800
2.	0.50mm (0.020") *or 0.77mm**	IDL - E2	< 2.3K	< 2.3K
3.	0.77mm (0.030") *or 0.85mm**	IDL - E2	Open / Infinite	Open / Infinite
4.	Wide Open Throttle	VTA - E2	3.3K-10K	3.3K-10K
5.	n / a	Vcc - E2	3.0K - 7.0K	4.0K - 9.0K