

**Statement of Ted Leonard  
Executive Director  
Pennsylvania AAA Federation  
To the Senate Transportation Committee  
May 10, 2019**

First, I want to thank Senator Ward and Senator Sabatina and the entire Senate Transportation Committee for the opportunity to address two very important vehicle programs-the annual vehicle safety inspection and the vehicle emissions testing program.

Second, I want to personally and publicly thank Senator Ward as I and our clubs and the entire Pennsylvania AAA Federation have been speaking out on these issues for years and we very much appreciate your bringing these issues to the forefront. This is something we have wanted for a very long time. Thank you.

I also want to make sure that we publicly thank those members of the Senate who have, in the past, issued legislation about these two issues about which I am to speak. Those members include Senator Vogel, who has been a prime sponsor of the bill, and Senators Scarnati Hutchison, Yudichak, Costa and Brewster... All of whom were sponsors of legislation on the issues about which I am to speak. And I would be remiss if I didn't also thank Senator Vogel who has worked with us on these issues for many years. Thank you to all of you.

In researching background on the annual safety inspection, I found two studies that were conducted on the Pa. safety inspection program. The first was a March 2009 study entitled Pennsylvania's Vehicle Safety Inspection Program Effectiveness conducted by Cambridge Systematics for PennDOT. This research considered the effectiveness of vehicle safety inspections on the number of fatal crashes, and compared the benefits of the program to the cost of inspections. The study did not address failure rates but concluded the benefits of the program exceeded the user costs and that the Vehicle Safety Inspection program in Pennsylvania is effective and saves lives. The second study, Failure Rates and Data Driven Policies for Vehicle Safety Inspections in Pennsylvania, was conducted by Carnegie Mellon University and published in *Science Direct* in August 2015. This study concluded that the overall failure rate of inspections was in the 12-18 percent range. The study also noted that vehicles older than three years old or have more than 30,000 miles had higher failure rates than newer vehicles, and that due to technology, the vehicle fleet is getting safer. The report also noted that accurate inspection data is limited. The accompanying chart is drawn from the report.

The second program I'd like to address is the Emissions Testing program. In 1998-1999, I participated in an Emissions Testing Stakeholder group hosted by PennDOT and DEP (Deputy Secretary Betty Serian presiding.) The group forwarded recommendations in January 2000 but a

lawsuit subsequently overtook those recommendations and a US District court ordered into place the program we have had for nearly twenty years now.

In October 2017 the National Bureau of Economic Research published a report with the rather lengthy title of Technology and the Effectiveness of Regulatory Programs Over Time: Vehicle Emissions and Smog Checks with a Changing Fleet. The study concluded that emissions inspections have become less effective at reducing air pollution as more high-polluting vehicles from the 1970s and 1980s leave the fleet.

Emissions testing programs vary widely from state to state. Previously, California exempted six newer model years from testing. As of January 1, 2019, California now exempts eight model years and testing is biennial. Ohio requires testing in just seven of the state's eighty-eight counties and testing there is also biennial. Delaware exempts seven model years and again testing is biennial. New Jersey exempts five model years and testing is biennial. New York exempts two model years. Rhode Island exempts two model years and testing is biennial. Virginia tests in five northern counties, exempts four model years and testing is biennial.

AAA suggests the following policies regarding vehicle emissions testing and annual safety inspections:

- PennDOT should permit states to test only vehicles two years or older to be subject to safety inspections.
- PennDOT should only require vehicles ten years or older to be subject to emissions testing.
- State I/M programs should be subjected to comprehensive and periodic review to ensure programs are both reasonable and cost effective. This suggestion would also apply to the safety inspection program.
- Inspection of onboard diagnostic (OBD) systems should serve as a replacement for other types of emission inspection on vehicles so equipped, if it can be demonstrated that false failures are not a factor, and that this means of inspection is both cost effective and produces the desired emission reductions.

## Review of Statistics

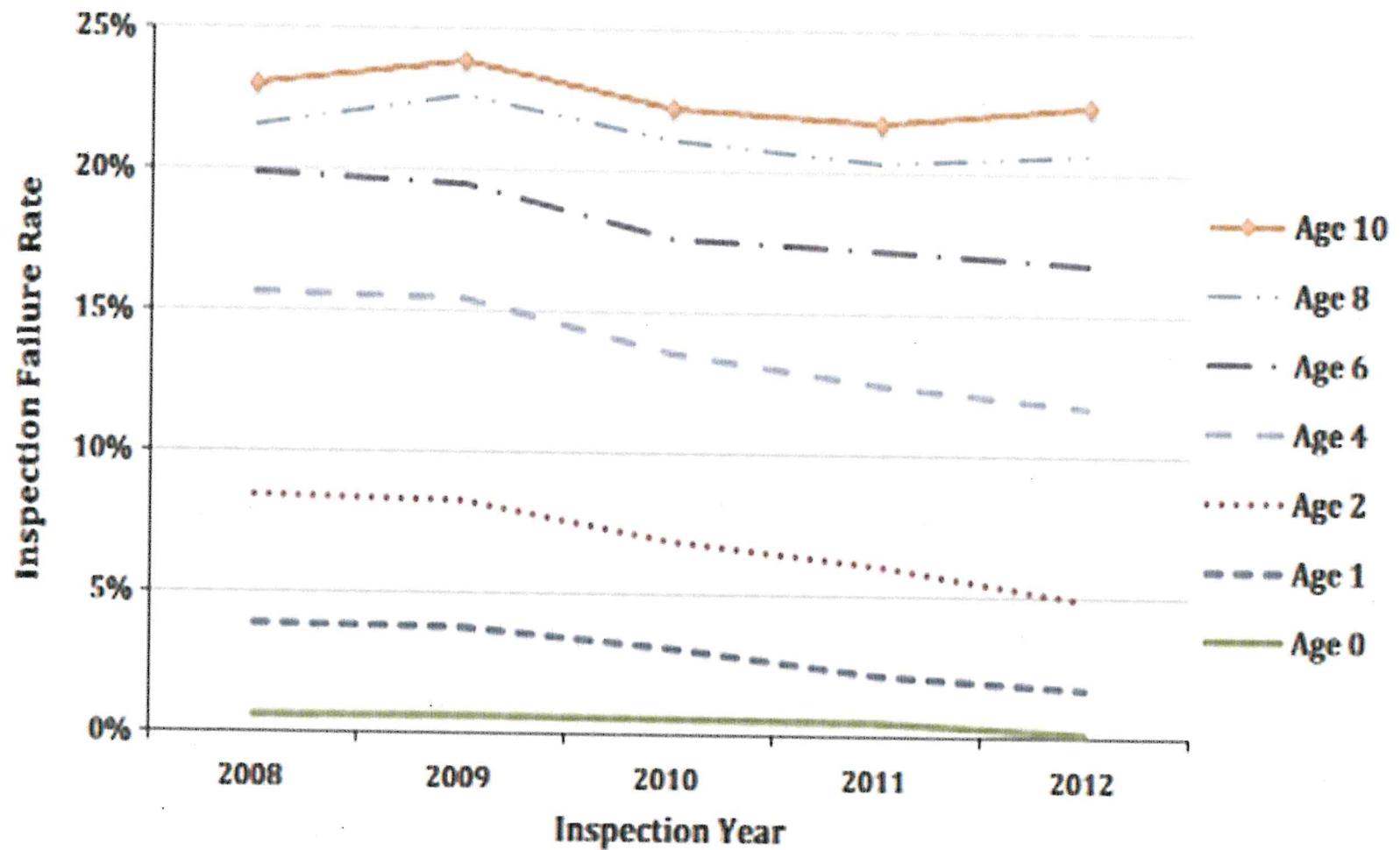


Fig. 7. Inspection failure rate time series, comparing vehicle age.

## **Failure Rates (%)**

- 2017: 2.02% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
3.27% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2016: 2.15% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
3.47 % (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2015: 2.24% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
3.67% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2014: 2.31% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
3.79% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2013: 2.35% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
3.89% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2012: 2.38% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
4.00% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2011: 2.42% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
4.12% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2010: 2.43% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
4.22% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)
- 2009: 2.40% (excludes gas caps that failed, but were replaced during the initial test, resulting in the vehicle passing the test)  
4.27% (includes overall initial test failures plus gas caps that failed during the initial test and were replaced)

Calendar Year 2011				Calendar Year 2012				Calendar Year 2013				Calendar Year 2014				Calendar Year 2015				Calendar Year 2016				Calendar Year 2017																																																								
Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %	Model Year	Total Tested	Total Failed	Total Failed %																																																					
2012	2,460	17	0.69%	2013	2,530	6	0.24%	2014	2152	7	0.33%	2015	2661	9	0.34%	2016	2358	7	0.30%	2017	2408	6	0.25%	2018	1508	3	0.20%																																																					
2011	156,527	413	0.26%	2012	154,888	434	0.28%	2013	166344	352	0.21%	2014	168320	379	0.23%	2015	173554	364	0.21%	2016	169846	339	0.20%	2017	163398	362	0.22%																																																					
2010	400,973	1,224	0.31%	2011	432,753	1,127	0.26%	2012	457740	1200	0.26%	2013	484141	1293	0.27%	2014	490109	1257	0.26%	2015	521881	1192	0.23%	2016	504198	1124	0.22%																																																					
2009	340,489	1,335	0.39%	2010	404,565	1,375	0.34%	2009	335,770	2,337	0.70%	2010	398735	1748	0.44%	2011	441495	2023	0.46%	2012	463261	2106	0.45%	2013	494161	2138	0.43%	2014	500313	2004	0.40%																																																	
2008	490,672	2,413	0.49%	2007	473,684	3,684	0.78%	2008	455,799	3,563	0.78%	2007	450,369	4,561	1.01%	2006	425,997	7,093	1.67%	2005	434,770	8,704	2.00%	2004	412,180	9,507	2.31%	2003	409,709	11,034	2.69%																																																	
2005	460,493	7,587	1.65%	2004	443,450	10,017	2.26%	2003	386,958	16,405	4.24%	2002	322,436	14,645	4.54%	2001	313,169	13,670	4.37%	2000	245,294	11,245	4.58%	1999	164,056	9,264	5.65%																																																					
1998	115,911	7,121	6.14%	1997	95,904	3,454	3.60%	1996	68,134	2,300	3.38%	1995	46,270	1,824	3.94%	1994	33,797	1,553	4.60%	1993	24,616	1,025	4.16%	1992	19,576	896	4.58%																																																					
1991	15,313	701	4.58%	1990	12,941	583	4.88%	1989	8,009	421	5.26%	1988	5,628	332	5.90%	1987	3,912	130	3.32%	1986	2,759	62	2.25%	1985	1,461	48	3.29%																																																					
1985	966	19	1.97%	1984	729	23	3.16%	1983	686	8	1.17%	1982	62	2.08%	1981	59	2.2	3.59%	1980	51	2.05	3.92%	1979	45	1.1	2.41%	1978	34	1.0	2.85%																																																		
1977	25	0.9	3.54%	5,716,625	138,447	2.42	Gas Cap Fails	97,259			5,679,954	135,067	2.38	Gas Cap Fails	92,221			5,734,715	134,710	2.35	Gas Cap Fails	88,266			5,780,120	133,701	2.31	Gas Cap Fails	85,156			5,828,167	130,555	2.24	Gas Cap Fails	83,195			5,890,491	126,596	2.15	Gas Cap Fails	77,776			5,863,337	118,656	2.02	Gas Cap Fails	73,357			Adj Total Fails	235,706	4.12		Adj Total Fails	227,288	4.00		Adj Total Fails	222,976	3.89		Adj Total Fails	218,857	3.79		Adj Total Fails	213,750	3.67		Adj Total Fails	204,372	3.47		Adj Total Fails	192,013	3.27	