



Biennial Report: 2015 – 2016
Ohio Vehicle Emissions Testing Program

BIENNIAL REPORT
OHIO VEHICLE EMISSIONS TESTING PROGRAM
INSPECTION AND MAINTENANCE PROGRAM
2015 – 2016

1. Introduction

This report has been prepared for the U.S. Environmental Protection Agency (U.S. EPA) in compliance with the requirements of 40 CFR 51.366. The information in this report covers the reporting period of 2015 – 2016.

The Ohio Vehicle Emissions Testing Program, known as E-Check, which started in 1996, is an important tool for improving air quality in nonattainment areas for ozone in Ohio. E-Check was established under Ohio Revised Code (ORC) 3704.14. Initial vehicle testing regulations were adopted in December 1995 by Ohio Environmental Protection Agency (Ohio EPA). In 1998, the State Controlling Board approved a contract change to allow vehicles to be tested under the ASM 2525 Phase-In standards. In September 2003, oxides of nitrogen (NOx) emissions standards were included for pass/fail determinations.

Ohio EPA runs the program through a contract that began in 1996 with Envirotest Systems. The contract was extended in July 2005 and an executive order was issued extending the contract for six months in 2007. In June 2008, a new one-year contract was awarded to Envirotest Systems. The contract was rebid in January 2009 and Envirotest was awarded the contract from October 2009 until the end of June 2012. In the summer of 2011, the Ohio legislature passed legislation for Ohio to implement a decentralized program by June 30, 2012.

From the start of the program in 1996 through January 2004, vehicles that were 25 years old and newer (a rolling window) were tested on a dynamometer. Actual emissions from vehicles on the dynamometer are compared to hydrocarbon, NOx, and carbon monoxide standards to determine whether a vehicle passes or fails. In January 2004, Ohio started using On-Board Diagnostics II (OBD II) testing for most 1996 and newer model year vehicles. OBD II computer systems determine whether a vehicle's emissions control systems are working properly and serve as an advanced warning to alert vehicle owners of potentially high emissions.

In 2016, OBD II tests were used for 93 percent of the vehicle emissions tests performed. Another 6 percent of the vehicle emissions tests performed were ASM 2525 tests.¹ Two-speed idle (TSI) tests accounted for 1.1 percent and

¹ If a gasoline-fueled vehicle could not be given an ASM 2525 test (e.g., vehicles with all-wheel drive) it was given a two-speed idle test, which measures emissions while the engine is operating at 2500 revolutions per minute (rpm) with the transmission in neutral, and while the vehicle is in idle. If a 1996 or older model year diesel-fueled vehicle was presented, an opacity test was performed, which measures the density of the exhaust emitted from the tailpipe.

opacity tests accounted for 0.1 percent. Clean Screen testing² accounted for an additional 1.2 percent of tests. Vehicles that fail the initial emissions test must have their emissions control system repaired, and must pass a re-test (or obtain a waiver of emissions requirements from Ohio EPA³).

To help motorists who need emissions repairs, the program has established a network of certified repair technicians who are specially trained to diagnose emissions problems, repair problems effectively, and prepare the vehicle for re-testing. In 2016, there were 125 licensed repair facilities that had at least one certified repair technician employed for repairs.

2. Program Changes Implemented since 2011

Program Design: Ohio has not changed the program's initial testing requirements regarding which vehicles are subject to testing. In the summer of 2011, the Ohio General Assembly passed legislation for Ohio to implement a decentralized program by June 30, 2012. The decentralized program involved adding 37 Lube Stops, 16 independent repair shops and 16 self-service testing kiosks to the 23 existing testing stations. All the new testing options only provide OBD II testing. The existing stations maintained the ability to perform OBD II, ASM, TSI and opacity emissions tests.

Funding: Funding for mandatory vehicle emissions tests continues to come from the Auto Emissions Test Fund. Money for this fund is transferred from the State's General Revenue Fund (GRF). This money pays for up to three tests within a 365-day period. With the fourth test, and all thereafter, the motorist must pay \$18. Only one passing test within a 365-day period is paid for out of the Auto Emissions Test Fund.

Personnel Levels: Due to program efficiencies, Ohio EPA Mobile Sources Section personnel levels have been reduced by two full-time employees.

Procedures: Since the program began in 1996, several procedures have been modified or adopted to ensure the program meets its goals. These changes include the following:

- *Use of ASM 2525 Phase-In test.* The initial IM240 test ran a vehicle on the dynamometer at varying speeds simulating normal driving conditions. In May 1998, the State Controlling Board approved a contract change to modify the emissions testing program to a new

² Clean Screen test measures emissions while the vehicle is operating normally on a public roadway. Clean Screen testing typically takes place at highway on-ramp locations to obtain emissions readings as vehicles are accelerating through the test equipment.

³ Waivers are only provided if some repairs are made and certain other conditions are met. In 2016, waivers were provided to 16,127 vehicles, or 24 percent of the vehicles that failed the initial test.

enhanced vehicle emissions test that runs vehicles at a lower, steady speed and, on average, is less time consuming than the original test.

- *OBD II Implementation.* On-Board Diagnostics (OBD II) testing was implemented in January 2004. OBD II compliant vehicles (most 1996 and newer vehicles) presented for testing with insufficient readiness monitors may be given the option for an ASM 2525 test on the initial visit. Vehicles that are 2005 model year and newer do not get the option to downgrade to the ASM 2525 test if the vehicle is not OBD II-ready.

OBD II-compliant vehicles presented with the malfunction indicator light (MIL) “on” will fail the emissions test and must have the vehicle repaired and retested using the OBD II test. In 2016, 93 percent of the vehicles presented for testing were tested with OBD II technology.

Program Authority (Legislation and Regulations): In 2006, the Ohio Legislature increased the new vehicle exemption age from two to four years, while ensuring that vehicles with title changes during the new vehicle exemption were not required to test prior to re-titling. The Ohio Legislature extended the motor vehicle emissions testing program until the end of 2007. In December 2007, the governor issued an executive order further extending the motor vehicle emissions testing program through June 30, 2008. The governor issued an executive order in June 2008 to extend the I/M program through June 2009. A six-month extension was granted in June 2009. The contract was renewed in October 2009 with Envirotest Systems until the end of June 2011. Beginning July 1, 2011, the contract was extended for one year until June 30, 2012. In January 2012, Envirotest Systems won a three-year contract to implement a decentralized vehicle testing program beginning June 4, 2012. Effective July 1, 2015, the contract was extended through June 30, 2016. The contract was again extended through June 30, 2017.

3. Program Issues Identified and Corrected

Ohio EPA and Envirotest Systems work together on an ongoing basis to address and resolve any issues that arise during the operation of the vehicle inspection and maintenance program. The continuing communication between the parties results in no long-term issues needing enforcement actions to be brought against Envirotest Systems.