

# SELF "TECH" GUIDE FOR YOUR FAVORITE CARS

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This is the first in a series of twelve articles. Copy this page each month and carry this guide in your car.

## BRAKES

**FLUID LEVEL:** Check fluid level in the master cylinder reservoir (see your manual). If you're losing more than 2-3 teaspoons a month, there could be a leak.

**BRAKE LINES:** Visually inspect brake fluid lines by peering under the car with a high-power flashlight. For example, a wet spot at the inside of the tire could be a brake fluid leak at the wheel cylinder. The brake warning light coming on when driving means you have lost fluid and, hence, pressure in one of the lines - reduce speed immediately.

**PEDAL CHECK:** (A) With the engine off, put pressure on the brake pedal and start the engine. The pedal should move slightly to the floor. If not, the power booster or vacuum line is defective. If the pedal goes to the floor, there is a hydraulic pressure leak. (B) With the engine on (warmed up) and gear in neutral, depress pedal hard with right foot. You should be able to slip your left foot toes under the depressed pedal.

**PARKING BRAKE:** Pull up until resistance felt. Total lever movement should not exceed 3 inches (possibly more on older cars). The "bottom line" is the holding power when parked on an incline. Note: 308's parking brake is basically ineffective (and incurable). In this case, a wood "wedge" should be carried to place under one of the rear tires when needed.

**SYMPTOMS CHECK:** Note: Probable causes are cited for illustrative purposes only in order to provide a "feeling" of the problem. There may be other causes of these symptoms.

1. Pedal hard to apply with reduced stopping power- Loose vacuum line or defective vacuum booster.
2. Pedal spongy - Air in system. Needs bleeding. May be a leak.
3. Pedal to floor (requires pumping to stop car) - Air in lines or fluid leak (usually at wheel cylinder or even the master cylinder).
4. Pedal pulsates - Rotor runout or thickness variation.
5. Smell smoke on braking - You locked the brakes. See Jim Russell or Bob Bondurant.
6. Car pulls to right or left on braking - Dirt, worn pad or jammed/bent mechanism. Possible worn tie rod or end(s). Possible sticking or seized wheel cylinder. Also loose wheel bearing, sticking caliper or even fluid (oil or brake) on pad could cause this symptom.
7. Brakes squeak or squeal - (1) High pitch on braking - probably dirt; (2) constant squeal while driving - pad wear warning system; (3) low "crunchy" growl intensifying as brakes applied - internal damage; (4) If you have metallic pads, the pads/rotors may be glazed.
8. Car vibrates when brakes applied hard. Worn suspension pins/bushings, loose wheel bearing, cracked rotor.