Facilitator Report to ASTM Section D02.B0.10 Standards Acceleration

Facilitator: Terry Bates
Report period: July 2019 to Dec 2019

Total time spent: July 2019 to Dec 2019: approx. 20h.

Sequence X Ford Timing-Chain Wear Test

The test is under the jurisdiction of the Sequence X SP: chair Alfonso Lopez (Intertek; SP contact on method, Jason Soto (Intertek). TMC contact: Rich Grundza.

Following the successful D02 ballot in June 2019, the method was published in Sept 2019 as **D8279** - **Determination of Timing-Chain Wear in a Turbocharged, Direct-Injection, Spark-Ignition, Four-Cylinder Engine.**

Seq IX Ford Low-Speed Preignition (LSPI) Test

The test is under the jurisdiction of the Sequence IX SP: chairman, Khaled Rais (SWRI); SP contact on method, Christine Eickstead (SWRI). TMC contact: Rich Grundza.

Following the successful D02.B0 ballot on June 9, 2019, a D02 ballot was completed on Sept. 26, 2019. The results were Affirmative 121, Negative 0, Abstain 455. There was only one comment to an abstain vote. The ballot was therefore successful. The method has now been published as **D8291- Evaluation of Performance of Automotive Engine Oils in the Mitigation of Low-Speed, Preignition in the Sequence IX Gasoline Turbocharged Direct-Injection, Spark-Ignition Engine.**

The comment to the abstain vote was from M. Mahdi Karima. Jessica Barrett ruled that the comment was not editorial. It was referred to the SP to consider if the comments could be used to revise the method via the Information Letter process. After a review, the SP decided not to include any of the comments in an information letter. Mr Karima was informed of the decision and invited to contact the SP if he had any questions or further comments about the procedure. No further input was received from Mr Karima. For the record the comments and SP response are provided at the end of this report.

Information Letters

Editorial comments were provided on several draft Information Letters to ensure the changes conformed to ASTM Form & Style and the SI.

M. Mahdi Karima Comments to Abstain vote on D02 LSPI ballot

Comment 1: Section 6.1- LSPI phenomena is more related to downsized turbo engine with high "bmep" (greater than 19). So 1.2 L GDI such as Ford ecoboost is recommended.

SP response: We agree that LSPI is prevalent in downsized turbo engines with high bmep but this procedure has only been created for use with the Ford 2.0 Ecoboost mentioned.

Comment 2: Section 6.9: it is recommended to use AC type dynamometer.

SP response: The test was developed with the Midwest MW-1014A. Since dyno inertia can affect engine test results, we would require testing that demonstrates equivalency before accepting other dynos.

Comment 3: Section 7.6.5: to add " ... with high dynamics type coupling"

SP response: This is a similar situation to the comment above. We identify specifications and give an example driveshaft that satisfies them and we would need additional data to accept other parts.

Comment 4: Section 7.4: following items may be added: Ignition system, Injection system, EMS system”

SP response: In section 7.4 we only listed specially modified parts. We describe the EMS which Ford refers to as a PCM in 7.9. There are no modifications to the physical equipment and Ford provides a PCM specifically for this test to handle any calibration changes.