State of California
AIR RESOURCES BOARD

STAFF REPORT: INITIAL STATEMENT OF REASONS
FOR PROPOSED RULEMAKING

PUBLIC HEARING TO CONSIDER AMENDMENTS TO REGULATIONS FOR THE AVAILABILITY OF CALIFORNIA MOTOR VEHICLE SERVICE INFORMATION

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EXECUTIVE SUMMARY

California's service information requirements ensure that independent motor vehicle service providers and aftermarket parts manufacturers have access to dealership-quality service information and tools necessary to effectively conduct emission-related repair work. The regulation was originally approved by the Air Resources Board (ARB or Board) pursuant to Health and Safety Code section 43105.5 in December 2001, and initially applied to 1994 and subsequent model year passenger cars, light-duty trucks, and medium-duty engines and vehicles certified to meet ARB's On-Board Diagnostic (OBD) requirements. Portions of the regulation were amended in January 2004 to include heavy-duty vehicles and engines as they are certified to meet new OBD requirements that take affect with the 2007 model year. The service information regulation is codified at title 13, California Code of Regulations, section 1969, and title 17, California Code of Regulations, sections 60060.1 through 60060.34.

The amendments approved in 2004 for 2007 and later model year, heavy-duty engines only included requirements for access to text-based service information. The Board deferred provisions that would have required the availability of emission-related diagnostic and reprogramming tools for heavy-duty applications until more comprehensive OBD requirements for heavy-duty vehicles were finalized for 2010 and later model year heavy-duty applications. The Board's decision to delay these requirements was based on the fact that the 2010 OBD requirements, and their impact on the design of heavy-duty vehicle tools, were not yet fully defined and because of manufacturers' concerns that additional lead time was necessary to address security and safety concerns associated with release of the tools beyond manufacturer dealerships. The Board subsequently adopted OBD requirements for 2010 and later model year heavy-duty applications in July 2005. Full phase-in of the requirements will be achieved in model year 2013. Therefore, consistent with the Board's decision in 2004, staff is again proposing to include availability requirements for heavy-duty tools and related information in the service information regulation. These heavy-duty tool requirements would be implemented beginning with the 2013 model year at which time the data communication requirements in the OBD II regulation are fully phased-in.

Apart from the requirements for the availability of emission-related tools, amendments are being proposed to address how the requirements apply to transmission manufacturers and to provide compliance flexibility for manufacturers that produce both medium- and heavy-duty products. Additional further minor amendments are also being proposed to improve the overall clarity and effectiveness of the regulation.

Heavy-duty manufacturers have estimated that initial costs to redevelop tools and software for use by the aftermarket could be as high as approximately $1.5 million. Annual maintenance costs thereafter would be about $70,000 per year. Affected

manufacturers would be permitted by the regulation to set fair, reasonable, and non-discriminatory prices for the tools and information thereby offsetting some or all of the compliance costs.

State of California
AIR RESOURCES BOARD

Staff Report: Initial Statement of Reasons
For Proposed Rulemaking

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CALIFORNIA REGULATIONS FOR THE AVAILABILITY OF MOTOR VEHICLE SERVICE INFORMATION

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I. Introduction

Pursuant to the directives of Senate Bill 1146, stats 2000 (SB 1146) (codified in Health and Safety Code sections 30027.3 and 43105.5), the Air Resources Board (ARB or Board) adopted the California Motor Vehicle Service Information Regulation on December 13, 2001. This regulation can be found in title 13, California Code of Regulations (CCR), section 1969 and title 17, CCR, sections 60060.1 through 60060.34. The requirements ensure that independent service facilities and aftermarket part companies have access to information and tools necessary to diagnose and repair emission-related malfunctions and produce emission-related replacement parts for California vehicles.

The regulation requires vehicle manufacturers to make text-based service information available for purchase over the internet. The manufacturers must also make the diagnostic and reprogramming tools (and related information) they offer to franchised dealerships available for purchase to independent service providers. The manufacturers set pricing for the information and tools, but the prices must meet regulatory criteria for being "fair, reasonable, and non-discriminatory."

The regulation as adopted in 2001 applied to manufacturers of 1994 and later model year passenger cars, light-duty trucks, and medium-duty vehicles equipped with on-board diagnostic (OBD) systems. The Board adopted amendments in 2004 to include heavy-duty engines produced during or after model year 2007, the year in which these engines must begin meeting initial OBD requirements. However, the Board deferred the requirements for tools availability for heavy-duty engine

manufacturers until the impact of future OBD requirements on the design and use of the tools became better defined.

The Board adopted this second round of OBD requirements for heavy-duty engines in 2005, which will apply to 2010 and later model year engines, with full phase-in occurring by the 2013 model year. As such, staff is now ready to propose service information amendments to require heavy-duty engine manufacturers to make their emission-related tools available for purchase. Staff is also proposing amendments to address the applicability of the regulation to transmission manufacturers along with more minor amendments to improve the clarity and overall effectiveness of the regulation.

II. Background

The use of sophisticated emission control devices has allowed motor vehicle and engine manufacturers to meet stringent emission standards necessary for California's attainment of ambient air quality goals. However, continued compliance with these low emission levels depends on the proper operation of the emission control systems built into the vehicles. Emission-related malfunctions can cause vehicle emission levels to greatly exceed certification standards. Current light- and medium-duty vehicles sold in California are equipped with on-board diagnostic (OBD) systems that detect the occurrence of these malfunctions.

When a malfunction is detected, the "check engine" or "service engine soon" light illuminates on the vehicle's instrument panel, and diagnostic information is stored in the on-board computer. Through the rapid identification and repair of emission-related problems, the lifetime emissions from motor vehicles can be minimized. However, because emission levels are not reduced until the vehicle is successfully repaired, it is critical that service technicians have access to the information and diagnostic tools necessary to effectively utilize OBD system information and carry out necessary repair work for identified problems. The availability of compatible aftermarket replacement parts is also important to the repair process. If there is not an adequate supply of needed replacement parts at reasonable prices, the repair of emission-related malfunctions may be postponed or carried out improperly.

Prior to ARB's service information regulation, independent service facilities (i.e., those not directly affiliated with the vehicle manufacturers), did not always have access to dealership-quality information and tools. In response to concerns from aftermarket service facilities and parts manufacturers, SB 1146 was signed into law on September 30, 2000.

The key elements of ARB's existing service information requirements include:

- The availability of dealership-quality, emission-related service information over the internet to independent service technicians and aftermarket parts manufacturers.

- Descriptions of the design and operation of manufacturers' OBD systems.

- The availability of emission-related diagnostic tools and reprogramming equipment used by manufacturer dealerships. (These tool availability requirements are currently applicable only to manufacturers of light- and medium-duty vehicles.)

- Assurance that the prices charged for information and tools are "fair, reasonable, and non-discriminatory."

- Provisions to address the release of information considered to be trade secrets by the manufacturers, the review of manufacturers' compliance, and procedures for the resolution of non-compliance determinations.

Light-duty vehicle manufacturers have been complying with these regulations since March 2003. Apart from a few issues regarding pricing and service information website content, manufacturers are successfully meeting the service information requirements and the number of subscribers to manufacturers' websites is on the rise.

The United States Environmental Protection Agency (U.S. EPA) promulgated amendments to its service information regulation on June 27, 2003[1]. The federal language is substantially similar in most respects to the information and tool provisions for light- and medium-duty vehicles. Its provisions are currently not applicable to heavy-duty vehicles and engines (as defined under California regulations), although EPA has stated its intent to consider provisions for heavy-duty vehicles in the near future.

III. Proposed Amendments

ARB staff's proposed amendments to title 13, CCR, section 1969 are presented below. The regulatory text for these requirements is included in Attachment A.

A. Heavy-Duty Tools and Information

Staff is proposing to expand the requirements for the availability of manufacturers' diagnostic tools to include those designed for use on heavy-duty engines. The requirements would take effect with the 2013 model year. Under

[1] Refer to 40 Code of Federal Regulations part 86, sections 86094.38 et seq.

staff's proposal, heavy-duty engine manufacturers would be required to offer for sale all emission-related diagnostic, reconfiguration, and recalibration tools that they supply to their dealerships or authorized service networks. Software or data files used in such equipment would also be required to be made available. Manufacturers would further be required to use recalibration methods consistent with established industry standards.[2] Many manufacturers already offer for sale at least some of the types of tools that would be required under staff's proposal.

Staff has recommended that engine manufacturers to make the above tools available by the 2013 model year because it coincides with the implementation date for a number of diagnostic tool communication requirements in ARB's heavy-duty OBD regulation, including the use of standardized communication protocols, diagnostic connectors, and data stream formats. These requirements are expected to result in engine manufacturers making design changes to the types of emission-related diagnostic tools currently in existence. To ensure public safety and proper use of the tools in the field the proposed amendments would provide engine manufacturers with sufficient time to incorporate necessary safeguards in the redesigned tools that would prevent truck engines from being improperly reconfigured or recalibrated. Also the additional time would allow manufacturers time to incorporate necessary security into the tools to protect proprietary information.

Despite the long lead time that will allow manufacturers to incorporate features into their diagnostic tools to safeguard against misuse of the tool, heavy-duty engine manufacturers consider it critical that technicians be properly trained on how the tools are to be used. These tools will include sophisticated capabilities that are needed to configure an engine for use with a wide variety of transmission, axle ratio, and chassis combinations, among other variables. To further guard against misuse, staff has proposed that manufacturers may require training as a condition of sale for their tools. In order to ensure that the requirement for training does not impose an obstacle that prevents independent technicians from being able to acquire dealership-quality tools, any requirement for training is subject to the following conditions: 1) the manufacturer must require substantially similar training (e.g., content and duration) for dealership technicians; 2) the training must be available within six months from the time a tool request has been made; 3) the training must be available at a minimum of one California location; and 4) the cost of the training must be fair, reasonable and nondiscriminatory.

In addition to offering diagnostic tools and equipment for sale, heavy-duty manufacturers would be required under staff's proposal to also make available information necessary for reading data stream information and carrying out

[2] Recalibration methods would need to comply with either Society of Automotive Engineers' Recommended Practice J2534 or Technology and Maintenance Council's Recommended Practice RP1210A.

bi-directional controls for 2013 and later model year heavy-duty engines.[3] The information would be available to manufacturers of aftermarket diagnostic equipment tools to enable them to incorporate into their product the ability to read and process this information.[4] Because this information does not enable aftermarket tools to make permanent recalibrations, staff is not proposing that manufacturers can require training as a condition for providing the required information.

Consistent with existing similar requirements for light- and medium-duty motor vehicle manufacturers, staff is proposing that heavy-duty engine manufacturers be able to petition the Executive Officer to withhold disclosure of the data stream and bidirectional control information to any requesting tool or equipment company if it has evidence that the company could not produce a safe or accurate aftermarket tool. Under staff's proposal, manufacturers would also be permitted to require equipment and tool companies to comply with "component identifier message" requirements specified in Society of Automotive Engineers' Recommended Practice J1939. This function provides a way for the engine control unit to log a unique identification number transmitted by diagnostic tools that have been used to service it, which can be used to help resolve questions over whether a particular tool was misused or malfunctioned in a way that caused engine damage or safety issues .

B. Optional Compliance Provisions

Staff is proposing amendments that would allow manufacturers of heavy-duty gasoline powered vehicles or engines the option of complying with the service information requirements for light- and medium-duty vehicles (e.g., following light- and medium-duty industry standards instead of heavy-duty standards). Conversely, manufacturers of medium-duty diesel powered engines would have the option of complying using the service information requirements for heavy-duty engines. In general terms, gasoline powered vehicles are typically certified in California under light- or medium-duty emission standard classifications, and diesel powered engines are typically certified under the heavy-duty classification.[5] Additionally, whether or not certified to the light- and medium-duty standards, gasoline powered vehicles are typically serviced by facilities specializing in light- and medium-duty vehicles. On the other hand, medium-duty diesel powered vehicles are most often serviced at heavy-duty repair facilities because their technicians have familiarity with and experience in servicing the engine technology being used. Therefore, the proposed flexibility would permit manufacturers to provide service information and tools that follow the industry standards and practices that are most familiar to the type of service

[3] Data stream information is defined generally as information that originates within the vehicle or engine's control unit that is transmitted to diagnostic tools for use by service technicians. Bi-directional control refers to the ability of a diagnostic tool to send messages to a vehicle or engine control unit that temporarily override a module's control over a sensor or actuator in order to give control to the diagnostic tool operator.

[4] Health and Safety Code Section 43105.5 (a)(2).

[5] ARB regulations classify vehicles with a Gross Vehicle Weight (GVW) of 14,000 pounds or less as medium-duty vehicles, and vehicles weighing more than 14,000 pounds are classified as heavy-duty vehicles.

providers that will work on the vehicles. Staff's proposal would also bring the service information regulations into consistency with similar compliance provisions included in ARB's OBD regulations.

C. Other Modifications

1. Requirements for Heavy-Duty Transmission Manufacturers

ARB staff is proposing language that would make clear that the service information requirements do not apply to heavy-duty manufacturers of transmissions that are not required to meet emission control requirements under ARB regulations. Staff's rationale for the proposal is presented in Section IV below.

2. Regulatory Definitions

For purposes of clarity, staff is proposing language that would define "engine manufacturer" throughout title 13, CCR, section 1969, and title 17, CCR, sections 60060.1 through 60060.34 (see Attachment B), in order to distinguish manufacturers of heavy-duty engines from light- and medium-duty motor vehicle manufacturers. The distinction is necessary because heavy-duty engine manufacturers do not typically build or have responsibility for transmissions or chassis for heavy-duty vehicles and as such do not have identical responsibilities under the service information regulation.

Staff is also proposing the addition of definitions for "recalibration" and "reconfiguration," both of which are terms used for heavy-duty engines instead of "reprogramming" -- which is the commonly used term for light- and medium-duty vehicles -- to indicate the process of changing an engine's operating parameters programmed into the on-board computer.

3. Use of Industry Standards for Heavy-Duty Service Information and Tools

Staff is proposing to require the use of the following heavy-duty vehicle industry standards for compliance with the regulation. These documents would be incorporated by reference in the regulation.

> Technology and Maintenance Council's Recommended Practice RP1210A, "Windows™ Communication API," July 1999, for the recalibration and reconfiguration of heavy-duty engines (Section 1969(h)(1)(B)
>
> SAE J1939, "Recommended Practice for a Serial Control and Communications Vehicle Network " and the associated subparts in SAE HS-1939, Truck and Bus Control and Communications Network

Standards Manual," 2005 Edition. (Section 1969(e)(2)(G)(ii), and (h)(2)(B)).

SAE J2403, "Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature," August 2004, for heavy-duty engine emission-related terms and acronyms. (Section 1969(f)(2)(K)(ii)).

Staff is also proposing to update the regulatory references to SAE J2534, and SAE J1979 to reflect the most recent publication dates and document titles.

Other minor revisions are also being proposed to provide clarity between light-, medium-, and heavy-duty requirements and to improve readability. The regulatory text for all of ARB staff's proposed amendments can be found in Attachment A to this report.

IV. Issues Regarding Staff's Proposal

A. Applicability of the Regulation to Heavy-Duty Transmission Information

Staff is proposing to amend the language of the service information regulation to exempt manufacturers of heavy-duty transmissions that are not otherwise subject to California emission-control requirements. In 2004, when the Board expanded the applicability of the service information requirements to include heavy-duty vehicles, staff anticipated that future OBD regulations for these vehicles would include specific monitoring requirements related to heavy-duty transmissions. However, in finalizing the proposed heavy-duty OBD requirements adopted by the Board in July of 2005, staff determined that requiring transmission manufacturers to develop and certify OBD systems would be inappropriately costly and impractical. Consistent with this decision, staff believes that regulating transmission manufacturers to make available service information and tools would not be of significant benefit.

Heavy-duty (and some medium-duty) engines are certified for emissions compliance using test procedures that evaluate the performance of the engine only and do not consider any emission effects from vehicle chassis or transmissions. These procedures have been used due to the "non-vertical integration" of heavy-duty truck construction, in which a particular engine model can be installed in essentially an unlimited number of vehicle chassis and transmission combinations, a process in which the engine manufacturer has little or no involvement. As such, heavy-duty transmission manufacturers are not subject to ARB emission standards or certification requirements, making regulation of the format and availability of transmission manufacturers' service information difficult to justify.

Representatives from the independent heavy-duty service industry believe that heavy-duty transmission manufacturers should be required to comply with service information availability provisions. They point out that SB 1146 specifically

includes within the definition of emission-related motor vehicle information emissions from components such as transmissions and that repair information is needed by independent service providers because they service all aspects of heavy-duty vehicles, including transmissions.

With respect to the language in the statute, staff believes that the use of regulatory discretion is appropriate based on the circumstances that existed when the statute was created. Specifically, at the time SB1146 was created, OBD regulations existed only for light- and medium-duty vehicles, for which the transmission is part of the vehicle's emissions-certified configuration. Further, the OBD regulations applicable to these vehicles include specific monitoring requirements for transmission functions. In contrast, although OBD requirements for heavy-duty transmissions were at one time contemplated, they were not ultimately adopted. The Legislature clearly contemplated that the definitions may need to be modified given the context of adopted regulations and provided ARB with express authority to do so.[6]

In terms of the need for transmission-related service information, staff agrees that full access to dealership-quality information and tools would benefit the aftermarket service industry. However, without a stronger link to vehicle emissions or engine on-board diagnostic systems, staff believes that continued reliance on current business relationships for the dissemination of transmission service information is more appropriate than having access regulated by ARB. Staff understands that transmission manufacturers already make available a significant amount of the service information that they provide to dealerships. If a need for emission-related monitoring of transmission components develops as engine manufacturers make progress towards meeting 2010 and later model year OBD requirements, ARB staff would commit itself to revisiting the issue whether transmission-related emissions information from heavy-duty vehicles should be made available to the aftermarket service industry.

B. Separate Regulatory Language for Heavy-Duty Engines

Engine manufacturers have requested that the service information provisions for heavy-duty engines be set up in an entirely separate regulatory section from the requirements for light- and medium-duty vehicles. The manufacturers state that separate references to vehicle manufacturers and engine manufacturers along with different implementation dates and referenced industry standards for vehicles versus engines would be confusing to stakeholders. They point out that ARB's OBD requirements for light-/medium-duty versus heavy-duty applications are in separate regulatory sections.

[6] Health and Safety Code section 39010: "Unless the context requires otherwise, a definition set forth in this chapter shall govern the construction this division, unless and until rules and regulations are adopted by the state board pursuant to Section 39601 which revise such definition."

ARB staff shares the engine manufacturers' desire for clear and understandable regulatory language; however, it disagrees that creating completely separate regulatory sections is the best way to achieve this goal. Most of the regulatory language applies equally to vehicle and engine manufacturers, minimizing opportunities for confusion. Further, if the requirements were separated, lengthy portions of each section would contain essentially identical text, and ARB staff would have an added burden of making sure that future changes to the text were carried out in the same manner for each regulatory section.

Notwithstanding, staff recognizes that the opportunity for confusion is potentially greater with respect to the requirements for availability of diagnostic tools, reconfiguration/recalibration equipment, and tool information. These provisions are more technical and specific to particular vehicle categories (e.g., different industry standards are referenced for light-and medium-duty vehicles than for heavy-duty applications). Therefore, in order to ensure adequate clarity, ARB staff has proposed separate subsections delineating the requirements for availability of diagnostic tools, reconfiguration/recalibration equipment, and tool information for light- and medium-duty vehicles versus heavy-duty engines. Staff believes that with the proposed formatting of the regulatory text, all vehicle and engine manufacturers will be able to clearly distinguish how the service information requirements apply to their particular products.

V. Air Quality, Environmental, and Economic Impacts

A. Air Quality and Environmental Impacts

The proposed amendments will have a positive impact on air quality by ensuring that independent heavy-duty vehicle service providers have access to sophisticated diagnostic tools and equipment to better repair emission-related malfunctions. Through improved maintenance and more effective emission repair work, the amendments will help ensure that the emission benefits attributed to California's heavy-duty emission standards and OBD requirements will be fully realized. ARB has estimated the emission reductions of oxides of nitrogen (NOx) and particulate matter (PM) statewide for ARB's 2007 heavy-duty emission standards to be 48.0 and 2.7 tons per day, respectively, by the year 2010.[7] These emission benefits increase dramatically to 209.5 and 8.3 tons per day by 2020. For the average heavy-duty vehicle, this translates to approximately 4.2 tons of NOx plus non-methane hydrocarbons reduced over its lifetime.

B. 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,

[7] Source: Staff Report: Initial Statement of Reasons, "Public Hearing to Consider Amendments Adopting More Stringent Emission Standards for 2007 and Subsequent Model Year Heavy-Duty Diesel Engines," Air Resources Board, September 7, 2001.

implementation, and enforcement of environmental laws, regulations, and policies (Senate Bill 115, Solis; Stats 1999, Ch. 690; Government Code § 65040.12(c)). The Board has established a framework for incorporating environmental justice into the ARB's programs consistent with the directives of State law. The policies developed apply to all communities in California, but recognize 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, areawide, and other sources.

Over the past twenty years, the ARB, local air districts, and federal air pollution control programs have made substantial progress towards improving the air quality in California. However, some communities continue to experience higher exposures than others as a result of the cumulative impacts of air pollution from multiple mobile and stationary sources and thus may suffer a disproportionate level of adverse health effects.

Since the same ambient air quality standards for heavy-duty vehicles apply to all regions of the State, all communities, including environmental justice communities, will benefit from the air quality benefits that would be associated with the proposal. To the extent that heavy-duty vehicle operation is higher near certain communities, these communities will receive a greater benefit from well-maintained California vehicle fleets.

C. Economic Impacts

The Administrative Procedures Act requires that, in proposing to adopt or amend any administrative regulation, state agencies shall assess the potential for adverse economic impacts on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states, and fiscal impacts on state and local agencies. Below is staff's assessment of the economic impacts of this proposal.

1. Cost to State Agencies

When the initial service information regulation was adopted, staff estimated that ARB would incur ongoing costs of up to $200,000 annually to implement and enforce the regulation. Staff believes that no significant additional ARB resources will be required as a result of the amendments being proposed. The proposed amendments are also not expected to create additional costs to any other state agency, local district, or school district, including any federally funded state agency or program.

2. Costs to Engine and Motor Vehicle Manufacturers

Engine manufacturer have commented that some diagnostic tools and equipment will have to be redesigned to incorporate necessary features and safeguards prior to their release to the independent service industry. Approximately 28 heavy-duty engine manufacturers do business in California. Manufacturers have estimated that startup costs to comply with the proposed amendments could reach $1.5 million per manufacturer. Annual maintenance costs related to updating tools and posting information on the engine manufacturers' Internet website are estimated to be approximately $70,000 per manufacturer. These estimates are based on limited cost data provided by engine manufacturers and do not take into account any revenue from the sale of such tools and information. Staff anticipates that engine manufacturers will be able to spread startup compliance costs over several years if necessary because approximately six years of lead time still exist before the proposed tools availability requirements would take effect.

3. Potential Impacts on Other Businesses

The proposed amendments should have a positive impact on independent service repair facilities and aftermarket parts manufacturers through the wider availability of emission-related tools and information. Covered persons should only incur additional expenses resulting from the amendments if they chose to purchase additional information and tools. However, in doing so, it is assumed that the purchases will be based on business decisions wherein the use of the information would be expected to yield a profit. The cost of purchasing tools and information under the proposal should be equal to or less than the current costs for the aftermarket service industry and equipment and tool companies.

Franchised heavy-duty truck dealerships and authorized service networks may experience some loss of business as independent facilities conduct more repairs using the tools and information that would be provided by the proposed amendments. However, this stimulation of competition in the service and repair industry was in fact the goal of SB 1146 and, thus, such an effect was clearly recognized by the California Legislature when the bill was passed.

4. Potential Impact on Business Competitiveness

The proposed amendments are expected to have no net effect on the ability of California businesses to compete with businesses in other states. Adoption of the regulations would allow California independent service facilities to compete more evenly with manufacturer dealerships and service networks within the state through access to dealership quality diagnostic tools and equipment. Since the competition between the aftermarket and franchised dealerships/service networks is primarily of an intrastate origin, the regulation should have no effect on the ability of California businesses to compete with businesses in other states.

5. Potential Impact on Employment

Staff does not believe the regulatory proposal would result in the loss of jobs. In fact, it may create some jobs in California, based on the need for manufacturers to redesign diagnostic tools and to provide a sufficient number of instructors to conduct tools-related training. Some service-related business may move from dealerships to independent service providers; however, staff does not expect any overall reduction in engine or vehicle repair work and, thus, no reduction in California jobs. To the extent that more competition in the service industry is achieved, lower prices and better service could offer an incentive for more vehicle owners to seek repairs, possibly resulting in increased employment.

D. Regulatory Alternatives

Regulatory alternatives were proposed by stakeholders for application of the service information requirements to manufacturers of heavy-duty transmissions, and for separation of the service information requirements into separate regulatory sections, one covering light- and medium-duty applications, and one covering heavy-duty applications. These alternatives are discussed in Section IV of this report, above.

Another alternative considered was to take no action for the inclusion of diagnostic tools for heavy-duty engines. Staff rejected this alternative because it believes that Senate Bill 1146 requires the availability of emission-related tools and equipment for all 1994 and later model year vehicles equipped with on-board diagnostic systems, including heavy-duty vehicles. For the reasons stated previously, existing regulation does not yet apply such provisions to heavy-duty engine manufacturers.

In summary, staff has determined that no feasible alternative considered would be more effective in carrying out the purpose of the proposed amendments. No alternative would be as effective or less burdensome to affected private persons than the proposed amendments to the regulation.

VI. Summary and Staff Recommendation

The availability of emission-related tools and information to all heavy-duty service facilities would help ensure that repair work is accurate and thorough, which in turn would provide California's citizens with the air quality benefits that are associated with properly maintained vehicles. Equipment and tool companies would also be able to benefit from the proposal because it would allow them to use engine manufacturers' tool information to produce generic, competitively priced, diagnostic tools for servicing the advanced emission control systems of today's heavy-duty vehicles.

Staff believes the proposed amendments properly take into account heavy-duty manufacturers' concerns regarding the safe and effective use of the tools they would be required to provide. Further, the proposed amendments would also fully implement the requirements of Health and Safety Code section 43105.5 as they apply to heavy-duty engines. Therefore, staff recommends that the Board adopt the proposed amendments to the service information regulations as outlined in title 13, CCR, section 1969 and title 17, CCR, sections 60060.1 through 60060.34.

VII. References

SAE J1939, "Recommended Practice for a Serial Control and Communications Vehicle Network " and the associated subparts in SAE HS-1939, Truck and Bus Control and Communications Network Standards Manual," 2005 Edition.

SAE J1979, "E/E Diagnostic Test Modes – Equivalent to ISO/DIS 15031-5: April 30, 2002," April 2002.

SAE J2403, "Medium/Heavy-Duty E/E Systems Diagnosis Nomenclature," August 2004.

SAE, "Recommended Practice for Pass-Thru Vehicle Programming," J2534, December 2004

International Standards Organization (ISO) 15765-4, "Road vehicles -- Diagnostics on Controller Area Networks (CAN) -- Part 4: Requirements for emissions-related systems," December 2001.

Technology and Maintenance Council, Recommended Practice RP1210A, "Windows™ Communication API," July 1999.

Title 40, Code of Federal Regulations, Part 86, Section 86094.38 et seq.

Staff Report: Initial Statement of Reasons, "Public Hearing to Consider Adoption of California Regulations for Motor Vehicle Service Information," Air Resources Board, December 5, 2003.

Staff Report: Initial Statement of Reasons, "Public Hearing to Consider Amendments Adopting More Stringent Emission Standards for 2007 and Subsequent Model Year Heavy-Duty Diesel Engines," Air Resources Board, September 7, 2001.

Senate Bill 1146: Motor Vehicles: Pollution Control Devices, authored by State Senator John Burton; approved by Governor Gray Davis September 30, 2000.

Title 13, California Code of Regulations, Section 1968.1.

Title 13, California Code of Regulations, Section 1968.2.

Title 13, California Code of Regulations, Section 1971.

Title 13, California Code of Regulations, Section 1971.1.