

Cummins Surveillance Panel Meeting Minutes

February 19, 2025 10:00-11:30 CST

Participants:

Afton – Joe Hoehn, Amanda Stone, Bob Campbell, Ben Maddock

Chevron Oronite –Marnix Torremans

Cummins –Phil Shelton

Exxon Mobil – Mike Shea

Infineum – David Brass, Andrew Smith, Todd Dovrak

Intertek – Joshua Ward (Chairman), Garrett White

Lubrizol –Austin Brining, Jonathan Bolaney, Phil Scinto

SwRI – Joe Moore, Robert Warden, Jose Starling, Travis Kostan

TEI – Dan Lancot

TMC – Sean Moyer

Agenda:

- ISB RO 835 Target and LTMS Analysis
- ISB New Hardware Testing Status
- ISM New Hardware Testing Status

ISB RO 835 Target and LTMS Analysis:

- Multiple options for the LTMS charts were put forward.
 - Restart charts using only batch F tappets with proposed transforms and ICF's.
 - Restart charts using only batch E and F tappets with proposed transforms and ICF's
 - Keep data until F tappets as is, then apply transforms and ICF's to batch F tappets.
 - Overall, the changes to stand's charts and SA's between the options is minimal.

Motion: The panel accepts the proposed transforms and reference targets for RO 831-3 and 831-4 for all tests run after July 1st 2021. Camshaft wear will adopt a natural log transformation. Tappet wear will adopt a square root transform. The new targets are mean of 3.7495, stand deviation of 0.2302 for the natural log of ACSW and mean of 9.8590, standard deviation of 1.1755 for the square root of ATWL.

Joe Hoehn motions, Austin Bringer seconds.

For: Afton, Infineum, LZ, SwRI, TMC, Exxon, IAR

Against:

Waive: Cummins, TEI, Oronite

Motion carries.

Motion: The panel accepts the proposed correction factors for all reference tests run on batch F tappets and subsequent hardware and for all candidate tests on batch F tappets and subsequent hardware that complete on or after February 19, 2025. Camshaft wear will adopt a correction factor of -0.4552 applied to the transformed value. Tappet wear will adopt a correction factor of -0.7410 applied to the transformed value.

Austin Bringer motions, Andrew Smith seconds.

For: Afton, Infineum, LZ, SwRI, TMC, Exxon, IAR

Against:

Waive: Cummins, TEI, Oronite

Motion carries.

Motion: The panel accepts the proposed reference targets for RO 835. The new targets are mean of 3.9338, stand deviation of 0.2302 for the natural log of ACSW and mean of 9.7057, standard deviation of 1.1755 for the square root of ATWL.

Joe Hoehn motions, Josh Ward seconds.

For: Afton, Infineum, LZ, SwRI, TMC, Exxon, IAR

Against:

Waive: Cummins, TEI, Oronite

Motion carries.

ISB New Hardware Testing Status:

- IAR – Both tests have started.
- LZ – First run was invalid, will restart next week.
- SwRI – Will start this week or next.
- Afton – Potential start in mid-March, will depend on ISB vis testing.
- This is not a coordinated reference; level 2 Ei's are in use.

ISM New Hardware Testing Status:

- LZ – 125 hours into the test.
- SwRI – Test is complete, waiting on results.
- Oronite – Test is complete, results are similar to previous references.
- Afton – Test is complete, results are similar to previous references.

Next Steps:

- Labs will need to re-report references with batch F tappets starting Thursday February 20th.

Next Meeting: First week of March to review new hardware data for both ISB and ISM.