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Test Monitoring Center

203 Armstrong Drive, Freeport, PA 16229, USA

www.astmtmc.org
412-365-1000

MEMORANDUM: 24-005

DATE: March 5, 2024

TO: D02.B0.07 Section and Surveillance Panel Chairs

FROM: John Loop

SUBJECT: Adjusted Specification Limits for EOEC D7216 Tests

On February 2, 2023, the EOEC-LDEOC Surveillance Panel voted unanimously to resume the practice of determining acceptable test performance ranges for EOEC tests through the use of Adjusted Specification Limits by using Standard Deviation Values that were calculated from SL107 reference oil test results. A summary of the SL107 data that was presented at the meeting is shown in Table 1.

The within-lab and overall (total) standard deviations used to determine the Adjusted Specification Limits will be established from data collected using SL107 reference oil from the previous 2-year period (January 1st through December 31st) and updated on an annual basis by February 1st. Table 2 has the Standard Deviation values to be used for Adjusted Specification Limit calculations for 2024.

For details regarding which D7216 parameters use Adjusted Specification Limits and how to calculate Adjusted Specification Limits, please refer to the 2024 update of ASTM D 4485 (Section A5 4.1).

The current EOEC Standard Deviation values will be maintained on the TMC website at:

https://www.astmtmc.org/ftp/docs/bench/EOEC/memos/EOEC_Adj_Specification_Limit_StndDevs

https://www.astmtmc.org/ftp/docs/bench/EOEC/memos/mem24-005.pdf

JGL/jgl/mem24-005.jgl.docx

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TABLE 1: All SL107 Data Calculated through December 31, 2022

D7216 Reference Oil SL107 Data: STDEVs for EOEC Adj Limits Calculations
(All Standard Deviation Units in % Change)

Parameter		EOECF	EOECN	EOECP	EOECS	EOECV
VOLC	n	318	340	332	302	307
	Within Lab STDEV	0.19	0.56	0.41	1.43	1.50
	Overall STDEV	0.19	0.57	0.41	3.08	1.67
HARD	n	318	340	332	302	307
	Within Lab STDEV	1.62	1.31	1.52	1.31	1.36
	Overall STDEV	2.21	1.39	1.61	2.03	1.45
TENS	n	318	340	332	302	307
	Within Lab STDEV	2.63	4.72	7.00	4.11	5.35
	Overall STDEV	3.46	4.87	7.01	4.97	5.39
ELONG	n	318	340	332	302	307
	Within Lab STDEV	4.74	5.39	10.00	5.99	5.95
	Overall STDEV	5.85	5.38	10.18	7.23	6.50

Notes:

1: Surveillance Panel voted to resume the use of Overall STDEV for Candidate Pass/Fail Adjustment Calculation on 20230202

2: STDEV Values to be updated yearly based upon rolling 2-year averages of SL107 calibration data.

TABLE 2: SL107 Data Calculated between 1JAN2022 and 31DEC2023

D7216 Reference Oil SL107 Data: STDEVs for EOEC Adj Limits Calculations
(All Standard Deviation Units in % Change)

Parameter		EOECF	EOECN	EOECP	EOECS	EOECV
VOLC	n	246	279	252	237	233
	Within Lab STDEV	0.20	0.53	0.54	1.72	1.69
	Overall STDEV	0.21	0.57	0.57	3.08	1.88
HARD	n	246	279	252	237	233
	Within Lab STDEV	1.58	1.12	1.63	1.40	1.37
	Overall STDEV	2.14	1.16	1.70	2.13	1.46
TENS	n	246	279	252	237	233
	Within Lab STDEV	2.82	5.22	6.93	4.42	5.84
	Overall STDEV	4.02	5.53	7.14	5.14	5.82
ELONG	n	246	279	252	237	233
	Within Lab STDEV	4.64	6.36	10.24	6.18	7.44
	Overall STDEV	6.20	6.57	10.50	6.82	7.84

Notes:

1: Surveillance Panel voted to resume the use of Overall STDEV for Candidate Pass/Fail Adjustment Calculation on 20230202

2: STDEV Values to be updated yearly based upon rolling 2-year averages of SL107 calibration data.

3. Effective Date: YEAR 2024 (Source Data: SL107 Reference Oil Results 2022-2023)