

**NOTICE OF PROPOSED RULEMAKING**

**TITLE 18. ENVIRONMENTAL QUALITY**

**CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY –**

**AIR POLLUTION CONTROL**

**PREAMBLE**

<b><u>1.</u></b>	<b><u>Section Affected</u></b>	<b><u>Rulemaking Action</u></b>
	R18-2-1001	Amend
	R18-2-1002	Added
	R18-2-1003	Amend
	R18-2-1005	Amend
	R18-2-1006	Amend
	R18-2-1007	Amend
	R18-2-1008	Amend
	R18-2-1009	Amend
	R18-2-1010	Amend
	R18-2-1011	Amend
	R18-2-1012	Amend
	R18-2-1013	Repeal
	R18-2-1016	Amend
	R18-2-1017	Amend
	R18-2-1018	Amend
	R18-2-1019	Amend
	R18-2-1020	Amend
	R18-2-1022	Amend
	R18-2-1023	Amend
	R18-2-1025	Amend
	R18-2-1026	Amend
	R18-2-1027	Repeal
	R18-2-1028	Repeal
	R18-2-1031	Repeal
	Table 5	Amend

**2. Citations to the agency’s statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):**

Authorizing statutes: A.R.S. §§49-104, 49-404, 49-425, 49-447

Implementing statutes: A.R.S. §§49-541, 49-542, 49-542.02, 49-542.03, 49-542.05, 49-542.06, 49-542.07, 49-543, 49-544, 49-545, 49-546, 49-547, 49-548, 49-549, 49-550, 49-551

**3. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the proposed rule:**

Notice of Rulemaking Docket Opening: (volume #) A.A.R. (page #)

**4. The agency’s contact person who can answer questions about the rulemaking:**

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**5. An agency's justification and reason why a rule should be made, amended, repealed or re-numbered, to include an explanation about the rulemaking:**

**A. Summary**

This rulemaking will bring the Arizona Vehicle Emissions Inspection Program (VEIP) in line with federal regulations, implement HB 2357 (2005), HB1531(2007), and HB 2226 (2014) into rule, allow the VEIP to leverage new technology, and codify VEIP practices that have been simplified as a result of ADEQ's adoption of the LEAN Management System

The VEIP is an esoteric Clean Air Act control program, an integral part of the Arizona State Implementation Plan (SIP), and a key cog in the state's ability to meet National Ambient Air Quality Standards (NAAQS). The Act specifically requires inclusion of the VEIP in the ozone nonattainment area SIP for Phoenix, and the program is also a key element of the carbon monoxide (CO) maintenance SIPs for Phoenix and Tucson. Because of the necessity of the program and its impact on pollutants, it is imperative that ADEQ bring this program up to date with current requirements.

ADEQ is proposing to amend current rules to implement more than a decade of enabling legislation, reduce redundant processes, bring the program in line with federal regulations, simplify and clarify rule language, and update the program to reflect technological innovation. While developing the language for these rules, ADEQ repeatedly reached out to motorists and industry stakeholders. By conducting a robust stakeholder process, ADEQ has ensured that the updated rules will not create any unforeseen burdens on Arizona citizens or businesses while still protecting and enhancing public health and the environment in the state.

As part of the process to update VEI regulations, ADEQ must also update the Arizona State Implementation Plan (SIP). This rulemaking will require the Department to model the effectiveness of the program and submit the modeling results for approval to the Environmental Protection Agency (EPA). This is reflected in the contingent nature of some of the rule changes. In the interim, ADEQ will maintain a website at <http://azdeq.gov/VECS/Rulemaking> that stakeholders and members of the public can visit to see the status of the SIP revision.

Arizona's VEIP is authorized by A.R.S. Title 49, Chapter 3, Article 5. The Inspection and Maintenance (I/M) Program has been approved by the Environmental Protection EPA as a part of Arizona's SIP, with the most recent revisions being approved in 2003. ADEQ has been granted general rulemaking authority under A.R.S. §49-104.

**B. Background**

Inspection and maintenance (I/M) programs are required in areas that do not meet the National Ambient Air Quality Standards (NAAQS). These programs help identify vehicles with excess emissions, provide information to assist with diagnosing malfunctions that cause excess emissions, and require repair of ve-

hicles to bring them into compliance with emissions standards. Arizona established a mandatory vehicle emissions inspection and maintenance program in Maricopa and Pima Counties in 1975. Since establishment of the mandatory program, there have been several improvements designed to further reduce carbon monoxide and ozone precursors, volatile organic compounds (VOC), and oxides of nitrogen (NOx) from vehicle emissions. The resulting emissions reduction benefits have helped the Phoenix area meet the 1-hour ozone and 1997 8-hour ozone air quality standards, and both the Phoenix and Tucson areas meet the carbon monoxide air quality standards.

Among program improvements was the passage of 1993 legislation that authorized the implementation of an enhanced I/M program in the Phoenix area. On November 14, 1994, the Arizona Department of Environmental Quality (ADEQ) submitted to the U.S. Environmental Protection Agency (EPA) Final State Implementation Plan Revision – Arizona Basic and Enhanced Vehicle Inspection/Maintenance Program. The Enhanced Program and the Basic Program, operated in the Tucson area, were approved by EPA as elements of the Arizona SIP effective July 7, 1995 (60 FR 22518; May 8, 1995). Subsequent revisions in June 2001, and February 2002, included an increase in the vehicle emissions inspection program area to incorporate high-growth areas adjacent to metropolitan Phoenix, adoption of onboard diagnostic testing to include current technology and improve customer convenience, and provisions for a one time only waiver from meeting applicable emissions standards for the life of a vehicle. These changes were approved by EPA effective February 21, 2003 (68 FR 2912; January 22, 2003).

At the time of the 1994 submittal, the Maricopa County carbon monoxide and 1-hour ozone planning areas were both classified as “moderate” nonattainment areas. Under the 1990 CAA amendments, moderate classifications for either pollutant require a basic I/M program. Due to rapid population growth in the Phoenix metropolitan area and the difficulty of demonstrating attainment for CO and ozone, the State legislature authorized an enhanced I/M program for the Maricopa County nonattainment areas. This action implemented measures to aid the State in meeting federal requirements for demonstrating reasonable further progress to reduce emissions of volatile organic compounds by 15 percent (63 FR 28898; May 27, 1998). Because the Maricopa County carbon monoxide and 1-hour ozone nonattainment areas had not attained the air quality standards by the applicable attainment date, both areas were subsequently reclassified to “serious” on August 28, 1996 (61 FR 39343; July 29, 1996) and February 13, 1998 (62 FR 60001; November 6, 1997, and 63 FR 7290; February 13, 1998), respectively. These actions triggered a federal requirement for the already implemented enhanced I/M program.

In 2018, the enhanced I/M program is operated in the expanded Phoenix metropolitan area, known as Area A, located in portions of Maricopa, Pinal, and Yavapai Counties, and requires periodic emissions inspection of motor vehicles registered or regularly operated within the area. This program is among the primary control measures used to help the Phoenix area attain and maintain the ozone and carbon monoxide air quality standards. ADEQ also operates a basic I/M program in Area B, located in portions of Pima County.

### **C. Explanation of the Proposed Rules:**

#### **1. Vehicle Types Updated to Reflect Current Technology and Regulatory Schemes.**

This rulemaking adds or updates definitions for all-terrain vehicles, collectible vehicles, alternative fuel vehicles, reconstructed vehicles, and specially constructed vehicles. These definitions are necessary to reduce confusion and delineate between different types of vehicles that are exempt from emissions testing. This rulemaking also removes unnecessary definitions from Article 10 and adds additional clarifying definitions for user-friendliness.

Reconstructed and specially constructed vehicles do not receive a grace period where they are exempt from emissions testing. This is because these vehicles may have been modified in a way that could increase the amount of pollutants they produce. This rulemaking clarifies the difference between these types of vehicles and original equipment manufacturer (OEM) vehicles.

Currently, Article 10 doesn't include definitions for many types of OEM alternative fuel vehicles. The last time these regulations were updated, battery electric vehicles (BEVs) and zero emissions vehicles (ZEVs) were not manufactured for public purchase in nearly the same volume as they are today. This rulemaking adopts many of the definitions ADOT uses for these vehicles to ensure that they fit within our emissions testing exemptions.

All-terrain vehicles (ATVs) are currently exempt from emissions testing, but there has been some confusion about what type of vehicles qualify for this exemption. The definition has been updated to be more precise. Additionally, a definition for motorcycles, which are exempt from emissions testing, has been updated to match ADOT definitions to reduce confusion.

## **2. Exemptions for Certain Classes of Vehicles.**

The Arizona Legislature has exempted certain classes of vehicles from emissions testing. These exemptions will be codified into rule through this rulemaking. This rulemaking exempts brand new cars from emissions testing for 5 years, even if they are last model year's vehicle. Currently, if a 2017 model year vehicle is purchased in 2018, the vehicle will only receive a 4 year exemption. This exemption extends to OEM alternative fuel vehicles. However, vehicles converted to run on alternative fuels will not be exempt from emissions testing.

This rulemaking will also exempt vehicles that meet the definition of a collectible vehicle. The legislation that exempted motorcycles and ATV's will be codified into rule. Cranes and oversized vehicles that receive permits pursuant to A.R.S. §§ 28-1100, 28-1103, and 28-1144 will be exempted. Currently, vehicles that are permitted by ADOT pursuant to these statutes don't receive emissions testing, and this rulemaking will match regulation to practice. These vehicles include cranes, earthmovers, and other massively oversized vehicles that receive special permits for traveling on the highway.

## **3. Exemption for Military Personnel on Out of State Active Duty.**

To streamline vehicle testing and registration procedures for military personnel, R18-2-1023 is being revised to allow our men and women at arms to more easily manage their vehicle registration when they are on active duty outside of the state. The rules are applicable to military personnel whose vehicles require emissions testing prior to registration but will not be available for inspection within the state during the 90-day period before the emissions compliance expiration date. Our men and women at arms will be exempt from emissions testing while they on duty and out of state. Additionally, filing for the exemption will be free of charge.

ADEQ will also be launching an online process to streamline out-of-state vehicle registration for all parties. Soldier on duty will be able to manage their vehicle registration from wherever they are in the world, absolutely free of charge.

## **4. Emissions Inspector and Fleet Agent Licenses Timeframe Expanded**

This rulemaking expands the length of emissions inspector licenses and fleet agent licenses from 1 to 2 years. Additionally, the subjects included on the licensing test have been changed to accurately reflect the

subjects that need to be tested according to regulations adopted pursuant to the Clean Air Act. Emissions inspectors must pass an overt audit from ADEQ twice a year in order to maintain their license.

#### **5. Transferable Certificate of Inspection for Dealer Fleets.**

A.R.S. § 49-542 (D) mandates that every motor vehicle sold in the state must pass an emissions test before being delivered to a retail purchaser. To ensure motor vehicle dealerships meet this requirement quickly and efficiently, ADEQ runs the fleet emissions testing program under a statutory grant of authority at A.R.S. § 49-546. The fleet emissions station program is part of Arizona's larger Vehicle Emissions Control (VEC) program that was implemented pursuant to the requirements of the Clean Air Act (CAA). The fleet program has been reviewed, and approved, by the Environmental Protection Agency (EPA) as part of Arizona's CAA State Implementation Plan (SIP).

Currently, ADEQ's fleet emissions testing program grants permits to conduct decentralized emissions testing to physical locations. ADEQ issues certificates of inspection (COI), the emissions compliance document that is required to register the vehicle, to those specific, physical addresses. When the vehicle is re-located, the COI is no longer valid, even if the vehicle is owned by the same business entity and has been assigned a valid COI. If the vehicle stayed on the same lot, the COI would be good for either 12 or 24 months depending on the type of test that was performed. Since the COI is issued to the physical location, when the vehicle is sold at another address, dealerships are forced to retest the vehicle before delivering to a customer regardless of the date the vehicle last passed an emissions test. This additional testing requirement has no positive impact on public health or the environment.

This rulemaking will amend current rules so that COIs are issued to vehicles instead of physical locations. The upshot of the change is that a dealership will be allowed to test cars at one location, and sell them at another without retesting. This rulemaking will have no effect on Arizona's ability to meet federal requirements, it is simply a process change to reduce the regulatory burden on businesses while still ensuring protection of public health and the environment. Every car in Arizona will still be required to pass an emissions test before it is sold to a retail customer.

#### **6. Removed Liquid Fuel Leak Test Requirement.**

The requirement to perform this test was removed from the Arizona Revised Statutes in 2014 by HB 2226. The liquid fuel leak test proved to be dangerous and costly to perform, and the legislature directed ADEQ to stop requiring that it be performed with the previously mentioned bill. This update to Article 10 matches regulations with to implementing statutes so there is no confusion.

#### **7. Removed Requirement for ADEQ to Keep a List of Aftermarket Catalytic Converters.**

The rulemaking removes a rule that required ADEQ to keep and maintain a list of acceptable aftermarket catalytic converters. There are numerous aftermarket catalytic converter models for numerous models and makes of vehicles. Nearly all of these catalytic converters would allow the car to meet emissions standards if used to replace a broken, stolen, or tampered part. Keeping an up-to-date list is nearly impossible, and it restricts the options of Arizonans who need to perform this type of repair in order to pass emissions.

#### **8. User Friendliness Updates.**

This rulemaking incorporates numerous changes to make Article 10 easier to read, navigate, and use for Arizona motorists. Confusing language has been cut out of Article 10 and rule language is now consistent

throughout the entirety of the regulations. R18-2-1006, the home of Arizona emissions testing requirements and procedures, has been completely redesigned to be more intuitive. R18-2-1013, R18-2-1027, R18-2-1028, and R18-2-1031 have been repealed and the relevant language incorporated into other rules.

This rulemaking also clarifies the emissions testing requirements for students who attend either community colleges or state universities. By referencing specific statutes and providing context for what those statutes mean in rule, ADEQ hopes that this rulemaking makes understanding emissions testing requirements easier for Arizona citizens, institutions, and businesses.

## **9. OBD Testing Expansion.**

Emissions testing using the on-board diagnostic system or OBD testing is a quick, efficient, and effective way to conduct an emissions test. Nearly all 1996 and later vehicles have an internal computer which continuously monitors the engine, transmission, and other emissions control systems. The OBD test is, in effect, an “early warning system” that alerts the driver or vehicle over about the need for repairs that can reduce air pollution and ensure that your vehicle keeps running as cleanly as it was designed to run. To do an OBD inspection, the inspector connects a communication cable from the emissions testing equipment to the vehicle’s diagnostic link connector (DLC). Through the cable, the emissions testing equipment will request specific communication protocols from the vehicle, allowing the testing equipment to verify whether or not the vehicle emissions control system is in compliance.

This rulemaking will expand OBD testing in Arizona to include any vehicle that is OBDII certified by the EPA. Previously, OBD testing was not done for fleets and certain weight classes of vehicles in the state. Specifically, in 2005, OBD systems became mandatory for heavy-duty vehicles and engines up to 14,000 lbs GVWR. Then, in December 2008, EPA finalized OBD regulations for 2010 and later heavy-duty engines used in highway vehicles over 14,000 lbs GVWR and made changes to the OBD requirements for heavy-duty applications up to 14,000 lbs GVWR to align them with requirements for applications over 14,000 lbs GVWR. This rulemaking will ensure that any vehicle equipped with a certified OBDII system is getting this quick and efficient emissions test.

### **a. Diesel Vehicles**

Diesel vehicles in Arizona currently do not undergo OBD testing. Beyond that, the test procedures for Diesel vehicles vary dramatically between Area A and Area B. This rulemaking will immediately prescribe OBD testing for diesel vehicles 8500 lbs or less in Area A. After the additional provisions of this rulemaking have been approved into the SIP by the EPA Administrator, diesel testing procedures between Area A and Area B will be standardized, and any diesel vehicle that is OBDII certified will receive an OBD test instead of opacity testing.

### **b. OBD testing for dealer fleet vehicles**

A.R.S. § 49-542 (D) mandates that every motor vehicle sold in the state must pass an emissions test before being delivered to a retail purchaser. To ensure dealerships meet this requirement quickly and efficiently, ADEQ runs the fleet emissions testing program under a statutory grant of authority at A.R.S. § 49-546. The fleet program grants permits to businesses, governments, state agencies, and cities to perform decentralized emissions testing on the vehicles they own and operate.

Currently, motor vehicle dealer fleets in Arizona are not licensed to perform OBD testing. Instead, they still perform curb idle testing and 2500 RPM testing as prescribed by state law at A.R.S. § 49-542 (F)(4) and (F)(6). Governments and non-dealer fleets are allowed to perform OBD testing, but only on non-

diesel vehicles. Government diesel vehicles will be allowed to receive OBD testing after the change. This change will affect the testing method for around 70,000 cars a year.

#### **10. Certificate of Exemption for Out-Of-State Vehicles.**

This rulemaking will modify the process for exempting out of state vehicles from emissions testing. ADEQ is mandated to have a process for out of state exemptions by A.R.S. § 49-542(J)(2)(E). Currently, ADEQ requires individuals who are in areas where corresponding emissions testing is not available to submit a vehicle verification form signed by a law enforcement officer from the area in order to be granted this exemption.

In theory, this was a good way for ADEQ to verify that the vehicle was, in fact, in another state. However, an overwhelming majority of individuals seeking to take advantage of this process have run into trouble when attempting to get a signature from a law enforcement officer. Most law enforcement officers in other states are unfamiliar with Arizona's emissions testing procedures. Therefore, when an individual needs to obtain an out of state exemption and is in an area without a corresponding emissions testing program, they often cannot meet Arizona's requirement to register their vehicle.

The new version of this rule will still require verification that the vehicle is in another state. Instead of requiring the signature of a law enforcement official, ADEQ will require a signed affidavit from the customer stating where the vehicle is located. ADEQ hopes that this will allow customers to take advantage of a statutorily mandated exemption when they qualify for it.

ADEQ is also leveraging technology to move the out-of-state exemption process online. This will eliminate the necessity of mailing registration documents. ADEQ can also perform additional online checks to ensure this process isn't being taken advantage of by individuals looking to avoid having to pass emissions in the state.

#### **11. Overt Audits of Emissions Testing Facilities Modified to Meet Federal Guidelines.**

ADEQ conducts quality assurance checks subject to 40 CFR § 51.363. The EPA's regulations and guidelines require two overt performance audits to be performed at least twice per year for each lane or test bay. Currently, ADEQ conducts significantly more overt inspections than required by federal regulations. This rulemaking will reduce the amount of overt inspections performed by ADEQ to fall in line with federal rules. The impact on the number of over inspections is displayed in the tables below.

ADEQ does not believe that the reduction in inspections will result in additional noncompliance by either state stations or fleet station permittees. Evolving technology has made it possible to review emissions testing results remotely in real time. The proliferation of OBD vehicles has also dramatically reduced the emission testing programs reliance on IM147 and curb idle tests. The reduction in frequency of these tests combined with gas analyzers that self-calibrate every day has made the amount of auditing done by ADEQ unnecessary.

##### **A. Area A State Stations**

Currently, ADEQ performs 3,308 audits per year on Area A state stations.

<b>AUDIT TYPE</b>	<b>ACTUAL AUDIT TIME IN MINUTES</b>	<b>AUDIT RELATED PAPER-WORK TIME IN MINUTES</b>	<b>TOTAL ELAPSED TIME IN HOURS</b>	<b>UNITS TO BE INSPECTED</b>	<b>AUDIT FREQUENCY PER YEAR</b>	<b>TOTAL NUMBER OF AUDITS PER YEAR</b>
Span Gas Audit	20	40	1.00	34	6	204
Traffic and Inspector Audit	20	40	1.00	52	12	624
Evap Integrity Audit	30	40	1.17	34	2	68
Gas Analyzer Audit	30	60	1.50	170	6	1020
Opacity Meter Audit	20	40	1.00	33	12	396
Inspector Audit	30	40	1.17	52	2	104
State Station VIR Audit	30	40	1.17	15	12	180
Gas Cap Integrity Audit	20	50	1.17	108	2	216
Propane Injection Audit	60	120	3.00	34	2	68
VIR Accuracy Audit	15	40	0.92	30	12	360
Ambient Sensor Audit	15	40	0.92	34	2	68

After this rule change goes into effect, ADEQ will conduct 1,192 audits per year on Area A state stations.

<b>AUDIT TYPE</b>	<b>ACTUAL AUDIT TIME IN MINUTES</b>	<b>AUDIT RELATED PAPER-WORK TIME IN MINUTES</b>	<b>TOTAL ELAPSED TIME IN HOURS</b>	<b>UNITS TO BE INSPECTED</b>	<b>AUDIT FREQUENCY PER YEAR</b>	<b>TOTAL NUMBER OF AUDITS PER YEAR</b>
Span Gas Audit	20	40	1.00	34	2	68
Traffic and Inspector Audit	20	40	1.00	52	2	104
Evap Integrity Audit	30	40	1.17	34	2	68
Gas Analyzer Audit	30	60	1.50	170	2	340
Opacity Meter Audit	20	40	1.00	33	2	66
Inspector Audit	30	40	1.17	52	2	104
State Station VIR Audit	30	40	1.17	15	12	180
Gas Cap Integrity Audit	20	50	1.17	108	2	216
Propane Injection Audit	60	120	3.00	34	2	68
VIR Accuracy Audit	15	40	0.92	30	2	60



Ambient Sensor Audit	15	40	0.92	34	2	68
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B. Area B State Stations

Currently, ADEQ performs 740 audits per year on Area B state stations.

AUDIT TYPE	ACTUAL AUDIT TIME IN MINUTES	AUDIT RELATED PAPERWORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Dyno Load Cell Audit	15	60	1.25	8	4	32
Traffic and Inspector Audit	20	40	1.00	12	12	144
Gas Analyzer Audit	30	60	1.50	8	24	192
Opacity Meter Audit	20	40	1.00	8	24	192
Inspector Audit	30	40	1.17	12	2	24
State Station VIR Audit	30	40	1.17	3	12	36
Gas Cap Integrity Audit	20	50	1.17	24	2	48
VIR Accuracy and Fraud Detection Audit	15	40	0.92	6	12	72

After this rule change, ADEQ will conduct 190 audits per year on Area B state stations.

AUDIT TYPE	ACTUAL AUDIT TIME IN MINUTES	AUDIT RELATED PAPERWORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Dyno Load Cell Audit	15	30	1.25	8	2	16
Traffic and Inspector Audit	20	30	1.00	12	2	24
Gas Analyzer Audit	30	30	1.50	8	2	16
Opacity Meter Audit	20	30	1.00	8	2	16
Inspector Audit	30	30	1.17	12	2	24
State Station VIR Audit	30	30	1.17	3	12	36
Gas Cap Integrity Audit	20	30	1.17	24	2	48

VIR Accuracy and Fraud Detection Audit	15	30	0.92	6	2	12
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C. Area A Fleet Station

Currently, ADEQ performs 2,119 audits per year on Area A fleet stations.

AUDIT TYPE	PRE AUDIT PAPERWORK TIME IN MINUTES	ACTUAL AUDIT TIME IN MINUTES	POST AUDIT PAPERWORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Gas Analyzer Audit	15	20	15	0.83	148	4	592
Opacity Meter Audit	15	15	15	0.75	61	4	244
Inspector Audit	15	25	15	0.92	430	2	860
Scan Tool Audit	10	20	10	0.67	59	4	236
Annual Fleet Audit	50	120	20	3.17	187	1	187

After this rule change goes into effect, ADEQ will perform 1,583 audits per year on Area A fleet stations.

AUDIT TYPE	PRE AUDIT PAPERWORK TIME IN MINUTES	ACTUAL AUDIT TIME IN MINUTES	POST AUDIT PAPERWORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Gas Analyzer Audit	15	20	15	0.83	148	2	296
Opacity Meter Audit	15	15	15	0.75	61	2	122
Inspector Audit	15	25	15	0.92	430	2	860
Scan Tool Audit	10	20	10	0.67	59	2	118
Annual Fleet Audit	50	120	20	3.17	187	1	187

D. Area B Fleet Station

Currently, ADEQ performs 567 audits per year on Area B Fleet Stations.

AUDIT TYPE	ACTUAL AUDIT TIME IN MINUTES	AUDIT RELATED PAPER-WORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Span Gas Audit	20	35	0.83	26	4	104
Traffic and Inspector Audit	15	30	0.75	21	4	84
Evap Integrity Audit	25	40	0.92	135	2	270
Gas Analyzer Audit	20	30	0.67	17	4	68
Opacity Meter Audit	120	170	3.17	41	1	41

After this rule change goes into effect, ADEQ will perform 439 audits per year on Area B fleet stations.

AUDIT TYPE	ACTUAL AUDIT TIME IN MINUTES	AUDIT RELATED PAPER-WORK TIME IN MINUTES	TOTAL ELAPSED TIME IN HOURS	UNITS TO BE INSPECTED	AUDIT FREQUENCY PER YEAR	TOTAL NUMBER OF AUDITS PER YEAR
Span Gas Audit	20	35	0.83	26	2	52
Traffic and Inspector Audit	15	30	0.75	21	2	42
Evap Integrity Audit	25	40	0.92	135	2	270
Gas Analyzer Audit	20	30	0.67	17	2	34
Opacity Meter Audit	120	170	3.17	41	1	41

## 12. State Registration of Equipment.

This rule change will eliminate the method in which ADEQ registers equipment to fleet emissions testing permits. Currently, emissions testing equipment is registered separately from a permit, and then linked to the permit itself. One of the modifications in these rule changes is that equipment will no longer be registered separately. Instead, it will be registered as part of an emissions testing permit and modifiable with the myDEQ web portal.

ADEQ expects this change to simplify the process of getting a fleet emissions inspection permit.

### 13. **Removed Licenses for Analyzer Repair Persons.**

ADEQ previously granted licenses for analyzer repair persons. There are currently only two people in the state who take advantage of this program. ADEQ is ending this licensing program because of a lack of participation.

With the proliferation of OBD testing, ADEQ expects less and less fleets with use gas analyzers for emissions testing. Therefore, the number of licensed individuals will likely dwindle.

**6. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:**

Not applicable.

**7. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:**

Not applicable.

**8. The preliminary summary of the economic, small business, and consumer impact:**

The following discussion addresses each of the elements required for an Economic, Small Business, and Consumer Impact Statement (EIS) under A.R.S. § 41-1055.

**An identification of the rulemaking.**

The rulemaking addressed by this EIS consists of amendments to the entirety of Title 18, Chapter 2, Article 10 of the Arizona Administrative Code. This rulemaking will ameliorate regulatory burdens that have no impact on public health or the environment.

**An identification of the persons who will be directly affected by, bear the cost of, or directly benefit from the rule making.**

**A. Effect on Used Car Dealerships**

One of the ways this rulemaking will have a positive impact on Arizona businesses is by making COI's assigned to a vehicle instead of a location. The rules that restrict certificate of inspection (COI) transferability are outdated, as they were written at a time where car dealerships didn't have multiple locations. Modern car dealerships have evolved, and routinely sell cars at different locations than the lot that they were originally parked on when the dealership took title. This rule making recognizes that reality, as requiring cars to be emissions tested multiple times when they have already passed a test and aren't being driven costs time, money, and effort with no return.

The persons who will be directly affected by and will benefit from this rulemaking are used car dealerships in Arizona, as well as individuals who buy cars from used car dealerships. An individual COI costs \$11.50, so although the economic benefits will be small, used car dealerships should expect to save money. They will also save money by reducing the amount of man hours they spend emissions testing cars.

This rule could also benefit used car dealerships that throw events like tent sales and other off-site sales events as it will remove logistical barriers that prohibit those events from happening.

Used car purchasers will benefit from this rule change because their transaction will be more expedient, as the car won't have to undergo a duplicative emissions test before delivery. There may also be a benefit for purchasers who choose to purchase a vehicle at the off-site sales events mentioned above.

This rule change will also reduce inspections on businesses that have fleet emissions testing permits. Reduced inspection are possible because ADEQ has launched a new, online portal for managing fleet emissions inspection permits called myDEQ. MyDEQ allows for immediate reporting of fleet emissions inspection results, which means less time ADEQ inspectors need to spend in the field. By reducing inspections and leveraging technology, the businesses that take advantage of ADEQ's fleet emissions testing permit should see cost savings.

Fleet permittees will also benefit from being allowed to conduct OBD testing. Although the cost per COI is the same, maintenance costs on OBD testing equipment is far less than the cost of maintaining a gas analyzer to

## **B. Diesel Vehicle Owners**

OBD testing is a more stringent, cheaper, and higher quality version of emissions testing for vehicles that are certified with the OBDII system. Testing diesel vehicles using this already installed technology will make emissions testing cheaper and quicker for all of the diesel vehicles that can take advantage of it. Additionally, an OBD test allows for two years of registration while opacity testing only allows registration for one. In Area A, this will save diesel vehicle owners \$34 every two years. In Area B, it will save diesel vehicle owners \$12.25 every two years.

### **A cost benefit analysis of the following:**

#### **(a) The probable costs and benefits to the implementing agency or other agencies directly affected by the implementation and enforcement of the rulemaking.**

ADEQ estimates that there will be no cost increases to the agency as a result of this rulemaking. By leveraging new technology such as myDEQ, ADEQ should see cost saving by reducing inspections.

#### **(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking.**

ADEQ estimates that there will be no cost increases to other political subdivisions of the state as a result of this rulemaking. Political subdivisions that take advantage of the fleet emissions testing permit should see some costs savings with this rulemaking because of myDEQ.

#### **(c) The probable costs and benefits to businesses directly affected by the rule making, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.**

Used car dealerships can expect to spend less money on COI's, as well as less man hours on emissions testing as a result of this rulemaking. ADEQ estimates that this rulemaking will result in moderate cost savings for Arizona businesses.

**A general description of the probable impact on private and public employment in businesses, agencies, and political subdivisions of this state directly affected by the rulemaking.**

ADEQ estimates that this rulemaking will have no impact on private and public employment in businesses, agencies, and political subdivisions of this state.

**A statement of the probable impact of the rulemaking on small businesses.**

**(a) An identification of the small businesses subject to the rulemaking.**

Under A.R.S. § 41-1001(21) “Small business” means a concern, including its affiliates, which is [1] independently owned and operated, which is [2] not dominant in its field and which [3] employs fewer than one hundred full-time employees or which had gross annual receipts of less than four millions dollars in its last fiscal year.

There are small used car dealerships that will benefit from this rulemaking. They will benefit by having to spend less time and money performing duplicative emissions testing on vehicles.

**(b) The administrative and other costs required for compliance with the rulemaking.**

There will be no additional costs required for compliance with this rulemaking. Businesses that are eligible for a fleet emissions testing station permit will continue to be eligible, and will continue to be subject to the same regulations and inspections as before.

**(c) A description of the methods that the agency may use to reduce the impact on small businesses.**

Not applicable.

**(d) The probable cost and benefit to private persons and consumers who are directly affected by the rule making.**

The cost savings to business is likely too small to have a measurable impact on used car prices on Arizona. The benefit that consumers can expect as a result of this rule change is that the logistics of doing car sales events like tent sales will be much easier after the rulemaking. Arizonans who choose to take advantage of sales events of that nature can expect more events, as the amount of time spent on the logistics for throwing them will be reduced.

**A statement of the probable effect on state revenues.**

A.R.S. § 49-542 (D) mandates that every motor vehicle sold in the state must pass an emissions test before being delivered to a retail purchaser. To ensure motor vehicle dealerships meet this requirement quickly and efficiently, ADEQ runs the fleet emissions testing program under a statutory grant of authority at A.R.S. § 49-546. This results in a cost savings for Arizona businesses, as a COI issued by a fleet station costs only \$11.50 compared to a cost of \$17 or more at a centralized state station. Additionally, fleets save time and money by not having to drive their merchandise to a centralized station every time they acquire a new car.

By reducing the duplicative testing requirement through this rulemaking, ADEQ expects a di minimus impact on agency revenues. ADEQ estimates that less than 5,000 cars a year, out of the 100,000 tested by

our fleet stations, will be affected by this rule change. That means an approximate decrease of \$57,500 for the administration of the agencies fleet emissions testing permit program.

**A description of any less intrusive or less costly alternative methods of achieving the purpose of the rule making.**

ADEQ was not able to identify any less intrusive or costly alternative methods for achieving the purpose of the rulemaking.

**A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that the data is acceptable. For the purposes of this paragraph, “acceptable data” mean empirical, replicable, and testable data as evidenced in supporting documentation, statistics, reports, studies, or research.**

ADEQ has relied on its own COI fee data to make projections on costs. ADEQ has also reached out to stakeholders at the various meetings held for this change. It is difficult to project with a high degree of accuracy, because the business of selling used cars is extremely cyclical in nature. Therefore, ADEQ believes that our own COI fee data is the best dataset available for any economic impact projections for this rulemaking.

**9. The agency’s contact person who can answer questions about the economic, small business and consumer impact statement:**

Name: Jonathan Quinsey  
Address: Arizona Department of Environmental Quality  
1110 W. Washington St.  
Phoenix, AZ 85007  
Telephone: (602)771-8193  
Fax: (602)771-2366  
E-mail: quinsey.jonathan@azdeq.gov

**10. The time, place, and nature of the proceedings to make, amend, repeal, or renumber the rule, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:**

ADEQ reached out to representatives from every permitted facility, and held a stakeholder meeting on September 11th from 2-4. ADEQ does not plan on holding any further oral proceedings. If an individual wishes to make further comments, they may contact:

Name: Jonathan Quinsey  
Address: Arizona Department of Environmental Quality  
1110 W. Washington St.  
Phoenix, AZ 85007  
Telephone: (602)771-8193  
Fax: (602)771-2366  
E-mail: quinsey.jonathan@azdeq.gov

ADEQ will accept any written comments on the matter until close of comment.

Close of comment: TBD

**11. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:**

*(Editor's Note: All agencies answer first part of question here.)*

**a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:**

This rule affects current fleet emissions testing permittees, a permit issued under the authority enumerated at § 49-546 and the corresponding ADEQ regulations at R18-2-1017, R18-2-1018, and R18-2-1019. Although the rulemaking affects permittees, it makes no changes to the requirements for the permit.

Permit management is changed with the rollout of myDEQ - ADEQ's online permit management application. MyDEQ is the new application ADEQ offers the regulated community. MyDEQ is a digital solution to better assist them in meeting their environmental priorities and responsibilities with an easy online tool, available 24/7 to meet business needs

**b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:**

40 CFR §51.353 and 40 CFR §51.356 guide states in the administration of decentralized emissions testing solutions. Arizona's fleet emissions testing program has been approved by the EPA and implemented in to Arizona's SIP. ADEQ runs the program pursuant to a grant of authority at A.R.S. § 49-546.

Federal law gives states the ability to design programs, but does not direct states in the implementation of those programs. There are no federal laws on point in regards to certificates of inspection, so this rule-making will not exceed the requirements of federal law.

**c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:**

No persons submitted an analysis to ADEQ.

**12. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:**

*Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program," EPA420-R-01-015, EPA, June 2001.*

R18-2-1006(C)(4)(b)

*IM240 & Evap Technical Guidance," EPA420-R-00-007, EPA, April 2000.*

R18-2-1006(C)(5)(a)(vii)



R18-2-1006(C)(5)(b)(iii)  
R18-2-1006(C)(6)(c)(i)

*Society of Automotive Engineers Recommended Practice J1667, February 1996*

R18-2-1006(C)(10)(a)(i)

*40 CFR 51, Subpart S, Appendix B, Section III, amended as of July 1, 2017*

R18-2-1006(C)(6)(b)

*40 CFR 51, Subpart S, Appendix A, Section I, amended as of July 1, 2017*

R18-2-1006(C)(6)(c)(ii)

R18-2-1006(C)(7)(b)

R18-2-1006(C)(8)(b)

R18-2-1019(D)(2)(a)

*40 CFR 51, Subpart S, Appendix B, Section II, amended as of July 1, 2017*

R18-2-1006(C)(7)(a)

*40 CFR 85.1703*

R18-2-1017(B)

**13. The full text of the rules follows:**

**TITLE 18. ENVIRONMENTAL QUALITY**

**CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY - AIR POLLUTION CONTROL**

**ARTICLE 10. MOTOR VEHICLES; INSPECTIONS AND MAINTENANCE**

Section

R18-2-1001. Definitions

R18-2-1002. ~~Reserved~~ Applicable Implementation Plan

R18-2-1003. Vehicles to be Inspected by the Mandatory Vehicle Emissions Inspection Program

R18-2-1005. Time of Inspection

R18-2-1006.	Emissions Test Procedures
R18-2-1007.	Evidence of Meeting State Inspection Requirements
R18-2-1008.	Procedure for Issuing Certificates of Waiver
R18-2-1009.	Tampering Repair Requirements
R18-2-1010.	Low Emissions Tune up, Emissions and Evaporative System Repair
R18-2-1011.	Vehicle Inspection Report
R18-2-1012.	Inspection <u>and Reinspections</u> ; Procedures and Fee
R18-2-1013.	<del>Reinspections</del> <u>Repealed</u>
R18-2-1016.	Licensing of Inspectors <u>and Fleet Agents</u>
R18-2-1017.	Inspection of Government Vehicles
R18-2-1018.	Certificate of Inspection
R18-2-1019.	Fleet Station Procedures and Permits
R18-2-1020.	<del>Licensing of Third Party Agents</del> ; Department Issuance of <del>Issuing</del> Alternative Fuel Certificates
R18-2-1022.	Procedure for Waiving Inspections Due to Technical Difficulties
R18-2-1023.	Certificate of Exemption for Out-of-State Vehicles
R18-2-1025.	Inspection of Contractor's Equipment and Personnel
R18-2-1026.	Inspection of Fleet Stations
R18-2-1027.	<del>Registration and Inspection of Emissions Analyzers and Opacity Meters</del> <u>Repealed</u>
R18-2-1028.	<del>Certification of Users of Registered Analyzers and Analyzer Repair Persons</del> <u>Repealed</u>
R18-2-1031.	<del>Standards for Evaluating the Oxidation Efficiency of a Catalytic Converter</del> <u>Repealed</u>
Table 5.	Tolerances

## ARTICLE 10. MOTOR VEHICLES; INSPECTIONS AND MAINTENANCE

### R18-2-1001. Definitions

~~In this Article, unless the context otherwise requires:~~ The following definitions apply to this Article:

1. Abbreviations and symbols are defined as follows:
  - a. "A/F" means air/fuel,
  - b. "CO" means carbon monoxide.
  - c. "CO<sub>2</sub>" means carbon dioxide.
  - d. "EGR" means exhaust gas recirculation.
  - e. "GVWR" means gross vehicle weight rating.
  - f. "HC" means hydrocarbon.
  - g. "HP" means horsepower.
  - h. "LNG" means liquefied natural gas.
  - i. "LPG" means liquid petroleum gas.
  - j. "MIL" means ~~Malfunction Indicator Lamp~~ malfunction indicator lamp.
  - k. "MPH" means miles per hour.
  - l. "MVD" means the Motor Vehicle Division of the Arizona Department of Transportation.
  - m. "NDIR" means nondispersive infrared.
  - n. "NO<sub>x</sub>" means the sum of nitrogen oxide and nitrogen dioxide.
  - o. "%" means percent.
  - p. "OEM" means original equipment manufacturer.
  - q. "OBD" means ~~On Board Diagnostics~~ on-board diagnostics.
  - r. "PCV" means positive crankcase ventilation.
  - s. "PPM" means parts per million by volume.
  - t. "RPM" means revolutions per minute.

- u. “VIN” means vehicle identification number.
- 2. “All-terrain vehicle” (ATV) means either of the following:
  - a. A motor vehicle that satisfies all of the following:
    - i. Is designed primarily for recreational non-highway all-terrain travel.
    - ii. Is fifty or fewer inches in width.
    - iii. Has an unladen weight of one thousand two hundred pounds or less.
    - iv. Travels on three or more non-highway tires.
    - v. Is operated on a public highway.
    - vi. Is not a motorcycle.
  - b. A recreational off-highway vehicle that satisfies all of the following:
    - i. Is designed primarily for recreational non-highway all-terrain travel.
    - ii. Is sixty-five or fewer inches in width
    - iii. Has an unladen weight of one thousand eight hundred pounds or less.
    - iv. Travels on four or more non-highway tires.
    - v. Is not a motorcycle.
- 3. “Alternative fuel vehicle” is a vehicle powered by an alternative fuel as defined in A.R.S. § 1-215(4).
- 2-4. “Annual test” means ~~any vehicle emissions test that is not a biennial test~~ a test for which an annual frequency is specified in the applicable table in R18-2-1006(B).
- 3-5. “Apportioned vehicle” means a vehicle that is subject to the proportional registration provisions of A.R.S. § 28-2233.
- 4-6. “Area A” has the meaning in A.R.S. § 49-541.
- 5. “Area A vehicle” means a motor vehicle subject to emissions inspection and that is:
  - a. ~~Registered or to be registered within area A;~~
  - b. ~~Owned by or leased to a person having a valid fleet permit and customarily kept in area A;~~
  - c. ~~A government vehicle customarily kept in area A;~~
  - d. ~~Used to commute to the driver’s principal place of employment located in area A; or~~
  - e. ~~Parked, will be parked, or is the subject of a parking permit application at an institution located in area A and subject to the requirements of A.R.S. §§ 15-1444(C) or 15-1627(G).~~
- 6-7. “Area B” has the meaning in A.R.S. § 49-541.
- 7. ~~“Area B vehicle” means a motor vehicle subject to emissions inspection and that is:~~
  - a. ~~Registered or to be registered within area B;~~
  - b. ~~Owned by or leased to a person having a valid fleet permit and customarily kept in area B;~~
  - c. ~~A government vehicle customarily kept in area B;~~
  - d. ~~Used to commute to the driver’s principal place of employment located in area B;~~  
~~or~~
  - e. ~~Parked, will be parked, or is the subject of a parking permit application at an institution located in area B and subject to the requirements of A.R.S. §§ 15-1444(C) or 15-1627(G).~~
- 8. “Biennial test” means ~~the transient loaded emissions test and evaporative system tests required under R18-2-1006(E)(2), or the OBD test for area A vehicles under R18-1006(E)(3).~~ a test for which a biennial frequency is specified in the applicable table in R18-2-1006(B).
- 9. “Calibration gas” means a reference gas or gas mixture with assigned concentrations ~~of CO, hexane, or CO2~~ that is used by a state inspector to check the accuracy of emissions analyzers.

10. “Certificate of compliance” means a serially uniquely numbered document issued as part of the vehicle inspection report by a state station at the time of a vehicle inspection indicating that the vehicle has met the emissions standards.
11. “Certificate of exemption” means a serially uniquely numbered document issued by the Director exempting providing an exemption from the testing requirements of this Article for a vehicle from inspection that is not available within the state for an inspection during the 90 days before that is outside the state on the emissions compliance expiration date.
12. “Certificate of inspection” means a serially uniquely numbered document issued by the Director indicating that a vehicle has been inspected under A.R.S. § 49-546 and has passed inspection.
13. “Certificate of waiver” means a serially uniquely numbered document issued by the Department or a fleet inspector other than an auto dealer licensed to sell used motor vehicles under A.R.S. Title 28, indicating that the requirement of passing reinspection has been waived for a vehicle under A.R.S. § 49-542.
14. “CFR” means the Code of Federal Regulations, with standard reference in this Chapter by Title and Part, so that “40 CFR 280” mean Title 40 of the Code of Federal Regulation, Part 280.
- ~~14. “Conditioning mode” means either a fast idle condition or a loaded condition as defined in this Section.~~
15. “Collectible vehicle” has the same definition as A.R.S. § 49-542(Z).
- ~~15-16.~~ “Constant 4-wheel drive vehicle” means any 4-wheel drive vehicle that cannot be converted to 2-wheel drive except by disconnecting one of the vehicle’s drive shafts, or any vehicle equipped with non-disengageable traction control which cannot be safely tested on conventional 2-wheel drive dynamometers.
- ~~16-17.~~ “Constant volume sampler” means a system that dilutes engine exhaust to be sampled with ambient air so that the total combined flow rate of exhaust and dilution air mix is nearly constant for all engine operating conditions.
- ~~17-18.~~ “Contractor” means a person, business, firm, partnership, or corporation with whom the Director has a contract that provides for the operation of one or more official emissions inspection stations.
- ~~18.~~ “Curb idle test” means an exhaust emissions test conducted with the engine of the vehicle running at the manufacturer’s idle speed  $\pm$  100 RPM but without pressure exerted on the accelerator.
- ~~19.~~ “Curb weight” means a vehicle’s unloaded weight without fuel and oil plus 300 pounds.
- ~~20-19.~~ “Dealer” means a person or organization licensed by the Arizona Department of Transportation as a new motor vehicle dealer, or used motor vehicle dealer, or motorcycle dealer.
- ~~21.~~ “Department” means the Department of Environmental Quality.
20. “Diagnostic Trouble Code” (DTC) means an alphanumeric code which is set in a vehicle’s on board computer when the OBD system detects an emissions control device or system failure.
21. “Diesel” or “Diesel Fuel” has the same meaning as in A.R.S. § 3-3401.
- ~~22.~~ “Director” means the Director of the Department of Environmental Quality.
- ~~23-22.~~ “Director’s certificate” means a serially uniquely numbered document issued by the Director in certain circumstances for the vehicle to show evidence of meeting the minimum standards for registration or reregistration under R18 2-1019 or R18 2-1022.
- ~~24-23.~~ “Electrically-powered vehicle” means a vehicle that uses electricity as the means of propulsion and does not require the combustion of fossil fuel within the confines of the vehicle to generate electricity.
- ~~25-24.~~ “Emissions compliance expiration date” means:
- a. Each registration expiration date for a vehicle subject to an annual test; and

- b. The registration expiration date in the second year after the initial biennial test required under this Article or R18-2-1005(B) for a vehicle subject to a biennial test.
- ~~26-25.~~ “Emissions inspection station permit” means a certificate issued by the Director authorizing the holder to perform vehicle emissions inspections under this Article.
- ~~27-26.~~ “Exhaust emissions” means products of combustion emitted into the atmosphere from any opening in the exhaust system downstream of the exhaust ports of a motor vehicle engine.
- ~~28-27.~~ “Exhaust pipe” means the pipe that attaches to the muffler and exits the vehicle.
- ~~29.~~ ~~“Fast idle condition” means to operate a vehicle by running the engine at 2,500 RPM, ± 300 RPM, for up to 30 seconds, with the transmission in neutral, to prepare the vehicle for a subsequent curb idle test.~~
- ~~30.~~ ~~“Fast pass or fast fail algorithm” means a procedure in a vehicle emissions testing system that logically determines whether a vehicle will pass or fail the transient loaded emissions test under R18-2-1006(E)(2) before the test is over.~~
- ~~31-28.~~ “Fleet emissions inspection station” or “fleet station” means any vehicle emissions inspection facility operated under a permit issued ~~under~~ pursuant to A.R.S. § 49-546.
- ~~29.~~ “Fleet vehicle” means any vehicle owned, leased, or operated by an individual or entity granted a vehicle emissions testing license under A.R.S. § 49-546.
- ~~32-30.~~ “Fuel” means any material that is burned within the confines of a vehicle to propel the vehicle.
- ~~31.~~ “Fuel Cell Electric Vehicle” or “FCEV” means a zero-emission vehicle that runs on compressed hydrogen fed into a fuel cell stack that produces electricity to power the vehicle.
- ~~33.~~ ~~“Four stroke vehicle” means a vehicle equipped with an engine that requires two revolutions of the crankshaft for each piston power stroke.~~
- ~~34-32.~~ “Golf cart” means a motor vehicle that has not less than three wheels in contact with the ground, has an unladen weight less than 1,300 pounds, is designed to be and is operated at not more than 15 MPH, and is designed to carry golf equipment and persons.
- ~~35-33.~~ “Government vehicle” means a registered motor vehicle exempt from the payment of a registration fee, or a federally owned or leased vehicle.
- ~~36-34.~~ “Gross vehicle weight rating” (GVWR) means the maximum vehicle weight that a vehicle is designed for as established by the manufacturer.
- ~~35.~~ “Idle test” means an exhaust emissions test conducted with the engine of the vehicle running at the manufacturer’s idle speed ± 100 RPM but without pressure exerted on the accelerator.
- ~~37-36.~~ “Inspection” means the mandatory vehicle emissions inspection including the tampering inspection.
- ~~38.~~ ~~“Inspection sticker” means a self adhesive, serially numbered rectangular sticker indicating a government vehicle has met Arizona emissions inspection requirements.~~
- ~~39.~~ ~~“Loaded condition” means to condition a vehicle by running the vehicle on a chassis dynamometer at a specified speed and load for no more than 30 seconds to prepare the vehicle for a subsequent curb idle test.~~
- ~~40.~~ ~~“Loaded cruise test” means an exhaust emissions test conducted on a chassis dynamometer under R18-2-1006(E)(1)(a) and (F)(2)(a).~~
- ~~41-37.~~ “Mass emissions measurement” means measurement of a vehicle’s exhaust in mass units such as grams.
- ~~38.~~ Maximum required repair cost” means the applicable maximum required repair cost under R18-2-1010(F) or (G) for a vehicle that has failed inspection.

- ~~42.39.~~ “Model year” means the date of manufacture of the original vehicle within the annual production period of the vehicle as designated by the manufacturer or, if a reconstructed vehicle, the first year of titling.
- ~~43.~~ “MOL percent” means the percent, by volume, that a particular gas occupies in a mixture of gases at a uniform temperature.
- ~~44.40.~~ “Motorcycle” means a motor vehicle, other than a tractor, having a seat or saddle for use of the rider and designed to travel on not more than three wheels in contact with the ground that is defined as a “motorcycle” as in A.R.S § 28-101(29).
- ~~45.~~ “Motorhome” means a vehicle built on a truck or bus chassis and equipped as a self-contained traveling home.
- ~~46.41.~~ “New aftermarket catalytic converter” or “~~new aftermarket converter~~” means a new catalytic converter, except for an OEM, manufactured as an OEM part that meets the standards under 40 CFR 86.
- ~~47.~~ “Official emissions inspection station” means an inspection facility, other than a fleet emissions inspection station, whether placed in a permanent structure or in a mobile unit for conveyance to various locations within the state, for the purpose of conducting inspections under A.R.S. § 49-542.
- ~~48.42.~~ “On-board diagnostics test” or “OBD” means a method of emissions testing using the on-board computer systems of a 1996 or newer vehicle, to diagnose and report on the status of the engine’s emissions systems by connecting a scan tool to the vehicle’s data link connector means an on-board diagnostic system required by Section 202(m) of the Clean Air Act.
- ~~49.43.~~ “Opacity” means the degree of absorption of transmitted light.
- ~~50.~~ “Operational air pump” means an air injection system to supply additional air into the exhaust system to promote further oxidation of HC and CO gases and to assist in catalytic reaction.
- ~~51.~~ “Person” means the federal government, state, or any federal or state agency or institution, any municipality, political subdivision, public or private corporation, individual, partnership, association, or other entity, and includes any officer or governing or managing body of any municipality, political subdivision, or public or private corporation.
- ~~52.44.~~ “Reconditioned OEM catalytic converter” or “~~reconditioned OEM converter~~” means a used OEM reconditioned equivalent or an OEM converter that has had the pellets replaced with new or used OEM equivalent pellets and that also meets the standards under 40 CFR 86 catalytic converter remanufactured, as a non-OEM part, with new catalytic material housed in the original catalyst casing.
- ~~53.45.~~ “Recognized repair facility” means a business with an Arizona Department of Revenue transaction privilege tax license pursuant to Title 15, Chapter 5 of the Arizona Revised Statutes whose primary purpose is vehicle repair, and who has at least one employee with a nationally recognized certification for emissions-related diagnosis and repair.
- ~~54.46.~~ “Reconstructed vehicle” means: a vehicle that has been assembled or constructed largely by means of essential parts, new or used, derived from vehicles or makes of vehicles of various names, models and types or that, if originally otherwise constructed, has been materially altered by the removal of essential parts or by the addition or substitution of essential parts, new or used, derived from other vehicles or makes of vehicles. For the purposes of this paragraph, "essential parts" means integral and body parts, the removal, alteration or substitution of which will tend to conceal the identity or substantially alter the appearance of the vehicle.
- a. A reconstructed special as identified by the code letters “SP” on the section of the vehicle’s Arizona registration card or Arizona certificate of title reserved for identification of the vehicle’s style; or

- b. ~~A vehicle in which the vehicle style is not shown on the Arizona registration card or certificate of title, and the original manufacturer of the complete vehicle cannot be identified from the body.~~
47. “Specially constructed vehicle” means any vehicle not originally constructed under a distinctive name, make, model, or type by a generally recognized manufacturer of vehicles.
55. ~~“Standard gases” means gases maintained as a primary standard for determining the composition of working gases, calibration gases, or the accuracy of an emissions analyzer.~~
- 56.48. “State inspector” means an employee of the Department designated to perform quality assurance or waiver functions under this Article.
- 57.49. ~~“State station” means an official emissions inspection station operated by a contractor~~  
means a facility, other than a fleet emissions inspection station, established for the purpose of conducting inspections under A.R.S. § 49-542.
- 58.50. ~~“Tampering” means removing, defeating, or altering an emissions control device that was installed on a vehicle at the time the vehicle was manufactured. For the purposes of this Article, defeating includes failure to repair any malfunctioning emission control system or device.~~
- 59.51. “Two-stroke vehicle” means a vehicle equipped with an engine that requires one revolution of the crankshaft for each power stroke.
60. ~~“Unloaded fast idle test” means an exhaust emissions test conducted with the engine of the vehicle running at 2,500 RPM.~~
- 61.52. “Vehicle” or “Motor Vehicle” means any automobile, truck, truck tractor, motor bus, or self-propelled or motor-driven vehicle registered or to be registered in this state and used upon the public highways of this state for the purpose of transporting persons or property, except implements of husbandry, roadrollers, or road machinery temporarily operated upon the highway.
- 62.53. “Vehicle emissions inspector” means an individual who is licensed by the Director to perform vehicle emissions inspections under this Article.
54. “Waiver inspector” means an employee of the contractor or the Department who is authorized to issue waivers under R18-2-1008.
63. ~~“Working gases” means gases maintained to perform periodic calibration of an emissions analyzer.~~
55. “Zero Emissions Vehicle” means a battery electric vehicle that runs on electricity stored in the batteries and has only an electric motor rather than an internal combustion engine, or a fuel cell electric vehicle that produces no emissions from the on-board source of power.

**R18-2-1002. Reserved Applicable Implementation Plan**

- A. Substantive revisions to the rules in this article that are included in the Arizona State Clean Air Act Implementation Plan cannot become effective until approved by the Administrator of the United States Environmental Protection Agency. Amendments adopted by the Department but not yet approved as of the date of the latest amendments are therefore identified in this Article as not applying until the Administrator approves them.
- B. The Administrator’s approvals of revisions to an applicable implementation plan are published as final rules in the Federal Register, which is available online at <http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>. The Department publishes a list of Article 10 provisions approved since the last revisions to the Article at: <http://azdeq.gov/VECS/Rulemaking>.

**R18-2-1003. Vehicles to be Inspected by the Mandatory Vehicle Emissions Inspection Program**

A. The following vehicles shall be inspected according to this Article ~~at a state station or a fleet station unless exempted by subsection (B):~~

1. A vehicle to be registered ~~or reregistered~~ within area Area A or area Area B; ~~for highway use.~~ For the purposes of this Article, registration or reregistration within area Area A or area Area B shall be determined by the vehicle owner's permanent and actual residence. The permanent address in the MVD database shall be presumed to be the owner's permanent and actual residence. A post office box address listed on a title or registration document under A.R.S. § 28-2051(C) is not evidence of the owner's permanent and actual residence;
2. Each vehicle delivered to a retail purchaser by a dealer licensed to sell used motor vehicles ~~for highway use~~ under A.R.S. Title 28 and whose place of business is located in area Area A or area Area B;
3. Each vehicle registered outside area Area A and area Area B but used to commute to the driver's principal place of employment located within area Area A or area Area B;
4. Each vehicle owned by a person who is subject to A.R.S. §§ 15-1444(C) or 15-1627(G); and
5. ~~An area Area A or area Area B vehicle located out of state for more than 90 days before vehicle registration expiration shall be emissions tested at an official emissions inspection testing center in the area where it is located. If no official emissions testing program is available in the area for that vehicle, the vehicle shall meet the testing requirements under this Article within 15 calendar days of returning to Arizona~~ owned or operated by the United States, this state, or a political subdivision of this state without regard to whether those vehicles are required to be registered in this state.

B. The following vehicles are exempt from the inspection requirements of this Article:

1. A vehicle manufactured in or before the 1966 model year;
2. A vehicle leased to a person residing outside area Area A and area Area B by a leasing company whose place of business is in area Area A or area Area B, except as provided in subsection (A)(3);
3. A vehicle sold between motor vehicle dealers;
4. ~~An electrically powered vehicle~~ A zero-emissions vehicle;
5. An apportioned vehicle;
6. A golf cart;
7. A vehicle with an engine displacement of less than 90 cubic centimeters;
8. A vehicle registered at the time of change of name of ownership ~~except when:~~
  - a. ~~The change in registration is accompanied by the required fee for the year following expiration of the prior registration, or~~
  - b. ~~The change results from the sale by a dealership whose place of business is located in area A or area B;~~
9. A vehicle for which a current certificate of exemption or Director's certificate is issued;
10. ~~A vehicle of a model year the same as, or newer than, the current calendar year and a vehicle of the prior four model years~~ new vehicle before the sixth registration year after initial purchase or lease; except that:
  - a. ~~A reconstructed vehicle or specially constructed vehicle is not exempt;~~
  - b. ~~An alternative fuel vehicle, as defined in A.R.S. § 43-1086~~ A vehicle converted to operate on an alternative fuel, as defined in A.R.S. § 1-215, and is not exempt.
  - c. A vehicle failing an emissions inspection the owner chooses to have under A.R.S. § 49-543 is not exempt for the current registration year.
11. A vehicle designed to operate exclusively on hydrogen, as defined in A.R.S. § 1-215;
12. A collectible vehicle;
13. A motorcycle;



14. An all-terrain vehicle (ATV):  
15. These exemption apply after the Administrator approves this subsection, (B)(15), into the applicable implementation plan:
- a. Cranes and oversized vehicles that require permits pursuant to A.R.S. §§ 28-1100, 28-1103, and 28-1144;
  - b. A vehicle not in use and owned by a resident of this state while on active military duty outside of this state.
- C. Government vehicles operated in ~~area~~ Area A or ~~area~~ Area B and not exempted by this Article shall be emissions inspected according to R18-2-1017.

**R18-2-1004. Repealed**

**R18-2-1005. Time of Inspection**

- A. ~~Area A vehicles~~ All Area A and Area B vehicles subject to an annual test, ~~all area B vehicles, and vehicles sold or offered for sale by dealers required to be inspected under R18-2-1003,~~ shall be inspected at the following times:
1. For a non-fleet vehicle ~~not covered by a fleet station permit,~~ within 90 days before each registration expiration date; ~~;~~
  2. For a fleet vehicle ~~sold by a dealer inspected at a licensed fleet station, to sell used motor vehicles under A.R.S. Title 28, whose place of business is located in area A or area B, before delivery of the vehicle to the retail purchaser; at least once within each 12 month period following any original registration.~~
  3. ~~For a consignment vehicle offered for sale by a dealer licensed to sell used motor vehicles under A.R.S. Title 28 whose place of business is located in area A or area B, before delivery of the vehicle to the retail purchaser. The consignment vehicle shall be inspected at a state station according to R18-2-1006;~~
  4. ~~3.~~ For a government vehicles ~~vehicle:~~
    - a. For a vehicle not exempt under R18-2-1003(B)(10), within 12 months after acquisition by the operating entity and then annually on or before the anniversary date of the previous inspection;
    - b. For a vehicle exempt under R18-2-1003(B)(10), within 90 days after the vehicle becomes subject to testing, and then annually on or before the anniversary date of the previous inspection; and;
    - c. A government vehicle is subject to testing on the anniversary of its date of acquisition; ~~;~~
  5. ~~For a vehicle owned by or leased to a person having a valid fleet station permit, at least once within each 12 month period following any original registration or reregistration;~~
  6. ~~For a vehicle to be registered in area A or area B under conditions not specified in subsection (1) through (5), within 90 days before registration;~~
  7. ~~4.~~ For a vehicle registered outside ~~area~~ Area A and ~~area~~ Area B and used to commute to the driver's principal place of work located in ~~area~~ Area A or ~~area~~ Area B, upon vehicle registration ~~or reregistration; and annually thereafter.~~
  8. ~~5.~~ For a vehicle owned by a person subject to A.R.S. §§ ~~15-1444(C)~~ 15-1444(D) or 15-1627(G), within 30 calendar days following the date of initial registration at the institution located in ~~area~~ Area A or ~~area~~ Area B and annually thereafter; ~~and.~~
  9. ~~For a vehicle issued a certificate of exemption under R18-2-1023, within 15 calendar days after returning to Arizona, unless an official emissions inspection document from the out of state emissions inspection station is submitted with the request for exemption.~~
- B. ~~An All~~ All area Area A and Area B vehicle ~~vehicles~~ subject to a biennial test shall be inspected at the following times:

1. For a non-fleet vehicle ~~not covered by a fleet station permit~~, within 90 days before the vehicle's emissions compliance expiration date.
  2. For fleet a vehicle inspected at a fleet station, at least once within each successive 24 month period following original registration.
  - ~~2.3.~~ For a government vehicle;
    - a. For a vehicle not exempt under R18-2-1003(B)(10), within 12 months after acquisition by the operating entity, and biennially thereafter, on or before the anniversary date of the previous inspection;
    - b. For a vehicle exempt under R18-2-1003(B)(10), within 90 days after the vehicle becomes subject to testing, and biennially thereafter, on or before the anniversary date of the previous inspection; ~~and,~~
    - c. ~~The vehicle becomes subject to testing on the anniversary of its date of acquisition;~~
  - ~~3.~~ ~~For a vehicle owned by or leased to a person having a valid fleet station permit, at least once within each successive 24 month period following original registration;~~
  4. For a vehicle registered outside ~~area~~ Area A or Area B but used to commute to the driver's principal place of ~~work~~ employment located in ~~area~~ Area A or Area B, upon vehicle registration and biennially thereafter;.
  5. For a vehicle owned by a person subject to A.R.S. §§ ~~15-1444(C)~~ 15-1444(D) or 15-1627(G), within 30 days following the date of initial registration at the institution located in ~~area~~ Area A or Area B and biennially thereafter;.
  - ~~6.~~ ~~For a vehicle to be registered as area A vehicles under conditions not specified in subsections (1) through (5), upon initial registration and within 90 days before the vehicle's emissions compliance expiration date thereafter and;~~
  - ~~7.~~ ~~For a vehicle issued a certificate of exemption under R18-2-1023, within 15 calendar days after returning to Arizona, unless an official emissions inspection document indicating compliance with the emissions requirements from the out-of-state emissions inspection station is submitted with the request for exemption.~~
- C. ~~A used vehicle not registered as an area A or area B vehicle shall be inspected according to this Article before registration as an area A or area B vehicle unless exempted by R18-2-1003(B). All vehicles sold by a dealer licensed to sell used motor vehicles under A.R.S. Title 28, whose place of business is located in Area A or Area B, shall pass the applicable emissions test prescribed by R18-2-1006 before delivery of the vehicle to a retail purchaser.~~
- D. An ~~area~~ Area B vehicle being registered in ~~area~~ Area A is subject to the appropriate annual or biennial test from ~~area~~ Area A before registration even ~~if the emissions compliance period for area B has not yet expired~~ if the Area A test, or test period, is different from the test required for the same vehicle in Area B.
- ~~E.~~ ~~A new vehicle that is exempt from emissions testing under R18-2-1003(B)(10), and subject to either an annual or biennial test, shall be tested before registration in the calendar year that exceeds the vehicle's model year by five years.~~
- ~~FE.~~ Nothing in this Section shall be construed to waive a late registration fee because of failure to meet inspection requirements by the registration deadline, except that a motor vehicle that fails the initial or subsequent test shall not be subject to a penalty fee for late registration renewal if:
1. The initial test is accomplished before the emissions compliance expiration date; and
  2. The registration renewal is received by MVD within 30 days of the initial test.
- ~~GF.~~ An owner of a vehicle subject to subsection (A)(1), ~~(A)(6)(A)(5)~~, (B)(1), or ~~(B)(6)(B)(5)~~ may submit the vehicle for emissions inspection more than 90 days before the emissions compliance expiration date but the inspection does not satisfy the registration or reregistration testing requirement under R18-2-1003.

## R18-2-1006. Emissions Test Procedures

- A. ~~Each vehicle inspected at a state station shall be visually inspected before the emissions test for the following unsafe or untestable conditions:~~
1. ~~A fuel leak that causes wetness or pooling of fuel;~~
  2. ~~A continuous engine or transmission oil leak onto the floor;~~
  3. ~~A continuous engine coolant leak onto the floor such that the engine is overheating or may overheat within a short time;~~
  4. ~~A vehicle with a tire on a driving wheel with less than 2/32 inch tread, with metal protuberances, unmatched tire size, with obviously low tire pressure as determined by visual inspection, or any other condition that precludes a loaded test for reasons of personnel, equipment, or vehicle safety;~~
  5. ~~An exhaust pipe that does not exit the rear or side of the vehicle to allow for safe exhaust probe insertion;~~
  6. ~~An exhaust pipe on a diesel powered vehicle that does not allow for safe exhaust probe insertion and attachment of opacity meter sensor units;~~
  7. ~~Improperly operating brakes;~~
  8. ~~Any vehicle modification or mechanical condition that prevents dynamometer operation; and~~
  9. ~~Any other condition deemed unsafe or untestable by the inspector, including loud internal engine noise or an obvious exhaust leak.~~
- B. ~~A vehicle emissions inspection shall not be performed by an official emissions inspection station on any vehicle towing a heavily loaded trailer, carrying a heavy load, loaded with explosives, or loaded with any hazardous material not used as fuel for the vehicle.~~
- C. ~~Any vehicle unsafe or otherwise untestable as determined by the visual inspection shall be rejected without an emissions test. The inspector shall notify the vehicle owner or operator of all unsafe conditions found on rejected vehicles. The state station shall not charge a fee if the vehicle is rejected. The contractor shall not conduct an emissions test on a vehicle rejected for a safety reason or any other untestable condition until the cause for rejection is repaired.~~
- D. ~~When conducting the emissions test required by this Section, the vehicle emissions inspector shall meet all of the following requirements:~~
1. ~~The vehicle shall be tested in the condition presented, unless rejected under subsection (A), (B), or (C). The vehicle's engine shall be operating at normal temperature and not be overheating as indicated by a gauge, warning light, or boiling radiator. All of the vehicle's accessories shall be turned off during testing.~~
  2. ~~A vehicle designed to operate with more than one fuel shall be tested on the fuel in use when the vehicle is presented for inspection, except alternative fuel vehicles, as defined in A.R.S. § 43-1086. The inspector shall test the alternative fuel vehicle on each fuel for which it is intended to operate, using the appropriate emissions test procedure and standards for that vehicle. The alternative fuel vehicle shall:~~
    - a. ~~Be operated a minimum of 30 seconds before testing, after switching fuels;~~
    - b. ~~Be rejected if it is not able to operate on both fuels; and~~
    - c. ~~Be rejected if the vehicle operator cannot switch fuels.~~
  3. ~~A vehicle operated exclusively on propane or natural gas, as defined in A.R.S. § 1-215, shall be exempt from the gas cap and evaporative pressure testing described in subsection (E)(6)(b)(ii), (E)(7)(a), and (F)(7)(a).~~
- E. ~~In area A, the inspection test procedures for a vehicle other than a diesel powered vehicle or a vehicle held for resale by a fleet licensed motor vehicle dealer shall consist of the following:~~
1. ~~A vehicle manufactured with a model year of 1967 through 1980, a nonexempt vehicle with a GVWR greater than 8,500 pounds, and a reconstructed vehicle, except a motorey-~~

ele and a constant 4 wheel drive vehicle, is required to annually take and pass a loaded cruise test and a curb idle test, as follows:

- a. — Loaded cruise test. The vehicle's drive wheels shall be placed on a dynamometer and the vehicle shall be operated according to Table 1 of this Article, in drive for automatic transmission or second or higher gear for manual transmission. Overdrive shall not be used for testing. All vehicles shall be driven by the inspector during testing. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 90 seconds, whichever occurs first. After exhaust emissions are recorded, engine speed shall be returned to idle for a curb idle test.
  - b. — Curb idle test. The test shall be performed with the vehicle in neutral for 1981 and newer vehicles. For 1980 and older vehicles, the test shall be performed in neutral, except that if the vehicle has an automatic transmission, drive shall be used. Engine RPM shall be within  $\pm 100$  RPM of the manufacturer's specified idle RPM. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 90 seconds, whichever occurs first. A CO<sub>2</sub> plus CO reading of 6% or greater shall be registered to establish test validity. A CO<sub>2</sub> plus CO reading of less than 6% shall be proof of exhaust sample dilution and the vehicle shall be rejected from further emissions inspection until repaired, except when tested at a fleet emissions inspection station.
  - c. — Exhaust sampling for a vehicle required to take an annual emissions test under subsection (E)(1) shall comply with subsection (F)(8).
2. — A vehicle with a 1981 or newer model year and a GVWR of 8,500 pounds or less, except a motorcycle, a reconstructed vehicle, a 1996 or newer OBD equipped vehicle or a constant 4 wheel drive vehicle, is required to biennially take and pass a transient loaded emissions test and an evaporative system pressure test as follows:
- a. — The transient loaded emissions test shall consist of 147 seconds of mass emissions measurement using a constant volume sampler while the vehicle is driven by an inspector through a computer monitored driving cycle on a dynamometer with inertial weight settings appropriate for the weight of the vehicle. The driving cycle shall include the acceleration, deceleration, and idle operating modes described in Table 4. The 147 second sequence may be ended earlier using a fast pass or fast fail algorithm. A retest algorithm shall be used to determine if a test failure is due to insufficient vehicle preconditioning. As determined by the retest algorithm, up to two additional tests may be performed on a failing vehicle. Drive shall be used for automatic transmissions and first gear shall be used to begin for manual transmissions. Exhaust emissions concentrations in grams per mile for HC, CO, NO<sub>x</sub> and CO<sub>2</sub> shall be recorded continuously beginning with the first second. The inspector shall reject a vehicle with an audible or visible exhaust leak from emissions testing.
  - b. — The evaporative system pressure test shall consist of the following steps in sequence:
    - i. — Connect the test equipment to either the fuel tank vent hose at the canister or the fuel tank filler neck. The gas cap shall be checked to determine that cap leakage does not exceed 60 cubic centimeters of air per minute at a pressure of 30 inches of water gauge;
    - ii. — Pressurize the system to  $14 \pm 0.5$  inches of water without exceeding 26 inches of water system pressure;
    - iii. — Close off the pressure source, seal the evaporative system, and monitor pressure decay for no more than two minutes.

- e. ~~For a vehicle requiring a transient loaded emissions test under subsection (E)(2)(a), all testing and test equipment shall conform to "IM240 & Evap Technical Guidance," EPA420-R-98-010, EPA, August 1998, incorporated by reference, and no future editions or amendments, except that the transient driving cycle in Table 4 of this Article shall be used. A copy of the incorporated material is on file with the Department and the Secretary of State, and may be obtained at EPA's National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, Ann Arbor, MI 48105-2498.~~
- 3. ~~A vehicle with a 1996 or newer model year and a GVWR of 8500 pounds or less, except a motorcycle or a reconstructed vehicle, is required to biennially take and pass an OBD test and a functional gas cap test as follows:~~
  - a. ~~The OBD test shall consist of:~~
    - i. ~~A visual inspection of the MIL function; and~~
    - ii. ~~An electronic examination of the OBD computer by connecting a scan tool to the data link connector and interrogating the OBD system to determine vehicle readiness status, MIL status, and presence of diagnostic trouble codes.~~
  - b. ~~The OBD test and test equipment shall conform to "Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program," EPA420-R-01-015, EPA, June 2001, incorporated by reference, and no future editions or amendments. A copy of this incorporated material is on file with the Department and the Secretary of State, and may be obtained at the EPA's National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, Ann Arbor, MI, 48105-2498; and~~
    - e. ~~The functional gas cap test shall comply with subsection (E)(7)(a).~~
- 4. ~~A motorcycle, or a constant 4 wheel drive vehicle except one requiring an OBD emissions test under subsection (E)(3), shall take and pass only a curb idle test according to subsection (F)(1). An all terrain vehicle (ATV), as defined in A.R.S. § 28-101, shall be tested as a motorcycle.~~
- 5. ~~A vehicle with a 1975 or newer model year is required to take and pass a liquid fuel leak inspection annually or biennially according to subsections (E)(1) or (2) as follows:~~
  - a. ~~For purposes of this subsection, "liquid fuel leak" means any fuel emanating from a vehicle's fuel delivery, metering or evaporation systems in liquid form that has created a visible drop or more of fuel on, around, or under a component of a vehicle's fuel delivery, metering, or evaporation system.~~
  - b. ~~With the engine running, the vehicle emissions inspector shall visually inspect the following components of the vehicle, if they are exposed and visually accessible, for liquid fuel leaks:~~
    - i. ~~Gasoline fuel tanks;~~
    - ii. ~~Gasoline fill pipes, associated hoses and fuel tank connections;~~
    - iii. ~~Gas caps;~~
    - iv. ~~External fuel pumps;~~
    - v. ~~Fuel delivery and return lines and hoses;~~
    - vi. ~~Fuel filters;~~
    - vii. ~~Carburetors;~~
    - viii. ~~Fuel injectors;~~
    - ix. ~~Fuel pressure regulators;~~
    - x. ~~Charcoal canisters; and~~
    - xi. ~~Fuel vapor hoses.~~
    - xii. ~~Any valves connected to any other fuel evaporative component.~~

- e. ~~The liquid fuel leak inspection required by this subsection is a visual inspection only. The vehicle emissions inspector is not required to perform any disassembly of the vehicle to inspect for liquid fuel leaks. No special tools or equipment, other than a flashlight and mirror, are required and no raising, hoisting, or lifting of the vehicle is required.~~
  - d. ~~The vehicle emissions inspector shall indicate on the vehicle inspection report the location of any liquid fuel leak.~~
  - e. ~~Nothing in this subsection shall prohibit a vehicle emissions inspector from refusing to inspect a vehicle under subsections (A), (B), or (C) or from terminating an inspection if a liquid fuel leak presents a safety hazard.~~
  - f. ~~A vehicle operated exclusively by compressed natural gas (CNG), liquid natural gas (LNG), or liquid petroleum gas (LPG) shall be exempt from the liquid fuel leak inspection.~~
6. ~~The emissions pass fail determination for a vehicle tested under subsection (E) shall be made as follows:~~
- a. ~~A vehicle tested under subsection (E)(1), that does not exceed the loaded cruise mode or curb idle mode HC and CO emissions standards listed in Table 2 for the vehicle, complies with the emissions standards in Table 2. The loaded cruise test standards in Table 2 apply to a fleet vehicle tested with the 2,500 RPM unloaded fast idle test under R18-2-1019(E).~~
  - b. ~~A vehicle tested under subsection (E)(2) shall meet the standards in Table 3 and pass the evaporative system pressure test as follows:~~
    - i. ~~Table 3 Standards. A vehicle shall meet either the composite standard for the whole test or the phase 2 standard for seconds 65 to 146. The Department may implement a testing algorithm for fast pass, fast fail, or both, provided that the algorithm is reliable in accurately predicting the final outcome of the entire cycle. A vehicle not meeting either the composite or phase 2 standard shall fail the emissions test.~~
    - ii. ~~Evaporative System Pressure Test. A vehicle fails the emissions test if the evaporative system cannot maintain a system pressure above eight inches of water for at least two minutes after being pressurized to  $14 \pm 0.5$  inches of water. Additionally, a vehicle fails the evaporative test if the canister is missing or damaged, if a hose or electrical connection is missing, routed incorrectly, or disconnected, according to the vehicle emissions control information label, or if the gas cap is missing.~~
  - c. ~~A vehicle that operates on natural gas complies with HC emissions standards if the HC emissions value does not exceed the applicable standard in subsection (E)(6)(a) or (b), if:~~
    - i. ~~Multiplied by 0.19, when using an analyzer with a flame ionization detector, or~~
    - ii. ~~Multiplied by 0.61, when using an NDIR analyzer.~~
  - d. ~~A motorcycle or a constant 4 wheel drive vehicle, except one requiring an OBD emissions test under subsection (E)(3), that does not exceed the curb idle mode HC and CO emissions standards listed in Table 2 on either the first curb idle test or the second curb idle test passes the emissions test.~~
  - e. ~~A vehicle tested under subsection (E)(3) shall:~~
    - i. ~~Fail if the data link connector is missing, tampered, or otherwise inoperable during any OBD test;~~
    - ii. ~~Fail if the MIL does not illuminate at all when the ignition key is turned to the key on, engine off position, or does not illuminate briefly during engine start during any OBD test;~~

- iii. ~~Fail if the MIL illuminates continuously or flashes after the engine has been started during any OBD test;~~
  - iv. ~~Fail if a diagnostic trouble code is present and the MIL status, as indicated by the scan tool, is commanded on during any OBD test.~~
  - v. ~~Be rejected from an initial OBD test and required to take and pass a transient loaded test under subsection (E)(2) if the number of unset readiness indicators, excluding continuous indicators, is three or more for a model-year 1996-2000 vehicle, or two or more for a model-year 2001 and newer vehicle.~~
  - vi. ~~Be rejected from an OBD retest if the number of unset readiness indicators, excluding continuous indicators, exceeds the number allowed in subsection (v).~~
  - vii. ~~Fail the functional gas cap test if the gas cap does not comply with subsection (E)(7)(a).~~
  - f. ~~A vehicle tested under subsection (E)(5) shall fail the inspection if a vehicle emissions inspector detects a liquid fuel leak.~~
  - g. ~~A vehicle that exceeds the applicable emissions standards for the tests described in subsections (E)(1) and (E)(2)(a), or fails the OBD test described in subsection (E)(3), fails the emissions test and shall not be reinspected until a low emissions tune up is performed as described in R18 2 1010. A vehicle that fails the evaporative system pressure test described in subsection (E)(2)(b) shall not be reinspected until repaired as required in R18 2 1010(D)(1) and (2). A vehicle that fails the functional gas cap test described in subsection (E)(7)(a) shall not be reinspected until repaired as required in R18 2 1009(B). A vehicle that fails the liquid fuel leak test described in subsection (E)(5) shall not be reinspected until repaired as required in R18 2 1010(E).~~
7. ~~A vehicle required to take an annual emissions test in area A shall, at the time of the test, undergo a tampering inspection based on the original configuration of the vehicle as manufactured. The applicable emissions system requirements shall be verified by the "VEHICLE EMISSION CONTROL INFORMATION" label. A vehicle that fails any portion of the tampering inspection shall be repaired according to R18 2 1009 before reinspection unless the owner provides the written statement required in R18 2 1008(B). "Original configuration" for a foreign manufactured vehicle means the design and construction of a vehicle produced by the manufacturer for original entry and sale in the United States. The tampering inspection shall consist of the following:~~
- a. ~~Any vehicle emissions tested, except one with a vented fuel system, shall have a functional test of the gas cap to determine that cap leakage does not exceed 60 cubic centimeters of air per minute at a pressure of 30 inches of water gauge. A vehicle with a vented fuel system shall be checked for the presence of a properly fitting fuel cap.~~
  - b. ~~For a 1975 and newer model year vehicle:~~
    - i. ~~A visual inspection to determine the presence and proper installation of each required catalytic converter, if applicable;~~
    - ii. ~~An examination to determine the presence of an operational air pump, if applicable; and~~
    - iii. ~~A visual inspection to determine the presence of an operational positive crankcase ventilation system and evaporative control system, if applicable.~~
- F. ~~In area B, the inspection test procedures for a vehicle other than a diesel powered vehicle shall consist of the following:~~

1. ~~An area B vehicle with a model year of 1967 through 1980 shall take and pass only a curb idle test. The curb idle test shall be performed with the vehicle in drive for automatic transmissions or in neutral for manual transmissions. Engine RPM shall be within  $\pm 100$  RPM of the manufacturer's specified idle RPM. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 30 seconds, whichever occurs first. A CO<sub>2</sub> plus CO reading of 6% or greater shall be registered to establish test validity. A CO<sub>2</sub> plus CO reading less than 6% shall be proof of exhaust sample dilution and the vehicle shall be rejected from further emissions inspection until repaired, except when tested at a fleet emissions inspection station. If the vehicle fails the curb idle test, and if permitted by the vehicle operator, the vehicle shall be conditioned according to one of the following conditioning procedures:~~
  - a. ~~Fast idle conditioning procedure. The vehicle shall be conditioned by increasing engine speed to 2,500,  $\pm 300$  RPM, for up to 30 seconds with the transmission in neutral. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 30 seconds, whichever occurs first. The conditioning procedure standards in Table 2 are for diagnostic and advisory information only. After exhaust emissions are recorded, the engine speed shall be returned to curb idle for a second idle test. The fast idle conditioning procedure may be used on a vehicle at a state station instead of the loaded conditioning procedure if any of the following occurs:~~
    - i. ~~The vehicle has a tire on a driving wheel with less than 2/32 inch tread, with metal protuberances, with visibly low tire pressure as determined by visual inspection, or any other condition that precludes loaded conditioning for reasons of personnel, equipment, or vehicle safety;~~
    - ii. ~~The vehicle is driven by a person who, because of physical incapacity, is unable to yield the driver's seat to the vehicle emissions inspector;~~
    - iii. ~~The driver refuses to yield the driver's seat to the vehicle emissions inspector; or~~
    - iv. ~~The vehicle cannot be tested according to Table 1 because of the vehicle's inability to attain the speeds specified.~~
  - b. ~~Loaded conditioning procedure. For a vehicle other than a motorcycle or a constant 4 wheel drive vehicle, the vehicle's drive wheels shall be placed on a dynamometer and the vehicle shall be operated according to Table 1, in drive for automatic transmission, or second or higher gear for manual transmission. All front wheel drive vehicles shall be driven by the inspector. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 30 seconds, whichever occurs first. The conditioning procedure standards in Table 2 are for diagnostic and advisory information only. After exhaust emissions are recorded, engine speed shall be returned to curb idle for a second idle test.~~
  - c. ~~Following one of the conditioning procedures in subsection (F)(1)(a) or (b), the vehicle shall be retested according to the curb idle test procedure in subsection (F)(1).~~
2. ~~An area B vehicle with a 1981 or newer model year, except a motorcycle, a constant 4-wheel drive vehicle, or a 1996 and newer vehicle equipped with OBD, shall take and pass a loaded cruise test and curb idle test, as follows:~~
  - a. ~~Loaded Cruise Test. The vehicle's drive wheels shall be placed on a dynamometer and the vehicle shall be operated according to Table 1, in drive for automatic transmission or second or higher gear for manual transmission. Overdrive shall not be used. All front wheel drive vehicles shall be driven by the inspector. HC and CO exhaust emissions concentrations shall be recorded after readings have~~



- stabilized, or at the end of 90 seconds, whichever occurs first. After exhaust emissions are recorded, engine speed shall be returned to idle for a curb idle test.
- b. — Curb Idle Test. The test shall be performed with the vehicle in neutral. Engine RPM shall be within  $\pm 100$  RPM of the manufacturer's specified idle RPM. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized, or at the end of 90 seconds, whichever occurs first. A CO<sub>2</sub> plus CO reading of 6% or greater shall be registered to establish test validity, except when tested at a fleet inspection station. A CO<sub>2</sub> plus CO reading less than 6% shall be proof of exhaust sample dilution and the vehicle shall be rejected from further emissions inspection until repaired.
3. — A vehicle with a model year of 1996 or newer and a GVWR of 8500 pounds or less, except a motorcycle or a reconstructed vehicle, is required to annually take and pass an OBD test and a functional gas cap test as follows:
- a. — The OBD test shall consist of:
- i. — A visual inspection of the MIL function; and
  - ii. — An electronic examination of the OBD computer by connecting a scan tool to the data link connector and interrogating the OBD system to determine vehicle readiness status, MIL status, and presence of diagnostic trouble codes;
- b. — The OBD test and test equipment shall conform to "Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program," EPA420-R-01-015, EPA, June 2001, incorporated by reference, and no future editions or amendments. A copy of this incorporated material is on file with the Department and the Secretary of State and may be obtained at the EPA's National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, Ann Arbor, MI, 48105-2498; and
- c. — The functional gas cap test shall comply with subsection (F)(7)(a).
4. — A motorcycle or a constant 4 wheel drive vehicle, except one requiring an OBD emissions test under subsection (F)(3), shall take and pass only a curb idle test according to subsection (F)(1). An all terrain vehicle (ATV), as defined in A.R.S. § 28-101, shall be tested as a motorcycle. If the vehicle fails the curb idle test, and if permitted by the vehicle operator, the vehicle shall be conditioned according to the fast idle conditioning procedure required in subsection (F)(1)(a). Following conditioning, the vehicle shall be retested according to the curb idle test procedure in subsection (F)(1).
5. — A vehicle with a 1975 or newer model year and annually tested under subsections (F)(1) or (2) is required to take and pass a liquid fuel leak inspection according to subsections (E)(5)(a) through (f).
6. — The emissions pass fail determination shall be made as follows:
- a. — A vehicle with a model year of 1967 through 1980, except a motorcycle or a constant 4 wheel drive vehicle, that does not exceed the curb idle mode HC and CO emissions standards in Table 2 on either the first or second curb idle test, complies with the minimum emissions standards contained in Table 2.
  - b. — A vehicle with a 1981 or newer model year, except a motorcycle or a constant 4 wheel drive vehicle, that does not exceed the loaded cruise mode or curb idle mode HC and CO emissions standards listed in Table 2, complies with the minimum emissions standards in Table 2. The loaded cruise test standards specified in Table 2 shall apply to fleet vehicles tested with the 2,500 RPM unloaded fast idle test.
  - c. — A vehicle that operates on natural gas complies with HC emissions standards if the HC emissions value, as determined by an NDIR analyzer, multiplied by 0.61 does not exceed the applicable standard in subsection (F)(6)(a) or (b).

- d. ~~A motorcycle or a constant 4 wheel drive vehicle, except one requiring an OBD emissions test under subsection (F)(3), that does not exceed the curb idle mode HC and CO emissions standards in Table 2 on either the first or second curb idle test complies with the minimum emissions standards in Table 2.~~
- e. ~~A vehicle that exceeds the applicable emissions standards, or fails the OBD test described in subsection (F)(3), fails the emissions test and shall have a low emissions tune up as described in R18 2 1010 before reinspection. A vehicle that fails the functional gas cap test described in subsection (F)(3)(c) shall not be reinspected until repaired as required in R18 2 1009(B).~~
- f. ~~A vehicle tested under subsection (F)(3) shall:
 
  - i. ~~Fail if the data link connector is missing, tampered, or otherwise inoperable during any OBD test;~~
  - ii. ~~Fail if the MIL does not illuminate at all when the ignition key is turned to the key on, engine off position, or does not illuminate briefly during engine start during any OBD test;~~
  - iii. ~~Fail if the MIL illuminates continuously or flashes after the engine has been started during any OBD test;~~
  - iv. ~~Fail if a diagnostic trouble code is present and the MIL status, as indicated by the scan tool, is commanded on during any OBD test;~~
  - v. ~~Be rejected from an initial OBD test and required to take and pass a loaded cruise test and curb idle test under subsection (F)(2) if the number of unset readiness indicators, excluding continuous indicators, is three or more for a model year 1996 2000 vehicle, or two or more for a model year 2001 and newer vehicle;~~
  - vi. ~~Be rejected from an OBD retest if the number of unset readiness indicators, excluding continuous indicators, exceeds the number allowed in subsection (v); and~~
  - vii. ~~Fail the functional gas cap test if the gas cap does not comply with subsection (F)(7)(a).~~~~
- g. ~~A vehicle tested under subsection (F)(5) shall fail the inspection if a vehicle emissions inspector detects a liquid fuel leak. A vehicle that fails the liquid fuel leak test shall not be reinspected until repaired as required in R18 2 1010(E).~~
- 7. ~~A vehicle required to take an emissions test in area B, except a vehicle required to take an OBD test as described in subsection (F)(3), shall at the time of the test, undergo a tampering inspection based on the original configuration of the vehicle as manufactured. The applicable emissions system requirements shall be verified by the "VEHICLE EMISSION CONTROL INFORMATION" label. A vehicle that fails any portion of the tampering inspection shall be repaired according to R18 2 1009 before reinspection unless the owner provides the written statement required in R18 2 1008(B). "Original configuration" for a foreign manufactured vehicle means the design and construction of a vehicle produced by the manufacturer for original entry and sale in the United States. The tampering inspection shall consist of the following:
 
  - a. ~~Any vehicle emissions tested, except one with a vented fuel system, shall have a functional test of the gas cap to determine that cap leakage does not exceed 60 cubic centimeters of air per minute at a pressure of 30 inches of water gauge. A vehicle with a non sealing gas cap shall be checked for the presence of a properly fitting gas cap.~~
  - b. ~~For a 1975 or newer model year vehicle:
 
    - i. ~~A visual inspection to determine the presence and proper installation of each required catalytic converter, if applicable; and~~~~~~

- ii. — An examination to determine the presence of an operational air pump, if applicable.
- 8. — Exhaust sampling in area B shall comply with the following:
  - a. — All CO and HC emissions analyzers shall have water traps incorporated in the sampling lines. Sampling probes shall be capable of taking undiluted exhaust samples from a vehicle exhaust system.
  - b. — A vehicle, other than a diesel powered vehicle, shall be inspected with a NDIR-analyzer capable of determining concentrations of CO and HC within the ranges and tolerances specified in Table 5.
  - c. — A vehicle with multiple exhaust pipes shall be inspected by collecting and averaging samples by one of the following methods:
    - i. — Collect separate samples from each exhaust pipe and use the average concentration to determine the test result;
    - ii. — Use manifold exhaust probes to simultaneously sample approximately equal volumes from each pipe; or
    - iii. — Use manifold exhaust pipe adapters to collect approximately equal volume samples from each pipe.
- G. — The following apply to all testing under subsection (E) or (F):
  - 1. — A rotary piston engine shall be inspected as a 4 stroke engine with four cylinders or less;
  - 2. — A turbine engine shall be inspected as a 4 stroke engine with more than four cylinders; and
  - 3. — A vehicle in which a diesel engine has been replaced with a gas engine shall be inspected as a gas powered vehicle of the same vehicle model year. The vehicle shall not pass the inspection unless each catalytic converter, air pump, gas cap, and other emissions control device applicable to the vehicle model year and the same or more recent year engine configuration is properly installed and in operating condition.
- H. — In area A, the inspection test procedure for a diesel powered vehicle is as follows:
  - 1. — A diesel powered vehicle with a GVWR greater than 8,500 pounds shall be tested with a procedure that conforms to Society of Automotive Engineers standard J1667, February 1996, incorporated by reference and on file with the Department and the Secretary of State. This incorporation by reference contains no future editions or amendments. A copy of this referenced material may be obtained at Society of Automotive Engineers, 400 Commonwealth Dr., Warrendale, PA 15096 0001. The procedure shall utilize the corrections for ambient test conditions in Appendix B of J1667 for all tests. The test results shall be reported as the percentage of smoke opacity. Emissions pass fail determinations are as follows:
    - a. — A vehicle powered by a 1991 or later model year diesel engine fails if the J1667 final test result is greater than 40%, unless the engine family is exempted from the 40% standard under subsection (H)(1)(e);
    - b. — A vehicle powered by a pre 1991 model year diesel engine fails if the J1667 final test result is greater than 55%, unless the engine family is exempted from the 55% standard under subsection (H)(1)(e);
    - c. — The engine model year is determined by the emission control label. If the emission control label is missing, illegible, or incorrect, the test standard shall be 40%, unless a correct, legible, emission control label replacement is attached to the vehicle within 30 days of the inspection;
    - d. — A vehicle that exceeds the opacity standard in subsection (H)(1)(a) or (b) fails the emissions test. Before reinspection, the vehicle shall have a low emissions tune-up as described in R18 2 1010(H);
    - e. — The Director shall exempt any engine family from the standards in subsections (H)(1)(a) or (b) if the engine manufacturer demonstrates either of the following:

- i. ~~The engine family exhibits smoke opacity greater than the standard when in good operating condition and adjusted to the manufacturer's specifications. The Director shall identify a technologically appropriate less stringent standard based on a review of data obtained from engines in good operating condition and adjusted to manufacturer's specifications; or~~
      - ii. ~~The engine family is exempted from an equivalent standard based on J1667 by the executive officer of the California Air Resources Board (CARB). The Director shall allow the engine family to comply with any technologically appropriate less stringent standard identified by the executive officer of CARB; and~~
    - f. ~~A demonstration under subsection (H)(1)(e)(i) shall be based on data from at least three vehicles. Data from official inspections under subsection (H)(1) showing that vehicles in the engine family meet the standard may be used to rebut the demonstration. The Director shall implement any new standard resulting from each exemption as soon as practicable for all subsequent tests and provide notice at all affected test stations and fleets.~~
  - 2. ~~A diesel powered vehicle with a GVWR greater than 4,000 pounds and less than or equal to 8,500 pounds shall be tested by a loaded dynamometer test by applying a single load of 30 HP,  $\pm$  2 HP, while operated at 50 MPH. A diesel powered vehicle with a GVWR of 4,000 pounds or less shall be tested by a loaded dynamometer test by applying a single load of between 6.4 8.4 HP while operated at 30 MPH. For all diesel powered vehicles with a GVWR less than or equal to 8,500 pounds:
 
    - a. ~~The emissions pass fail determination shall be made as follows:
 
      - i. ~~The opacity reading for a period of 10 consecutive seconds with the engine under applicable loading shall be compared to the opacity standard in R18 2 1030(B). A vehicle that does not exceed the applicable opacity standard in R18 2 1030(B) complies with the minimum emissions standards.~~
      - ii. ~~A vehicle that exceeds the applicable opacity standard fails the emissions test. Before reinspection, the vehicle shall have a low emissions tune up as described in R18 2 1010.~~~~
    - b. ~~Exhaust sampling shall comply with the following:
 
      - i. ~~For a diesel powered vehicle equipped with multiple pipes, separate measurements shall be made on each exhaust pipe. The reading taken from the exhaust pipe that has the highest opacity reading shall be used for comparison with the applicable emissions standard.~~
      - ii. ~~A vehicle shall be inspected with either a full flow or sampling type opacity meter. The opacity meter shall be a direct reading, continuous reading light extinction type using a collimated light source and photo electric cell, accurate to a value within  $\pm$  5% of filter value.~~~~~~
- I. ~~In area B, the inspection test procedure for a diesel powered vehicle is as follows:
 
  - 1. ~~A diesel powered vehicle with a GVWR greater than 26,000 pounds or having tandem axles shall be tested according to one of the following methods:
 
    - a. ~~The vehicle shall be tested on a chassis dynamometer beginning with no power absorption by selecting a gear ratio that produces a maximum vehicle speed of 30 35 MPH at governed or maximum rated RPM. If the vehicle has a manual transmission or an automatic transmission with individual gear selection, the engine shall be operated at governed or maximum rated engine RPM, at normal operating temperature under a power absorption load applied to the dynamometer until the loading reduces the engine RPM to 80% of the governed speed at wide open throttle position. If the vehicle has an automatic transmission and automatic~~~~~~

- gear kickdown, the engine shall be loaded to a speed just above the kickdown speed or 80% of the governed speed, whichever is greater. If the chassis dynamometer does not have enough horsepower absorption capability to lug the engine down to these speeds, the vehicle's brakes may be used to assist the dynamometer.
- b. ~~If a chassis dynamometer is not available, the vehicle shall be tested by being lugged by its own brakes by selecting a gear ratio that produces a maximum speed of 10-15 MPH at governed engine RPM or maximum rated RPM and then loading the engine by applying the brakes until the engine RPM is lugged down to 80% of the governed or maximum rated RPM at wide open throttle position. If the vehicle does not have a tachometer, the vehicle may be loaded to 80% of governed or maximum rated speed.~~
2. ~~A diesel powered vehicle without tandem axles and having a GVWR greater than 10,500 pounds and less than or equal to 26,000 pounds shall be tested according to one of the following methods:~~
- a. ~~The vehicle shall be tested on a chassis dynamometer beginning with no power absorption by selecting a gear ratio that produces a maximum vehicle speed of 30-35 MPH at governed or maximum rated RPM. If the vehicle has a manual transmission or an automatic transmission with individual gear selection, the engine shall be operated at governed or maximum rated engine RPM, at normal operating temperature under a power absorption load applied to the dynamometer until such loading reduces the engine RPM to 80% of the governed speed at wide open throttle position. If the vehicle has an automatic transmission and automatic gear kickdown, the engine shall be loaded to a speed just above the kickdown speed or 80% of governed speed, whichever is greater. If the chassis dynamometer does not have enough horsepower absorption capability to lug the engine down to these speeds, the vehicle's brakes may be used to assist the dynamometer;~~
- b. ~~The vehicle shall be tested by applying a single load of 30 HP,  $\pm$  2 HP, while operated at 50 MPH; or~~
- c. ~~The vehicle shall be tested by being lugged by its own brakes by selecting a gear ratio that produces a maximum speed of 10-15 MPH at governed engine RPM or maximum rated RPM and then loading the engine by applying the brakes until the engine RPM is lugged down to 80% of the governed or maximum rated RPM at wide open throttle position. If the vehicle does not have a tachometer, the vehicle may be loaded to 80% of governed or maximum rated speed.~~
3. ~~A diesel powered vehicle with a GVWR of greater than 4,000 pounds and less than or equal to 10,500 pounds shall be tested by a loaded dynamometer test by applying a single load of 30 HP,  $\pm$  2 HP, while operated at 50 MPH.~~
4. ~~A diesel powered vehicle with a GVWR of 4,000 pounds or less shall be tested by a loaded dynamometer test by applying a single load of between 6.4-8.4 HP while operated at 30 MPH.~~
5. ~~The emissions pass-fail determination shall be performed:~~
- a. ~~The opacity reading during a period of 10 consecutive seconds with the engine under applicable loading specified in subsections (I)(1) through (4) shall be compared to the opacity standard specified in R18-2-1030(B). A vehicle that does not exceed the opacity standard in R18-2-1030(B) complies with the minimum emissions standards.~~
- b. ~~A vehicle that exceeds the standard in R18-2-1030(B) fails the emissions test. Before reinspection, the vehicle shall have a low emissions tune-up as described in R18-2-1010.~~

- 6. ~~Exhaust sampling shall comply with the following:~~
  - a. ~~For a diesel powered vehicle equipped with multiple exhaust pipes, separate measurements shall be made on each exhaust pipe. The reading taken from the exhaust pipe that has the highest opacity reading shall be used for comparison with the standard in R18 2 1030(B).~~
  - b. ~~A vehicle shall be inspected with either a full flow or sampling type opacity meter. The opacity meter shall be a direct reading, continuous reading light extinction type using a collimated light source and photo electric cell, accurate to a value within  $\pm 5\%$  of filter value.~~
- J. ~~All diesel powered vehicles shall undergo a tampering inspection under subsection (E)(7).~~
  - A. This section establishes the testing requirements for vehicles in the State of Arizona. Subsection B identifies which tests apply to a particular type and model year of vehicle. Subsection C establishes the procedures and criteria for, passing, failing, or being rejected from each test.
  - B. Test applicability.
    - 1. Area A and Area B non-diesel. The following general requirements govern test applicability for non-diesel vehicles in both Area A and Area B:
      - a. A rotary engine shall be inspected as a 4-stroke engine with four cylinders or less.
      - b. For a vehicle in which an engine has been replaced:
        - i. A vehicle owner shall not install a heavy-duty engine in a light-duty chassis.
        - ii. A vehicle owner shall not install a light-duty engine in a heavy-duty chassis.
        - iii. The replacement engine package shall include all emissions control equipment and devices that were required by the manufacturer for an engine-chassis certification. All emissions control equipment and devices shall be properly installed and in operating condition, and the resulting engine-chassis configuration shall be equivalent to a verified configuration of the same, or newer, model year as that of the vehicle chassis.
        - iv. The Department shall inspect the vehicle according to the model year of the vehicle chassis.
    - 2. Area A Non-Diesel. Non-diesel vehicles in Area A are subject to the test procedures identified in this subsection:
      - a. Vehicles other than alternative fuel vehicles operated by a school district in Area A, heavy duty alternative fuel vehicles, reconstructed vehicles, and constant 4-wheel-drive vehicles that are not equipped with OBD, are subject to the following test procedures until the Administrator approves subsection (B)(2)(a)(i) into the applicable implementation plan:

<b>Area A Non-Diesel Testing Procedures Until SIP Revision is Approved</b>				
<u>Model Year</u>	<u>GVWR</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>1996 or later</u>	<u>8,500 pounds or less</u>	<u>Biennial</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.4</u> <u>C.16</u> <u>C.17</u>
<u>1981 through 1995</u>	<u>8,500 pounds or less</u>	<u>Biennial</u>	<u>Transient loaded and evaporative system pressure</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.5</u> <u>C.16</u> <u>C.17</u>
<u>1975 through 1980</u>	<u>8,500 pounds or less</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>More than 8,500 pounds</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Any</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u>	<u>C.6</u> <u>C.16</u>

- i. Test procedures that apply after the administrator approves this subsection, (B)(2)(a)(i), into the applicable implementation plan:

<b>Area A Non-Diesel Testing Procedures After SIP Revision is Approved</b>					
<u>Model Year</u>	<u>GVWR</u>	<u>OBD Certified?</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>1996 or Later</u>	<u>Any</u>	<u>Yes</u>	<u>Biennial</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.4</u> <u>C.16</u> <u>C.17</u>
<u>1981 or later</u>	<u>8,500 pounds or less</u>	<u>No</u>	<u>Biennial</u>	<u>Transient loaded and evaporative system pressure</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.5</u> <u>C.16</u> <u>C.17</u>
<u>1975 through 1980</u>	<u>8,500 pounds or less</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>More than 8,500 pounds</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Any</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u>	<u>C.6</u> <u>C.17</u>

- b. Alternative fuel vehicles operated by a school district in Area A are subject to the following testing procedures until the Administrator approves subsection (B)(2)(b)(i) into the applicable implementation plan. After section (B)(2)(b)(i)

has been approved into the applicable implementation plan, alternative fuel vehicles operated by a school district in Area A will be subject to subsection (B)(2)(b)(i).

<b>Area A Alt. Fuel Vehicles Operated by a School District Testing Procedures Until SIP Revision is Approved</b>				
<b>Model Year</b>	<b>OBD Certified?</b>	<b>Test Frequency</b>	<b>Tests Applicable</b>	<b>Test Subsection</b>
<u>1975 or later</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u>	<u>C.8</u> <u>C.16</u>

i. Test procedures that apply after the Administrator approves this subsection, (B)(2)(b)(i), into the applicable implementation plan.

<b>Area A Alt. Fuel Vehicles Operated by a School District Testing Procedures After SIP Revision is Approved</b>				
<b>Model Year</b>	<b>OBD Certified?</b>	<b>Test Frequency</b>	<b>Tests Applicable</b>	<b>Test Subsection</b>
<u>Any</u>	<u>Yes</u>	<u>Biennial</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.4</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u>	<u>C.6</u> <u>C.16</u>

c. Heavy duty alternative fuel vehicles in Area A that are not owned by a school district are subject to the follow testing procedures.

<b>Model Year</b>	<b>GVWR</b>	<b>OBD Certified?</b>	<b>Test Frequency</b>	<b>Tests Applicable</b>	<b>Test Subsection</b>
<u>Any</u>	<u>More than 14,500 pounds</u>	<u>Yes</u>	<u>Biennial</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.4</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>More than 14,500 pounds</u>	<u>No</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.8</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>More than 14,500 pounds</u>	<u>No</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u>	<u>C.8</u> <u>C.16</u>

2. Area B Non-Diesel. Non-diesel vehicles in Area B are subject to the test procedures identified in this subsection:

a. Vehicles other than reconstructed vehicles and constant 4-wheel-drive vehicles that are not equipped with OBD shall be subject to the following test procedures



until the Administrator approves subsection (B)(2)(a)(i) into the applicable implementation plan:

<b>Area B Non-Diesel Testing Procedures Until SIP Revision is Approved</b>				
<u>Model Year</u>	<u>GVWR</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>1996 or later</u>	<u>8,500 pounds or less</u>	<u>Annual</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1981 through 1995</u>	<u>8,500 pounds or less</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 through 1980</u>	<u>8,500 pounds or less</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.8</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>More than 8,500 pounds</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.8</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Any</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u>	<u>C.8</u> <u>C.16</u>

i. Test procedures that apply after the Administrator approves this subsection (B)(2)(a)(i) into the applicable implementation plan:

<b>Area B Non-Diesel Testing Procedures After SIP Revision is Approved</b>					
<u>Model Year</u>	<u>GVWR</u>	<u>OBD Certified?</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>Any</u>	<u>Any</u>	<u>Yes</u>	<u>Biennial</u>	<u>OBD</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.4</u> <u>C.16</u> <u>C.17</u>
<u>1981 or later</u>	<u>8,500 pounds or less</u>	<u>No</u>	<u>Annual</u>	<u>Loaded test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 through 1980</u>	<u>8,500 pounds or less</u>	<u>No</u>	<u>Annual</u>	<u>Loaded Test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 or later</u>	<u>More than 8,500 pounds</u>	<u>No</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.8</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Any</u>	<u>No</u>	<u>Annual</u>	<u>Idle test</u> <u>Functional gas cap</u>	<u>C.9</u> <u>C.17</u>

4. Reconstructed non-diesel vehicles. Reconstructed non-diesel vehicles in both Area A and Area B are subject to the tests specified in the following table:

<u>Model Year</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>1967 or later</u>	<u>Annual</u>	<u>Loaded test</u> <u>Visual gas cap</u>	<u>C.6</u> <u>C.18</u>

5. Constant 4-wheel-drive vehicles. Constant 4-wheel-drive in both Area A and Area B that are not equipped with OBD are subject to the tests specified in the following table:

<u>Model Year</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>1975 or later</u>	<u>Annual</u>	<u>Idle Test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.8</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Annual</u>	<u>Idle Test</u> <u>Functional gas cap</u>	<u>C.8</u> <u>C.16</u>

6. Area A diesel. Diesel vehicles that require inspection in Area A are subject to the test procedures specified in this subsection until the Administrator approves subsection (B)(8) into the applicable implementation plan:

<u>Area A Diesel Testing Procedures Until SIP Revision is Approved</u>					
<u>GVWR</u>	<u>OBD Certified?</u>	<u>Model Year</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>8,500 and less</u>	<u>Yes</u>	<u>Any</u>	<u>Annual</u>	<u>OBD</u> <u>Tampering</u>	<u>C.4</u> <u>C.17</u>
<u>More than 8,500 pounds</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Snap idle</u> <u>Tampering</u>	<u>C.10</u> <u>C.17</u>
<u>More than 8,500 pounds</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Snap idle</u>	<u>C.10</u>
<u>More than 4,000 and less than or equal to 8,500 pounds</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity B</u> <u>Tampering</u>	<u>C.12</u> <u>C.17</u>
<u>More than 4,000 and less than or equal to 8,500 pounds</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity B</u>	<u>C.12</u>
<u>4,000 pounds or less</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity C</u> <u>Tampering</u>	<u>C.13</u> <u>C.17</u>
<u>4,000 pounds or less</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity C</u>	<u>C.13</u>

7. Area B Diesel. Diesel vehicles that require inspection in Area B are subject to the test procedures specified in this subsection until the Administrator approves subsection (B)(8) into the applicable implementation plan:

<b>Area B Diesel Testing Procedures Until SIP Revision is Approved</b>				
<u>GVWR</u>	<u>Model Year</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>More than 26,000 pounds</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity A</u> <u>Tampering</u>	<u>C.12</u> <u>C.18</u>
<u>More than 26,000 pounds</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity A</u>	<u>C.12</u>
<u>More than 10,500 and less than or equal to 26,000 pounds</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Any of the following:</u> <u>Loaded opacity A</u> <u>Loaded opacity B</u> <u>Tampering</u>	<u>C.12</u> <u>C.13</u> <u>C.18</u>
<u>More than 10,500 and less than or equal to 26,000 pounds</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Any of the following:</u> <u>Loaded opacity A</u> <u>Loaded opacity B</u>	<u>C.12</u> <u>C.13</u>
<u>More than 4,000 and less than or equal to 10,500</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity B</u> <u>Tampering</u>	<u>C.13</u> <u>C.18</u>
<u>More than 4,000 and less than or equal to 10,500</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity B</u>	<u>C.13</u>
<u>4,000 pounds or less</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity C</u> <u>Tampering</u>	<u>C.14</u> <u>C.18</u>
<u>4,000 pounds or less</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity C</u>	<u>C.14</u>

8. Test procedures that apply for diesel vehicles in both Area A and Area B after the Administrator approves this subsection (B)(8) into the applicable implementation plan:

<b>Area A and Area B Diesel Testing Procedures After SIP Revision is Approved</b>					
<u>GVWR</u>	<u>OBD Certified?</u>	<u>Model Year</u>	<u>Test Frequency</u>	<u>Tests Applicable</u>	<u>Test Subsection</u>
<u>Any</u>	<u>Yes</u>	<u>Any</u>	<u>Biennial</u>	<u>OBD</u> <u>Tampering</u>	<u>C.4</u> <u>C.17</u>
<u>More than 8,500 pounds</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Snap idle</u> <u>Tampering</u>	<u>C.10</u> <u>C.17</u>
<u>More than 8,500 pounds</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Snap idle</u>	<u>C.10</u>

<u>More than 4,000 and less than or equal to 8,500 pounds</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity B</u> <u>Tampering</u>	<u>C.12</u> <u>C.17</u>
<u>More than 4,000 and less than or equal to 8,500 pounds</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity B</u>	<u>C.12</u>
<u>4,000 pounds or less</u>	<u>No</u>	<u>1975 or later</u>	<u>Annual</u>	<u>Loaded opacity C</u> <u>Tampering</u>	<u>C.13</u> <u>C.17</u>
<u>4,000 pounds or less</u>	<u>No</u>	<u>1967 through 1974</u>	<u>Annual</u>	<u>Loaded opacity C</u>	<u>C.13</u>

9. Dealer Fleet Testing Procedures. Test procedures that apply until the administrator approves sections (B)(2)(a)(i), (B)(3)(a)(i), and (B)(8) into the applicable implementation plan for used vehicles sold by a motor vehicle dealer who is a fleet operator and who has been issued a permit pursuant to §49-546. After those sections are approved into the applicable implementation plan, used vehicles sold by a motor vehicle dealer who is a fleet operator and who has been issued a permit pursuant to §49-546 will be subject to the same testing procedures as vehicles tested at state stations and this table will no longer be applicable.

<b>Area A and Area B Dealer Fleet Testing Procedures Until SIP Revision is Approved</b>			
<b><u>Model Year</u></b>	<b><u>Test Frequency</u></b>	<b><u>Tests Applicable</u></b>	<b><u>Test Subsection</u></b>
<u>1981 or later</u>	<u>Annual</u>	<u>Two speed idle test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.6</u> <u>C.16</u> <u>C.17</u>
<u>1975 through 1980</u>	<u>Annual</u>	<u>Idle Test</u> <u>Functional gas cap</u> <u>Tampering</u>	<u>C.7</u> <u>C.16</u> <u>C.17</u>
<u>1967 through 1974</u>	<u>Annual</u>	<u>Idle Test</u> <u>Functional gas cap</u>	<u>C.8</u> <u>C.16</u>

**C. Test Requirements**

1. Conditions for Pass. A vehicle passes inspection if the vehicle:
  - a. Is subjected to all applicable tests required by Subsection (B);
  - b. Is not rejected from any of the tests for any of the reasons specified in (C)(2) or (C)(3) of this subsection; and
  - c. Does not fail any of the applicable tests for any of the reasons specified in this subsection.
2. Pre-Test Safety Inspection
  - a. The Department shall inspect each vehicle visually before the emissions test for any of the following unsafe or untestable conditions:
    - i. A fuel leak that causes wetness or pooling of fuel;
    - ii. A continuous engine or transmission oil leak onto the floor;
    - iii. A continuous engine coolant leak onto the floor such that the engine is overheating or may overheat within a short time;

- iv. A tire on a driving wheel with less than 2/32-inch tread, metal protuberances, unmatched tire size, obviously low tire pressure as determined by visual inspection;
  - v. An exhaust pipe that does not allow for safe exhaust probe insertion;
  - vi. An exhaust pipe on a diesel-powered vehicle that does not allow for safe exhaust probe insertion and attachment of opacity meter sensor units;
  - vii. Improperly operating brakes;
  - viii. Any vehicle modification or mechanical condition that prevents dynamometer operation;
  - ix. Loud internal engine noise;
  - x. An obvious exhaust leak;
  - xi. Towing a trailer or carrying a heavy load;
  - xii. Carrying explosives or any hazardous material not used as a fuel for the vehicle; or
  - xiii. Any other condition that in the judgment of the inspector makes testing unsafe or the vehicle untestable.
- b. If the inspector determines that a vehicle is unsafe or otherwise untestable by the visual inspection the following shall apply:
- i. The vehicle shall be rejected without an emissions test;
  - ii. The inspector shall notify the vehicle owner or operator of all untestable or unsafe conditions found;
  - iii. A state station shall not charge a fee; and
  - iv. A state station shall not test the vehicle until the cause for rejection is repaired.
3. Test Operating Conditions. When conducting the emissions test required by this Section, the vehicle emissions inspector shall ensure that all of the following requirements are satisfied:
- a. The vehicle shall be tested in the condition presented, unless rejected under 18-2-1006(C)(2);
  - b. The vehicle's engine shall be operating at normal temperature and not be overheating as indicated by a gauge, warning light, or boiling radiator; and
  - c. All vehicle accessories shall be turned off during testing.
4. OBD Test.
- a. Test Procedure. The OBD test shall consist of:
    - i. A visual inspection of the MIL function; and
    - ii. An electronic examination of the OBD computer by connecting a scan tool to the data link connector and interrogating the OBD system to determine vehicle readiness status, MIL status, and the presence of diagnostic trouble codes.
  - b. Equipment Specifications. The OBD equipment shall conform to the requirements of "Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program," EPA420-R-01-015, EPA, June 2001 (and no future editions or amendments), which is incorporated by reference. A copy of this incorporated material is on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.
  - c. OBD scan tools shall have the most recent available software downloaded and installed before inspection.
  - d. Test Rejection. A vehicle shall be rejected from an OBD test if any of the following conditions occurs:

- i. The number of unset readiness indicators, excluding continuous indicators, is three or more for a model year 1996-2000 vehicle, or two or more for a model year 2001 and newer vehicle;
  - ii. The data link connector cannot be located or is inaccessible;
  - iii. The data link connector is loose and the scan tool cannot be inserted into the connector;
  - iv. The OBD is not communicating;
  - v. The data link connector has no voltage; or
  - vi. The eVIN and monitors are mismatched.
- e. Test Failure. A vehicle fails the OBD test if any of the following conditions occurs:
- i. The vehicle's MIL does not illuminate when the ignition is on and the engine is off;
  - ii. The vehicle's MIL illuminates continuously or flashes with the engine running;
  - iii. The vehicle's OBD system reports the MIL as commanded on;
  - iv. The vehicle's OBD system data is inappropriate for the vehicle being tested; or
  - v. The vehicle's OBD system data does not match the original equipment manufacturer (OEM) or an ADEQ exempted OBD software configuration.

5. Transient Loaded and Evaporative System Pressure Test.

- a. Transient Loaded Test Procedure.
- i. The transient loaded test shall consist of 147 seconds of mass emissions measurement using a constant volume sampler while the vehicle is driven by an inspector through a computer-monitored driving cycle on a dynamometer with inertial weight settings appropriate for the weight of the vehicle.
  - ii. The driving cycle shall include the acceleration, deceleration, and idle operating modes described in Table 4.
  - iii. The 147-second sequence may be ended earlier using a fast-pass or fast-fail algorithm.
  - iv. A retest algorithm shall be used to determine if a test failure is due to insufficient vehicle preconditioning. As determined by the retest algorithm, an additional test may be performed on a failing vehicle.
  - v. The highest selectable drive gear shall be used for automatic transmissions and first gear shall be used for manual transmission acceleration from idle.
  - vi. Exhaust emissions concentrations in grams per mile for HC, CO, NO<sub>x</sub> and CO<sub>2</sub> shall be recorded continuously beginning with the first second.
  - vii. All testing and test equipment for the transient loaded emissions test shall conform to "IM240 & Evap Technical Guidance," EPA420-R-00-007, EPA, April 2000, and no future editions or amendments, which is incorporated by reference, except that the transient driving cycle in Table 4, the standards in Table 4, and the fast-pass, fast-fail retest algorithms described in subsection (C)(5)(a) shall be used. A copy of the incorporated material is on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.
  - viii. In determining compliance under subsection (C)(5)(d) for a vehicle that operates on natural gas, HC emissions shall be multiplied by 0.19, when

- an analyzer with a flame ionization detector is used or 0.61, when an NDIR analyzer is used.
- b. Evaporative System Pressure Test Procedure. The evaporative system pressure test shall consist of the following steps in sequence:
    - i. Connect the test equipment to either the fuel tank vent hose at the canister or the fuel tank filler neck;
    - ii. Pressurize the system to 14 ± 0.5 inches of water without exceeding 26 inches of water system pressure; and
    - iii. Close off the pressure source, seal the evaporative system, and monitor pressure decay for two minutes unless a failure is detected or a fast-pass determination is made as defined in EPA420-R-00-007, which is incorporated by reference in subsection (C)(5)(a)(vii) of this rule.
  - c. Test Rejection. A vehicle shall be rejected from the transient loaded and evaporative system pressure test if it has an audible or visible exhaust leak during emissions testing, or the vehicle displays unsafe behavior on the dynamometer during testing.
  - d. Transient Loaded Test Failure. A vehicle fails the transient loaded test if emissions measured during the test exceed the Table 3 standard applicable to the model year and type of the vehicle being tested as follows:
    - i. The average emissions measured for the entire test exceed the “composite standard” for any pollutant; or
    - ii. The average emissions measured during seconds 65 through 146 exceed the “phase-2” standard for any pollutant.
  - e. Evaporative System Pressure Test Failure. A vehicle fails the evaporative system pressure test if any of the following conditions occurs:
    - i. The evaporative system cannot maintain a system pressure above eight inches of water for two minutes after being pressurized to 14 ± 0.5 inches of water;
    - ii. The canister is missing or damaged; or
    - iii. The hose or electrical system is missing, routed incorrectly, or disconnected, according to the vehicle emissions control information label.
  - f. Test Failure. A vehicle fails the transient loaded and evaporative system pressure test if it fails the test under either subsection 10-2-1006(C)(5)(d) or 10-2-1006(C)(5)(e).
6. Loaded Test.
- a. Loaded Cruise Test Procedure.
    - i. The vehicle’s drive wheels shall be placed on a dynamometer and the vehicle shall be operated according to Table 1 of this Article.
  - b. Besides the Arizona specific dynamometer test schedule, loaded tests shall conform to the procedures listed at 40 CFR 51, Subpart S, Appendix B, Section III, amended as of July 1st, 2017, which is incorporated by reference and on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.
  - c. Loaded Test Equipment Specifications.
    - i. The equipment used in Area A state stations for loaded cruise and curb idle testing shall conform to IM240 & Evap Technical Guidance," EPA420-R-00-007, EPA, April 2000, and no future editions or amendments, which is incorporated by reference in subsection (C)(5)(a)(vii) of this rule.
    - ii. The equipment used in Area B state stations and all Arizona fleet emission testing stations for the loaded test shall comply with 40 CFR 51,

Subpart S, Appendix A, Section I, amended as of July 1, 2017, which is incorporated by reference and on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.

- d. In determining whether a vehicle that operates on natural gas complies with the HC emissions standards in Table 2, the results of the test shall be multiplied by 0.19, when an analyzer with a flame ionization detector is used or 0.61, when an NDIR analyzer is used.
  - e. Test Rejection. A vehicle shall be rejected from a loaded cruise and curb idle test, if the CO<sub>2</sub> plus CO reading during the curb idle test is less than 6%.
  - f. Test Failure. A vehicle fails the loaded cruise and curb idle test if tailpipe emissions measured by the test exceed the applicable standards in Table 2 for loaded cruise mode or curb idle mode for the type and model year of the vehicle being tested.
7. Two Speed Idle Test
- a. All two speed idle testing shall conform to the procedures listed at 40 CFR 51, Subpart S, Appendix B, Section II, amended as of July 1, 2017, and no future editions or amendments, which is incorporated by reference and on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.
  - b. All equipment used for two speed idle testing shall conform with the requirements of 40 CFR 51, Subpart S, Appendix A, Section I, amended as of July 1, 2017, and no future editions or amendments, which is incorporated by reference and on file with the Department.
  - c. Test Failure. A vehicle fails the two speed idle test if tailpipe emissions measured by the test exceed the applicable standards in Table 2 for the type and model year of the vehicle being tested.
8. Idle Test
- a. All idle testing shall conform to the procedures listed at 40 CFR 51, Subpart S, Appendix B, Section I, amended as of July 1, 2017, and no future editions or amendments, which is incorporated by reference and on file with the Department, the Secretary of State, and is available online at <http://azdeq.gov/VECS/Rulemaking>.
  - b. All equipment used for two speed idle testing shall conform with the requirements of 40 CFR 51, Subpart S, Appendix A, Section I, amended as of July 1, 2017, and no future editions or amendments, which is incorporated by reference and on file with the Department.
  - c. Test Failure. A vehicle fails the idle test if tailpipe emissions measured by the test exceed the applicable standards in Table 2 for the type and model year of the vehicle being tested.
9. Exhaust Sampling Requirements for Annual Tests on Non-Diesel Vehicles.
- a. All CO and HC emissions analyzers shall have water traps incorporated in the sampling lines. Sampling probes shall be capable of taking undiluted exhaust samples from a vehicle exhaust system.
  - b. A vehicle, other than a diesel-powered vehicle, shall be inspected with a gas analyzer capable of determining concentrations of CO and HC within the ranges and tolerances specified in Table 5.
  - c. A vehicle with multiple exhaust pipes shall be inspected by collecting and averaging samples by one of the following methods:
    - i. Collecting separate samples from each exhaust pipe and use the average concentration to determine the test result;



- ii. Using manifold exhaust probes to simultaneously sample approximately equal volumes from each exhaust pipe; or
- iii. Using manifold exhaust pipe adapters to collect approximately equal volume samples from each exhaust pipe.

10. Snap Idle Test.

a. Snap Idle Test Procedure.

- i. The Department shall test the vehicle with a procedure that conforms to Society of Automotive Engineers Recommended Practice J1667, February 1996, incorporated by reference and on file with the Department, the Secretary of State and is available online at <http://azdeq.gov/VECS/Rulemaking>. This incorporation by reference contains no future editions or amendments.
- ii. All testing and test equipment shall conform to the J1667 Recommended Practice.
- iii. The procedure shall use the corrections for ambient test conditions in Appendix B of the J1667 Recommended Practice for all tests.
- iv. To expedite testing throughput, the Department may implement rapid testing procedures.
- v. The test results shall be reported as the percentage of smoke opacity.

b. Snap Idle Test Failure.

- i. Except as provided in subsection (C)(10)(c), a vehicle fails the snap idle test if the opacity of emissions exceeds the level specified in the following table:

<u>Model Year</u>	<u>Standard</u>
<u>1991 or later</u>	<u>40%</u>
<u>1990 or earlier</u>	<u>55%</u>

- ii. The engine model year is determined by the emission control label. If the emission control label is missing, illegible, or incorrect, the test standard shall be 40%, unless a correct, legible, emission control label replacement is attached to the vehicle within 30 days of the inspection.

c. Alternative Opacity Standard. The Director shall identify an alternative, less stringent opacity standard for an engine family if the conditions of either subsection (C)(10)(c)(i) or (C)(10)(c)(ii) are satisfied.

- i. The engine family exhibits smoke opacity greater than the applicable standard in subsection (C)(10)(b)(i) when in good operating condition and adjusted to the manufacturer's specifications. If this condition is satisfied, the Director shall identify a technologically appropriate less stringent standard based on a review of data obtained from engines in good operating condition and adjusted to manufacturer's specifications.
- ii. The engine family has been granted an exemption from a standard equivalent to the applicable standard in subsection (C)(10)(b)(i) based on the J1667 Recommended Practice by the executive officer of the California Air Resources Board (CARB). If this condition is satisfied, the Director shall allow the engine family to comply with any technologically appropriate less stringent standard identified by the executive officer of CARB.
- iii. A demonstration under subsection (C)(10)(c)(i) shall be based on data from at least three vehicles. Data from official inspections under this

- subsection (C)(10) showing that vehicles in the engine family meet the standard may be used to rebut the demonstration.
- iv. The Director shall implement any new standard resulting from each exemption as soon as practicable for all subsequent tests and provide notice at all affected test stations and fleets.
11. Loaded Opacity A Test.
- a. Test Procedure.
    - i. The vehicle shall be tested on a chassis dynamometer beginning with no power absorption by selecting a gear ratio that produces a maximum vehicle speed of 30-35 MPH at governed or maximum rated RPM.
    - ii. If the vehicle has a manual transmission or an automatic transmission with individual gear selection, the engine shall be operated at governed or maximum rated engine RPM, at normal operating temperature under a power absorption load applied to the dynamometer until the loading reduces the engine RPM to 80% of the governed speed at wide-open throttle position.
    - iii. If the vehicle has an automatic transmission and automatic gear kick-down, the engine shall be loaded to a speed just above the kickdown speed or 80% of the governed speed, whichever is greater.
    - iv. If the chassis dynamometer does not have enough horsepower absorption capability to lug the engine down to these speeds, the vehicle's brakes may be used to assist the dynamometer.
  - b. Test Failure. A vehicle fails the test if the opacity reading for a period of 10 consecutive seconds exceeds the applicable standard in R18-2-1030(B).
12. Loaded Opacity B Test.
- a. Test Procedure. The vehicle shall be tested by a loaded dynamometer test by applying a single load of 30 HP,  $\pm$  2 HP, while operated at 50 MPH.
  - b. Test Failure. A vehicle fails the test if the opacity reading for a period of 10 consecutive seconds exceeds the applicable standard in R18-2-1030(B).
13. Loaded Opacity C Test.
- a. Test Procedure. The vehicle shall be tested by a loaded dynamometer test by applying a single load of between 6.4 - 8.4 HP while operated at 30 MPH.
  - b. Test Failure. A vehicle fails the test if the opacity reading for a period of 10 consecutive seconds exceeds the applicable standard in R18-2-1030(B).
14. Exhaust Sampling Requirements for Diesel Vehicles Tests other than the Snap Idle Test.
- a. For a diesel-powered vehicle equipped with multiple exhaust pipes, separate measurements shall be made on each exhaust pipe. The reading taken from the exhaust pipe that has the highest opacity reading shall be used for comparison with the standard in R18-2-1030(B).
  - b. A vehicle shall be inspected with either a full-flow or sampling-type opacity meter. The opacity meter shall be a direct reading, continuous reading light extinction-type using a collimated light source and photo-electric cell, accurate to a value within  $\pm$  5% of filter value.
15. Functional Gas Cap Test.
- a. Test Procedure.
    - i. The vehicle shall undergo a functional test of the gas cap to determine cap leakage.
    - ii. A vehicle with a non-sealing gas cap shall be checked for the presence of a properly fitting gas cap.
  - b. Exemption. A vehicle with a vented fuel system is exempt from this subsection.
  - c. Test Failure.

- i. A vehicle fails the test if cap leakage exceeds 60 cubic centimeters of air per minute at a pressure of 30 inches of water gauge.
  - ii. Notwithstanding subsection 18-2-1006(C)(15)(c)(i), a vehicle does not fail the test if the failing cap is immediately replaced at the state station by a gas cap that satisfies the requirements of this subsection.
- 16. Tampering Inspection.
  - a. The inspection shall be based on the original configuration of the vehicle as manufactured. The Department shall verify the applicable emissions system requirements shall be verified by the "Vehicle Emission Control Information" label. "Original configuration" for a foreign manufactured vehicle means the design and construction of a vehicle produced by the manufacturer for original entry and sale in the United States.
  - b. The Department's tampering inspection shall consist of the following:
    - i. A visual inspection to determine the presence and proper installation of each required catalytic converter system or OEM equivalent;
    - ii. An examination to determine the presence of an operational injection system, if applicable;
    - iii. A visual inspection to determine the presence of an operational positive crankcase ventilation system or closed crankcase ventilation system, if applicable; and
    - iv. A visual inspection to determine the presence of an operational evaporative control system, if applicable.
- 17. Visual Gas Cap Test.
  - a. The visual gas cap test consists of the inspector's ocular verification that a gas cap is properly fitted to the vehicle.
- 18. Testing Vehicles that Operate on More than One Fuel.
  - a. A vehicle, other than a vehicle for which an OBD test is required, designed to operate on more than one fuel, shall be tested on the fuel in use when the vehicle is presented for inspection, except vehicles that operate on alternative fuel, as defined in A.R.S. § 1-215.
- 19. Testing Vehicles that Operate on Alternative Fuels.
  - a. The inspector shall test vehicles that operate on an alternative fuel, as defined in A.R.S. § 1-215, other than a vehicle for which an OBD test is required, on each fuel that the vehicle is intended to operate on, using the appropriate emissions test procedure and standards for that vehicle.
  - b. The vehicle shall be operated for a minimum of 30 seconds after switching fuels and before testing begins. The vehicle shall be rejected for testing if it is not able to operate on each fuel that the vehicle is intended to operate on or if the vehicle operator cannot switch fuels.
  - c. A vehicle that operates exclusively on propane or natural gas, as defined in A.R.S. § 1-215, shall be exempt from the functional gas cap test in subsection 10-2-1006(C)(15) and the evaporative pressure system test in subsection 10-2-1006(C)(5)(b).

**R18-2-1007. Evidence of Meeting State Inspection Requirements**

- A. A ~~Vehicles~~ vehicle required to be inspected under this Article shall pass inspection before registration by meeting the requirements of R18-2-1006, unless the vehicle owner obtains a certificate of waiver ~~waived~~ under R18-2-1008.
- B. The MVD or its agent may use the MVD motor vehicles emissions database, if available, as evidence that a vehicle complies with the requirements of this Article.

- C. If the MVD motor vehicles emissions database is not available, the MVD or its agent shall accept any of the following documents identified in subsections (C)(1) to (C)(5), when complete, unaltered, and dated no more than 90 days before registration expiration date, as evidence that a vehicle complies with the requirements of this Article unless the MVD or its agent has reason to believe it is false. Documents accompanying a late registration may be dated subsequent to the registration expiration date:
  1. Certificate of compliance,
  2. Certificate of waiver (except from auto dealers licensed to sell used motor vehicles under Title 28),
  3. Certificate of exemption,
  4. Director's certificate, or
  5. The upper section of the vehicle inspection report with "PASS" in the final results block.
- D. A complete certificate of inspection or government vehicle certificate of inspection dated within 12 months of registration for an annually tested vehicle and 24 months for a biennially tested vehicle shall be accepted by the MVD or its agent as evidence that a vehicle is in compliance with the requirements of this Article unless the MVD or its agent has reason to believe it is false. ~~A certificate corrected according to R18-2-1019(F)(1)(a) shall be accepted by the MVD or its agent.~~
- E. Documents listed in subsection (C) and originating in ~~area~~ Area B are not acceptable for meeting the inspection requirements in ~~area~~ Area A, unless the tests required in Area A and Area B for the vehicle under R18-2-1006 are identical.
- F. Government vehicles for which only weight fees are paid shall be registered without evidence of inspection.

**R18-2-1008. Procedure for Issuing Certificates of Waiver**

- A. Unless prohibited under subsection ~~(C)~~; ~~(D)~~; ~~or (E)~~, a ~~certificate of waiver~~ inspector shall be ~~issued subsequent to~~ issue a certificate of waiver after reinspection by a state inspector at a state ~~or~~ Department station to a vehicle that failed the emissions ~~inspection or the emissions and tampering inspections~~ when it is determined by repair receipts, emissions test results, evidence of repairs performed, underhood verification, or similar evidence that the requirements of R18-2-1009 and R18-2-1010 have been met, or for emissions failures only, any further repairs within the repair cost limit would be ineffective. A waiver may be denied if a waiver request is based upon repair estimates and the state inspector demonstrates that a recognized repair facility can repair or improve the vehicle's test readings within the repair cost limit reinspection when the vehicle owner demonstrates any of the following conditions have been satisfied:
  1. The requirements of R18-2-1009 and R18-2-1010, to the extent applicable, have been satisfied;
  2. The vehicle owner has spent the maximum required repair cost on the maintenance and repair procedures required by R18-2-1010; or
  3. Any further repairs within the maximum required repair cost would not enable the vehicle to pass the required vehicle emissions inspection.
- B. The demonstration required by subsection (A) may consist of repair receipts, emissions test results, evidence of repairs performed, under hood verification, repair cost estimates, or similar evidence.
- ~~B.C.~~ A temporary certificate of waiver may be issued to a vehicle failing the tampering inspection if the vehicle owner provides to ~~the Director~~ a state inspector a written statement from an automobile parts or repair business that an emission control device necessary to repair the tampering is not available and cannot be obtained from any usual source of supply, and if all requirements of R18-2-1008(A) have been met. All written statements are subject to verification for authenticity and accuracy by the ~~Department~~ state inspector. The Department may deny a temporary certificate of waiver if the state inspector has any reason to believe the written statement is false or a

usual source of supply exists and the device necessary to repair the tampering is available. Certificates of waiver for ~~tampered vehicles~~ may be issued under this subsection conditionally for a specified period, not to exceed 90 days, that allows sufficient time for the procurement and installation of a proper emissions control device. A receipt or bill from a vehicle repair facility or automobile parts store shall be an acceptable proof of purchase. Before the end of the specified time period, the vehicle owner shall present to the ~~Director~~ state inspector proof of purchase and installation of the device. The Department shall track all issued ~~conditional~~ temporary certificates of waiver and if no proof of purchase and installation is received before the end of the specified time period, the Director shall forward to the ~~Department of Motor Vehicles~~ MVD an order to cancel the vehicle's registration.

- ~~C.D.~~ The Director shall not issue a waiver to a vehicle ~~that has failed the emissions test due to the catalytic converter system. A vehicle shall have failed the emissions test due to the catalytic converter system if:~~ under any of the circumstances described in subsections (D)(1) through (4).
1. ~~The converter's oxidation efficiency, as measured by the Catalyst Efficiency Test Procedure in R18-2-1031(A), is less than 75%; and~~ The vehicle failed the emissions test due to the catalytic converter system. A vehicle fails the emissions test due to catalytic converter system if:
    - a. The vehicle has a catalytic converter system that is missing or defeated;
    - b. The vehicle is equipped with an on-board diagnostic computer (OBD) with a malfunction indicator light (MIL), "check engine" or "service engine soon" light commanded on by the computer and containing diagnostic trouble codes indicating the catalytic convertor must be replaced.; or
    - c. A vehicle with a repair order or estimate paperwork provided the waiver technician at the time of waiver inspection shows that a diagnostic determination has been made by the mechanic that the catalytic converter must be replaced.
  2. ~~No engine or fuel system malfunctions exist that would prevent the proper operation of a catalytic converter~~ The vehicle failed the emissions test with an HC, CO, NOx, or opacity emission level greater than two times the pass-fail standard in R18-2-1006.
  3. The same vehicle has previously received a certificate of waiver.
  4. The waiver request is based upon repair estimates and the waiver inspector demonstrates that a recognized repair facility can repair or improve the vehicle's test readings within the repair cost limit.
- ~~D.~~ ~~The Director shall not issue a waiver to a vehicle failing the emission test with an HC, CO, NOx, or opacity emission level greater than two times the pass fail standard in R18-2-1006, unless the vehicle is repaired so that each emission level is less than two times the pass fail standard.~~
- ~~E.~~ ~~After January 1, 1997, the Director shall not issue a certificate of waiver to the same vehicle more than once.~~
- ~~F.E.~~ The fee for a certificate of waiver under this Section shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated costs to the state for administering and enforcing the provisions of this Article for issuance of certificates of waiver under this Section. The fee shall be payable ~~directly to the Department of Environmental Quality~~ at the time the certificate of waiver is issued.
- F. If a waiver inspector denies a certificate of waiver under this Section, the vehicle owner may request review of the denial by a state inspector.

#### **R18-2-1009. Tampering Repair Requirements**

- A. ~~If~~ When a vehicle fails the visual inspection for properly installed catalytic converters, the vehicle owner shall replace the converters ~~shall be replaced~~ with new or reconditioned OEM converters, or equivalent new aftermarket converters. ~~The Department shall provide names of acceptable aftermarket converters at the time of inspection on the repair requirement list.~~

- ~~B. If a vehicle fails the functional gas cap pressure test described in R18-2-1006(E)(7)(a) or (F)(7)(a), the gas cap shall be replaced with one that meets those specifications. If a vehicle designed with a vented system fails a visual inspection for the presence of a gas cap, a properly fitting gas cap shall be installed on the vehicle.~~
- ~~C.B. If When a vehicle fails the visual inspection for the presence of an operational air pump air injection system, the vehicle owner shall install a new, used, or reconditioned, operational air pump shall be properly installed on the vehicle according to manufacturer specifications.~~
- ~~D.C. If When a gasoline vehicle fails the visual inspection for the presence or malfunction of the positive crankcase ventilation system, the vehicle owner shall repair or replace the system shall be repaired or replaced with OEM or equivalent aftermarket parts.~~
- D. When a diesel-powered vehicle fails the visual inspection for the presence or malfunction of the closed crankcase ventilation system, the vehicle owner shall repair or replace the system with OEM or equivalent aftermarket parts.
- E. If When a vehicle fails the visual inspection for the presence or malfunction of the evaporative control system, the vehicle owner shall repair or replace the system shall be repaired or replaced with OEM or equivalent aftermarket parts.

### **R18-2-1010. Low Emissions Tune-up, Emissions and Evaporative System Repair**

- A. A low emissions tune-up on a nondiesel powered vehicle consists of the following procedures: Vehicle maintenance and repairs under subsection (B) and the failure-specific maintenance and repair requirements of subsection (C) must be performed before reinspection of a vehicle that fails a tailpipe emissions or OBD test under R18-2-1006.
- B. Vehicle maintenance and repairs on a non-diesel powered vehicle consists of the following procedures:
1. Emissions Failure Diagnosis. For a computer-controlled vehicle, the on-board ~~diagnostics~~ computer shall be accessed and any stored trouble codes recorded. For a model year 1996 or newer vehicle equipped with an OBD system, a compatible scan tool shall be used to access and record diagnostic trouble codes. The following instruments or equipment are required to complete a low emissions tune-up:
    - a. Tachometer, although for 1996 and later vehicles an OBD scanner can be used to monitor engine RPMs;
    - b. Timing light A compatible OBD scan tool, if appropriate;
    - c. Engine analyzer or oscilloscope; and
    - d. A HC/CO NDIR analyzer to make final A/F adjustments, if specified by the manufacturer.
  2. Adjustment. All adjustments shall be made according to the manufacturer's specifications and procedures. Final adjustment shall be made on the vehicle engine only after the engine is at normal operating temperature.
  3. Inspection of ~~Air Cleaner~~ air cleaner, ~~Choke~~ choke, and ~~Air Intake System~~ air intake system. The vehicle owner shall repair or replace a ~~A~~ dirty or plugged air cleaner, stuck choke, or restricted air intake system ~~shall be replaced or repaired~~ as required.
  4. Dwell and Basic Timing Check. Dwell and basic engine timing shall be checked and the vehicle owner shall make adjustments adjusted, if necessary, according to manufacturer's specifications.
  5. Inspection of PCV ~~Valve System~~. The PCV ~~valve~~ system shall be checked to ensure that it is the type recommended by the manufacturer and is correctly operating. Free flow through the PCV system passages and hoses shall be verified. The vehicle owner shall Repair repair or replace the system as required.
  6. Inspection of Vacuum Hoses. The vacuum hoses shall be inspected for leaks, obstruction, and proper routing and connection. The vehicle owner shall repair Repair or replace as required.

7. ~~Perform a visual inspection for leaking fuel lines or system components. Repair or replace as required.~~ Fuel Lines and System Components Inspection. A visual inspection for leaking fuel lines or system components shall be performed. The vehicle owner shall repair or replace any leaking lines or systems as required.
  8. Idle Speed and A/F Mixture Check. The idle speed and A/F mixture shall be checked and ~~the vehicle owner shall make adjustments~~ adjusted according to manufacturer's specifications and procedures. If the vehicle is equipped with a fuel injection system or an alternate fuel (LPG or LNG), the manufacturer's recommended adjustment procedure shall be followed.
- ~~B. A vehicle that fails reinspection does not qualify for a waiver unless a low emissions tune-up and diagnosis is performed on the vehicle.~~
- C. Failure-specific recommended repairs and maintenance. If the maximum required repair cost in subsection (F) or (G) is not exceeded after ~~a low emissions tune-up~~ the diagnosis and vehicle maintenance and repairs described in subsection ~~(A)~~ (B), then the following procedures apply:
1. CO failure.
    - a. If a vehicle fails CO only, the vehicle shall be checked for:
      - i. Proper canister purge system operation,
      - ii. High float setting,
      - iii. Leaky power valve, and
      - iv. Faulty or worn needles, seats, jets or improper jet size.
    - b. If applicable, the ~~following vehicle~~ shall ~~also~~ be checked for the following items:
      - i. Computer,
      - ii. Engine and computer sensors,
      - iii. Engine solenoids,
      - iv. Engine thermostats,
      - v. Engine switches,
      - vi. Coolant switches,
      - vii. Throttle body or port fuel injection system,
      - viii. Fuel injectors,
      - ix. Fuel line routing and integrity,
      - x. Air in fuel system including line and pump,
      - xi. Fuel return system,
      - xii. Injection pump,
      - xiii. Fuel injection timing,
      - xiv. Routing of vacuum hoses, and
      - xv. Electrical connections.
    - c. The items in subsections (C)(1)(a) and (b) shall be repaired or replaced as required.
  2. HC, or HC and CO failure.
    - a. If a vehicle fails HC, or HC and CO emissions, the vehicle shall be checked for:
      - i. Faulty spark plugs and faulty, open, crossed, or disconnected plug wires;
      - ii. Distributor module;
      - iii. Vacuum hose routing and electrical connections;
      - iv. Distributor component malfunctions including vacuum advance;
      - v. Faulty points or condenser;
      - vi. Distributor cap crossfire;
      - vii. Catalytic converter efficiency air supply;
      - viii. Vacuum leaks at intake manifold, carburetor base gasket, EGR, and vacuum-operated components.
    - b. The vehicle owner shall repair or replace the items in subsection (C)(2)(a) ~~shall be repaired or replaced~~ as required.

3. NOx failure.
  - a. If a vehicle fails for NOx emissions, the vehicle shall be checked for:
    - i. Removed, plugged, or malfunctioning EGR valve, exhaust gas ports, lines, and passages;
    - ii. EGR valve electrical and vacuum control circuitry, components, and computer control, as applicable;
    - iii. Above normal engine operating temperature;
    - iv. Proper air management;
    - v. Lean A/F mixture;
    - vi. Catalytic converter efficiency; and
    - vii. Over-advanced off-idle timing.
  - b. The items in subsection (C)(3)(a) shall be repaired or replaced as required.
4. OBD failure. If the vehicle fails the OBD test, the vehicle owner shall be repaired for repair the items indicated on the ~~Vehicle Emissions Report~~ vehicle emissions report as causing the failure. If the failure results from ~~Diagnostic Trouble Codes~~ diagnostic Trouble codes (DTCs) that caused the ~~Malfunction Indicator Lamp~~ malfunction indicator lamp (MIL) to be illuminated, the vehicle owner shall repair or replace the components or systems causing the DTCs shall be repaired or replaced. After repair of a DTC failure, and before reinspection, the vehicle shall be operated under conditions recommended by the vehicle manufacturer for the OBD computer to evaluate the repaired system.
  - D. For Evaporative System Failures, the following procedures apply:
    1. If a vehicle fails the evaporative system pressure test, the inspector shall check the vehicle ~~shall be checked~~ for leaking or disconnected vapor hoses, line, gas cap, and fuel tank.
    2. If a vehicle fails a visual inspection of the evaporative system, the inspector shall check the vehicle ~~shall be checked~~ for a missing or damaged canister, canister electrical and vacuum control circuits and components, disconnected, damaged, misrouted or plugged hoses, and damaged or missing purge valves. ~~Repair or replace as necessary~~ The vehicle owner shall repair or replace the system with OEM or equivalent aftermarket parts.
  - E. ~~If a vehicle fails the liquid fuel leak inspection, the vehicle shall be checked for leaking or disconnected fuel delivery, metering, or evaporation system components including those listed in R18-2-1006(E)(5)(b). Repair or replace as necessary~~ If a vehicle fails the functional gas cap pressure test described in R18-2-1006, the vehicle owner shall replace the gas cap with one that meets the requirements of that subsection. If a vehicle designed with a vented system fails a visual inspection for the presence of a gas cap, the vehicle owner shall install a properly fitting gas cap on the vehicle.
  - F. The maximum required repair cost for a vehicle in ~~area~~ Area A, not including cost to repair the vehicle for failing an evaporative system pressure test due to tampering, or other tampering repair cost, is:
    1. For a diesel-powered vehicle with a GVWR greater than 26,000 pounds or a diesel-powered vehicle with tandem axles: \$500; and
    2. For a vehicle that is not a diesel-powered vehicle with a GVWR greater than 26,000 pounds and is not a diesel-powered vehicle with tandem axles:
      - a. Manufactured in or before the 1974 model year: \$200;
      - b. Manufactured in the 1975 through 1979 model years: \$300; and
      - c. Manufactured in or after the 1980 model year: \$450.
    3. Subsection (F) does not prevent a vehicle owner from authorizing or performing more than the required repairs. A vehicle operator who has a vehicle reinspected shall have the repair receipts available when requesting a certificate of waiver.
  - G. The maximum required repair cost for vehicles in ~~area~~ Area B, not including tampering repair cost, is:



1. For a diesel-powered vehicle with a GVWR greater than 26,000 pounds or a diesel-powered vehicle with tandem axles: \$300; and
  2. For a vehicle that is not a diesel-powered vehicle with a GVWR greater than 26,000 pounds and is not a diesel-powered vehicle with tandem axles:
    - a. Manufactured in or before the 1974 model year: \$50;
    - b. Manufactured in the 1975 through 1979 model years: \$200; and
    - c. Manufactured in or after the 1980 model year: \$300.
  3. Subsection (G) does not prevent a vehicle owner from authorizing or performing more than the required repairs. A vehicle operator who has a vehicle reinspected shall have the repair receipts available when requesting a certificate of waiver.
- H. A low emissions tune-up on a diesel-powered vehicle consists of the following procedures. Before reinspection of a diesel vehicle that has failed an inspection, the vehicle owner shall comply with the following maintenance and repair requirements to the extent that the total cost of meeting the requirements does not exceed the maximum require repair cost in subsection (F) or (G):
1. Inspect for dirty or plugged air cleaner, or restricted air intake system. Repair or replace as required.
  2. Check fuel injection system timing according to manufacturer's specifications. Adjust as required.
  3. Check for fuel injector fouling, leaking, or mismatch. Repair or replace as required.
  4. Check fuel pump and A/F ratio control according to manufacturer's specifications. Adjust as required.
  5. If the vehicle fails the J1667 procedure, check smoke-limiting devices, if any, including the aneroid valve and puff limiter. Repair or replace as required.
- I. The vehicle owner shall use ~~Any~~ any available warranty coverage for a vehicle ~~shall be used~~ to obtain needed repairs before an expenditure can be counted toward the cost limits in subsection (F) and (G). If the operator of a vehicle within the age and mileage coverage of section 207(b) of the Clean Air Act presents a written denial of warranty coverage from the manufacturer or authorized dealer, warranty coverage is not considered available under this subsection.

**R18-2-1011. Vehicle Inspection Report**

- A. The Department shall provide a ~~A~~ vehicle inspected at a state station ~~shall be provided~~ a uniquely numbered vehicle inspection report of a design approved by the Director that contains, at a minimum, the following information, as applicable to the tests required for the vehicle under R18-2-1006:
1. License plate number;
  2. Vehicle identification number;
  3. Model year of vehicle;
  4. Make of vehicle;
  5. Style of vehicle;
  6. Type of fuel;
  7. Odometer reading ~~to the nearest 1000 miles, truncated~~;
  8. Emissions standards for idle and loaded cruise modes, if applicable;
  9. Emissions measurements during idle and loaded cruise modes, if applicable;
  10. Opacity measurements and standards, if applicable;
  11. Emissions standards and measurements for the transient loaded test, and the evaporative system pressure test, if applicable;
  12. Results of OBD test including all diagnostic trouble codes that commanded the illumination of the malfunction indicator lamp;
  13. Tampering inspection results;
  - ~~14. Liquid fuel leak inspection results;~~
  - ~~15;~~14. Repair requirements;

- ~~16-15.~~ Final test results;
  - ~~17-16.~~ Repairs performed;
  - ~~18-17.~~ Cost of emissions-related repairs;
  - ~~19-18.~~ Cost of tampering-related repairs;
  - ~~20-19.~~ Name, address, and telephone number of the business or person making repairs;
  - ~~21-20.~~ Signature and certification number of person certifying repairs;
  - ~~22-21.~~ Date of inspection;
  - ~~23-22.~~ Test results of the previous inspection if the inspection is a reinspection;
  - ~~24-23.~~ Inspection station, lane locators; and
  - ~~25-24.~~ Test number and time of test.
- B. A vehicle failing the initial inspection shall receive the Department's approved ~~an~~ inspection report supplement ~~approved by the Department~~ containing, at a minimum, the following:
- 1. Diagnostic and tampering information including acceptable replacement units, and
  - 2. Applicable maximum repair costs.
- C. The inspection report shall ~~provide~~ include a ~~3-inch by 5-inch tear-out~~ section that may be used as a certificate of compliance for vehicles passing the inspection or as a certificate of waiver, if applicable. The section shall contain all of the following information:
- 1. License plate number,
  - 2. Vehicle identification number,
  - 3. Final results,
  - 4. Serial number of the inspection report,
  - 5. Date of inspection,
  - 6. Model year,
  - 7. Make,
  - 8. Date of initial inspection, ~~and~~
  - 9. Inspection fee, ~~and~~
  - 10. Label as either a certificate of compliance or a certificate of waiver.
- ~~1. The tear-out section shall be a certificate of compliance when the word "compliance" appears in the appropriate location on the printout.~~
  - ~~2. The tear-out section shall be a certificate of waiver when the word "waiver" appears in the appropriate location on the printout.~~
  - ~~3. The tear-out section shall contain all of the following information:~~
    - ~~a. License plate number,~~
    - ~~b. Vehicle identification number,~~
    - ~~c. Final results,~~
    - ~~d. Serial number of the inspection report,~~
    - ~~e. Date of inspection,~~
    - ~~f. Model year,~~
    - ~~g. Make,~~
    - ~~h. Date of initial inspection, and~~
    - ~~i. Inspection fee.~~
- D. At the time of registration ~~or reregistration~~, the certificate of compliance or certificate of waiver may be submitted to the Arizona Department of Transportation Motor Vehicle Division as evidence of meeting the requirements of this Article.

**R18-2-1012. Inspection and Reinspections; Procedures and Fee**

- ~~A. A vehicle that is inspected by a state station must be accompanied by a document such as a registration renewal notice, registration, certificate of title, or bill of sale that identifies the vehicle by make, model year, identification number, and license plate if applicable.~~
- ~~B. If the vehicle inspection report from the previous test is used, it shall be retained by the test lane inspector.~~

- ~~C.A.~~ The fees vehicle owners are required to pay for emissions inspections at a state station shall be specified in the contract between the contractor and the state of Arizona according to A.R.S. § 49-543, and shall include the full cost of the vehicle emissions inspection program including administration, implementation, and enforcement. Each fee is payable by the vehicle owner directly to the contractor at the time and place of inspection ~~in cash or by check approved by the contractor~~ as specified in the contract, and deposited into an account established by the Department for administration of fees. The contractor will be compensated by the Department for services provided on a schedule and in a manner defined in the contract. ~~The amount collected by the contractor to defray the cost of the inspection shall be retained by the contractor. The amount collected to defray the cost of the administration, implementation, and enforcement of the vehicle emissions inspection program shall be remitted to the Department. Amounts collected shall be recorded and reported to the Department monthly. The contractor shall submit to the state of Arizona on a monthly basis, by the 10th day of each month, a report showing the number of inspections performed and the amount of fees collected.~~
- ~~D.~~ Each subsequent inspection, if needed, shall be treated by the state and the contractor in the same manner as an initial inspection and reinspection, providing for a free reinspection according to R18-2-1013, if needed, following a paid inspection. The fee for each paid reinspection shall be the full fee as provided for in the contract with the contractor.
- B. A vehicle failing the initial paid inspection or any subsequent paid inspection is entitled to one reinspection at no additional charge under the following conditions:
1. The vehicle is presented for inspection within 60 calendar days of the initial or any subsequent paid inspection.
  2. Emissions-related repairs or adjustments and any tampering repairs have been made.
  3. The vehicle is accompanied by the vehicle inspection report from the initial or subsequent inspection.
- C. A vehicle failing the reinspection shall be provided a vehicle inspection report and a vehicle inspection report supplement.
- ~~E.D.~~ A state station emissions inspector shall not recommend repairs or repair facilities.

**R18-2-1013. Reinspections Repealed**

- ~~A.~~ A vehicle failing the initial inspection or any subsequent paid inspection is entitled to one reinspection at no additional charge under the following conditions:
- ~~1.~~ The vehicle is presented for inspection within 60 calendar days of the initial or any subsequent paid inspection, if the vehicle operator presents the vehicle inspection report from the previous inspection, indicating the itemization of the repairs performed.
  - ~~2.~~ Emissions related repairs or adjustments and any tampering repairs have been made.
  - ~~3.~~ The vehicle is accompanied by the entire vehicle inspection report from the initial or subsequent inspection with the following information filled in on the reverse side:
    - ~~a.~~ Emissions related and tampering related repairs made;
    - ~~b.~~ Cost of emissions related and tampering related repairs as reflected by receipts or bills;
    - ~~c.~~ Name, address, telephone number, and type of facility making repairs;
    - ~~d.~~ Signature of person certifying the repairs;
    - ~~e.~~ Date of repairs; and
    - ~~f.~~ The state certification number of the technician making repairs, if applicable.
- ~~B.~~ A vehicle shall be retested after repair for any portion of the inspection the vehicle failed on the previous test to determine if the repairs are effective. To the extent that repair to correct a previous failure could cause failure of another portion of the test, that portion shall also be retested. Evaporative system repairs shall trigger an exhaust emissions retest.
- ~~C.~~ A vehicle failing the reinspection shall be provided a vehicle inspection report and a vehicle inspection report supplement.

**R18-2-1014. Repealed**

**R18-2-1015. Repealed**

**R18-2-1016. Licensing of Inspectors and Fleet Agents**

- A. ~~The Department shall license a person as a vehicle emissions inspector if the applicant passes a practical and a written examination with a score equal to or greater than 80% in the following areas. Emissions inspectors shall be licensed as follows:~~
1. ~~For nondiesel powered fleet vehicle emissions inspectors:~~
    - a. ~~Equipment used in the inspection and the control of emissions;~~
    - b. ~~Types of emission inspection failures;~~
    - c. ~~Corrective procedures for excessive HC emissions;~~
    - d. ~~Corrective procedures for excessive CO emissions;~~
    - e. ~~Corrective procedures for excessive NOx emissions, for inspectors in area A;~~
    - f. ~~Proper fuel system adjustment procedures;~~
    - g. ~~Computerized engine control systems; and~~
    - h. ~~Regulations governing fleet stations;~~
  2. ~~For diesel powered fleet vehicle emissions inspectors:~~
    - a. ~~Equipment used in the inspection and the control of opacity and emissions;~~
    - b. ~~Corrective procedures for excessive opacity;~~
    - c. ~~Proper fuel injection system adjustment procedures;~~
    - d. ~~Proper use of tools required by the vehicle manufacturer for field setting of fuel injectors, inlet and exhaust valve clearance, governors, and throttle controls;~~
    - e. ~~Computerized engine control systems; and~~
    - f. ~~Regulations governing fleet stations;~~
  3. ~~For state station vehicle emission inspectors:~~
    - a. ~~Air pollution causes and effects;~~
    - b. ~~Purpose, function, and goals of the inspection program;~~
    - c. ~~State inspection regulations;~~
    - d. ~~Test procedures and rationale for their design;~~
    - e. ~~Emission control devices, configuration, and inspection;~~
    - f. ~~Test equipment operation, calibration, and maintenance;~~
    - g. ~~Proficiency in driving the transient test cycle in Table 4;~~
    - h. ~~Quality control procedures;~~
    - i. ~~Public relations; and~~
    - j. ~~Safety and health issues related to the inspection process.~~
  4. ~~For the practical portion of the examination an applicant shall demonstrate the ability to conduct a proper emissions inspection, including proper use of equipment and procedures, to pass. If an inspector fails to demonstrate such ability in an audit, either covert or overt, the inspector's license shall be suspended. The suspended licensee shall demonstrate to the Department the skills required by this subsection within 30 days of suspension or such license shall be revoked.~~
- B. ~~If an applicant for a nondiesel powered vehicle emissions inspector license fails the written examination, the applicant shall successfully complete the vehicle emissions inspector state training program before reexamination for licensure.~~
- C. ~~Applications may be obtained from the Department. The application shall contain the following:~~
1. ~~The type of license requested;~~
  2. ~~The applicant's name;~~

3. ~~The applicant's home address;~~
  4. ~~The applicant's phone number;~~
  5. ~~The name of the applicant's employer;~~
  6. ~~The phone number of the applicant's employer;~~
  7. ~~The applicant's signature; and~~
  8. ~~The date of the license request.~~
- D. ~~All completed applications shall be returned to the Department.~~
- E. ~~Licenses issued to vehicle emissions inspectors shall be renewed annually on or before the expiration date. An inspector whose license has expired may not inspect vehicles.~~
- F. ~~Applications for renewal of vehicle emissions fleet inspector's licenses shall be submitted within 30 days before the current license expiration date.~~
- G. ~~The Department may suspend, revoke, or refuse to renew a license if the licensee has violated any provision of A.R.S. Title 49, Chapter 3, Article 5 or any provision of this Article or fails to continue to demonstrate proficiency to the Department as required in subsection (A).~~
- H. ~~A vehicle emissions inspector shall notify the Department of any change in employment status, due to retirement, resignation or termination, within seven days of the change. The notification shall include the name and license number of the emissions inspector, a statement declaring the employment change, and the effective date of the employment change.~~
- I. ~~The Department shall assign a single, unique, nontransferable inspector's number to each vehicle emissions inspector.~~
1. To obtain a license as a vehicle emissions inspector, an applicant shall pass a written test with a score greater than or equal to 80%. After passing the written test, the applicant shall pass a separate practical examination.
    - a. Applications to become an emissions inspector may be obtained from the Department and an applicant must submit a completed application to the Department. The Department must deem an application administratively complete before an applicant will be allowed to sit for the written portion of the exam. If the Department finds the application incomplete, the applicant may be provided an opportunity to submit sufficient information to enable the Department to deem it administratively complete.
    - b. The written portion of the test shall cover the following subjects:
      - i. The air pollution problem in Arizona, its causes and effects;
      - ii. The purpose, function, and goals of the vehicle inspection program;
      - iii. State vehicle inspection regulations and procedures;
      - iv. Technical details of the test procedures and rationale for their design;
      - v. Emission control device function, configuration, and inspection;
      - vi. Test equipment operation, calibration, and maintenance;
      - vii. Quality control procedures and their purpose;
      - viii. Public relations; and
      - ix. Safety and health issues related to the inspection process.
    - c. After passing the written exam, the inspector applicant shall pass a practical exam where they shall demonstrate the ability to conduct a proper emissions inspection, including proper use of equipment and procedures, in accordance with the testing procedures in R18-2-1006(C). An inspector applicant shall pass a practical examination for each type of test they wish to perform.
  2. Licenses issued to vehicle emissions inspectors shall be renewed biannually, on or before the expiration date.
  3. An inspector whose license is expired or suspended may not inspect vehicles.
  4. A vehicle emissions inspector shall submit an application for a renewal of the vehicle emissions inspector's license at least 90 days before the current license expiration date.

5. The Department may suspend, revoke, or refuse to renew a license if the licensee has violated any provision of A.R.S. Title 49, Chapter 3, Article 5, any provision of this Article, or fails to continue to demonstrate proficiency to the Department.
6. A vehicle emissions inspector shall notify the Department of any change in employment status no later than fourteen days after the change.
7. The Department shall assign a single, unique, nontransferable inspector's number to each vehicle emissions inspector.
8. If a licensed emissions inspector fails to demonstrate the ability to conduct a proper vehicle emissions inspection during any audit, the Department shall suspend the vehicle emissions inspector's license. The suspended emissions inspector shall pass a practical examination within 30 days after suspension or the inspector's license shall be revoked. An inspector's license may be reinstated once the inspector passes a written examination with a score of 80% or greater and demonstrates the ability to properly conduct a vehicle emissions test during a practical examination.

**B. Fleet Agents shall be licensed as follows:**

1. To obtain a license as a fleet agent, an applicant shall pass a written test with a score greater than or equal to 80%. A fleet agent is an individual associated with a fleet emissions testing permit who is ultimately responsible for making sure a fleet complies with the requirements of this Article. This license is separate and distinct from a fleet emissions inspector license.
  - a. Applications to become a fleet agent may be obtained from the Department. An application must be administratively complete and submitted in the manner required by the Department before an applicant will be allowed to sit for the written portion of the exam.
  - b. The written test shall cover the following subjects:
    - i. The statutes and rules governing the operation and administration of a fleet emissions inspection station.
    - ii. The duties of a fleet agent.
    - iii. How to operate an account on the Department's web portal.
    - iv. Purchasing certificates of inspection.
2. If a licensed fleet agent fails to assure that the agent's fleet complies with this Article, the agent's license shall be suspended. The suspended agent shall pass a written examination within 30 days of suspension or such license shall be revoked.
3. Licenses issued to fleet agents have no expiration date.
4. A fleet represented by an agent that has a suspended license may not inspect vehicles.
5. The Department may suspend, revoke, or refuse to renew a fleet agent's license if the licensee has violated any provision of A.R.S. Title 49, Chapter 3, Article 5, any provision of this Article, or fails to continue to demonstrate proficiency to the Department as required.
6. A fleet agent shall notify the Department of any change in employment status within seven days of the change.
7. The Department shall assign a single, unique, nontransferable agent's number to each fleet agent.

**R18-2-1017. Inspection of Government Vehicles**

**A. Inspection of government Government vehicles operated in areas Area A and Area B shall be conducted inspected as follows:**

1. At a licensed fleet station operated by the government entity;
2. At a state station upon payment of the fee;
3. At a state station upon payment of the contracted fee, either singly or in combination with other government fleet operators.

- B. A government vehicle, except a federally owned vehicle that is excluded from the definition of motor vehicle under 40 CFR 85.1703, shall be inspected according to this Article and shall have a ~~Government Vehicle Certificate of Inspection~~ government vehicle certificate of inspection (GVCOI) affixed to the vehicle if in compliance with state ~~inspection~~ emissions requirements.
1. The vehicle emissions inspector performing the inspection shall punch out the appropriate year and month on the ~~Government Vehicle Certificate of Inspection~~ GVCOI to designate the date of the vehicle's next annual or biennial inspection. ~~The vehicle emissions inspector, at the time of inspection, shall record the serial number of the Government Vehicle Certificate of Inspection on the vehicle inspection report. If the vehicle emissions inspection is performed at a fleet station, the emissions inspector, at the time of inspection, shall record the serial number in the block labeled "Certificate of Inspection No." on the "Fleet Vehicle Inspection Report/Monthly Summary."~~ Each Government Vehicle Certificate of Inspection shall be used in serial number order. Presence of a current Government Vehicle Certificate of Inspection indicates a government vehicle has met the state of Arizona emissions inspection requirements.
  2. If the vehicle emissions inspection is performed at a fleet station, the emissions inspector shall record administratively complete results of the inspection into the Department's web portal on the day of the inspection. The unique number on the GVCOI sticker must be entered along with the emissions testing results for the vehicle.
  - ~~2.3.~~ A government vehicle, with the exception of a motorcycle or an undercover law enforcement vehicle, shall have the ~~Government Vehicle Certificate of Inspection~~ GVCOI affixed to the lower left side of the rear window as determined from a position facing the window, from outside the vehicle. If a vehicle does not have a rear window, the ~~Government Vehicle Certificate of Inspection~~ GVCOI shall be affixed to the lower left corner of the windshield as determined from the driver's position.
  3. ~~A government motorcycle shall have the Government Vehicle Certificate of Inspection affixed to the lower left hand corner of the windscreen as determined from the driver's position. If the Government Vehicle Certificate of Inspection cannot be affixed to the lower left hand corner of the windscreen, the Government Vehicle Certificate of Inspection may be affixed to a visible position on the front or left side of the left front fork of the motorcycle. The fork shall be determined from the driver's position.~~
- C. The ~~Government Vehicle Certificate of Inspection~~ GVCOI shall be purchased from the ~~Department in lots of 25~~ the Department's web portal.
1. The fee for a certificate of inspection shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated costs to the state of administering and enforcing the provisions of this Article as they apply to issuance of certificates of inspections. ~~Payment for certificates shall be included with an application for certificates. Checks shall be made payable to the Department of Environmental Quality.~~
  2. Only the Department may sell or otherwise transfer ~~certificates of inspection~~ GVCOI.
- D. ~~All Government Vehicle Certificates of Inspection shall be designed, issued, and administered to ensure compliance with this Article. The Department shall be the only source of supply for Government Vehicle Certificates of Inspection.~~
- E. ~~Government entity fleet stations shall inspect the fleet vehicles according to R18-2-1019 except that a government vehicle certificate of inspection shall only be used for government vehicles.~~
- F. ~~A government entity fleet station shall send a quarterly statement identifying vehicles and test results to the Department within 10 business days following the end of the quarter.~~

**R18-2-1018. Certificate of Inspection**

- A. A fleet inspector shall submit and certify administratively complete certificates of inspection (COI) to the Department through the Department's web portal. A COI is used as evidence that the vehicle it is assigned to has passed the tests required by this Article and complies with the appli-

~~cable state emissions standards for that vehicle. A fleet station other than a government entity fleet station shall use completed certificates of inspection as evidence that its vehicles meet the requirements of this Article unless inspection Inspection data is may be electronically transmitted to MVD under A.R.S. § 49-542(Q). If a fleet vehicle is inspected at a state station, the vehicle inspection report provided under R18-2-1011 shall be used.~~

- B. ~~On the day a vehicle is inspected, a licensed inspector shall enter an administratively complete record of the inspection into the Department's web portal. A certificate of inspection shall contain the following information:-~~
- ~~1. — VIN,~~
  - ~~2. — Model year,~~
  - ~~3. — License number,~~
  - ~~4. — If applicable, a statement that the inspection meets area A requirements,~~
  - ~~5. — Owner of vehicle,~~
  - ~~6. — Date of expiration, according to R18-2-1019(F)(1)(b),~~
  - ~~7. — Fleet station permit number, and~~
  - ~~8. — Inspector's signature and license number.~~
- C. ~~A certificate of inspection issued to a fleet vehicle is transferable to an auctioneer licensed as a used motor vehicle dealer to sell the vehicle. The certificate of inspection is valid for a valid for a period ~~not to exceed~~ of 180 days after the transfer unless the vehicle is reregistered with a new owner, in which case the vehicle shall be inspected according to this Article before the reregistration.~~
- D. ~~A certificate of inspection, complete or incomplete, is not transferable except as provided in subsection (C) or except when submitted to MVD for the purpose of vehicle registration. The following individuals are authorized to purchase certificates of inspection as long as the fleet they are associated with meets the requirements of this article:~~
- ~~1. A fleet agent who is licensed by the Department under R18-2-1016;~~
  - ~~2. A responsible corporate officer;~~
  - ~~3. A designated responsible officer.~~
- E. ~~Only a person who meets the requirements of R18-2-1019(D)(4) is authorized to purchase certificates of inspection, certificates of waiver, or Government Vehicle Certificates of Inspection.~~

### **R18-2-1019. Fleet Station Procedures and Permits**

- A. ~~The following requirements apply to issuance of fleet station permits:~~
- ~~1. — An owner or lessee of a fleet of 25 or more nonexempt vehicles whose place of business is located in area A or B may apply to the Director for a permit to establish a fleet station. A dealer's business inventory of vehicles held for resale, counted cumulatively over the previous 12 months at the time of application review by the Department shall be used to determine compliance with this subsection. A newly established dealer shall certify that it will comply with the 25 nonexempt vehicles requirement.~~
  - ~~2. — An application form for a fleet station permit shall be obtained from the Department. All completed applications shall be submitted to the Department. An application shall be considered administratively complete when:~~
    - ~~a. — The Department receives a completed application form and fleet agent designation form;~~
    - ~~b. — The applicant or designated employee successfully completes the fleet agent examination; and~~
    - ~~c. — The Department conducts a site inspection.~~
  - ~~3. — Before an application for a fleet station permit may be approved, a state inspector shall inspect the premises to determine compliance with subsections (B) and (C).~~
  - ~~4. — A fleet station permit shall not expire.~~



5. ~~A fleet station permit shall only be applicable to the fleet's inspection facility located at the address shown on the fleet station permit. If a fleet owner or lessee requests a permit for inspection facilities at more than one address, the fleet owner or lessee shall apply for a permit for each facility.~~
  6. ~~A fleet station permit issued by the Director is non-transferable.~~
  7. ~~If the name or address of the permitted fleet facility changes and the name or address change does not involve a change of ownership, the permit shall be returned to the Department for cancellation and a new permit application shall be submitted. The Director shall cancel the returned permit and issue a new permit.~~
  8. ~~In the event of loss, destruction, or mutilation of the permit, the person to whom it was issued may obtain a duplicate upon furnishing satisfactory proof of loss, destruction, or mutilation. If a fleet owner or lessee obtains a duplicate permit and then finds the original, the fleet owner or lessee shall immediately surrender the original permit to the Department.~~
- B. ~~A fleet station permit applicant or fleet station permit holder, or its employees, shall own or lease the following equipment for testing and repair of a fleet vehicle, and maintain the equipment in good working condition:~~
1. ~~If the permit is for the inspection of a vehicle required to take an idle only, or an idle plus 2500 RPM unloaded test:~~
    - a. ~~An NDIR CO and HC emissions analyzer that complies with the requirements of R18-2-1006(F)(8) to conduct the emissions inspection;~~
    - b. ~~Pressure test equipment for the functional gas cap test that complies with the requirements of R18-2-1006(E)(7)(a); and~~
    - c. ~~An ignition operated tachometer.~~
  2. ~~If the permit is for the inspection of a vehicle required to take a steady state loaded test:~~
    - a. ~~An NDIR CO and HC emissions analyzer that complies with the requirements of R18-2-1006(F)(8) to conduct the emissions inspection;~~
    - b. ~~Pressure test equipment for the functional gas cap test that complies with the requirements of R18-2-1006(E)(7)(a);~~
    - c. ~~A dynamometer to operate the vehicle under load; and~~
    - d. ~~An ignition operated tachometer.~~
  3. ~~If the permit is for the inspection of a vehicle required to take a transient loaded test:~~
    - a. ~~Equipment to perform a transient loaded emissions test as required in R18-2-1006(E)(2);~~
    - b. ~~Equipment to perform the evaporative system pressure test as required in R18-2-1006(E)(2)(b);~~
    - c. ~~Equipment to perform the maintenance and quality control requirements of R18-2-1006(E)(2) and "IM240 and Evap Technical Guidance;" and~~
    - d. ~~Pressure test equipment for the functional gas cap test that complies with the requirements of R18-2-1006(E)(7)(a).~~
  4. ~~If the permit is for the inspection of a vehicle required to take an OBD test:~~
    - a. ~~A scan tool used to perform the OBD test that complies with the Society of Automotive Engineers Recommended Practice J1979, September 1997, incorporated by reference and no future editions or amendments. A copy of this referenced material is on file with the Department and the Secretary of State and may be obtained at Society of Automotive Engineers, 400 Commonwealth Dr., Warrendale, PA 15096-0001; and~~
    - b. ~~Pressure test equipment for the functional gas cap test that complies with the requirements of R18-2-1006(E)(7)(a).~~
  5. ~~If the permit is for the inspection of a vehicle required to take a diesel test:~~

- a. ~~Opacity meter: A meter used in area A shall comply with the requirements of R18-2-1006(H) for the applicable test procedure. A meter used in area B shall comply with the requirements of R18-2-1006(I)(6)(b); and~~
  - b. ~~A dynamometer for testing any light-duty diesel vehicle in area A or for testing any diesel vehicle in area B.~~
- C. ~~A fleet's inspection facility shall comply with the following requirements:~~
- 1. ~~The facility shall include space devoted principally to maintaining or repairing the fleet's motor vehicles. The space shall be large enough to conduct maintenance or repair of at least one fleet motor vehicle.~~
  - 2. ~~The facility shall be exclusively rented, leased, or owned by the permit applicant or permit holder.~~
- D. ~~A fleet owner or lessee shall employ the following personnel:~~
- 1. ~~If the facility is for the repair of nondiesel-powered vehicles, at least one person to perform tune-ups of engines and replacement or repair of fuel system and ignition components.~~
  - 2. ~~If the facility is for the repair of diesel-powered vehicles, at least one person to perform tune-ups and replacement or repair of diesel fuel systems in the vehicle fleet.~~
  - 3. ~~A licensed vehicle emissions inspector who will perform the necessary inspections. This inspector may be the same person required by subsection (D)(1) or (2).~~
  - 4. ~~A fleet agent, who shall be in charge of the day-to-day operation of the fleet and who demonstrates proficiency by passing a Department-administered examination annually, with a score equal to or greater than 80%, on the statutes and rules governing the operation and administration of a fleet emissions inspection station. The fleet owner or lessee shall designate the fleet agent on a form obtained from the Department.~~
- E. ~~Unless inspected at a state station, a vehicle owned by or leased to a holder of a fleet emissions inspection station permit shall be inspected according to R18-2-1006(D) through (J), except as follows:~~
- 1. ~~A dealer fleet vehicle in area A held for resale and an area B fleet vehicle, with a model year of 1981 or newer, and other than diesel-powered, shall be required to take and pass both the curb-idle test specified in R18-2-1006(F)(2)(b) and a 2,500 RPM unloaded fast-idle test as follows:~~
    - a. ~~The vehicle's engine shall be operated at 2,500, ± 300 RPM, for no more than 30 seconds with the transmission in neutral.~~
    - b. ~~HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized or at the end of 30 seconds, whichever occurs first, and compared to the loaded-cruise standards in Table 2. The curb-idle test standards in Table 2 shall apply for the idle test.~~
  - 2. ~~A dealer fleet vehicle in area A held for resale, and an area B vehicle, with a model year of 1980 or older and other than diesel-powered, shall be required to take and pass a curb-idle test as specified in R18-2-1006(F)(1). The curb-idle test standards in Table 2 shall apply.~~
  - 3. ~~A dealer fleet vehicle in area A held for resale with a model year of 1975 or newer and other than diesel-powered, shall be required to take and pass a tampering inspection as specified in R18-2-1006(E)(7).~~
  - 4. ~~A dealer fleet vehicle in area B held for resale with a model year of 1975 or newer and other than diesel-powered, shall be required to take and pass a tampering inspection as specified in R18-2-1006(F)(7).~~
  - 5. ~~A consignment vehicle shall be tested at a state inspection station according to R18-2-1005(A)(3).~~

- F. ~~The vehicle emissions inspector shall complete and process the forms for vehicle inspection as follows, except a government entity fleet shall issue and process each government vehicle certificate of inspection under R18-2-1017:~~
1. ~~A certificate of inspection shall be processed as follows:~~
    - a. ~~A certificate of inspection shall be completed and signed by the vehicle emissions inspector performing the inspection at the time the vehicle passes inspection. The vehicle emissions inspector who performed the inspection may correct a certificate by drawing a single line through the mistake, writing the correct information directly above the mistake, and initialing and dating the correction. Each certificate shall be issued in numerical order;~~
    - b. ~~For an inspection that does not include a biennial test, the expiration date shall be one year from the date the vehicle passes the mandatory vehicle emissions inspection. For a vehicle required to pass a biennial test, the expiration date shall be two years after the pass date;~~
    - c. ~~All copies of a certificate of inspection shall be legible;~~
    - d. ~~Unless inspection data is electronically transmitted under A.R.S. § 49-542(Q), the original completed certificate shall be presented to MVD for processing the vehicle's application for title and registration or the Arizona registration card. MVD may accept a signed certificate of inspection as evidence that the vehicle is a fleet inspected vehicle and meets the inspection requirements of this Article;~~
    - e. ~~The vehicle emissions inspector shall forward the second copy of each completed certificate of inspection, along with the second copy of the "Fleet Vehicle Inspection Report/Monthly Summary," to the Department monthly, not later than two weeks after the last day of the month in which the inspection is conducted;~~
    - f. ~~The third copy of each completed certificate of inspection, along with the original "Fleet Vehicle Inspection Report/Monthly Summary," shall be retained for two years from the date of inspection;~~
    - g. ~~Vehicle emissions certificates shall be purchased from the Department in lots of 25. Excess certificates may be returned to the Department for refund or may be used in subsequent years;~~
    - h. ~~The fee for a certificate of inspection shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated costs to the state of administering and enforcing the provisions of this Article as they apply to issuance of a certificate of inspection. Payment for certificates shall be included with an application for certificates. Checks shall be made payable to the Department of Environmental Quality.~~
    - i. ~~Only the Department shall sell or otherwise transfer a certificate of inspection. This subsection does not apply to the submission of a certificate of inspection to MVD for the purpose of vehicle registration;~~
    - j. ~~The fleet station owner shall be responsible for the security and accountability of the fleet's certificates and fleet vehicle emissions inspection records. Certificates and fleet vehicle emissions inspection records shall be maintained at the fleet station and shall be made available for review by a state inspector during normal business hours of the fleet station;~~
    - k. ~~If any certificate is discovered lost or stolen, the fleet station owner shall notify the Department in writing within 24 hours, indicating the number of certificates lost or stolen and each serial number. The Department may revoke a fleet station permit for refusal or failure to report a lost or stolen certificate within 24 hours;~~
    - l. ~~In the event of loss, destruction, or mutilation of an original completed certificate of inspection, a Director's certificate may be obtained from the Department by hand delivery of the following:~~

- i. ~~The second or third copy of the lost, destroyed, or mutilated certificate of inspection;~~
  - ii. ~~The original of the "Fleet Vehicle Inspection Report/Monthly Summary;"~~
  - iii. ~~A cover letter from the fleet agent explaining the situation that caused the loss, destruction, or mutilation of the original certificate of inspection; and~~
  - iv. ~~Payment of a fee to cover the cost of issuance of the Director's certificate. The fee for a Director's certificate shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated cost to the state of administering and enforcing the provisions of this Article as they apply to issuance of a Director's certificate. Checks shall be made payable to the Department of Environmental Quality; and~~
  - m. ~~If an original certificate of inspection is voided by a fleet station, the original of the voided certificate shall be matched to the corresponding third copy of the certificate and retained at the fleet station for two years from the date of inspection.~~
2. ~~The fleet agent or vehicle emissions inspector shall obtain the "Fleet Vehicle Inspection Report/Monthly Summary" form from the Department. The vehicle emissions inspector performing the inspection shall record the following information on the form at the time of inspection:~~
- a. ~~The VIN of the vehicle passing inspection;~~
  - b. ~~The vehicle's license number, if applicable;~~
  - c. ~~The HC content of the undiluted exhaust recorded at idle, if applicable;~~
  - d. ~~The CO content of the undiluted exhaust recorded at idle, if applicable;~~
  - e. ~~The HC content of the undiluted exhaust recorded at 2,500 rpm, if applicable;~~
  - f. ~~The CO content of the undiluted exhaust recorded at 2,500 rpm, if applicable;~~
  - g. ~~Results of a tampering check, if applicable;~~
  - h. ~~Liquid fuel leak inspection results;~~
  - i. ~~The vehicle model year;~~
  - j. ~~The vehicle make;~~
  - k. ~~The GVWR for a vehicle certified under federal truck standards;~~
  - l. ~~The date of inspection;~~
  - m. ~~The license number of the vehicle emissions inspector conducting the inspection;~~
  - n. ~~The signature of the inspector making the entry;~~
  - o. ~~The serial number of the certificate of inspection, recorded in numerical order;~~
  - p. ~~For a vehicle required to take the transient loaded emissions test, the inspector shall record the total HC, CO, CO<sub>2</sub> and NO<sub>x</sub> measured in grams/mile, and the evaporative system pressure test result, if applicable;~~
  - q. ~~The registration number of the registered analyzer or opacity meter used to perform the inspection;~~
  - r. ~~For a light duty diesel vehicle, the inspector shall record opacity rather than undiluted HC and CO;~~
  - s. ~~For a heavy duty diesel vehicle, instead of undiluted HC and CO:~~
    - i. ~~The time of the inspection;~~
    - ii. ~~The ambient temperature;~~
    - iii. ~~The corrected barometric pressure;~~
    - iv. ~~The relative humidity at the time of inspection;~~
    - v. ~~The engine year and cubic inch or liter displacement;~~
    - vi. ~~The GVWR;~~
    - vii. ~~The diameter of the exhaust stack; and~~
    - viii. ~~The corrected opacity reading.~~

- t. ~~For a vehicle required to take an OBD test, the inspector shall record the OBD results rather than HC, CO, and NOx.~~
- 3. ~~A certificate of waiver may be issued by a fleet vehicle emissions inspector unless the fleet owner or lessee is an auto dealer licensed to sell used motor vehicles under A.R.S. Title 28. The certificate of waiver may be issued according to the following procedure if the requirements of R18 2 1008(A), R18 2 1009, and R18 2 1010 are met:~~
  - a. ~~A certificate of waiver shall be completed and signed by the vehicle emissions inspector performing the inspection after completion of a fleet inspection waiver report. The report shall be forwarded to the Department within three business days from the date of issuance of the certificate of waiver. A fleet inspection waiver report shall be provided by the Department with the purchase of each certificate of waiver. The report shall contain a description of the vehicle, test results, and repairs performed.~~
  - b. ~~The expiration date of the certificate of waiver shall be two years from the date that the waiver is issued for a vehicle required to take the transient loaded emissions test, and one year for all other vehicles.~~
  - c. ~~All information required on the certificate of waiver shall be legible.~~
  - d. ~~The vehicle emissions inspector issuing the certificate of waiver shall initial all corrections.~~
  - e. ~~Only the vehicle emissions inspector performing the inspection may sign or initial a certificate of waiver.~~
  - f. ~~Unless inspection data is electronically transmitted under A.R.S. § 49-542(Q), the original completed certificate shall be presented to MVD for processing of either the vehicle's application for title and registration or the Arizona registration card. MVD may accept the signed certificate of waiver as evidence that the vehicle is a fleet inspected vehicle and meets the inspection requirements of this Article if the certificate is complete and the expiration date has not passed.~~
  - g. ~~The second copy of each completed certificate of waiver shall accompany the completed fleet inspection waiver report.~~
  - h. ~~The third copy of each completed certificate of waiver, along with a copy of the fleet inspection waiver report, shall be retained by the fleet station owner for two years from the date of inspection.~~
  - i. ~~The fee for a certificate of waiver shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated cost to the state of administering and enforcing the provisions of this Article as they apply to issuance of a certificate of waiver. Payment for certificates shall be included with an application for certificates. Checks shall be made payable to the Department of Environmental Quality.~~
  - j. ~~Only the Department shall sell or otherwise transfer a certificate of waiver. This subsection does not apply to the submission of a certificate of waiver to MVD for the purpose of vehicle registration.~~
  - k. ~~The fleet station owner shall be responsible for the security and accountability of the fleet's certificates.~~
  - l. ~~If a certificate is discovered lost or stolen, the fleet station owner shall notify the Department in writing within 24 hours and indicate the number of certificates lost or stolen and each serial number. The Department may revoke a fleet station permit for refusal or failure to report a lost or stolen certificate within 24 hours of discovery.~~
  - m. ~~In the event of loss, destruction, or mutilation of an original completed certificate of waiver, a Director's certificate may be obtained from the Department by hand-delivery of the following:~~

- i. ~~The second or third copy of the lost, destroyed, or mutilated certificate of waiver;~~
  - ii. ~~The original of the "Fleet Vehicle Inspection Report/Monthly Summary;"~~
  - iii. ~~A cover letter from the fleet agent explaining the situation that caused the loss, destruction, or mutilation of the original certificate of waiver; and~~
  - iv. ~~Payment of a fee to cover the cost of issuance of the Director's certificate. The fee for a Director's certificate shall be fixed by the Director according to A.R.S. § 49-543, and shall be based upon the Director's estimated cost to the state of administering and enforcing the provisions of this Article as they apply to issuance of a Director's certificate. Checks shall be made payable to the Department of Environmental Quality.~~
  - n. ~~In the event an original certificate of waiver is voided by a fleet station, the original of the voided certificate shall be matched to the corresponding third copy of the certificate and retained by the fleet for two years from the date of inspection.~~
- 4. ~~Upon request, a state inspector shall be allowed access to and shall be permitted to photocopy, on or off the premises, any original "Fleet Vehicle Inspection Report/Monthly Summary," the second copy of a certificate of inspection, and any other related documents.~~
- G. ~~The fleet shall comply with the following general operating requirements:~~
  - 1. ~~The fleet station permit and the licenses of all inspectors employed at the station shall be prominently displayed at the fleet's inspection facility.~~
  - 2. ~~A fleet station shall only certify a vehicle owned by or leased to the holder of the fleet station permit.~~
  - 3. ~~The inspection equipment shall be operated, calibrated, and maintained as follows:~~
    - a. ~~All test equipment and instrumentation shall be maintained in accurate working condition as required by the manufacturer. An instrument requiring periodic calibration shall be calibrated according to instructions and recommendations of the instrument or equipment manufacturer. An NDIR emissions analyzer shall be registered and calibrated according to R18-2-1027. Calibration records for each instrument, except an NDIR emissions analyzer, shall be maintained by the fleet station. The calibration records shall be signed and dated by the technician performing each calibration.~~
    - b. ~~The instrument calibration records shall be available for review by the Department.~~
    - c. ~~Working gases used by the fleet station shall be subject to analysis and comparison to the Department's standard gases at any time.~~
    - d. ~~Fleet station equipment shall be subject to both scheduled and unscheduled checks for accuracy and condition by the Department.~~
  - 4. ~~A fleet emissions inspection station that is unable to test at least 25 vehicles according to R18-2-1006 and subsection (A) shall surrender its permit.~~
  - 5. ~~A motor vehicle dealer with a fleet station permit shall comply with A.R.S. § 49-542.03.~~
  - 6. ~~If a fleet station fails to meet any requirement of subsection (B), (C), or (D), it shall immediately cease operating as a fleet station until the requirement is met. If the fleet is cited for failure to have the necessary equipment under subsection (B), it shall not resume operation as a fleet emissions inspection station until compliance is verified by the Department.~~
  - 7. ~~A fleet station shall notify the Department in writing within seven days of the end or start of employment of any vehicle emissions inspector. The written notification shall include the name and license number of the vehicle emissions inspector, a statement declaring the employment change, and the effective date of the employment change. A fleet station that~~

does not employ a vehicle emissions inspector shall immediately cease operating as a fleet station and notify the Department immediately by telephone and within seven days in writing. All unused vehicle certificates of inspection shall be returned to the Department for a refund within seven days after operations cease.

8. ~~A fleet station that does not employ a fleet agent, as described in subsection (D)(4), shall immediately cease operating as a fleet station and shall notify the Department immediately by telephone and within seven days in writing. The written notification shall include the name and license number of the fleet agent, a statement declaring the employment change, and the effective date of the employment change. The fleet station may resume fleet station operation after the permit applicant or other designated employee takes and passes the examination required in subsection (D)(4), if the responsibility of the day to day operation of the fleet station and a fleet agent designation form has been filed with the Department.~~

H. ~~A fleet's activities shall be governed by the following compliance and enforcement rules:~~

1. ~~Subsections (B) through (G) apply at all times after the issuance of a fleet station permit. In addition, subsections (B), (C), and (D) apply before a permit can be issued or removed from suspension.~~

2. ~~The Director may suspend or revoke a fleet station permit according to A.R.S. § 49-546(F) and A.R.S. Title 41, Chapter 6, if the permittee, or any person employed by the permittee:~~

a. ~~Violates any provision of A.R.S. Title 49, Chapter 3, Article 5 or any provision of this Article;~~

b. ~~Misrepresents a material fact in obtaining a permit;~~

c. ~~Fails to make, keep, and submit to the Department records for a vehicle tested as a permittee; or~~

d. ~~Does not provide a state inspector access to the information required by this Article.~~

3. ~~If a fleet station permit is surrendered, suspended or revoked, all unused vehicle certificates of inspection shall be returned to the Department for a refund.~~

4. ~~A fleet vehicle is subject to inspection by a state inspector.~~

5. ~~Surrender of a permit under subsection (A)(8) or (G)(4) shall not prevent the Department from carrying out an investigative or disciplinary proceeding against the permit holder for a violation before surrender.~~

A. A fleet emissions testing station applicant or permittee shall create and manage an account on the Department's web portal.

B. To obtain a fleet emissions inspection station permit, an applicant shall:

1. Be a registered owner or lessee of a fleet of at least twenty-five nonexempt vehicles.

a. A motor vehicle dealer's business inventory of vehicles held for resale over the previous 12 months shall be used to determine compliance with this subsection.

b. A motor vehicle dealer with less than 12 months of operations applying for a fleet emissions testing permit shall certify that it will test at least 25 vehicles per year.

2. Be located within Area A, within 50 miles of the border of Area A, or within Area B. A dealer outside these areas who certifies to the department that customers who reside in Area A are the primary source of the dealer's business may also apply for a fleet permit.

3. Maintain a facility that has space devoted principally to maintaining or repairing the fleet's motor vehicles.

a. The space shall be large enough to conduct maintenance or repair of at least one motor vehicle.

b. Any fleet station shall be exclusively rented, leased, or owned by the applicant.

4. Own or lease the machinery, tools, and equipment required for the specific tests the applicant wishes to perform. Equipment and testing requirements are listed in R18-2-1006(C).
  5. Employ the following personnel:
    - a. At least 1 fleet agent licensed pursuant to R18-2-1016.
    - b. At least 1 emissions inspector licensed pursuant to R18-2-1016.
    - c. At least 1 person who is able to perform necessary emissions related repairs for fleet vehicles.
    - d. A single person may fill two or more of these roles for a fleet.
  6. Provide data to the Department as required by this section.
  7. Pass an initial inspection to determine compliance with this section.
  8. Submit to the ongoing inspections and audits prescribed in this Article.
- C. A fleet emissions inspection testing permittee shall continuously comply with all requirements of this Article.
- D. The equipment used at a fleet emissions inspection station is subject to the following requirements:
1. A fleet emissions testing station applicant or permittee shall own or lease the equipment referenced in R18-2-1006 that is necessary for the specific type of testing that the permittee is licensed to perform.
  2. All test equipment and instruments shall be maintained in accurate working condition as required by the manufacturer. An instrument requiring periodic calibration shall be calibrated according to instruction and recommendations of the instrument or equipment manufacturer. Calibration records shall be submitted through the web portal for review by the Department. The calibration records shall be certified by the technician performing each calibration.
    - a. Fleet station analyzers shall comply with, be calibrated, and be quality control checked according to 40 CFR 51, Subpart S, Appendix A, Section I, amended as of July 1, 2017, and no future editions or amendments, which is incorporated by reference in (C)(7)(b) and on file with the Department.
    - b. A fleet station opacity meter used for emission inspections is required to read the equivalent opacity value of neutral density filter within +/- 5% opacity at any point in the range of meter.
  3. Calibration gases used by the fleet station shall be subject to analysis and comparison to the Department's standard gases at any time.
  4. Fleet testing equipment shall be subject to both scheduled and unscheduled audits by state inspectors.
  5. A fleet's analyzer shall be calibrated at least monthly with calibration gases approved by the Department. A registered opacity meter shall be calibrated according to manufacturer's specifications before performing the first vehicle emissions inspection in any month.
- E. For every test performed by a vehicle emissions inspector, that vehicle emissions inspector shall log into the Department's web portal the same day that the inspection takes place to report the results of the test to the Department.
- F. A fleet's activities shall be governed by the following compliance and enforcement rules:
1. All requirements in this Article apply at all times after the issuance of a fleet emissions testing license has been issued.
  2. The Director may suspend or revoke a fleet emissions testing license according to A.R.S. § 49-546(F) and A.R.S. Title 41, Chapter 6, if the permittee, or any person employed by the permittee:
    - a. Violates any provisions of A.R.S. Title 49, Chapter 3, Article 5 or any provision of this Article;
    - b. Misrepresents a material fact in obtaining a permit;



- c. Fails to make, keep, and submit to the Department records for a vehicle tested; or
  - d. Does not provide a state inspector access to the information required in this Article.
3. If a fleet emissions inspection permit is surrendered, suspended or revoked, all unused certificates of inspection shall be automatically refunded.
  4. Any fleet vehicle is subject to inspection by a state inspector.
- G. A fleet emissions inspection station permit is non-transferable and does not expire.

**R18-2-1020. Licensing of Third Party Agents; Department Issuance of Issuing Alternative Fuel Certificates**

- A. ~~Licensing of Third Party Agents. The Department shall accept an application for a third party agent license to issue Alternative Fuel Certificates from any person who demonstrates all of the following:~~
1. ~~The applicant has knowledge of all laws and rules governing the inspection of alternative fuel vehicles;~~
  2. ~~The applicant has training or experience in inspecting alternative fuel vehicles; and~~
  3. ~~The applicant agrees to conduct inspections in accordance with the laws and rules for the inspection of alternative fuel vehicles.~~
- B. ~~A third party agent license is valid for a period of five years.~~
- C. Issuing Alternative Fuel Certificates. The Department or its agent shall inspect a vehicle converted to run on alternative fuel and shall issue an Alternative Fuel Certificate alternative fuel certificate according to A.R.S. § 28-2416 A.R.S. § 28-2416(2)(b) if the vehicle is currently powered by an alternative fuel as defined in A.R.S. § 1-215(4).

**R18-2-1021. Reserved**

**R18-2-1022. Procedure for Waiving Inspections Due to Technical Difficulties**

- A. A vehicle emissions station manager employed by an official emissions inspection station may issue a Director's certificate for a vehicle that cannot be inspected as required by this Article because of technical difficulties inherent in the manufacturer's design or construction of the vehicle.

**R18-2-1023. Certificate of Exemption for Out-of-State Vehicles**

- A. ~~If a vehicle being registered or reregistered in area Area A or area Area B requires an emission test and will not be physically available for inspection within the state during the 90-day period before the emissions compliance expiration date, and an emissions inspection is not available for that class of vehicle at an official inspection station in the area where the vehicle is located, the owner or owner's agent may apply in writing submit an application to the Department for a certificate of exemption.~~
- B. ~~The owner or owner's agent shall complete the owner portion of the certificate of exemption form, and a law enforcement official shall complete the vehicle verification portion. The owner or owner's agent shall submit the completed form to the Department apply for a certificate of exemption in the manner and form required by the Department.~~
- C. The Department shall may issue a certificate of exemption:
1. For a vehicle that meets the requirements of subsection (A) as indicated by the form completed under subsection (B) that will not be physically available for inspection within the state during the 90-day period before the emissions compliance expiration date and is located in an area where emissions testing is not available. This exemption shall only be granted if an affidavit confirming the location of the vehicle is signed and submitted with the application.

2. For a vehicle that has passed an official emissions inspection in another state during the 90 days before emissions compliance expiration upon submission of the inspection compliance document issued by the ~~government~~ entity conducting the inspection program.
- D. The fee for a certificate of exemption shall be fixed by the Director according to A.R.S. § 49-543 and shall be based upon the Director's estimated costs to the state of administering and enforcing the provisions of this Article as they apply to issuance of certificates of exemption. The payment for the certificates shall be included with the application for certificates. ~~Checks shall be made payable to the Department of Environmental Quality.~~

**R18-2-1024. Expired**

**R18-2-1025. Inspection of Contractor's Equipment and Personnel**

- A. State stations shall be inspected by state inspectors as follows ~~State inspectors shall conduct performance audits to determine whether a state station is correctly performing all inspection and functions related to inspections as follows:~~
1. ~~In Area A:~~
    - a. ~~Automated emission analyzers, calibrated and maintained according to "IM240 and Evap Technical Guidance," shall be inspected using state station field calibration gases at least once every other month.~~
    - b. ~~Opacity meters shall be inspected for accuracy using a neutral density filter at least once each month.~~
    - c. ~~During audits, a check shall be made for equipment tampering, worn instrumentation, blocked filters, and other conditions that would impair accurate sampling.~~
  2. ~~In Area B:~~
    - a. ~~Automated emission analyzers shall be inspected using state station field calibration gases at least two times each month.~~
    - b. ~~Opacity meters shall be inspected for accuracy using a neutral density filter at least two times each month.~~
    - c. ~~During audits, a check shall be made for tampering, worn instrumentation, blocked filters, and other conditions that would impair accurate sampling.~~
    - d. ~~Functional checks of dynamometer accuracy including roll speed and power absorption shall be performed at least quarterly.~~
1. Overt audits shall be completed at least two times each year for each inspection lane. Overt audits shall include:
    - a. A check for the observance of appropriate document security;
    - b. A check to see that required recordkeeping practices are being followed;
    - c. A check for licenses, certificates, and other required display information;
    - d. An observation and evaluation of each vehicle emissions inspector's ability to perform an inspection; and
    - e. A check to ensure all emissions testing equipment is calibrated and operating correctly.
  2. If a vehicle emissions inspector fails an audit, the vehicle emissions inspector's license may be suspended or revoked under R18-2-1016(A)(4).
  3. Vehicle emissions inspection records shall be reviewed at least monthly to assess station performance and identify any problems, potential fraud, or incompetence.
  4. Covert audits may be performed as necessary to confirm compliance with this article.
- B. ~~Equipment used to perform a transient loaded emissions test, shall be audited at least twice a year for all of the following:~~
1. ~~Constant volume sampler critical flow and calibration;~~
  2. ~~Optimization of the flame ionization detector fuel to air ratio using methane;~~
  3. ~~Proper dynamometer coast down, roll distance, and inertia weight;~~

4. ~~Ability to detect background pollutant concentrations;~~
  5. ~~Evaporative pressure test system for accuracy, response time, and other criteria consistent with "IM240 and Evap Technical Guidance;" and~~
  6. ~~Functional gas cap analysis equipment.~~
- ~~C.B.~~ If an equipment audit of an inspection lane in either area A or area B indicates that a state station analyzer is not operating within contractually specified tolerance, the state inspector shall immediately re-audit the failing equipment. If the equipment fails the second audit, the inspector shall immediately notify the station manager indicates that equipment is not calibrated and accurate, the equipment shall not be used to conduct emissions testing until it is replaced or repaired. The station manager shall either replace or repair the failing equipment or close the affected lane until the equipment is repaired and its accuracy verified. The state inspector shall provide a copy of the analyzer's failing results to the station manager.
- ~~D.C.~~ A state station analyzer removed by the contractor may be returned to service upon its repair and written verification of a passing calibration audit. The contractor shall immediately notify the Department in writing of the analyzer's return to service. The contractor's calibration audit of the analyzer shall be provided to the Department within seven calendar days after the analyzer's return to service. Equipment that is removed from testing may be returned to service upon its repair and a state inspector's verification of a passing calibration audit.
- ~~E.~~ State inspectors shall conduct performance audits to determine whether vehicle emissions inspectors are correctly performing all inspections and functions related to inspections as follows:
1. ~~Overt audits at least two times each year for each inspection lane:~~
    - a. ~~Check for proper document security;~~
    - b. ~~Check for required recordkeeping including vehicle emissions inspector licenses; and~~
    - c. ~~Observation and written evaluation of each vehicle emissions inspector's ability to perform an inspection.~~
  2. ~~State station and vehicle emissions inspector records shall be reviewed at least monthly to assess station performance and identify any problems, potential fraud, or incompetence.~~
  3. ~~If a vehicle emissions inspector fails an audit under subsection (E)(1) or (E)(2), the vehicle emissions inspector's license may be suspended or revoked according to R18-2-1016(A)(4).~~
- ~~F. D.~~ A state inspector shall inspect On road on-road emissions analyzers shall be inspected by a state inspector at least monthly using dry gas analysis equipment.
- ~~G.~~ If an equipment audit indicates that an on road emissions analyzer is not operating within contractually specified tolerance, the state inspector shall immediately re-audit the failing equipment. If the equipment fails the second audit, the inspector shall immediately notify the contractor and the contractor shall repair or replace the equipment according to subsections (C) and (D).

#### **R18-2-1026. Inspection of Fleet Stations**

- A. Equipment used by fleet stations to perform emissions testing shall be inspected by state inspectors for accuracy as follows: meet the requirements for the type of testing a fleet station is licensed to perform.
1. ~~Emission analyzers shall be inspected using field calibration gases at least quarterly.~~
  2. ~~Opacity meters shall be inspected using a neutral density filter at least quarterly.~~
  3. ~~Equipment for transient loaded emissions tests shall be inspected according to R18-2-1025(A) and (B).~~
- B. A fleet station's emissions gas analyzer shall not be used for an official emissions inspection if:
1. The state's field calibration gases are not read within the tolerances prescribed by subsection (J); The calibration gases are not read within the following tolerances:
    - a. Within plus 0.50% CO to minus 0.25% CO in the range from 0 to 2% CO;

- b. Within plus 60 PPM HC to minus 30 PPM HC in the range from 0 to 500 PPM HC when read as N-HEXANE.
    - 2. There is a leak in the sampling systems or the calibration port; or The calibration gases are not read within the manufacturer specified tolerances;
    - 3. The sample handling system is restricted. There is a leak in the sampling systems or the calibration port; or
    - 4. The sample handling system is restricted.
  - C. The fleet emissions testing station is responsible for calibration of the fleet station emission analyzer shall acquire and utilize calibration gases with assigned HC and CO concentrations to calibrate fleet emission analyzers.
  - D. A state inspector may, at the inspector's discretion, allow a fleet station employee, or someone authorized by the fleet station, to calibrate the analyzer utilizing the state's field calibration gases shall fail a fleet emissions analyzer if the analyzer does not meet the requirements of this section. A fleet emission inspector shall not use the analyzer for inspection until the analyzer is cleared for return to service by a state inspector.
  - E. ~~The Department shall assign HC and CO concentrations to a calibration gas submitted by a fleet station emission analyzer technician and purchased from a private source.~~
  - F. ~~A state inspector shall tag a fleet station emission analyzer if the analyzer does not meet the requirements of this Section. The fleet vehicle emissions inspector shall not use the analyzer for inspection until the tag is removed by a state inspector or an analyzer repair person certified under R18-2-1028. The tag shall be in the form of a U.S. postcard and contain the information listed in R18-2-1027(E).~~
  - G. ~~An analyzer tagged under subsection (F) shall not be returned to service until its accuracy is verified by a state inspector or an emissions analyzer repair person certified under R18-2-1028.~~
  - H. ~~A fleet station is responsible for periodic maintenance and calibrations of its emissions analyzers. Repair and maintenance requirements are prescribed in R18-2-1019.~~
  - I. ~~If a state inspector has approved its use, a fleet station may lease or borrow an emission analyzer for official inspections for up to six months while the station's approved analyzer is being repaired.~~
  - J. ~~Fleet station analyzers used for transient loaded tests shall comply with and be quality control checked according to "IM240 and Evap Technical Guidance." All other fleet station emission analyzers used for emissions inspections are required to read the calibration gases within the following tolerances:-~~
    - 1. ~~Within plus 0.50% CO to minus 0.25% CO in the range from 0 to 2% CO;~~
    - 2. ~~Within plus 1.00% CO to minus 0.50% CO in the range from 2% to 10% CO;~~
    - 3. ~~Within plus 60 PPM HC to minus 30 PPM HC in the range from 0 to 500 PPM HC when read as N-HEXANE; and~~
    - 4. ~~Within plus 200 PPM HC to minus 100 PPM HC in the range from 500 to 2,000 PPM HC when read as N-HEXANE.~~
  - K. ~~A fleet station opacity meter used for emission inspections is required to read the equivalent opacity value of neutral density filter within  $\pm 5\%$  opacity at any point in the range of the meter.~~
  - L. A state inspector shall conduct performance audits to determine whether a vehicle emissions inspector fleet emissions inspection station is correctly performing inspections and functions related to inspections as follows:
    - 1. Overt audits at least two times each year for each facility that include:
      - a. Check A check for the observance of proper appropriate document security;
      - b. Check A check to see for that required recordkeeping including vehicle emissions inspector licenses; and practices are being followed;
      - c. Observe and make a written evaluation of each vehicle emissions inspector's ability to perform an inspection. A check for licenses, certificates, and other required display information;

- d. An observation and evaluation of each vehicle emissions inspector's ability to perform an inspection; and
  - e. A check to ensure all emissions testing equipment is calibrated and operating correctly.
2. Fleet station and vehicle emissions inspector records shall be reviewed at least monthly to assess fleet performance and identify any problems, potential fraud, or incompetence.
  3. If a vehicle emissions inspector fails an audit, the vehicle emissions inspector's license may be suspended or revoked according to R18-2-1016(A)(4).
  4. Covert audits may be performed as necessary to confirm compliance with this article.

**R18-2-1027. ~~Registration and Inspection of Emissions Analyzers and Opacity Meters Repealed~~**

- A. ~~An automotive repair facility may apply to the Department at no charge for registration of NDIR-HC and CO analyzers, and opacity meters. NDIR emission analyzers and opacity meters used by fleet inspection stations shall be registered for the fleet station permit approval. Application forms for analyzer or opacity meter registration are available from the Department. Completed application forms shall be submitted to the Department. For purposes of 18 A.A.C. 1, the application components for registration of an analyzer or opacity meter are:~~
1. ~~The Department receives a completed application form;~~
  2. ~~The applicant or employee successfully completes the "Certified Technician" examination described in R18-2-1028(A)(2); and~~
  3. ~~The Department inspects the analyzer.~~
- B. ~~A registered analyzer shall be calibrated at least monthly, by a certified technician, with calibration gases approved by the Department. A registered opacity meter shall be calibrated according to manufacturer's specifications before performing the first vehicle emissions inspection in any month.~~
- C. ~~A registered analyzer shall meet the requirements of R18-2-1006(F)(8)(a). Calibration shall be verified by a state inspector before the analyzer is registered. The analyzer shall read the value of the calibration gases within the following tolerances:~~
1. ~~Plus 0.50% CO to minus 0.25% CO in the range from 0 to 2% CO;~~
  2. ~~Plus 1.00% CO to minus 0.50% CO in the range from 2% to 10% CO;~~
  3. ~~Plus 60 PPM HC to minus 30 PPM HC in the range from 0 to 500 PPM HC when read as N HEXANE; and~~
  4. ~~Plus 200 PPM HC to minus 100 PPM HC in the range from 500 to 2,000 PPM HC when read as N HEXANE.~~
- D. ~~Each registered opacity meter and analyzer shall have a unique registration number assigned by the Department. The technician shall maintain a repair and calibration log for each registered opacity meter and analyzer on a form provided by the Department. The log shall be made available to a state inspector on request.~~
- E. ~~A state inspector shall tag a registered opacity meter or analyzer if the opacity meter or analyzer does not meet the requirements of this Section. A tagged opacity meter or analyzer shall not be used for the purposes of R18-2-1010 or R18-2-1019 until the tag is removed by a state inspector or an emission analyzer repair person certified under R18-2-1028 after accuracy is verified.~~
1. ~~The tag shall be in the form of a U.S. postcard and contain the following information:~~
    - a. ~~Analyzer registration number or opacity meter registration number;~~
    - b. ~~Brief statement that the analyzer does not meet state operating requirements for registered analyzers;~~
    - c. ~~Reason for tagging;~~
    - d. ~~Date the analyzer was tagged and the signature of state inspector issuing the tag;~~
    - e. ~~Details of repairs performed to correct the failure;~~
    - f. ~~CO and HC concentrations of calibration gases used to verify analyzer accuracy;~~

- g. ~~Analyzer readings when gases were introduced into the analyzer sampling probe, and~~
- h. ~~Repair person's certificate number and signature or signature of state inspector removing the tag and date accuracy is verified.~~
- 2. ~~The tag shall be returned to the Department within two business days after accuracy is verified.~~
- F. ~~An owner of a registered emission analyzer or opacity meter shall notify the Department within seven business days of the retirement, resignation, or termination of any licensed vehicle emissions inspector or certified technician. The Department shall revoke the registration of an emission analyzer or opacity meter if the owner of the analyzer or meter does not employ an inspector licensed under R18-2-1019 or a technician certified under R18-2-1028.~~

**R18-2-1028. Certification of Users of Registered Analyzers and Analyzer Repair Persons Repealed**

- A. ~~A person may be certified to use a registered analyzer and opacity meter if:
 
  - 1. ~~The person completes the application form and submits it to the Department; and~~
  - 2. ~~The person demonstrates proficiency by scoring 80% or higher on a Department-administered examination in the following areas:
 
    - a. ~~Equipment used in the inspection and control of emissions;~~
    - b. ~~Types of emissions inspection failures;~~
    - c. ~~Correction procedures for excessive HC emissions;~~
    - d. ~~Correction procedures for excessive CO emissions;~~
    - e. ~~Proper carburetor adjustment procedures; and~~
    - f. ~~Diesel fuel injection systems.~~~~~~
- B. ~~Certification under subsection (A) shall be valid for one year from date of issue and may be renewed, under the conditions of subsection (A), by submitting a renewal application to the Department 30 days before the current certification expiration date.~~
- C. ~~A person certified under subsection (A) shall notify the Department within seven business days of the person's retirement, resignation, or termination from employment.~~
- D. ~~A person may be certified to repair and remove tags from an emission analyzer under R18-2-1027 if:
 
  - 1. ~~Application is made to the Department;~~
  - 2. ~~The person demonstrates proficiency by scoring 80% or higher on a Department-administered examination in the following areas:
 
    - a. ~~State and federal regulations governing emissions analyzers;~~
    - b. ~~Fundamentals of emission analyzer operation, repair and preventive maintenance;~~
    - c. ~~Theory of operation of vehicle emissions control devices.~~~~~~
- E. ~~Certification under subsection (D) shall be valid for one year from date of issue and may be renewed, under the conditions of subsection (D), by submitting a renewal application to the Department 30 days before the current certification expiration date.~~
- F. ~~Each person certified under this Section shall receive a unique nontransferable certification number.~~
- G. ~~The Department may suspend, revoke or refuse to renew the certification issued under subsection (A) if:
 
  - 1. ~~The person's actions demonstrate a lack of proficiency in the areas listed under subsection (A)(2); or~~
  - 2. ~~The person has willfully violated any provision of this Article.~~~~
- H. ~~The Department may suspend, revoke, or refuse to renew the certification issued under subsection (D) if:
 
  - 1. ~~The person's actions demonstrate a lack of proficiency in the areas listed under subsection (D)(2); or~~~~

~~2. The person has willfully violated any provision of this Article.~~

**R18-2-1031. Standards for Evaluating the Oxidation Efficiency of a Catalytic Converter Re-pealed**

~~A. Except for a vehicle requiring an Idle Only Inspection, a gasoline powered vehicle requiring a catalytic converter test under R18-2-1008(C) shall be tested using the following Catalyst Efficiency Test Procedure:~~

- ~~1. Immediately after a vehicle completes an Inspection and Maintenance (I/M) test in the waiver lane, the exhaust sampling cone shall be removed from the tailpipe. The vehicle shall remain on the dynamometer with the engine idling and the transmission in neutral. The vehicle engine must be at normal operating temperature.~~
- ~~2. For the catalyst test, the dynamometer and the constant volume sampler shall remain at the settings used for the vehicle's I/M test.~~
- ~~3. The inspector shall insert the sampling tube for the A/F analyzer into the tailpipe of the vehicle.~~
- ~~4. The inspector shall accelerate the vehicle to  $40 \pm 2.5$  MPH and maintain a steady state operating mode for the duration of the test. Once the vehicle obtains the test speed, the test shall begin.~~
- ~~5. Once the test begins, a two minute stabilization period shall take place, during which the inspector shall monitor the A/F analyzer to ensure that the A/F is 14.0 or greater. If the mean A/F is less than 14.0, the inspector shall abort the test.~~
- ~~6. If the A/F is 14.0 or greater, the exhaust sampling cone shall be repositioned for exhaust sampling.~~
- ~~7. After the stabilization period ends, the total hydrocarbon and methane concentrations and the A/F ratio shall be continuously recorded for two minutes.~~
- ~~8. At the end of the two minute sampling period, the inspector shall stop the vehicle, remove the exhaust sampling cone and the A/F analyzer sampling probe from the tailpipe, and remove the vehicle from the dynamometer.~~
- ~~9. The mean total hydrocarbon concentration shall be divided by the mean methane concentration for the recorded values of the test, to produce a ratio (R) of total hydrocarbon to methane. The ratio, R, shall be applied to the formula: Catalyst Efficiency (%) =  $3(R) + 100$ .~~
- ~~10. A vehicle passes the test if the Catalyst Efficiency (%) is 75% or greater.~~
- ~~11. The test result for a non-passing vehicle with a mean A/F equal to, or less than, 14.3 shall be inconclusive.~~
- ~~12. A vehicle fails the Catalyst Efficiency Test Procedure if the A/F is greater than 14.3 and the Catalyst Efficiency (%) is less than 75%. The failing vehicle cannot be granted a waiver according to R18-2-1008(C)(1).~~

~~B. Analytical equipment required to perform the Catalyst Efficiency Test Procedure shall meet the following requirements:~~

~~1. Analyzer Specifications:~~

- ~~a. An analyzer shall meet performance specifications of 40 CFR 86 subparts B, D, and N with respect to accuracy, precision, drift, interference, and noise. 40 CFR, subparts B, D, and N, adopted as of July 1, 1998, are incorporated by reference and on file with the Department and the Secretary of State. This incorporation contains no future editions or amendments. A copy of this referenced material may be obtained from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop SSOP, Washington D.C. 20402-9328.~~

- b. ~~Total hydrocarbon analysis shall be determined by a flame ionization detector. The analyzer shall be single range with a calibration curve covering at least 0 to 300 ppm carbon.~~
- c. ~~Methane analysis shall be determined by a flame ionization detector equipped with a non-methane cutter capable of oxidizing 98% of the hydrocarbons (except methane) while more than 90% of the methane remains unchanged. The analyzer shall be single range with a calibration curve covering at least 0 to 30 ppm.~~
- d. ~~Engine A/F mixture analysis shall be determined by a Universal Exhaust Gas-Oxygen Sensor. The range shall be 8.0 to 25.5 A/F for gasoline with an accuracy of  $\pm 2\%$  of point and a response time of less than 150 milliseconds.~~
- 2. ~~Analyzer Performance Verification and Calibration:~~
  - a. ~~The operator of an analyzer under this Section shall verify analyzer performance according to manufacturer recommendations.~~
  - b. ~~Upon initial installation, and monthly thereafter, the operator of an analyzer under this Section shall generate a 10-point calibration curve for each total hydrocarbon and methane analyzer. A gas divider employing equally spaced points may be used to generate the calibration curve.~~
    - i. ~~Each calibration curve generated shall fit the data within  $\pm 2.0\%$  at each calibration point.~~
    - ii. ~~Each calibration curve shall be verified for each analyzer with a confirming calibration standard between 15-80% of full scale that is not used for curve generation. Each confirming standard shall be measured by the curve within  $\pm 2.5\%$ .~~

**Appendix of Tables Applicable to Article 10**

**Table 1. Dynamometer Loading Table - Annual Tests**

Gross Vehicle Weight			
Rating (Pounds)	Engine Size	Speed (MPH)	Load (HP)
8500 or less	4 cyl. or less	22-25	2.8-4.1
8500 or less	5 or 6 cyl.	29-32	6.4-8.4
8500 or less	8 cyl. or more	32-35	8.4-10.8
8501 or more	All	37-40	12.7-15.8

**Table 2. Emissions Standards - Annual Tests**  
**MAXIMUM ALLOWABLE**  
**Motorcycles**

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
2-Stroke	All	All	18,000	5.00	18,000	5.00	N/A	N/A
4-Stroke	All	All	500	5.00	1,800	5.50	N/A	N/A



Reconstructed Vehicles

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
4-Stroke	1967-1980	All	700	5.25	1,200	7.50	1,200	5.60
4-Stroke	1980 & Newer	All	700	5.25	1,200	7.50	700	5.25

Light-Duty Vehicles

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
2-Stroke	All	All	18,000	5.00	18,000	5.00	18,000	5.00
4-Stroke	1967-1971	4 or less	450	3.75	500	5.50	500	4.20
4-Stroke	1967-1971	more than 4	380	3.00	450	5.00	450	3.75
4-Stroke	1972-1974	4 or less	380	3.50	400	5.50	400	4.20
4-Stroke	1972-1974	more than 4	300	3.00	400	5.00	400	3.75
4-Stroke	1975-1978	4 or less	120	1.00	250	2.20	250	1.65
4-Stroke	1975-1978	more than 4	120	1.00	250	2.00	250	1.50
4-Stroke	1979	4 or less	120	1.00	220	2.20	220	1.65
4-Stroke	1979	more than 4	120	1.00	220	2.00	220	1.50
4-Stroke	1980 & newer	All	100	0.50	220	1.20	220	1.20

Light-Duty Truck 1 (0-6000 lbs GVWR)

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
2-Stroke	All	All	18,000	5.00	18,000	5.00	18,000	5.00
4-Stroke	1967-1971	4 or less	450	3.75	500	5.50	500	4.20
4-Stroke	1967-1971	more than 4	380	3.00	450	5.00	450	3.75
4-Stroke	1972-1974	4 or less	380	3.50	400	5.50	400	4.20
4-Stroke	1972-1974	more than 4	300	3.00	400	5.00	400	3.75
4-Stroke	1975-1978	4 or less	120	1.00	250	2.20	250	1.65
4-Stroke	1975-1978	more than 4	120	1.00	250	2.00	250	1.50
4-Stroke	1979	4 or less	120	1.00	220	2.20	220	1.65
4-Stroke	1979	more than 4	120	1.00	220	2.00	220	1.50

		4						
4-Stroke	1980 & newer	All	100	0.50	220	1.20	220	1.20

Light-Duty Truck 2 (6001 - 8500 lbs GVWR)

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
2-Stroke	All	All	18,000	5.00	18,000	5.00	18,000	5.00
4-Stroke	1967-1971	4 or less	450	3.75	500	5.50	500	4.20
4-Stroke	1967-1971	more than 4	380	3.00	450	5.00	450	3.75
4-Stroke	1972-1974	4 or less	380	3.50	400	5.50	400	4.20
4-Stroke	1972-1974	more than 4	300	3.00	400	5.00	400	3.75
4-Stroke	1975-1978	All	300	3.00	350	4.00	350	3.00
4-Stroke	1979	4 or less	120	1.00	220	2.20	220	1.65
4-Stroke	1979	more than 4	120	1.00	220	2.00	220	1.50
4-Stroke	1980 & newer	All	100	0.50	220	1.20	220	1.20

Heavy-Duty Truck (8501 lbs or greater GVWR)

Vehicle Engine Type	Vehicle Model Year	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
			HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
2-Stroke	All	All	18,000	5.00	18,000	5.00	18,000	5.00
4-Stroke	1967-1971	4 or less	450	3.75	500	5.50	500	4.20
4-Stroke	1967-1971	more than 4	380	3.00	450	5.00	450	3.75
4-Stroke	1972-1974	4 or less	380	3.50	400	5.50	400	4.20
4-Stroke	1972-1974	more than 4	300	3.00	400	5.00	400	3.75
4-Stroke	1975-1978	All	300	3.00	350	4.00	350	3.00
4-Stroke	1979 & newer	All	300	3.00	300	4.00	300	3.00

**Table 3. Emissions Standards - Transient Loaded Emissions Tests**  
FINAL STANDARDS (Standards are in grams per mile)

(i) Light Duty Vehicles

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1981-1982	3.0	2.5	25.0	21.8	3.5	3.4
1983-1985	2.4	2.0	20.0	17.3	3.5	3.4
1986-1989	1.6	1.4	15.0	12.8	2.5	2.4
1990-1993	1.0	0.8	12.0	10.1	2.5	2.4
1994+	0.8	0.7	12.0	10.1	2.0	1.9

(ii) Light Duty Trucks 1 (less than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1981-1985	4.0	3.4	40.0	35.3	5.5	5.4
1986-1989	3.0	2.5	25.0	21.8	4.5	4.4
1990-1993	2.0	1.7	20.0	17.3	4.0	3.9
1994+	1.6	1.4	20.0	17.3	3.0	2.9

(iii) Light Duty Trucks 2 (greater than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1981-1985	4.4	3.7	48.0	42.5	7.0	6.9
1986-1987	4.0	3.4	40.0	35.3	5.5	5.4
1988-1989	3.0	2.5	25.0	21.8	5.5	5.4
1990-1993	3.0	2.5	25.0	21.8	5.0	4.9
1994+	2.4	2.0	25.0	21.8	4.0	3.9

**Table 4. Transient Driving Cycle**

Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed
sec- ond	mph	sec- ond	mph	sec- ond	mph	sec- ond	mph	sec- ond	mph
0	0	30	20.7	60	26	90	51.5	120	54.9
1	0	31	21.7	61	26	91	52.2	121	55.4
2	0	32	22.4	62	25.7	92	53.2	122	55.6
3	0	33	22.5	63	26.1	93	54.1	123	56
4	0	34	22.1	64	26.5	94	54.6	124	56
5	3.3	35	21.5	65	27.3	95	54.9	125	55.8
6	6.6	36	20.9	66	30.5	96	55	126	55.2
7	9.9	37	20.4	67	33.5	97	54.9	127	54.5
8	13.2	38	19.8	68	36.2	98	54.6	128	53.6
9	16.5	39	17	69	37.3	99	54.6	129	52.5
10	19.8	40	17.1	70	39.3	100	54.8	130	51.5
11	22.2	41	15.8	71	40.5	101	55.1	131	50.8
12	24.3	42	15.8	72	42.1	102	55.5	132	48

13	25.8	43	17.7	73	43.5	103	55.7	133	44.5
14	26.4	44	19.8	74	45.1	104	56.1	134	41
15	25.7	45	21.6	75	46	105	56.3	135	37.5
16	25.1	46	22.2	76	46.8	106	56.6	136	34
17	24.7	47	24.5	77	47.5	107	56.7	137	30.5
18	25.2	48	24.7	78	47.5	108	56.7	138	27
19	25.4	49	24.8	79	47.3	109	56.3	139	23.5
20	27.2	50	24.7	80	47.2	110	56	140	20
21	26.5	51	24.6	81	47.2	111	55	141	16.5
22	24	52	24.6	82	47.4	112	53.4	142	13
23	22.7	53	25.1	83	47.9	113	51.6	143	9.5
24	19.4	54	25.6	84	48.5	114	51.8	144	6
25	17.7	55	25.7	85	49.1	115	52.1	145	2.5
26	17.2	56	25.4	86	49.5	116	52.5	146	0
27	18.1	57	24.9	87	50	117	53		
28	18.6	58	25	88	50.6	118	53.5		
29	20	59	25.4	89	51	119	54		

**Table 5. Tolerances**

~~Range State Station Fleet Station~~

4 & 2 stroke vehicles:

~~CO in MOL percent 0 to 2.0% ±0.1% ±0.25%~~  
~~2 to 10.0% ±0.25% ±0.5%~~

4-stroke vehicles:

~~HC as N hexane in PPM 0 to 500 PPM ±15 PPM ±30 PPM~~  
~~500 to 2000 PPM ±50 PPM ±100 PPM~~

2-stroke vehicles:

~~HC as propane in PPM 0 to 25,000 PPM ±1250 PPM ±1250 PPM~~

	<u>Range</u>	<u>State Station</u>	<u>Fleet Station</u>
<u>4 &amp; 2 stroke vehicles:</u> <u>CO in MOL percent</u>	<u>0 to 2.0%</u> <u>2 to 10.0%</u>	<u>±0.1%</u> <u>±0.25%</u>	<u>±0.25%</u> <u>±0.5%</u>
<u>4-stroke vehicles:</u> <u>HC as N-hexane in PPM</u>	<u>0 to 500 PPM</u> <u>500 to 2000 PPM</u>	<u>±15 PPM</u> <u>±50 PPM</u>	<u>±30 PPM</u> <u>±100 PPM</u>
<u>2-stroke vehicles:</u> <u>HC as propane in PPM</u>	<u>0 to 25,000 PPM</u>	<u>±1250 PPM</u>	<u>±1250 PPM</u>

**Table 6. Repealed**