

## **Service Bulletin**

### PRELIMINARY INFORMATION

# Subject: Service Traction Or Stability Message Models: 2011 - 2012 Cadillac SRX 2011 - 2012 Chevrolet Equinox 2011 - 2012 GMC Terrain With one or more DTC C056D SYM39 C0186 SYM71 C0196 SYM71 C0287 SYM71 C0280 SYM54

#### This PI was superseded to add additional labor op. Please discard PIT5187.

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

#### **Condition/Concern**

Customers may comment on a Stability indicator illumination or the DIC message; Service Traction or Service Stability. The technicians may find DTCs C056D symptom 39 or 4A or 00 set in the Multi-Axis sensor. The DTC's set in the EBCM module may have a combination of one or more DTCS C0186 sym71 C0196 sym71 C0287 sym71 C0280 sym54 and may have other combination of symptoms 5A, 3B, 4A,or 00. This has been found to be caused by a faulty Multi-Axis sensor.

**Note:** Other acronyms used for "Multi-Axis" sensor are: YAW Rate sensor, Inertia Measurement Unit (IMU), or Inertia Sensor Module. These are terms used and are related to the same sensor/module.

Note: If DTC U0074 U0125 U0126 or U0073 are set, see reference to additional DTCs below.

#### **Recommendation/Instructions**

#### Note: Do Not Replace EBCM for this concern.

When using GDS check the EBCM, Multi-Axis sensor/module and Steering Angle sensor/module for DTC's: Example DTC C056D symptom 39 is found in the Multi-Axis sensor module communicated on the chassis Bus, and the EBCM has DTC C0196 symptom 71 communicated on High Speed LAN bus. The Symptom 71 indicates the data from the Multi-Axis sensor/module data is not valid or different than what the EBCM is expecting to see. Symptom 39 is an internal electronic failure within the Multi-Axis sensor/module. Other DTCs that can set C0280 with symptom 54 indicates a stability active too long, C0287 symptom 71 Longitudinal Acceleration sensor data invalid.

Replace the Multi-Axis sensor. After installing the Multi-Axis sensor/module the sensor has to be configured and Yaw Rate sensor offset learned. Perform the following.

**Note:** When using TIS2WEB recommend to have the MDI hard wired to USB or Ethernet port to reduce configuration programming issues. Failure to do this may result in DTC C0287 5A C0186 5A or possible unwanted stability activation due to the configuration did not take place in the multi-axis sensor.

- 1. Using TIS2WEB/Select "IMU (Inertia Sensor Module)" this will configure the orientation position of the Multi-Axis sensor per vehicle build. After configuration shut off ignition key and open and close driver's door.
- 2. Next using GDS select "Multi-Axis Acceleration Control Module" then Configuration Reset functions;
  - A. Select "Yaw Rate Reset"
  - B. Select "Yaw Rate Learn"
- 3. Next go to EBCM Configuration Reset Functions

Perform the "YAW rate sensor learn"

Shut the ignition key off and remove key from cylinder; open and close driver's door to shut off RAP and module's go to sleep. Disconnect the MDI cable from the DLC connecter. Startup engine and test drive to confirm repair and recheck for DTC after test drive.

Additional DTCs that may set: U0074 (U0074 loss of chassis BUS) U0073 U0125 U0126. These codes can set if there is an issue with the MDI cable resistance on chassis bus review latest version of PIT5076. Diagnose the chassis bus at DLC connecter pins 12 and 13. Normal measurement is 60 ohm's and voltage checks should be around 2.3 and 2.6 volts. If the chassis bus checks are correct suspect a resistance issue within the MDI cable. This cable is the one from the DLC connector end to the MDI. Try another MDI cable or MDI with different cable. Clear codes and recheck the DTCs.

#### **Parts Information**

| Part Number | Description       |
|-------------|-------------------|
| 13505726    | Multi-Axis Sensor |

#### Warranty Information

For vehicles repaired under warranty use:

| Labor Operation | Description                                        | Labor Time                         |
|-----------------|----------------------------------------------------|------------------------------------|
| H2580           | Vehicle Yaw Sensor Replacement (SRX)               | Use Published Labor Operation Time |
| H2582           | Vehicle Yaw Sensor Replacement (Equinox & Terrain) | Use Published Labor Operation Time |

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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