



## Test Monitoring Center

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EOEC Information Letter No. 09-2  
Sequence No. 4  
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*ASTM consensus has not yet been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.*

TO: EOEC Mailing List

SUBJECT: Revision of Passenger Car Elastomer Test Precision Estimates

The Engine Oil Elastomer Compatibility Surveillance Panel previously approved and added five new elastomers to Test Method D 7216. Test precision estimates in Annex A2 for these elastomers have been revised, based upon corrections to the precision matrix data.

The updated sections of Test Method D 7216 are attached and are effective the date of this information letter.

Becky Grinfield  
EOEC Surveillance Panel Chairman  
Southwest Research Institute

Frank M. Farber  
Administrator  
ASTM Test Monitoring Center

Attachment

c: [ftp://ftp.astmtmc.cmu.edu/docs/bench/eoec/procedure\\_and\\_ils/il09-02.pdf](ftp://ftp.astmtmc.cmu.edu/docs/bench/eoec/procedure_and_ils/il09-02.pdf)

Distribution: Email

(Revises Test Method D 7216-08a, as amended by Information Letter 09-01)

**TABLE A2.2 Hydrogenated Nitrile (HNBR-1) Reference Oil Precision Data**

NOTE—These statistics are based on results obtained on Test Monitoring Center reference oil 1006-1 between March 19, 2009 and April 30, 2009.

Variable	S <sub>i.p.</sub>	i.p.	S <sub>R</sub>	R
Volume Change, %	0.14	0.39	0.19	0.53
Hardness Change, Points	0.47	1.32	0.87	2.44
Tensile Strength Change, %	4.11	11.51	4.71	13.19
Elongation Change, %	4.71	13.19	9.60	26.88
Tensile Stress Change @ 50% Elongation, %	5.62	15.74	9.35	26.18

**TABLE A2.3 Polyacrylate (ACM-1) Reference Oil Precision Data**

NOTE—These statistics are based on results obtained on Test Monitoring Center reference oil 1006-1 between March 19, 2009 and April 30, 2009.

Variable	S <sub>i.p.</sub>	i.p.	S <sub>R</sub>	R
Volume Change, %	0.16	0.45	0.17	0.48
Hardness Change, Points	0.37	1.04	0.61	1.71
Tensile Strength Change, %	3.76	10.53	4.95	13.86
Elongation Change, %	11.47	32.12	12.29	34.41
Tensile Stress Change @ 50% Elongation, %	17.80	49.84	22.61	63.31

**TABLE A2.4 Fluoroelastomer (FKM-1) Reference Oil Precision Data**

NOTE—These statistics are based on results obtained on Test Monitoring Center reference oil 1006-1 between March 19, 2009 and April 30, 2009.

Variable	S <sub>i.p.</sub>	i.p.	S <sub>R</sub>	R
Volume Change, %	0.14	0.39	0.18	0.50
Hardness Change, Points	0.52	1.46	1.04	2.91
Tensile Strength Change, %	1.28	3.58	3.91	10.95
Elongation Change, %	2.13	5.96	4.31	12.07
Tensile Stress Change @ 50% Elongation, %	2.69	7.53	12.21	34.19

**TABLE A2.5 Silicone (VMQ-1) Reference Oil Precision Data**

NOTE—These statistics are based on results obtained on Test Monitoring Center reference oil 1006-1 between March 19, 2009 and April 30, 2009.

Variable	S <sub>i.p.</sub>	i.p.	S <sub>R</sub>	R
Volume Change, %	0.85	2.38	2.67	7.48
Hardness Change, Points	0.77	2.16	2.52	7.06
Tensile Strength Change, %	2.58	7.22	3.02	8.46
Elongation Change, %	3.84	10.75	7.25	20.3
Tensile Stress Change @ 50% Elongation, %	3.59	10.05	11.54	32.31

**TABLE A2.6 Ethylene Acrylate (AEM-1) Reference Oil Precision Data**

NOTE—These statistics are based on results obtained on Test Monitoring Center reference oil 1006-1 between March 19, 2009 and April 30, 2009.

Variable	$S_{i.p.}$	i.p.	$S_R$	R
Volume Change, %	0.44	1.23	0.49	1.37
Hardness Change, Points	0.46	1.29	0.72	2.02
Tensile Strength Change, %	2.37	6.64	2.69	7.53
Elongation Change, %	3.37	9.44	5.21	14.59
Tensile Stress Change @ 50% Elongation, %	4.22	11.82	5.76	16.13

## Legend:

- $S_{i.p.}$  = intermediate precision standard deviation.
- i.p. = intermediate precision.
- $S_R$  = reproducibility standard deviation.
- R = reproducibility.