

PAGE 2 OF A 3 PAGE LETTER FROM
CATERPILLAR TRACTOR COMPANY,
RECENTLY GIVEN TO CARB.

Page 2 of 3

develop, certify and introduce new emission compliant products for major portions of their product lines in the time window provided for by emissions regulations. In previous transition years, the ARB/EPA's "flex" program was available to address the business challenges of introducing broad changes into the majority of a company's product line in a very short time frame by allowing the staggering of some product introductions. Unfortunately for California equipment owners, this program won't be a viable option since they will be addressing aggressive fleet average targets.

The Challenge:

The ARB calculates this rule will impact nearly 200,000 pieces of off-road equipment and uses its best judgment – through its inventory efforts – to define the age and models of the machines in question. The ARB, itself, is aware of the inherent imprecision of the inventory data and the depth of accurate detail supporting that data. It is a difficult if not mammoth task to accurately create the detailed product population data needed when you are working with a business model where customer fleets evolve and move in a highly transient environment within and outside of the state.

For a manufacturer to accurately forecast individual customer needs they would need to know:

- Every model (their own and competitive) in a given fleet
- Every engine tier level in the fleet (their own and competitive)
- Every horsepower rating (their own and competitive)
- Every aftertreatment option for those machines (currently available and projected to be available)
- Every repower option for those machines (currently available and projected to be available)
- Customer purchasing cycles for new equipment
- Customer desired solutions mix for achieving compliance (aftertreatment over repowers, repowers over new purchases, etc.)
- Ability to pay for work performed.

At this stage, it is unrealistic for Caterpillar – or any manufacturer – to guarantee they will have all the products and service capacity necessary to perform the work without clear definition of the regulatory requirements and the information necessary to reliably forecast specific customer needs. In fact, until the proposed rule is finalized it will remain a moving target – as demonstrated by the significant changes made recently where the rule has gone from being a strictly PM rule to one that now addresses both NOx and PM.

Currently, Caterpillar is undertaking a data-driven process through its 6 Sigma methodology to:

- Create fleet analysis software to better define machine population
- Prioritize the aftertreatment needs of customers
- Examine the service capacity of its dealer network and parts flow velocity
- Facilitate movement of the legacy fleet and;
- Analyze the introduction of new equipment into the California market.