



Service Bulletin

File in Section: -

Bulletin No.: PIP5172A

Date: November, 2014

PRELIMINARY INFORMATION

Subject: Police Tahoe Drivability Issues In Hot Weather With An Idle Surge, Sag Or Stall

Models: 2012-2014 Chevrolet Tahoe Police Pursuit Vehicles (RPO code PPV) and Special Service trucks (RPO code 5W4)
With engines 5.3L LMG

This PI was superseded to update Recommendation/Instructions. Please discard PIP5172.

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

Condition/Concern

Customers may comment on an erratic idle, idle surge or sag, and other low engine speed drivability concerns, including the potential for stall events that can occur infrequently.

These conditions are evident in hot weather especially after extended idle times.

This concern is on Tahoe Police Pursuit Vehicles (PPV) and Special Service Tahoe's (5W4) and/or does not include retail trucks.

Recommendation/Instructions

To correct the above concerns, update the following control module calibrations:

1. Engine Control Module calibration (Engine Operation) with a calibration in TIS2Web titled "New calibration to address idle sag in high ambient temperatures" This can be completed through TIS
2. Regulated Voltage Control in the Body Control Module in the Charging/Energy Storage" category. This can be completed through TIS.

Additional information to pass along to the operator of the vehicle and fleet management

Issues addressed with the updated calibration to minimize stall or idle surge events:

1. Idle speed control modified to minimize idle surge/roll
2. Modified to reduce idle speed increase following most rolling stop maneuvers
3. Increased idle speed in high temperatures (650 rpm above 80F IAT) with A/C on
4. Modified purge vapor management
5. Maximize available spark advance for improved launch performance

Operational characteristics that are not addressed with the calibration

1. Some Idle roll/oscillation is inherent. Can occur on return to idle, but should stabilize/damp out quickly.
2. Uncompensated loads such as hydraulic power steering input can also disturb idle.
3. A/C cycling may cause approx. 100 rpm idle speed variation for example from 650 to 550 rpm.
4. Elevated idle – Trucks are equipped with idle boost strategy for various inputs (HVAC, electrical load...).

Level 1 – 650 RPM in drive / 800 RPM in park/neutral

Level 2 – 725 RPM in drive / 1000 in park/neutral

Level 3 – 800 RPM in drive / 1000 RPM in park/neutral

Transmission shift points – The Tahoe PPV does have a performance oriented shift strategy, but can still experience

1. Some downshift delays in certain conditions.
2. Reverse to Drive transitions at too high of vehicle speed can result in stall and is considered an abusive maneuver.
3. Low power in high ambient temperatures (should be improved by some small amount with updated calibration).

4. Lack of throttle response (tip-in/tip-out) – Known issue (anti-clunk) with no resolution - PIP4112N: Normal Characteristic - Sag Or Hesitation On Acceleration.
5. Low power low speed acceleration – Known issue, trans shifting to lower gear delay, with no resolution - PIP4112N: Normal Characteristic - Sag Or Hesitation On Acceleration
6. Two footed drivers could be in torque limiting mode (Enhanced Brake Pedal Override) on 2012 and newer trucks.
7. Drivability concerns can be induced by fueling with vehicles running. Do not fill trucks while running.
8. Additional engine vibration for AFM operation, low idle speeds and general performance can be noticed because of solid engine mounts.
9. While decelerating, when the transmission performs the 2nd to 1st gear downshift, it will match engine RPM to the new downshifted speed.
 This can be perceived as a very brief surge but in reality is only a slight reduction in engine braking during the shift transition to complete the clutch to clutch shift.
 This is different than the downshifts performed on the older 4-speed automatics that had a freewheeling clutch that did not require the engine speed matching. This is an expected characteristic
10. Traction Control may activate on dry or rough roads or under conditions such as heavy acceleration while turning or abrupt upshifts/downshifts of the transmission.
 When this happens, a reduction in acceleration may be noticed, or a noise or vibration may be heard. This is normal.

Warranty Information

For vehicles repaired under warranty use:

Labor Operation	Description	Labor Time
2810075	Engine Control Module Reprogramming with SPS	Use Published Labor Operation Time
2810215	Body Control Module Reprogramming with SPS	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.