



TT469: PREVENTING LEARNED MODULE DATA

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Electrical

APPLIES TO	SYMPTOMS
All CAN equipped vehicles.	• Serial Communications with Incorrect Learned Data

Purpose for Technical Tip Bulletin

When troubleshooting a vehicle, it is sometimes in a technician's best interest to try a test module before confirming the diagnosis and ordering a new part. In a CAN (Controller Area Network) system, the vehicle's modules will learn data from the other connected modules. This can result in one or more modules learning data which may cause negative side-effects. This can either affect the vehicle being diagnosed or the donor vehicle depending on the circumstance.

Markets Affected

All markets are affected.

Theory

If the correct procedures are used, and if the donor parts are taken from an appropriate vehicle, these types of problems can be avoided. The use of a test module should never take precedence over Harley-Davidson's recommended diagnostics. Module-swapping should act only as a confirmation of the troubleshooting results.

Resolution

When removing and installing modules, always follow the procedures in the service and electrical diagnostic manuals. This tech tip does not take precedence over those procedures. For all module swaps, verify the donor bike uses the same part number module as the vehicle that is being troubleshot. Additionally, see below for more module-specific information:

Speedometer and/or ECM:

The main concern with swapping a speedometer or ECM (Electronic Control Module) is an undesired VIN (Vehicle Identification Number) being learned or mileage being transferred to either module. To avoid this refer to TT427.

ECM:

If an ECM is installed on a vehicle that uses the parking brake lamp (Trike), the speedometer can learn that function. The parking brake lamp may remain on, even after the ECM is reinstalled in the donor vehicle which may not utilize that lamp (two-wheeled models). To prevent this when using a test ECM, do not swap ECMs between Trikes and two-wheeled models.

Radio:

If a radio equipped vehicle that has not been sold has a radio temporarily installed, other modules will learn that there is a radio present. Therefore, if that radio is uninstalled at any point, there

will be current DTCs (Diagnostic Trouble Codes) set for radio communication which cannot be cleared. To avoid these DTCs, do not install a radio in a non-radio vehicle if that radio is intended to be removed from the vehicle.

BCM:

If a BCM (Body Control Module) is taken from a vehicle with no IMU (Inertial Measurement Unit) (non-RDRS (Reflex Defensive Rider Systems) vehicle) and installed in a vehicle with an IMU (RDRS vehicle), the BCM will learn the IMU as a connected module. If that BCM is then returned to the non-RDRS vehicle it will display a current IMU communication DTC (Diagnostic Trouble Code) which cannot be cleared. To prevent this when using a test BCM, do not swap BCMs between RDRS and non-RDRS models.

TCU:

Best practice for swapping a TCU (Telematic Control Unit) is to only use a TCU from a vehicle that does not have an activated H-D Connect subscription (dealers stock only). If the donor TCU has an activated subscription and something goes wrong during the process of swapping the TCUs, anyone (the customer) with that vehicle in the H-D Mobile App may receive theft alerts.