August 18, 2021

Mr. Jeffrey Harmening
Manager – EOLCS/DEF/MOM
American Petroleum Institute
200 Massachusetts Ave NW
Washington, DC 20001

Subject: Request for Supplement to the existing API SP Engine Oil Standard

Dear Mr. Harmening:

On behalf of the companies copied below, I am writing to formally request that the American Petroleum Institute (API) Lubricants Group develop a supplement to the existing API SP specification to include an aged oil Low Speed Pre-Ignition (LSPI) protection requirement. We request that the supplement include all the performance requirements presently in API SP plus the requirements of meeting the limits set for the aged oil LSPI performance of a lubricant.

The API SN PLUS and API SP/ILSAC GF-6 specifications address the lubricant's fresh oil LSPI performance in a turbocharged GDI engine. Further protection is now necessary to prevent equipment failure which may be connected to a degradation in the LSPI protection of the lubricant over its standard oil drain interval. Field test data showing the increase in LSPI activity with oil aging is documented in the recent SAE publications 2018-01-1676 and 03-11-01-0002.

The Sequence IX test is a fresh oil test and thus at the API SN PLUS/SP Sequence IX limits does not confirm that the LSPI protection is retained as the oil ages in the field. To address this need, Ford has sponsored the work of an ASTM Task Force. The group took the oils from the referenced SAE publications and developed an aging test procedure using the Sequence X engine and evaluated the LSPI protection of these oils in the Sequence IX test. The data from the Task Force shows that the oils can be aged to simulate the field conditions, and that their Sequence IX LSPI activity is higher than the fresh oils supporting the findings from the SAE publications.

As a result of the Task Force work, ILSAC is requesting that the API Lubricants Group consider the request for a supplement to the existing API SP specification to further protect the turbocharged GDI engines for which the SN PLUS, SP (and ILSAC GF-6) categories were originally developed. The next steps for the ASTM Task Force are to move the Sequence X oil aging and Sequence IX aged oil test methods towards ASTM standards. To achieve this goal a precision matrix will need to be run on both new tests, and we are now seeking the funding to do this. We would like to discuss at its earliest convenience with the API Lubes Group, the development of these new ASTM standards and the timing of the implementation of an SP supplement which will include their test requirements.

Sincerely,

M. D. Deegan

Michael Deegan
Ford Motor Company
(ILSAC/Alliance LWG Chair)

Cc:

Nathan Siebert-gm
Meryn Hopp-gm
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Additional cc:
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