

ASTM Engine Oil Gelation Test (EOGT) WK86363 Update

EOGT Meeting
November 6, 2025

Yong-Li McFarland



ADVANCED SCIENCE. APPLIED TECHNOLOGY.

ASTM Antitrust and Recording Policy

ASTM International is a not-for-profit organization and developer of voluntary consensus standards. ASTM's leadership in international standards development is driven by the contributions of its members: more than 30,000 technical experts and business professionals representing 135 countries.

The purpose of antitrust laws is to preserve economic competition in the marketplace by prohibiting, among other things, unreasonable restraints of trade. In ASTM activities, it is important to recognize that participants often represent competitive interests. Antitrust laws require that all competition be open and unrestricted.

It is ASTM's policy, and the policy of each of its committees and subcommittees, to conduct all business and activity in full compliance with international, federal and state antitrust and competition laws. The ASTM Board of Directors has adopted an antitrust policy which is found in Section 19 of ASTM Regulations Governing Technical Committees. All members need to be aware of and compliant with this policy. The Regulations are accessible on the ASTM website <http://www.astm.org/COMMIT/Regs.pdf>.

Electronic recording of ASTM meetings is prohibited.



EOGT Membership

21 members

Sarah Fitzgerald, Afton Chemical
Robert Stockwell, Chevron Oronite
Quanchang Li, ExxonMobil
Michael Deegan, Ford
Melissa Chu, Infineum
Angela Willis, Infineum
Joe Franklin, Intertek
Karina Gil, Intertek
Yuliza Rocha, Intertek
Michael Johnscher, ISP
Michael Kunselman, KJA Group

Litchi Xie, Lubrizol Additive (Zhuhai) Co., Ltd.
Victoria Fein, Lubrizol
Jason Bowden, OH Technologies Inc
Clarence McCollum, Richful (Xinxiang Richful)
Greg Miiller, Savant Group
Sean Alston, SGS North America
Becky Grinfield, SwRI
Yong-Li McFarland*, SwRI
John Loop, TMC
Jared Cavaliere, Valvoline

*Chair



ADVANCED SCIENCE. APPLIED TECHNOLOGY.

New EOGT WK86363, ILS# 1854

- Ford request for a new Engine Oil Gelation Test (EOGT): request to add a new test filterability test to better screen oils for field issues
- Status:
 - Method: 1 draft (Afton method V9.7) uploaded on ASTM Collaboration Area
 - Oils: 11 potential reference oils offered; 17 oils received at TMC
 - Screening Tests and ILS: ILS tests completed
 - Timing: test available in December 2025

Agenda:

- 1. Additional ILS data?
- 2. Reference process decision
- 3. Reference oil F batches
- 4. New Business



ILS Updates – any additional data?

- Afton: completed ILS
- SwRI: completed ILS
- Savant: completed ILS, rerun ILS completed and data to be submitted 11/6
- Intertek: completed ILS
- Valvoline: completed ILS
- Infineum: completed ILS
- Lubrizol: completed ILS
- Richful: completed ILS



EOGT Procedure

- ILS objectives:

- 1) Determine report value: *Report the volume at 120 s for each of the duplicate runs. The primary result is the average volume at 120 s. Report batch Oil F result (for tests needing TMC referencing).*
- 2) Establish precision (determinability, repeatability, and reproducibility) statement:
 - *The difference between determinations shall be less than 9 mL of its duplicate run. Each determination shall reach 120 seconds (for reference oils only).*
 - *Repeatability—The difference between successive test results, obtained by the same operator with the same apparatus under constant operating conditions on identical test material, would in the long run, in the normal and correct operation of the test method, exceed the following value only in one case in twenty:*

Repeatability= 15 mL

- *Reproducibility—The difference between two single and independent results, obtained by different operators working in different laboratories on identical test material, would in the long run, in the normal and correct operation of the test method, exceed the following value only in one case in twenty:*

Reproducibility= 21 ml



EOGT Procedure cont.

- ILS objectives:
 - 3) Select reference oil(s) for test: *Run reference oils F and M (blinded samples for both). If not acceptable reference run, need to rerun both oils. Acceptance criteria: the difference between the average result for Oil F and Oil M must be greater than 32. ~~each batch of candidate samples or~~ Referencing is every 14-30 days (from start to start). Check oil: passing batch Oil F (only 1 run needed when testing candidates) (criteria of Oil F acceptance range from Stats group). Require attendance at annual workshop to build consistency.*
 - Need to build separate EOGT SP.
 - Need to set new test lab criteria for referencing
 - *Reference oil info listed in new section to be added to TMC LTMS document.*

- Comments?



Reference Oils M and F

Oil Name	Available as Reference Oil	Amount (gallons)	Comments
EOGT-F	Yes	3	(reblend available but not yet tested)
EOGT-K	Yes	0	(reblend available but not yet tested)
EOGT-M	Yes	9	
EOGT-P	Yes	9	

- Request for 2 labs to test Oil F batch 1 and reblend, 2 tests (4 runs) on each batch: Intertek and SwRI, John sent out samples – Labs to run tests week of Nov 10
- John to reach out to Oil F and Oil M supplier to get additional fluid – to get update from supplier



Timeline – updated Nov 5, 2025

EOGT Timeline	Date															
	5-6 2023	7-8 2023	9-10 2023	11-12 2023	1-2 2024	3-4 2024	5-6 2024	7-8 2024	9-10 2024	11-12 2024	1-2 2025	3-4 2025	5-6 2025	7-8 2025	Sept – Oct 2025	Nov-Dec 2025
Develop test procedure and ILS report form	█															
Collect and prepare donated oil samples (17 oils)		█														
Screening samples shipped to labs (6 labs)		█														
Screening labs run 4 tests			█													
Test development (Screening, Proposal tests, Root cause)			█													
Pilot #1									█							
Pilot #2 and #3									█							
ILS samples shipped and labs run tests												█				
Data analysis for ILS, generate Research Report (RR) & Precision														█		
Ballot test procedure and RR																█
Test available for industry use																█

Action Items and Next Meeting

- Jared and John to work on data dictionary
 - All: all to give comments on procedure or video to Yong-Li
 - All: review the precision and TMC Calibration requirements and provide any suggestions if disagree
 - Afton and Infineum give graduated cylinder info to Yong-Li
 - Statisticians to review ILS data to provide acceptance criteria for I run Oil F
 - Yong-Li to make edits to EOGT method on precision and other sections
 - John to draft EOGT LTMS and TMC calibration/referencing section
 - John to reach out to Oil F and Oil M supplier to get additional fluid
 - Intertek and SwRI to run 2 tests each of Oil F batch I and reblend
 - All: send Yong-Li names for EOGT SP chair
 - Stats group: send statistics used to generate precision to Yongli so it can be sent to ASTM ILS team for Research Report
 - Greg to send list of method suggestions
 - Email Greg for more info on potential automated apparatus consortium
-
- Next Meeting: Mon Nov 17 at 9am CST for 1.5 hr



Thank you for your support!

Participants		
Method Development (11)	Oil Donations (9)	Testing Labs (10)
Afton	Afton	Afton
ExxonMobil	Ford	Infineum
Ford	Infineum	Intertek
Infineum	Lubrizol	ISP
Intertek	OH Technologies (donate filters only)	Lubrizol
ISP	Oronite	Richful
Lubrizol	Subaru	Savant
Oronite	TMC (collection, shipping only)	SwRI
Savant	Toyota	TMC (monitoring system only)
SwRI		Valvoline
TMC		

