

State of California
Air Resources Board

Final Statement of Reasons for Rulemaking Including
Summary of Comments and Agency Response

PUBLIC HEARING TO CONSIDER FORD MOTOR COMPANY'S PETITION FOR LIMITED
RELIEF FROM 1994/1995 ON-BOARD DIAGNOSTIC II (OBD II) PROVISIONS

Considered: July 9, 1993
Agenda Item No: 93-9-1

I. GENERAL

The "Staff Report: Initial Statement of Reasons for the Proposed Rulemaking" ("Staff Report"), released May 21, 1993, is incorporated herein by reference.

Following a public hearing on July 9, 1993, the Air Resources Board (ARB or Board), by Resolution 93-50, approved for adoption amendments to Title 13, California Code of Regulations (CCR), Section 1968.1, the regulations establishing on-board diagnostic system requirements for 1994 model year passenger vehicles, light-duty trucks, and medium-duty vehicles and engines (OBD II). The Board Hearing was initiated by a petition from Ford Motor Company requesting the Board to grant relief from specific OBD II monitoring requirements for the 1994 and 1995 model years.

In response to Ford's petition, the ARB staff proposed modifications to section 1968.1(m), which were made available to the public, with the Staff Report, on June 9, 1993. The staff proposed that manufacturers, meeting specified criteria (including the payment of penalties for each deficiency identified in 1995 model year vehicles), be permitted to certify 1994 and 1995 model year vehicles using OBD II monitoring systems, even though such systems may not be fully compliant with the OBD II monitoring requirements. The staff subsequently modified its proposal at the Board hearing in response to comments received from interested parties.

After listening to extensive testimony from manufacturers and other interested parties, the Board approved the staff proposal as modified, with some additional modifications. The modified regulations were made available to the public from July 28, 1993, to August 12, 1993. The ARB mailed a copy of the "Notice of Availability of Modified Text", which is incorporated by reference herein, to each person described in subsection (a) through (d), inclusive of Section 44, Title 1, California Code of Regulations, on July 28, 1993.

II. SUMMARY OF PUBLICLY NOTICED MODIFICATIONS TO PROPOSED REGULATION

Section (m)(6.0) has been modified to limit the basis for the Executive Officer's decision to grant a waiver to the specific criteria listed in the section.

Section (m)(6.1) has been modified to limit penalties in 1995 model year vehicles equipped with OBD II systems to the third and subsequently identified monitoring system deficiencies. In determining the order of identified deficiencies for purposes of calculating the penalties to which manufacturers would be subject, the failure to meet the requirements of section (b)(1) through (b)(9) (i.e., those for which a \$50 per vehicle fine would apply) would be counted first. Section (m)(6.1) has been further modified to clarify that 1994 and 1994 1/2 vehicles exempted from one or more of the monitoring requirements under section (m)(6.0) are exempt from the 1995 model year penalties, as are vehicles produced by small volume manufacturers.

The Board has determined that this regulatory action does not impose a mandate on local agencies or school districts.

The Board has further determined for the reasons set forth in the Petition Decision and Initial Statement of Reasons that no alternative to the adopted amendments would be more effective in carrying out the purposes for which the regulations and evaluation procedures were adopted or would be as effective and less burdensome to affected private persons than the adopted amendments. No alternatives were proposed that would lessen any adverse economic impact on small businesses.

V. SUMMARY OF COMMENTS AND AGENCY RESPONSES

Prior to the public hearing on July 9, 1993, written comments were received from: American Automobile Manufacturers Association (AAMA), Association of International Automobile Manufacturers (AIAM), Bureau of Automotive Repair (BAR), Chrysler Corporation (Chrysler), Ford Motor Company (Ford), General Motors (GM), Purdue University, Subaru, Technical Advances Inc., Volkswagen of America, Inc. (VW), and Volvo Cars of North America (Volvo).

The Automobile Club of Southern California (ACSC) commented in response to the 15 day "Notice of Availability of Modified Text."

At the Board hearing, the AAMA, AIAM, Chrysler, Ford, GM, and Purdue University testified.

Vehicle manufacturers supported the provision for 1994 and 1995 model year waivers for individual monitoring requirements, but opposed the fines associated with 1995 model year relief. Inventors of misfire detection technology disputed that Ford has worked in good faith to meet the misfire detection requirements in 1994. A summary of these comments and the agency responses are set forth below.

1. **Comment:** The Air Resources Board should not require manufacturers to pay fines for non-compliance with the OBD II requirements in the 1995 model year; rather the regulation should be amended to allow the Executive Officer to waive one or more OBD II requirements for 1995 model year vehicles based on good faith, without a penalty. (AIAM, AAMA, Chrysler, Ford, GM, Subaru, VW)

2. **Comment:** Monetary penalties should not become a surrogate for the technical feasibility requirement in that manufacturers should not have to pay penalties to sell their vehicles in California, even though it may not have been feasible for them to meet all of the requirements on every engine given the short lead time and the complexity of the requirements. (AAMA)

3. **Comment:** Penalties are inappropriate in 1995 because the regulations are technology forcing, complex, and subject to many interpretations. (Ford, GM, Chrysler)

4. **Comment:** Penalties are inappropriate in that the demonstration of the feasibility of the OBD II requirements on one or a few applications does not mean that it will be feasible for all vehicle applications. Unique problems may occur on certain engine families which were not present when the same OBD II technology was successfully implemented on other engine designs. (AAMA, GM, Chrysler)

Agency Response: The OBD II requirements are effective beginning with the 1994 model year. A two year phase-in of OBD II systems is allowed in order to provide manufacturers flexibility in managing developmental resources, and to provide an opportunity for manufacturers to gain in-use experience with OBD II systems before having to implement them across their entire product lines. At the risk of having to implement OBD II systems across their entire product lines in one model year, a manufacturer could completely delay implementation of OBD II systems until the 1996 model year.

The feasibility of meeting the OBD II requirements in the 1994 and 1995 model years is being demonstrated by five manufacturers which are expected to comply with the OBD II regulation on a total of six 1994 or 1994 1/2 models.

The proposed amendments to the regulation would allow the Air Resources Board to certify 1994 and 1995 vehicle models scheduled to comply with the OBD II regulation in instances where one or more of the monitoring requirements are not fully met. Certification in these instances is contingent primarily upon the manufacturer demonstrating a good faith effort to meet the requirements in full.

However for the 1995 model year, it is proposed that the manufacturer be required to pay a fine for the third and subsequent OBD II monitoring system deficiency identified in the vehicle models scheduled to be OBD II equipped. The fines are intended to maintain equity between those manufacturers which have successfully met the OBD II requirements in

full and those which, despite a good faith effort, were unsuccessful. The theory is that since the technology presently exists, the ability of a manufacturer to comply with the monitoring requirements is a factor of time and resources it chooses to devote to compliance.

Fines are proposed for only 1995 model year vehicles because it is at this point that potential inequity between complying and non-complying manufacturers will be greatest. For the 1994 and 1994 1/2 models, manufacturers are working to first implement new diagnostic techniques and technologies. Because each manufacturer develops their monitoring systems separately, varying degrees of success by the first year of implementation are somewhat to be expected. Manufacturers generally will have expended comparable resources in attempting to meet the requirements; however, some manufacturers have incorporated additional hardware in some instances to better assure compliance. For the 1995 model year, manufacturers will have had an additional year to perfect their monitoring technology, or to incorporate a technology already demonstrated by other manufacturers. Therefore, 1995 model year compliance is a function of devoting necessary resources to implement compliant technology more so than having the capability to develop it.

5. Comment: 1995 model year fines are inappropriate because manufacturers which have worked in good faith to meet the requirements will most likely have incurred the same costs as those manufacturers who develop fully compliant systems. (AAMA)(Ford)

Agency Response: While it may be that Ford, or other manufacturers which may certify OBD II systems with deficiencies, will incur equal costs to other manufacturers fully meeting the requirements, this is not in all cases true. For example, one manufacturer's 1994 model year OBD II system will use an added sensor to detect the failure of the evaporative purge valve. Ford has attempted to meet this requirement without using additional hardware, but has been unable to successfully implement a monitoring system using just software. Therefore, for that particular monitoring requirement, Ford will have incurred substantially less costs than the other manufacturer. The proposed fines help to maintain equity for those manufacturers which have devoted necessary resources to obtain full compliance.

6. Comment: 1995 model year fines could be counter-productive to the extent they provide a disincentive to aggressive phase-in of OBD II systems. (AIAM, Ford)

7. Comment: Penalties are inappropriate since manufacturers were required by the regulations to apply for waivers from OBD II requirements for the 1994 and 1995 model years before October 15, 1991. This early waiver decision increases manufacturers' risk of noncompliance. Decisions had to be made with little data. To penalize a manufacturer for trying will only ensure that manufacturers will always err on the safe side by

seeking the waiver early should similar circumstances occur in the future.
(AAMA)

Agency Response: Previous to the proposed amendments, the regulation contained no provision to certify any vehicle model scheduled to be OBD II compliant that did not meet the minimum requirements. Therefore, even with the proposed fines, the amendments relax the penalty for non-compliance with the regulation. Further; the primary incentive for manufacturers to introduce OBD II technology in the 1994 or 1995 model years is to gain in-use experience with OBD II systems prior to the required 100 percent implementation in 1996. Even when the penalty for non-compliance with the regulation meant not being able to certify vehicles, manufacturers designed their phase in schedules to include 1994 and 1995 model year introduction of OBD II systems.

8. Comment: Section (m)(6.1) should be modified to reflect the staff's expressed intent that 1994 model year vehicles that are OBD II certified with one or more deficiencies can be carried over through the 1995 model year without being subject to fines. (Ford)

Agency Response: Section (m)(6.1) has been modified to exempt 1994 model year carry over OBD II equipped vehicles from the fines laid out in that section.

9. Comment: Since 1995 model year hardware and software are already frozen, providing relief for the 1995 model year based on good-faith effort would be as effective and less burdensome than the proposal to assess fines. (GM)

Agency Response: See Response to Comments 6 and 7 above. Manufacturers have been on notice of the 1995 model year OBD II requirements since 1989. The lead time provided has been demonstrated as adequate in the fact that a number of manufacturers will fully meet the OBD II requirements on some models for the 1994 model year. One manufacturer implemented significant software changes approximately six months from production to meet the 1994 requirements.

10. Comment: To require some 1995 model year vehicles that fail to meet all the OBD II requirements to incur fines while similar vehicles that have inferior OBD I systems would not incur fines would create an unfair competitive situation. (GM)

Agency Response: The nature of the 1994 and 1995 model year OBD II exemption provision essentially allows manufacturers to design their own phase-in schedules. It is assumed that competition from other manufacturers was taken into account when the phase-in plan was formulated. Further, it can be argued that the proposed amendments to the regulation benefit manufacturers introducing OBD II systems in the 1994 and 1995 model

years because the amendments permit OBD II equipped vehicles to be certified with one or more identified monitoring deficiencies.

11. Comment: Manufacturers initially complying with the OBD II requirements in the 1995 model year should be able to carry over system deficiencies without penalty on their 1996 model year products. (Subaru)

Agency Response: By the 1996 model year, manufacturers will have had a total of seven years of lead time to implement OBD II systems, and two years of lead time from the time OBD II systems are first introduced in California. Relief beyond the 1995 model year would be unnecessary and would have a negative impact on the effectiveness of the OBD II program.

12. Comment: Ford and other manufacturers have not demonstrated a good-faith effort to evaluate the best available technology for misfire detection. (Purdue University)(Technical Advances)

Agency Response: The issue under consideration by the Board is not Ford's good faith efforts per se, but the criteria the Executive Officer shall apply in making his determination whether a manufacturer should be permitted to certify its vehicles in the 1994 and 1995 model years even if it has not fully complied with the OBD II monitoring requirements. The good faith determination by the Executive Officer will be made upon final approval of these amendments on a case by case basis.

13. Comment: Fines should be assessed for vehicle models subject to the OBD II regulation in the 1994 model if the OBD II requirements are not met in full. (Purdue University)

Agency Response: The Board and its staff has recognized that some manufacturers despite a good faith effort have been unable to fully meet the OBD II requirements in the 1994 model year. In the staff's opinion, it is not in the best interest of the OBD II program to fine vehicle manufacturers for non-compliance in the first year of OBD II implementation.

14. Comment: The ARB should compile a list of each manufacturers vehicle models identifying the level of OBD compliance for use in Smog Check stations. Also this information should be made available on the underhood emissions label and through the vehicle's diagnostic communication link. (BAR)

Agency Response: The staff plans to provide the BAR with the requested information. Further vehicle labeling and diagnostic information requirements are in place that should be adequate to address the BAR's concerns.

15. **Comment:** A manufacturer that has received a waiver for 1994 and 1995 model year vehicles and decides to voluntarily introduce OBD II systems in some of its 1995 model year vehicles should be exempt from penalties. (VW)

Agency Response: If a manufacturer, having received an exemption under section (m)(2.0), chooses to implement a computer system which can comply with OBD II requirements, the manufacturer would be subject to the requirements of sections (m)(6.0) and (6.1). The exemption provided under section (2.0) applies only to manufacturers which can demonstrate that they cannot modify an OBD I system by the 1994 model year consistent with their projected changeover schedule. Accordingly, manufacturers which have received an exemption under (2.0) should carefully consider their ability to comply prior to installing OBD II systems for 1994 and 1995. This situation is really no different than manufacturers such as Ford which decided to comply early with OBD II, even though they could have sought an exemption by delaying implementation of an OBD II capable computer until 1996.

16. **Comment:** If the ARB grants a function exemption as requested by Ford without incurring a financial penalty, the ARB should not have a formal reporting requirement for any function. (Volvo)

Agency Response: It appears that the commenter is requesting relief not specifically addressed in the Ford petition or in the notice for this hearing. The reporting requirements referred to by the commenter are set forth in section 1968.1(a)(1.8) and apply to specific elements of the monitoring systems which will not be required to illuminate the malfunction indicator light (MIL) in the 1994 and 1995 model years because the approach is sufficiently new or complex. This provision will minimize the occurrence of false illumination of the MIL on the OBD II systems while still requiring the storing of fault codes when malfunctions are detected. The provision's reporting requirement is intended to ensure that manufacturers advise the ARB of monitoring problems in-use, so that staff can be assured that manufacturers correct the identified fault codes.

The reporting requirements should also protect vehicle owners from unnecessarily having to replace properly operating components because of erroneous fault codes. The cost of the in-use performance reporting requirements for the OBD II systems should be minimal if checks of the systems are conducted during routine customer visits to dealerships.

17. **Comment:** The ARB should not relax such a critical regulation as the OBD II. (ACSC)

Agency Response: To the extent the comment refers to the amendments as proposed in the original notice, the comment is untimely. However, in response to the comment, staff disagrees for the reasons set forth in the Staff Report. The relaxation that will occur will only apply to those manufacturers which have satisfied the criteria set forth in section (m)(6.0) and which have made good faith efforts to equip and fully

implement 1994 and 1995 model year vehicles with enhanced monitoring systems. Such systems, although possibly deficient in monitoring one or more of the requirements of the regulation, should nevertheless obtain greater emission reductions than if the manufacturer had elected to continue to use an OBD I system. As stated in the Staff Report, to not provide such relief could at this late date cause a significant burden for manufacturers unable to certify vehicles that do not have a fully compliant system.

To the extent that the comment refers solely to the relaxation of the penalty provisions set forth in section (m)(6.1), the Board decided, upon consideration of all the comments received and the testimony presented at the hearing, that the proposed modifications to the penalty structure are appropriate given it will apply only to those manufacturers that have attempted to install OBD II systems in 1995 model year vehicles and have satisfied the specified criteria for relief.