

Celeste M. Powers, CAE
Independent Lubricant Manufacturers Association
651 S. Washington Street
Alexandria, VA 22314

Re: ILMA Comments on Draft ILSAC GF-4 Specification

Dear Ms. Powers

The ILSAC/Oil Committee would like to thank you for your comments on the draft ILSAC GF-4 Specification and your participation in the standards development process. Please find below our responses to your comments:

ASTM Sequence IIIG Correction Factor

Sequence IIIG Test performance has been found to be more sensitive to oil consumption than the IIIF test. The correction equation originally proposed for the Sequence IIIG Test was designed to enhance test precision by taking into consideration variation in oil consumption not directly related to the candidate engine oil formulation. Correction factors for engine tests are not unusual. Both the Mack T-8 and the Cummins M11-EGR tests have correction factors built into the test to enhance precision, and all tests are subject to laboratory correction factors based on the LTMS system. Fortunately, the question of an oil consumption correction equation for the Sequence IIIG has become moot. Work on the IIIG correction equation led the Sequence III Surveillance Panel and the test laboratories to a number of techniques to reduce lab-to-lab and test-to-test oil consumption variation, and the correction equation is no longer needed. Laboratory correction factors related to test severity through the LTMS system will, as with all other tests, still apply.

Regarding your comments on the IIIG test's capability to discriminate between good performing oils and poor performing oils, the ASTM IIIG Test Matrix results clearly show that the test discriminates between oils of different performance levels.

ASTM Sequence IIIG Viscosity Increase Limits

The viscosity increase limit for the Sequence IIIG was set based on a technical need to improve the oxidative stability of current engine oils. GF-4 oils represent a significant improvement in fuel efficiency, catalyst compatibility, deposit control, and both high and low temperature oil thickening due to oxidation and nitration. Although GF-3 was a significant improvement over GF-2, problems have still been seen in the field with respect to deposits and oxidation/ nitration protection. A technical need exists in the field for the superior performance of GF-4 oils as demonstrated by passing IIIG results. ILSAC GF-4 oils passing the IIIG test provide improved robustness during high temperature, high load operation to improve piston ring belt cleanliness and control of nitration and oxidation. This is needed because the higher power density and higher speeds in modern engines put higher stress on the oil.

In order to address your comment concerning the impact of GF-4 on Group II base stocks, William Downey of Kline & Company was asked to provide an independent assessment of the situation. Kline & Company concluded that there would be sufficient supply of Group II, II+ and III stocks to meet the anticipated needs for GF-4. A copy of their presentation is attached.

Note that it is also generally accepted that Group I base oils will meet the IIIG limits with the use of supplemental anti-oxidants. As an added measure, the committee has requested that industry provide a demonstration oil that contains significant levels of Group I base stocks.

Increased Oil Consumption

There is no reason to believe that GF-4 oils will be prone to greater oil consumption than GF-3 oils. In fact owing to the sensitivity of the Sequence IIIG Test to oil consumption, formulators will be motivated to use formulation strategies that contribute to reduced oil consumption.

Specific viscosity grade recommendations are not a part of the ILSAC GF-4 specification. This is something that is left up to individual engine manufacturers. Additionally, even if an engine manufacturer suggests that a lighter viscosity grade oil may be used in an older vehicle for which the lighter viscosity grade oil was not originally recommended, there is nothing to prohibit a marketer from selling the original viscosity grade or from recommending it for use.

As a point of interest, an owner's manual for an eight-year-old car would have likely recommended a GF-2 5W-30 oil. This oil would have had a maximum Noack volatility of 22%. Today's GF-3 oils and the proposed GF-4 oils both have maximum Noack volatility limits of 15%. The significantly lower volatility levels of the GF-3 and GF-4 oils would be expected to contribute to lower oil consumption than the GF-2 oils.

Approval Period

The timing of the use of the API mark(s) is an issue that will be decided by the API Lubricants Committee. However, we will note that the 10-month period mentioned in your response is the time between when ILSAC / Oil approved the draft GF-4 specification and the first allowable use. This is consistent with previous upgrades. It is our understanding that discontinued licensing of ILSAC GF-3 is not currently planned until April 2005. Thus marketers actually will have 19 months to upgrade from GF-3 to GF-4. The April 2005 date is needed to ensure availability of ILSAC GF-4 oils for 2005 model year vehicles. In addition, while GF-4 does represent a significant upgrade in product performance it does not have as many new tests to deal with as did GF-3 and it may not require blenders to add tankage for additional base oils, as did GF-3. Thus, from both a testing and an operations perspective, this should be a smoother transition.

Category Life

The category life is not specified in the draft specification. ILMA's added comment on this matter will be taken into account in separate discussions on this matter in other forums.

The ILSAC/Oil committee would again like to thank you for your comments. We hope that our responses will help to alleviate some of the concerns ILMA may have over this new performance category.

Sincerely



Robert M. Olree
Chairman, ILSAC/Oil Committee