Statement of Principles for Diesel Fuel Lubricity

This Statement of Principles (SOP) serves to establish the purpose and scope of work of the joint working group of ISO/TC28 and ISO/TC22/SC7. The Joint Working Group together with the subject heading Diesel Fuel Lubricity is hereinafter referred to as DFLJWG. The SOP tasks the DFLJWG with the maintenance and further development of test method(s) for the assessment of the property of lubricity in fuel used in diesel engines, as well as the determination of the acceptable level of lubricity which judges a fuel fit for purpose for operation in diesel fuel injection equipment (DFIE).

Work Group Structure

This SOP shall be executed by the working group ISO/TC28 (Petroleum Products & Lubricants) - TC22/SC7 (Road Vehicles-DFIE)/JWG - Diesel Fuel Lubricity. The DFLJWG shall be chaired by an ISO/TC22/SC7 member, whilst the secretariat shall be from ISO/TC28. The membership (panel of experts) shall be nearly equal representation from the petroleum industry and the DFIE community. Experts are expected to be able to commit the resources of their respective companies to carry on the work of the DFLJWG. The working group may also include experts from the fields of statistics and test equipment. Through this core of experts and additional parties if necessary, the DFLJWG shall liaise with other groups such as the ASTM, CEC, CEN, etc.

History of the ISO (diesel fuel lubricity) Work Item

In 1992, ANSI (the U.S. member of ISO), submitted a new work item proposal to ISO/TC22/SC7 to develop an international standard to define the lubrication property in diesel fuel as required to lubricate diesel fuel injection equipment. The work item was accepted and assigned to ISO/TC22/SC7/WG6. The WG6 had been formed some years prior to assess the need for anti-wear additives in DFIE calibration fluid. Knowing that the DFIE industry had relied on the intrinsic lubricating properties in diesel fuel, the petroleum industry gave the DFIE industry a proactive warning that pending regulatory efforts to reduce sulfur and/or aromatic content in diesel fuel could result in some loss of lubricating properties.

The WG6 expanded its membership by soliciting expertise from the petroleum industry and the field of tribology and proceeded to develop a standard for the level of lubricity required in diesel fuel and a test method to measure the property. In anticipation of making regulatory use of the standard and due to particular procedural requirements, CEN/TC19 asked that this work item result in two standards, one for the test method and one for the limit. The following two documents were eventually approved as international standards:

ISO 12156-1:1997, Diesel Fuel - Assessment of lubricity using the high frequency reciprocating rig (HFRR) - Part 1: Test method.

Elements of SOP

This SOP forms the elements of the work tasks for the DFLJWG. The DFLJWG shall:

1. Embrace the concept of continuous improvement in its work.

2. Design, develop, and execute test programs to maintain the suitability and effectiveness of the ISO 12156-1&2 international standards.

3. Design, develop, and execute test programs to provide enhanced test methods with associative limits with expected precision better than or equal to ISO 12156-1 and expected correlation to DFIE needs better than or equal to ISO 12156-2.

4. Consider, evaluate, and apply, if appropriate, information generated by groups such as ASTM, CEC, etc.


6. Consider other such work as directed by ISO/TC28 or ISO/TC22/SC7.

DFLJWG Roster

Convenor: Paul Henderson

Secretary: Todd Sandler

DFIE Experts:
Bryan Milburn, Cummins Engine Co.
Paul Lacey, Delphi Diesel Systems
Craig Paradis, Stanadyne Automotive Corp.
Ulrike Litzow, Robert Bosch GmbH
Toshihiko Omori, Denso Corporation

Petroleum Industry Experts:
Bernd Schwarz, Intertek
Rinaldo Caprotti, Infineum UK Ltd.
Nick Davenport, Shell Research Ltd.
Ken Mitchell, Shell Canada Ltd.
Manuch Nikanjam, Chevron USA Products

Statistician:
Jim Rutherford, Chevron Oronite

PCS Liaison:
John Hutchinson, PCS Instruments

For More Information

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The secretary shall maintain, in addition to the working group membership roster, a mailing list of interested parties with a “need to know” the workings of the DFLJWG. The mailing list recipients will receive DFLJWG correspondence and tabled documents as determined by the secretary and may be otherwise kept informed through periodic informational meetings.