

Sequence V Surveillance Panel Meeting

Teams

Monday, June 10, 2026, 9:00 pm – 10:00 am EST

1.0) Attendance

Afton:	B. Maddock
BP:	B. Hochkeppel
Carless Haltermann	W. Hairston
Exxon	L. Salvi
Ford:	M. Deegan, R. Zdrodowski
GM:	K. Zreik
Haltermann Solutions:	E. Hennessy
Infineum:	J. Anthony, T. Dvorak
Intertek:	A. Lopez
Lubrizol:	T. Catanese
OHT:	J. Bowden
Oronite:	R. Affinito, J. Martinez
Shell:	S. Demel
SwRI:	C. Exposito, T. Kostan, P. Lang
TMC:	D. Beck, S. Moyer, B. Transue, W. Venhoff
TEI:	D. Lanctot
Toyota:	V. Deshpande
Valvoline:	B. Du Chene

1.0) Approved meeting minutes

The meeting minutes from March 16, 2026 were approved

2.0) Review of ASTM Update, J. Anthony

2.1) Reviewed Sequence V Report Presentation to ASTM

3.0) Fuel Supply Update, E. Hennessy

3.1) M-Batch Status

- 285,000 gallons in storage
- No RVP adjusts as of June 10, 2026

4.0) Reference Oil Discussion, A. Lopez

4.1) Reference Oil 1011-1 Supply Status

- TMC has less than 2 years of 1011-1
- 1011-1 is used in several test types
- TMC will work with the 1011-1 supplier to determine if another 5-year supply for all test types is possible.
- In the meantime, the VH SP Chair will work with TMC to request proposals for RO's from suppliers.

5.0) Stats Group Findings for M-Batch ICF: T. Dvorak

5.1) Reviewed M-Batch Reference Data Summary Presentation

- T. Dvorak believes that the reference test results are trending in the right direction
 - T. Kostan disagreed with the statement that the results are trending because there is only one result showing that it is trending closer to target.
- The latest ICF value calculated is lower than the value calculated in January 2026
- It was decided to not take action at this time and continue to monitor the test's performance

6.0) VH O&H Update: B. Maddock

6.1) Replacement for Pencool in RAC System

- The current procedure requires Pencool 2000 for the RAC coolant loop, however, this product line has been discontinued

ASTM Procedure D8256, Standard Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation in the Sequence VH Spark-Ignition Engine Fueled with Gasoline and Operated Under Low- Temperature, Light-Duty Conditions¹

8.4 Coolants:

8.4.1 Description—The engine coolant is equal parts of demineralized (less than 0.34 g/kg) or distilled water and a fully formulated ethylene glycol based automotive antifreeze to protect against corrosion of all system components. The RAC coolant is a solution of demineralized (less than 0.34 g/kg) or distilled water and an additive treatment of 475 mL of Pencool 2000^{24,13} per 15 L of water.

²⁴ The sole source of supply of Pencool 2000 coolant known to the committee at this time is Penray Cos., Inc., 1801 Estes Ave., Elk Grove, IL 60007.

- The VH O&H Task Force has been investigating alternative coolants
- Nalcool Nalfleet 2000 has been shown to be an equivalent alternative and passed a motion to bring this alternative to the VH Surveillance Panel for approval to change the procedure to document the change to Nalfleet 2000.

B. Maddock made the following **Motion**:

“Penray has discontinued their entire Pencool lineup and do not offer an alternative. Labs have identified that Nalcool Nalfleet 2000 is an allowable alternative. Modify Section 8.4.1 and remove footnote 26 as follows:

8.4.1 Description—The engine coolant is equal parts of demineralized (less than 0.34 g/kg) or distilled water and a fully formulated ethylene glycol based automotive antifreeze to protect against corrosion of all system components. The RAC coolant is a solution of demineralized (less than 0.34 g/kg) or distilled water and *a coolant* additive treatment¹³ of 475 mL *of* per 15 L of water. *Pencool 2000 and Nalfleet 2000 are the only approved coolant additive treatments in the RAC coolant.*”

- Motion seconded by J. Anthony
- Motion approved without further discussion or dissent

6.2) Intake manifolds, A. Lopez

- IAR has encountered threaded inserts being pulled out during an engine install
- IAR was concerned before this meeting, but located approximately 12 intake manifolds on-site since the initial alert
- The intake manifolds are no longer available from the dealer and likely not available from FCS.

7.0) Meeting Adjourned

- Meeting adjourned at 10:00 am EDT