

**DIAGNOSIS AND TESTING > BRAKE SYSTEM > PINPOINT TESTS > PINPOINT TEST
A : VIBRATION WHEN BRAKES ARE APPLIED > PINPOINT TEST A : VIBRATION
WHEN BRAKES ARE APPLIED**

A1 ROAD TEST THE VEHICLE -LIGHT BRAKING

Road test the vehicle. Warm the brakes by slowing the vehicle from 80 to 32 km/h (50 to 20 mph) using light brake force. At highway speeds of 89-97 km/h (55-60 mph), apply the brake using light pedal force.

Is there a vibration/shudder felt in the steering wheel, seat or brake pedal?

Yes	GO to A4
No	GO to A2

A2 ROAD TEST THE VEHICLE -MODERATE TO HEAVY BRAKING

Road test the vehicle. At highway speeds of 89-97 km/h (55-60 mph), apply the brake using a moderate to heavy pedal force.

Is there a vibration/shudder?

Yes	GO to A3
No	The concern is not present at this time.

 **NOTE:** During moderate to heavy braking, noise from the Hydraulic Control Unit (HCU) and pulsation in the brake pedal can be observed. Pedal pulsation coupled with noise during heavy braking or on loose gravel, bumps, wet or snowy surfaces is acceptable and indicates correct operation of the ABS. Pedal pulsation or steering wheel nibble with the frequency proportional to vehicle speed indicates a concern with a brake or suspension component.

A3 CHECK ABS (ANTI-LOCK BRAKE SYSTEM) OPERATION

Road test the vehicle and apply the brakes on a dry, firm surface, then apply the brakes on a wet, snowy or loose surface (such as gravel).

Is the vibration/shudder only present on a wet, snowy or loose surface?

Yes	This is a normal operating condition of the ABS.
No	GO to A5