STAR ONLINE PUBLICATION

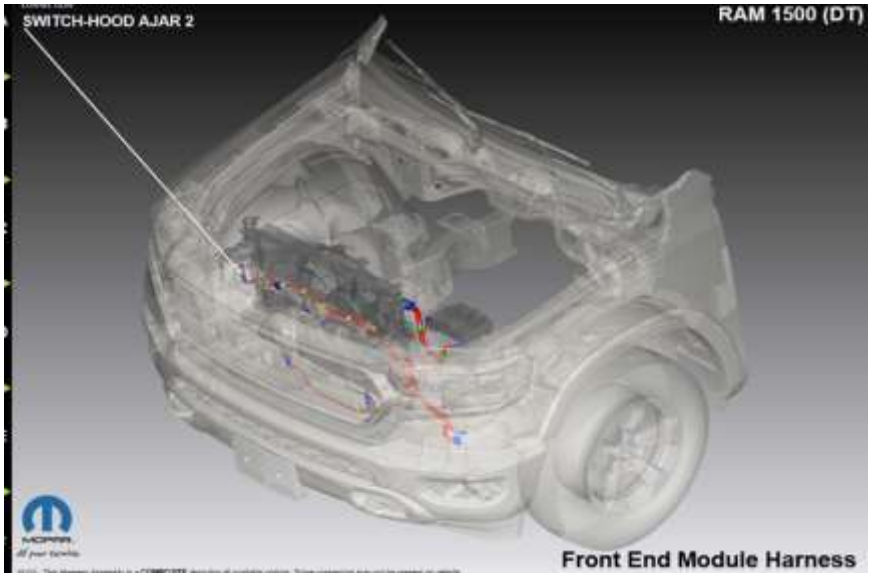
Case Number: **S2008000138**

Release Date: 09/09/2020

Symptom/Vehicle Issue: Malfunction Indicator Lamp (MIL) Turns On, Electric Start Stop (ESS) Disabled Message On Cluster While Driving, Remote Start Feature Inoperative Intermittently

Customer Complaint/ Technician Observation: Customer complains a cluster message appears while driving ESS is disabled, intermittently remote start does not function. Technician observed the vehicle setting DTC P152E - Engine Hood Switch 2 Circuit High, P152F – Engine Hood Switch 2/ to Engine Hood Switch 1 Correlation as stored and or active.

Discussion: The Powertrain Control Module (PCM) monitors the hood ajar status. The hood Ajar Switch 2 is hard-wired to the PCM. If the PCM detects that either switch is in the open position or is faulted for any reason during a normal drive cycle, ESS will be disabled for the remainder of the drive cycle. This condition will cause the engine to default to a running state on both PHEV and ESS equipped vehicles. If Hood Ajar Switch 2 is faulted or in the open state it will also cause the Remote Start feature to be inoperative.



This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

Contact STAR Center, or your Technical Assistance Center Via TechCONNECT or eCONTACT ticket if no solution is found

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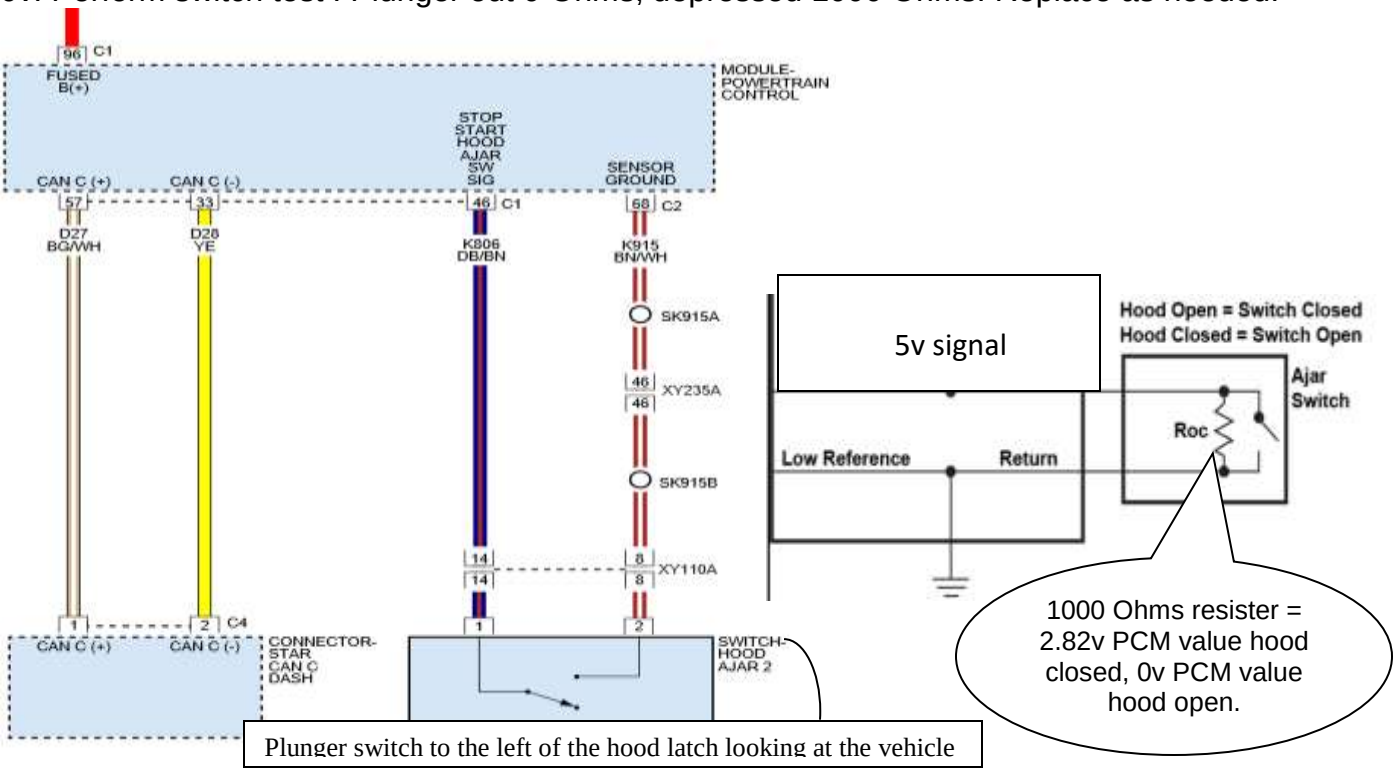
Hood Switch Functional Operation: The Hood Ajar Switch 2 is a hard-wired to the Powertrain Control Module (PCM). The switch receives a 5.0 volt signal from PCM K806 through an internal pull up resistor. When the switch is open (hood closed) the signal passes through the internal resistor and the resistance through the switch is approximately 1000 Ohms (2.82v with a good switch) PCM value. When the ajar switch is closed (hood open) the signal passes through the switch directly to the return circuit and the resistance through the switch should read approximately 0.0 Ohms (0V) PCM value. The PCM is not able to detect a short low in the signal since this would be the same input as hood open/ajar. This failure mode would be detected by the rationality fault that compares the signal to the Hood Ajar Switch 1 (hood latch switch) signal received over the CAN BUS from the Body Control Module (BCM) data see BCM data Hood AJAR (hood latch switch).

Disconnect the hood switch and use DVOM test for the 5v on K806, jumping to K915 ground will read 0v. Perform switch test : Plunger out 0 Ohms, depressed 1000 Ohms. Replace as needed.



NOTE:The GPEC Diagnostic Adaptor can add up to 1.5 Ohms of resistance to the circuit. If checking circuits through a resistance test from the PCM.

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