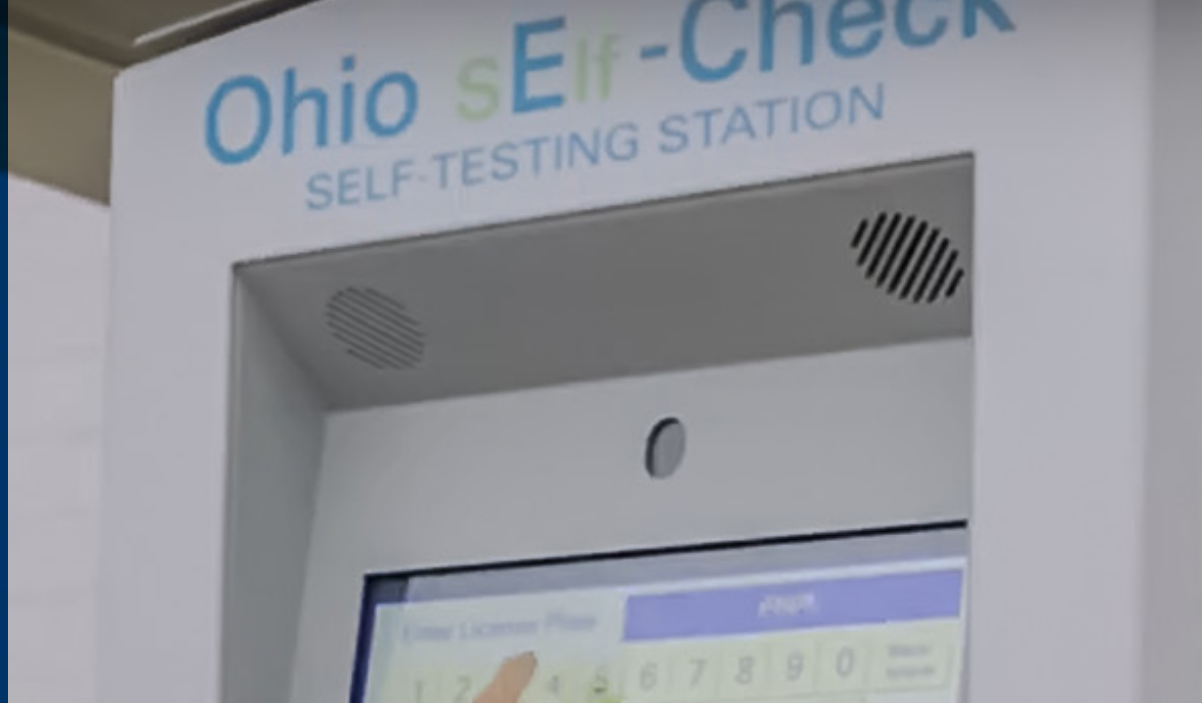




**Environmental  
Protection  
Agency**



# Ohio E-Check Annual Report

# 2023

This document is the 2023 Annual Report for the United States Environmental Protection Agency (U.S. EPA) on the Ohio Enhanced Inspection and Maintenance Program (I/M Program) known as E-Check. This report covers Jan. 1 to Dec. 31, 2023.

## Ohio Vehicle Inspection and Maintenance Program



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## ATTACHMENTS

Attachment A: Index of Report Pages Relevant to EPA Regulation Sections

Attachment B: Number of vehicles failing initially, per test type

# 1.0 EXECUTIVE SUMMARY

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The Ohio E-Check program plays a vital role in improving air quality by ensuring vehicles are properly maintained. When a vehicle fails an emission test, it must be repaired, which directly reduces harmful emissions. An example out of Oregon found that 22% of vehicles outside the emission testing area failed the tests, while only 5% inside the testing area failed.

In Ohio, vehicles in E-Check counties emit 20% less carbon monoxide and 44% less nitrogen oxide emissions than those outside the program area. This data shows that emission testing helps keep vehicles well-maintained and reduces pollution.

# 1.1 Testing overview

## In 2023...

### Emission Tests Conducted

Ohio EPA performed

# 880,832

vehicle emission tests, including initial tests, retests, and off-cycle tests due to change of ownership/registration. 99.3% were On-Board Diagnostics (OBD) tests and 0.7% were opacity and Clean Screen tests. Only 78 were opacity tests on diesel vehicles.

### Quality Assurance

Ohio EPA performed

# 2,233

audits (303 covert audits, 239 performance audits, 151 equipment audits, and 1,576 lane status audits) to determine if stations performed all E-Check tests correctly and if the station's physical conditions met the contract requirements. As a result of these audits, no performance issues were identified that warranted station closure.

### Compliance and Enforcement

# 55,789

unique vehicles failed their initial tests, a 6.6% failure rate. Of those, 17,918 vehicles, about 2.0% of all unique vehicles tested, received a repair waiver, meaning 32% of initially failed vehicles received this waiver.

# 12,136

vehicles tested failed, but had no known outcome, accounting for 1.4% of the total unique vehicles. This includes vehicles that didn't pass a retest, didn't receive a waiver, were sold or moved outside the program area, were scrapped, or otherwise couldn't operate within the area. (See attachment B for the number of vehicles failing initially by test type.)



# 2.0 THE OHIO I/M PROGRAM

## 2.1 Purpose and Statistics of the Ohio E-Check Program



The E-Check program helps improve air quality by identifying cars and trucks with high emissions that may need repairs. Established under the 1990 amendments to the Clean Air Act (CAA), the inspections and maintenance (I/M) program was required and implemented in areas **failing to meet federal health standards** for ozone and carbon monoxide (CO). Historically, the Cleveland-Akron area was designated as moderate nonattainment because it did not meet the federal health standards for ozone. The CAA mandates moderate nonattainment areas implement an I/M program, known in Ohio as E-Check. The program aims to reduce volatile organic compound (VOC) emissions and nitrogen oxides (NOx) that lead to ozone formation.

**Under the most recent 2015 ozone standard, the Cleveland-Akron area was initially designated as marginal nonattainment.** After failing to meet the 2015 ozone standard by the 2020 deadline, U.S. EPA reclassified (“bumped up”) this area to moderate nonattainment on Nov. 7, 2022. The area again failed to meet the standard by the 2023 deadline and is expected to be “bumped up” by U.S. EPA to serious nonattainment.

Ohio EPA administers the E-Check program under [Ohio law](#), aiming to identify polluting vehicles and make testing as user-friendly as possible. Ohio, via multiple competitive bids, contracted with Envirotest Systems to operate the Ohio I/M Program in the Cleveland-Akron metro area from 1996 through June 30, 2025.

In 2019, the tailpipe emission test was discontinued since all vehicles aged four to 25 now use onboard diagnostics (OBD) II systems for testing. As of 2023, most vehicles from 1999 to 2019 were tested using OBDII, with only a small fraction (0.7%) undergoing other tests.

### 2.1.1 Ohio I/M Program Summary

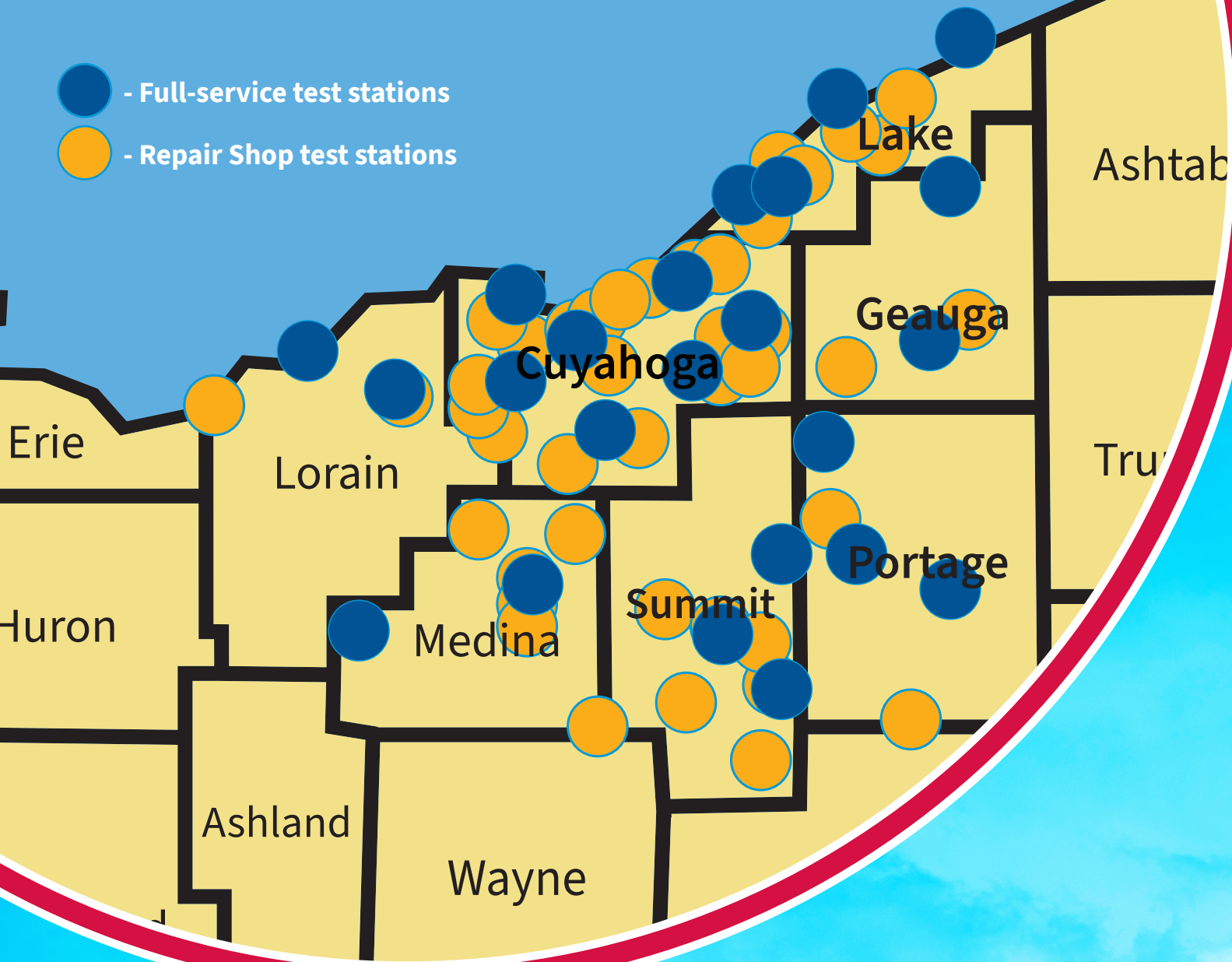
In 2023, 834,217 vehicles were expected to undergo emission testing. Vehicles were exempted from testing if they were:

- Model year 1999 or older
- Model year 2020 or newer
- Greater than 10,000-pounds gross vehicle weight rating
- Motorcycles, recreational vehicles, and motor homes
- Vehicles operating on alternative fuels, such as propane or natural gas

Vehicles must have a valid vehicle emission certificate every other year or when transferred to a new owner if not tested within 365 days of the previous test.



## 2.1.2 Inspection Stations



### Full-service test stations

1. 24770 Sperry Dr, Westlake, 44145
2. 1291 West Bagley Rd, Berea, 44017
3. 13000 York Delta Dr, North Royalton, 44133
4. 4557 Industrial Pkwy, Cleveland, 44135
5. 2724 East 55th St, Cleveland, 44104
6. 6150 West Canal Rd, Valley View, 44125
7. 17704 St Clair Ave, Cleveland, 44110
8. 19000 South Miles Rd, Warrensville Hts, 44128
9. 1750 Metro Dr, Euclid, 44132
10. 1979 Joseph Lloyd Pkwy, Willoughby, 44094
11. 1755 North Ridge Rd, Painesville, 44077
12. 10632 Auburn Rd, Chardon, 44024
13. 17202 Munn Rd, Chagrin Falls, 44023
14. 5093 South Prospect St, Ravenna, 44272
15. 1460 Fairchild Rd, Kent, 44240
16. 2200 Pinnacle Pkwy, Twinsburg, 44087
17. 3478 State Rd, Cuyahoga Falls, 44223
18. 2021 Brown St, Akron, 44319
19. 1818 Copley Rd, Akron, 44320
20. 770 N Progress Dr, Medina, 44256
21. 408 East Main Str, Spencer, 44275
22. 205 Sandstone Blvd, Amherst, 44001
23. 128 Reaser Ct, Elyria, 44036

### Repair shop test stations

1. **Take 5 - Arlington**  
2960 Arlington Rd, Akron, 44312
2. **Take 5 - Willowick**  
33707 Vine St, Willowick, 44095
3. **Take-5 - Fairview Park**  
21459 Center Ridge Rd, Fairview Park, 44116
4. **Take 5 - Montrose**  
3908 Medina Rd, Montrose, 44333
5. **Serpentini Chevrolet - Medina**  
3880 Pearl Rd, Medina, 44256
6. **Honda - Cleveland Heights**  
2953 Mayfield Rd, Cleveland Heights, 44118
7. **Serpentini Chevrolet - Strongsville**  
15303 Royalton Rd, Strongsville, 44136
8. **Serpentini Chevrolet - Westlake**  
25100 Detroit Rd, Westlake, 44145
9. **Lang's Automotive**  
1407 State Route 44, Randolph, 44265
10. **Terry's Northcoast Auto**  
3328 St Clair Ave NE, Cleveland, 44111
11. **Preston Chrolet**  
13600 W Center St, Burton, 44021
12. **Plain Brothers**  
12144 Triskett Rd, Cleveland, 44111
13. **Mercedes Benz of North Olmsted**  
28595 Lorain Rd, North Olmsted, 44070
14. **Frank May Garage**  
225 Seiberling St, Akron, 44306
15. **Circle Automotive**  
2122 W 73rd St, Cleveland, 44102
16. **Columbia Marathon**  
24497 Sprague Rd, Columbia Station, 44028
17. **TransColonial Auto Service**  
8228 E Washington St, Chagrin Falls, 44023
18. **Fred Martin Superstore**  
3195 Barber Rd, Barberton, 44203
19. **Carvana - Warrensville Heights**  
4070 Interchange Corporate Center Rd, Warrensville Heights, 44203
20. **Rad Air - Akron**  
1200 Portage Trail W, Akron, 44313
21. **Rad Air - Medina**  
767 N Court St, Medina, 44256
22. **Xtreme Performance**  
38070 Center Ridge Rd, North Ridgeville, 44309
23. **Nissan of Streetsboro**  
885 Classic Dr, Streetsboro, 44241
24. **Masterworks**  
1789 S Taylor Rd, Cleveland Heights, 44118
25. **Delta Automotive Repair Center**  
6672 Center Rd, Valley City, 44280
26. **Ron's Garage LLC**  
1460 W 130th St, Brunswick, 44212
27. **K&B Auto**  
405 Chestnut Blvd, Cuyahoga Falls, 44221
28. **Zappy's Auto Care Center**  
9862 Johnnycake Ridge Rd, Mentor, 44060
29. **Mighty Auto Pro**  
290 S Prospect St, Medina, 44256
30. **Olmsted Auto Care**  
27098 Cook Rd, Olmsted Township, 44138
31. **Serpentini Chevrolet**  
2810 Bishop Rd, Willoughby Hills, 44092
32. **Horner's Corner**  
738 E State St, Wadsworth, 44281
33. **Eugene's Auto Repair**  
8612 East Ave, Bedford, 44146
34. **Northcoast Mitsubishi - Bedford**  
500 Broadway Ave, Bedford, 44146
35. **Weber Automotive**  
28820 Lorain Rd, North Olmsted, 44070
36. **Terry's Northcoast Auto - Parma**  
5295 Pearl Rd, Parma, 44129
37. **Center Heights Service**  
3884 Warrensville Center Rd, Beachwood, 44122
38. **Dave's Auto Care**  
37657 Vine St, Willoughby, 44094
39. **CarMax - Akron**  
2940 Chenoweth Rd, Akron, 44312
40. **CarMax - Warrensville Heights**  
4900 Pointe Pkwy, Warrensville, 44128
41. **Federico Tire**  
71 S State St, Painesville, 44077
42. **Rad Air - Downtown Cleveland**  
1277 Hamilton Ave, Cleveland, 44114
43. **Northcoast Auto Mall- Brookpark**  
5700 Brookpark Rd, Cleveland, 44129
44. **Firelands Chevrolet**  
2315 OH-60, Vermillion, 44089
45. **Fuerst Automotive**  
8116 Broadview Rd, Broadview Heights, 44147

*As of 2023, the Cleveland-Akron area had 68 stations and 119 lanes available for testing and 45 OBDII-only inspection stations (or independent repair shops). The region also has 21 self-serve kiosks which account for 116,229, or 13.2% of total tests. Various independent businesses operate the OBDII-only inspection stations, while the E-Check stations and self-serve kiosks are operated by Envirotest Systems.*

## 2.1.3 Inspectors



**Table 1: Number of Inspectors in 2023**

	# of Inspectors
Trained and licensed to conduct testing in 2023	221

## 2.1.4 Emission Tests Administered

The Ohio E-Check utilizes four different types of emission tests:

1. **Gas Cap Tests:** This checks that the gas cap seals tightly to prevent fuel vapors from escaping. If a vehicle fails the gas cap test, it fails the overall emissions test, regardless of its emissions performance.
2. **On-Board Diagnostic (OBDII) Test:** For vehicles made in 1996 or newer, this test monitors the vehicle’s performance through its computer system and will trigger the “check engine” light if there’s a problem. In 2023, 99.3% (874,902) of all tests were OBDII.
3. **Clean Screen Test:** This is for a small percentage of gasoline-fueled vehicles with exceptionally low emissions. It measures emissions while the vehicle operates normally, usually at highway on-ramps. To pass, a vehicle must have two acceptable readings within nine months. In 2023, 5,852 (0.66%) Clean Screen tests were completed.
4. **Opacity Tests:** Only diesel vehicles undergo this test, which measures the density of the exhaust emitted from the tailpipe. In 2023, 78 (0.01%) opacity tests were completed.

For all vehicles—except those tested with the Clean Screen test — a visual inspection is performed to confirm the presence of a catalytic converter. If a vehicle fails this visual check, it automatically fails the overall emission test, no matter the results.

## 2.2 Compliance, Extensions, and Exemptions

### 2.2.1 Overall Motorist Compliance with Testing Requirements

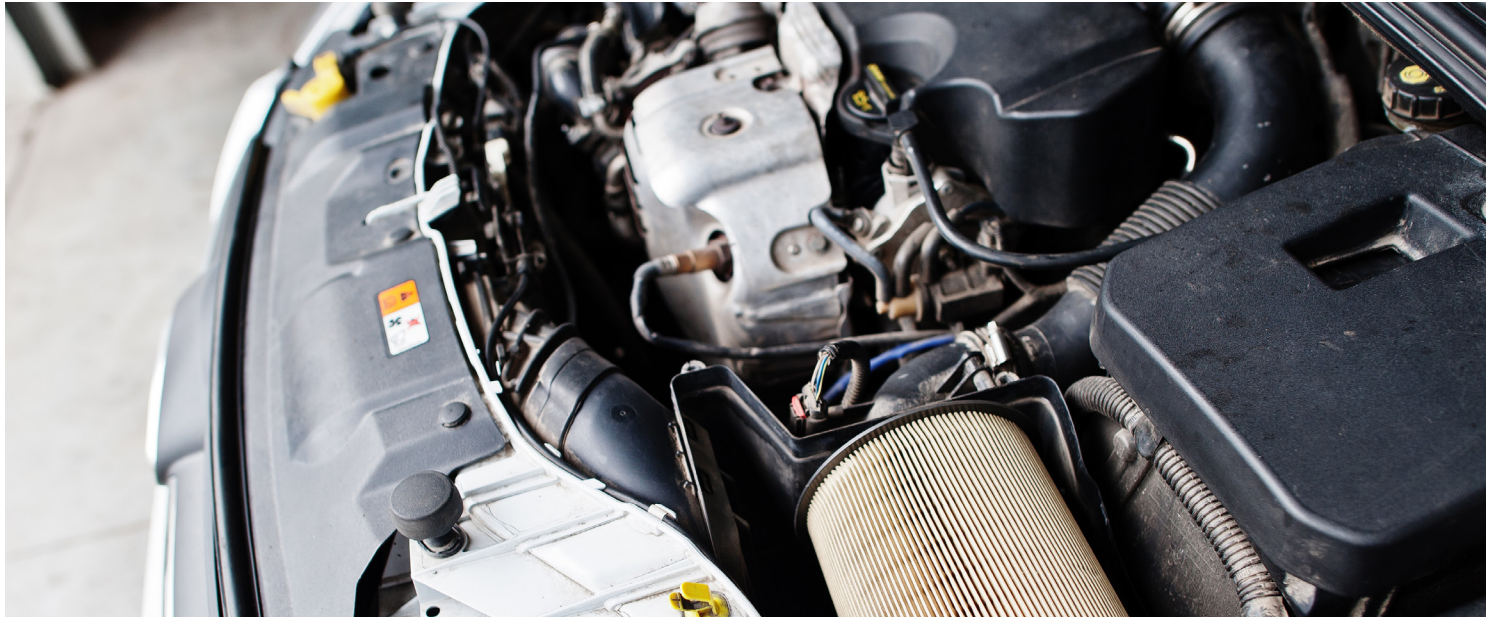
Table 2 summarizes the 2023 overall compliance rate - the total number of registered unique vehicles subject to testing compared to the number that passed.

**Table 2: Motorist Completing Testing Requirements**

Overall Testing Compliance	Vehicle Count	Compliance % (Unique vehicles versus estimated vehicles subject to test)
Vehicles subject to 2023 test (registered BMV records)	834,217*	
Unique vehicles tested that received passing tests, including clean screen	830,899	99%

*\*This number is an estimate due to vehicles bought and sold outside of the test area or transferred to different owners within.*





## 2.2.2 Motorist Time Extensions

Ohio EPA offers various extensions and exemptions to individuals who need more time to repair a vehicle or have it tested.

- Non-permanent exemptions:**  
 If the driver is out-of-state, such as in military service or school, or the vehicle won't return to Ohio within one year, the motorist can register the vehicle without getting an E-Check test for one test cycle.
- Extensions:**  
 If the driver is unable to afford necessary repairs or is temporarily located out-of-state in an area without emission testing, they may qualify for an extension. A motorist has up to six months to comply with the current testing cycle.
- Permanent exemptions:**  
 Some vehicles, like those over 10,000 pounds or operating on alternative fuels (electricity, natural gas, or propane), are permanently exempt from emission testing.



Extensions require a vehicle to receive a test, but more time is provided to complete it. The category of "other" in Table 3 includes special or unique circumstances such as extended medical situations and not being able to obtain a part for repairs that would require a vehicle to be tested out of its normal test cycle.

The E-Check program offers repair waivers to individuals who attempt to repair their vehicle but need help getting it to pass E-Check. In most cases, a repair waiver will be issued if \$300 or more is spent on emissions-related repairs and it passes a visual tampering inspection. A waiver is good for that test cycle, the same as a passing test, and will allow the vehicle to be registered Ohio.

**Table 3: Number of Extensions or Exemptions Issued in 2023**

Type of Extensions or Exemptions	Number Issued
Extensions	3,439
Waivers	17,918
Permanent Exemptions	527
Out-of-State Exemptions	3,227
Student Exemptions	308
Military Exemptions	645
Hardship Extensions	3,335
Other	18
<b>Total Number of Waivers, Extensions, and Exemption Issues</b>	<b>29,417</b>



## 2.2.3 Registration File Audits and Compliance with Deadlines

Ohio EPA works with Ohio Bureau of Motor Vehicles' (BMV) Special Investigations Unit (SIU) to make sure people aren't evading emission testing by falsely registering their vehicles outside of testing areas. In 2023, Ohio BMV SIU investigated seven complaints regarding E-Check compliance. Of the seven investigations, one resulted in registration cancellation, and none resulted in a criminal prosecution.

Currently, the BMV has not performed registration file audits to determine compliance with the vehicle emission testing program in northeast Ohio.



## 3.0 IS THE TESTING EQUIPMENT RELIABLE?

In 2023, 68 vehicle testing stations operated 119 lanes.

Ohio EPA's equipment audit procedure is designed to verify that the lane equipment operates within the tolerances specified by federal and state guidelines. Equipment audits are inspections of emission testing equipment performed overtly at least two times per year per lane. Ohio EPA's equipment audits are conducted by agency staff and a contractor representative. If a lane fails any of the audit criteria, the lane is shut down until the issue is resolved.

Envirotest Systems' equipment must undergo self-tests on either a per-test, hourly, or weekly basis. The computer system will lock down a lane if a self-test is not performed at the required time. Testing cannot resume in the lane until the self-test is performed.

In 2023, 74 testing lanes at the full-service stations operated by Envirotest Systems were successfully audited. 151 equipment audits resulted in 148 audit passes and two audit failures, or an overall failure rate of 1.9%.

**Table 4: Number of Equipment Audits at Each Testing Station in 2023**

Facility	Number of Equipment Audits
WESTLAKE	8
BEREA	6
NORTH ROYALTON	8
PURITAS	8
EAST 55TH	8
VALLEY VIEW	8
ST. CLAIR	6
WARRENSVILLE	9
EUCLID	8
WILLOUGHBY	6
PAINESVILLE	6
CHARDON	4
AUBURN	4
ROOTSTOWN	4
KENT	6
CUYAHOGA FALLS	6
BROWN STREET	10
COPLEY	8
MEDINA	6
SPENCER	4
AMHERST	6
ELYRIA	6
TWINSBURG	6





4.0

## QUALITY ASSURANCE

### 4.1 Overt and Covert Audits

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Ohio EPA performs overt and covert performance audits to evaluate emission testing station and inspector performance. The results of the different types of audits are detailed below.

#### 4.1.1 Overt Audits

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During overt performance audits, Ohio EPA staff verifies that Envirotest Systems and other contracted private repair shop personnel perform the emission test correctly while providing adequate customer service to Ohio's motorists.

These audits have three main focuses:

- 1. Test Procedures:** Evaluate how well the inspectors perform the emissions test and interact with the motorists.
- 2. Safety Conditions:** Ensure that testing environments are safe for customers.
- 3. Station Appearance:** Check that the stations are clean and welcoming.

In total, 151 overt audits were completed in 2023, averaging two per lane. All 23 full-service stations and 44 private repair shops were audited, with no station or lane shut down.

#### 4.1.2 Covert Audits

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During covert audits, Ohio EPA staff verifies that emission tests are performed correctly while ensuring good customer service. The procedures are similar to those in the overt audits.

For these audits, Ohio EPA uses three vehicles that have been tampered with before testing to ensure they fail the proper emission tests.

## 4.1.3 Covert Audit Results

The covert vehicles are usually set up to fail the OBD test or, if applicable, not allow the test to be performed by clearing the readiness monitors. If the vehicle passes when it was meant to fail, that's called a false pass. The audit does not directly indicate whether the false pass resulted from the equipment or the inspector. If a false pass occurs because the test wasn't performed correctly, Envirotest Systems must provide proper test procedures and/or additional training with the option of Ohio EPA taking corrective actions against Envirotest.

In 2023, the 23 full-service test stations underwent 233 covert audits, including 117 camera audits. The 45 repair shops received 75 covert performance audits, including 26 camera audits.

**Table 5: 2023 Covert Audit Results**

Conducted with the vehicle set to fail	
Diesel	0
OBD	308
Conducted with the vehicle set to fail any combination of two or more test types	
Diesel	0
OBD	0
Resulting in a false pass	
Diesel	0
OBD	0
Resulting in a false pass for any combination of two or more test types	
Diesel	0
OBD	0

As seen in Table 5, none of the 308 covert audits, or 0%, resulted in false passes.

## 4.2 Inspector Performance

As stated in Section 2.1.3, 221 states that all inspectors are licensed or certified to conduct testing in 2023.

Ohio EPA and Envirotest Systems keep records of all fraud and bribery issues at the testing stations. All cases brought to either Ohio EPA or Envirotest Systems are investigated thoroughly. If the situation warrants using other agencies, such as the Ohio State Highway Patrol, the agencies work together to resolve these cases. The table below summarizes the results of Ohio EPA's enforcement actions against stations and inspectors.

**Table 6: Non-Customer Initiated Fraud and Bribery Cases**

The number of inspectors and stations	# inspectors	# stations
Suspended, fired, or otherwise prohibited from testing as a result of covert audits	0	0
Suspended, fired, or otherwise prohibited from testing for other causes	0	0



## 4.3 Fines Collected

Ohio EPA does not collect fines from stations or inspectors.

## 4.4 Station Compliance Documents

Ohio EPA works with Envirotest Systems and the Ohio BMV to ensure no false compliance documents are passed through the system. Each compliance document is printed with a specific type of printer and each compliance document issued is electronically transferred to BMV's database and verified before registration issuance. If the compliance code on the compliance certificate cannot be verified, Ohio BMV will reject the vehicle registration.



In 2023, 848,334 vehicles received one or more emission tests for a total of 880,832 tests, including both pass and fail. This includes 5,842 “clean screened” vehicles and 75 opacity tests. 55,789 vehicles (6.6%) failed their initial test. The Ohio E-Check program requires motorists to repair the vehicle and receive a passing test, waiver, or extension before the vehicle registration date.

- Waivers were issued to vehicles that had more than \$300 repairs performed and were still unable to pass a retest. In 2023, repair waivers were granted to 17,918 vehicles (32%) initially failing the emission test (2% of all vehicles tested).
- Of the vehicles that failed the initial test during 2023, 12,136 vehicles (21.6%) passed a retest, obtained a waiver, or an extension.

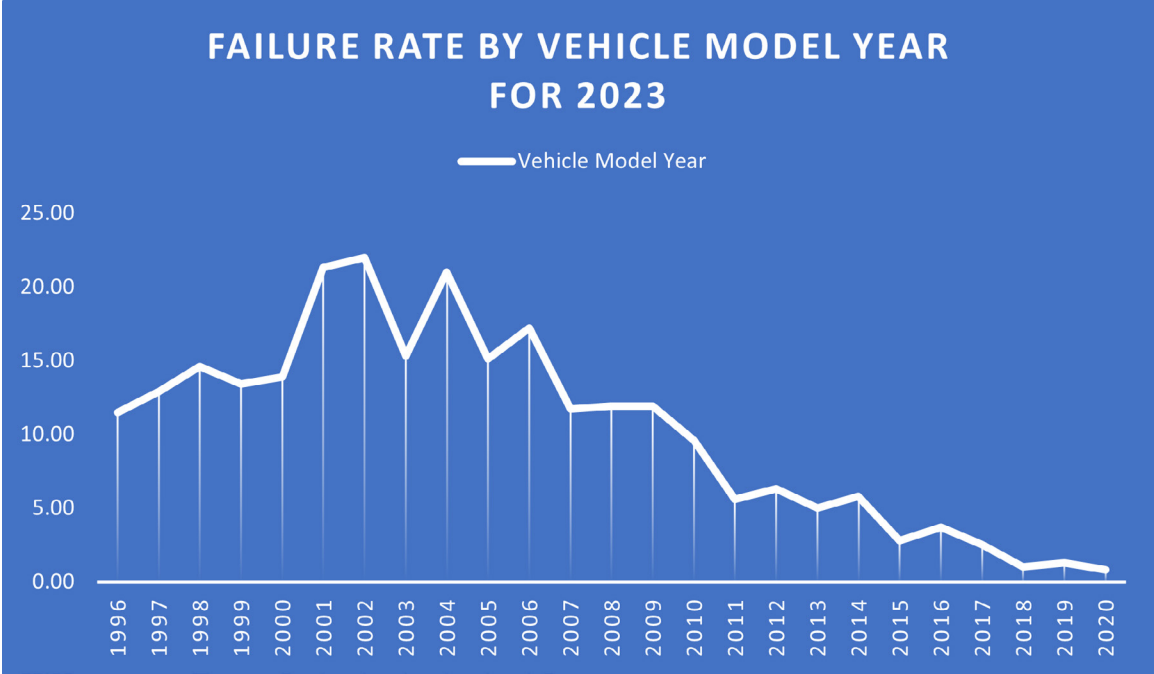
The following is a summary of all tests:

**Year 2023**

Test Type	(Pass & Fail) Count	Percentage
OBD (including 116,229 kiosk)	874,902	99.3 (13.3 kiosk)
Opacity	78	0.01
RSD (Clean Screen)	5,852	0.66
<b>Total Tests</b>	<b>880,832</b>	

Details of all emission test results are available on the [Ohio EPA website](#).

The following figure shows failure rates by model year for 2023. As shown, a vehicle’s age significantly impacts failure rate.



## 5.1 Station Compliance Documents

This section previously determined emission reductions from tailpipe testing. However, as mentioned, tailpipe testing was discontinued in 2020 and only OBDII diagnostic testing was conducted in 2023. The [2021-22 Biennial report](#) provides the total emission reductions due to the vehicle emission testing program using the MOVES3 model.

