

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 BritRacer - 23 May 2015 15:54

The leak down test revealed 1,2,4 all around 3% but #3 is losing 50% through the intake valve. So I am going to have to take the head off and see why.

Could also explain all the carbon in the intake, if the intake is open all the time and the exhaust gases are going escaping into the intake.

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Re: Engine Problems (misfire?)

Posted by joeblow - 23 May 2015 21:31

Bent valve, dropped valve guide, dropped valve seat or broken valve. All not good. BUT...before you pull the head though, pull the cam housing only. Inspect that valve compared to the rest from the top. if it is very much higher than the rest it is likely bent or one of the other above scenarios, If it looks OK then try this:

Set the #3 cylinder at BDC for that piston (piston down). Spray carb cleaner into the intake port for cylinder #3 until it pools on the closed valve, then with a flat punch and a hammer tap the top of the valve stem to momentarily open the valve several times until the carb cleaner is gone into the cylinder. With your leakdown tester compress Cylinder #3 to whatever the top pressure is for your compressor. Spray carb cleaner in the intake port again and then cover the port with a rag. Then again with a flat

punch and a hammer, tap the top of the valve stem. It will make a big bang as the compression escapes the cylinder. Do this several times. Then check the leakdown again. Often times it is severe carbon buildup or other foreign matter that jams the valve from seating. I cant tell you how many times this has worked for me.

Good Luck!

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Re: Engine Problems (misfire?)

Posted by BritRacer - 24 May 2015 09:01

Thanks for the idea Joe, there is a lot of carbon on the valves particularly #3. I will let you know how it goes.

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Re: Engine Problems (misfire?)

Posted by BritRacer - 26 May 2015 13:22

I tried cleaning up the valves without taking over the head and the numbers definitely got better. Leak down changed to 25%, which is still too high. So I will be taking over the head later this week.

Thanks again Joe!

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Re: Engine Problems (misfire?)

Posted by BritRacer - 21 Aug 2015 08:07

So just to give an update.

After pulling the whole thing apart I found that the head gasket around the number 3 cylinder has blown. I am in the process of cleaning up all the messing and checking the head for warpage etc. I will be back next year for sure!!

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