



## STAR ONLINE PUBLICATION



**Case Number:** S2008000186

**Release Date:** 11/20/2020

**Symptom/Vehicle Issue:** Engine Control Module (ECM) Flash Failure, Diagnostic Trouble Code (DTC) U1601 – ECU Application Software Code 1 Missing Or Corrupted

**Discussion:** Several reports of ECM reprogramming failures have been received from the field. When the reprogramming process fails, it will often be accompanied by DTC U1601. Further investigation into these programming failures have found that most have been due to interference on the CAN C bus. This interference has been found to be caused by the following:

- Aftermarket equipment installed on the bus that include, but are not limited to:
  - GPS Tracking Devices
  - Electronic Mileage Log Books (Heavily used in certain fleets)
  - Aftermarket Trailer Brakes
  - Other Miscellaneous devices wired into the radio.
- On Cab Chassis Applications
  - Fleet Telematics Modules (FTMs)

If you encounter an issue with the ECM reprogramming process failing during the flash process, please perform the following repair procedure to eliminate any possible interference on the bus.

### Repair Procedure:

1. Closely inspect behind the driver's side knee bolster for the presence of any aftermarket add on devices. Most aftermarket devices such as GPS trackers, and electronic mileage loggers are attached via a Y harness tied in at the DLC.
2. Inspect for any aftermarket devices wired into the bus behind the radio.

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3. If no devices are found, or if everything is believed to be removed, and the flash failure still occurs, disconnect the radio fuse.
4. If working on Cab Chassis, disconnect the FTM fuse.
5. If still encountering a failure during the flash process, disconnect all modules from the Star Connectors with the exception of the following:
  - a. Engine Control Module (ECM)
  - b. Transmission Control Module (TCM) if equipped with an Aisin transmission
  - c. Body Control Module (BCM)
  - d. Radio Frequency Hub (RF Hub)
  - e. Security Gateway Module (SGW)

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