

CATEGORY DEFINITION

Status / Timing of Category Development

Development activities in support of PC-10 have been progressing for a little over two years. Following an EMA request to the Diesel Engine Oil Advisory Panel (DEOAP), a New Category Evaluation Team (NCET) was formed in March 2002, and the first NCET meeting was held the following July. The NCET concluded its work with the recommendations that a PC-10 category was both feasible and needed to protect the engines and emission control systems capable of meeting the 2007 exhaust emission limits.

Following these conclusions, the NCET was reformed into a New Category Development Team (NCDT) to manage the PC-10 development process. However, in June 2003, the EMA approached the DEOAP with a request to upgrade the quality of API CI-4 lubricants to provide more robust protection of engines in the field meeting the October 2002 emission limits. This request caused a significant dilution of the PC-10 development activities, but it did eventually result in a new supplemental category, identified as API CI-4 Plus, which became licensable on September 1, 2004.

Once the CI-4 Plus supplement was settled, industry resumed its concentration on PC-10 development. The EMA has confirmed that it is requesting three brand new tests: Caterpillar C-13, Cummins ISB, and Mack T-12; along with one of the CI-4 Plus tests, the Mack T-11, and a replacement for the Cummins M11-EGR, the ISM. These tests will require varying levels of development to meet the timing for PC-10 inclusion. In addition to these new diesel tests, the EMA has also requested use of the Sequence IIIG test to measure oxidation in PC-10. If this request is met, and the IIIG replaces the IIIF as the category oxidation test, it will have dramatic impacts on both formulation cost and base stock usage. The Sequence IIIG, at GF-4 pass/fail performance, shows a strong preference for more highly saturated base stocks, as well as a need for significantly more antioxidant in the oil formulation versus the needs of HD diesel engines. Infineum believes that a more appropriate solution would be to continue using the Sequence IIIF as the HD oxidation test, but with a reduced viscosity increase target similar to the Mack Premium Plus specification.