PCS TPS Installation Guidelines

The throttle position sensor is a critical input to the transmission controller. Failure to properly install the throttle position sensor will result in improper transmission operation and damage.

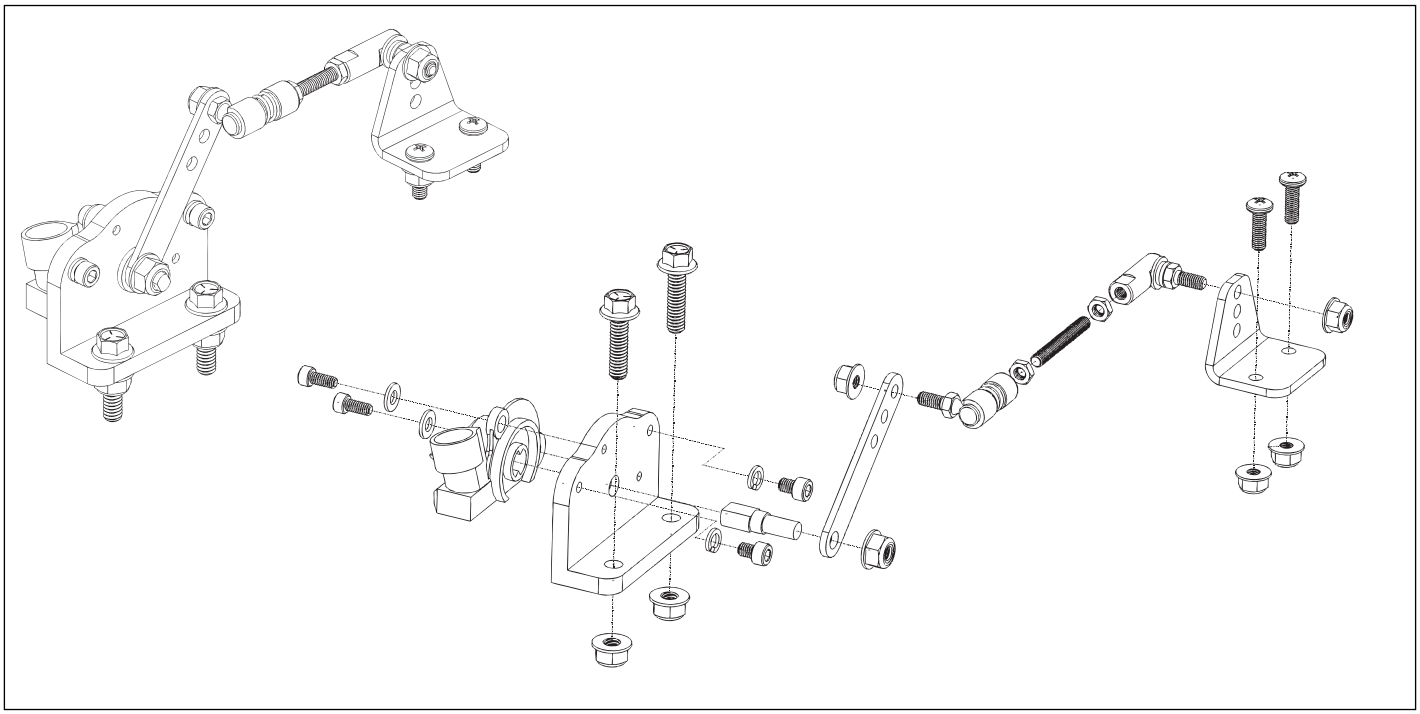

Figure 1

Position 1: LOW FAILURE POSITION. The sensor arm should return to this position when it is disconnected from the pedal or throttle linkage. When the sensor is connected to the transmission controller the signal should measure less than 0.2V.

Position 2: IDLE POSITION. The sensor arm should be off of the minimum stop such that the reported voltage is between 0.5V and 1.5V.

Position 3: FULL THROTTLE POSITION. The sensor arm should not contact the maximum stop. The reported voltage in this position should be 3.5V to 4.5V.

Position 4: HIGH FAILURE POSITION. The maximum stop position is designed to protect the sensor if a failure in the linkage allows the sensor arm to extend past the normal operating range.

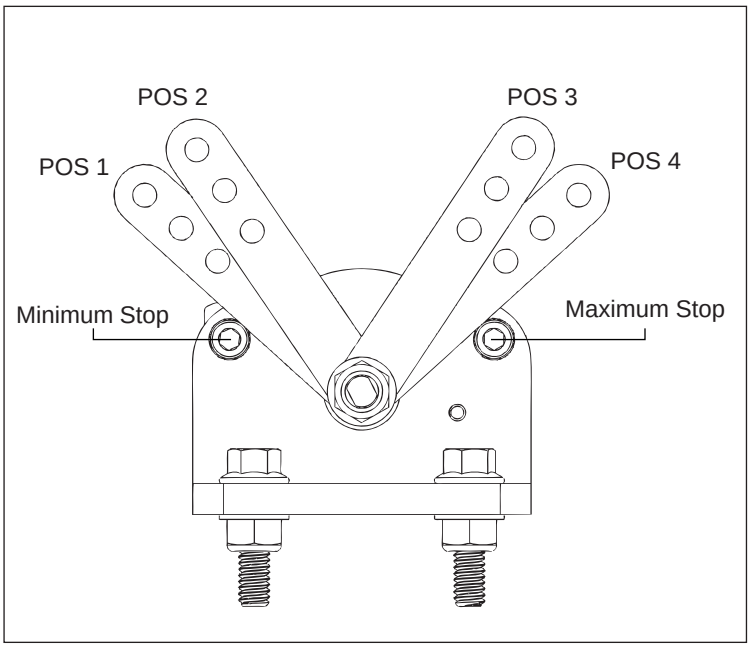

Figure 2

Electrical Pinout	
A	+5V
B	Ground
C	Output Signal

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TPS Verification Checklist

You must be able to answer YES to all of these statements to verify proper sensor installation.

1. The sensor is mounted in a location that is free from excessive vibration, protected from heat sources, debris, and fluids.

2. The sensor is mounted with proper fasteners (lock washers, lock nuts, etc) and uses appropriate materials (no uncoated steel, etc) for the sensor to last the anticipated life of the vehicle.

3. When the accelerator pedal is at idle (not depressed), the sensor arm is off of the minimum stop and the voltage as shown on the TCM software monitor screen is between 0.5V and 1.5V.

4. When the sensor arm is disconnected from the linkage that connects it to the engine or pedal, the sensor arm returns to the minimum stop and the voltage on the TCM software monitor screen is below 0.2V. Code 22 becomes active after three seconds.

5. When the pedal is pressed, the sensor arm moves accordingly. There is no movement or “slop” such that the pedal or engine throttle blade can move without seeing a voltage change on the TCM software monitor screen.

6. The sensor moves freely without binding. The sensor does not provide any resistance or change to the operation of the throttle linkage.

7. When the accelerator pedal is at full throttle, the sensor arm does not contact the maximum stop and the voltage as shown on the TCM software monitor screen is between 3.5V and 4.5V.

It is strongly recommended to use the arm provided by PCS. In situations where the vehicle manufacturer must design a custom arm, refer to figure 3 provided for the design of the arm to the sensor.

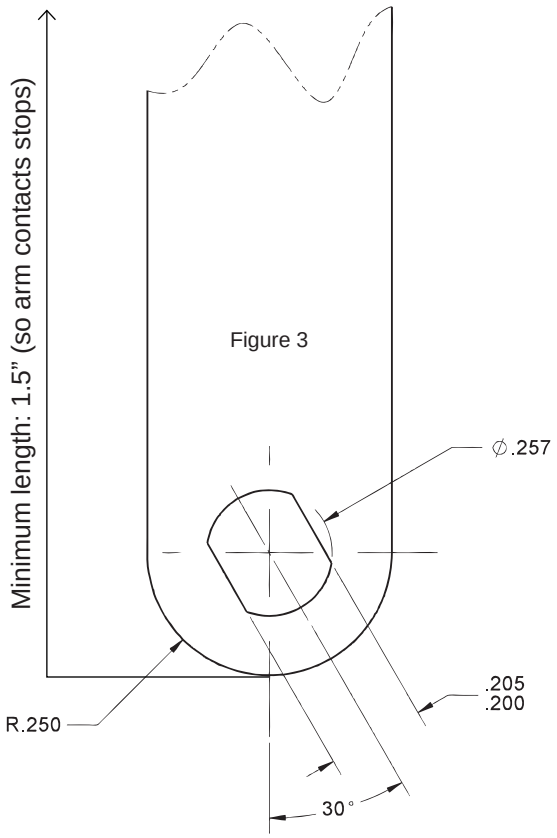

Figure 3

LIMITED WARRANTY STATEMENT. Powertrain Control Solutions, LLC. Warrants all merchandise against defects in factory workmanship and materials for a period of 12 months after purchase. This warranty applies to the first retail purchaser and covers only those products exposed to normal use or service. Provisions of this warranty shall not apply to a Powertrain Control Solutions, LLC. Product used for a purpose for which it is not designed, or which has been altered in any way that would be detrimental to the performance or life of the product, or misapplication, misuse, negligence or accident. On any part or product found to be defective after examination by Powertrain Control Solutions, LLC., Powertrain Control Solutions, LLC. will only repair or replace the merchandise through the original selling dealer or aon a direct basis. Powertrain Control Solutions, LLC. assumes no responsibility for diagnosis, removal and/or installation labor, loss of vehicle use, loss of time, inconvenience or any other consequential expenses. The warranties herein are in lieu of any other expressed or implied warranties, including any implied warranty of merchantability or fitness, and any other obligation on the part of Powertrain Control Solutions, LLC., or selling dealer.

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