MASSACHUSETTS
VEHICLE CHECK
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INSPECTION UPDATE

Volume 12, Issue 4 Winter 2011

Contents

Inspection Update is a publication produced by Massachusetts Vehicle Check; a joint program of the Massachusetts Department of Environmental Protection (MassDEP), the Registry of Motor Vehicles (RMV) and Parsons Commercial Technology Group, Inc.

New Program Changes Beginning January 1, 2012

▶ Windshield Sticker Changes

In December, the Massachusetts Vehicle Check program began shipping to all inspection stations the first deliveries of green 2012 Vehicle Inspection Reports (VIRs) and windshield stickers. These supplies should cover approximately three months of vehicle inspections. Stations will automatically receive future shipments of stickers when their inventories indicate they have only one pack of stickers remaining.

Stations that have not received their sticker shipments by Dec. 28, or that have any questions about the new green 2012 stickers, should contact the Technical Help Desk at 1-877-834-4677.

All unopened, unused sticker books should be kept in their shrink-wrapped packaging and in a secure location until they are needed. Remember to always load the sticker books into the workstation in the order of lowest to highest sticker book number.

All unused orange 2011 stickers should be set aside and kept in a secure location until they are collected by the Massachusetts Department of Transportation (MassDOT) Registry of Motor Vehicles (RMV) Division.

▶ Program Changes

Effective Jan. 1, 2012, all 1997 model year vehicles are exempt from the on-board diagnostics (OBD) emissions test requirement. However, all 1997 model year vehicles are still subject to an annual safety inspection. All 1997 model year diesel vehicles over 10,000 pounds Gross Vehicle Weight Rating (GVWR) are still subject to the opacity emissions inspection requirement. Additionally, the Massachusetts Vehicle Check emissions waiver and economic hardship repair extension minimums have increased to the following:

Vehicle Age	Emissions Waver Spending Minimum	Economic Hardship Repair Extension Estimate Minimum
Five model years old or newer	$820	$1,230
Six to ten model years old	$720	$1,080
Greater than 10 model years old	$620	$930

(Continued on page 2)

New Program Changes

(Continued from page 1)

▶ Workstation Changes

The program will be releasing several workstation software updates during the winter. Upcoming changes include:

- Revised motorist messaging for the changes in waiver spending limits
- Vehicle identification number (VIN) and GVWR decoding will be improved for several makes and models
- Inspection test selection logic will be improved for New Vehicle OBD Scans.
- New Help Screens are available for Kit Cars and Custom Vehicles as a result of recent changes to registration and inspection requirements.
- For New Car Dealers: In addition to properly authorized dealership employees, all licensed inspectors will now be able to use the pre-delivery inspection (PDI) workstations.

When your workstation indicates that a new version of software is available, please take the time to download and install the update so that you have the most current version. Once the installation is complete, perform a Data File Refresh before starting a new vehicle inspection. If you have any questions about downloading or installing these software updates, please contact the Technical Help Desk at 1-877-834-4677.

Massachusetts Vehicle Check Contract Extension Update

Throughout Fall 2011, the Massachusetts Department of Transportation (MassDOT) Registry of Motor Vehicles (RMV) Division and Department of Environmental Protection (MassDEP) continued discussions with Parsons regarding the first two-year contract extension option and related changes in costs to the agencies and the inspection industry. Based on those discussions, an extension agreement is pending. This option would extend the existing contract's end date from September 30, 2013 to September 30, 2015.

Happy Three-Year Anniversary: The Year in Review

October 2011 marked the three-year anniversary of the Massachusetts Vehicle Check program. Congratulations to all who contributed to another successful year! The following is a summary of program statistics* from Year Three:

Number of paid vehicle inspections.....4,630,521

Number of inspectors receiving initial training.....1,717

Number of inspectors re-certified.....3,654

Number of active inspection stations.....1,766

Number of registered emissions repair technicians.....323

Number of motorist hotline calls.....14,244

Number of technical helpdesk calls.....30,642

Number of registered vehicles in Massachusetts.....4.8 million

Average age of vehicles in Massachusetts.....9.55 years

Number of registered hybrid vehicles.....47,811

Number of registered diesel vehicles.....148,554

Number of registered flexible fuel vehicles.....20,816

Communities with the most registered vehicles:

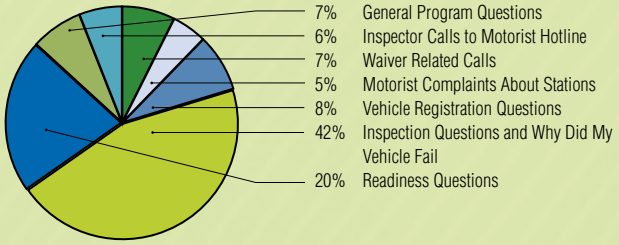
1. Boston.....363,790
2. Worcester.....119,417
3. Springfield.....106,191

Communities with newest average vehicle age:

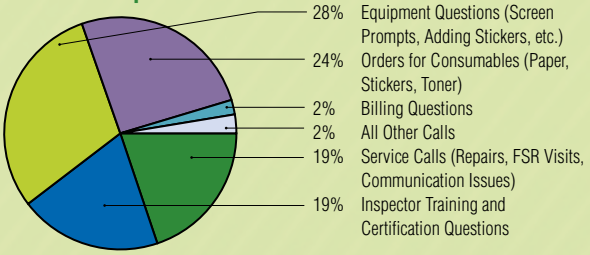
1. Chelsea.....6.49 years
2. Sharon.....7.59 years
3. Needham.....7.63 years

**Statistics as of September 30, 2011*

Motorist Hotline Calls:



Technical Helpdesk Calls:



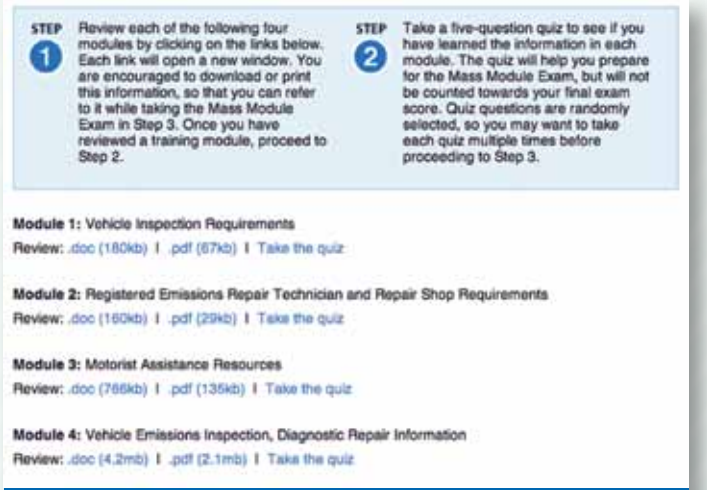
Mass Module Content and Practice Quizzes are Available for Registered Emissions Repair Technicians

In November, the Massachusetts Vehicle Check program published the Mass Module Training content and practice quizzes on the program's Web site: www.massvehiclecheck.state.ma.us/inspection_mass_module.html

The Mass Module Training is designed to teach automotive repair professionals what they need to know in order to become Massachusetts Registered Emissions Repair Technicians. The modules provide specific information relevant to the Massachusetts Vehicle Check program.

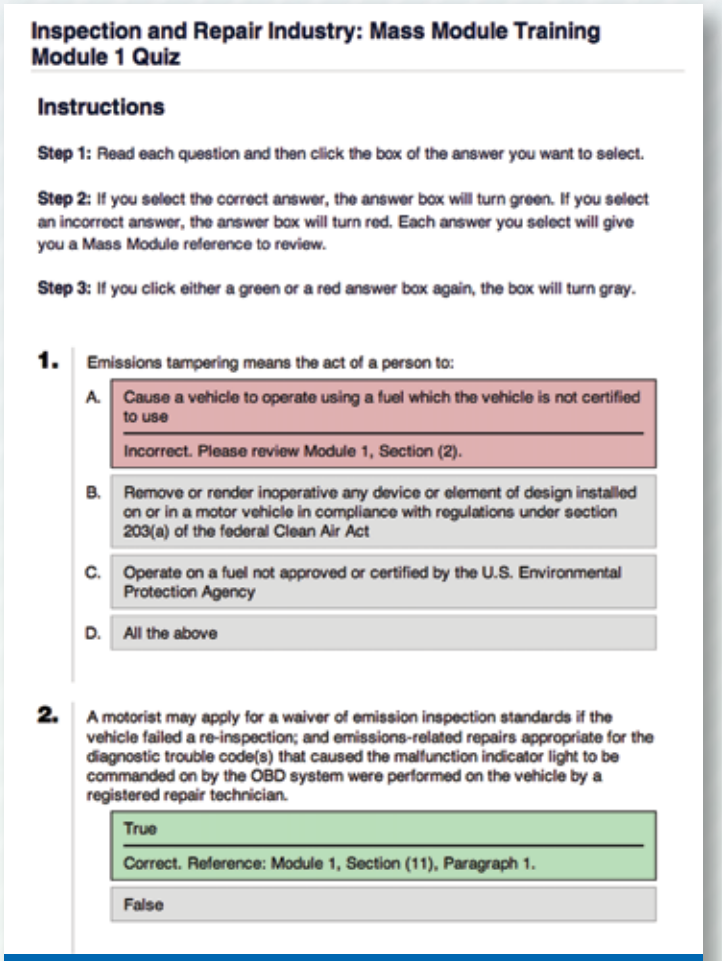
The Mass Module Training is a free on-line course that can be reviewed or downloaded in either Microsoft Word or portable document file (PDF) formats. The training curriculum includes an introduction section and four modules that cover:

1) Vehicle Inspection Requirements
2) Registered Emissions Repair Technician and Repair Shop Requirements
3) Motorist Assistance Resources
4) Vehicle Emissions Inspection, Diagnostic Repair Information



Registered Emissions Repair Technicians can now review Mass Module Content on the Program Web site.

After reviewing the module content, technicians can take a five-question multiple-choice practice quiz to help them test their comprehension of each module. The quizzes will help technicians prepare for the Mass Module Exam, but will not be counted towards their final exam score. Quiz questions are randomly selected, so technicians are encouraged to take each quiz multiple times before taking the online exam.



Inspection and Repair Industry: Mass Module Training Module 1 Quiz

Instructions

Step 1: Read each question and then click the box of the answer you want to select.

Step 2: If you select the correct answer, the answer box will turn green. If you select an incorrect answer, the answer box will turn red. Each answer you select will give you a Mass Module reference to review.

Step 3: If you click either a green or a red answer box again, the box will turn gray.

1. Emissions tampering means the act of a person to:

A. Cause a vehicle to operate using a fuel which the vehicle is not certified to use

Incorrect. Please review Module 1, Section (2).

B. Remove or render inoperative any device or element of design installed on or in a motor vehicle in compliance with regulations under section 203(a) of the federal Clean Air Act

C. Operate on a fuel not approved or certified by the U.S. Environmental Protection Agency

D. All the above

2. A motorist may apply for a waiver of emission inspection standards if the vehicle failed a re-inspection; and emissions-related repairs appropriate for the diagnostic trouble code(s) that caused the malfunction indicator light to be commanded on by the OBD system were performed on the vehicle by a registered repair technician.

True

Correct. Reference: Module 1, Section (11), Paragraph 1.

False

Example questions from Mass Module 1 Quiz.

To retain their Registered Emissions Repair Technician status, current Registered Emissions Repair Technicians must review the new Mass Module and pass the online exam with a score of 100 percent. All current Registered Emissions Repair Technicians will be notified by mail when the exam is available in the first quarter of 2012. Once notified, they will have six (6) months to pass the online exam.

Prospective registered emissions repair technicians must review the Mass Module, pass the online exam with a score of 100 percent, and complete the new on-board diagnostics (OBD) Repair Training course as a prerequisite to becoming registered. They may complete these requirements at any time. If you have already applied to become registered, you will be notified by mail when the online exam is available.

To apply to become a Registered Emissions Repair Technician, please print and send in a Registered Repair Technician application form, which can be downloaded from the program Web site: www.massvehiclecheck.state.ma.us/inspection_forms.html

For more information about the OBD Repair Training course, please visit: www.massvehiclecheck.state.ma.us/inspection_obd_repair.html

Motorist Assistance Center (MAC) Success Story

Mike Shanahan, Shrewsbury MAC L-1

After speaking with the Motorist Hotline, a motorist contacted the nearest Motorist Assistant Center (MAC) for assistance with a 2007 Buick Lacrosse that was failing its emission test. The Shrewsbury MAC L-1, Michael Shanahan, researched the vehicle's inspection history in an attempt to identify the failure.

The OBD emissions test is comprised of many requests for information from the vehicle's powertrain control module (PCM), such as OBD communication protocol, malfunction indicator lamp (MIL) command status, RPM value, and readiness monitor status. If any of these values are missing, the vehicle will fail the emissions test.

Shanahan's research revealed that the May 2011 inspections were missing the RPM value. Based on this finding, the motorist made a MAC appointment at a time convenient to him so that the vehicle could be evaluated further.

Once Shanahan evaluated the vehicle with an on-board diagnostics (OBD) generic scan tool, he determined that the engine revolutions per minute (RPM) parameter identification (PID) was missing from the scan tool data. This result validated the inspection workstation scan tool's results.

The Buick's inspection history revealed that the vehicle passed the previous year's (2010) inspection with the RPM signal present, so Shanahan reviewed the emissions test history again, this time focusing on anything else that was different between the 2010 and 2011 test records.

The test history revealed that the PID Count information (highlighted in the table) was inconsistent. The Buick had 38 PIDs in May 2010 when the RPM signal was present, while the May 2011 tests showed only 32 PIDs when the RPM signal was not present.

Shanahan suspected that the vehicle had some sort of PCM recalibration to cause this kind of change. When asked if the vehicle had any repairs performed after the May 2010 inspection, the motorist responded that a power steering pump had been replaced at the dealership.

Before working for the Massachusetts Vehicle Check program, Shanahan was a General Motors (GM) Master Technician with 30 years of experience working on GM brand vehicles. Based on his professional contacts and knowledge of GM data systems, he contacted a local GM dealer and asked a technician there to perform a vehicle warranty repair history search for the Buick in question.

General Motors Model 2007 Buick Lacrosse

That search confirmed that the dealership that replaced the power steering pump had performed a PCM recalibration in September 2010. He then spoke with the motorist's dealership, who checked the RPM data with an OBD generic scan tool to verify the MAC's findings. They both concluded something must be wrong with the latest version of PCM software loaded in September.

Because GM does not allow PCM software to be rolled back to a previous calibration, Shanahan suggested that the dealership technician contact the GM Technical Assistance Network for assistance. The technician did contact them, and after a couple of days reviewing the vehicle's problem, GM issued a PCM-specific password that allowed the motorist's dealership technician to install the calibration that had been installed prior to September 2010.

Once the vehicle was driven to set the readiness monitors, the vehicle was re-tested and passed inspection with 38 PIDS and an actual RPM signal. As this case illustrates, the MAC L-1's experience with GM systems and knowledge of OBD PIDs was invaluable to the Buick owner.

Test Date/Time	5/21/10 10:37 AM	5/13/11 11:19 AM	5/13/11 12:01 PM	5/19/11 11:57 AM	7/15/11 9:13 AM
Test Counter	1	1	2	3	4
OBD Test Result	Pass	Fail	Fail	Fail	Pass
OBD RPM	649	0	0	0	1188
PID Count	38	32	32	32	38
MIL Result	Pass				Pass
Diagnostic Trouble Codes					

Inspection Update Profile

With John Bilotta, John's Automotive

John Bilotta, Owner and Registered Emissions Repair Technician, John's Automotive.

Q: What services does John's Automotive offer motorists?

A: We offer complete auto repair services ranging from oil changes to electrical work, as well as tire replacement and care. Our team is made up of electrical and electronic specialists.

Q: How did you get your start in the automotive industry? What made you want to open your own business?

A: I have always loved cars since I was young. When I was in high school, I began working as a line technician at a dealership. I worked my way up to service and parts director for the Condor Automotive Group, and, at one point, I was overseeing the service at five dealerships! I saw the opportunity to advance myself by owning my own business, so I left the dealership in 1998 and opened John's Automotive in Pittsfield.

Q: Have you attended any of the MAC Open Houses? How else do you keep up with industry changes and emerging vehicle technologies?

A: We try to attend as many classes as we can. Most recently, we attended a free training seminar at the West Springfield Motorist Assistance Center (MAC) Open House. Instructor "G" Truglia is amazing, because he offers real hands-on training. We constantly use the AC Delco service center and participate in various web-based trainings and instructor-led classroom trainings. Some of those trainings take place at United Auto Parts warehouses where many of the instructors are actual General Motors technicians.

Q: Do you have any Registered Emissions Repair Technicians at your business? If so, how has that helped your business succeed?

A: We have three Registered Emissions Repair Technicians on staff, which makes up 75 percent of our team. Being a Registered Repair Shop has helped us keep up with changes in technology and allowed us the opportunity to diagnose and fix issues that other shops often overlook or can't complete, such as "Check Engine" light problems. It's nice to be able to stay ahead of the curve and accurately diagnose and complete vehicle repairs.

Q: What are some of your most challenging vehicle repairs? How did you solve them?

A: Some of the most challenging repairs we see involve drivability and "Check Engine" lights, especially when they occur on vehicles from the European markets. These repairs are tough because the scan tool information is very limited and can be difficult to use. Therefore, we do a lot of research and rely upon our industry contacts, including Andy Wood, an Automotive Service Excellence (ASE) L-1 Technician who works at the Pittsfield MAC. He has a wealth of knowledge that he has shared with us.

Q: Are there any repairs that are unique to winter conditions?

A: This time of year we see a lot of wire repairs and component replacements due to corrosion, such as salt underneath vehicles. A lot of the time, this corrosion results from where manufacturers are placing the components on the vehicle.

Q: How do you advertise your business?

A: Most of our business is made up of families and repeat customers, so word-of-mouth is our greatest form of marketing. We also use local papers and radio stations to help us advertise our services.

Q: What is your business motto?

A: I always tell my team to "make sure that a vehicle is right when it leaves here." We are very particular about our services, so we are constantly double-checking our work to make sure that it's properly completed, and our customers are 100 percent satisfied when they drive their vehicles away.

Inspection Equipment Updates

▶ Changes to Printers Shipped for Maintenance Replacement

Parsons/SGS have learned from the manufacturers that shipping printers with the toner cartridge and photoconductor assembly installed may not produce the best printing results and could damage the printer. As a result, all Lexmark and Okidata printers are no longer being shipped with a toner cartridge/photoconductor kit pre-installed. Replacement toner cartridges and photoconductors are now being shipped separately.

Note: Before calling the Technical Help Desk for printer service, stations should verify whether the toner or photoconductor warning lights are on. Please remember to inform the Hotline staff if either the toner, photoconductor or both lights are on, so that if a new toner cartridge and/or photoconductor is needed, it is ordered and delivered for use with the replacement printer.

Any station that receives a printer maintenance replacement shipment should follow the instructions below to remove the toner cartridge/photoconductor assembly from its original printer for use in the newly received replacement printer.

▶ Replacing Toner Cartridge/Photoconductor Procedures

Please be aware of and adhere to the following guidelines when removing toner/photoconductor assembly:

1. Turn the printer off.
2. Remove the printer cartridge assembly.
   a. Press the grey button on the left side of the printer to release the front door.
   b. Lower the front door.
3. Grasp the toner cartridge assembly handle and pull up and out.

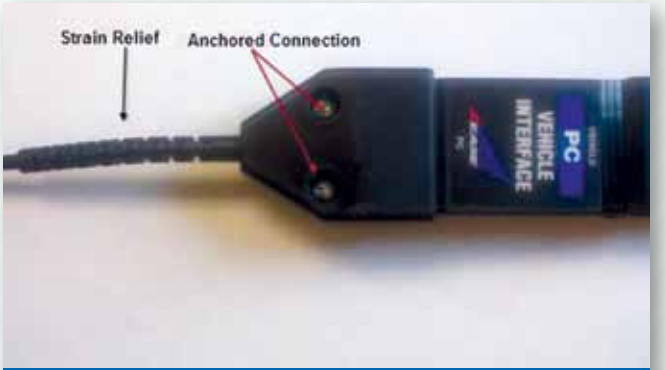
Note: Do not press the button on the printer cartridge assembly.

4. Place the toner cartridge assembly on a flat, clean surface.
5. Install the toner cartridge assembly into the replacement printer by aligning the green arrows on the guides of the toner cartridge assembly with the green arrows on the tracks in the printer and pushing the toner cartridge assembly in as far as it will go.

6. Close the front door and turn the printer on.

▶ Distribution of Upgraded OBD Cables and Clamshells Update

A Fall 2011 Inspection Update Newsletter article described the new on-board diagnostics (OBD) components that are being distributed to all inspection stations.



Program is distributing upgraded USB cable and custom clamshells to all stations

As of December 13, 2011, the program has distributed an improved 25-foot USB cable and a custom clamshell device to secure USB cables to the EASE interface device to 633 inspection stations. Distributions will continue until all stations have received these components.

▶ Clamshell Repair or Replacement

Please be aware of and adhere to the following:

1. Stations should not disassemble the clamshell unless directed by the Technical Help Desk staff or an FSR.
2. All OBD cable kits shipped to inspection stations will have the clamshell pre-attached and will contain the fully assembled kit (long cable, short cable, interface and clamshell).
3. The warehouse will not ship singular cables or interfaces unless you would like to purchase a part. Customers may contact the Technical Help Desk at 1-877-834-4677 for purchase instructions.

Inspection Procedure Reminders

▶ Proper Inspection Procedure for Vehicles with Loud Exhausts

The Registry of Motor Vehicles (RMV) routinely fields complaints about vehicles emitting loud exhaust noise while having valid (passing) inspection stickers. For example, the RMV received this comment: "What has been occurring for a long time is that young people are having specialty mufflers installed on their vehicles and the noise level of the muffler is increased dramatically. This noise level is disturbing to the general public 24 hours a day."

RMV would like to remind all vehicle inspectors of the proper procedure for inspecting vehicles with excessive (exhaust) noise. 540 CMR 4.04(5) states that "unnecessary noise is herein defined as any noise which is louder than that emitted by the vehicle when equipped with the original manufacturer's equipment."

If you are inspecting a vehicle, the vehicle must be rejected if the sound emitting from the exhaust component(s) is louder than the original manufacturer's equipment.

▶ Sticker Scanning Reminder

Some orange windshield stickers printed in January and February 2011 might have a 2D barcode that cannot be successfully scanned through the windshield. If you are attempting to inspect a vehicle in January or February 2012, and the windshield sticker barcode cannot be scanned, you do not need to call the Technical Helpdesk. Instead, enter the vehicle identification number (VIN) by scanning the VIN plate visible through the windshield or by manually typing the VIN using the workstation keyboard.

Fall Registered Repair Technician Training Recap

From October 17 to 20, 2011, the Massachusetts Vehicle Check program offered a Registered Repair Technician training seminar titled "OBD II Fuel System Problems."

At the Medford Motorist Assistance Center Open House on October 17, G Truglia instructed 30 repair technicians about how to perform effective repairs for fuel system diagnostic trouble codes.

Instructor "G" Truglia taught 110 repair technicians at four Motorist Assistance Centers about effective diagnostics and repairs on vehicles that have failed their emission inspection because of fuel system diagnostic trouble code problems.

These seminars are offered twice a year in the spring and fall. Look for an announcement about the Spring 2012 seminar in the next Inspection Update Newsletter.

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New Toner Replacement Procedures and Registered Repair Technician Update Inside!

Massachusetts Vehicle Check Program At A Glance

Program at a Glance	Count	Failure Rate
Non-Commercial Safety Inspections	1,233,803	5.5%
Commercial Safety Inspections	41,964	5.4%
7D Safety Inspections	407	2.5%
OBD Emissions Inspections	1,016,422	6.6%
Opacity Emissions Inspections	27,188	2.2%
Emissions Waivers Issued	2	
Repair Hardship Extensions Issued	24	

Enforcement Statistics	Count
Violations Issued to Inspectors	105
Violations Issued to Stations	113
Inspector Privileges Revoked	2
Inspectors Required to Retrain	5
Inspectors Suspended	28
Stations Suspended	28
Penalties Assessed	$104,000

Hotline and Training Statistics	Count
Motorist Calls Received	4,177
Inspection Station Calls Received	8,233
Initial Non-Comm. Inspectors Trained	254
Initial Commercial Inspectors Trained	38
Initial 7D Inspectors Trained	28
Initial Motorcycle Inspectors Trained	15

Licensed Stations	Count
Class A Stations	1,207
Class B Stations	176
Class C Stations	33
Class D Stations	285
Class E Stations	9
Registered Emissions Repair Shops	303

For period 07/01/2011 to 09/30/2011

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