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# Air Resources Board

Alan C. Lloyd, Ph.D.  
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Gray Davis  
Governor

June 17, 1999

MANUFACTURERS ADVISORY CORRESPONDENCE No. **MAC 99-05**

TO: ALL PASSENGER CAR MANUFACTURERS  
ALL LIGHT-DUTY TRUCK MANUFACTURERS  
ALL MEDIUM-DUTY VEHICLE MANUFACTURERS  
ALL DIRECT IMPORTERS  
ALL OTHER INTERESTED PARTIES

SUBJECT: Certification Compliance With The Acceleration Simulation  
Mode (ASM) Loaded-Mode Inspection and Maintenance  
(I/M) Standards

This letter transmits the attached Manufacturers Advisory Correspondence (MAC) which supersedes MAC No. 98-04. ARB revised the policy set forth in MAC No. 98-04 in response to a joint request by the American Automobile Manufacturers Association and Association of International Automobile Manufacturers to provide manufacturers with sufficient lead time and flexibility to demonstrate certification compliance with the ASM I/M standards.

Manufacturers of 2000 model-year (MY) passenger cars (PC), light-duty trucks (LDT) or medium-duty vehicles (MDV) that submit applications for certification post-marked on or before June 30, 1999, do not have to test emission data vehicles (EDV) to demonstrate certification compliance with the ASM I/M standards. (Unchanged from MAC No. 98-04.) Manufacturers submitting applications post-marked after June 30, 1999 may, in lieu of submitting test data demonstrating compliance of EDVs with the ASM I/M standards, submit a statement that based on their engineering evaluation, their vehicles comply with the ASM I/M standards. (Revised from MAC No. 98-04.)

If you have any questions or comments, please contact Mr. Shewen Chen, Staff Engineer, Certification Section, at (626) 575-6661.

Sincerely,

/S/

R. B. Summerfield, Chief  
Mobile Source Operations Division

Attachment

State of California  
AIR RESOURCES BOARD

SUBJECT: Certification Compliance With the Acceleration Simulation Mode (ASM) Loaded-Mode Inspection and Maintenance (I/M) Standards

APPLICABILITY:

2000 and subsequent model-year (MY) passenger cars (PC), light-duty trucks (LDT), and medium-duty vehicles (MDV).

Exceptions: (1) Diesel-fueled vehicles are currently exempt from all I/M testing requirements. (2) Vehicles with non-disengageable all-wheel-drive, and vehicles with full-time traction control are currently exempt from ASM I/M testing; for these vehicles, only idle mode testing is required.

REFERENCES:

1. Title 13, California Code of Regulations (CCR) Section 1960.1, and the incorporated "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as last amended March 19, 1998.
2. Manufacturers Advisory Correspondence No. 92-04, "Certification Compliance with the Inspection and Maintenance (I/M) Program."
3. "Mandatory Exhaust Emissions Inspection Standards and Test Procedures," Title 16, CCR, Section 3340.42.
4. Joint letter from American Automobile Manufacturers Association and Association of International Automobile Manufacturers, dated February 12, 1998.
5. Joint letter from American Automobile Manufacturers Association and Association of International Automobile Manufacturers, dated September 22, 1998.

[References to the above documents are indicated by brackets.]

BACKGROUND AND DISCUSSION:

Title 13, California Code of Regulations (CCR) Section 1960.1 and the incorporated "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as last amended March 19, 1998 [Reference 1], require vehicle manufacturers to test all 1993 and subsequent model-year (MY) emission-data vehicles (EDV) to demonstrate compliance with applicable California I/M emission standards. I/M standards are specified in "Mandatory Exhaust Emissions Inspection Standards and Test Procedures," Title 16, CCR Section 3340.42 [Reference 3], which contains two test procedures, a "loaded mode" test and an "idle mode" test.

The Air Resources Board's (ARB's) policy for demonstrating certification compliance with the I/M standards is set forth in MAC No. 92-04 [Reference 2]. Because California air pollution control/air quality management districts (districts) were only implementing the idle mode test when MAC No. 92-04 was issued, manufacturers were only required to submit EDV idle mode I/M test results for certification. This policy was subject to the condition that "when any district participating in the I/M program decides to require the loaded-mode test, all EDVs must undergo both the loaded-mode test and idle test. In such an event, the ARB will inform manufacturers of this requirement." MAC No. 92-04 [Reference 2].

In accordance with MAC No. 92-04, the ARB is hereby notifying manufacturers that as of June 8, 1998, the Bureau of Automotive Repair (BAR) of the California Department of Consumer Affairs has implemented the ASM loaded mode I/M test in several districts. The existing idle mode I/M test is retained for areas of the state not subject to the ASM I/M test.

The ARB recognizes that requiring manufacturers to immediately demonstrate compliance with the ASM I/M standards would impose excessive hardships in light of the June 1998 ASM I/M test start date and manufacturers' requests for additional lead time to ensure availability of test equipment and trained personnel, and to incorporate the ASM I/M test into their certification test procedures [References 4 and 5]. The ARB will therefore require vehicle manufacturers to demonstrate certification compliance with the ASM I/M standards beginning with the 2000 MY. Also, to provide manufacturers additional lead time, ARB will waive the ASM I/M test compliance demonstration for 2000 MY engine families (EFs) whose certification applications are submitted and post-marked on or before June 30, 1999.

Manufacturers must demonstrate EDV compliance with ASM I/M standards for those 2000 MY EFs whose certification applications are post-marked after June 30, 1999. This requirement can be satisfied by a manufacturer either submitting ASM I/M test data or a statement in the application that, based on the manufacturer's engineering evaluation as it deems appropriate, its vehicles comply with ASM I/M standards.

ARB staff contacted several ASM BAR-97 equipment manufacturers to determine the amount of lead time required by vehicle manufacturers to

acquire and install the ASM test equipment, and to train personnel to conduct ASM testing. According to the equipment manufacturers contacted, there are no equipment shortages that would significantly delay the implementation of ASM I/M testing. Taking into account the time needed for equipment ordering, delivery, and installation, as well as training of test personnel, approximately two to four months would be needed for vehicle manufacturers to fully implement ASM I/M testing. Therefore, the implementation schedule in this MAC will provide manufacturers more than adequate lead time and compliance flexibility to fully integrate the ASM I/M test requirement into certification testing procedures.

It should be noted that all 2000 MY EFs must be tested to demonstrate compliance with the idle mode I/M standards. Also, under the current certification requirements, all 2001 and subsequent MY PC, LDT, and MDV must be tested under both the idle mode and the ASM I/M tests. However, under the "LEV II - CAP 2000" regulatory package adopted by the ARB on November 5, 1998 that is applicable to 2001 and subsequent MY PC, LDT, and MDV, and early opt-in 2000 MY EFs, a manufacturer may satisfy the certification requirement for I/M compliance by simply providing a statement that based on the manufacturer's engineering evaluation, its EFs comply with the I/M standards. Thus, the ARB's policy for 2000 MY EFs discussed above will be consistent with the "LEV II - CAP 2000" provisions when the November 1998 amendments are approved by the Office of Administrative Law.

MAC No. 92-04 is still applicable to the requirements for EDVs to comply with idle mode I/M testing. The provisions described in MAC No. 92-04 regarding pre-conditioning, test fuel, test vehicles, test temperature, and carry-over/carry-across of test data are also applicable to the ASM I/M test.

POLICIES:

1. Manufacturers must submit demonstrations that their EDVs comply with both the idle mode and ASM I/M standards in their certification applications for 2000 and subsequent MY PC, LDT or MDVs as follows:
  - a. Demonstration of compliance with ASM I/M standards is not required for a 2000 MY EF if the initial certification application for that EF is submitted and post-marked on or before June 30, 1999.
  - b. A manufacturer that submits initial certification applications post-marked after June 30, 1999 may demonstrate compliance with ASM I/M standards by including a statement in the applications that, based on its engineering evaluation as it deems appropriate, its vehicles comply with the ASM I/M standards. Alternately, the manufacturer may submit test data demonstrating EDV compliance with ASM I/M standards.
2.
  - a. A manufacturer of 2001 and subsequent MY PC, LDT, or MDV, and early opt-in 2000 MY EFs certified under the "LEV II - CAP 2000" provisions, may satisfy the certification I/M compliance requirement by including a statement in the application that, based on its engineering evaluation as it deems appropriate, its vehicles comply with the I/M standards.
  - b. If the "LEV II - CAP 2000" package does not become effective, manufacturers of all 2001 and subsequent MY EFs must demonstrate compliance with both the idle mode and ASM I/M standards by submitting EDV test data.
3. Diesel-fueled vehicles are currently not subject to the I/M program. Thus, no demonstrations of compliance with I/M emission standards are required for these vehicles.
4. Non-disengageable all-wheel-drive and full-time traction control vehicles are exempted from ASM test requirements, but continue to be subject to the idle mode I/M testing. These vehicles must demonstrate compliance with only the idle mode I/M standards during certification.
5. All requirements, including pre-conditioning, test fuel, test vehicles, test temperature, and data carry-over/carry-across, as described in MAC No. 92-04 are also applicable to the ASM test.
6. MAC No. 92-04 is still applicable to the I/M idle test.