



September 14, 2009

Clerk of the Board  
Air Resources Board  
1001 I Street  
Sacramento CA 95814

**Subject: Plug-In Hybrid Electric Vehicles Test Procedure Amendments – 15-Day Notice**

Dear Clerk of the Board:

The Alliance of Automobile Manufacturers is a trade association of 11 car and light truck manufacturers. We appreciate the opportunity to work with ARB staff to develop test procedures for plug-in hybrid electric vehicles. The technology involved is some of the most complex produced by manufacturers and the testing requirements reflect this complexity. Both manufacturers and ARB staff have spent considerable time and effort developing the subject regulations, but there are still a few issues that need to be addressed to ensure that the test procedures can be conducted in the laboratory and are not unnecessarily burdensome.

At this late stage of regulatory development, our primary concern is to ensure the test procedures can be executed as written. Manufacturers attempt to follow test procedures verbatim. Unfortunately, several provisions in the test procedures cannot be executed as currently written. For example, some testing requires conducting multiple drive cycles (for example, to determine the all-electric range). After each drive cycle the battery state of charge (SOC) is determined by analyzing the emission sample bags. However, as written, the battery SOC and bag sample analysis must be COMPLETED within 15 seconds in some cases or within 1-2 minutes in others. This is simply not possible.

There are also several provisions which would streamline the test procedures while still providing necessary information for certification and reporting. Additionally, we've noted a few typographical errors.

**BMW Group • Chrysler LLC • Ford Motor Company • General Motors • Jaguar Land Rover  
Mazda • Mercedes-Benz • Mitsubishi Motors • Porsche • Toyota • Volkswagen**

The attached documents – one covering exhaust and the other evaporative test procedures – summarize our comments and recommendations for revision. We have highlighted comments that prevent the test procedures from being executed as written.

Again, we appreciate the work and cooperation by ARB staff, recommend the attached changes above to streamline the procedures, and look forward to working with you. If you have any questions, please feel free to contact me at (916) 538-1197 or at [sdouglas@autoalliance.org](mailto:sdouglas@autoalliance.org).

Sincerely,



Steven P. Douglas  
Senior Director, Environmental Affairs

Attachments