

RANDOM MISFIRE

The Quarterly E-Newsletter for the Automotive Repair Industry

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DPFE SETTING A P0340?

As many of us know, Ford DPFE sensors are a common failure that quite often sets a P0401 and command on the MIL. But what about a DPFE setting a P0340 CMP code? Or even disabling the misfire monitor?

In some applications, the DPFE shares a ground wire with the CMP sensor. The DPFE can fail and cause interference in the CMP signal to the PCM.

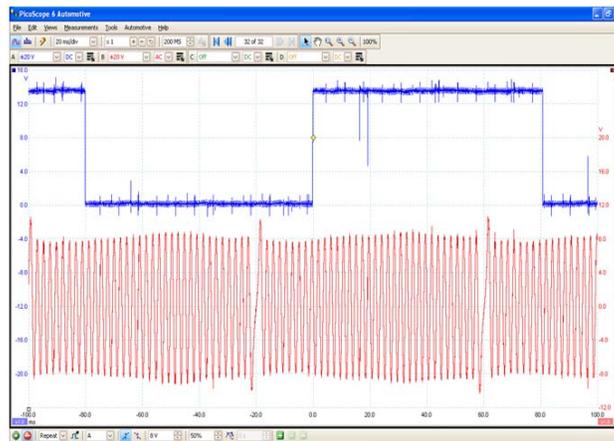
If this interference is present the PCM gets confused. Do you remember how the CMP signal is interpreted by the PCM? The PCM is looking for a positive or negative transition of voltage, or an on/off signal, that corresponds with the CKP signal.

As you can see in this scope capture, there is interference present on the CMP signal wire. This interference is seen as additional on/off signals and does not agree with what the PCM expects. Therefore a P0340 and the disabling of the misfire monitor because the PCM does

not know which cylinder is where. Sequential injection is also disrupted.

The test is simple, disconnect the DPFE and see if the interference goes away.

(Note: the aluminum bodied DPFE's cause this issue more than the plastic ones)



THANKS AGAIN TO THE FOLKS AT LINDER TECHNICAL SERVICES

Thanks again to the Linder crew for putting on another great training session in September. Top trainers, top topics and top end techs playing around after class... how can you get any better than that?

If you have never attended a Linder Conference you don't know what you are missing!

Hey Linder folk... keep up the great work. And I'm sure we'll all see you again next year!



www.lindertech.com

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Points of interest:

- The next big Driveability Guys training push is coming in '09. We hope to see you at an event.
- TPMS is the law now. Every car in your shop doesn't have it... YET! Are you ready?
- We are looking for feedback on our site, training, and software. Email us your honest opinion.

DON'T LET THAT GAS ANALYZER COLLECT DUST. BE CREATIVE AND PUT IT TO USE.

Since the end of IM-240 emissions testing in Illinois, gas analyzers have been collecting dust on shelves all around Chicago and its surrounding suburban areas. I find this fact very confusing. There are many ways an exhaust gas analyzer can be used to diagnose problems other than tail pipe emissions or driveability issues.

This example was a 1999 Ford Taurus with a MIL illuminated and a P0442 stored in the PCM. The vehicle failed the EVAP test in the IDS. The next step was to smoke the system, but no smoke could be seen. Smoke machines are great tools, but in some circumstances (usually due to system design) they don't always work well.

To this point, a leak has been verified but the method for finding a leak is failing. What else could be used to find a leak? Time to get out the next tool in your arsenal: the gas analyzer.



Waving the analyzer's probe around EVAP components that don't seal can result in evaporating hydrocarbons being drawn into the analyzer's probe.



In this case the HC reading on the analyzer climbed to 2550 ppm when the probe was waved around the gas cap.

The Taurus in question had cracks forming around the rim of the fuel filler neck. Smoke didn't lead me here... plenty of HC did.



My point is that our arsenal of tools is vast. Some of the tools in these arsenals were purchased for a specific purpose that may no longer be a current issue. That does not mean that the tool is antiquated. Be creative and take a minute to find a use for what you already have.

Hey! What about slightly leaking fuel pressure regulator diaphragms?

IT HAS BEEN A FUN RUN... BUT "DOT" SHIRTS ARE DONE!



For those of you who don't know, DOT (or Disciples of Thornton) started out as a joke. It grew into T-Shirts and a variety of individuals jumped

on the band wagon. It got a lot of laughs and caused a certain individual's skin pigment to turn quite red on at

least one occasion.

Out of respect for the individual the shirts were intended to honor, The Driveability Guys have decided to discontinue production of the shirts.

We only have a few left, so put in your order now. First come... First serve. When they are gone they are gone!

Call Bob at 630-853-4454 to get yours!

Thanks for everything John!



The Driveability Guys want you to help yourself... and everyone.

The Driveability Guys are spoiled because we have so many top trainers in close proximity to our homes. We know the trainers in the area, good and bad, and don't hesitate to attend the classes of the good ones. In the same respect, we have no idea what is available in your area. We have sites such as iATN, D-Tips, and OE's to gather technical information, but nothing to help techs looking to advance themselves through training. Because of this issue, The Driveability Guys have started a new FREE forum to address this issue... A venue to help others research training opportunities. Please take a moment to visit the forum and read about training that is available to you. If you have a comment about a trainer please post it. Let others know about your experience.

NOTE: Negative comments will be erased by the forum administrator. Let's let positive comments speak for themselves... and the trainers they represent!

As this resource grows, researching training choices before spending valuable training dollars will be much easier. Please take a few minutes to contribute and help everyone make informed training choices in your area and nationwide.

THE DRIVEABILITY GUY'S Forums

Categories: All

<p>DG News General News and comments from The Driveability Guys. Please feel free to respond to this category, but please leave the new messages to us. Discussions: 2</p>
<p>Trainer / Class Reviews Research for yourself, or help others, find which trainers/classes might best fit your training dollar regardless of where you live. POSITIVE POSTS ONLY! PLEASE READ "Posting Guidelines" Discussions: 7</p>
<p>Upcoming Training Events Post any local or national training events here to help others in your area continue their education. Please include a city, state, and date with you post. Links to more info would be appreciated. Discussions: 2</p>

To access the Trainer / Class Review forum...

Go to: WWW.DRIVEABILITYGUYS.COM

Click on the "Enter Here" to access the forums.

***NEW!* DRIVEABILITY GUYS Forums!**
Enter Here!

Read the "Posting Guidelines" - don't worry... they are pretty short.

Click on

Enter Here

Thank you for your contribution.

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SOMEONE SHOULDN'T HAVE BEEN WORKING ON THIS CAR, ANY GUESSES WHAT WAS MISSED?

This 1996 Mazda 626 came into my shop because the customer decided to replace their own head gasket. When they realized they had gotten in over their head they brought it to me. I installed the timing belt correctly, which they had left off the camshaft, and cranked the vehicle... no start.

Since this day was one of the few where I had a couple of hours to play, I started scoping things to see what I could see.

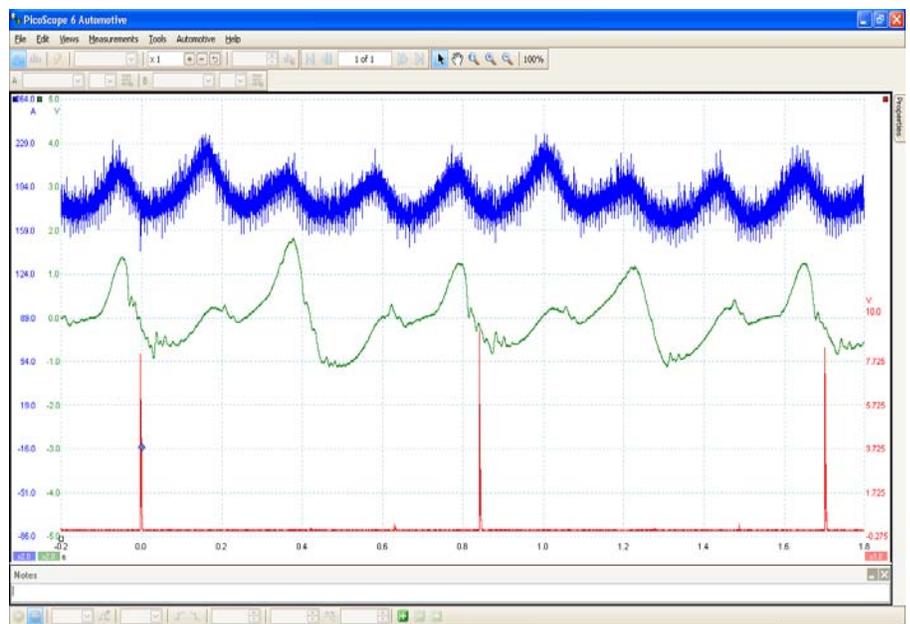
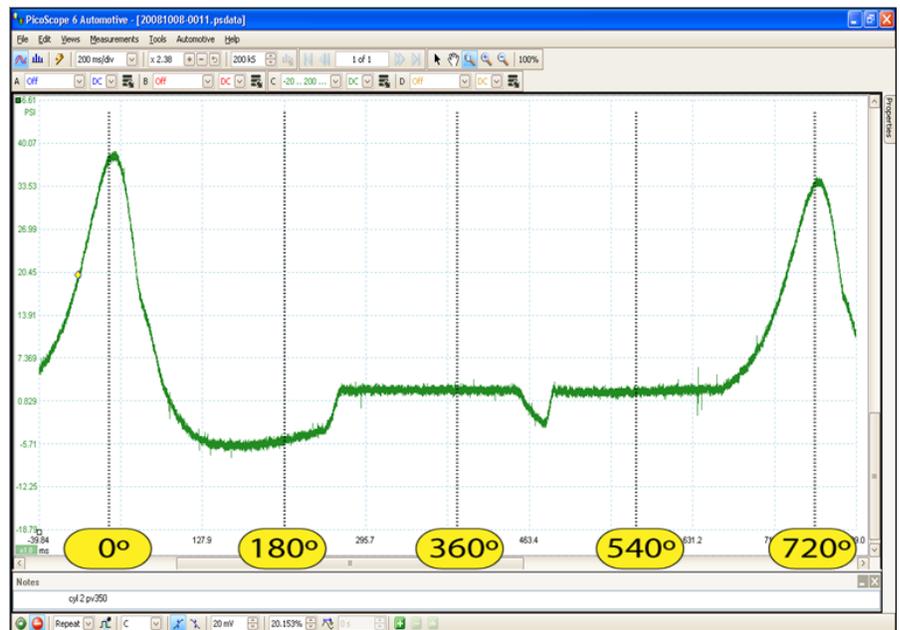
Here is a little of what I saw:

Scope capture 1—cranking compression with a Fluke PV350. All 4 cylinders look very similar.

Scope capture 2—relative compression is the top trace. My first look is the green trace... attached to the *radi-ator filler neck*. And the red is my sync on #1 plug wire.

I know this isn't a lot of info, so to be fair I must tell you:

The valves are not bent and the cam timing is correct.



Want to take a stab? Email your thoughts to scott@driveabilityguys.com and wait for the answers in the next issue of RANDOM MISFIRE!