

Oil Seal Compatibility Test (OSCT) Surveillance Panel Meeting Minutes

February 9, 2022

Don Bell

Participants listed on attachment in Appendix.

An OSCT Surveillance Panel Microsoft Teams and in-person meeting was called to order by D. Bell at 11:00 am on 2/9/2022. The agenda was reviewed and the membership list was passed around for signing attendance.

The 12 OSCT Surveillance Panel voting member list below was reviewed with no need for changes.

- D. Bell Afton (Chair)
- A. Comfort Army
- T. Muransky AAM
- R. Banas ExxonMobil
- B. Grinfield SWRI
- W. Venoff Lubrizol
- C. Knight TEI
- J. Carter Meritor
- M. Cabaj Linamar
- D. Beck TMC
- M. Lopez Intertek
- D. Mosher BASF

A motion made by D. Mosher and 2nd by M. Lopez was unanimously approved with 11 votes to approve the OSCT meeting minutes posted to the TMC website for 11/9/2021.

Labs C and G can conduct ASTM D5662 PA, FL, and NI tests with no known stand/bath issues.

The polyacrylate (PA) qualification status and Test Engineering Institute's (TEI) elastomer inventory were reviewed.

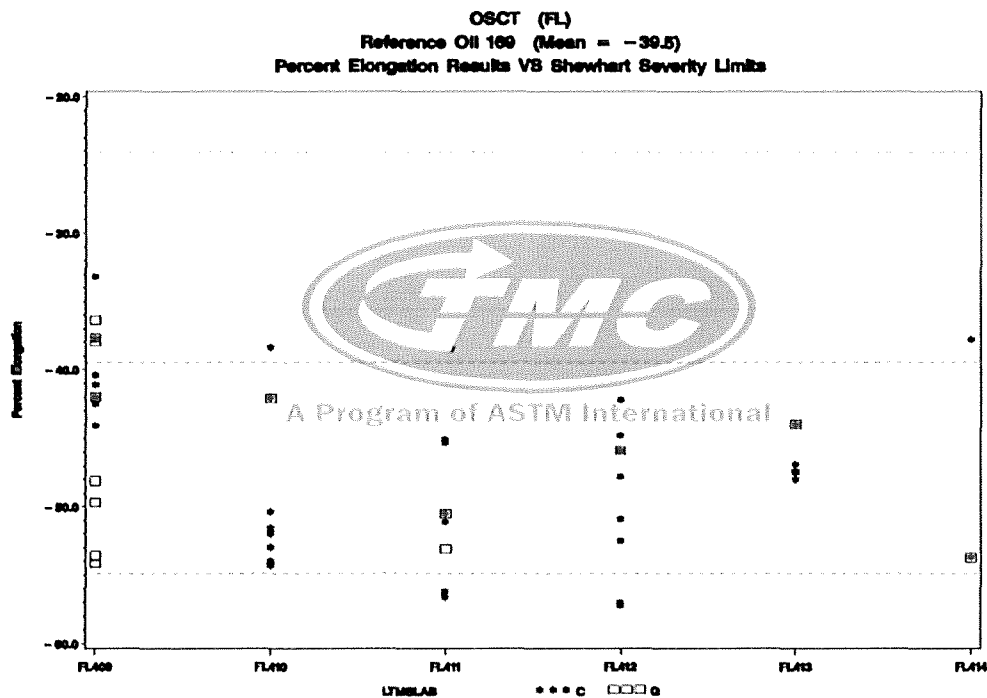
- PA366 TEI has 141 approved slabs
- PA367 TEI has 259 approved slabs
- PA368 TEI has 259 approved slabs

TEI was instructed to send out the oldest slabs (PA366) first to avoid slabs reaching shelf life.

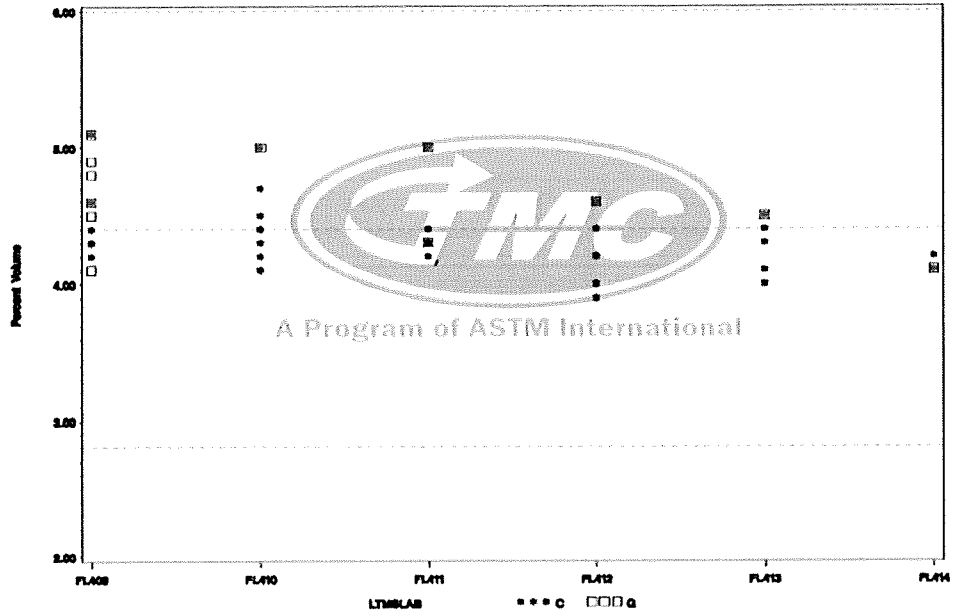
The fluoroelastomer (FL) qualification status and TEI's elastomer inventory were also reviewed.

- FL410 TEI has 18 approved slabs
- FL411 TEI has 0 approved slabs
- FL412 TEI has 58 approved slabs
- FL413 TEI has 66 approved slabs
- FL414 TEI has 179 unapproved slabs, so the qualification test results from both labs were reviewed in both TMC 169 and TMC 171 reference oils.

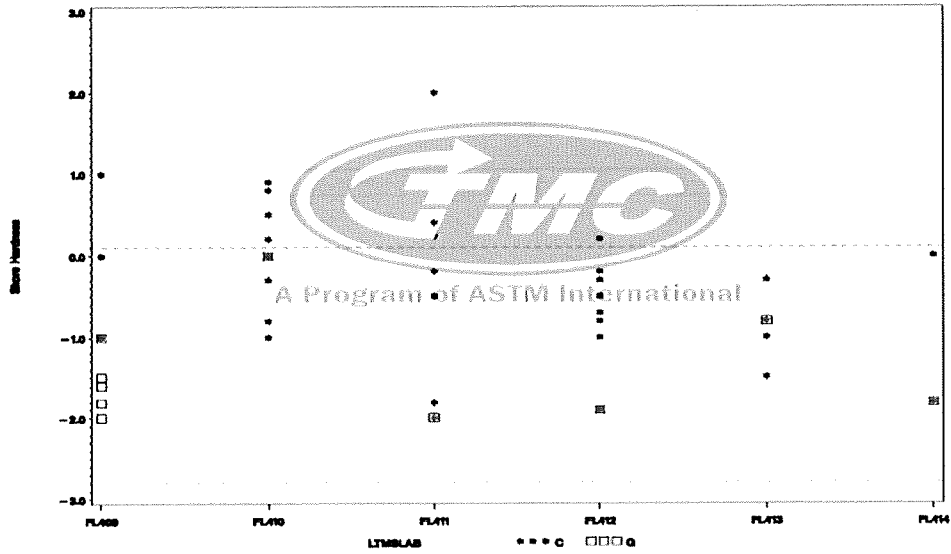
FL414 Elastomer Approval					
		Lab C	Validity	Lab G	Validity
169	Approval Run	166050-OSCT	NI	165157-OSCT	NI
	Accompanying Ref	166058-OSCT	AC	165161-OSCT	AC
171	Approval Run	164933-OSCT	NI	157640-OSCT	NI
	Accompanying Ref	166058-OSCT	AC	165156-OSCT	AC



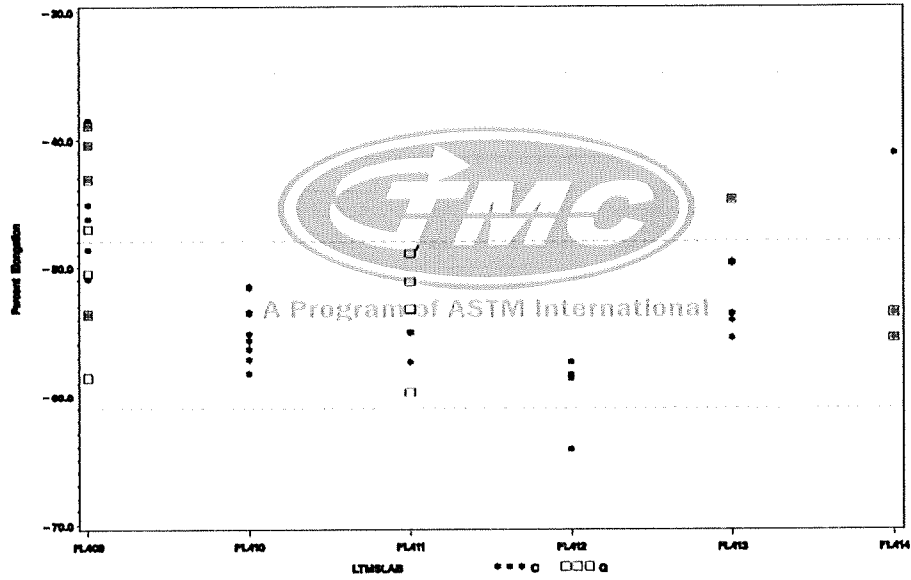
OSCT (FL)
 Reference Oil 169 (Mean = 4.4)
 Percent Volume Results VS Shewhart Severity Limits



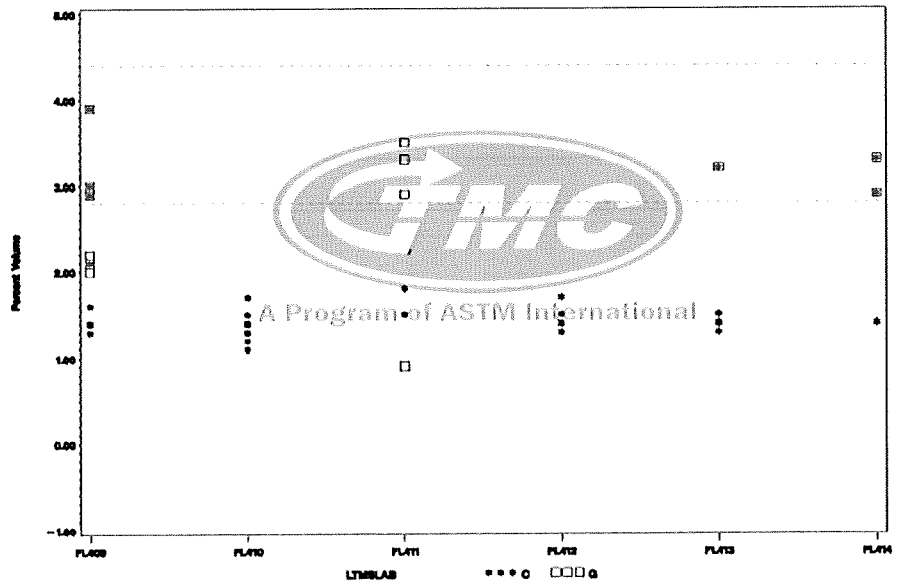
OSCT (FL)
 Reference Oil 169 (Mean = 0.1)
 Shore Hardness Results VS Shewhart Severity Limits

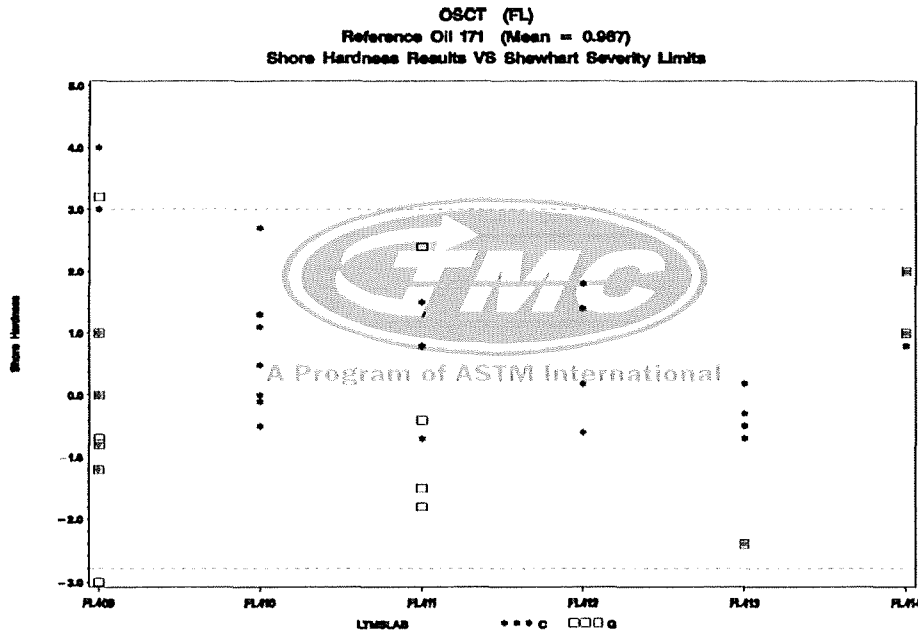


OSCT (FL)
 Reference Oil 171 (Mean = -47.948)
 Percent Elongation Results VS Shewhart Severity Limits



OSCT (FL)
 Reference Oil 171 (Mean = 2.167)
 Percent Volume Results VS Shewhart Severity Limits





The FL414 data from both labs is within the limits with values similar to past lots of elastomer. A motion made by D. Bell and 2nd by B. Grinfield was unanimously approved with 11 votes that effective immediately FL414 is fully approved for use for ASTM D5662 testing. TEI was instructed to release FL414 for sale.

TEI has 200 slabs of FL415 and several have been sent to both test labs for qualification testing and submission of results to TMC. Once data is received, D. Bell will call an OSCT meeting to review the data for consideration of approving FL415.

The nitrile (NI) qualification status and TEI's elastomer inventory were also reviewed.

- NI351 TEI has 78 slabs that expired 2/24/2022
- NI352 TMC plotted the following qualification data generated by both labs, but failing data was obtained in TMC 170 reference oil as shown below highlighted in red. The OSCT Panel decided to not approve NI352 due to these failures.

testkey	lmslab	val	ind	lmsdate	CHART	com1	com2	com3	com4	PVCA	SAHA	PELA	ETYP	EBC
168849-OSCT	C	MI	170	20220107	N	NI352	APPROV/SAHAL	PELAH		2.5	0.9	-64	NI	NI352
168849-OSCT	C	AC	169	20220107	Y	NI352	REF			12.2	-9.5	-16.1	NI	NI351
158285-OSCT	G	AC	170	20211213	Y	NI352	REF			2.8	2	-66.2	NI	NI351
158285-OSCT	G	MI	170	20211213	N	PELAH	NI352	APPROVAL		2.4	2	-57.3	NI	NI352
165155-OSCT	G	NI	169	20211213	N	NI352	APPROVAL			14.4	-11	-7.1	NI	NI352
166052-OSCT	C	MI	170	20211123	N	NI352	APPROV/PELAH	SAHAL		2.7	-0.2	-61.5	NI	NI352
166052-OSCT	C	AC	169	20211123	Y	NI352	REF			12.2	-10	-18.7	NI	NI351
166053-OSCT	C	NI	169	20211123	N	NI352	APPROVAL			13.1	-10.8	-15.4	NI	NI352

The NI351 trend line data was reviewed and found to be very stable over time. A motion made by W. Venhoff and 2nd by B. Grinfield as unanimously approved with 11 votes to extend NI351 shelf life expiration date to 8/24/2022 to allow for continued NI referencing and candidate testing. TEI instructed to retain NI351 and make available for sale as needed.

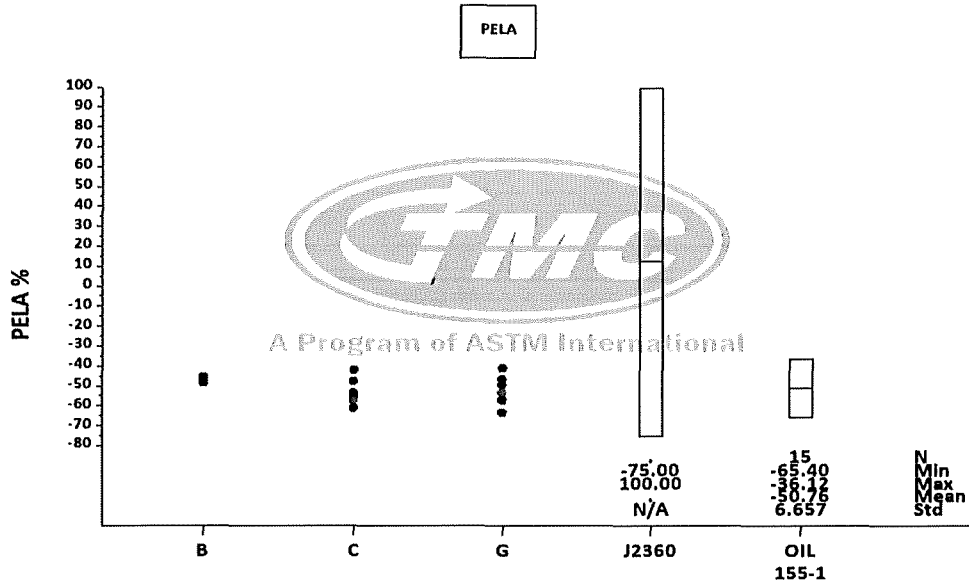
Both labs submitted their 2021 annual PA and FL test results with the industry reference oil, TMC155-1, along with a reference fluid, to TMC for graphing and review for approval to ensure results are in-control.

155-1 Annual Runs (2021)								
Ref Oil	Testkey		Lab	Elastomer	Validity	Dtcomp	Accompanying Ref	Ref validity
155-1	148365-OSCT	Approval Run	C	FL413	NI	20211112	164929-OSCT	AC
	148364-OSCT	Approval Run	C	PA366	NI	20211210	164932-OSCT	AC
155-1	131593-OSCT	Approval Run	G	PA365	NI	20211115	157634-OSCT	AC
	131594-OSCT	Approval Run	G	FL409	NI	20211115	157634-OSCT	AC

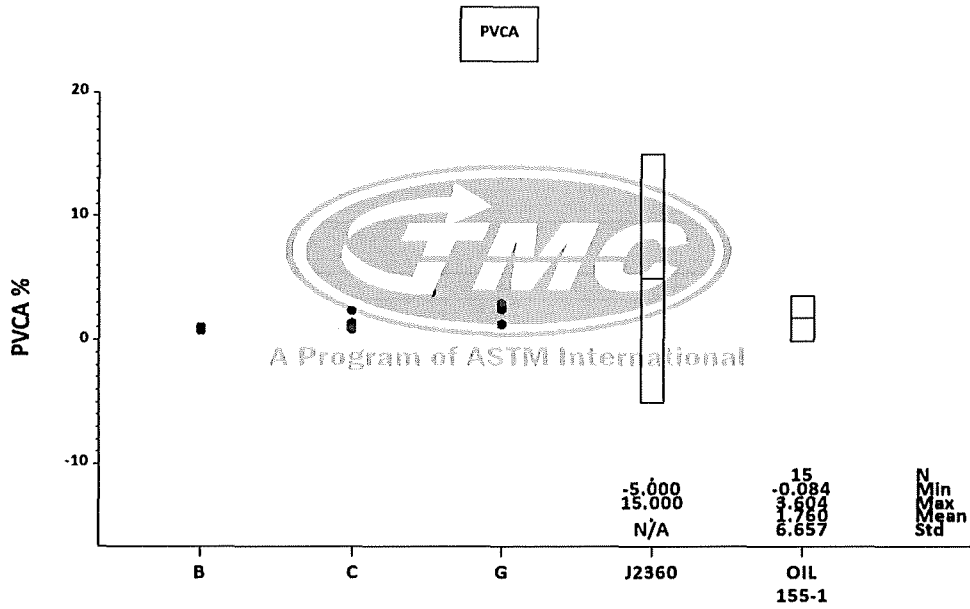
2021 Annual 155-1 Reference Oil Polyacrylate Results:

testkey	ltmslab	val	ind	ltmsdate	PVCA	SAHA	PELA	EBC
111180-OSCT	C	NI	155-1	20150925	1.2	0	-41.5	FL396
116408-OSCT	B	NI	155-1	20160411	1	3	-47.8	FL398
120862-OSCT	B	NI	155-1	20161115	0.8	4	-45.1	FL399
120890-OSCT	G	NI	155-1	20170309	1.3	3	-56.6	FL399
120855-OSCT	C	NI	155-1	20161010	2.4	-1	-53.1	FL400
120863-OSCT	B	NI	155-1	20171116	1.1	2	-46.4	FL402
120891-OSCT	G	NI	155-1	20171219	2.6	-1	-40.7	FL403
120858-OSCT	C	NI	155-1	20171221	1.4	3	-47.2	FL404
131159-OSCT	G	NI	155-1	20181207	2.5	0	-48.9	FL405
120860-OSCT	C	NI	155-1	20190903	1.4	4	-54.8	FL407
131596-OSCT	G	NI	155-1	20190913	2.9	1	-46.3	FL407
131160-OSCT	G	NI	155-1	20200928	2.9	1.8	-62.8	FL409
131594-OSCT	G	NI	155-1	20211115	3	0.8	-52.9	FL409
148363-OSCT	C	NI	155-1	20200925	0.9	3.8	-60.6	FL410
148365-OSCT	C	NI	155-1	20211122	1	4.1	-56.7	FL413

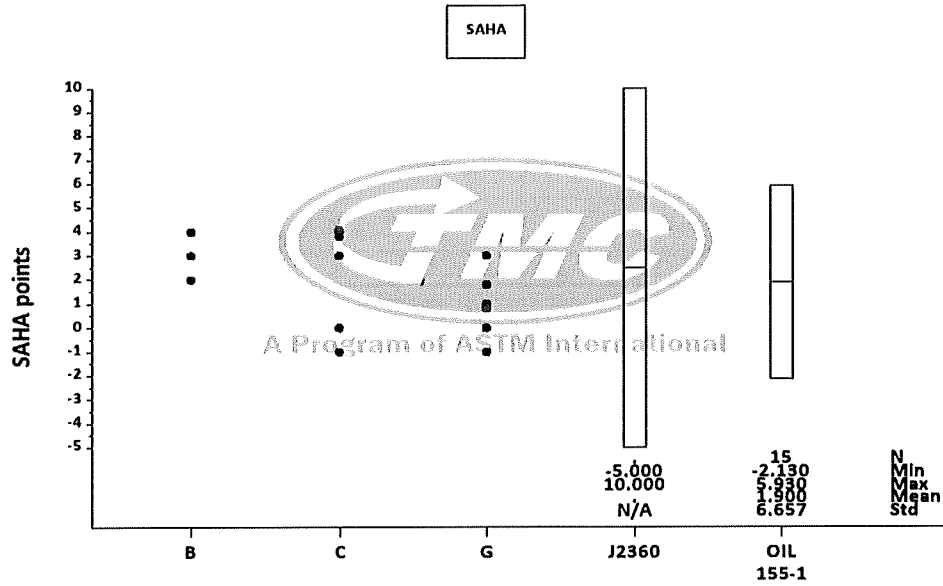
OSCT Reference Oil 155-1
FLUOROELASTOMER Results



OSCT Reference Oil 155-1
FLUOROELASTOMER Results



OSCT Reference Oil 155-1
 FLUOROELASTOMER Results

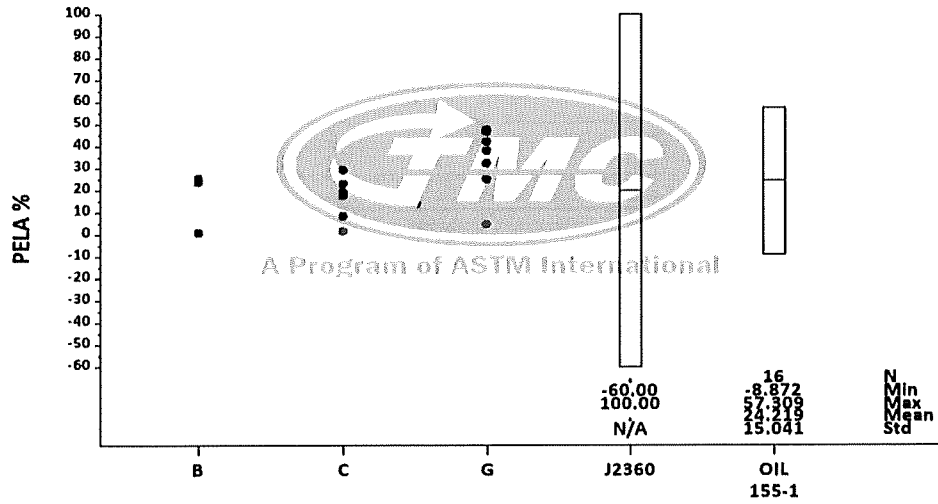


2021 Annual 155-1 Reference Oil Fluoroelastomer Results:

testkey	ltmslab	val	ind	ltmsdate	PVCA	SAHA	PELA	EBC
111179-OSCT	C	NI	155-1	20150927	0.4	1	8.6	PA352
116409-OSCT	B	NI	155-1	20160412	0.3	0	1	PA355
120856-OSCT	C	NI	155-1	20161013	0.1	-1	19.4	PA355
120886-OSCT	G	NI	155-1	20161020	-0.2	0	47.7	PA355
120861-OSCT	B	NI	155-1	20161027	0.5	-1	23.8	PA355
120865-OSCT	B	NI	155-1	20171214	0.2	-2	25.4	PA359
131157-OSCT	G	NI	155-1	20171214	0.7	0	38.2	PA359
120857-OSCT	C	NI	155-1	20171221	0.3	-2	23.2	PA359
131595-OSCT	G	NI	155-1	20190905	1	0	25.2	PA360
131158-OSCT	G	NI	155-1	20181207	1	-1	46.7	PA362
120859-OSCT	C	NI	155-1	20190905	-0.2	0	17.8	PA363
148362-OSCT	C	NI	155-1	20200924	-0.1	0.3	29.3	PA364
131591-OSCT	G	NI	155-1	20200928	12.7	-12	32.3	PA364
131592-OSCT	G	NI	155-1	20201214	-0.2	1.5	42.2	PA364
131593-OSCT	G	NI	155-1	20211115	-0.6	0.2	4.9	PA365
148364-OSCT	C	NI	155-1	20211210	-0.1	2.2	1.8	PA366

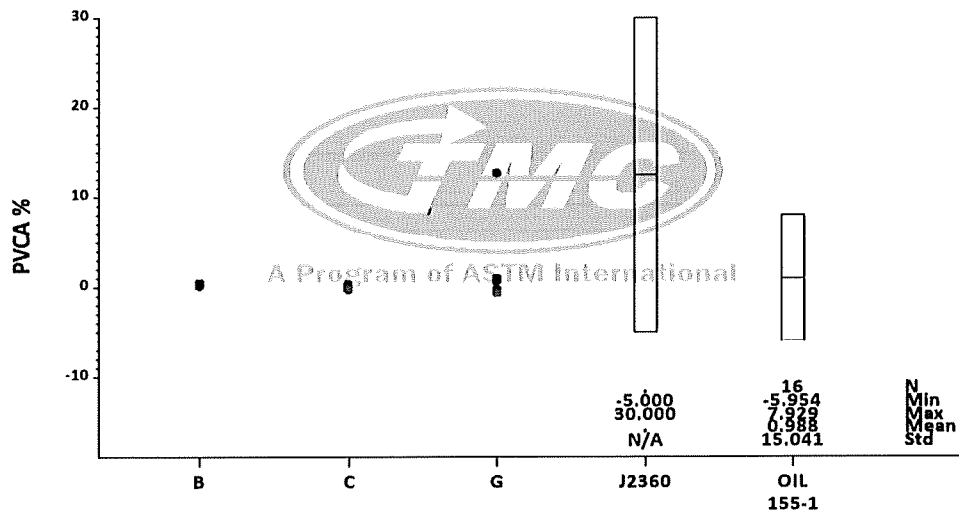
OSCT Reference Oil 155-1
POLYACRYLATE Results

PELA

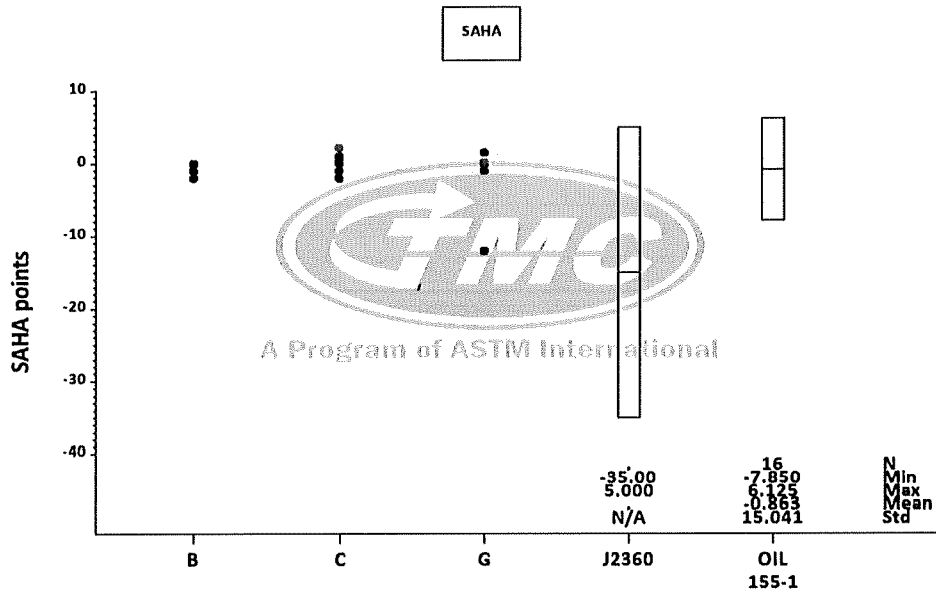


OSCT Reference Oil 155-1
POLYACRYLATE Results

PVCA



OSCT Reference Oil 155-1
POLYACRYLATE Results



Both PA and FL 155-1 results were within the J2360 limits and deemed acceptable and thus test is in-control.

A request will be made around August 2022 to add TMC 155-2 new industry reference oil to the annual testing of TMC 155-1 for both labs.

A motion made by D. Bell and 2nd by W. Venhoff was unanimously approved with 11 votes to adjourn the OSCT Panel meeting at 11:28 am on 2/9/2022.

Respectfully Submitted,

Donald Bell/OSCT Chairman

Appendix

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: Feb. 10, 2022 1 of 3

Initials	V= Voting NV= Non-	Name	Company & Address	Phone:	e-Mail:
	NV	Nancy Aguirre	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	210-647-9428	Nancy.AGUIRRE@Intertek.com
	V	Rob Banas	ExxonMobil Lubricants and Specialties 114 Arcadia Park Drive Canton, GA 30114	678-493-3930	Rob.a.banas@exxonmobil.com
DB	V	Dylan Beck	TMC 203 Armstrong Dr. Freeport, PA	412-365-1037	djb@astmtmc.org
DB	V	Don Bell <i>Chairperson</i>	Afton Chemical Corp. 500 Spring Street Richmond, VA 23219	804-788-6332	don.bell@aftonchemical.com
MC phone	V	Mike Cabaj	McLaren/Linamar	313-820-0119	Michael.cabaj@linamar.com
JE	V	Jason Carter	Meritor		Jason.carter@meritor.com
	NV	Jeff Clark	TMC 203 Armstrong Dr. Freeport, PA	412-365-1032	jac@astmtmc.org
A.C.	V	Allen Comfort	US Army CCDC-GVSC RDTA-DP/MS110 6501 E. 11 Mile Road Warren, MI 48307-5000	586-282-4225 <i>army</i>	Allen.s.comfort.civ@mail.mil
	NV	Brian Foecking	The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092	440-349-2130	bjf@lubrizol.com
Buy	NV	Arjun Goyal	BASF 500 White Plains Road Tarrytown, NJ 10951	914-785-2083	Arjun.goyal@basf.com
BCG phone	V	Rebecca Grinfield	Southwest Research Institute P.O. Drawer 28510 San Antonio, TX 78228-0510	210-522-3652	becky.grinfield@swri.org

Initials	V = Voting NV = Non-voting	Name	Company & Address		
KG phone	NV	Kimberly Gutierrez	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	e-Mail:	kimberly.hernandez@intertek.com
Q	NV	Dan Horvath	Afton Chemical 2000 Town Center Southfield, MI 48075	e-Mail:	dan.horvath@aftonchemical.com
EK phone	V	Clayton Knight	Test Engineering Institute 12718 Cimarron Path San Antonio, TX 78249	Phone: e-Mail:	210-690-1958 cknight@tei-net.com
	NV	Dan Lanctot	Test Engineering Institute 12718 Cimarron Path San Antonio, TX 78249	e-Mail:	dlanctot@tei-net.com
	NV	Jessica LaBond	Meritor 2135 W. Maple Rd. Troy, MI 48084	Phone: e-Mail:	248-872-3055 jessica.labond@meritor.com
AL	NV	Anthony Lange	Intertek 5404 Bandera Rd. San Antonio, TX 78238	Phone: e-Mail:	210-634-1103 anthony.lange@intertek.com
ML phone	V	Mike Lopez	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	e-Mail:	mike.lopez@intertek.com
DM	V	Donna Mosher	BASF 100 Park Ave. Florham Park, NJ	Phone: e-Mail:	269-217-1715 Donna.mosher@basf.com
CXC	NV	Caroline Mueller	SWRI	Phone: e-Mail:	210-522-2671 Caroline.louis@swri.org
TM	V	Troy Muransky	AAM 1840 Holbrook Detroit, MI 48212	e-Mail:	troy.muransky@aam.com
	NV	Suzanne Neal	Daimler Trucks/Detroit Diesel	e-Mail:	Suzanne.neal@daimler.com

MS	NV	Matt Sangpeal	Afton Chemical Ashland Technical Center 11289 Central Drive Ashland, VA 23005	Phone: e-Mail:	804-788-5364 matt.sangpeal@aftonchemical.com
	NV	Eric Sattler	US Army CCDC-GVSC RDTA-DP/MS110 6501 E. 11 Mile Road Warren, MI 48307-5000	e-Mail:	Eric.r.sattler.civ@mail.mil
RS	NV	Robert Slocum	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	e-Mail:	robert.slocum@lubrizol.com
	NV	Dale Smith	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	Phone: e-Mail:	412-855-6854 Dale.smith@intertek.com
WV	V	Wes Venhoff	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	e-Mail:	Wes.venhoff@lubrizol.com
RW	NV	Rebecca Warden	Southwest Research Institute P.O. Drawer 28510 San Antonio, TX 78228-0510	Phone: e-Mail:	210-522-6266 Rebecca.Warden@SWRI.org
DU	NV	Dairene Uy	Shell	e-Mail:	dairene.uy@shell.com
	NV	Khaled Zreik	General Motors	Phone: e-Mail:	248-977-9214 Khaled.zreik@gm.com
AB	NV	Amy Zyski	Dana Inc. 3939 Technology Drive Maumee, OH 43537	Phone: e-Mail:	419-887-3432 Amy.zyski@dana.com

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