TOYOTA INDUSTRIES CORPORATION
TOYOTA MATERIAL HANDLING COMPANY

TAKAHAMA PLANT
2-1-1, TOYODA-CHO, TAKAHAMA-SHI
AICHI-KEN, JAPAN
TEL: (81)-566-53-7075
FAX: (81)-566-53-7267

HEAD OFFICE
2-1, TOYODA-CHO, KARIYA-SHI,
AICHI-KEN, JAPAN
TEL: (81)-566-22-2511
FAX: (81)-566-27-5650

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To: Clerk of the Board
California Air Resources Board (ARB)
1001 I Street, 23rd Floor
Sacramento, CA 95814

We, **TOYOTA INDUSTRIES CORPORATION**, respectfully submit these comments concerning the Public Hearing to Consider Adoption of New Emission Standards, Fleet Requirements, and Test Procedures for Forklifts and other Industrial Equipment.

PUBLIC COMMENTS

Whether it is an automobile or industrial forklift, Toyota has always placed the highest level of priority in not only producing products that exceed our customers' expectations, but also developing these products in such a way to minimize the overall impact to our precious environment. With recent technological advancements and innovations in hybrid technology and alternative fuel systems, Toyota has made a strong commitment to its customers and society in general to develop environmentally friendly products.

As part of this commitment, Toyota would like to continue to cooperate with ARB in its efforts to further reduce emission levels, however these efforts must take into account the direct impact on both manufacturers and society as a whole. That being said, ARB's proposal to establish more stringent emission standards in 2010 places insurmountable strain and barriers within Toyota's research and development division which is focused on developing technologically advanced, and environmentally friendly systems for the market. Our highest concerns are as follows;

[1] **TIMING:** The emission system designed specifically to meet the upcoming 2007 EPA-ARB emission standards, will not be applicable for use in meeting the proposed ARB 2010 emission standard requirements. To achieve such a drastic reduction over the 2007 EPA-ARB emission standards, Toyota would be required to assign significant resources not only in the development of a new fuel system, but potentially a new engine as well. The ARB 2010 proposal provides manufacturers approximately 3 years to develop technology to meet the regulation, however typical timing for complete development of new engine and emission system is at the very least, 6 years.

[2] **REASSIGNMENT OF ALTERNATIVE FUEL R&D RESOURCING:** As stated in [1], Toyota would be required to assign significant resources not only in the development of a new fuel system, but possibly a new engine. As part of its commitment towards a "greener" environment, Toyota has invested, and continues to invest an enormous amount of resources (manpower and money) in the development of alternative fuel systems to operate industrial lift trucks.

a. **UL Listed CNG Fuel System Option –** On February 18, 2005 Toyota announced it had become the first and currently only lift truck manufacturer to develop a UL listed, factory installed, EPA & CARB certified, Compressed Natural Gas (CNG) option for its cushion and pneumatic line of lift trucks up to 6500 lbs. capacity.
b. **FCHV-F Fuel Cell Hybrid System** - On October 11, 2005 Toyota announced it had successfully developed a fuel cell hybrid system for industrial lift truck use. The prototype Toyota FCHV-F featuring this system was displayed at CeMAT, the worlds leading trade fair for intra-logistics, in Hannover, Germany, October 11-15, 2005.

From these results, it is evident that Toyota is focused on and has committed to furthering its R&D activities in alternative fuel technologies that lead to a cleaner environment for society. The ARB 2010 proposal would unfortunately result in reallocation of those critical resources, and indefinitely delay the possibility of offering a true Fuel Cell Hybrid system to the market.

[3] **FINANCIAL IMPACT ON SOCIETY:** Along with the significant resources (manpower and money) required to develop such an engine/emission system to meet the ARB 2010 proposal, comes the financial impact on society. Manufacturers developing engine/emission systems to meet this proposal would pass on the considerably high development expense directly to California customers. From a California customer perspective, the combination of ARB's proposal for end user fleet averaging, along with this significant capital cost increase, could drive business out of the state, thereby impacting the economy and society as a whole.

[4] **LPG FUEL QUALITY:** Although Toyota Industries Corporation may refer to automotive technology, industrial lift truck technology and applications is considerably different than the automobile. Unlike gasoline powered automobiles, for which fuel quality standards exist, approximately 90% of industrial forklifts operate on Liquefied Petroleum Gas (LPG), for which no quality standards exist.

Since no quality standards exist for LPG, the high sulfur content, which is known to negatively influence catalyst performance, combined with heavy contaminants commonly found in LPG fuels will impact the performance of these very sophisticated emission control systems. Without measures in place to limit sulfur content and contaminants in LPG, the ability for a manufacturer to guarantee proper operation of their emission system becomes a major challenge.

Thank you for this opportunity to publicly comment on this proposal. Toyota shares ARB's vision and commitment to a cleaner environment, and will continue to work side by side with ARB to achieve this vision.

Respectfully,

TOYOTA INDUSTRIES CORPORATION.
TOYOTA MATERIAL HANDLING COMPANY

T. Nishio

TOSHIHIRO NISHIO
GENERAL MANAGER
PRODUCT PLANNING DEPT.