



# SERVICE BULLETIN

Classification: BR91-003	Section: BRAKES	Models: ALL MODELS
Reference: TECHNICAL BULLETIN NTB91-096	Date: DECEMBER 12, 1991	

## ABS SYSTEM: SELF-CHECK NOISE AND ACTUATOR NOISE

**APPLIED MODELS:** All Models equipped with ABS.

### SERVICE INFORMATION:

#### SELF-TEST FEATURE

Some customers may notice a "clunk" noise during braking after each engine start when their vehicles are initially driven in forward or reverse gear. This "clunk" noise may be accompanied by a 'pulsation' in the brake pedal. The anti-lock brake system is a sophisticated system with electronic sensors, electric pumps, and hydraulic solenoids controlled by a computer. The computer has a built-in diagnostic feature that tests the system each time the vehicle is started and reaches a speed of 4 mph in forward or reverse gear. If the customer expresses a concern regarding this "clunk" noise and pedal pulsation, he/she should be reassured that this is normal and not indication of any malfunction. It should be further explained to the customer that should the computer sense any malfunction in the ABS system, it will switch the anti-lock brake system OFF and activate the ABS indicator light on the dashboard. At this time, the brake system will behave in a normal fashion but without anti-lock assistance.

#### NORMAL OPERATION:

The vehicle must be traveling at least 6 mph for the anti-lock system to work. When the anti-lock system senses that one or more wheels are close to locking up, an actuator under the hood rapidly applies and releases hydraulic pressure, much like quickly pumping the brakes. While the actuator is operating, the customer may notice a brake pedal pulsation and a noise from the actuator located under the hood of the vehicle. This is also normal and indicates that the anti-lock system is functioning properly.

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