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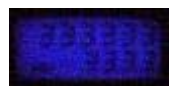
Thread: VIDEO: One Toyota Driver's Horror Story

February 25th,
2010, 20:37

#24

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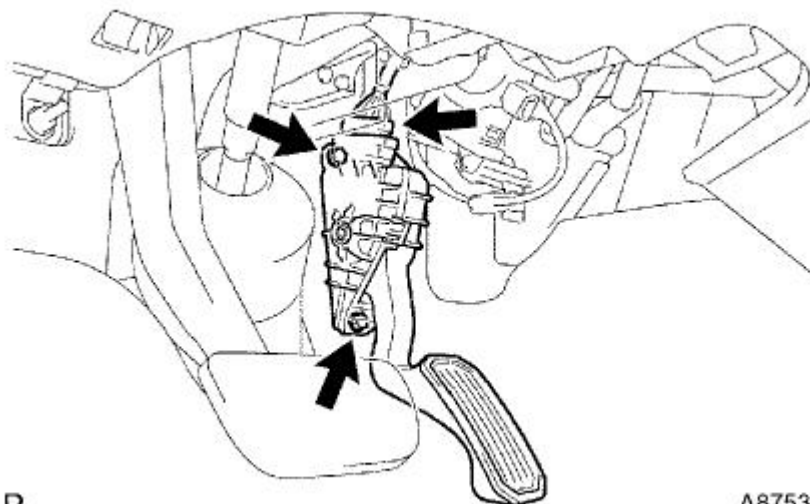
Veteran Member



Join Date: Jun
2002
Location:
Nashua, NH,
USA

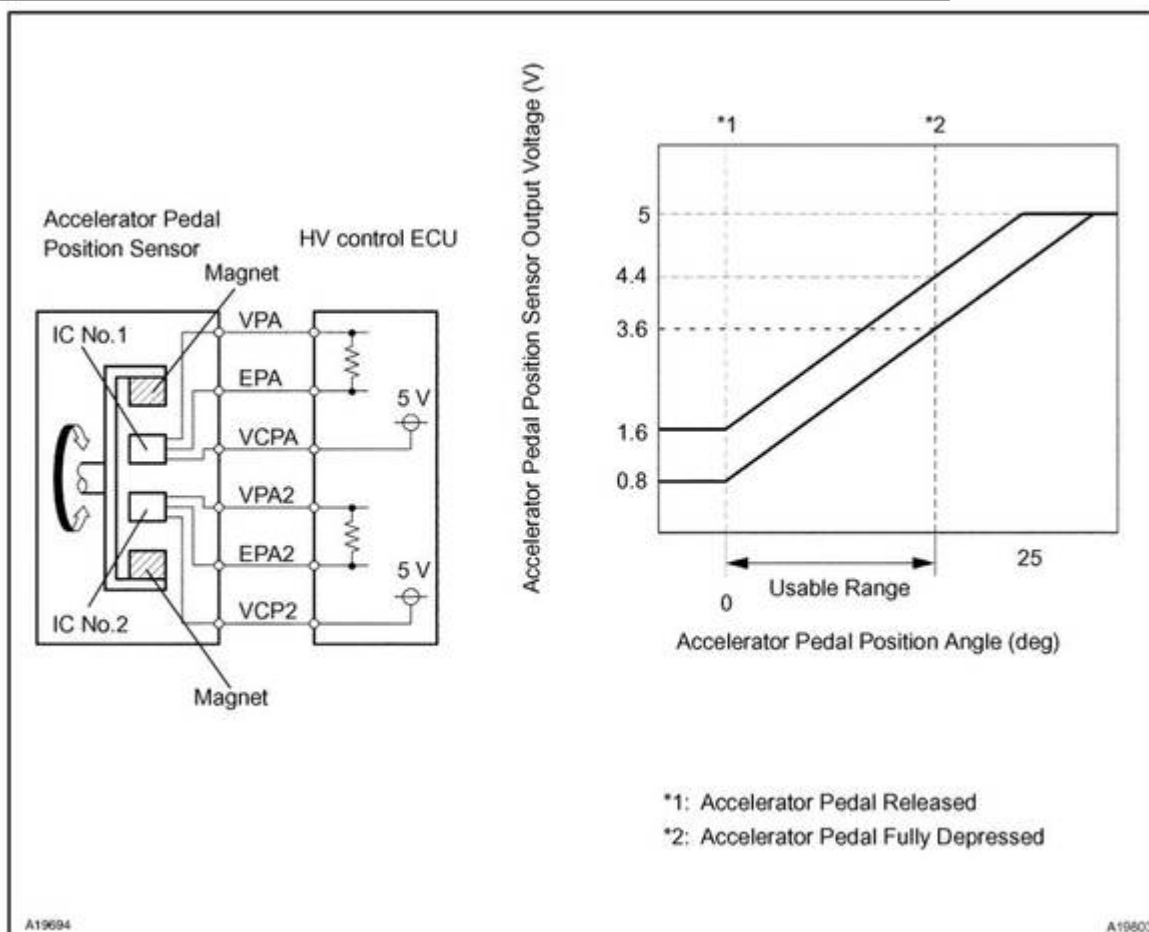


Here's some pics of a Prius ETCS system, found on Priuschat. Other Toyotas having ECTS use the same design strategy.

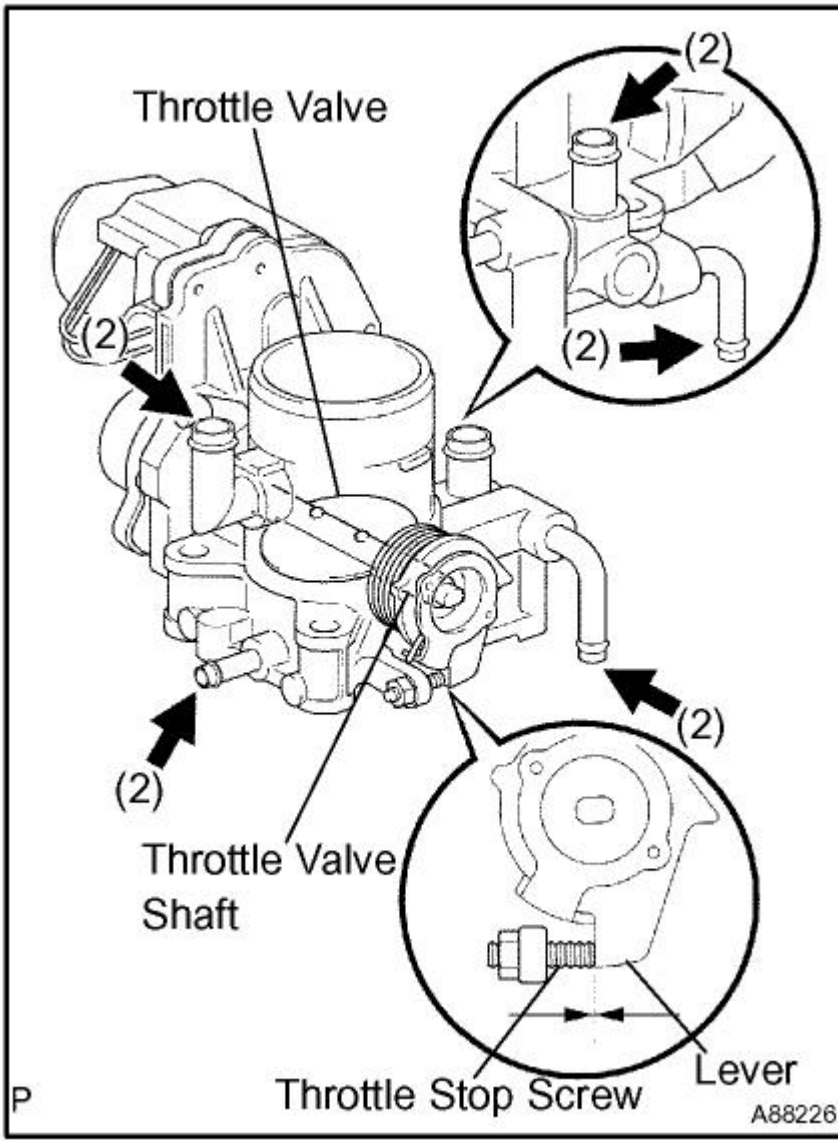


P

A87530



DTC No.	INF Code	DTC Detection Condition	Trouble Area
P2120	111	Accelerator pedal position main sensor value does not change while its sub sensor value changes	• Accelerator pedal rod assembly
P2121	106	Internal error of accelerator pedal position main sensor	• Accelerator pedal rod assembly
P2121	114	Accelerator pedal not smoothly returning to its original position	• Accelerator pedal rod assembly
P2125	112	Accelerator pedal position sub sensor value does not change while its main sensor value changes	• Accelerator pedal rod assembly
P2126	109	Internal error of accelerator pedal position sub sensor	• Accelerator pedal rod assembly
P2138	110	Difference between main sensor value and sub sensor value is large	• Accelerator pedal rod assembly



One thing that concerned Dr. Gilbert was that the two sensor output voltages operate in the same plane, i.e., the output voltages track each other. Errors are only detected when the two voltages become far enough different from each other due to a sensor failure. But what if the two voltages always track too close together or are the same voltage (i.e., due to a short between the two systems)? Such a fault may go undetected because the detection strategy is only looking for the two voltages to be far enough apart to flag it as an error.

I suspect the undetectable WOT condition occurs when both sensor outputs get shorted

to the +5V supply rail.

I think a smarter fault detection strategy would be for one sensor output voltage to go positive while the 2nd sensor output goes negative in voltage as a function of pedal position.

David Sterrett, N1DAS

2002 ALH Golf, 354k | RC4b & other mods = stomp 'n go fun! 🤖

2005 ATD (PD100) (BEW *RIP*) Jetta Wagen, 87k | PD RC2+ & other mods = stomp 'n go fun! 🤖

Segway i170 🤖 - Same model that went across the USA!



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