

# K-Jetricks

PART TWO



K-Jetronic can look deceptively simple. Some of us remember the days when we looked at this system and thought "Servicing this will be a breeze—the system's almost entirely mechanical!"

But we didn't anticipate the ravages of fuel contamination. We also didn't know that the system would evolve into electronically controlled versions such as K-Lambda and KE. But electronically controlled or not, fuel contamination is the number one problem-starter in any K-Jet/CIS system. (Most of the tips described here apply to all versions.)

Never attempt to separate the two halves of a fuel distributor for cleaning. However, you may be able to save a fuel distributor by cleaning the control circuit

and control plunger bore. When you opt to remove a control plunger, always catch it in a clean shop towel. Note which end of it pointed up.

When you spray out the plunger bore and its dampening restrictor with carb cleaner, blow out the cleaner residue with compressed air. Then dip the plunger in clean fuel and slide it back into its bore. When you tilt the fuel distributor, the plunger should slide up and down on its own weight. If it doesn't, replace the fuel distributor.

If you use baby bottles to measure injector flow, respect and heed the fire potential here. After all, you're spraying and collecting raw fuel.

—By Dan Marinucci





# 1

The most cost-effective tools for K-Jet injector volume tests are plain old baby bottles. Use one bottle per injector. Turn on the fuel pump, move the air flow sensor plate, and collect a few ounces of fuel. Line the bottles up on a level surface. The lowest fuel level pinpoints the leanest cylinder.



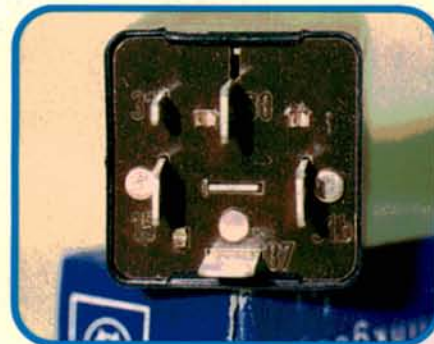
# 2

Deteriorated injector lines aren't commonplace. But the inside of the line can "flake" and restrict fuel flow. If you've got misfiring and low injector volume in one cylinder, try swapping the line for a line from a known-good cylinder. If swapping lines corrects the miss, replace the bad line.



# 3

Would you replace just one bad spark plug instead of replacing the entire set? No? Then apply the same reasoning to injectors. Explain to customers that replacing just one injector—especially on higher-mileage engines—is false economy. Replacing all the injectors is cheap insurance.



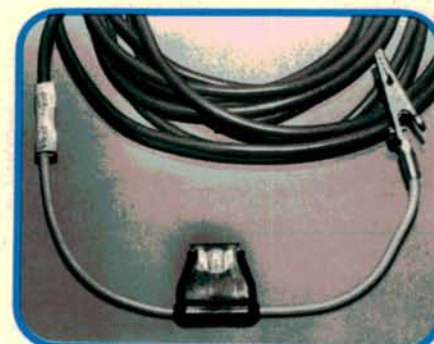
# 4

In order to run the fuel pump during your K-Jet tests, you can by-pass the fuel pump relay. See how the middle two terminals (30 and 87) form an inverted T? After you pull out the relay, just remember to connect your jumper wire across the two female terminals that form the T.



# 5

Checking injector flow/volume on a problem car? Remember to take three separate readings at three different sensor plate positions. Check it with the sensor plate barely open, with it halfway open, and with it wide open. At each of these plate positions, the injector's volumes should be equal.



# 6

During testing, some guys prefer to run the fuel pump directly off the battery. To make a good jumper, splice a fuseholder and 10-amp fuse onto some 12-gauge wire. Be sure you have an alligator clip that fits the fuel pump terminal and another one that fits the battery terminal.





# 7

When the fuel pump fuse keeps blowing or the pump sounds draggy or noisy, check the pump's current draw. A typical K-Jet pump draws about 8 amps. Remember that the brown wire connected to the thicker-diameter terminal is the ground wire.



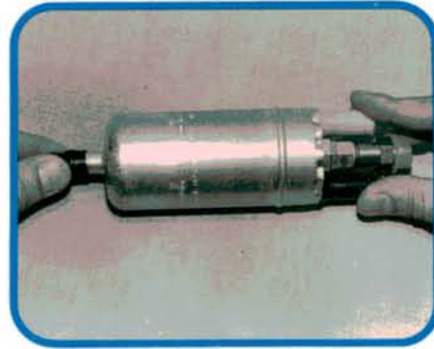
# 8

When you're troubleshooting a low power and/or fuel starvation complaint, don't overlook a cracked fuel pump inlet hose. Symptoms? Listen for a howling pump. Look for bubbly fuel when you do the fuel pump volume test. A collapsed in-tank fuel strainer can also make the fuel pump sound noisy.



# 9

It's bitter cold, the car won't start, and you notice the pump fuse is blown. Maybe there's water in the fuel and the pump froze. Replace the fuse and gently warm the pump with a hair dryer or a dryer-like electric heat gun such as this one. Don't use an open flame here!



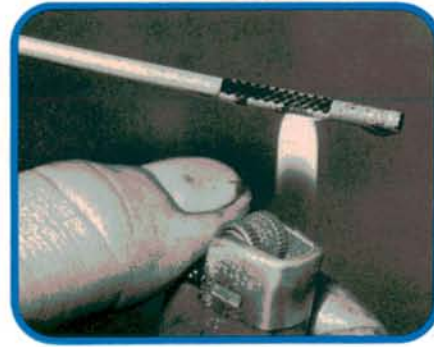
# 10

Whatever you do, never dump that fluid out of a new or remanufactured pump. Remember that fuel cools the pump. That funny fluid you find inside the pump both keeps the pump primed and keeps it cool during start-up. Running the pump dry can kill the pump or shorten the life of the pump.



# 11

Most of the problems you encounter on K-Jet fuel systems are *originally* caused by damp and/or dirty fuel. You really can't change fuel filters too often on this system—but try convincing the customer of that! When you replace a filter, it can't hurt to log the mileage right on the filter can.



# 12

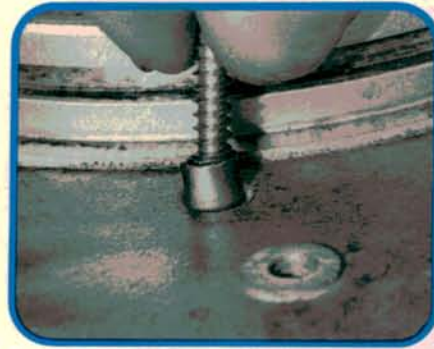
Blazing dipsticks? This is an old trick—but an effective one. If the customer balks at your suggestion to change the fuel-diluted oil and filter, pull the dipstick and put a match to it for him. If the crankcase is fuel-diluted, there's no way you'll get an accurate CO adjustment on the system!





# 13

One sensitivity K-Jet shares with its cousin L-Jet is oil temperature. Preferred temperature for an accurate mixture adjustment is about 80 degrees C (175 degrees F). If the oil temperature isn't right or the oil's diluted with fuel, that CO adjustment will come back to haunt you!



# 14

When you have to remove a K-Jet mixture concealment plug, carefully—and very gently—center punch the plug. Then slowly drill the plug without drilling through it. Thread a self-tapping screw into the plug and use a dent puller or locking pliers to pull the screw and the plug out.



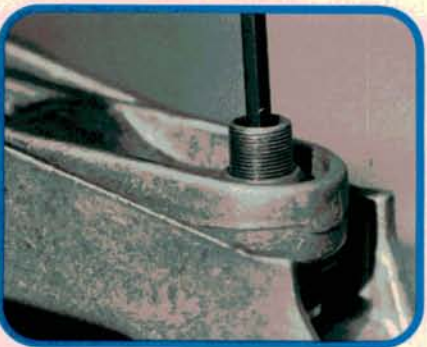
# 15

If you're removing this anti-tampering plug, we recommend using a drill bit no larger than about  $\frac{3}{16}$  (0.140 inch/3.5 mm). To be safe, drill the plug no deeper than about  $\frac{1}{16}$  (0.187 inch/4.7 mm). To keep dirt out of the air flow housing, install a new plug after you've adjusted the CO.



# 16

The K-Jet mixture adjustment is so sensitive that it'll change when you put your 3 mm wrench into the adjuster screw! Because it's so sensitive, we prefer a lighter-weight tool for this job. Remember that changing the idle CO on this system automatically changes mixture at all engine speeds!



# 17

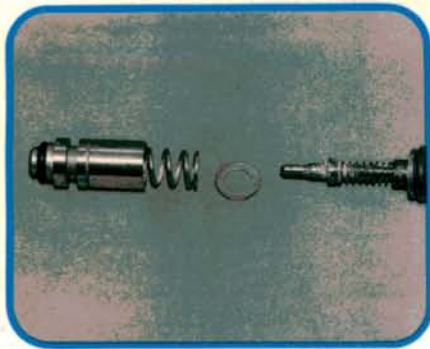
See how fine the threads on the mixture adjustment screw are? If someone forgot to reinstall the concealment plug, these threads may be badly rusted. If the adjustment screw won't budge, soak it with penetrating oil for as long as practically possible. Don't force this screw!



# 18

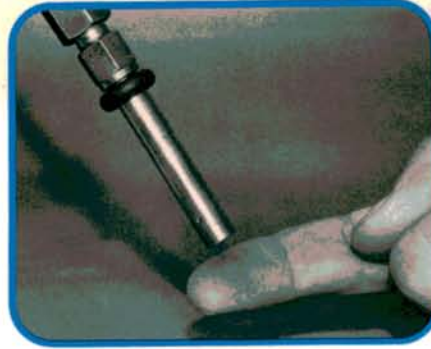
Suppose you have to service the primary pressure regulator but the regulator won't cooperate. Grab a clean, untorn shop towel and hold it over the regulator opening. Have your assistant turn on the fuel pump for just a second or two. Fuel pressure will pop the regulator valve out of its bore.





# 19

This is a typical later-model K-Jet primary pressure regulator assembly. Be careful with it, because there're lots more little parts here than there are in the earlier regulator. Changing that washer-like shim changes the primary system pressure. A thicker shim increases the pressure.



# 20

The injection system seems to be flooding the engine? Shut the engine off and pull the injectors. If the injectors are spraying fuel when the air flow sensor plate is at rest, then the control circuit is restricted or the control plunger's sticking in its bore.



# 21

When you slowly move the sensor plate up to full travel, you should feel steady, even resistance. If you feel uneven resistance, move it to full travel again and release it. If the plate doesn't freely drop down to rest position, its lever is binding inside the air flow sensor housing.



# 22

If you feel uneven resistance when you move the air flow sensor plate but the plate drops freely to its rest position, then the control plunger is sticking. A blast of compressed air may free the plunger. You can also dislodge it by rapping the fuel distributor against a pair of wood blocks.



# 23

Contributor Dré Brungardt uses his cutaway to show the restrictor above the control plunger. If this clogs up, the engine will flood out. To clean it out, remove the fuel distributor, remove the control plunger, and blow carb cleaner and shop air into the centermost fuel distributor fitting.



# 24

Violent engine backfiring can bend this air flow sensor plate. If that engine's got a whole list of driveability problems at the same time, check for a bent or uncentered sensor plate. Don't invite a comeback. Pin-point and correct the cause of the backfiring before you return the car.