

#03-05-25-007D: Antilock Brake (ABS) Activation at Low Speeds (Clean Wheel Speed Sensor Mounting Surface) - (May 1, 2009)

Subject: Antilock Brake (ABS) Activation At Low Speeds (Clean Wheel Speed Sensor Mounting Surface)



Models: 2002-2006 Cadillac Escalade, Escalade EXT  
2003-2006 Cadillac Escalade ESV  
1999-2006 Chevrolet Silverado  
2001-2006 Chevrolet Suburban, Tahoe  
2002-2006 Chevrolet Avalanche  
2003-2006 Chevrolet Express  
2007 Chevrolet Silverado Classic  
1999-2006 GMC Sierra  
2001-2006 GMC Yukon, Yukon Denali, Yukon XL, Yukon Denali XL  
2003-2006 GMC Savana  
2007 GMC Sierra Classic  
2003-2006 HUMMER H2

This bulletin is being revised to add the 2007 Silverado/Sierra Classic models. Please discard Corporate Bulletin Number 03-05-25-007C (Section 05 -- Brakes).

Condition

Some customers may comment on ABS activation at low speeds, usually below 8 km/h (5 mph). Upon investigation, the technician will find no DTCs set.

Cause

The cause of this condition may be an increased air gap between the wheel speed sensor and the hub reluctor ring due to rust and debris built up on the sensor mounting surface.

Correction

Measure AC voltage and clean the wheel speed sensor mounting surfaces.

- 1. Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle in the General Information sub-section of the Service Manual.
- 2. Disconnect both the front wheel speed sensor connectors at the frame and harness.

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- 3. Place a Digital Volt Meter (DVM) across the terminals of each wheel speed sensor connector.
- 4. Rotate the wheel clockwise approximately one revolution per second. The minimum reading should be at least 350 ACmV's. If the reading is less than 350 ACmV's, remove the wheel speed sensor. Refer to the applicable Wheel Speed Sensor Replacement procedure in the ABS sub-section of the Service Manual.
- 5. Plug the wheel speed sensor bore in order to prevent debris from falling into the hub during service.
- 6. Clean the wheel speed sensor mounting surface using a wire brush, sand paper, emery cloth, scotch brite, or other suitable material. Be sure to thoroughly clean the wheel speed sensor surface. There should be no rust or corrosion.
- 7. Check the sensor head to determine if it has been warped/distorted due to the corrosion build up or other causes. Check the mounting surface on the sensor head for flatness by placing it on the edge of a metal machinists scale or other suitable straight edge to measure the flatness. Check the sensor for flatness in multiple (minimum 3) positions/directions. If the sensor head is distorted, replace the sensor.
- 8. Apply (spray) two thin coats of the specified rust penetrating lubricant (corrosion inhibitor) to the complete sensor mounting surface on the bearing hub. Allow to dry for 3-5 minutes between coats. Use ONLY Rust Penetrating Lubricant, P/N 89022217 (in Canada, P/N 89022218).
- 9. When the corrosion inhibitor is dry to the touch (about 10 minutes), apply a thin layer of bearing grease to the hub surface and sensor O-ring prior to sensor installation. Use ONLY Wheel Bearing Lubricant, P/N 01051344 (in Canada, P/N 993037).
- 10. Install either the original sensor or a new one in the hub. Ensure that the sensor is seated flush against the hub. Refer to the applicable Wheel Speed Sensor Replacement procedure in the ABS sub-section of the Service Manual.
- 11. Place the DVM across the sensor terminals and recheck the voltage while rotating the wheel. The voltage should now read at least 350 ACmV's.

Parts Information

Part Number	Description	Qty
89022217 (Canadian P/N 89022218) (Package of 2 cans)	Rust Penetrating Lubricant  (Each can will service 50+ vehicles)	1
01051344 (Canadian P/N 993037) (Package of 12 tubs)	Wheel Bearing Lubrication - Tub  (Each tub will service 25+ vehicles)	1

Place unused material on dealer shelf for future use.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
H9714*		

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(1500 Series)	Front Wheel Speed Sensor Inspect and Clean (Both Sides)	1.2 hrs
H9714* (Single Wheels 2500/3500)	Front Wheel Speed Sensor Inspect and Clean (Both Sides)	1.5 hrs
H9714* (Dual Wheels 3500)	Front Wheel Speed Sensor Inspect and Clean (Both Sides)	2.0 hrs
*This is a unique labor operation for bulletin use only. It will not be published in the Labor Time Guide.		

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 this bulletin.



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