



STAR ONLINE PUBLICATION



Case Number: S1708000013 REV. B

Release Date: August 2021

Symptom/Vehicle Issue: Key Cannot Be Removed From Ignition, Or No Start concerns

Customer Complaint/Technician Observation: Owner may experience a key stuck concern or a key that cannot be turned or removed from the ignition switch.

Discussion: If the customer describes the symptom/condition listed above without DTC's, perform the steps below to service. Technicians observing the condition as described and setting the following associated DTC's p0688, P0622, P0706, PiC4f, check the ground to transmission housing and frame.

Note: Inspect the main grounds to the engine and or transmission, G021PB example for vehicles setting the involved DTC's. Perform a voltage drop, clean and secure or replace the main cable, see pg 5 for ground location illustrations.

1. If shifter has been in park for **more** than 30 seconds and key **has not** been turned to OFF, the key might be trapped after switching to off. This behavior is by design "**NO ISSUE**".
Perform a key-on/key-off cycle to smoothly release the Key.

2. If vehicle has been switched OFF (in Park) but key has not been removed, even after 30 seconds, the key should release normally.

If the key becomes locked for any reason other than described above; check the ignition key lock solenoid voltage.

NOTE: If the key becomes locked for any reason other than described above; check the ignition key lock solenoid voltage:

- Verify voltage at the Key Lock Solenoid when the lever is moved to "PARK" (ensure the Park is lit on the bezel) and at Key Off (always in Park position).
- To verify the voltage disconnect the key lock connector and measure the voltage at the 2 pins of the vehicle side connector. See next page.

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

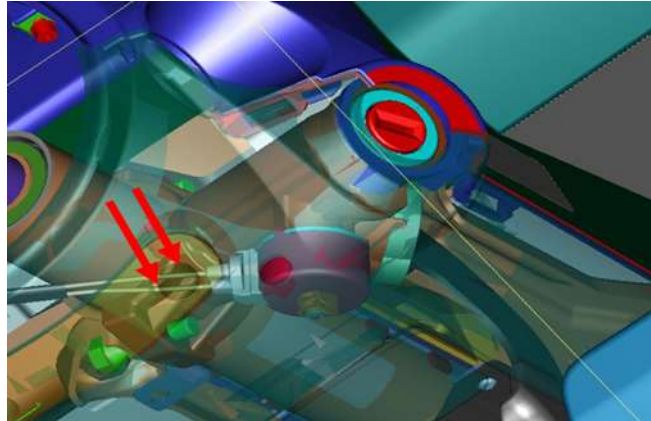


Figure 1. Position of the Key Lock Solenoid

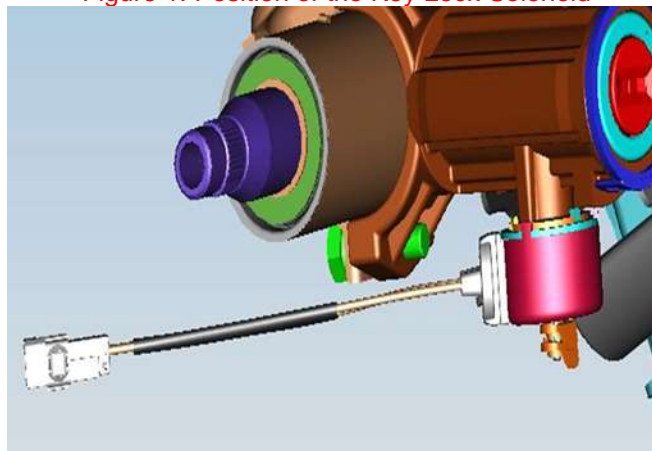


Fig 2. Key Lock Solenoid and its wire harness

- The voltage when key coil is fed (Park and Key Off) must be **V-BATT**
 - For all other lever positions, the voltage will range **from 0 to 0.5** Volts (Figure 3 and 4)
 -
- A. If the voltage readings match what is indicated above, then shifter is properly feeding the key lock solenoid and the issue is not related to the shifter:
- a. Check wire-harness up to Ignition Switch
 - b. The Key Lock Solenoid in Ignition may be overheated/damaged → Replace Key Lock Solenoid

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



STAR ONLINE PUBLICATION



- B. If the above conditions are not verified, the shifter is not feeding the Key Lock Solenoid. Verify that the shifter is free from obstruction that impedes the lever from reaching the stable **Park** position (Also, check that the **P** indicator is lighted when reaching **Park** position). If shifter can reach **P** position properly, replace the shifter.

VEHICLE INTERFACE		
PIN	CIRCUIT	WIRE COLOR
1	KL30 (VBATT)	RED/BLACK
2	KL15 (IGN)	ORANGE/BLACK
3	N/C (OPEN)	
4	GND	BLACK
5	N/C (OPEN)	
6	KEY-LOCK COMMAND	BROWN/ORANGE
7	CAN-C BUS (H1) (TWISTED PAIR 1)	GREEN
8	CAN-C BUS (H2) (TWISTED PAIR 2)	GREEN
9	CAN-C BUS (L1) (TWISTED PAIR 1)	BROWN
10	CAN-C BUS (L2) (TWISTED PAIR 2)	BROWN
11	N/C (OPEN)	
12	N/C (OPEN)	

Figure 3. Shifter Connector Pinout

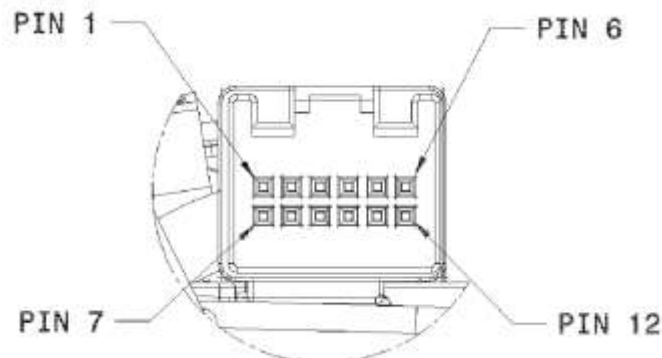


Figure 4. Shifter Connector

***NOTE:** Shifter SW is designed (according to key lock requirements) to feed key lock solenoid for **30** seconds whenever lever reaches **Park** Position and at **Key Off** (if in **Park**). See next page

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



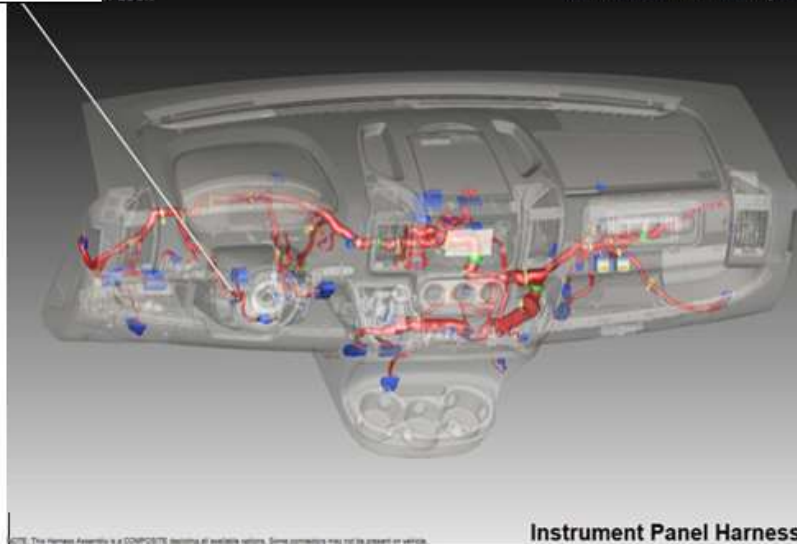
STAR ONLINE PUBLICATION



Move the steering column harness at or near the D0007 connector to see if it releases the key or changes condition. Inspect the terminals at white 2-way connector for spread or damaged terminals, replace or repair the connector as needed.



RAM PROMASTER (VF)



Ground inspection points

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.

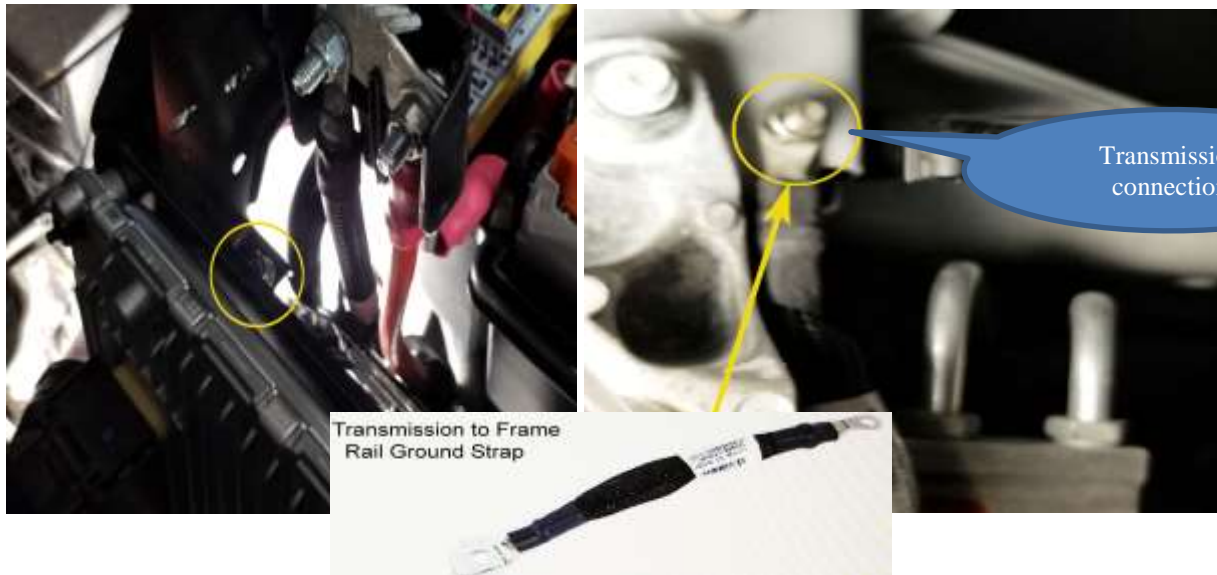
Contact STAR Center, or your Technical Assistance Center Via TechCONNECT or eCONTACT ticket if no solution is found



STAR ONLINE PUBLICATION



Inspect both sides of the involved ground jumper.



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