ASTM Engine Oil Gelation Test (EOGT) WK86363 Update

EOGT Meeting

April 3, 2026

Yong-Li McFarland

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Electronic recording of ASTM meetings is prohibited.

EOGT Membership – please review

55 members

Name	Company
Amanda Stone	Afton
Jacob Zwilling	Afton
Joe Strukl	Afton
Sarah Fitzgerald	Afton
Brent Calcut	Afton
Josephine Martinez	Chevron
Ricardo Affinito	Chevron
Jiangao Fang	Chevron Oronite
Laura Birnbaumer	Chevron Oronite
Nicole Ketterer	Chevron Oronite
Robert Stockwell	Chevron Oronite
Quanchang Li	ExxonMobil
Dean Wingert	Ford
Michael Deegan	Ford
Rob Zdrodowski	Ford
Andrew Ritchie	Infineum
Angela Willis	Infineum
Caroline Laufer	Infineum
Melissa Chu	Infineum
Todd Dvorak	Infineum
Joe Franklin	Intertek
Karina Gil	Intertek
Martin Chadwick	Intertek
Yuliza Rocha	Intertek
Philipp Wigger	ISP
Udo Boecker	ISP
Michael Kunselman	KJA Group
Litchi Xie	Lubrizol
Phil Scinto	Lubrizol
Rachelle McCallister	Lubrizol
Victoria Abad	Lubrizol
Sachiko Okuda	Nissan
Jason Bowden	OHT
Clarence McCollum	Richful
Dave Duncan	Richful
Michael Liang	Richful
Alisha Hoffman	Savant
Canika Owen-Robinson	Savant
Greg Miiller	Savant
Pinal Shah	SGS
Sean Alston	SGS
Samuel Demel	Shell
Aoki Hisashi	Subaru
Suzuki Yumi	Subaru
Adam Ramos	SwRI
Beck Grinfield	SwRI
Travis Kostan	SwRI
Yong-Li McFarland	SwRI
Jeff Clark	TMC
John Loop	TMC
Sean Moyer	TMC
Satoshi Hirano	Toyota
Venkat Deshpande	Toyota
Jared Cavaliere	Valvoline
Jeremy Styer	Vanderbilt
Beth Schwab	

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 (V10.3) 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 May 2026

Agenda:

- 1. Ballot review and method updates
- 2. Research report status
- 3. Time to 40C additional comments
- 4. TMC oil assignment update

EOGT Ballot

Designation: XXXX – XX

Date: January 21, 2026
To: Subcommittee B
Tech Contact: Yong-Li McFarland, ymcfarland@swri.org, 210-522-2715
Work Item #: WK86363
Ballot Action: Approval of a new test method
Rationale: A user requested a new test method to evaluate the filterability and gelation of engine oils due to field issues. Two other filterability methods, ASTM D6795 and D6794, were found not to discriminate against this failure mode. In March 2023, a task group was formed to work on developing this method with the user and other industry participants to correctly show gelation on a poor oil sample and no gelation on a good oil sample. These 2 oil samples were provided by the user and related to the gelation and decreased filterability in the field oils. The original field issue was believed to have been from calcium detergent drop out with elevated amounts of water in the oil that formed a gel, blocking filters and passage in the engine. This test was developed to be used as a bench test to screen oils for this issue. As such, this method has been added to new passenger car engine oil test specification and formal approval as an ASTM method is urgently needed.

The ILS was conducted between March and December of 2025, with the analysis producing the precision statement for the determinability, repeatability, and reproducibility on a range of industry engine oil samples. The ILS research report will be separately balloted.

Ballot History: This is the first ballot to the subcommittee. This draft test method has been repeatedly reviewed and revised by the task group. Numerous updates on the method have been given at Subcommittee B Engine Oil meetings within the last 1.5 years with invitation to anyone having comments to join the task group.

Standard Test Method for

Measuring the Gelation Propensity of Automotive Engine Oils After Treatment with Acidified Water

INTRODUCTION

Portions of this test method are written for use by laboratories that make use of ASTM Test Monitoring Center (TMC)2 services (see Annex A1).

The TMC provides reference oils, and engineering and statistical services to laboratories that desire to produce test results that are statistically similar to those produced by laboratories previously calibrated by the TMC.

In general, the Test Purchaser decides if a calibrated test stand is to be used. Organizations such as the American Chemistry Council require that a laboratory utilize the TMC services as part of their Engine test registration process. In addition, the American Petroleum Institute and the Gear Lubricant Review Committee of the Lubricant Review Institute (SAE International) require that a laboratory use the TMC services in seeking qualification of oils against their specifications.

The advantage of using the TMC services to calibrate test stands is that the test laboratory (and

D02.B0 (26-02) SubB Ballot passed with 2 comments

D02 (26-03) Main Ballot had 2 negatives, and 2 comments

Next Main/Concurrent ballot deadline is April 4, with April 27 and May 8 as later dates

See updated EOGT procedure with edits

Main Ballot D02 26-03 Negatives and comments

Alex Lau Negative

D02(26-03) ITEM 1 WK86363

Bases for negative:

> non-compliance to Form & Style A21.2.2 and A21.4. The requirements as underlined in the quotation below are not met. No Research Report was provided with the ballot. No brief summary of the ILS was included.

from Form & Style:

A21.2.2 Precision shall be estimated in accordance with the interlaboratory test program prescribed in Practice E691, Conducting an Interlaboratory Study to Determine the Precision of a Test Method, or by an interlaboratory test program that yields equivalent information, for example, a standard practice developed by an ASTM technical committee. The data and details of the interlaboratory study to determine precision shall be filed as a research report at ASTM International Headquarters, provided ASTM holds copyright permissions. The precision statement shall include reference to the research report in a Note."

A21.4 General Considerations:
A21.4.1 The precision and bias section of the test method shall include a brief descriptive summary of the interlaboratory study that will permit the user of the test method to judge the reliability of the data. This summary should include number of laboratories, number of property levels tested, range of the measured average property levels, and number of replicate tests. The summary may be included in a Note.

Main Ballot D02 26-03 Negatives and comments cont.

Negative

Ballot Number:	D02 (26-03)	Close Date: MARCH 29, 2026
Item Number:	001	Test Method for Measuring the Gelation Propensity of Engine Oils After Treatment with Acidified Water (EOGT) WK86363 36 AFF. - 0 NEG. - 65 ABS. TECHNICAL CONTACT: Yong Li McFarland yongli.mcfarland@swri.org (522) 27-15
Member's Name:	william vanbergen	
Address:	Savant, Inc.	
Phone Nr:	9896002768	Fax Nr:
Email Address:	bvanbergen@savantgroup.com	
File Attachment:		
Statement:		

Section	**Statement**
11.1.2.2	11.1.2.2 Over 5 – 10 s, lower the tool to be on or near the bottom of the container and continue to shear in a circular motion for the remaining time. **To ensure the sample is homogenous, continuous motion is imperative. Tilting and vertical motion have been found to be helpful.** Ensuring homogeneity of the test sample is critical to consistent results with this method. If tilting and vertical motion are critical, they should be required across all samples and well defined.

Main Ballot D02 26-03 Negatives and comments cont.

Abstain with comment

Ballot Number:	D02 (26-03)	Close Date: MARCH 29, 2026
Item Number:	001	Test Method for Measuring the Gelation Propensity of Engine Oils After Treatment with Acidified Water (EOGT) WK86363 36 AFF. - 0 NEG. - 65 ABS. TECHNICAL CONTACT: Yong Li McFarland yongli.mcfarland@swri.org (522) 27-15
Member's Name:	Marc Becker	
Address:	BRP-Rotax GmbH & Co KG	
Phone Nr:	436646182581	Fax Nr:
Email Address:	Marcandre.becker@brp.com	
File Attachment:		
Statement:		

Section	Statement
	Too less background about the test method to give an eligible statement

Main Ballot D02 26-03 Negatives and comments cont.

Greg Miiller
D02 Main Ballot 26-03
Item 1 EOGT Test method

Comment 1: Section 11
The wording for this section is not entirely clear. It is difficult to follow. The timing with the homogenizer moving from top to bottom can be interpreted different ways.

a. 11.1 Does the operator continue to go from the top to bottom with the homogenizer throughout the test?
b. 11.1 How close to the bottom should the operator remain with the homogenizer?
c. 11.1 Should the hole of the homogenizer ever be exposed and what happens if the homogenizer is taken to high? Does it invalidate the test?
d. 11.1 It mentions that tilting the sample may be helpful. When does that occur? What angle should it be?
e. 11.3.3 Indicates not to start the timing until the first drop or until 120 seconds. If the timer does not start, how does the operator know they are at 120 seconds?
f. Savant Labs will assist putting together some verbiage that may be helpful to improve these sections. We are working on it now.

Comment 2: Section 10
In section 10.3 it mentions to record the time it takes to reach 40 °C. However, there is not timeframe indicated to heat up to 40 °C. In other words, is it 10 minutes or 10 hours? Not sure if it matters. This is not identified so it is uncertain as to why this is recorded. Maybe just strike that section or add a timeframe such as “within 30 minutes”.

Comment 3: Section 15
As mentioned in my comments for the subcommittee ballot, there is no research report included. According to the ASTM form and style guide, unless there is temporary statement for repeatability, there needs to be a research report completed and referenced. As an officer of D02 it is part of my responsibility to be sure these procedures are followed. See below to help you with the verbiage:

A21.2.5 The statement regarding between-laboratory variability shall pertain to test results obtained with the same method on random test units from the same lot of homogeneous material in different laboratories with different operators using different equipment (reproducibility conditions).

A21.2.6 The precision statement shall include the repeatability standard deviation and reproducibility standard deviation; and shall include the 95 % repeatability limit and the 95 % reproducibility limit for the largest expected differences between two test results. The latter are numerically equal to 2.8 times the respective standard deviation for data that are known to be normally distributed, and approximately so for most other data encountered in ASTM committee work. Use a statement such as the following:

Precision[1]—The repeatability standard deviation has been determined to be (insert repeatability value) and the 95 % repeatability limit is (insert value). The reproducibility standard deviation has been determined to be (insert reproducibility value) and the 95 % reproducibility limit (insert value).

1 Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR: (insert report number). Contact ASTM Customer Service at service@astm.org.

Main Ballot D02 26-03 Negatives and comments cont.

Procedures For Handling Negative Votes

Consideration By The Subcommittee Shall Be Given To The Negative Vote, In Accordance With ASTM Regulations. Discussion Between The Negative Voter And The Subcommittee/Task Group Chair Or Technical Contact Prior To The Meeting Is Strongly Recommended.

The Subcommittee Chair Shall Complete And Return This Form To The Staff Manager At The Meeting Or Immediately Thereafter. If A Negative Is Withdrawn Before The Meeting Return This Pink Sheet Immediately To Prevent Any Unnecessary Delay.

1. ☐ **Negative Vote Determined Persuasive:** Item Is Withdrawn From Ballot. Choose one:
   - ☐ Please indicate new Work Item target date for ballot submission ___ / ___ / ___
   - ☐ Work item is to be dropped.
2. ☐ **Negative Vote Withdrawn**
3. ☐ **Negative Vote Withdrawn With Editorial Changes:** (Incorporate editorial changes in main committee ballot submittal.)
4. ☐ **Negative Vote Determined Not Persuasive** (Provide Rationale On Reverse Side For This Decision. Motions and Vote Counts Shall Be Taken)
5. ☐ **Negative Vote Determined Not Related** (Provide Rationale On Reverse Side For This Decision And The Plan For Further Consideration. Motions and Vote Counts Shall Be Taken)

For Action Taken, In 4 Or 5 Above, The Vote Count Shall Be Recorded Below.

Subcommittee Vote
A Vote Of ___ (For) And ___ (Against) And ___ (Abstain) At Subcommittee Meeting (Date) ___ / ___ / ___

Main Committee Vote
A Vote Of ___ (For) And ___ (Against) And ___ (Abstain) At Main Committee Meeting (Date) ___ / ___ / ___

Research Report status

Yong-Li with Phil's help updated the research report

Table of Contents

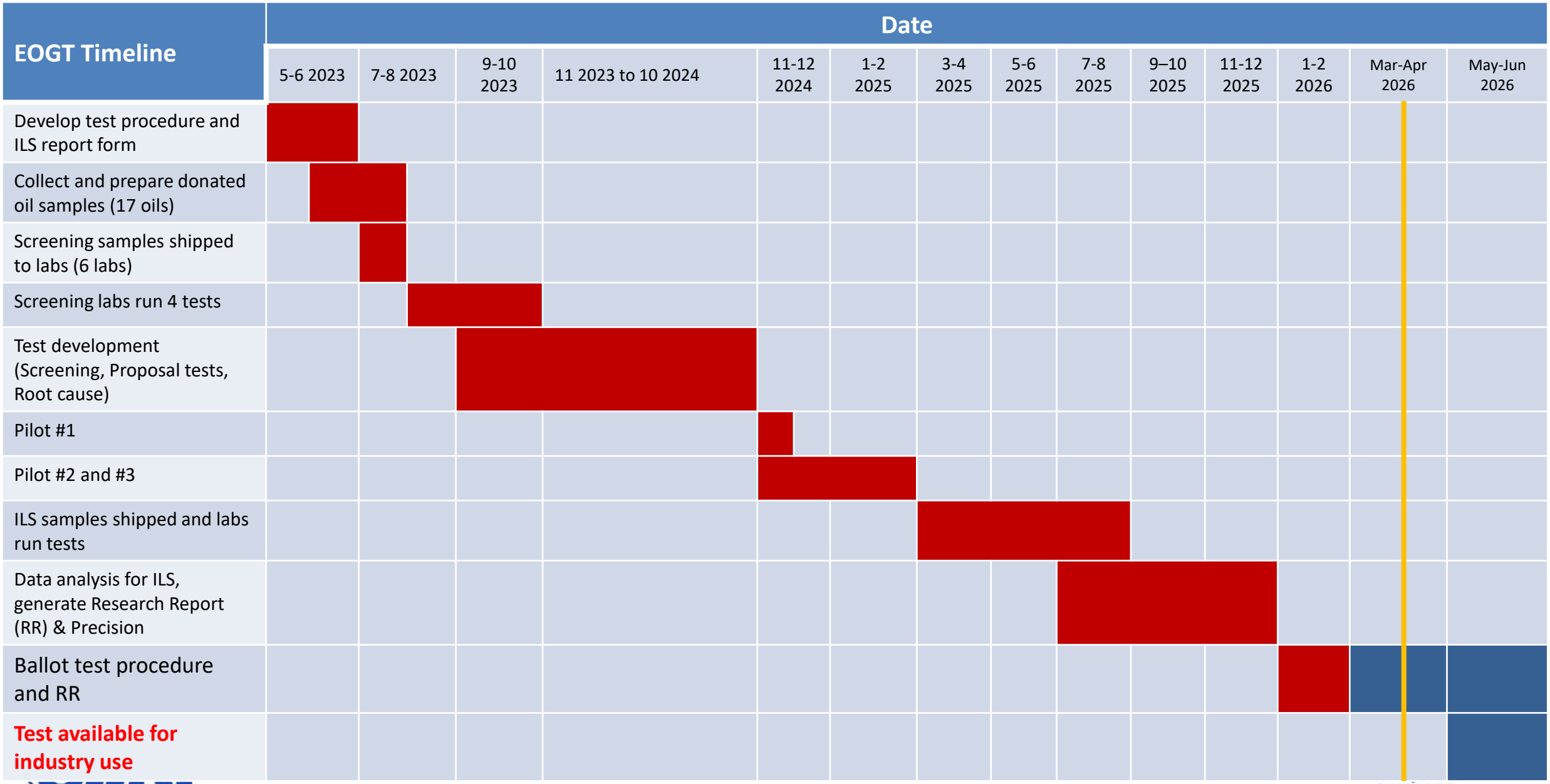
Time to 40C additional comments

- ?

TMC EOGT Calibration Oils

- How to request oil assignments
- Clarify # QC requirements: 1 run or 2 runs
- Comments

Timeline – updated March 30, 2026



Action Items and Next Meeting

- All: send Yong-Li names for EOGT SP chair
- All: send Yong-Li membership updates

- Add separate meeting for labs and TMC on oil assignment.

- Next meeting: *group to review ballot comments and negatives (if any)*

- Next Meeting: May 12 at 10am CST for 1 hr

Thank you for your support!

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