

Oil Seal Compatibility Test (OSCT) Surveillance Panel Meeting Minutes

Troy, MI (Automation Alley)

5/9/2012

D. Bell

Participants:

S. Parke (TMC)	B. Dwornick (Army)	A. Comfort (Army)	S. Eliot (XOM)
B. Grinfield (SWRI, phone)	L. Hamilton (Lz)	S. Higuichi (Afton)	B. Koehler (SWRI)
J. Gropp (Lz)	B. McGlone (Meritor)	T. Muransky (Meritor)	B. Kearney (Afton)
D. Bell (Afton)	C. Knight (TEI)	P. Kanga (XOM)	K. Hobson (Afton)
D. Smith (Intertek)	K. Zreik (GM)	C. Knight (TEI, phone)	T. Boschert (Afton)
T. Gottwald (Afton)	W. Recinos (Afton)	D. Mosher (Eaton, phone)	W. Venhoff (Lz)
J. Zakarian (Chevron)	A. Trader (Intertek)	C. O'Brien (GM)	

The attached OSCT Surveillance Panel membership list of 10 voting and numerous non-voting members was reviewed and those non-voting members that have not participated over the last year have been eliminated from the list.

A motion made by B. McGlone and 2nd by B. Grinfield was unanimously approved by 8 voting members to approve the OSCT Surveillance Panel meeting minutes from 2/8/2012 and 4/3/2012 that are posted on the TMC website.

There are multiple baths available at both Lz and SWRI with no known related "stand" bath problems or severity issues.

The Test Engineering Institute (TEI) has the approximate seal inventory:

- PA 345: 26 slabs
- PA346: 300 slabs, distributed on 4/24/2012 to SWRI and Lz for qualification testing
- FL385: 178 slabs, qualification data reviewed as noted below
- FL386: 200 slabs, distributed on 4/11/2012 to SWRI and Lz for qualification testing
- NI339: 106 slabs
- NI340: 200 slabs, distributed on 4/3/2012 to SWRI and Lz for qualification testing)

SWRI and Lz expect to complete the qualification testing on PA346 and FL386 within the next several weeks, so the chairman will call an OSCT Surveillance Panel teleconference to review the data when available. TEI was instructed to track the NI340 shipment to SWRI since they did not locate these seals on site.

Since polyacrylate (PA) and fluoroelastomer (FL) are depleted rather quickly, it was recommended that Test Engineering Institute (TEI) order a new batch of PA and FL as soon as the prior lot is approved to

ensure an adequate supply of inventory is maintained. Since NI is not used as often, the typical protocol of ordering new NI when the TEI inventory drops to ~100 slabs will remain in place.

TMC-169 has been identified as a J2360 oil that was approved as a replacement for the discontinued TMC reference oil 161-1. Lz and SWRI have been collecting D5662 data side-by-side with TMC -161 and TMC-169 and have now depleted their inventory of TMC-161. TMC has 5 drums of TMC 169 and both labs have sufficient quantity for using TMC-169 as a reference oil. The Test Monitoring Center (TMC) established new acceptance bands for TMC-169 based upon the mean of the results obtained on TMC-169 and either the standard deviation currently being used for TMC-161 or the standard deviation from data developed on TMC-169, whichever is larger.

The qualification data conducted by Lz and SWRI as compiled by the TMC for the new batch of FL385 (data in Appendix), was reviewed by the Panel. The % elongation and volume change, as well as shore hardness change for FL385 in both 169 and 160-1 reference oils fell within the Shewhart acceptance bands. A motion passed (7 approved/0 disapproved/1 abstention from TMC) that was made by D. Bell and 2nd by B. Grinfield: Effective immediately approve FL385 batch for ASTM D5662 testing. TEI was instructed to release FL385 for sale as orders are received.

Meeting adjourned at 1:14 pm on 5/9/2012.

Respectfully Submitted,

A handwritten signature in cursive script that reads "Don Bell". The signature is written in black ink and is positioned above the printed name.

Don Bell

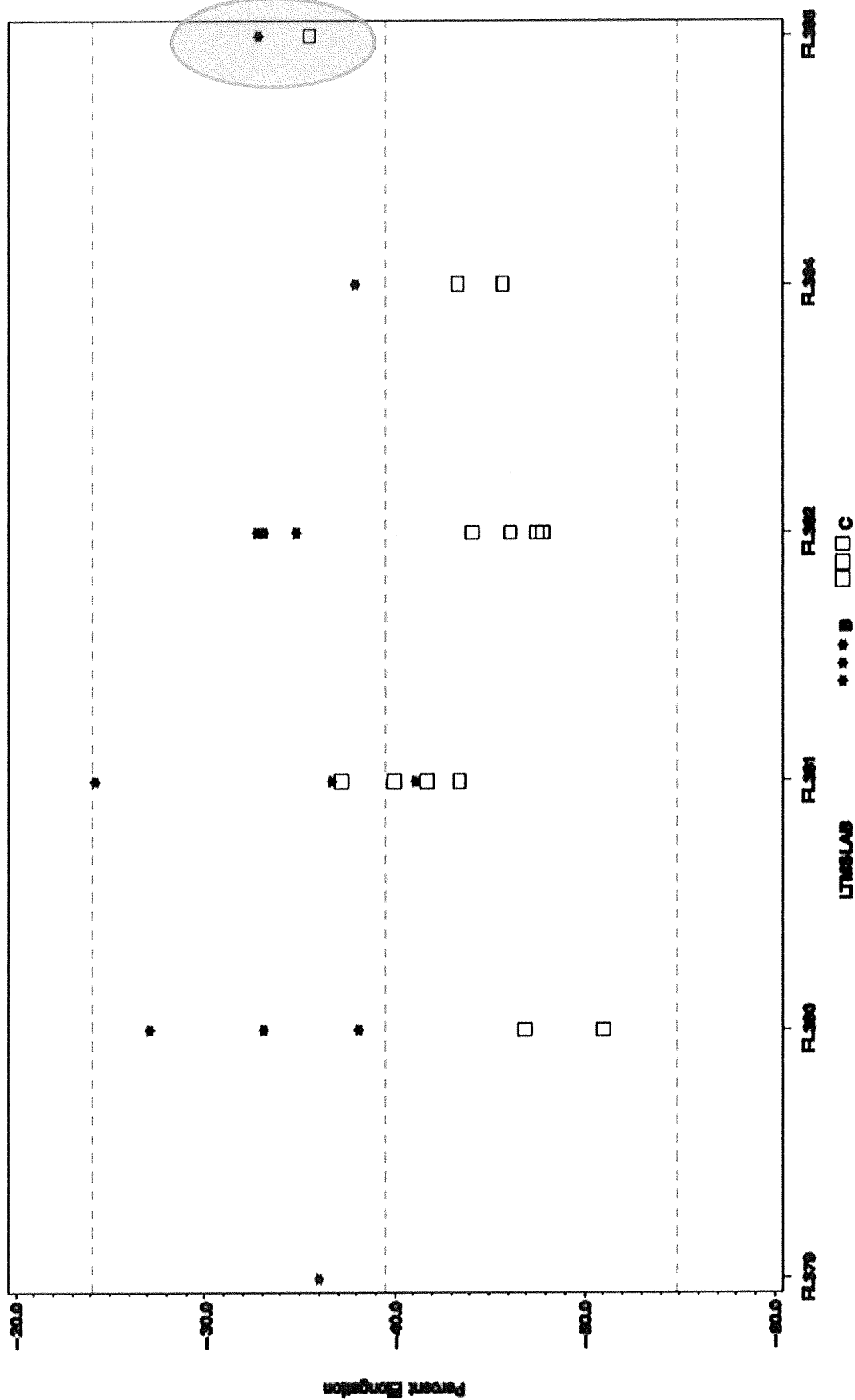
Appendix

OSCT Surveillance Panel Meeting

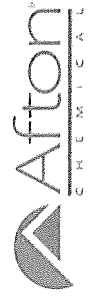
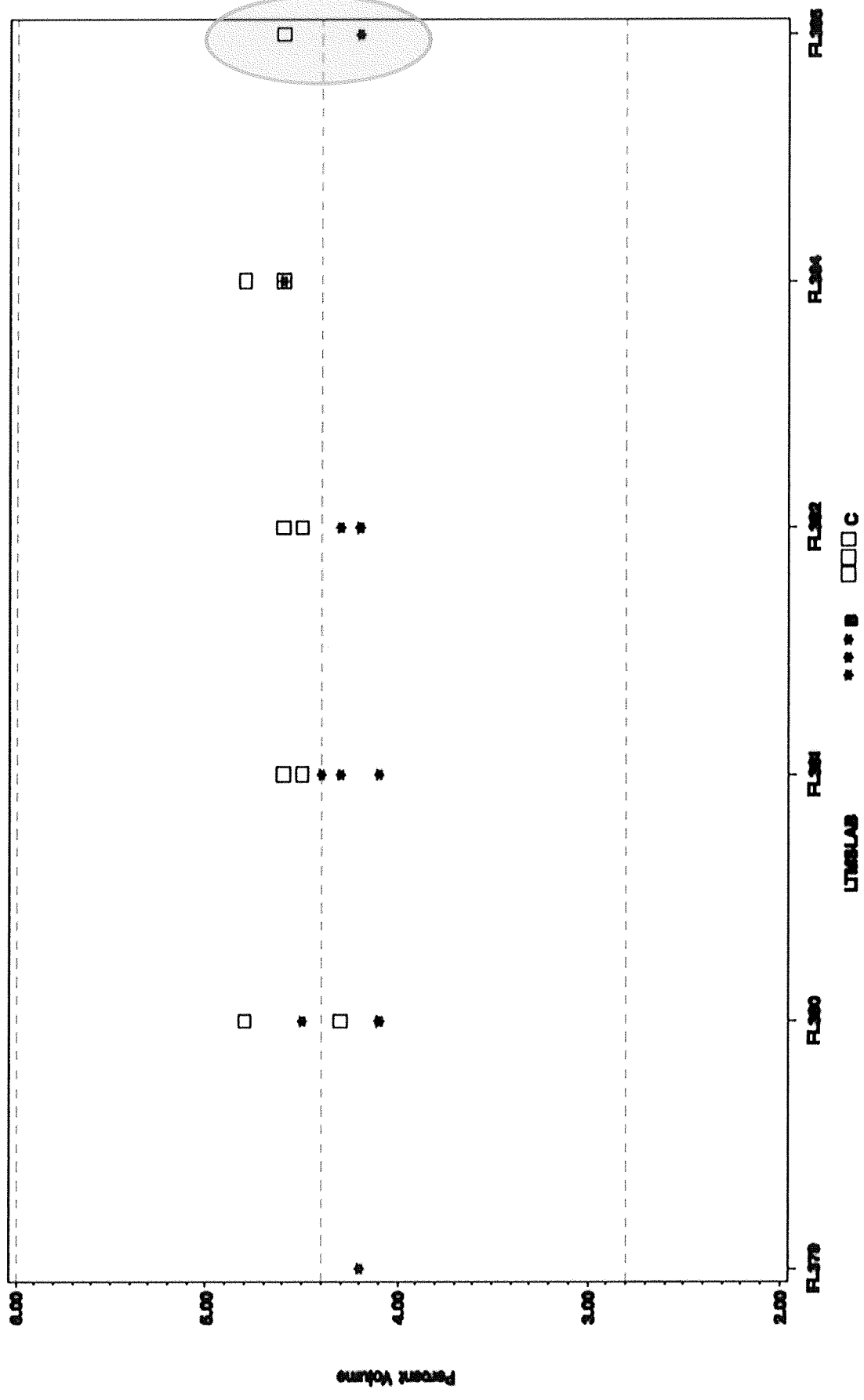
5/9/2012

FL385: TMC Reference Oil Data

OSCT (FL)
Reference Oil 169 (Mean = -39.5)
Percent Elongation Results VS Shearhart Severity Limits



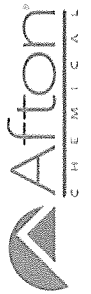
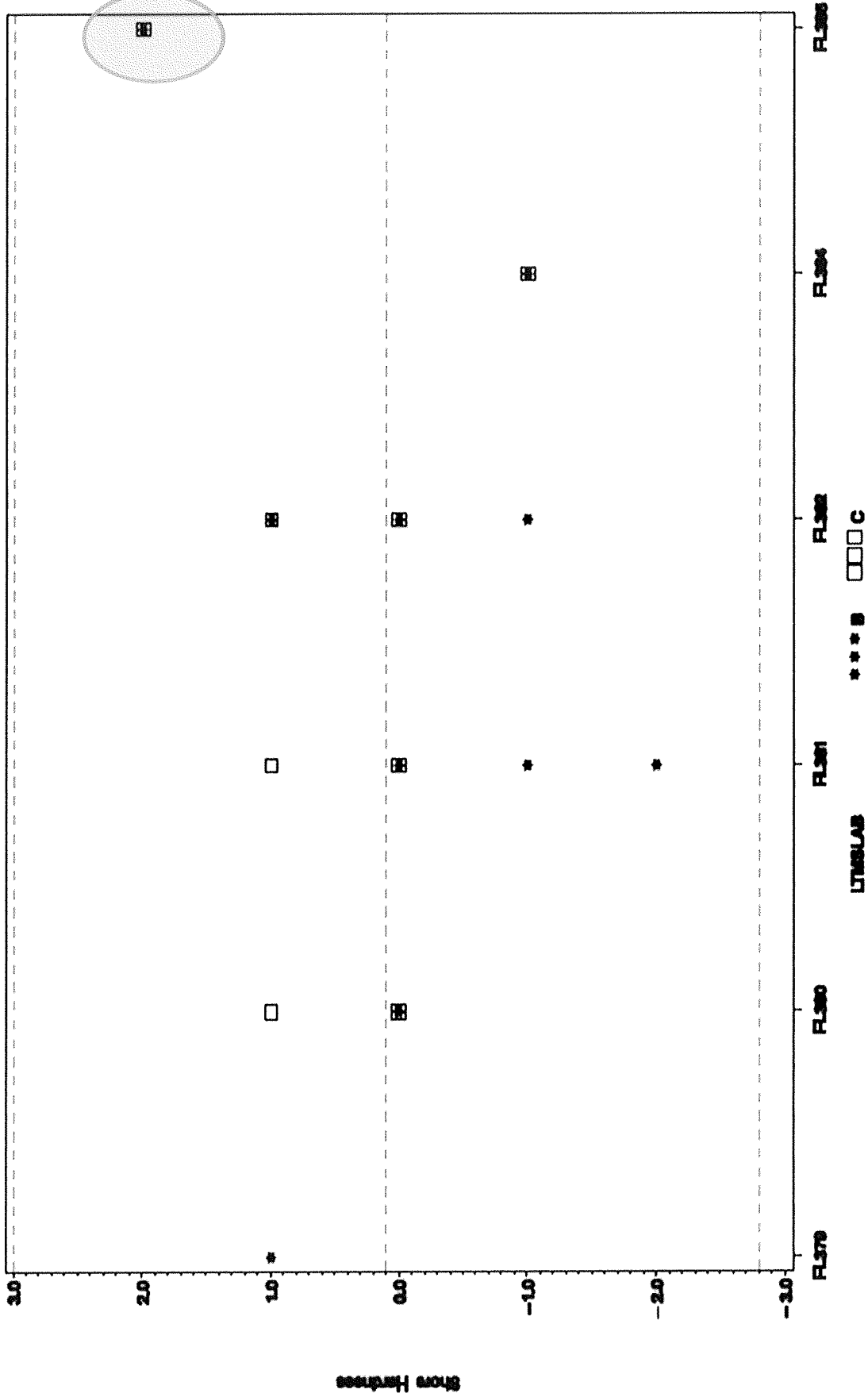
OSCT (FL)
Reference Oil 169 (Mean = 4.4)
Percent Volume Results VS Shewhart Severity Limits



Passion for Solutions™

OSCT SP Meeting

OSCT (FL)
 Reference Oil 168 (Mean = 0.1)
 Shore Hardness Results VS Shearhart Severity Limits



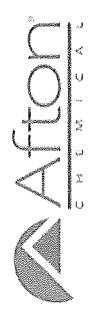
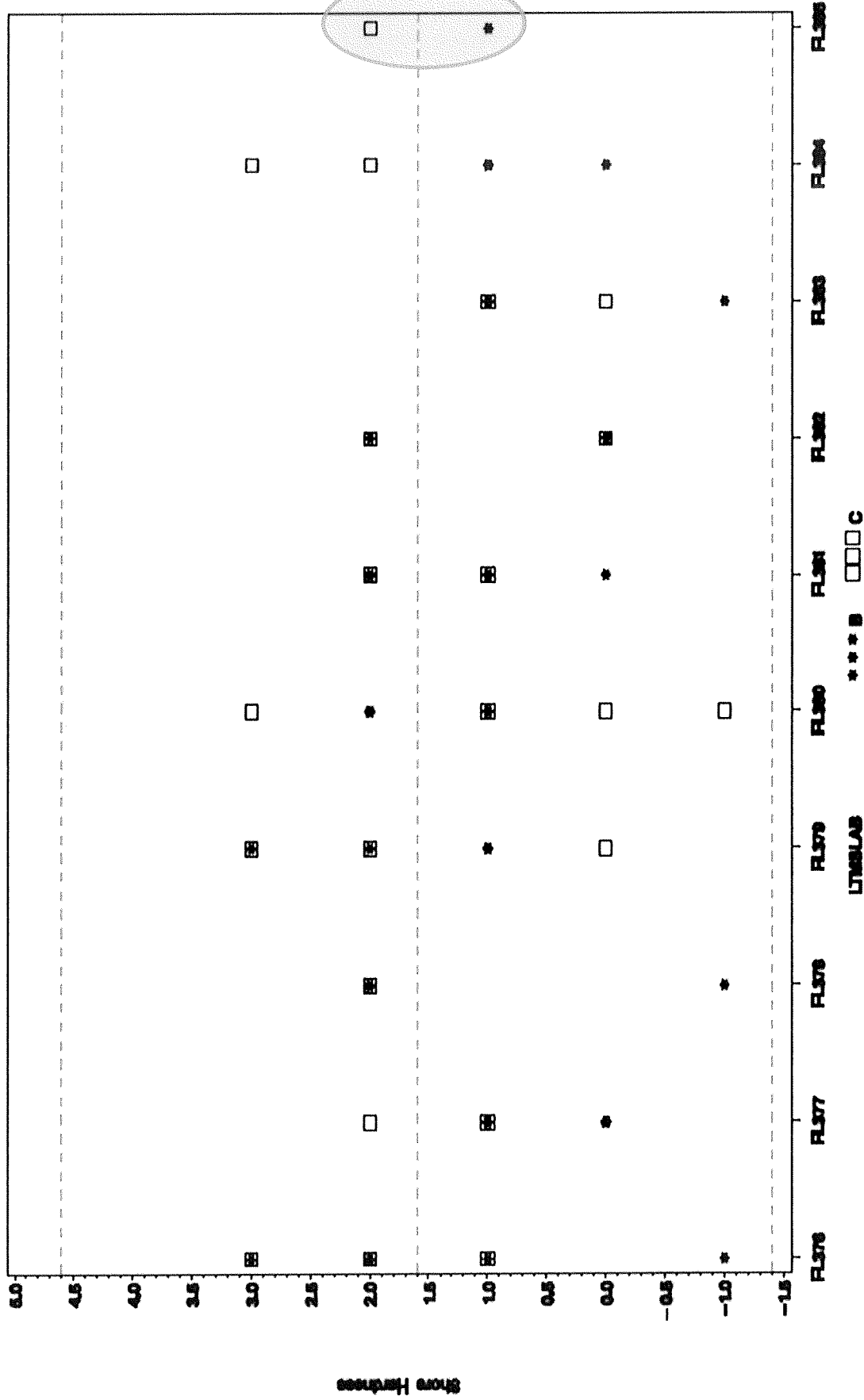
Passion for Solutions™

OSCT SP Meeting

OSCT (FL)

Reference Oil 160-1 (Mean = 1.6)

Shore Hardness Results VS Shevart Severity Limits



Passion for Solutions™

OSCT SP Meeting

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: May 9, 2012

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail
	NV	Allison Athey	Volvo Powertrain N.A. 13302 Pennsylvania Ave. Hagerstown, MD 21742-2675	Phone: 301-790-5400 x3109 FAX: 301-790-5815 e-Mail: Allison.athey@volvo.com
	V	Don Bell <i>Chairperson</i>	Afton Chemical Corp. 500 Spring Street Richmond, VA 23219	Phone: 804-788-6332 FAX: 804-788-6243 e-Mail: don.bell@aftonchemical.com
	NV	Zack Bishop	TEI	Phone: FAX: e-Mail: zbishop@tei-net.com
<i>MB</i>	NV	Tom Boschert	Afton Chemical Corp. 500 Spring St. Richmond, VA 23219	Phone: 804-788-5202 FAX: 804-788-6243 e-Mail: Tom.boschert@aftonchemical.com
	NV	Jeff Clark	Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206	Phone: 412-365-1032 FAX: 412-365-1047 e-Mail: jac@astmtmc.cmu.edu
<i>AL</i>	V	Allen Comfort	US Army TACOM RDTA-DP/MS110 6501 E. 11 Mile Road Warren, MI 48307-5000	Phone: 586-282-4225 FAX: 586-282-4244 e-Mail: Allen.s.comfort@us-army.mil <i>allen.s.comfort.civ@wpmail.mil</i>
	V	John D'harte	American Axle 1 Dauch Drive Detroit, MI 48211	Phone: 313-758-4687 FAX: 313-758-4237 e-Mail: dhartej@aam.com
<i>BD</i>	NV	Bridget Dwornick	US Army RDECOM/TARDEC RDTA-DP/210 MS 110 6501 E 11 Mile Road Warren, MI 48397-5000	Phone: 586-282-4221 FAX: 586-282-4244 e-Mail: Bridget.dwornick@us.army.mil
<i>SWZ</i>	NV	Stephen Eliot	ExxonMobil 18486 Lanier Island Square Leesburg, VA 20176	Phone: 703-669-9916 FAX: 703-669-9917 e-Mail: Stephen.w.eliot@exxonmobil.com

Will Reinos

WR

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date:

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail
	NV	Hong Gao	ConocoPhillips 1000 S. Pine Street Ponca City, OK 74602	Phone: 580-767-2126 FAX: 580-767-4534 e-Mail: Hong.gao@concoPhillips.com
TG	NV	Thomas Gottwald TG	Afton Chemical Corp. 500 Spring St. Richmond, VA 23219	Phone: 804-788-5230 FAX: e-Mail: Thomas.gottwald@aftonchemical.com
/	NV	G. Greene	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347-2394 FAX: 440-347-2394 e-Mail: ggre@lubrizol.com
B. Quinn	V	Rebecca Grinfield	Southwest Research Institute P.O. Drawer 28510 San Antonio, TX 78228-0510	Phone: 210-522-3652 FAX: 210-522-5907 e-Mail: bgrinfield@swri.org
J. H.	V	Jerry Gropp	The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347-1223 FAX: 440-347-5337 e-Mail: jlg@lubrizol.com
LPH	NV	Larry Hamilton	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347-2326 FAX: e-Mail: Larry.hamilton@lubrizol.com
SH	NV	Sam Higuchi	Afton Chemical Corp. 500 Spring Street (23219) P.O. Box 2158 Richmond, VA 23218-2158	Phone: 804-788-5375 FAX: 804-788-6358 e-Mail: Samuel.higuchi@aftonchemical.com
BK	NV	Bill Kearney	Afton Chemical Corp Southfield, MI	Phone: 248-350-0640 FAX: e-Mail: Bill.kearney@aftonchemical.com
	NV	Jennifer Keiter	The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347-8034 FAX: 440-347-8003 e-Mail: Jennifer.keiter@lubrizol.com

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date:

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail
	NV	Brian Koehler	Southwest Research Institute P.O. Drawer 28510 San Antonio, TX 78228-0510	Phone: 210-522-3588 FAX: 210-684-7523 e-Mail: bkoehler@swri.org
	NV	Percy Kanga	ExxonMobil Research and Engineering 600 Billingsport Rd. Paulsboro, NJ 08066	Phone: 856-224-2094 FAX: 856-224-3613 e-Mail: Percy.r.kanga@exxonmobil.com
	V	Clayton Knight	Test Engineering Institute 12718 Cimarron Path San Antonio, TX 78249	Phone: 210-690-1958 FAX: 210-877-0228 e-Mail: cknight@tei-net.com
	V	Thelma Marougy	Eaton Corporation 26201 Northwestern Highway Southfield, MI 48037	Phone: 248-226-6985 FAX: 248-226-1739 e-Mail: thelmaemarougy@eaton.com
	V	Bruce McGlone	Meritor 2135 West Maple Troy, MI 48084-7121	Phone: 248-435-9929 FAX: 248-435-6602 e-Mail: Bruce.McGlone@meritor.com
	NV	Donna Mosher	Eaton Corporation 13100 E. Michigan Avenue Galesburg, MI 49053	Phone: 269-342-3039 FAX: 269-746-6039 e-Mail: donnamosher@eaton.com
	(NV) Alternate	Troy Muransky	Meritor 2135 West Maple Rd. Troy, MI 48084-7121	Phone: 248-435-1409 FAX: 248-435-6602 e-Mail: Troy.muransky@meritor.com
	V	Scott Parke	ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206	Phone: 412-365-1033 FAX: 412-365-1047 e-Mail: sdp@astmtmc.cmu.edu
	V	Dale Smith	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	Phone: 412-855-6854 FAX: e-Mail: Dale.smith@intertek.com

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: _____

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail
	NV	Chintan Ved	Ford 35500 Plymouth Road Livonia, MI 48150	Phone: 313-805-9495 FAX: e-Mail: cved@ford.com
WVE	NV	Wes Venhoff	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347-4879 FAX: e-Mail: wve@lubrizol.com
KZ	NV	Khaled Zreik	General Motors	Phone: 248-977-9214 FAX: e-Mail: Khaled.zreik@gm.com

NV Jack Zakarian

Chevron

JAZA @ CHEVRON.COM

ATT NU

Angela Trader Intertek Automotive
Research

2107061533 angela.trader@
intertek.com

CB0 NV

Cheryl O'Brien General Motors Co.

248-343-7347
cheryl.obrien@gm.com