



INSPECTION UPDATE

VOLUME #19, ISSUE 2

SUMMER 2018

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Important Reminders!

Vehicle Inspection Procedures

This message is intended to remind all inspectors that regulations specifically state that inspections are to be conducted completely within the inspection bay. With the introduction of camera systems in the inspection bays, it is important to follow the steps below so that the entire inspection is video recorded.

1. Select the Vehicle Inspection button.
2. Log into the workstation.
3. Select the button for the appropriate inspection type. The four images will appear.
4. Verify that the camera images are present and that the camera angles are correct; then click Continue.
5. Retrieve the vehicle from the parking area and drive the vehicle into the inspection bay.
6. Proceed with conducting the inspection of all items while the vehicle is in the inspection bay, beginning with taking the four photographs of the vehicle.

Keep Workstation on Main Menu Screen Between Tests and Overnight

This message is to remind all inspectors that in between inspections the Workstation needs to be returned to the Main Menu screen and the Workstation should not be turned off overnight. This means that you need to leave the Workstation computer turned on as well. You may turn off only the monitor if you wish by using the power button on the monitor itself. This allows all the images taken during inspections to process in a timely manner.

When the Workstation is not returned to the Main Menu between inspections or is turned off overnight it causes a backlog of image data that increases each day. Your cooperation in following these procedures is greatly appreciated. Thank you!

What's New?

Renewing or Applying for an Inspector License? Start Online First.

It is now possible to renew or apply for an initial Inspector License online at mass.gov/rmv. Additionally, the process for out-of-state inspectors has changed to ensure an applicant is eligible before going through the full application process.

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In-state applicants

Follow these instructions:

1. Go to mass.gov/rmv
2. Select the Online Service Center
3. Select Access My Profile – make sure there are no outstanding fees/citations
4. Log off your Profile
5. Select
 - Apply For A Vehicle Inspector Credential or
 - Renew My Vehicle Inspector Credential
6. Follow steps to complete the online application

Out-of-state applicants

Prior to October 2017, all out-of-state applicants were required to visit an RMV service center to have their image captured before submitting an application for a vehicle inspector license. The new procedure requires that the applicant submit an application before visiting a service center. Out-of-state applicants may apply online and pay the fee. They will then get notified of their eligibility by the RMV.

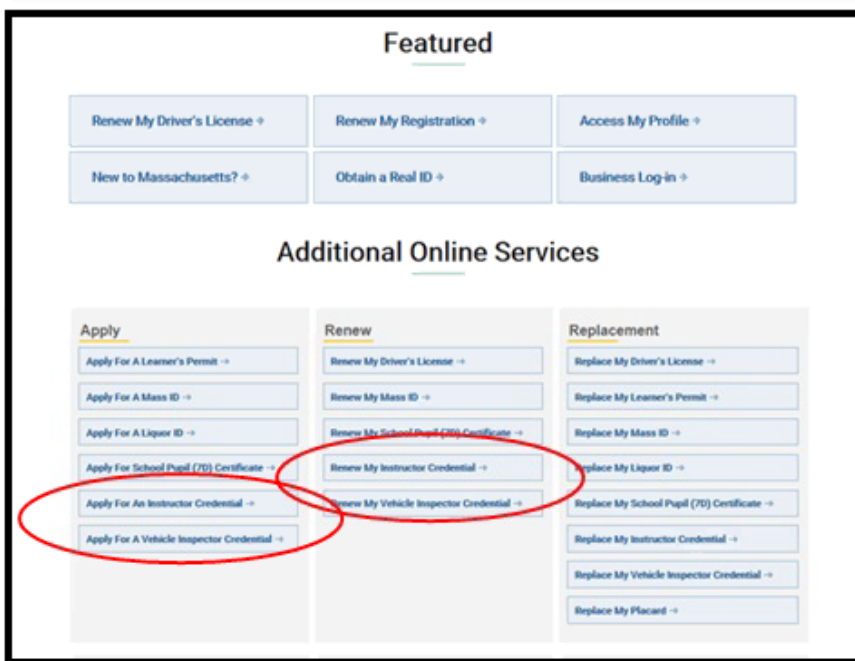
Follow these instructions:

1. Select the Online Service Center
2. Select
 - Apply For A Vehicle Inspector Credential or
 - Renew My Vehicle Inspector Credential
3. Follow steps to complete the online application.

Note: Applicants will be required to upload a clear copy of the front and back of their out-of-state driver's license.

If an applicant has never held a Massachusetts credential, or the image on file is out of date, a written notification will be sent requesting the applicant visit an RMV service center to have their picture taken.

Online Service Center – My RMV



All initial applicants must complete initial inspector training. Training applications can be obtained on the Mass Vehicle Check website at www.mavehiclecheck.com or by contacting the call center at 1.844.358.0135.

If the inspector license has been successfully renewed online, the new credential should be received within 10 business days.

Note: Applicants are required to have a credit/debit card or e-check information to pay the application/renewal fee.

Did You Know?

Updated Vehicle Safety Inspection Regulations

The RMV revised the vehicle safety inspection regulations including requirements for airbags. The recent workstation software release updated the airbag inspection so that now only vehicles 10 model years old and newer are subject to airbag requirements during the annual safety inspection. We no longer fail model year 2007 and older vehicles if the airbag light is on, or if the airbag is missing or has been deployed.

Workstation Library Now Available

All Station Managers and Inspectors may now access the workstation library through their Dashboard account. The document categories in the library include, but are not limited to:

- Station and Inspector Applications
- Equipment Troubleshooting Assistance
- Program Newsletters
- MA Regulations
- Repair Industry Resources
- Motorist Resources

To view these files from your workstation, select “6 - Station Menu” from the Main Menu and log in. Then select the “F - Dashboard Menu” option. Once on the MA Dashboard login screen, enter your login credentials as usual to access your account. In the top-right corner of the webpage, select the “Station” tab and then “Test Center Documents” from the drop-down list.

All documents have been grouped into several folders for easy navigation. To open a document, click on the document’s name and the PDF will open in the window. Once the document is open, you may also print it right through your workstation by selecting the printer icon on the bottom of your screen.

If you have any questions or need additional assistance, please contact your Customer Service Center at 1.844.358.0135 or Info@MassVehicleCheck2017.com.

Station Spotlight - Michael’s Motor Sales, Inc.



Michael’s Motor Sales, Inc. in Lawrence has been a Massachusetts Inspection Station for more than 70 years.

Michael’s – owned and operated by Mike Pawlik and his son Sean Pawlik – has been serving the greater Lawrence area since 1946 when the business was started by Mike’s father and Uncle, Chester (Teddy) Pawlik

and Michael Pawlik. The two brothers started out in a small lot in South Lawrence and moved to its current location at 54 Winthrop Avenue in 1966. The station’s Service Manager and MASS Vehicle Check Registered Repair Technician, Ron Dube, has been with the business for more than 40 years.

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With the Lawrence RMV location right across the street, many motorists bring their vehicles to Michael's for inspection. Both Mike and Sean agree that, under the new program, having cameras in the inspection bay has been very helpful for documenting program compliance, building trust with customers and ensuring motorist safety.

"We will get people who come in for an inspection and ask us if we think their vehicle will pass before we run the test," says Sean. "I tell them that once we pull their vehicle into the bay and close the door, that vehicle is leaving with a sticker one way or the other. Some people may not like to hear that and may get upset if the vehicle fails but we hope they realize that we are here to help them. We don't ever want to send somebody back out on the road in a vehicle that is potentially unsafe or out of compliance with state laws where they might be ticketed."



Sean points to the difference in window tinting laws from state to state. This has always been a challenging issue. But being able to document the test with the cameras and show visual evidence as to why the vehicle failed helps the Inspector explain to the motorist what repairs or modifications are needed and why.

"The cameras have been a valuable addition to the program," says Mike. All of the new equipment has been great and, overall, the program is running very smoothly."

Test Interrupt Anecdotes

The MASS17 Inspection Test Interrupt process that was discussed in our Spring Newsletter has been operational since March. It provides the opportunity to pause an inspection should the MASS17 inspection software determine the vehicle may be receiving the wrong type of inspection. A support representative will start a video conference or video chat with the Inspector using Team Viewer so that the vehicle description data entered into the workstation can be discussed. This process allows a data correction if necessary or, after a discussion about the vehicle in your bay, allows the inspection to continue. This process also provides the opportunity for a second opinion with the ultimate goal of ensuring that the vehicle receives the correct type of inspection.

Here are a few things we have noticed so far:

1. The kit car that wasn't? There have been a few instances where the Kit Car check box was selected for vehicles that were not kit cars. The box should not be checked unless you are inspecting a kit car. In most cases, you can identify a kit car by the assigned state jurisdictional vehicle identification number (e.g. MA12345). After a brief discussion with the Inspector, the direction of the inspection was updated and these vehicles received the correct inspection on their initial test.
2. GVWR value entries: There have been instances where the workstation software provided an incorrect GVWR value as well as the Inspector was not entering the vehicle's actual GVWR. The GVWR value is a critical input in determining what type of emission or safety inspection the vehicle will receive. The GVWR value can be found on the vehicle's identification tag which is usually located on the driver's door jam. The value can also be obtained from the manufacturer or, a VIN decoding software, or by contacting our Customer Service Center. Always be sure to pause at the workstation Summary Screen to review all the data presented. Make any corrections needed before hitting the <Continue> button.
3. Odometer entry: By accident, we have witnessed the odometer value being entered in the GVWR field instead of the Odometer field. Left unchanged, the vehicle would most likely receive the wrong type of inspection. The motorist, Inspector and station avoided future inconvenience because the inspection was interrupted so the correct GVWR and odometer values could be entered in the proper fields. This is an example of how addressing an issue in real-time during an inspection prevents inaccurate data from being entered in the database and printed on VIRs, and potentially inconveniencing motorists during future inspections, or during the change of vehicle ownership, just to name a few circumstances.

Plate State, Type, and Number Entry

Plate State: MA

Plate Type: PAN

Plate Number: [input field]

Registration Number: [input field]

Suffix: [input field]

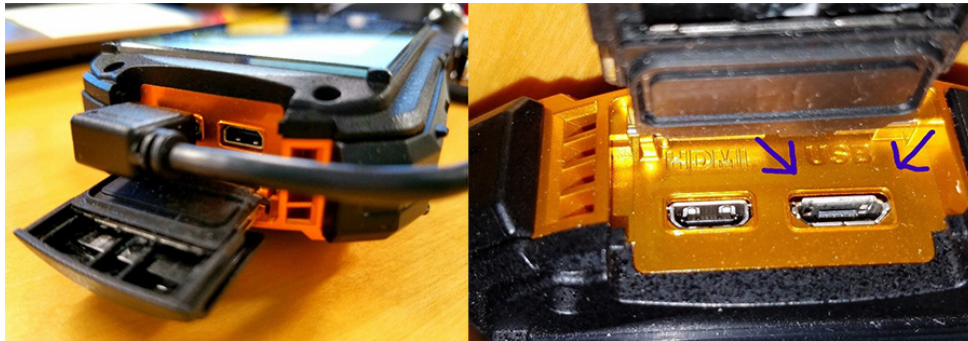
Kit Car: ?

Check mark should only be displayed when inspecting an actual Kitcar vehicle

Tips & Tricks

From Technical Services:

1. When replacing the VIR printer toner, make sure that you remove the white sticker on the bottom of the cartridge.
2. If you need to reboot the workstation for any reason, please remember to click on the arrow next to the “Shut Down” button on the screen. Then click on reboot.
3. If your sticker printer is printing multiple stickers or the print is misaligned, give Applus a call and we will be glad to calibrate your printer and fix the problem.
4. If your hand-held camera isn't charging, try to bypass the pigtail and plug directly into the camera's USB port on the side. Wait for it to charge for a few minutes. If that works, you need a new pigtail.



5. If you have problems connecting to the VID, try unplugging the black edge router for ten seconds. Then plug it back in and wait two minutes before you do anything on the workstation. Then, try a data file refresh.
6. If your webcam is black when you start a test, try putting your thumb over the camera, hit refresh, remove your thumb away, hit refresh again and that should solve the issue.
7. When replacing the ribbon on the Zebra (sticker) printer, make sure you put the new roll on the bottom and go over the top, so the duller side is facing out.
8. If you have a wireless barcode scanner and it stops working, try to plug the USB cable into the right side of the cabinet where it says barcode scanner and wait a few minutes before using.
9. Don't forget to leave your workstations on overnight in case there are any updates that need to be performed. You can turn the monitor off by pressing the button on the bottom right corner of the monitor.



From the Customer Service Center:

1. Out of State Applicants for Vehicle Inspector License:
 - a. Please note that the following instructions are located at the bottom of the [application](#):
 - i. Out-of-state applicants must send a copy of their valid driver license from issuing state and will be processed through the National Driver Register (NDR) and/or the Commercial Driver License Information System (CDLIS) to verify the status of operating privileges in other jurisdictions. I, the undersigned, hereby apply for a license to inspect motor vehicles and swear (affirm), under the penalties of perjury, that the information I have provided in this application is true and correct.
 - b. The MASS Vehicle Check Inspector License application can be found under [Stations & Inspectors>>Resources for Stations & Inspectors>>Downloads & Forms>>Inspector License Application](#) on the www.mass.gov/vehiclecheck website.
2. Remember that all training application submittals must provide an “S” number for processing.
3. To make a payment for workstations, consumables and broken parts, please note that our remittance address is as follows:

MA OPS
P.O. Box 21254
New York, NY 10087-1254

Training News

Repair Technician Ongoing Training



In June, the Massachusetts Vehicle Check program offered a Registered Emissions Repair Technician Ongoing Training course titled “Misfire Diagnosis.” During the training, instructor Gary Machiros covered how the vehicle’s software determines when there is a misfire event, and how to use the available data, to determine whether it is an ignition, fueling or mechanical misfire.

Case studies were presented that demonstrated real-world examples of misfire diagnosis using the scan tool data and understanding the specific vehicle’s misfire detection strategy. The course concentrated on identifying the root cause of the misfire before any engine disassembly.

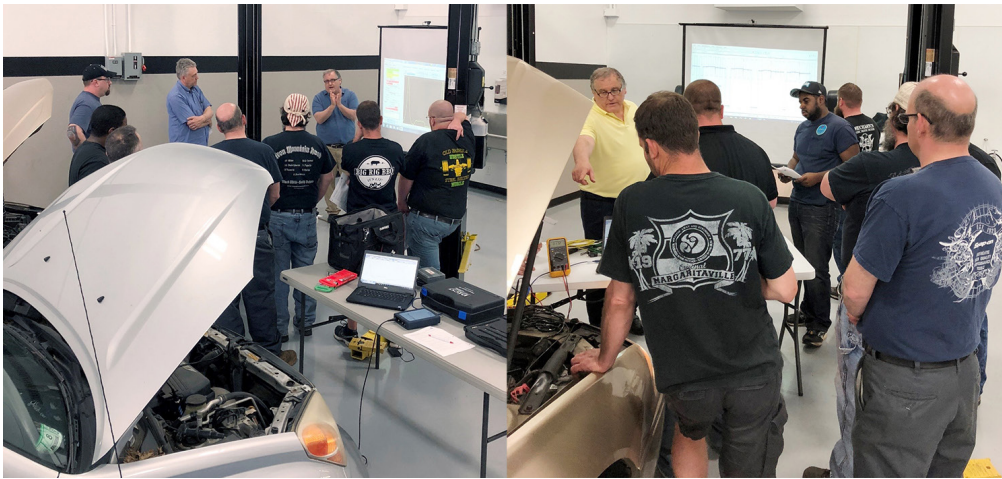
Each Registered Emissions Repair Technician is required to attend one four-hour training session every year to maintain their registration in the Massachusetts Vehicle Check Program. These free training seminars are scheduled quarterly and held at Motorist Assistance Center (MAC) locations across Massachusetts.

A schedule of training opportunities is always available at the [Repair Industry>>Repair Tech Training](#) section of www.mass.gov/vehiclecheck. Upcoming ongoing repair training classes include:

| REPAIR TRAINING OPPORTUNITIES | DATE | LOCATION |
|--|---------------------|------------------------------|
| Ongoing Training: GM Engine Performance | September 6, 2018 | West Springfield MAC |
| Ongoing Training: Evap Diagnosis | September 17, 2018 | Norwood MAC |
| Ongoing Training: GM Engine Performance | September 20, 2018 | Shrewsbury MAC |
| Ongoing Training: GM Engine Performance | September 24, 2018 | Medford MAC |
| Ongoing Training: Fuel Trim Diagnosis | October 29, 2018 | West Springfield MAC |
| Ongoing Training: Misfire Diagnosis | November 1, 2018 | Bourne MAC |
| Ongoing Training: Fuel Trim Diagnosis | November 19, 2018 | Shrewsbury MAC |
| Ongoing Training: Fuel Trim Diagnosis | November 26, 2018 | Medford MAC |
| 28-hour OBD Diagnostics and Repair Training | October 16-19, 2018 | TBD (based on applicants) |

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28-Hour Class OBD Diagnostics and Repair Training



In May, the MASS Vehicle Check program held an OBD Diagnostics and Repair Training. This is the training designed for technicians who want to become Registered Emissions Repair Technicians. To stay current with today's vehicle technology, the curriculum for the MASS17 program training has been completely updated. The training includes both classroom theory and hands-on exercises to support the classroom presentation. The technicians

were provided with three text books containing over 800 pages of automotive theory, oscilloscope and scan tool captures and program specific regulatory information. These text books will serve as a valuable resource for the technicians to refer to when a reminder about a particular topic is needed.

Instructors Gary Machiros and Bruce Ward, assisted by Mike Shanahan (MAC L1), led the training at the Norwood MAC with the eight attendees traveling from all areas of Massachusetts.

| ATTENDEE NAME | HOME TOWN | SHOP |
|----------------|---------------|--|
| Brandon Benton | Haverhill | Larson's Automotive Service Peabody |
| Gregg Browie | North Adams | Don's Service Center North Adams |
| Shane Johnson | North Reading | Rogers Automotive Woburn |
| Matthew Olsen | Burlington | Sullivan Tire Somerville |
| Dennis Plant | Plymouth | Cape Auto Repairs Plymouth |
| Mark Read | Bridgewater | Mass Tire & Auto Service Weymouth |
| Kurt Wittbold | Wilmington | Lannan Chevrolet Woburn |
| Daniel Zogg | Amesbury | Signature Motor Cars Topsfield |

The MASS17 program sincerely appreciates the sacrifice made by the technicians, their families, and the repair facilities that employ them. We welcome you to the registered repair technician community.

Unusual Things at the MACs

ISSUE: A 2007 Nissan Murano repeatedly fails inspection for Malfunction Indicator Lamp (MIL) Command but MIL is Off.

The vehicle had initially failed inspection on March 22, 2018 for readiness with the Catalyst, Evaporative, and O2 Sensor monitors not ready. The vehicle returned for a retest on April 6, 2018 and failed for emissions with all the supported monitors ready and no codes. The vehicle then proceeded to fail each re-inspection the same way five more times over the next six days.

| INSPECTION DATE | INSPECTION ATTEMPTS | OVERALL INSPECTION RESULT | EMISSIONS RESULT | MISFIRE | FUEL | COMP | CAT | HTD CAT | EVAP | SEC AIR | A/C | O2 | HTD O2 | EGR | NUM OF DTCS STORED | DTCS STORED | PERMANENT DTCS |
|-----------------|---------------------|---------------------------|------------------|---------|------|------|-----|---------|------|---------|-----|----|--------|-----|--------------------|-------------|----------------|
| 04/13/18 | 8 | P | P | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/12/18 | 7 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/12/18 | 6 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/09/18 | 5 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/09/18 | 4 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/06/18 | 3 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 04/06/18 | 2 | F | F | R | R | R | R | N/A | R | N/A | N/A | R | R | N/A | 0 | | 0 |
| 03/22/18 | 1 | F | F | R | R | R | NR | N/A | NR | N/A | N/A | NR | R | N/A | 0 | | 0 |

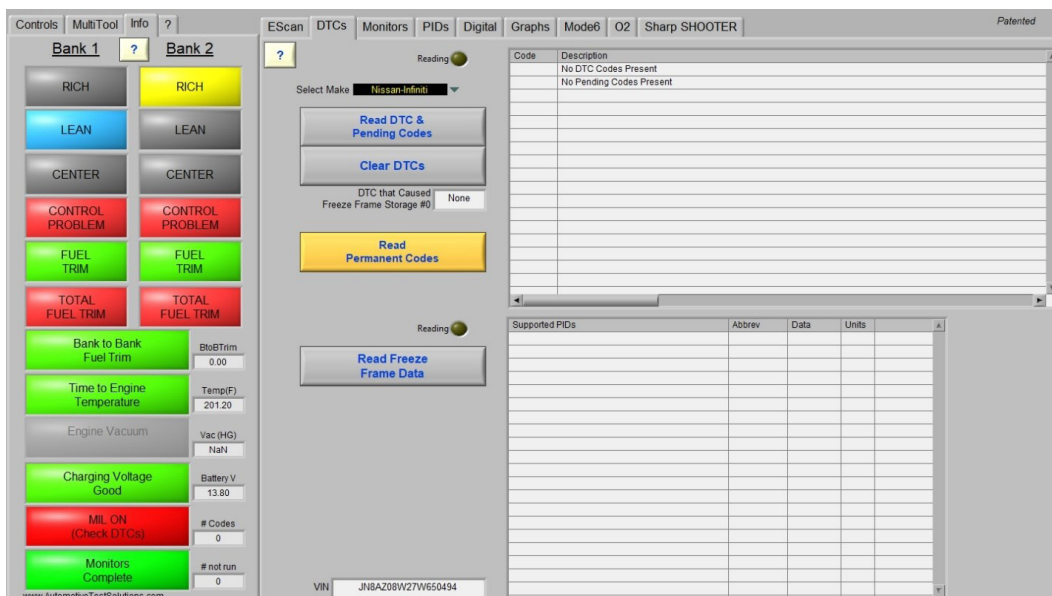
At this point the MAC was contacted. Upon review the inspection history made no sense. *Why was the vehicle failing for emissions with no codes and all the supported monitors ready?*

Just to review....

A vehicle does not fail an emissions inspection because it has codes in the Powertrain Control Module (PCM). The workstation reads whether the PCM is commanding or requesting the MIL to be on. The workstation reads the MIL request and uses that to Pass or Fail the emissions test, along with the readiness status. The Diagnostic Trouble Codes (DTCs) printed out on the inspection report are a courtesy for the motorist and the repair community. We called the motorist who put us in contact with his mechanic.

With the motorist's mechanic on the phone, we requested that he connect a scan tool so we could review some information. While connected generically the technician checked for current and pending codes. No codes were present. Checking the data stream, nothing appeared to be terribly out of the ordinary. At this point we requested that the motorist bring the vehicle to the MAC for further examination.

The motorist came to the MAC and the vehicle's status was verified. The MIL functioned correctly, illuminated KOEO (key-on engine off) was not on while the engine was running (KOER key on engine running). There were no codes current



or pending using generic On Board Diagnostics (OBDII) and also using enhanced Nissan software.

But here's the odd thing...

Look at the screen shot to the left, specifically the lower left corner red box. The generic scan tool is showing the MIL as being ON but the visual dashboard reveals the bulb is off.

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A quick note about the red boxes showing “Control Problem” and “Total Fuel Trim” in the previous graphic. This vehicle had O2 sensors that were a bit on the lazy side and the combined short-term and long-term fuel trims were almost 20% on each bank. While the scan tool software flagged those issues, this was not what was causing the problem that made the vehicle fail the test.

There are no Technical Service Bulletins (TSBs) or this issue in Alldata. A call was placed to Shawn O’Dwyer, a Nissan Master Technician at Commonwealth Nissan in Lawrence. Shawn confirmed that there were no TSBs or campaigns that might pertain to this issue and we also verified that the vehicle had the latest software in the PCM at this time.

So, what we were seeing with the vehicle made no sense: an MIL request with no codes. A visual examination of the vehicle revealed a new looking rebuilt transmission, but nothing else unusual. Just for fun we decided to review scan data again to look for a clue.

Everything looked totally normal except for one data item; Distance Traveled While MIL is Activated.

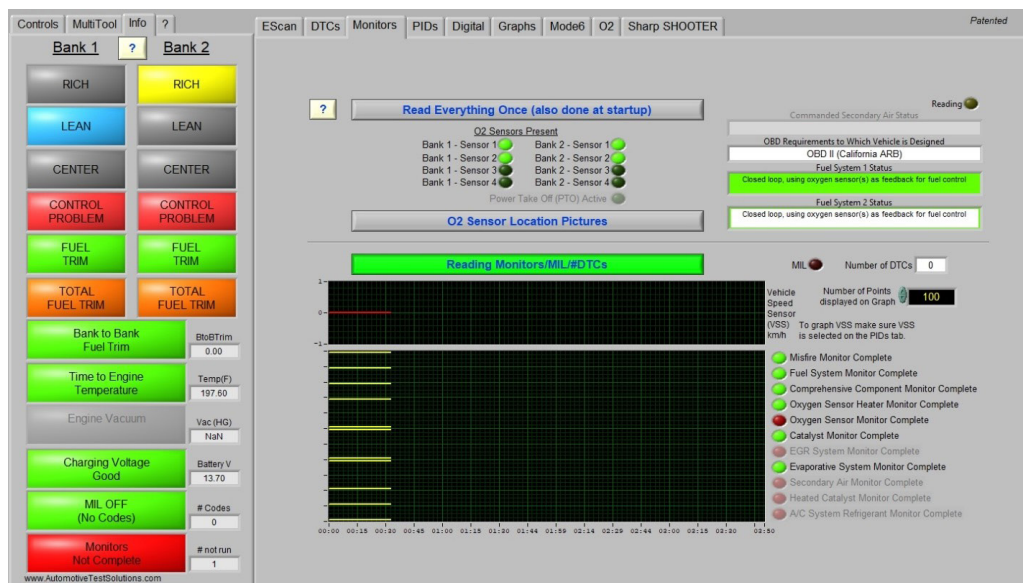
| | | | |
|--|-------------|----------|-------|
| ✓ O2 Bank 2 - Sensor 2 | F1B2S2 | 99.2187 | % |
| ✓ Distance Traveled While MIL is Activated | MIL_DIST | 617.8950 | miles |
| ✓ Total Trim Bank1 (Calculated) | TotalTrimB1 | 23.4375 | % |

It appears that the PCM thinks the MIL has been activated for the last 617 miles. This makes sense in a way because the PCM thinks it is commanding the MIL on, even though the MIL is not on. At this point it appears to be a logic problem in the vehicle’s PCM.

We decided to clear the MIL and then disconnect the battery for five minutes. Upon reconnecting and checking the monitors, we confirmed that the monitors had reset to not ready and the Parameter ID (PID) for Distance Traveled While MIL is Activated was now 0 miles.

| | | | |
|--|-------------|---------|-------|
| ✓ O2 Bank 2 - Sensor 2 | F1B2S2 | 99.2187 | % |
| ✓ Distance Traveled While MIL is Activated | MIL_DIST | 0.0000 | miles |
| ✓ Total Trim Bank1 (Calculated) | TotalTrimB1 | 14.8437 | % |

The motorist then took the vehicle on a short drive to set the monitors to Ready status and then returned to the MAC for another check.



All the supported monitors were ready except for the oxygen sensor monitor. This was a bit unusual in that the evaporative emissions monitor got ready before the O2 sensor monitor. In Massachusetts, vehicles are allowed to have one monitor not ready so this vehicle was good to go. The motorist was advised to return for an inspection.

The vehicle then passed a short time later with all supported monitors ready. The O2 sensor monitor completed after leaving the MAC on the way to the inspection station.

This is a relatively rare problem that the MAC has seen over the past couple years. So far, all of the vehicles exhibiting this phenomenon have been Nissans. A special thank you to Shawn O’Dwyer for taking time to talk with the MAC L1 Technician to verify the vehicle’s software version.

As is frequently stated, “A rising tide carries all boats”. If we all can help each other, it elevates us all together. Any comments or questions? Please contact the MAC or email us (ContactUs@MAVehicleCheck.com).

Program Statistics

| PROGRAM AT A GLANCE | COUNT | FAILURE RATE |
|-----------------------------------|-----------|--------------|
| Non-Commercial Safety Inspections | 1,825,827 | 6.30% |
| Commercial Safety Inspections | 60,903 | 8.00% |
| 7D Safety Inspections | 6,520 | 2.60% |
| OBD Emissions Inspections | 1,435,519 | 5.10% |
| Opacity Emissions Inspections | 37,687 | 2.80% |
| Emissions Waivers Issued | 0 | |
| Repair Hardships Issued | 0 | |

| ENFORCEMENT STATISTICS | COUNT |
|---------------------------------|-------|
| Violations Issued to Inspectors | 20 |
| Violations Issued to Stations | 28 |
| Inspector Privileges Revoked | 0 |
| Inspector Required to Retrain | 0 |
| Inspectors Suspended | 0 |
| Stations Suspended | 0 |

| HOTLINE AND TRAINING STATISTICS | COUNT |
|---|--------|
| Motorist Calls Received | 4,444 |
| Inspection Station Calls Received | 18,722 |
| Initial Non-Commercial Inspectors Trained | 674 |
| Initial Commercial Inspectors Trained | 106 |
| Initial 7D Inspectors Trained | 15 |
| Initial Motorcycle Inspectors Trained | 58 |
| Commercial Recertifications | 159 |

| LICENSED STATIONS | COUNT |
|-------------------|-------|
| Class A Stations | 1,153 |
| Class B Stations | 194 |
| Class C Stations | 21 |
| Class D Stations | 313 |
| Class E Stations | 8 |