Case Number: S1308000399

Release Date: 05/29/2013

Symptom/Vehicle Issue:
Intermittent Crank No Start

Diagnosis:
Vehicle does not start, fuel pump operates intermittently at times. Verify fuel pump relay output fuse is good. Fuse M25 20 A and, circuit N1 DB/OR pin 10, C5 TIPM brown connector has no 12v power output.

Parts Required:
Relay kit 68142156aa
Inline fuse 68217670aa
20A fuse 000ATC20

Additional parts needed
Zip ties
¼ inch eyelet
Corrugated Wire loom protector (24 inches)
Repair Procedure:
Procedure to install an external fuel pump relay control circuit.

1. Disconnect the battery prior to performing repairs.
2. Attach blue wire terminals into the connector from relay kit (wire ends feed through top of connector/insulator, relay coil locations (85) and (86) coil control circuits.
3. Install the green wire terminal to the relay connector location, switched side terminal location (87). Slide the corugated harness covering over the relay circuit wiring as shown.
4. Connect the eyelet terminal to one end on the red inline fused circuit. Install the green wire into relay connector location (30) B+ feed. Work through insulator and corugated harness covering. Secure green wire to red by crimp splice to achieve overall length as seen below.
5. Review the assembled harness and wiring to ensure completed as illustrated below.
Connecting relay and harness to vehicle

1. Mount the relay at upper radiator core support (right side); attachment pilot hole in front of hood bumper.

2. Unclip and roll TIPM to access the **C1, 50 way black TIPM connector**.
3. Cut circuit K31 engine fuel pump control, cavity 40 brown wire about 1 inch from the connector. Use heat shrink tube on the short wire on the connector side to seal. This will not be used in this repair. Solder the other end of the wire harness side K31 Brown wire to blue wire from relay terminal (85) of the relay harness. (use shrink tube to to seal all spliced areas).

![Diagram](image1)

4. Install black connector on TIPM once complete.

5. Remove the C5 TIPM brown connector and locate circuit N1 DB/OR Fuel pump circuit feed, cavity 10. Cut the wire about 1 inch from the connector. Use heat shrink tube on the short wire on the connector side to seal. This will not be used in this repair. Solder the other end of the wire harness side N1 DB/OR wire to the green wire from the relay terminal (87) of the relay harness. (use shrink tube to to seal all spliced areas).

![Diagram](image2)

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Center 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 the STAR Center for assistance if no solution is found
6. Locate circuit F941 PWR IGN RUN/START PK/LG cavity 38 of the C5 Brown TIPM connector DO NOT cut this wire. Remove the wire from the connector to splice. About 2 inches from the connector trim insulation back to expose the bare wire. Solder this circuit to the blue wire from terminal (86) of the relay harness. Slip heat shrink tube over the terminal of F941 and seal the solder point. Install the wire back into the connector.

7. Install the brown connector back onto the TIPM and secure the TIPM as needed.

8. Attach Fused relay eylet, red wire from the relay harness terminal location (30) to the B+ terminal post of the TIPM.

9. Test the operation to complete.

LOP: 08 90 65 37 1.0 hr