

'83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by bg993 - 11 Nov 2013 06:44

OK Folks,

Needs a little help/direction with next steps in the trouble shooting process.

I have been building an '83 944 SP1 car for a while, and it is pretty much complete, I just need to chase down this last (hopefully) issue. The car is an '83 shell with an '86 924S block. Here are the symptoms:

- Car starts and runs fine in the garage, revs smoothly to redline.
- No cold start apparatus, cold air valve and associated plumbing has been removed/blocked off.
- Once I get out on the track, runs well at lower RPM, but once it reaches 4200 rpm, it starts to stumble and cough. (within the first hot lap) Bring it back in, and now it won't rev past the 4200 without stumbling, coughing and spitting. If you hold the throttle open it will try to rev, the spit stumble and die.

The car was not running when I got it, and I have gone through the motor, and most everything else:

- New fuel pump and filter (filter has been changed once since it has been running there was definitely still crud in the tank).
- Fuel Pressure tests good at the rail
- Reference sensors are both new, and the reference sensor wiring harness has been replaced all the way back to the ECU connector.
- ECU has been swapped
- TPS is new and set properly
- Air Flow Meter does have a slight "line" at the contact point, adjusted the arm slightly, but it does not appear to have worn through the conductive material.
- O2 Sensor is not connected
- Injectors did need to be "smacked" when I first started the car up.
- Most of the rest of the engine harness is original, I am going to rebuild it over the winter. (Hoping to nail down the problem before I take it out).

I can swap parts with the best of them, I am hoping you (all) can point out some steps or areas I have not yet addressed. The challenging thing is you make a couple of changes/tweaks, and go out to test, but the problem remains. So, back to the garage, try something else (and then wait till you can get back to the track to test.)

Appreciate the help and thoughts in advance!

Bill

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Re: '83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by 944Racer72 - 11 Nov 2013 09:13

I'd look to the air flow meter first. I had that exact symptom. Changing air flow meters (to my spare) changed the characteristics but it didn't go away. Finally, I swapped in a known good air flow meter and it went away completely.

Easy to swap it out if you have a spare.

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Re: '83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by Big Dog - 11 Nov 2013 10:09

Check the cap and rotor (I am sure you did this already). I have seen this, generally starting at higher revs, with broken valve springs that allow valves to "float" with the problem getting worse and starting at lower revs.

There are two valve springs per valve and the inner springs can break and cause the issue.

Since that is much more trouble to deal with, check the MAF first, as Steve suggests.

Big Dog

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Re: '83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by RacerX - 12 Nov 2013 00:16

Try checking your grounds. I had a lose one and mine had similar symptoms.

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Re: '83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by bg993 - 12 Nov 2013 10:25

Hey guys,

Thanks for the input so far! I have a couple of things to try.

I'll let you know what I find, and if it solves the problem.

Bill

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Re: '83 944 SP1 Build Trouble Shooting (Kind of Long)

Posted by AgRacer - 12 Nov 2013 20:10

You said you changed/checked the fuel pump/filter but did you inspect/replace the "sock" that's actually inside the fuel tank?

Also, I didn't see mentioned the Fuel Pressure Regulator. Sounds like it could be that after a certain vacuum level it could start failing an wont "reset" again until after the engine is shut off. You would need to check the fuel pressure both before and after the fault.

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