**Wheels:** E-mail from David states that in whatever position he places the heater or air- conditioning system; all the air seems to be coming from the defroster. Do you have any ideas?

**Halderman:** Yes. The default position for most heater and air-conditioning systems is the defrost position. This is a federally mandated requirement for safety. The safest place for the air to flow is to the windshield. A typical problem that can cause this to occur is a vacuum hose disconnected or broken under the hood. Most heating and air-conditioning systems today use engine vacuum to move blend doors to direct airflow through the various vents and components. Look carefully at all of the vacuum hoses, especially those near the engine. Rubber hose can deteriorate near the heat of the engine. Rubber vacuum hose can split and leak, yet look okay when observed. Service technicians often use carburetor cleaner or propane directed to areas of the engine through a small tube to help pinpoint vacuum leaks. With the engine running, if propane is directed to an area that has a split in a vacuum hose, the carburetor cleaner or propane is drawn into the engine through the opening and this changes the sound of the engine. Many shops today introduce harmless smoke into the engine and watch for wisps of smoke coming from any leaks.

If David's vehicle is older, he may want to think about replacing all the vacuum hoses to help prevent this or other more serious problems in the future. If a vacuum leak is not corrected, the engine could operate too lean causing the engine to overheat. An engine that is operating hotter than normal could cause extra strain on head gasket(s) leading to serious engine damage and a big repair bill.