

MEMORANDUM: 25-019

DATE: September 11, 2025

TO: OSCT Surveillance Panel

FROM: Dylan Beck *Dylan Beck*

SUBJECT: Reference Oil 171-1 Introduction

During a conference call on September 9th, 2025 the OSCT panel agreed to approve reference oil 171-1 for test use with the previous 171 reference oil targets. The effective date of this change is September 10th 2025.

ELONGATION

Unit of Measure: Percent

Reference Oil	Elastomer	Mean	Standard Deviation
160-1	Polyacrylate	23.04	14.289
160-1	Fluoroelastomer	-47.65	5.506
161-1	Polyacrylate	68.88	17.850
161-1	Fluoroelastomer	-34.57	6.989
161-1	Nitrile	10.43	10.691
162	Nitrile	-65.35	7.330
168	Nitrile	-74.52	6.965
169	Polyacrylate	49.2	21.82
169	Fluoroelastomer	-39.5	6.99
169	Nitrile	-16.2	10.69
170	Nitrile	-70.68	3.007
171/171-1	Polyacrylate	25.090	11.415
171/171-1	Fluoroelastomer	-47.949	5.947

SHORE HARDNESS

Unit of Measure: Points

Reference Oil	Elastomer	Mean	Standard Deviation
160-1	Polyacrylate	-1.8	1.16
160-1	Fluoroelastomer	1.6	1.36
161-1	Polyacrylate	-24.9	2.83
161-1	Fluoroelastomer	1.6	1.30
161-1	Nitrile	-16.1	2.18
162	Nitrile	2.0	2.03
168	Nitrile	3.0	1.89
169	Polyacrylate	-16.0	2.83
169	Fluoroelastomer	0.1	1.30
169	Nitrile	-8.6	2.18
170	Nitrile	1.500	0.718
171/171-1	Polyacrylate	0.223	1.858
171/171-1	Fluoroelastomer	0.987	1.664

VOLUME CHANGE
Unit of Measure: Percent

Reference Oil	Elastomer	Mean	Standard Deviation
160-1	Polyacrylate	0.343	0.4473
160-1	Fluoroelastomer	2.053	0.4075
161-1	Polyacrylate	19.624	1.4348
161-1	Fluoroelastomer	6.199	0.7080
161-1	Nitrile	18.444	1.7057
162	Nitrile	2.460	1.5821
168	Nitrile	1.326	1.4730
169	Polyacrylate	13.1	1.43
169	Fluoroelastomer	4.4	0.71
169	Nitrile	11.8	1.71
170	Nitrile	2.325	0.341
171/ 171-1	Polyacrylate	-0.088	1.096
171/ 171-1	Fluoroelastomer	2.167	1.201

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cc: Jeff Clark

Sean Moyer

OSCT Surveillance Panel

<http://www.astmtmc.org/ftp/docs/gear/osct/memos/mem25-019.pdf>

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