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08-11-2012, 11:29 AM

**Thread Starter** 

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#### dudeperson3 BenzWorld Veteran



Date registered: Jun 2009 Vehicle: 1992 190E 2.3 8v w/ '87 5-speed and 3.27 rear, 1966 Shelby Cobra 427 S/C

Location: NYC Metro Area. Posts: 702 Mentioned: 0 Post(s) Quoted: 1 Post(s)

(Thread Starter)

K-Jetronic Troubleshooting - From a couple of specialists

Long story short, I had a long dinner with a couple of "specialists". One guy helped engineer the 190E, one guy worked on D, K, KE-Jetronics at Bosch, and they other guy (my father) was a technician at VW and taught the "Jetronic Course". I highly trust and respect this trio and they're all friends!

I had a list of my own troubleshooting techniques I've gotten through: this forum, other forums, manuals, personal experience, and some guy that helped me out when my car overheated and later wouldn't start in the middle of NYC. The "trio of specialists" helped me improve, refine, and verify my list of troubleshooting techniques for the K/KE-Jetronic system that we have on our 190Es. There was a lot I was not aware of and there are a number of things that I may not be able to help with...beyond this list. Since these apply to the whole system, I'm assuming it applies to all of the gasoline 190Es: 1.8, 2.0 (or was that only carbs?), 2.3, 2.6, the 16 valves, and the 3.2 AMG. The trio helped me put into order what would be most-likely-toleast-likely, but they are all possibilities.

# If the Engine turns but won't start

- 1: No fuel pressure, or less than 50 PSI. Test the fuel pump (all 190s) and pre-pump (of those 190s that have two pumps) and do a fuel pressure and volume test.
- 2: Jammed and/or sticking airflow sensor. Remove the air cleaner and loosen the center line on fuel distributor. This will relieve the control pressure. Press down on the center of the plate and you should feel no resistance or binding.
- 3: Defective cold start injector. If the injector does not function, the air-fuel ratio will be lean, preventing easy start up...tho, it may still start.
- 4: Shorted or defective thermo time switch. The cold start injector will not work if the thermo time switch is defective. Check this in the event that your cold start injector does not function before replacing. (I personally was not aware of this,

nor do I know where it is, but I trust them)

- 5: Control plunger sticking. Remove the fuel distributor from the airflow sensor and check to see if it moves freely. (I can't imagine this actually happening)
- 6: Restricted injectors. For this to be the cause, they would have to be severely restricted, which is why it is listed last. Do an injector flow test and ensure that the delivery is near equal.

### Hot starting difficulty

- 1: Loss of rest pressure. Do a pressure test and focus on the rest pressure. If it does not pass, check for a defective fuel pump check
- valve, defective (or clogged) fuel distributor, faulty system pressure regulator, and leaking cold start injector.
- 2: Airflow sensor adjusted incorrectly. Check height, centering and for binding. Remove the boot and loosen the center line on fuel distributor to relieve control pressure.
- 3: Sticking or binding of the control plunger. Remove the fuel distributor and ensure that the control plunger moves freely.
- 4: Injectors leaking. Remove the injectors from the intake manifold and with the ignition key on and engine off, press on the center plate to pressurize the system. Inspect and replace any injector that is leaking.
- 5: Cold start injector leaking. Same test as above.
- 6: Shorted thermo time switch. Cold start injector is dependent of this component.
- 7: Incorrect control pressure. Do a pressure test and verify that the warm control pressure is within spec.

#### Rough idle (cold)

- 1: Cold control pressure incorrect. The movement of the control plunger will be limited if the cold control pressure is too high. This in turn will limit the amount of fuel able to be delivered through the injectors. The result will be a lean ratio and will cause rough idle.
- 2: Auxillary air valve defective. If defective and not opening, idle cannot rise and results in rough idle. (I think I have this issue in my 2.3)
- 3: Airflow sensor adjusted improperly or binding. If the movement is not smooth, it will result in air-fuel ratio errors. If you've never messed with it, and no one else has, then just check for binding or extra resistance (mechanical resistance).
- 4: Leaking cold start injector. If the cold start injector is leaking, the engine will be over-fueled even if cold. If the cold start injector is leaking, the idle will get worse as the engine temperature increases.

5: Injectors have an unequal flow or spray pattern. Do an injector flow test and replace any that do not deliver the correct amount of fuel or have a poor spray pattern. They are \$30-40 on <a href="mailto:autohausaz.com">autohausaz.com</a>

#### Runs rough (warm)

- 1: Warm control pressure incorrect. Incorrect warm control pressure that is too high or low will cause an incorrect air-fuel ratio, thus resulting in a rough idle.
- 2: Airflow sensor adjusted improperly or binding. If the movement is not smooth, it will result in air-fuel ratio errors. Check for centering and correct rest height. (again, its more likely that its binding if no one has ever messed with it)
- 3: Leaking cold start valve. Again, will result in over-fueling the engine, resulting in a rough idle.
- 4: Injectors have an unequal flow or spray pattern. Do an injector flow test and replace any that do not deliver the correct amount of fuel or have a poor spray pattern.

# Stalls after starting (warm)

- 1: Warm control pressure. If the warm control pressure is too high, the air-fuel ratio will be lean.
- 2: System pressure incorrect. If too high or low, the air-fuel ratio will be incorrect.

# Idle speed high

- 1: Check auxiliary air valve. Ensure that it is closing. (Not quiet sure how to do that)
- 2: Vacuum leaks. Self explanatory, I hope. I'd start with the Air Flow meter and the boot below it, then all the connections on the intake manifold, and then the manifold/head connection. Also, all vacuum lines.

### **Backfire in intake**

- 1: Check that CO adjustment is correct. If incorrect, backfire will result if started and under a load. (I'm not sure how to do that)
- 2: Boot between airflow sensor and throttle defective/leaking. Will result in a lean mixture due to extra air. Our cars are old, its rubber. It might have cracked.
- 3: Vacuum leaks. Self explanatory.

# **Misfires**

- 1: Ignition. Inspect the cap, rotors, wires, and plugs.
- 2: Fuel delivery inadequate. Check for binding of airflow sensor, control plunger, incorrect control or system pressure and restricted injectors.
- 3: Injectors. Unequal delivery or poor spray pattern. Do a test and

replace any that are defective. (\$30-40 on autohausaz.com)

#### Poor power

- 1: Control pressure too high. If the control pressure is too high, the control plungers travel will be limited, resulting in a lean running engine.
- 2: Check ignition components. Verify that the spark plugs, wires, cap and rotor are not worn, dirty, or defective.
- 3: Injectors restricted. Do a test for delivery. If an injector is restricted, fuel delivery will be limited, thus power will suffer.

# Sag or stumble when accelerating

- 1: Airflow sensor plate binding or sticking. If binding or sticking, fuel flow will be limited.
- 2: Control plunger binding or sticking. If binding or sticking, fuel flow will be limited.
- 3: System pressure or warm control pressure incorrect. If too high, the travel of the plunger will be limited.
- 4: Injector flow unequal. Self explanatory.

# **Fuel consumption high**

- 1: Air-fuel ratio incorrect
- 2: Injectors leaking
- 3: Cold start injector leaking

I got most of the information from our forum, other 190 forums, reading troubleshooting threads, books, manuals, and personal experience. I had my "trio of specialists" confirm everything. If you guys have any questions about the Jetronic system I'll do my best to answer them.

DP, jacques GuÃ@ho, Jacques405 and 1 others like this.

1992 190E 2.3 8v (converted to 5-speed) 27,045 miles as of 9/31/08 183,000 miles as of 2/1/15

1965 Shelby Cobra 427S/C (351W engine) 15.5k miles as of 2/1/15