



Celebrating 25 Years of Fuel System Excellence!



January 23, 2010

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

RE: Comments on proposed amendments to the Verification Procedure, Warranty and in-use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines.

Dear Board Members:

Thank you for the opportunity to provide comments for your consideration regarding the above regulation.

Transfer Flow Inc. is an Engineering and Manufacturing Company located in Chico, California. We have been in business for 27 years. Over these many years we have written both EPA and CARB Certificates of Conformity for such companies as John Deere, Oshkosh, Bluebird, Fleetwood, Gillig and Roadmaster. Our company owns over 160 CARB Executive Orders. We have received CARB Executive Orders for New Vehicles, Aftermarket and SORE. We are currently working with your Refueling Tank group to help draft future emission regulations for those particular systems.

Needless to say, we have extensive experience with reading a variety of CARB regulations, following the emission test procedures, assembling all the test data, writing emission applications, and submitting it to CARB for review. After reading the Verification Procedure that was originally drafted in 2000, we believe there are several changes to this regulation that the CARB Board should address.

While extending the time to meet the emission standards for the thousands of pieces of Off-Road, Portable and Stationary equipment is absolutely necessary, it does not solve your underlying problem associated with this Verification Procedure. Not only is the cost to follow this test procedure extremely expensive, but the test methods, especially for durability, is unnecessary.

The cost of the Verification Process ranges from \$250,000 to over \$1 million dollars for a specific DPF retrofit system. Few DPF companies are willing to invest that type of money to obtain an Executive Order for a specific DPF retrofit system. This is especially true, when that Executive Order only covers a very small quantity of equipment in the field. Hence there are



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few Verified DPF retrofit systems currently available for the huge quantity of equipment that must be modified to meet your regulation. The unavailability of DPF retrofit kits has a major negative impact on small business owners who must incur the high cost of purchasing new engines or equipment as their only options for compliance.

Regarding test methods, Method 5 is one test method for example that is not necessary. The performance of the wall-flow type DPF is well documented. It is perfectly capable of exceeding the PM standard set for Portable and Stationary applications. This is especially true of DPFs that are currently used for on-road vehicles. If testing data for a particular DPF meets on-road requirements, than it should be acceptable for Off-Road, Portable and Stationary applications without the need to follow any of the Verification Procedures.

Method 5 is the same test that has been used to measure particulate matter on huge industrial power plant exhaust stacks for the last 15+ years. In addition to being an old and established test method, it cost the equipment owner over \$5000.00 for a CARB certified lab to perform this test. No wonder DPF retrofit kits cost the end user between \$11,000.00 and \$43,000.00!

At the time of plan adoption in 2002, DPF technology was in its infancy. Since that time, the effectiveness of diesel particulate filters has been proven and well documented. Both CARB and the U.S. EPA have reported PM emission reductions of 85 to 97 percent for various types of catalyzed diesel particulate filters. Durability of these DPFs has also been proven for on-road vehicles.

On-road DPF emission control systems already have the ability to record and store regeneration operations, pressure differentials, temperature at DPF, diagnostic trouble codes, etc. This is the type of data that CARB should request to review on a periodic basis. Not a onetime Method 5 test, but instead the downloaded data from each particular DPF. Periodically reviewing this data is the only reliable way to truly validate the performance of the DPF system over the 5 year warranty period.

We strongly suggest that you alter the current verification testing procedure language to obtain an EO. The DPF is only one part of the diesel emission control system. To obtain an EO, CARB should review the system drawings, instruction sheets and testing data. If the supplied testing data meets on-road requirements, that should be acceptable to CARB in lieu of the current Verification Procedure.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Bill Gaines".

Bill Gaines
Chairman
Transfer Flow Inc.