



# Service Bulletin

File in Section: -

Bulletin No.: PIC5643D

Date: October, 2012

## PRELIMINARY INFORMATION

**Subject:** PQC Part Restriction - Electronic Power Steering (EPS) Service Steering Message Displayed And Increased Steering Effort

**Models:** 2012 Chevrolet Camaro ZL1  
2013 Chevrolet Camaro Equipped with any V8 Engine (RPO LS3 or LSA or L99)

**This PI was superseded to add specific actions for DTCs C0475 and C0544. Please discard PIC5643C.**

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

### Condition/Concern

The DIC may display "Service Steering" in combination with an increase in steering effort and standard diagnostics may lead to steering gear replacement. As of 06/19/2012 Electronic Power Steering P/N 22848599 and P/N 22960699 have been placed on restriction through PQC. This part restriction will allow Engineering to evaluate the fault while the steering gear is in the vehicle and prior to any repairs.

### Recommendation/Instructions

**Important:** Do not perform a Clear DTCs function.

Retrieve any stored DTC information from the Electronic Power Steering module. If any of the following DTCs are set (history or current) in the EPS module or you are unable to diagnose the cause DO NOT CLEAR DTC(s), STOP FURTHER SERVICE ACTIVITY, complete the questionnaire below and contact PQC for further action.

- DTC C0569
- DTC C0475 - Skip directly to SPECIAL ACTIONS Below
- DTC C056E
- DTC C0545
- DTC C056D
- DTC C055C
- DTC C0544 - Skip directly to SPECIAL ACTIONS Below

For all other concerns where the above DTCs are not set, follow the published service procedures to complete the repair. Should the repair require steering gear replacement, Contact PQC to review the diagnosis and order the part.

Please complete this questionnaire prior to contacting PQC.

Customer's concern:

What is the customer's description of the concern?

How many times did the customer indicate the issue occurred?

During which of the following driving condition(s) did the customer have a steering concern?

Low Speed turn Y/N

Straight-away Y/N

On a rough road Y/N

Was the concern temperature related? Y/N

Was the concern weather related? Y/N

Did the concern occur soon after an engine stall. Y/N

Did the concern occur during an engine start (cranking)? Y/N

What state were other electronics in when concern occurred (e.g.: A/C: High, Med, or Low; Heater: On/Off; Radio: On/Off; etc.)

Please list any other conditions (if applicable) when the concern occurred.

What are the current and/or history DTCs?

Is the vehicle still exhibiting the customer concern? Y/N

Has the vehicle been modified with any aftermarket accessories or options? Y/N

What SI document number was used during the diagnosis?

Have the wires/harnesses been checked for proper routing and free from damage, stretch, pinch, etc.? Y/N

(If no, perform this inspection prior to calling PQC.)

Have the wires been checked for any damaged, loose, or disconnected connectors? Y/N

(If no, perform this inspection prior to calling PQC.)

Have any wire connectors or terminals been disconnected or loosened and then re-torqued? Y/N

Has the EPS supply voltage been checked on both sides of the EPS Fuse? Y/N

IF Yes, what was the voltage with ignition OFF? \_\_\_\_ Volts

(If no, you need to check and record voltages with ignition OFF prior to calling PQC. This fuse is not accessible; it is molded into the EPS power cable between the Battery Positive Junction Block and the EPS motor. Measure voltage at both ends of the EPS power cable.)

Have you made any other observations or have any recommendations of what may be causing this concern?

### **SPECIAL ACTIONS FOR DTCS C0475 AND C0544:**

Verify software in the module.

Using GDS2 Scan tool, go to Module Diagnostics>Power Steering Control Module>Identification Information>Software Module 1 Identifier

1. If Software Module 1 Identifier PN is 22945361 (HA software) then reflash using updated Service software. Run Physical Tests C. 1-9 below.
2. If Software Module 1 Identifier PN is 22979747 (JD software). Record codes seen. Then run tests A-C, record codes again and call PQC.
  - A. It is very important to probe circumstances of incident fully with the customer to determine if it occurred around the same time that they started engine / restarted engine / or an engine stall. Please confirm if the incident occurred shortly after one of these events (started engine / restarted engine / or an engine stall).
  - B. (Unless Steering Assist has already been returned) Please do the following and confirm if these actions return the Assist.
    - Make sure the vehicle is switched off, key is out of ignition and door is closed – for 2 minutes. (Waiting for BCM to shut down, Interior Light will turn off)
    - Open the vehicle door, sit in the vehicle, and close the door
    - Crank and start the vehicle
  - C. Attempt to REPEAT the Incident by performing the following Checks, then Actions:

Visual Inspection (Power Off)

- Check the Electric Power Steering System (EPS) connection at the battery – is B+ connection loose? (Visual check, then wiggle to see if it is tight)
- Check both ends of the EPS fuse – are the connections loose? (Visual check, then Wiggle ends to see if they are tight)
- Visually Check the EPS fuse – check to confirm it is still intact or not damaged.
- Is the Connector Position Assurance (CPA) on the POWER connector to the EPS in place? (Visual check, then Wiggle to see if it is tight, and confirm it is Latched)
- Check the GROUND connection from the EPS to vehicle ground – is it loose? (Wiggle to see if it is tight)

Physical Tests (Cranking Test)

1. Make sure the vehicle is switched off, key is out of ignition and door is closed – for 2 minutes. (Waiting for BCM to shut down)
2. Open the vehicle door, sit in the vehicle, and close the door.
3. Crank and start the vehicle (let engine run for 10 seconds). Check for “Service Power Steering” message. (IF message appears: STOP, Pull Fault Codes with Tool, then call Engineering)
4. Switch the vehicle off (engine stop) and then re-crank immediately (let the engine run for 10 seconds). Check for “Service Power Steering” message. (IF message appears: STOP, Pull Fault Codes with Tool, then call PQC)
5. Switch the vehicle off (engine stop).
6. Remove the key.

7. Open the door and leave the vehicle.
8. Close the door.
9. Leave the vehicle for 2 minutes.

Repeat steps 2 to 9 (for a total of 5 times).

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.