

Oil Seal Compatibility and Testing Meeting Minutes

SAE/PRI Warrendale, PA

2/9/2011

Attendees:

G. Greene (Lz)	J. Gropp (Lz)	B. Koehler (SWRI)
D. Smith (Intertek)	D. Bell (Afton)	J. D'harte (American Axle)
S. Parke (TMC)	T. Marougy (Eaton)	R. Graziano (Lz)
K. Zreik (GM)	P. Kanga (XOM)	S. Elliott (XOM)
J. Clark (TMC)	B. Grinfield (SWRI)	J. Keiter (Lz, phone)
J. Mattern (Lz, phone)	W. Venhoff (Lz)	

ASTM D5662 Oil Seal Compatibility Testing (OSCT), D. Bell:

A motion was unanimously approved (7 approvals) that was made by J. Gropp and 2nd by B. Grinfield to approve the previous OSCT Surveillance Panel meeting minutes from 11/3/2010 that is available on the TMC website.

There are multiple baths available at both Lz and SWRI with no known related "stand" bath problems. In October 2010 there were three D5662 warning alarms that have since been corrected and was attributed to one elastomer being assigned the incorrect CMIR. TMC plans to initiate lab visits over the next month to confirm that both labs are following the D5662 procedures.

Both test labs have a sufficient quantity of elastomer batches for D5662 testing. The qualification data from both test labs of Polyacrylate PA343 consisting of 300 slabs was reviewed (attached). A motion was unanimously approved (7 approved) that was made by J. Gropp and 2nd by B. Grinfield to require lab C to re-run the qualification data since the %elongation parameter for only lab C was the only out-of-specification parameter. The qualification data from both test labs of Fluoroelastomer FL381 consisting of 200 slabs was also reviewed (attached). A motion was also unanimously approved (7 approved) that was made by J. Gropp and 2nd by B. Grinfield to require lab C to re-run the qualification data since the %volume parameter for only lab C was the only out-of-specification parameter. Lab C has ordered more PA343 and FL381 to complete the repeat qualification testing, so the chairman will hold a teleconference with the Panel when data is ready for review. TEI has been instructed to order new lots of polyacrylate and fluoroelastomer. Nitrile batch NI337 qualification data is currently being generated by both test labs.

For supply security, we would like to obtain an alternate supplier for elastomers. The Chairman sent out an industry inquiry to determine potential seal suppliers of their interest in supplying D5662 test slabs. Thus far, we have only received an interest from BRUSS (Germany) and Parker Hannifin (USA). The Panel expressed no interest in pursuing Bruss as a potential supplier since they would potentially have a very long lead time from Germany and the seals were very expensive: PA 203% more, FL 550% more, NI

81% more relative to TEI's pricing. The Chairman will continue to get feedback from Parker Hannifin, Federal Mogul and SKF regarding their interest in participating. The Panel also suggested that OH Technologies and Akron Rubber be consulted, so the Chairman will follow-up with them.

The current supplier of TMC reference oil 161-1 can no longer supply this oil due to component unavailability, and the TMC inventory is almost depleted. In May 2010, the Panel approved the use of an alternate J2360 qualified reference oil from the same supplier and will refer to it as TMC-169. TMC now has 5 drums of TMC 169 and has sent some to both labs to initiate side-by-side testing to gather seal data until the TCM 161 is depleted and then new acceptance bands can be established. TMC showed 6 sets of data generated with TMC 169. TMC will alert the Panel when ~10 sets of data is collected and establish tentative acceptance bands.

Motion to adjourn was made by J. Gropp and 2nd by T. Marougy was unanimously approved at 1:44 pm 2/9/2011.

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: Feb. 9, 2011

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail	
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	NV	Ed Akucewich	The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: FAX: e-Mail:	440-347-2415 440-347-4713 Edward.akucewich@lubrizol.com
	NV	Zack Bishop	TEI	Phone: FAX: e-Mail:	 zbisnop@te-net.com , zrbi@sbcglobal.net
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OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: 2/9/11

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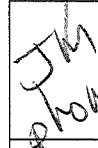

OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: 2/2/11

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail	
	NV	Matt Jackson	Southwest Research Institute P.O. Drawer 28510 San Antonio, TX 78228-0510	Phone: FAX: e-Mail:	210-522-6981 210-684-7523 Matt.jackson@swri.org
	NV	Bill Kearney	Afton Chemical Corp Southfield, MI	Phone: FAX: e-Mail:	248-350-0640 Bill.kearney@aftonchemical.com
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Date: 2/9/11

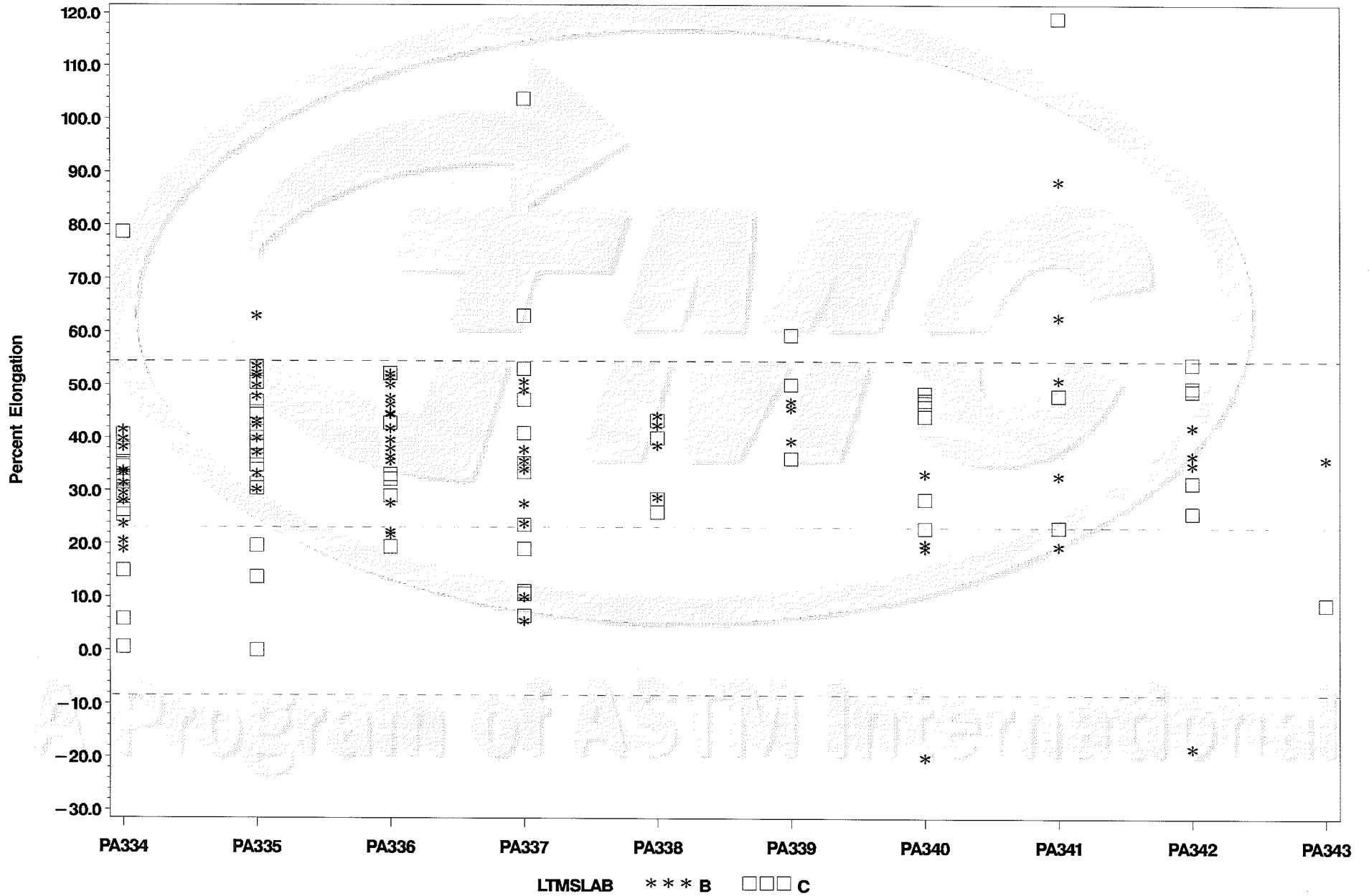
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OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

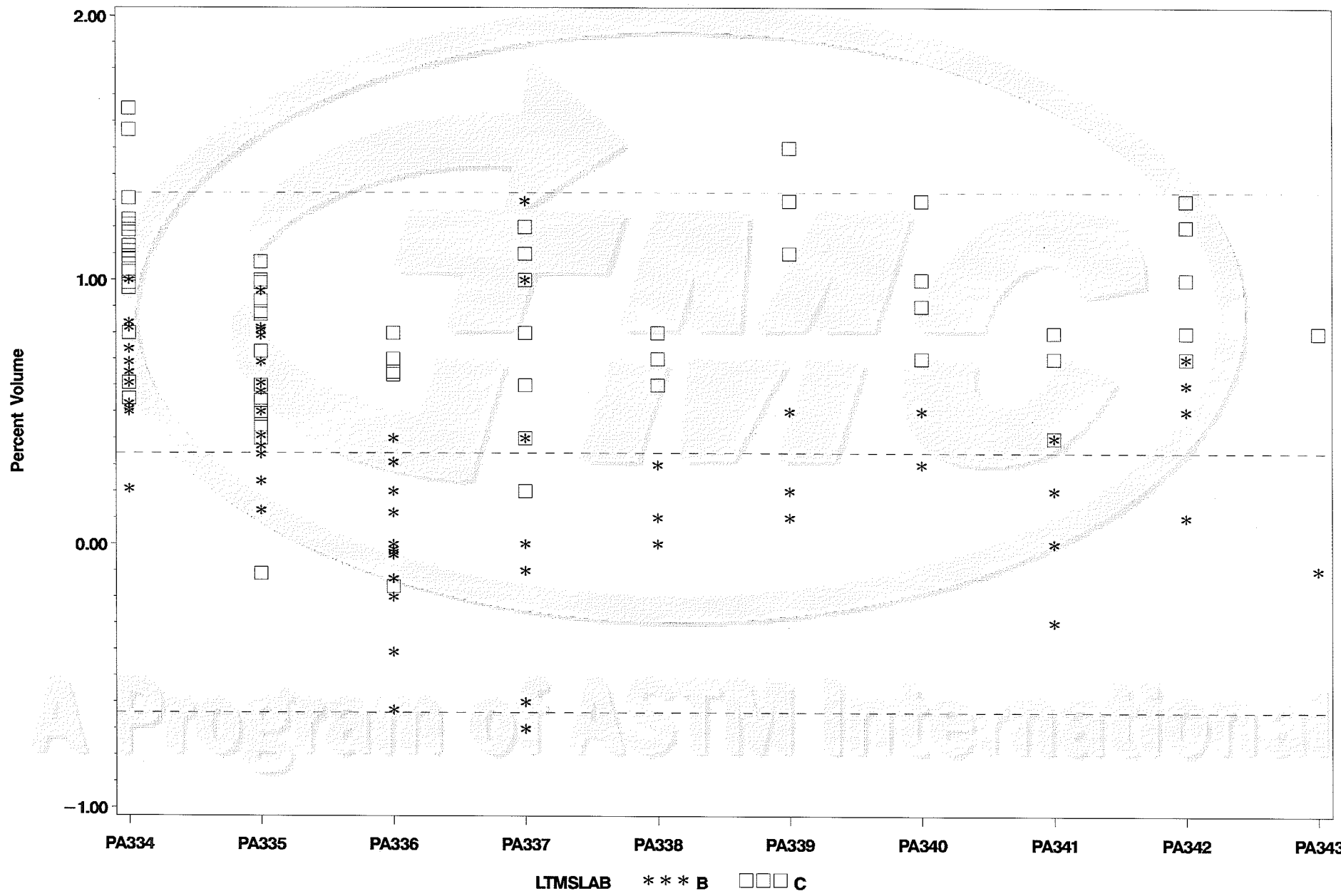
Date: 2/9/11

Initials	V = Voting NV = Non-voting	Name	Company & Address	Phone / FAX / e-Mail	
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	NV	HaiQing Song	Research Institute of Petroleum Processing No 18 XueYuan Road PO Box 914-19 Beijing 100083 P.R. China	Phone: FAX: e-Mail:	011-86-10-8236-8182 011-86-10-6231-1290 songhq@ripp-sinopec.com
	NV	Bill Sullivan	Independent 5 Scheber Drive Brick, NJ 08723	Phone: FAX: e-Mail:	908-930-3512 267-220-7750 wtsullivan@comcast.net
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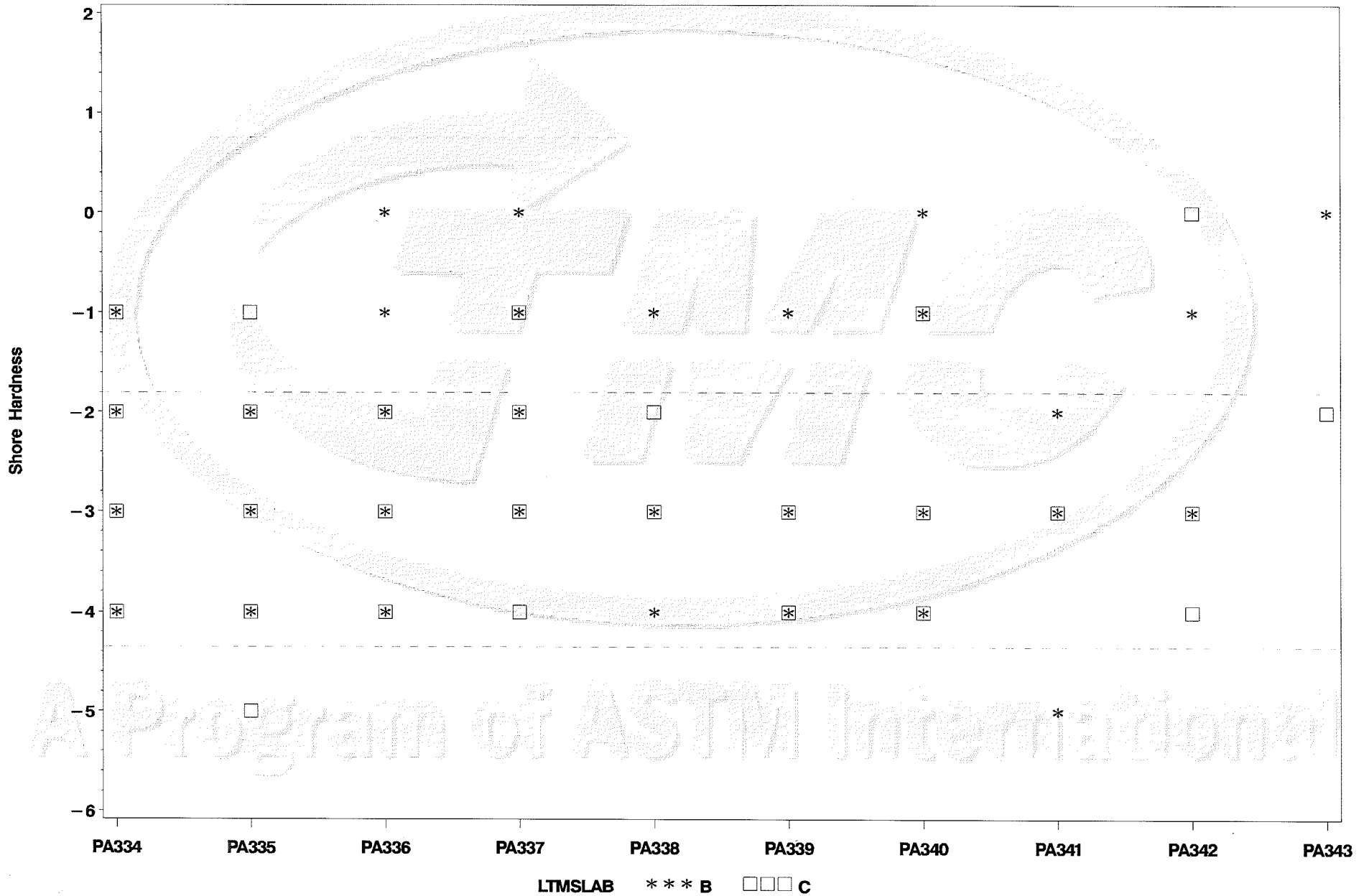
OSCT (PA)
Reference Oil 160-1 (Mean = 23.04)
Percent Elongation Results VS Shewhart Severity Limits



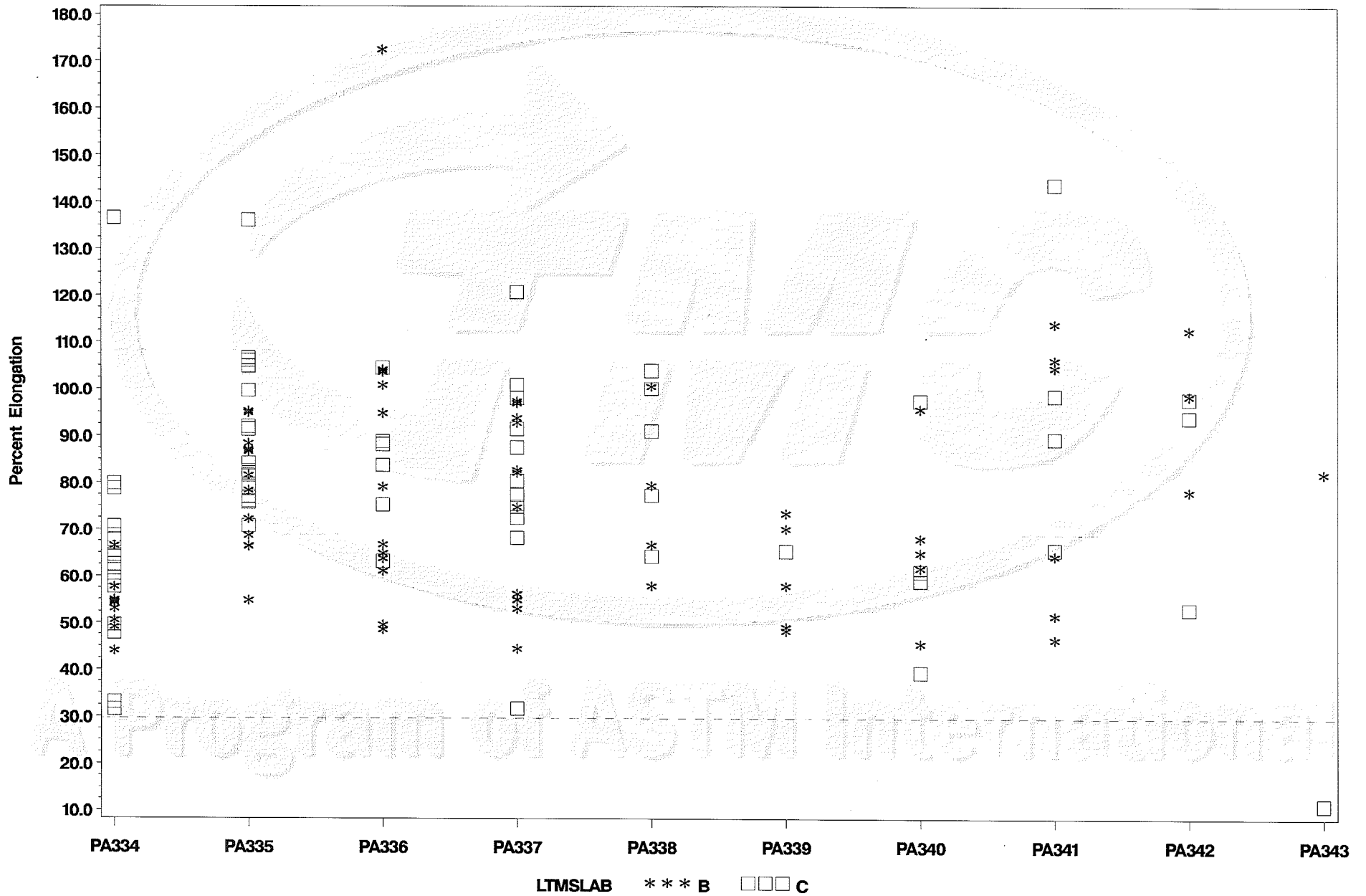
OSCT (PA)
Reference Oil 160-1 (Mean = 0.343)
Percent Volume Results VS Shewhart Severity Limits



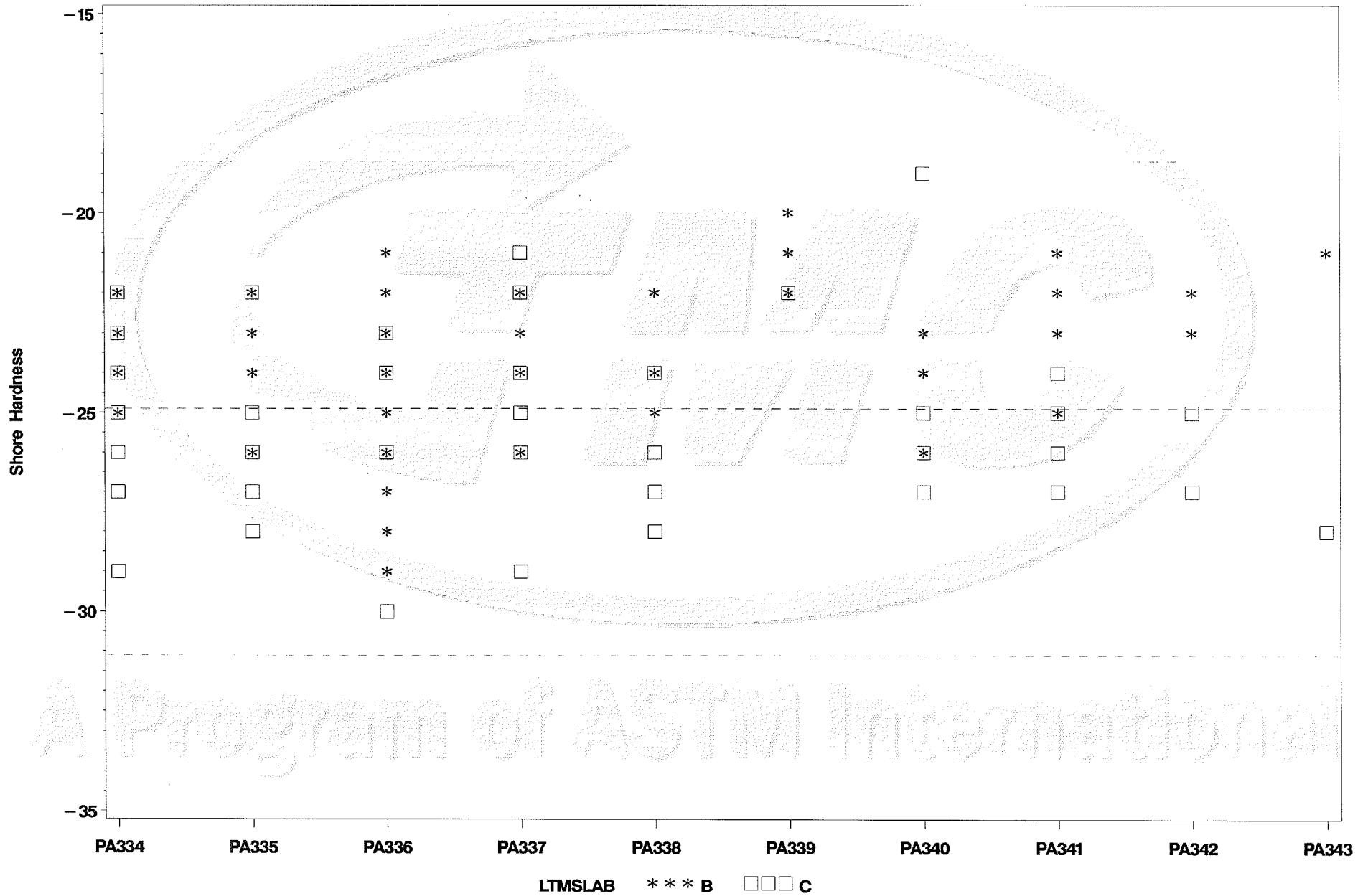
OSCT (PA)
Reference Oil 160-1 (Mean = -1.8)
Shore Hardness Results VS Shewhart Severity Limits



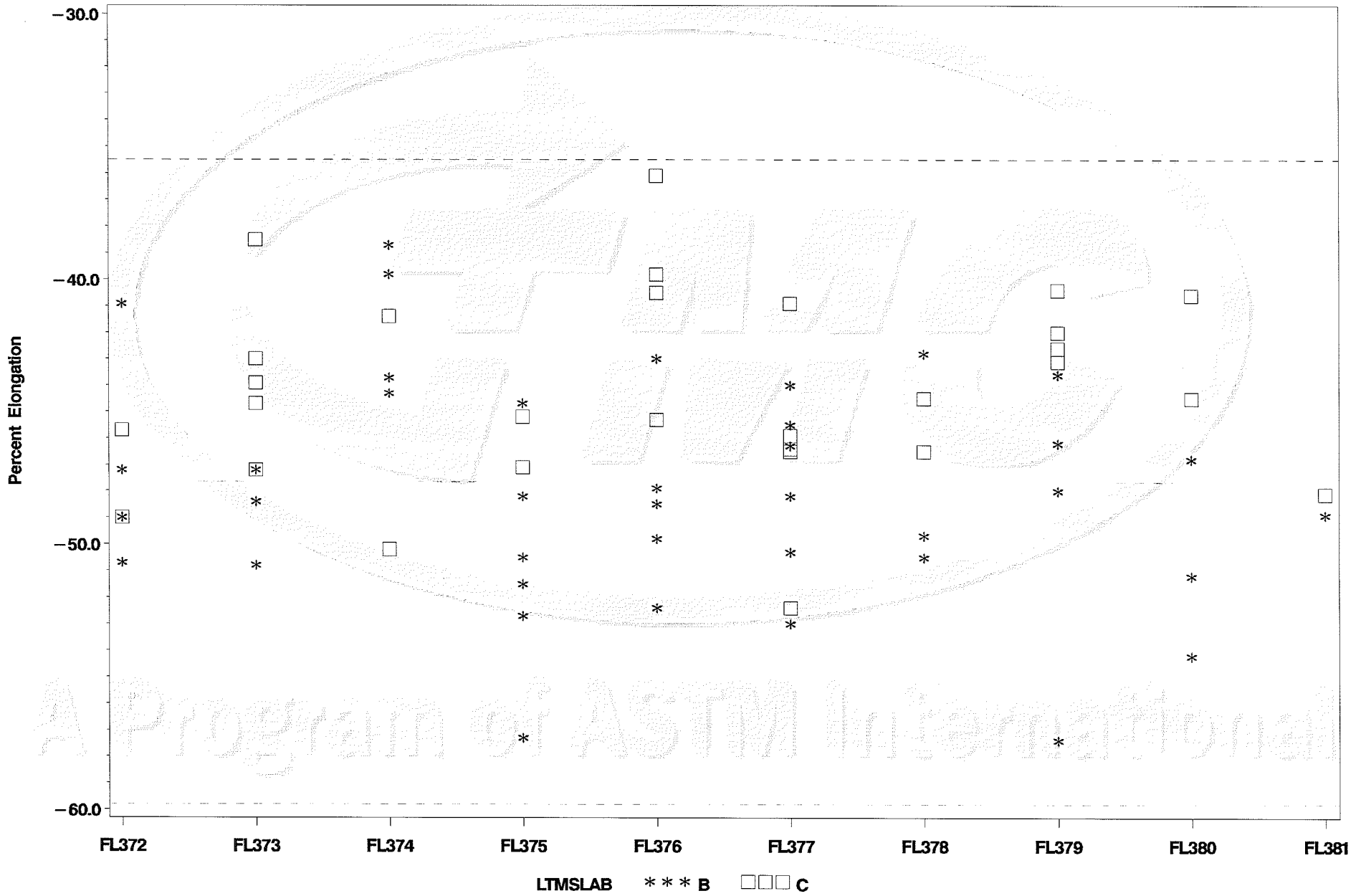
OSCT (PA)
Reference Oil 161-1 (Mean = 68.88)
Percent Elongation Results VS Shewhart Severity Limits



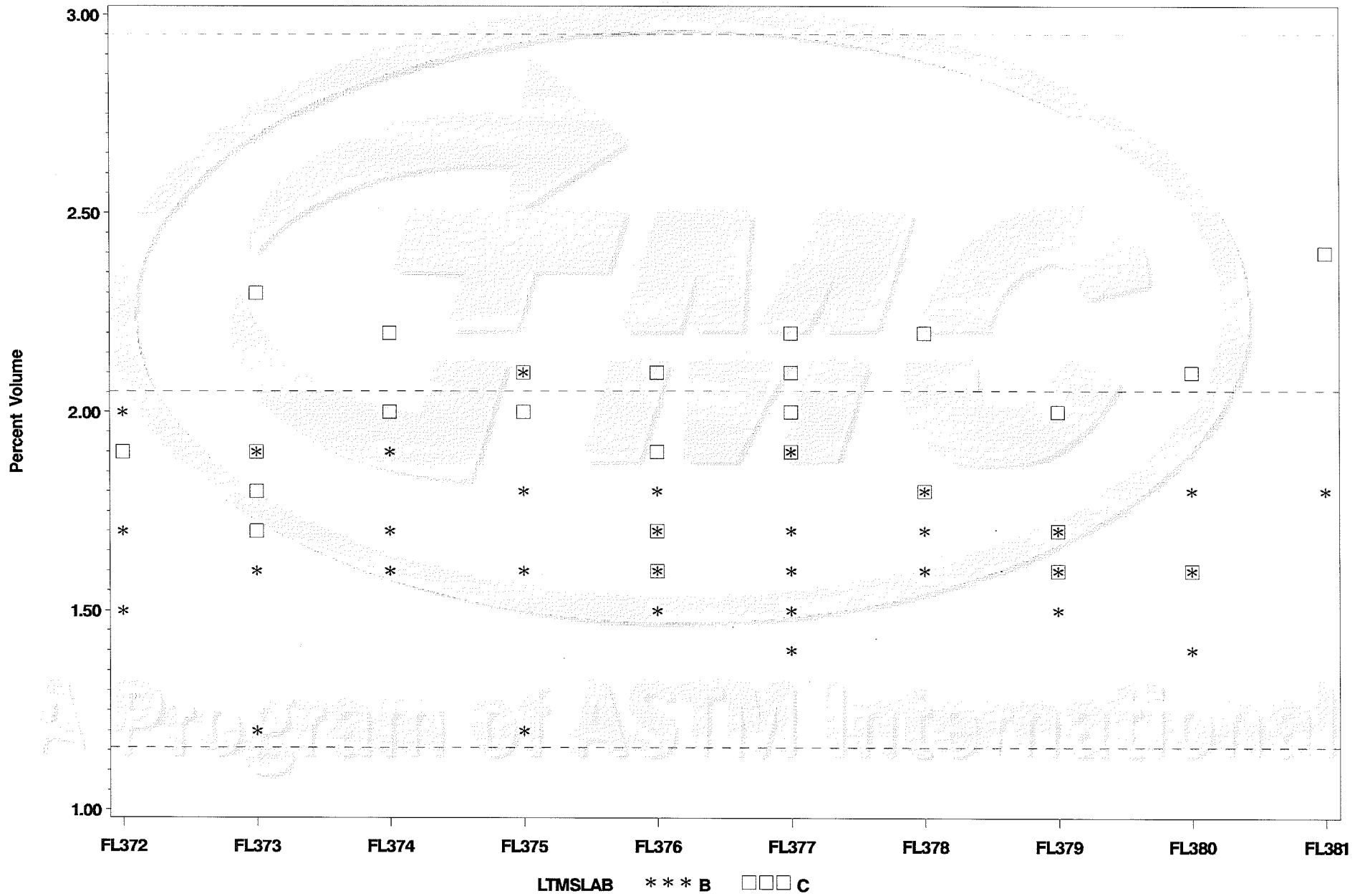
OSCT (PA)
Reference Oil 161-1 (Mean = -24.9)
Shore Hardness Results VS Shewhart Severity Limits



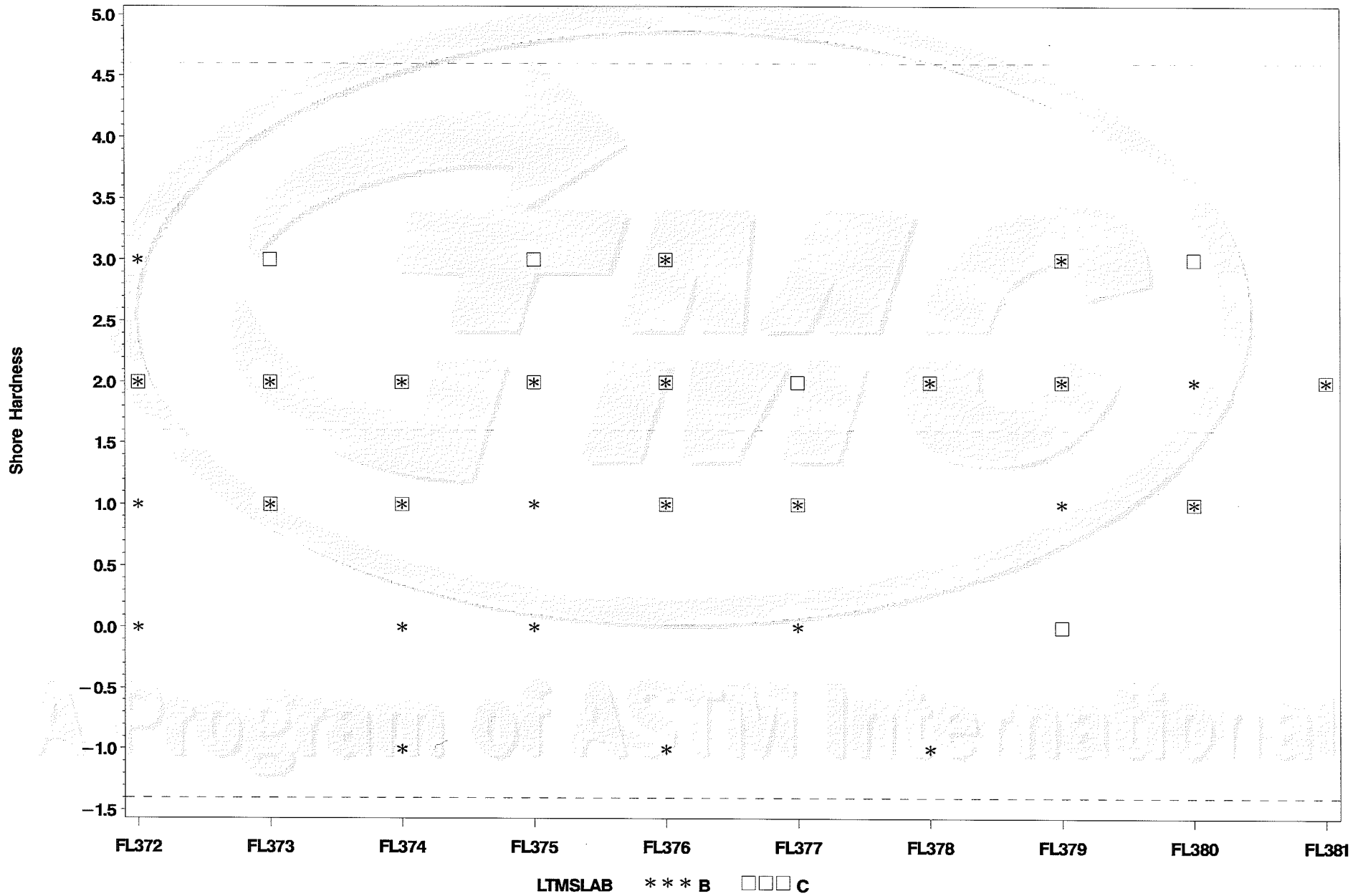
OSCT (FL)
Reference Oil 160-1 (Mean = -47.65)
Percent Elongation Results VS Shewhart Severity Limits



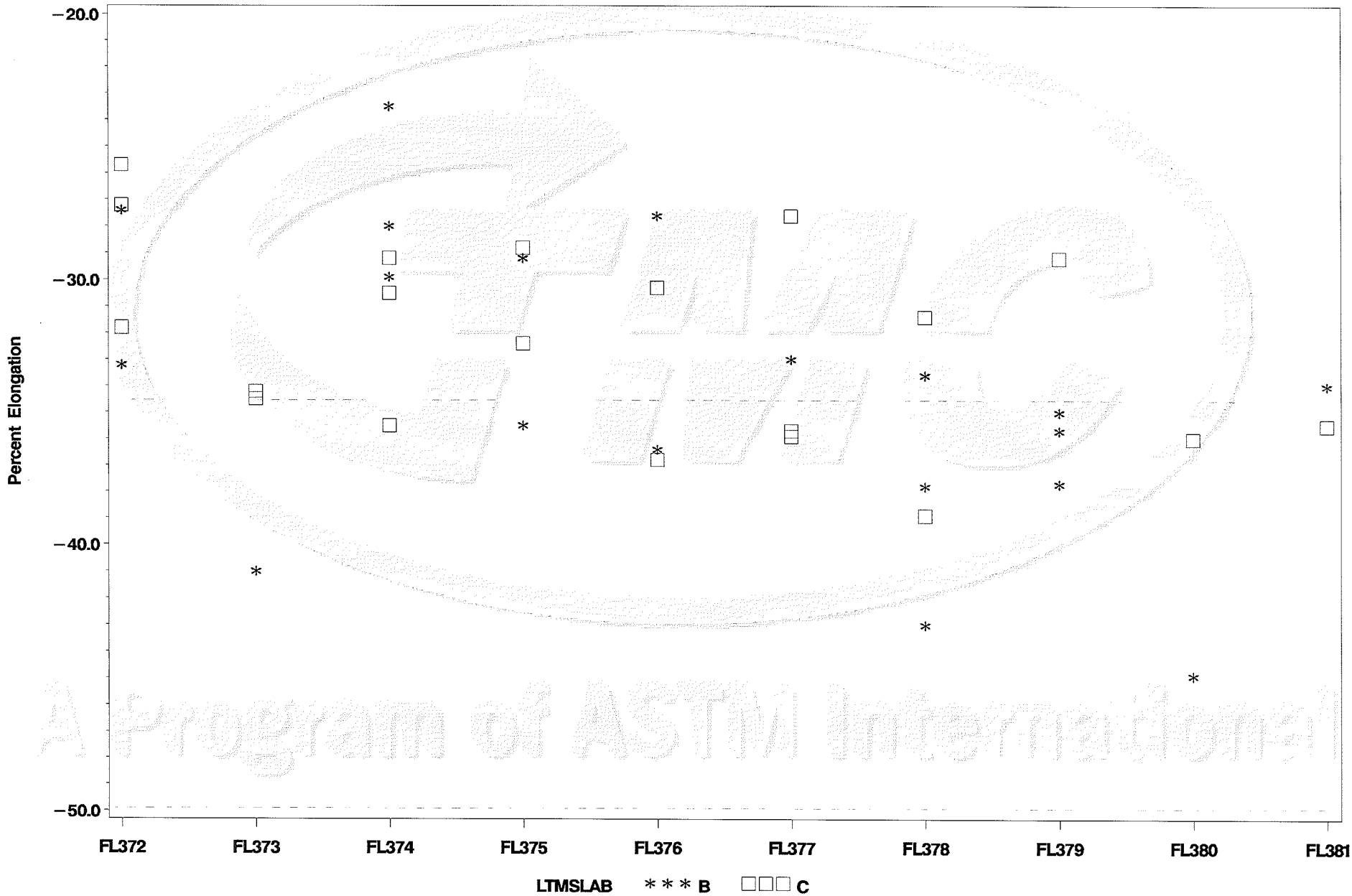
OSCT (FL)
Reference Oil 160-1 (Mean = 2.053)
Percent Volume Results VS Shewhart Severity Limits



OSCT (FL)
Reference Oil 160-1 (Mean = 1.6)
Shore Hardness Results VS Shewhart Severity Limits

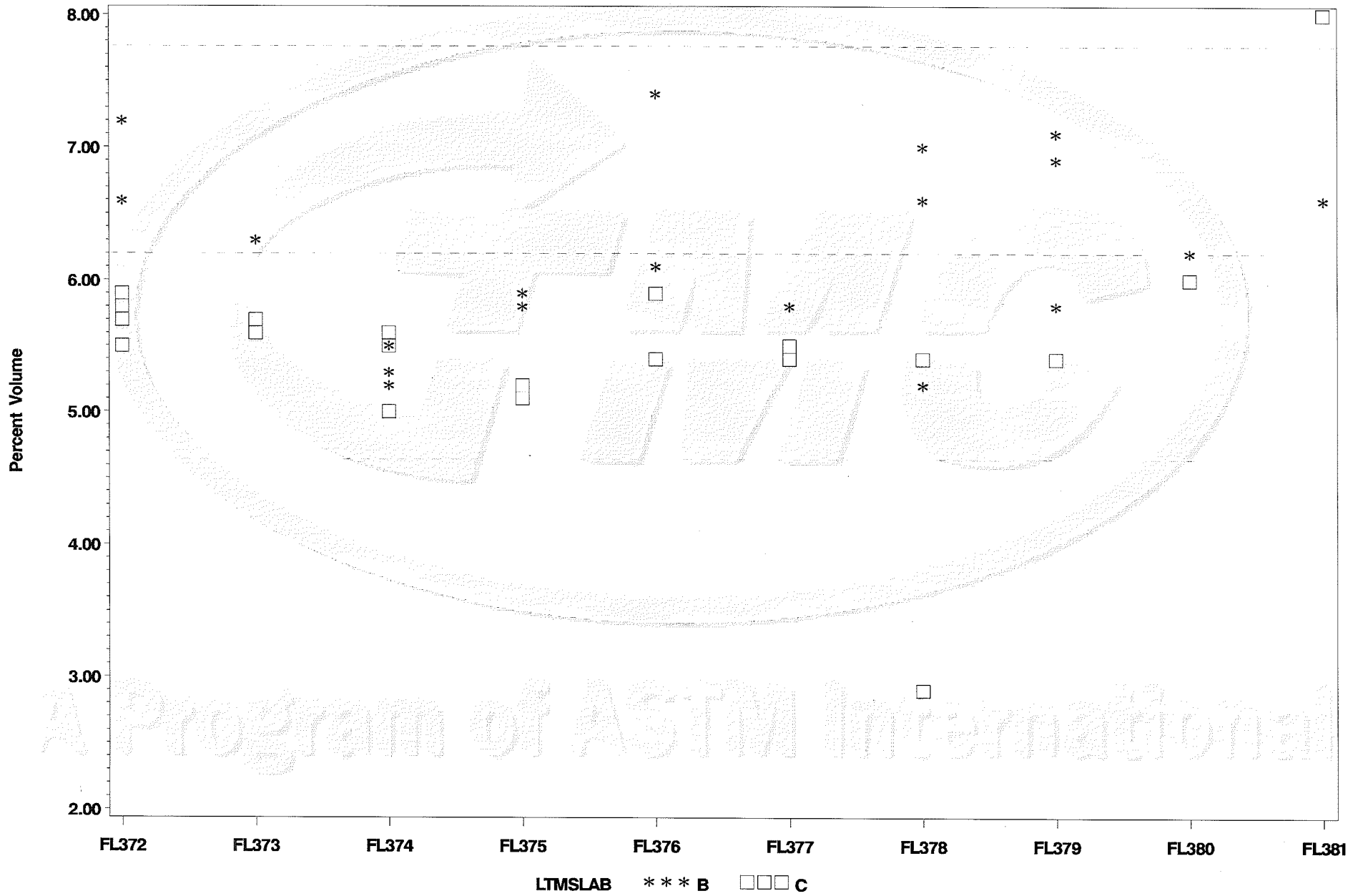


OSCT (FL)
Reference Oil 161-1 (Mean = -34.57)
Percent Elongation Results VS Shewhart Severity Limits



A Program of ASTM International

OSCT (FL)
Reference Oil 161-1 (Mean = 6.199)
Percent Volume Results VS Shewhart Severity Limits



OSCT (FL)
Reference Oil 161-1 (Mean = 1.6)
Shore Hardness Results VS Shewhart Severity Limits

