



# Test Monitoring Center

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MEMORANDUM: 20-001  
DATE: January 9, 2020  
TO: D02.B0.07 EOEC Mailing List  
FROM: Tom Schofield  
SUBJECT: D7216 Technical Update - Replacement Reference Oil SL107

On December 19, 2019, the D02.B0.07 D7216 (EOEC/LDEOC) Surveillance Panel approved TMC Oil SL107 as a replacement for reference oil 1006-2 with the following performance targets:

### D7216 Reference Oil SL107 Targets Effective January 8, 2020 (All mean and standard deviation units in % change)

| Parameter |                   | EOECF  | EOECN  | EOECP  | EOECS  | EOECV               |
|-----------|-------------------|--------|--------|--------|--------|---------------------|
| VOLC      | n                 | 17     | 18     | 16     | 15     | 17                  |
|           | Mean <sup>1</sup> | 0.44   | -0.08  | 0.20   | 32.17  | 18.54               |
|           | s.d. <sup>2</sup> | 0.15   | 0.84   | 0.76   | 2.95   | 1.49                |
| HARD      | n                 | 17     | 18     | 16     | 15     | 17                  |
|           | Mean <sup>1</sup> | 8.04   | 1.83   | -0.01  | -21.68 | -7.48               |
|           | s.d. <sup>2</sup> | 2.20   | 1.77   | 1.80   | 2.04   | 0.95                |
| TENS      | n                 | 17     | 18     | 16     | 15     | 17                  |
|           | Mean <sup>1</sup> | -71.32 | 2.80   | 0.36   | -33.75 | -15.33              |
|           | s.d. <sup>2</sup> | 5.35   | 7.33   | 8.04   | 3.70   | 4.84                |
| ELON      | n                 | 17     | 18     | 16     | 15     | 17                  |
|           | Mean <sup>1</sup> | -58.48 | -33.69 | -22.58 | -24.81 | -34.96              |
|           | s.d. <sup>2</sup> | 8.99   | 6.72   | 8.94   | 6.25   | 7.40                |
| Parameter |                   | LDEOCA | LDEOCF | LDEOCN | LDEOCP | LDEOCS <sup>3</sup> |
| VOLC      | n                 | 16     | 19     | 18     | 18     | 15                  |
|           | Mean <sup>1</sup> | 24.20  | 0.68   | 0.32   | 2.05   | 32.17               |
|           | s.d. <sup>2</sup> | 0.77   | 0.15   | 0.60   | 0.66   | 2.95                |
| HARD      | n                 | 16     | 19     | 18     | 18     | 15                  |
|           | Mean <sup>1</sup> | -12.73 | 4.10   | -1.18  | -0.21  | -21.68              |
|           | s.d. <sup>2</sup> | 0.91   | 1.01   | 0.87   | 1.54   | 2.04                |
| TENS      | n                 | 16     | 19     | 18     | 18     | 15                  |
|           | Mean <sup>1</sup> | -16.84 | -57.40 | 5.97   | 2.58   | -33.75              |
|           | s.d. <sup>2</sup> | 3.87   | 4.34   | 4.87   | 8.44   | 3.70                |

Notes:

<sup>1</sup>A bias adjustment relative to the reference oil 1006-2 performance in the round robin study is applied to derive the SL107 mean targets.

<sup>2</sup>The SL107 target standard deviations (s.d.) are carried over from the 1006-2 targets, at least until the precision on additional elastomer batches can be evaluated using oil SL107.

<sup>3</sup>The LDEOCS targets for SL107 are duplicated from the EOECs derived targets, rather than using the LDEOCS round robin results.

The data set used to determine these limits is posted here:

[http://www.astmtmc.cmu.edu/ftp/docs/bench/eoec/minutes/20191113\\_EOEC-LDEOC\\_SL107RR\\_Data.xlsx](http://www.astmtmc.cmu.edu/ftp/docs/bench/eoec/minutes/20191113_EOEC-LDEOC_SL107RR_Data.xlsx)

The minutes, including the panel decisions and the statistical analysis of the data set, is posted here:

<http://www.astmtmc.cmu.edu/ftp/docs/bench/eoec/minutes/20191219%20EOEC-LDEOC%20Teleconference%20Minutes.pdf>

TMS/tms

c: <http://www.astmtmc.cmu.edu/ftp/docs/bench/eoec/memos/mem20-001.pdf>

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