



The Rio Grande Redline



BMW CCA New Mexico Chapter

www.nmbmwcca.org

When the “Service Engine Soon” Light Is Not Right!

by Christo Tinkov

Taken from: Boston Bimmer • November 2008, page 14

Imagine every time you sneezed or hiccupped, you had to go see the doctor. It cost you \$120 or so, a few hours of lost productivity, and probably a lot of worries (good thing the diagnosis was good and the doctor said you were OK!). This, for the most part, is how the “Service Engine Light” works in your BMW, except you go to see the dealer instead of the doctor.

I first saw the “Service Engine Light” on my 2001 325i just a day or two after I put the first modification in it – an after-market cold-air intake. The warning looked ominous to me and it freaked me out. Did I just screw up my engine? And how do I “service” it? I went to the dealer on the next day and they said the code that had been triggered was related to an “out of range parameter: impermissible air range”. I checked the intake again and I was convinced it had been correctly installed. I knew many other 325i’s were running it and had no issues with it. The car exhibited no drivability issues and after a few days, the light disappeared. To this day, the light still comes back every once in a while when we get the first cold weather spell each Fall and then it clears itself out. 7 years, 55 track days, as many autocross events and 140K miles on the engine later, the car is still running better than new. The “Check Engine” light is not unique to BMWs. All cars sold in the US after 1996 were required to have a diagnostic system to track emissions-related problems. This system is called OBDII (On Board Diagnostics, second generation) and it contains a set of monitored parameters with corresponding fault codes. Regardless of the vehicle you drive, you have probably seen the “Check Engine” or “Service Engine Soon” light displayed on your dashboard at least once. And similarly, your first reaction might have been to panic or get frustrated. You cannot know what the problem is without a code reader because there are literally hundreds of possible reasons for it. Sometimes the light is alerting you to the real need for a repair, but most often, it is merely indicating a simple type of problem (low coolant level, loose gas cap or oil cap, etc.). When the

“Service Engine” light came on in my wife’s 2001 Audi A4, we took it to a local shop for some other maintenance work and, thinking the quick code read would be free, I naively asked the owner to check what had triggered the light. To my dismay, they charged us \$120 to read the code and clear the light. “But it only takes two minutes to read the code, how can it be that expensive?”, I argued. They claimed they needed a \$10,000 computer to be able to read the code. While researching the triggered fault code, I found out that there is a great generic code reader, as well as a BMW-specific code reader and both can be bought for a fraction of the \$10,000 price the shop had quoted.

Mac Tools ET50 Code Reader, \$70 at AutoZone

This tool works with most, if not all, manufacturer specific codes for domestic and import cars. It is also capable of clearing all pending and current codes. This compact hand-held reader is super-light and it fits easily in the glove box. As an added benefit, it does not need batteries. It plugs into the OBDII port under the dashboard. At a recent autocross event, my 2008 Z4 M Coupe went into limp mode, which severely limits the RPMs and the speed with which you can rev up the engine. I was lucky enough to find another driver who had the Mac reader with them. (cont’d page 3)



UNDER THE HOOD

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Remember to check our web site for periodic updates: www.nmbmwcca.org

President's Message

by Jon van Arsdel
Oct 2008

Winter is here. As I write this (December), it is cold and snowy for a lot of New México. This has been a big change over a rather temperate autumn.

Tech tip #351: Are you slipping and sliding more than normal on the snow and ice? You may want to check your tire tread. Most BMW's wear performance tires, which normally don't last more than about 20,000 miles.

This past quarter, we had the Fall Tour and a membership meeting.

The Annual Karl H. Fox Memorial Fall Tour was on Sunday, October 12, 2008. The previous day (Saturday) was host to a vigorous storm system, which included wind, rain, hail, snow, and various other elements for meteorological study. We were therefore amazed and thrilled to have fifteen BMW automobiles and one BMW motorcycle come out for the tour. As the skies slowly cleared off, the fall colors were absolutely gorgeous; but the temperatures were rather cold. Therefore, the tour was not quite as convertible-friendly as had been advertised. Nonetheless, we toured Jémez Mountains and stopped for several photo opportunities (see our website). We ended with a great lunch at Gabriel's, just north of Tesuque.

For the first quarter of 2009, we have scheduled three tech sessions. Each will cover a very different set of topics.

The January 13th (Tuesday) tech session will be at Sandía BMW. Service Director Jeff Cline will be the host, along with some of his excellent technical staff. He is planning to have a couple of the new Diesel BMW's on display.

Reminder: the membership voted to move officer elections from December (2008) to January (2009). This will make the elections continue to coincide with the Sandía tech session. Please come and vote for (or against) your favorite candidate. Better yet, run for an office.

The February 12th (Thursday) tech session will be at Southwest Collision Craftsmen. Owner Manny Córdova will be the host, at his BMW-certified body shop.

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The March tech session will be at The Tint and Trim Factory. This proved to be a very popular event a few years ago. Shawn Windecker and his crew will demonstrate window tinting and clear front-end protection. We will announce an exact date when it is confirmed. This event was originally scheduled for December 2008, but was postponed due to snow and a leaky roof.

As is our normal custom, food is included in club events.

Tech tip #352: If you have 60,000+ miles on your engine, you may wish to replace your valve cover gasket set and spark plugs. This is especially true for M50, M52, and M54 series engines (six cylinder). The gaskets can begin leaking oil around the spark plugs, which could cause a coil pack to fail. Although spark plugs are now supposed to last 100,000 miles, your BMW will be happier if you don't let them run that long.

Complaint. Both of my BMW's and a couple of my other cars are unhappy with the current winter gasoline formulation here. I am told ethanol could be the culprit. Problems include low power, and stumbling on startup when cold. Has anyone found a brand of fuel that runs well this winter?

The New Mexico chapter of the BMW CCA is always looking for event leaders, and also officers for the board of directors. If you are interested, please notify someone on the current BoD.

As always, watch your email for changes and updates to the events. You can also check www.nmbmwcca.org for additional information.

I hope to see each of you soon!

Jon van Arsdel
el Presidente
BMW CCA of NM

NMBMWCCA.ORG

(from page 1) A quick read indicated the throttle position sensor had gone bad so the drive-by-wire throttle system was getting confused about how much throttle I really wanted (the default answer is “max throttle”, that should have been an easy guess!). The key thing is, the code description was close enough for me to know that the engine was OK and that I just needed a short trip to the dealer. Based on the dealer’s factory code reader, the tech had also concluded that it was the throttle position sensor. However, no code reader is absolutely perfect when it comes to diagnosing the exact issue. The problem did not disappear after the dealer replaced the throttle position sensor. They were finally able to trace the actual issue to a chafed wire going into the sensor.

Peake Research R5 FCX-III Fault Code Reader, \$140 at Turner Motorsport

This tool, which is very popular with BMW enthusiasts, works with the vast majority of BMW models from 1987 to 2006 but you need an adapter for 2001 and later models. On cars up to 2000, the reader plugs into a round port under the hood. The Peake reader’s advantage is the codes translate to exactly what the factory wants the technicians to know. While most fault codes will overlap with generic OBDII codes, some will not and many will be somewhat more descriptive than those corresponding OBDII codes displayed by a generic tool such as the Mac reader. The Peake tool also has the ability to reset the oil service and inspection interval indicators, preventing more visits to the dealer.



Conclusions

Which tool you get would depend on how you plan to use it: the generic Mac reader works with most makes and models; the Peake tool will only work with BMWs but it will display more descriptive codes, which might allow you to diagnose the problem better. Both readers can clear the fault codes but the Peake reader also provides the added benefit of resetting oil and inspection indicators (on most BMWs

Welcome Our New Members!		
Roe Arn	335i	2009
Walter Buenning		
Donald Cooper	528i	2008
Ben-Ami Dresdner	335	2008
Jesse Gutierrez	545i	2004
Timothy Hamlin	325i	1994
Tim Jelinek	330i	2006
Victor Maness	Z3M	1998
Enrest Matamorez	Z3	1997
Dan McCormack	135i	2008
Darrelyn Sanders	328xi	2008
Kurt Schoenberg	335i	2009
Larry Tomlinberg	330CI	2004
Michael Wadsworth	Z4	2008
Ronald Williams	528i	2008

manufactured after 2000, these intervals can also be reset using buttons on the dashboard). For my intended use, the Mac reader made more sense. Recently, the “Service Engine Soon” light started coming up maybe once a month in my wife’s Audi A4. It turned out the fault code is triggered because the catalytic converter has a hiccup every once in a while and briefly operates “below the minimum efficiency threshold”. I reset it each time it comes up knowing that the car is safe to drive and that my wife will pay more attention to the road instead of staring at that annoying bright yellow light on the dash. Now if buying her a Christmas present was only as easy as choosing the right code reader ... Good thing I have a few more weeks to figure that one out!



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Changing front brake pads

by Colin S. Whelan

Taken from: Boston Bimmer • July 2008, page 7

This month we're going back to the basics of changing the front brake pads and rotors on an E36. Most people don't realize the relative mechanical simplicity of this maintenance procedure. *Remember: attempt these procedures and utilize this information at your own risk.*

Begin by jacking up the car and safely supporting it on jack stands before removing the front wheels. Using a set of calipers, you'll want to measure the thickness of the brake rotor and compare it to the minimum thickness stamped either on the center hub or along the circumference. If you're close to or below the minimum, you'll want to replace the rotor. Begin disassembly by first removing the spring like clip, that holds the outside of the caliper tightly against the caliper bracket, using a screwdriver. Next, remove the two sliding pins (hidden under plastic dust caps) using a hex socket. With a little rocking the caliper can now be removed from the rotor (Figure 1). The outer pad on an E36 can be lifted out at this point. It's good to have an old metal coat hanger

are usually on there quite tight, requiring a 1/2" breaker bar or ratchet to remove. Finally, while supporting the rotor with one hand, remove the small hex bolt holding the rotor to the hub. Sometimes this bolt can be tough to remove and is easily stripped. I've always had success using an impact driver, which is a cheap \$20 tool available at your local auto parts store. It works by converting the impact of a hammer blow into a small twisting motion, and is a valuable tool for your collection. If you're lucky, the rotor will come right off the hub, otherwise you'll need to resort to using a dead-blow hammer to get the job done. To prevent this from happening again, it's best to use a wire brush to clean the hub (Figure 3) of any rust or corrosion and apply a thin coat of anti-seize.

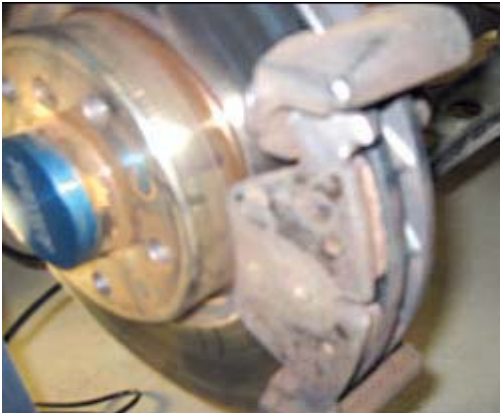


Figure 1

Counter clockwise from left top:

Figure 1: Brake caliper removed on an E36, leaving outer pad, bracket and rotor.

Figure 2: Caliper bracket removed. Caliper hanging safely by metal hanger.

Figure 3: Brake rotor removed, exposing the hub and mounts for caliper bracket.

Figure 4: Pushing the piston back into its bore to make room for the new pads.



Figure 2



Figure 3



Figure 4

or similar available to hang the caliper from the strut, as you don't want it to hang it by the rubber brake line. (Note: Don't hit the brake pedal with a caliper removed or the piston will pop out, spilling brake fluid everywhere.) Assuming you need to replace the rotor, the next step is to remove the two caliper bracket-to-hub mounting bolts (Figure 2). These

Before placing the rotor on the hub and securing it with the hex bolt, you'll want to thoroughly clean the friction surfaces of any oil/coatings using "brake clean" solvents. (Tip: If the rotor is directional, make sure you place the correct rotor on its respective side of the car. This can be done by matching BMW parts numbers or by (continued page 5)

CLASSIFIEDS

Classified ads are free for NMBMWCCA Chapter members. Only BMW cars, parts, aftermarket add-ons will be published. All ads will run in one issue and will be removed unless a request is made to run the ad again. Member number must be included in all submissions. Please submit all ads to: webmaster@nmbmwcca.org subject: *Classifieds*. Ads may be edited due to space limitations. There is also the free classifieds section on the chapter website for you to use.

CARS FOR SALE

The following cars and/or were listed on the Club's website as of Jan 5, 2009:

2000 M Coupe, 4 Used Borbet Wheels

Check the Club's Website at: www.nmbmwcca.org for current availability

(from page 4) examining the cooling vanes along the circumference. When attached to the hub and viewed from above, the vanes/channels should be bending back towards the rear of the car as they extend from the center hub to the edge of the rotor.) With the new rotor and caliper bracket back in place, let's turn our attention the caliper and pads. The first step is to remove the pad wear sensor wire from the inner pad, if so equipped, using a pair of pliers. Next, the inner pad can simply be lifted out. Make note of both pads' orientation before removal so that you can put the new ones in the same way. Using a C-clamp tool to push the piston back into its bore (Figure 4). You might need to remove some brake fluid from the reservoir to prevent it from overflowing. (A garage- only turkey baster works well. Remember, the old fluid should be recycled.) Before installing the new pads there are two things that are often overlooked. First, you might consider lightly coating the backside (metal side, not friction side) of the pad with an anti-squeal coating and secondly, lubricating the metal-to metal contact points between the caliper, bracket and pad.

This is also a great time to re-lubricate the metal pins that hold the floating caliper in place. You'll want to make sure that this is a high temperature lubricant capable of withstanding the somewhat extreme temperatures found in braking systems. You can pick this up at your local auto parts store, but I happen to like Pastelub and Ceramilub dry-film lubricants that I found at www.GWRauto.com. With the inner pad back on the caliper and the outer pad back on the bracket, simply slide the caliper back in place, tighten the sliding pins and replace the plastic covers. Now reattach the spring clip. This is a good time to double check that everything is torqued to spec, including the wheels. With everything reassembled and the car back on the ground, make sure you pump the brake pedal until it is stiff, since this will push the pistons tightly against the new pads and rotors. I always like to try the brakes a few times before moving the car more than a couple of inches to make sure everything is well. Now follow your pad manufacturer's bedding procedure to insure proper brake-in of the new pads. ♦

On the Docket—Calendar of Events

January 13, 2009 (Tuesday), 6:00 p.m. Tech session. Sandia BMW, 6001 Pan American Fwy. NE, in Albuquerque.

February 12 (Thursday), 6:00 p.m. Tech session. Southwest Collision Craftsmen, 3401 Claremont NE, in Albuquerque.

March (TBA) 6:00 p.m. Tech session. The Tint and Trim Factory, Jefferson at McLeod, in Albuquerque.

April 2009. Annual spring tour. Details to be announced.

May 2009. Annual Clean Car Show.

June 2009. Tech session. Santa Fe BMW.

July 2009. Membership meeting.

August 2009. The BMW/Porsche Challenge.

On the Docket



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WEB LINKS FOR THIS ISSUE

http://www.boston-bmwcca.org/bimmer/Bimmers/2008_11.pdf

http://www.boston-bmwcca.org/bimmer/Bimmers/2008_07.pdf



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