

**Wheels:** Chris writes, “My wife has a 1999 Saturn SL2, 4-cylinder that recently has had trouble starting. It will start very sluggish and rough, but after a few seconds, it will smooth out and run fine. I thought it had a choke problem but my mechanic told me it doesn’t have a choke. He also kept the car for two days trying to figure it out. He was able to duplicate the starting problem I was talking about but could not find the cause. He said all his diagnostic testing showed nothing. His final opinion was “This will probably be a problem that will have to get a lot worse before we can figure it out.” I asked him if the dealer would have any special testing equipment that might point to the cause and he said no, that they did everything the dealer would do. Any ideas?”

**Halderman:** The problem sounds like it is being flooded as you suggested, but there is not a choke. However, if there were a small hole in the rubber diaphragm of the fuel pressure regulator, extra fuel would drip into the intake manifold when it was shut off, causing the engine to be hard to start. This would most likely cause a hard starting problem when the engine was warm and may not be noticed when first starting in the morning. This can be checked by removing the vacuum hose from the regulator and looking for fuel in the vacuum line. A clear plastic line can also be used temporarily to check for any droplets of fuel being drawn into the engine through the vacuum line with the engine running.

Another possible cause is a leaking fuel injector. A leaking injector is harder to test for but can be checked by using a pressure gauge attached to the fuel system and seeing if the pressure drops when the engine is off.

