

Symptom Chart

Symptom Chart — Brake System

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Condition	Possible Sources	Action
<ul style="list-style-type: none"> The red brake warning indicator and the yellow ABS warning indicator are illuminated 	<ul style="list-style-type: none"> DTCs in the ABS module 	<ul style="list-style-type: none"> REFER to Section 206-09 to diagnose the ABS.
<ul style="list-style-type: none"> The red brake warning indicator is always/never on 	<ul style="list-style-type: none"> Brake fluid level switch Parking brake switch Wiring, terminals or connectors Instrument Cluster (IC) Smart Junction Box (SJB) 	<ul style="list-style-type: none"> REFER to Section 413-01 to diagnose the red brake warning indicator.
<ul style="list-style-type: none"> Vehicle pulls or drifts during braking 	<ul style="list-style-type: none"> Brake calipers and/or guide pins Brake flexible hose Brake pads Brake discs Tires Suspension component(s) and/or wheel alignment 	<ul style="list-style-type: none"> INSPECT the brake system components. REFER to Brake System Inspection in this section. REFER to Section 204-04 to diagnose tire concerns. REFER to Section 204-00 to diagnose suspension system.
<ul style="list-style-type: none"> Brake pedal goes down fast or eases down slowly 	<ul style="list-style-type: none"> Brake fluid leaks and/or air in the system Brake master cylinder Hydraulic Control Unit (HCU) 	<ul style="list-style-type: none"> INSPECT the system for leaks. REPAIR as necessary. BLEED the system. REFER to Brake System Bleeding in this section. CARRY OUT the Brake Master Cylinder — Bypass Condition Component Test in this section. REFER to Section 206-09 to diagnose the HCU.
<ul style="list-style-type: none"> Brakes lock up under light brake pedal force 	<ul style="list-style-type: none"> Brake pads Brake flexible hose Brake disc Brake calipers and/or guide pins ABS 	<ul style="list-style-type: none"> INSPECT the brake system components. REFER to Brake System Inspection in this section. REFER to Section 206-09 to

		diagnose the ABS.
<ul style="list-style-type: none"> Excessive brake pedal travel (low/spongy pedal) 	<ul style="list-style-type: none"> Brake fluid leaks and/or air in the system Brake master cylinder Brake calipers and/or guide pins Brake flexible hose 	<ul style="list-style-type: none"> INSPECT the system for leaks. REPAIR as necessary. BLEED the system. REFER to Brake System Bleeding in this section. CARRY OUT the Brake Master Cylinder — Bypass Condition Component Test in this section. INSPECT the brake calipers and guide pins. REFER to Brake System Inspection in this section. INSPECT the brake flexible hoses during brake application. REFER to Brake System Inspection in this section.
<ul style="list-style-type: none"> Erratic brake pedal travel 	<ul style="list-style-type: none"> Brake pedal ABS 	<ul style="list-style-type: none"> INSPECT the brake pedal for binding, obstructions and correct connection to booster rod. REPAIR as necessary. CHECK the brake pedal fasteners for correct torque. REFER to Specifications in Section 206-06. REFER to Section 206-09 to diagnose the ABS.
<ul style="list-style-type: none"> Brake drag 	<ul style="list-style-type: none"> Parking brake component Brake caliper and/or guide pins Brake flexible hose Brake booster Brake master cylinder HCU Stoplamp switch 	<ul style="list-style-type: none"> REFER to Section 206-05 to diagnose the parking brake system. INSPECT the brake system components. REFER to Brake System Inspection in this section. CARRY OUT the Brake Master Cylinder — Compensator Port Component Test in this section. REFER to Section 206-09 to diagnose the HCU. VERIFY correct installation of the stoplamp switch. REFER to Section 417-01.
<ul style="list-style-type: none"> Excessive brake pedal effort 	<ul style="list-style-type: none"> Insufficient vacuum for brake booster operation Brake booster manifold vacuum hose Brake booster Brake booster check valve Brake pads 	<ul style="list-style-type: none"> CARRY OUT the Brake Booster Component Test in this section. INSPECT the brake pads. REFER to Brake System Inspection in this section.

Symptom Chart — NVH

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NOTE: NVH symptoms should be identified using the diagnostic tools that are available. For a list of these tools, an explanation of their uses and a glossary of common terms, refer to

Section 100-04 . Since it is possible any one of multiple systems may be the cause of a symptom, it may be necessary to use a process of elimination type of diagnostic approach to pinpoint the responsible system. If this is not the causal system for the symptom, refer back to **Section 100-04** for the next likely system and continue diagnosis.

Condition	Possible Sources	Action
<ul style="list-style-type: none"> Vibration when the brakes are applied 	<ul style="list-style-type: none"> Brake disc(s) Suspension components 	<ul style="list-style-type: none"> GO to Pinpoint Test A .
<ul style="list-style-type: none"> Brake vibration/shudder — occurs when the brake pedal is released 	<ul style="list-style-type: none"> Brake drag 	<ul style="list-style-type: none"> GO to Symptom Chart - Brake System .
<ul style="list-style-type: none"> Rattling noise 	<ul style="list-style-type: none"> Caliper guide pins or guide pin bolts Missing or damaged anti-rattle clips or springs Loose brake disc shield 	<ul style="list-style-type: none"> CHECK the caliper guide pins and guide pin bolts. REFER to Brake System Inspection in this section. CHECK the brake pads for missing clips or broken springs. INSTALL new components as necessary. REFER to Section 206-03 for front disc brakes or Section 206-04 for rear disc brakes. TIGHTEN the brake disc shield bolts to specification. REFER to Section 206-03 for front disc brakes or Section 206-04 for rear disc brakes.
<ul style="list-style-type: none"> Squealing noise — occurs on first (morning) brake application 	<ul style="list-style-type: none"> Brake pads 	<ul style="list-style-type: none"> Acceptable condition. Caused by humidity and low brake pad temperature.
<ul style="list-style-type: none"> Squealing noise — a continuous squeal 	<ul style="list-style-type: none"> Brake pads 	<ul style="list-style-type: none"> INSPECT the brake pads. REFER to Brake System Inspection in this section.
<ul style="list-style-type: none"> Squealing noise — an intermittent squeal 	<ul style="list-style-type: none"> Brake pads 	<ul style="list-style-type: none"> Acceptable condition. Caused by cold, heat, water, mud or snow.
<ul style="list-style-type: none"> Groaning noise — occurs at low speeds with brake lightly applied (creeping) 	<ul style="list-style-type: none"> Brake pads 	<ul style="list-style-type: none"> Acceptable condition.
<ul style="list-style-type: none"> Grinding/moaning noise — continuous 	<ul style="list-style-type: none"> Brake pads Brake disc 	<ul style="list-style-type: none"> INSPECT the brake pads, brake discs and attaching hardware for damage. VERIFY brake components are within specifications. REFER to Brake System Inspection in this section.
