

Engine Problems (misfire?)

Posted by BritRacer - 03 Dec 2014 20:56

To avoid taking over Kerry's AFM Problem topic, I thought I would start a fresh one for my misfire (?) issue.

At the West coast champs, I had problem with my engine hesitating (even from idle in the paddock) but worse than that after 10mins of racing it would lose power and become very flat under load.

Below is a video of the engine sound when the power loss occurred.

As you can hear it sounds like a misfire. We did a quick compression check at the track and all cylinders were right around 155 PSI (is this in the expected range for a '88 engine?). We also pulled the plugs and found the #3 plug was very black, whilst the rest seemed normal. This lead us to believe it could be the problem cylinder. We did a quick spark check of all plugs and it looked like all have a strong spark.

At the track we changed out the DME, rotor, cap, spark leads, spark plugs, as well as fixed the connector on the #3 injector (which lost the retaining clip).

Obviously we never resolved the issue. However when I was taking the car of the trailer at home I heard a loud ticking noise, which we could not hear whilst in the busy paddock.

Here is a recording of the ticking I can here. It is much louder just as the engine starts and gets quieter within a 10 seconds. Could it be a bad lifter, which is compressing and gets quieter as oil pressure builds and pumps it up? My thinking is this is something that could get worse again when the engine heats up and the oil gets thinner?

Other suggestions at the track were a broken valve spring, vacuum leak and broken AFM.

My next steps are to do vacuum pressure testing, AFM voltage test, injector ohm check (noid light too, if I can get hold of one), leak down test.

If all these check out, I hope my plan to pull the head and have it and the injectors rebuilt.

Any ideas are greatly appreciated.

Thanks

Jason

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Re: Engine Problems (misfire?)

Posted by joeblow - 21 Dec 2014 17:28

A quick track test would be to move that injector to another location. If the problem follows the injector well you found the issue. I think it is oil fouled though. Could be valve stem seal, piston ring, cracked block/head.

Start with the injector though. Could be a bad plug lead too which you could swap with another one.

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Re: Engine Problems (misfire?)

Posted by BritRacer - 21 Dec 2014 17:35

Thanks Joe.

I was wavering between the 2, but it was not sticky to touch so went the other way but maybe that is just because the car has not been run awhile. Don't think it is the leads as we changed out those at the track and still saw the issue. I am leaning more to valve stem seal.

I plan to do a leak down test after Christmas, which may help in the diagnosis. There is not froth in the water which I hope rules out the cracked head/gasket.

Thanks

Jason

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Re: Engine Problems (misfire?)

Posted by joeblow - 22 Dec 2014 08:21

It may not be the leads but it also could be the distributor cap. It can be cracked or fouled on one post.

I still think it is oil though.

I have seen cracked heads leak ONLY oil and not pass water. Though it is pretty rare. As a side note. Does the injector itself look dirty? If it is leaking (not closing all the way) it will be very black as well. Of course a leaking valve stem seal will get the injector dirty too. If you pull the intake manifold and see a oily sooty intake port on the cylinder you know it is not the rings too.

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Re: Engine Problems (misfire?)

Posted by BritRacer - 23 Dec 2014 22:11

If I find it I be the rings, does anyone have recommendations for replacements? I have read in a few places neither the Goetze nor the Porsche genuine rings are guaranteed to meet the gap requirements on high mileage engines. It looks like Lindsey do a set designed to be filed down to the right gap but are these allowed within the rules. What do people normally do in this situation?

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Re: Engine Problems (misfire?)

Posted by tocomeau - 24 Dec 2014 09:22

I have no prob with Lindsey piston rings. "aftermarket parts...no change in performance or weight may be used..." PARAGraph 2.1 of the rules. Using these rings can actually help keep some "loose" blocks in racing service.