

AIR RESOURCES BOARD

**STAFF REPORT: INITIAL STATEMENT OF REASONS
FOR PROPOSED RULEMAKING**

**PUBLIC HEARING TO CONSIDER MINOR AMENDMENTS TO THE
PERIODIC SMOKE INSPECTION PROGRAM (PSIP) IN RESPONSE TO
THE INCLUSION OF DIESEL VEHICLES IN SMOG CHECK
(ASSEMBLY BILL 1488, MENDOZA 2007)**

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EXECUTIVE SUMMARY

Assembly Bill (AB) 1488, Mendoza was signed into law on October 14, 2007. The bill requires that beginning January 1, 2010, diesel passenger cars and trucks, manufactured after the 1997 model year with a Gross Vehicle Weight Rating (GVWR) of 14,000 pounds or less be included in the California Smog Check Program. The diesel Smog Check Program is a registration based program and requires most California vehicles undergo emissions checks on a biennial basis. The program is administered by the Department of Consumer Affairs, Bureau of Automotive Repair (BAR) with assistance from the Air Resources Board (ARB). Diesel Smog Check inspections which began in 2010, consist of a visual inspection of the emission control devices, an interrogation of the vehicle's on-board diagnostic (OBD) system, and a visual assessment of the vehicle's smoke level. ARB estimates that about 510,700 diesel vehicles are subject to the diesel Smog Check Program, the vast majority of which are not part of a fleet.

The Periodic Smoke Inspection Program (PSIP) was signed into law in 1990 (Senate Bill 2330) to control excess smoke emissions and tampering from fleets of heavy-duty diesel trucks and buses. It was implemented in October 1999. The PSIP requires that owners of California based fleets with two or more diesel-powered vehicles with GVWR greater than 6,000 pounds to conduct annual smoke opacity inspections. ARB randomly audits fleet inspection and maintenance records to ensure compliance. The staff estimates that 379,242 vehicles in about 12,600 fleets are subject to PSIP in 2010.

Most of the diesel vehicles recently added to the Smog Check program are not part of a fleet, and thus are not also subject to the PSIP. Most vehicles subject to PSIP are larger than 14,000 GVWR, and are not subject to Smog Check. However, an estimated 76,740 vehicles are subject to both programs in 2010. As a result these vehicles will be required to perform two emission checks in alternating years: An annual PSIP test and a biennial Smog Check. Since both tests evaluate emissions, staff believes there is little or no air quality benefit from conducting both emissions tests within any one year. The unnecessary second test costs about \$55.

The proposed revision would amend the current PSIP regulation to allow commercial truck fleets, which are now subject to both the PSIP and the Smog Check Program, to submit evidence of passing a Smog Check inspection as proof of compliance with the PSIP for those years when a Smog Check inspection is required. For those years when a Smog Check test is not required, the vehicle would still be required to perform a PSIP smoke inspection. Requirements for diesel vehicles subject to PSIP but not subject to Smog Check would remain unchanged.

State of California
AIR RESOURCES BOARD

Staff Report: Initial Statement of Reasons for Proposed Rulemaking

I. Introduction

Existing law establishes a motor vehicle inspection and maintenance program (Smog Check), administered by the Department of Consumer Affairs¹, Bureau of Automotive Repair (BAR), that provides for the inspection of all motor vehicles, except those specifically exempted from the program, upon registration, biennially upon renewal of registration, upon transfer of ownership, and in certain other circumstances.

Assembly Bill (AB) 1488, Mendoza was signed into law on October 14, 2007 enhancing the existing Smog Check Program. The bill requires that beginning January 1, 2010, diesel passenger cars and trucks, manufactured after the 1997 model year with Gross Vehicle Weight Rating (GVWR) of 14,000 pounds or less be included in the California Smog Check Program. The new law has resulted in a duplication of test requirements with another pre-existing vehicle inspection program, the Periodic Smoke Inspection Program (PSIP).

II. Background

A. Periodic Smoke Inspection Program

The PSIP was signed into law in 1990 (Senate Bill 2330) to control excess smoke emissions and tampering from fleets of heavy-duty diesel trucks and buses. The PSIP requires owners of California based fleets with two or more diesel-powered vehicles with a GVWR greater than 6,000 pounds to conduct annual smoke opacity inspections. The PSIP complements ARB's other in-use vehicle anti-smoke program - the Heavy Duty Vehicle Inspection Program (HDVIP), which is based on random roadside inspection of diesel trucks.

For both the PSIP and HDVIP, the smoke opacity test is performed on a stationary vehicle using a standardized smoke opacity meter. The test protocols and smoke opacity meter specifications are defined by the Society of Automotive Engineers J1667 recommended practice. Opacity limits of 40 percent for 1991 and newer model year engines and 55 percent for pre-1991 model year engines apply. A PSIP inspection ranges in cost from \$40 to \$100 with an average cost of about \$55 per test.

Vehicles determined to be non-compliant with the applicable opacity limits must be removed from service, repaired and retested. Test, maintenance, and repair records, as well as post-repair emissions test records, must be maintained by the fleet for a period of two years and are subject to audit by ARB. ARB has authority to audit fleet maintenance records and perform confirmatory tests of vehicles as necessary to ensure

compliance. ARB randomly audits fleet maintenance and inspection records. The program was implemented in October 1999. Staff estimates that 379,242 vehicles in about 12,600 fleets are subject to PSIP in 2010¹.

B. Diesel Smog Check

Assembly Bill 1488 requires that diesel passenger cars and trucks, manufactured after the 1997 model year with GVWR of 14,000 pounds or less to be included in the California Smog Check Program beginning January 1, 2010. The Smog Check Program is registration based and requires most California vehicles to undergo emissions checks on a biennial basis. Diesel Smog Check inspections consist of a visual inspection of the emission control devices, an interrogation of the vehicle's on-board diagnostic (OBD) system, and a visual assessment of the vehicle's smoke level. The BAR estimates the cost of a diesel Smog Check to be \$47.25. ARB estimates that about 510,700 diesel vehicles are subject to the diesel Smog Check Program, the vast majority of which are privately owned and not subject to the PSIP.

The new diesel Smog Check inspection process is similar to the process used for passenger cars and trucks. Upon receipt of a registration renewal notice, the vehicle owner will be informed that a Smog Check inspection is required. The owner will then proceed to a Smog Check inspection station and obtain a Smog Check test. The vehicle owner will also be given a Vehicle Inspection Report (VIR) indicating the test results and whether the vehicle passed or failed the test. The same process would apply to commercial fleets. However, public fleets follow a slightly different process, in that they do not receive registration renewals from DMV. Instead, public fleets inspect their fleet vehicles biennially based on the vehicle's Vehicle Identification Number (VIN). If the VIN ends with an even number, inspections occur in even calendar years; and VINs ending with odd numbers are inspected in odd calendar years.

C. Concurrent Impacts of the PSIP and Diesel Smog Check Programs

The implementation of the new diesel Smog Check Program results in a duplicative emission control requirement for some vehicles subject to the PSIP. The current PSIP requires all diesel-powered vehicles, greater than 6,000 pounds GVWR, that are a part of a fleet of two or more vehicles to be inspected annually for excessive smoke. Since AB 1488 now includes all 1998 and newer diesel vehicles with GVWRs of 14,000 pounds or less to be included in the Smog Check Program, some vehicles will be subject to both programs. The overlap of the two programs causes additional costs and confusion to fleets as a result of having to perform a PSIP smoke test every year and also a Smog Check test every other year.

¹ California Air Resources Board, "Staff Report: Initial Statement of Reasons for Proposed Rulemaking. Public Hearing to Consider Proposed Amendments to California Regulations Governing The Heavy-Duty Vehicle Inspection Program (HDVIP) and the Periodic Smoke Inspection Program (PSIP), October 1997, pp 21.

III. Vehicles Affected

To determine the number of vehicles impacted, the staff analyzed registration records collected by the DMV. The data set included registration data through 2008. Vehicle model years included years 1998 through 2008. To quantify the number of vehicles impacted, the staff analyzed the following: the vehicle classes, the total number of vehicles impacted by class, the vehicle fuel type, the model year distribution, and the split between private versus fleet vehicle ownership.

The staff estimates that in 2010, there are about 510,700 model year 1998 through 2008 diesel vehicles with GVWR between 5,751² to 14,000 pounds; these vehicles are subject to Smog Check. The vast majority of these vehicles are privately owned (i.e. are not part of a commercial fleet). However, about 76,740 of these vehicles belong to commercial fleets of two or more and therefore are also subject to the PSIP. Every other year, these vehicles will be required to perform a Smog Check test as well as a PISP opacity test. The main purpose of each test is to inspect for excessive smoke, and thus the two tests are duplicative.

IV. Summary of the Regulatory Proposal

The staff's proposal is designed to eliminate the duplicate test requirements resulting from the implementation of AB 1488 and the existing PSIP by amending the PSIP regulations. The proposed amendments would change the PSIP regulation to allow commercial truck fleets that are subject to both the PSIP and the Smog Check Program, to submit evidence of passing a Smog Check inspection as proof of compliance with the PSIP. Every other year when a Smog Check inspection is not required, the vehicle would still be required to perform a PSIP smoke inspection. Staff believes that the proposal will result in lower costs to industry with no adverse air quality impacts. An amendment to the regulation would be made to title 13, CCR section 2190 (a).

V. Environmental and Economic Impacts

The staff estimated both the emissions impacts and the costs associated with the proposed amendments.

² Under current vehicle weight classifications, no distinct break exists at the 6,000 pound GVWR. The closest break is at 5,751 pounds, which could mean that some vehicles having GVWR between 5,751 to 6,000 pounds might be included in the inventory; however, the staff believes that number to be very small.

A. Air Quality Impacts

With the implementation of Smog Checks for diesel trucks rated at less than 14,000 pounds GVWR, 76,740 trucks (15 percent of trucks in this weight range) will be subject to both a Smog Check test (which includes a visual smoke inspection) and a PSIP smoke opacity test within one year, followed by another PSIP smoke opacity test the next year. Staff is proposing that the PSIP test can be skipped in a year in which the vehicle is also required to pass a Smog Check. Staff believes that the Smog Check test and PSIP opacity test provide a similar amount of assurance that smoking vehicles will be identified and repaired. If the requirement for double testing every other year were retained, staff believes that owners would likely have both tests performed at the same time, and thus no additional emission reduction of smoke or PM would be realized from performing the second test, whichever it is. Thus reducing the number of tests to one each year—a Smog Check one year, and a PSIP opacity test the next—will not reduce the emissions reductions achieved from these two programs.

Some context for the amount of emissions reduction at stake may clarify this issue. Diesel trucks under 14,000 GVWR emit much fewer emissions per mile than their larger, over-the-road counterparts, and travel far fewer miles per year. Furthermore, the diesel trucks subject to the double inspection requirement account for only 15 percent of all trucks under 14,000 GVWR. As a result, staff estimates that the 76,740 trucks affected by the proposed amendments account for less than one percent of the PM emissions from all diesel trucks. Thus even if there were a loss of emission reduction from eliminating the double testing requirement every second year, it would have a very small impact on air quality. If the entire 76,740 trucks were excluded from the PSIP, the staff estimates that the PM disbenefit would be around 0.01 tpd³. However, as stated above, staff does not believe there will be any negative impact on air quality resulting from the proposed amendments because a diesel Smog Check test will be substituted for a PSIP smoke test.

B. Costs

The proposed amendments to the PSIP regulation affects 76,740 diesel powered vehicles that are subject to both the PSIP and the Smog Check Program. In any one year half of these vehicles would see a \$55/vehicle savings from eliminating the duplicate test requirement.

³ California Air Resources Board Memorandum, Emissions Impact of Proposed Amendment to Periodic Smoke Inspection Program (PSIP), Todd Sax, Chief, Mobile Source Analysis Branch, Planning and Technical Support Division to John Urkov, Chief, In-Use Vehicle Program Branch, Mobile Source Operations Division, August 25, 2010.

The total estimated cost savings can be seen in the table below.

Estimated Cost Savings to Private Fleets and State and Local Agencies		
Fleet Owners Costs Savings	Savings Per Vehicle	Annual Savings
Elimination of Duplicate Tests	\$55.00/vehicle	\$2.1 million*

* Of the \$2.1 million annual savings, State and Local agencies will realize savings of approximately \$42,000 and \$168,000, respectively.

C. Cost to Private Fleets

Private fleets account for about 90 percent of the affected fleets and will realize cost savings of \$1.9 million annually by eliminating duplicate emissions test requirements.

D. Cost to State and Local Agencies

There will be no new costs to state agencies as a result of the amendments to the PSIP. State government fleets make up about 2 percent of the fleets and will realize cost savings of approximately \$42,000 annually by eliminating duplicative emissions test requirements. School Districts, Cities and Counties, Fire Districts, and other local government fleets comprise about 8 percent of the fleets and will also realize cost savings of approximately \$168,000 per year through the elimination of duplicative emissions test requirements.

E. Cost to Engine and Motor Vehicle Manufacturers

There will be no costs incurred by engine and motor vehicle manufacturers as a result of the amendments to the PSIP.

F. Economic Impacts on the Economy of the State

ARB's goal is to design clean air programs that are effective while being sensitive to the economic impacts of regulation. The proposed amendments to the PSIP regulation apply to a small number of diesel powered vehicles that are currently subject to both diesel Smog Check and PSIP. The proposed amendments will eliminate the duplicative emission test, saving owners the cost of inspecting these trucks.

G. Potential Impacts on Other Businesses

The staff expects that the proposed amendments may have a negligible impact on a small number of businesses that provide smoke testing services to fleets subject to the PSIP. The impact is negligible for the PSIP businesses since the vast majority of smoke tests provided by these businesses are for heavy-duty trucks greater than 14,000 pounds GVWR which these proposed amendments do not affect. Conversely, a

small increase in business is likely for businesses that provide diesel Smog Check services instead.

H. Potential Impacts on Business Competitiveness

The staff believes that business competitiveness will improve because commercial fleets will no-longer have to pay additional monies for PSIP tests on those years when a Smog Check inspection is also required.

I. Potential Impacts on Employment

There will be no potential impact on employment as a result of the amendments to the PSIP.

J. Environmental Justice

State law defines environmental justice as the fair treatment of people of all races, cultures and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. ARB has established a framework for incorporating environmental justice into ARB's programs consistent with the directives of State law. The policies developed apply to all communities in California. ARB recognizes that environmental justice issues have been raised more in the context of low income and minority communities which sometimes experience higher exposures to some pollutants as a result of the cumulative impacts of air pollution from multiple mobile, commercial, industrial, area wide, and other sources.

The staff's proposal does not change the stringency nor the effectiveness of the inspections of diesel vehicles, and thus should have no impact on the environmental justice commitment.

VI. Alternatives Considered

The staff has considered two alternatives to address the complications that have arisen through the implementation of the statutory requirements of AB 1488. These alternatives include making no change to the PSIP, and exempting the impacted diesel vehicles from the PSIP requirements.

A. No Change to the PSIP

The staff has considered making no change to the PSIP therefore continuing the requirement that commercial fleet owners perform annual PSIP smoke tests as well as obtain a diesel Smog Check inspection every other year. The staff does not recommend this alternative because the duplication between the PSIP and diesel Smog Check creates additional costs to California fleet owners with zero emissions benefits.

B. Exempt Diesel Vehicles Subject to Smog Check from the PSIP

The second alternative that the staff considered was to exempt diesel vehicles subject to diesel Smog Check from the PSIP. This alternative would exempt approximately 76,740 diesel vehicles currently subject to the PSIP. The staff believes that this alternative is the most straightforward approach and would result in a small increase in PM emissions.

VII. Summary and Conclusion

The staff recommends that the Board adopt the amendments to the PSIP regulation to allow commercial truck fleets, which are subject to both the PSIP and the Smog Check Program, to submit evidence of passing a Smog Check inspection; as proof of compliance with the PSIP. For those years when a Smog Check inspection is not required, the vehicle would still be required to perform a PSIP opacity smoke test.

Submission of documentation of a passing Smog Check inspection, in lieu of a PSIP annual smoke inspection, would only be for those calendar years when a Smog Check inspection is required. The staff's proposal will lower compliance costs to fleet owners by eliminating duplicate emissions tests with no loss of emission benefit.

VIII. Summary and Rational for the Proposed Amendments

The staff's proposal is designed to eliminate the duplicate test requirements resulting from the implementation of AB 1488 and the existing PSIP by amending the PSIP regulations. The proposed amendments would change the PSIP regulation to allow commercial truck fleets that are subject to both the PSIP and the Smog Check Program, to submit evidence of passing a Smog Check inspection as proof of compliance with the PSIP. Every other year when a Smog Check inspection is not required, the vehicle would still be required to perform a PSIP smoke inspection. Staff believes that the proposal will result in lower costs to industry with no adverse air quality impacts. The affected sections are 2190, 2191, and 2194, title 13, chapter 3.6, California Code of Regulations.

Section 2190. Vehicles Subject to the Periodic Smoke Inspection Requirements.

Summary of Section 2190(g).

This new section identifies a new class of vehicles that are exempted from the PSIP requirements, but must undergo a diesel Smog Check inspection.

Rationale for Section 2190(g).

This section is needed to identify those vehicles that are concurrently impacted by both the PSIP and the new diesel Smog Check requirements as mandated by AB1488. This

section defines the remedial action that these vehicles must follow in order to comply with the PSIP.

Section 2191. Definitions.

Summary of Section 2191(a)(3).

This new section defines the term Vehicle Inspection Report (VIR)

Rationale for Section 2191(a)(3).

This new definition is needed to specify the type of documentation that must be provided by a commercial fleet to demonstrate compliance with the PSIP for those vehicles that undergo a diesel Smog Check inspection.

Section 2194. Record Keeping Requirements.

Summary of Section 2194(a)(1)(13).

Subsection (a)(1)(13) is a new section and is needed to address the record keeping requirements for those vehicles that undergo a diesel Smog Check inspection instead of a PSIP smoke test.

Rationale for Section 2191(a)(1)(13).

This section is needed to specify the documents that must be maintained by a commercial fleet to demonstrate compliance with the PSIP for those vehicles that undergo a diesel Smog Check inspection.

References

1. California Air Resources Board, January 2009. "Regulations for the Heavy-Duty Vehicle Inspection Program, Periodic Smoke Inspection Program, Title 13, California Code of Regulations, sections 2180-2194", <http://www.arb.ca.gov>
2. California Air Resources Board and Environmental Analysis, Inc., *"Regulatory Amendments to California's Heavy Duty Vehicle Inspection Program and Periodic Smoke Inspection Program – Technical Support Document"*, October 1997.