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# Test Monitoring Center

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MEMORANDUM: 21-033

DATE: October 14, 2021

TO: D7528 ROBO Surveillance Panel

FROM: Tom Schofield

SUBJECT: Replacement Reference Oil 436 and Updated Targets  
Effective October 21, 2021

On September 30, 2021, the D7528 ROBO Surveillance Panel voted to discontinue using reference oils 438 and 438-2 for LTMS calibrations. The oils were already suspended in favor of replacement oil 436, but are now officially discontinued. The TMC will contact labs individually about disposal of specific blind samples of 438 and 438-2.

The panel also approved updated targets on replacement oil 436. The LTMS ROBO section 43 will be updated accordingly with the following information (changes/additions in red font):

Table 1  
MRV VISCOSITY  
Unit of Measure: LN(MRV)

D7528 (ROBO) Aged Oil MRV Acceptance Bands, mPa·s and ln(mPa·s)								
Oil	n	Natural Log Transformed Mean (ln)	Mean in Original Units	s.d. (ln)	95% band in mPa·s Min <sup>1</sup>	95% band in mPa·s Max <sup>1</sup>	95% Bands Min (ln)	95% Bands Max (ln)
434-2	36	<sup>2</sup> 10.9284	<sup>2</sup> 55,737	0.1551	<sup>2</sup> 41,126	<sup>2</sup> 76,008	<sup>2</sup> 10.6244	<sup>2</sup> 11.2386
434-3	22	<sup>2</sup> 10.8172	<sup>2</sup> 49,871	0.1389	<sup>2</sup> 37,987	<sup>2</sup> 65,473	<sup>2</sup> 10.5450	<sup>2</sup> 11.0894
435-1	22	<sup>2</sup> 11.0416	<sup>2</sup> 62,420	0.20295	<sup>3</sup> 44,570	92,910	<sup>3</sup> 10.7048	11.4394
436	<b>36</b>	<b>10.3319</b>	<b>30,696</b>	<b>0.1290</b>	<b>23,840</b>	<b>39,525</b>	<b>10.0791</b>	<b>10.5847</b>

<sup>1</sup> 95% bands in mPa·s are listed for information purposes only, the transformed values will be used to judge acceptance in all cases.

<sup>2</sup> A bias adjustment has been applied to the means of reference oils 434-2, 434-3 and 436 to account for biases observed in the TMC reference data during the periods that each oil target dataset was generated. The 95% confidence range reflects the inclusion of the bias adjustments.

<sup>3</sup> The minimum value for Reference oil 435 is fixed at 60,000 (11.0021 in transformed units) and not a true 95% minimum as calculated from the statistics.

TMS mem21-033.pdf

cc: Frank Farber  
Jeff Clark

<https://www.astmtmc.org/ftp/docs/bench/robo/memos/mem21-033.pdf>

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