

DIAGNOSIS AND TESTING (Continued)

BRAKE SYSTEM DIAGNOSIS		
CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> Brakes Do Not Apply 	<ul style="list-style-type: none"> Insufficient brake fluid. Binding or damaged brake pedal linkage. 	<ul style="list-style-type: none"> Add fluid, bleed system, check for leaks. Service as required.
<ul style="list-style-type: none"> Excessive Pedal Travel or Pedal Goes to Floor 	<ul style="list-style-type: none"> Air in system. Loose brake tube end fittings. Malfunctioning master cylinder. Malfunctioning ABS hydraulic unit. Loose wheel bearings — front. Loose or missing pedal bushings / fasteners. 	<ul style="list-style-type: none"> Bleed system. Tighten to specification. Refer to Master Cylinder Diagnosis. Refer to ABS Diagnosis, Section 06-09. Replace as required. Check and replace as required.
<ul style="list-style-type: none"> Excessive Pedal Effort to Stop Vehicle 	<ul style="list-style-type: none"> Binding or damaged pedal linkage. Engine vacuum loss. Booster inoperative. Worn or contaminated linings. Brake system. 	<ul style="list-style-type: none"> Inspect. Service as required. Check engine vacuum, and vacuum at check valve to booster. Service as required. Perform power brake function test or vacuum booster diagnosis. Inspect. Replace if necessary. Inspect wheel cylinders or caliper pistons, restricted lines or hoses, contaminated brake fluid, improper operation of proportioning or metering valve. Service as necessary.
<ul style="list-style-type: none"> Spongy Pedal 	<ul style="list-style-type: none"> Air in system. Loose or improper brake pedal, pedal support, booster, master cylinder attachment. Brake system. 	<ul style="list-style-type: none"> Bleed system. Service as required. Inspect for damaged or distorted parts in brake caliper assemblies, cracked brake drums, mis-machined anchor plates.
<ul style="list-style-type: none"> Brakes Drag, Slow or Incomplete Release 	<ul style="list-style-type: none"> Parking brake cable out of adjustment or binding. Front wheel bearings worn or damaged. Blocked master cylinder compensator ports. On front disc brakes — loose or missing innershoe clip. Brake adjustment (rear). On front disc brakes — LH or RH shoes misassembled. Restriction in hydraulic system. Caliper piston seizure. 	<ul style="list-style-type: none"> Check cables for correct adjustment or bind. Check bearings for wear, damage or bind. Refer to Master Cylinder Diagnosis. Inspect and replace if required. Check and adjust. Check and service. Check and service. Check and service.
<ul style="list-style-type: none"> Noise at Wheels When Brakes are Applied — Snap or Clicks 	<ul style="list-style-type: none"> On disc brakes — loose or missing inner anti-rattle clip. On front disc brakes — missing pin insulator. On front disc brakes — missing or loose pins. 	<ul style="list-style-type: none"> Lubricate and replace¹. Lubricate and replace¹. Lubricate and replace¹.
<ul style="list-style-type: none"> Noise at Wheels When Brakes are Applied — Scrape or Grind 	<ul style="list-style-type: none"> Worn brake linings. Caliper to wheel or rotor interference. Other brake system components: Warped or bent brake splash shield, cracked rotors. Tires rubbing against chassis or body. Rotor to spindle interference. 	<ul style="list-style-type: none"> Replace drums or rotors if heavily scored. Replace as required. Inspect and service. Inspect and service. Replace as required.

¹ Use Disc Brake Caliper Slide Grease D7AZ-19590-A (ESA-M1C172-A) or equivalent.