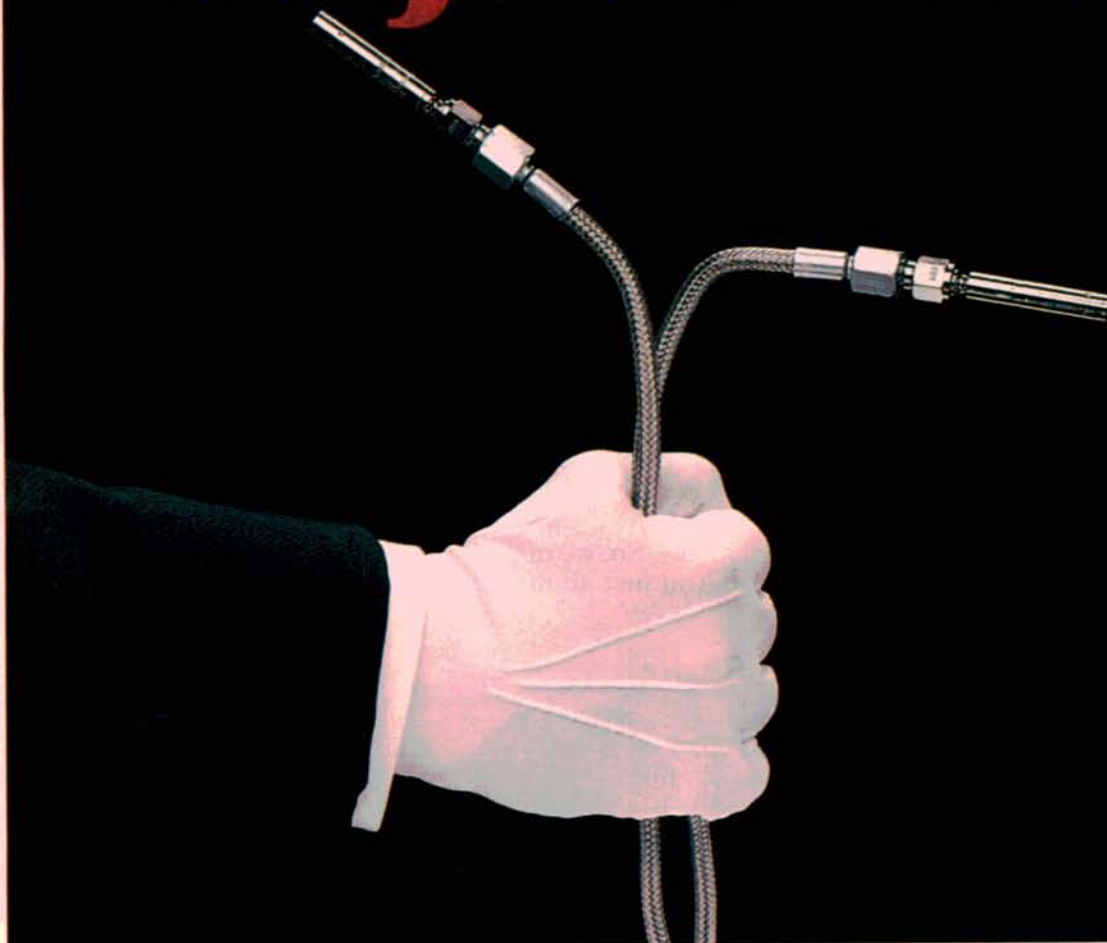


# K-Jetricks



Some people call it CIS, continuous injection system. Others call it K-Jetronic. The K comes from konstant—German for constant. But when things go wrong, you call it things we can't print! Always apply the same preliminaries to K-Jetronic that you apply to L-Jet: a basic engine/ignition analysis and fuel system pressure tests. And fuel pump pressure/volume tests are extremely important during K-Jet analysis.

Anytime you have a fuel delivery problem, check for a bad fuel pump or fuel pump pickup. With practice, you'll learn how a bad pump sounds.

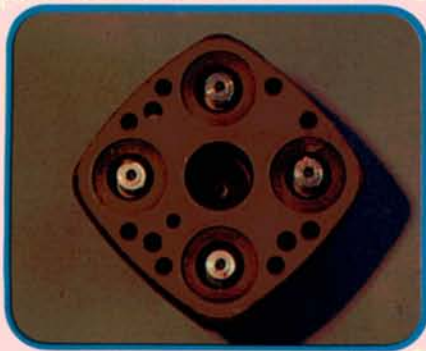
Because the K-Jet injectors are hydraulically operated, they need a steady diet of clean, bubble-free fuel or they won't open. Therefore, fuel pressure and

fuel quality are critical on all K-Jet and K-Jet derivative systems.

Special thanks to the people who helped us research these fuel injection articles: Mark Blair, Dre Brungardt, Tom Caterina, Ben Davis, James Demas, Andy Demrovsky, Merry Ann Edwards, Eric Von Gunten, Jeff Hislop, Steve Loudon, Jeff Melchiorre, Dick Mitchell, Fred Muder, Doug Paquin, Andy Pegues, John Savarda, John Sayword, John Spaminato, John Steiner, and Gary Strnad.

—By Dan Marinucci





# 1

It doesn't take much dirt or rust to clog up or partially clog the fine metering ports inside the fuel distributor. When a dirty fuel distributor weakens a cylinder, swapping injectors from cylinder to cylinder won't improve the weak one.



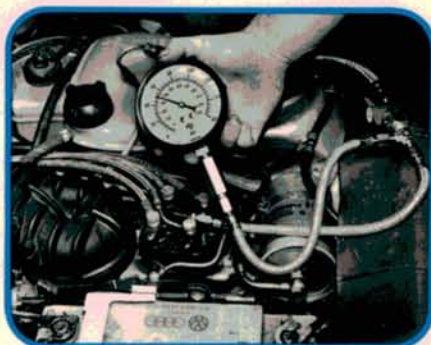
# 2

Don't be afraid to slice open a fuel filter and show evidence of fuel contamination to the customer. Often, the only permanent cure for fuel contamination is a new fuel tank, tank pickup, and/or more-frequent filter changes. If you use fuel-cleaning additives, use alcohol-free ones.



# 3

This is the result of too much blow-by and too little maintenance. During cold weather, crankcase condensation and/or outside moisture can freeze on and jam up the air flow sensor plate. Spray off the plate with spray cleaner. Then check that the intake air preheat system is working properly.



# 4

If you try to diagnose a K-Jet system without hooking up a pressure gauge and three-way valve, you're crazy. Unless you test the system's pressures—control pressure, primary pressure, and rest pressure, you are lost, lost, lost! However, some people still try!



# 5

Whenever you repair or service a K-Jet system, be super-conscious of dirt, particularly around the fuel distributor. Always flush away dirt with a spray cleaner before you crack open any fuel distributor fittings. And take extra care when you're changing fuel filters or fuel tank pickups too!



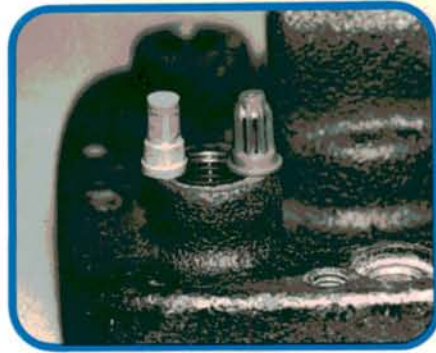
# 6

A partially clogged control circuit causes a rich condition. Did the fuel pump test good? Is the fuel filter fresh? If so, then route a hose from the centermost distributor fitting into a container. Run the pump for one minute. A clean control circuit will flow at least 5.3 ounces of fuel.



**7**

To isolate a bad injector from a bad fuel distributor, check injector volume—or engine performance. Then swap the suspect injector to an adjacent fuel line. Repeat the volume or performance test. If the problem follows the injector to the adjacent fuel line or engine cylinder, the injector's bad.

**8**

Suppose you swap injectors from strong cylinder to weak cylinder and there's no improvement. Some guys prefer to remove these outlet screens from the fuel distributor ports and then retest the weak cylinder. Sometimes, cleaning or discarding the screen will correct the problem.

**9**

To do a quickie opening-pressure test, let all the injectors hang free. Install your pressure gauge in place of one injector. Energize the fuel pump and move the air flow sensor plate. The moment the injectors squirt, note the gauge reading. Injector with the lowest opening pressure will spray first.

**10**

If you've found rust elsewhere in the system, take a moment to inspect these ports in the warm-up regulator (control pressure regulator). If you find rust in here, at least notify the customer. That contaminated control pressure regulator may live for some time—or it may fail next week.

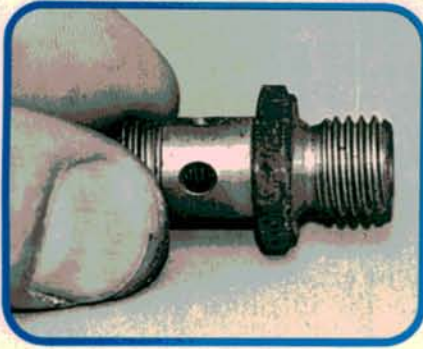
**11**

Tiny o-ring on the inner end of the primary pressure regulator may be out of sight and out of mind. But a damaged o-ring will leak off rest pressure and cause hard hot starts. If you service this regulator, don't lose those tiny shims that sit inside the regulator fitting.

**12**

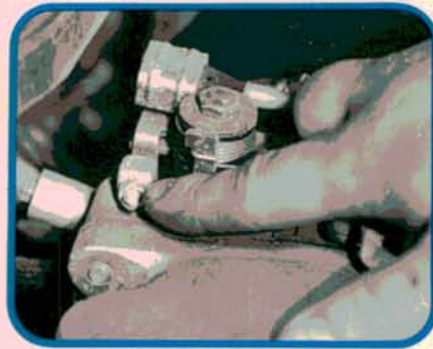
Wondering where the rest pressure went? When this type of accumulator leaks rest pressure, the fuel drains back into the tank. Remove this hose. If fuel runs out of this nipple, replace the accumulator. Sometimes, a bad accumulator will suddenly make the pump begin moaning a low-pitched moan.





# 13

On K-Jet, many hard hot starts are caused by a bad fuel pump check valve. Valve's available separately. But watch out for alcohol-laden fuel too! When alcohol is causing a hot no start or hard start, a short cool-down will often make the car start right up. When in doubt, sample the fuel.



# 14

This is NOT the idle speed screw, it's the throttle stop screw! It's often factory-painted so you can tell if it's been disturbed. If you pinch off the auxiliary air hose and the engine still won't idle down, then some joker probably tried to set the idle by cranking in this screw.



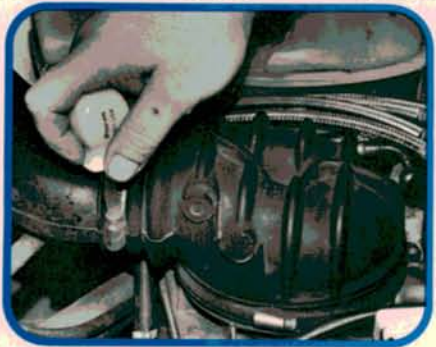
# 15

Shining a light through a suspect auxiliary air valve can be impractical and inconclusive. When in doubt, disconnect the suction side air valve-to-engine hose and squeeze it. If you can regulate the air flow well enough with your fingers to restore fast idle, the auxiliary air valve's bad.



# 16

Many shops don't wait for vacuum leaks to occur at the injector o-rings and/or insulators. They replace the entire set as part of the car's maintenance program! Some techs lube these parts with anti-seize because it holds up better than grease does. No sense fighting the same injector twice.



# 17

If the engine backfires violently enough to blow this boot off the air flow sensor, the engine won't start. You guessed it—no air flow through the sensor, no fuel to the injectors! To prevent a replay of the no start, find and fix the cause of the backfire before you return the car.



# 18

K-Jetronic responds to air leaks between the air flow sensor and intake manifold the same way its cousin L-Jetronic does. It hesitates, stumbles, and misfires! Watch for small cracks on these air flow sensor boots—especially on the older, high-mileage systems.