

Oil Seal Compatibility Test (OSCT) Surveillance Panel Meeting Minutes

November 12, 2014

Don Bell

Participants: Please see attached membership list in Appendix.

The OSCT Surveillance Panel meeting was called to order at 1:04 pm on 11/12/2014.

The Panel reviewed the 12 voting member list and confirmed it was accurate. The attendees initialed the attached membership list.




A motion made by J. Gropp and 2nd by J. Dharte to approve the OSCT Surveillance Panel meeting minutes on the TMC website from 5/7/2014 and 5/22/2014 was unanimously approved with 11 votes.




Intertek has been audited and approved by the Test Monitoring Center (TMC) for conducting ASTM D5662 testing of polyacrylate and fluoroelastomer seals (not nitrile) with one calibrated bath.




Test Engineering Institute (TEI) compiled the qualification data generated by SWRI and Lubrizol for three new lots of polyacrylate, fluoroelastomer, and nitrile seals. The data for each seal in the reference oils was reviewed and compared against the acceptance bands and data on prior lots (see Appendix for data).

There are multiple baths at Lz and SWRI, and one at Intertek with no known related problems or severity issues for conducting ASTM D5662 seal testing for SAE J2360 programs.

The following elastomer inventory at Test Engineering Institute (TEI) was reviewed to show there is a sufficient inventory of polyacrylate, fluoroelastomer, and nitrile seals and plenty on order to ensure the demand is met, especially with the addition of Intertek.

-  PA350 TEI has ~142 unapproved slabs
-  PA351 TEI received 300 slabs - sent to all 3 labs for qualification testing
-  PA352 300 slabs ordered, expect 12/2014 delivery

-  FL393 TEI has ~150 unapproved slabs
-  FL394 TEI has ~167 slabs - sent to all 3 labs for qualification testing
-  FL395 200 slabs ordered, expect 12/2014 delivery

-  NI343 Rejected by TEI, thickness exceeded 0.080 inches max.
-  NI344 TEI has ~174 unapproved slabs
-  NI345 300 slabs ordered, expect 12/2014 delivery

The TMC compiled the PA350 and FL393 qualification testing results from labs B and C in graphs in the Appendix, which were reviewed by the Panel. Intertek's qualification data was noted to meet all specification limits for both seals but was not available in time for TMC to compile for review.

The % elongation change, %volume change, and shore hardness change data for polyacrylate PA350 in reference oils 160-1 and 169 were within the acceptance bands. The initial % elongation result from Lab B in reference oil 169 was low out-of-specification, but fell well within the limits when all of the testing was repeated by Lab B in reference oil 169. A motion made by D. Bell and 2nd by J. Gropp passed unanimously (10 approved): Effective immediately approve PA350 for conducting testing per ASTM D5662. TEI was informed to release PA350 for sale.

The % elongation change, % volume change, and shore hardness change data for fluoroelastomer FL393 in reference oils 160-1 and 169 were also within the acceptance bands. A motion made by D. Bell and 2nd by J. Dharte passed unanimously (10 approved): Effective immediately approve FL393 for conducting testing per ASTM D5662. TEI was informed to release FL393 for sale.

The Panel reviewed the current inventory of TMC reference oils for seals that are currently at the test labs and TMC as shown below:

Reference Oil	Cans @ Test Labs	Cans @ TMC
TMC 160-1	29	249 (~49 gals)
TMC 169	19	1163 (~230 gals)
TMC 168	39	33 (~6 gals)

TMC 168 for nitrile referencing is nearing depletion and can no longer be blended, so a new replacement is needed. Lz and Afton will review their seal data to see if they can identify a potential alternate oil that gives similar nitrile results to TMC 168 as shown below:

- % elongation change = -74.5
- % volume change = 1.32
- Shore hardness change = 3

A revised and more automatic seal approval process was proposed. The following motion made by J. Gropp and 2nd by J. Dharte was unanimously approved (10 approved): All three labs send qualification seal data to TMC who graph the data. If all of the data is within acceptance bands, TMC issues an email to OSCT Surveillance Panel voting members with the graphs noting that the seal will be automatically approved within two working days unless someone objects. If no objections, the seal is approved for ASTM D5662 testing, and TEI will be notified by the Chairman to release the lot for sale. If there are objections, the Chairman will call an OSCT Surveillance Panel meeting to discuss the issues and decide the path forward.

A motion to adjourn made by D. Bell was unanimously (10 approved) approved at 1:31 pm on 11/12/2014.

Respectfully Submitted,

Don Bell



Appendix

OSCT Surveillance Panel Meeting

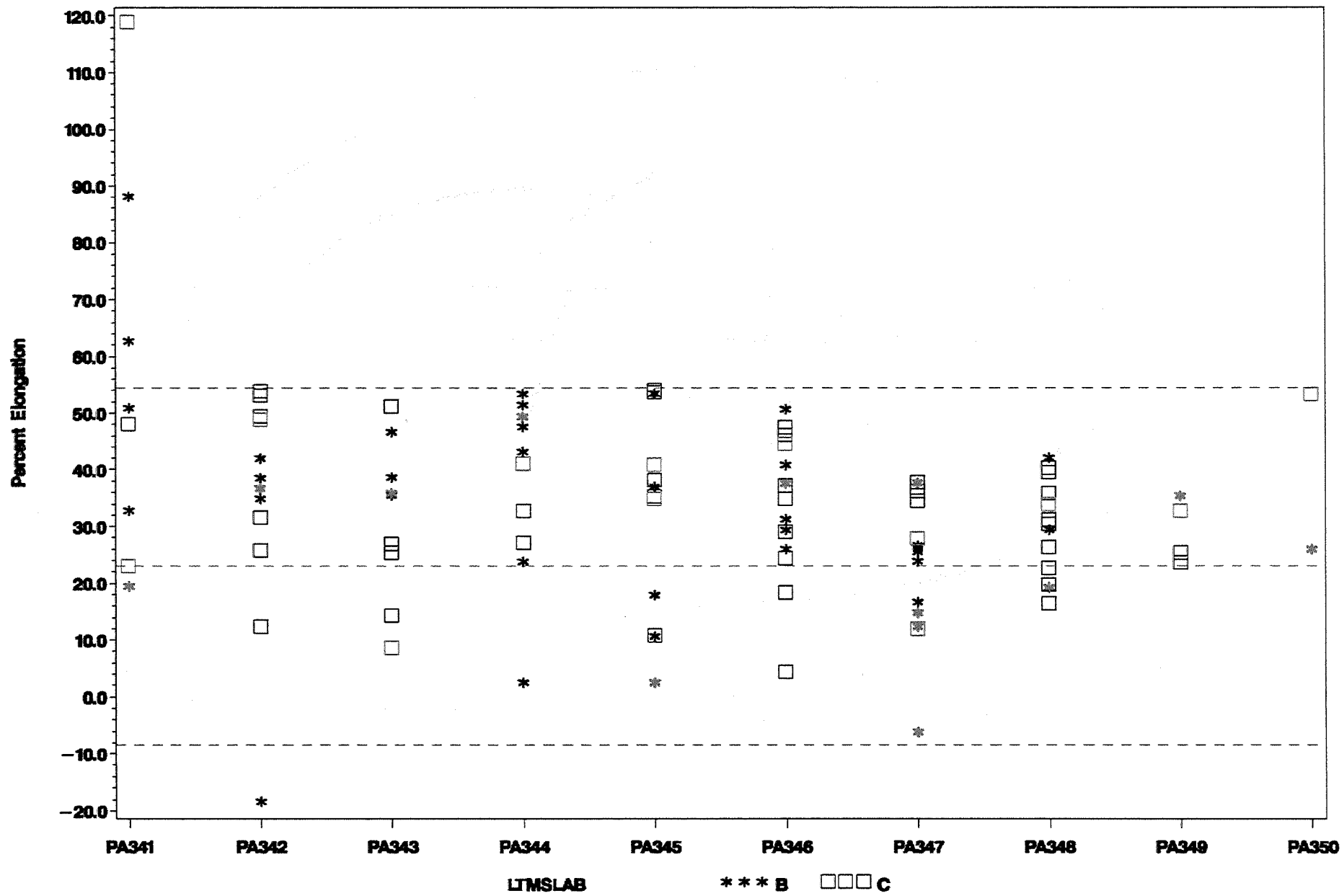
11/12/2014



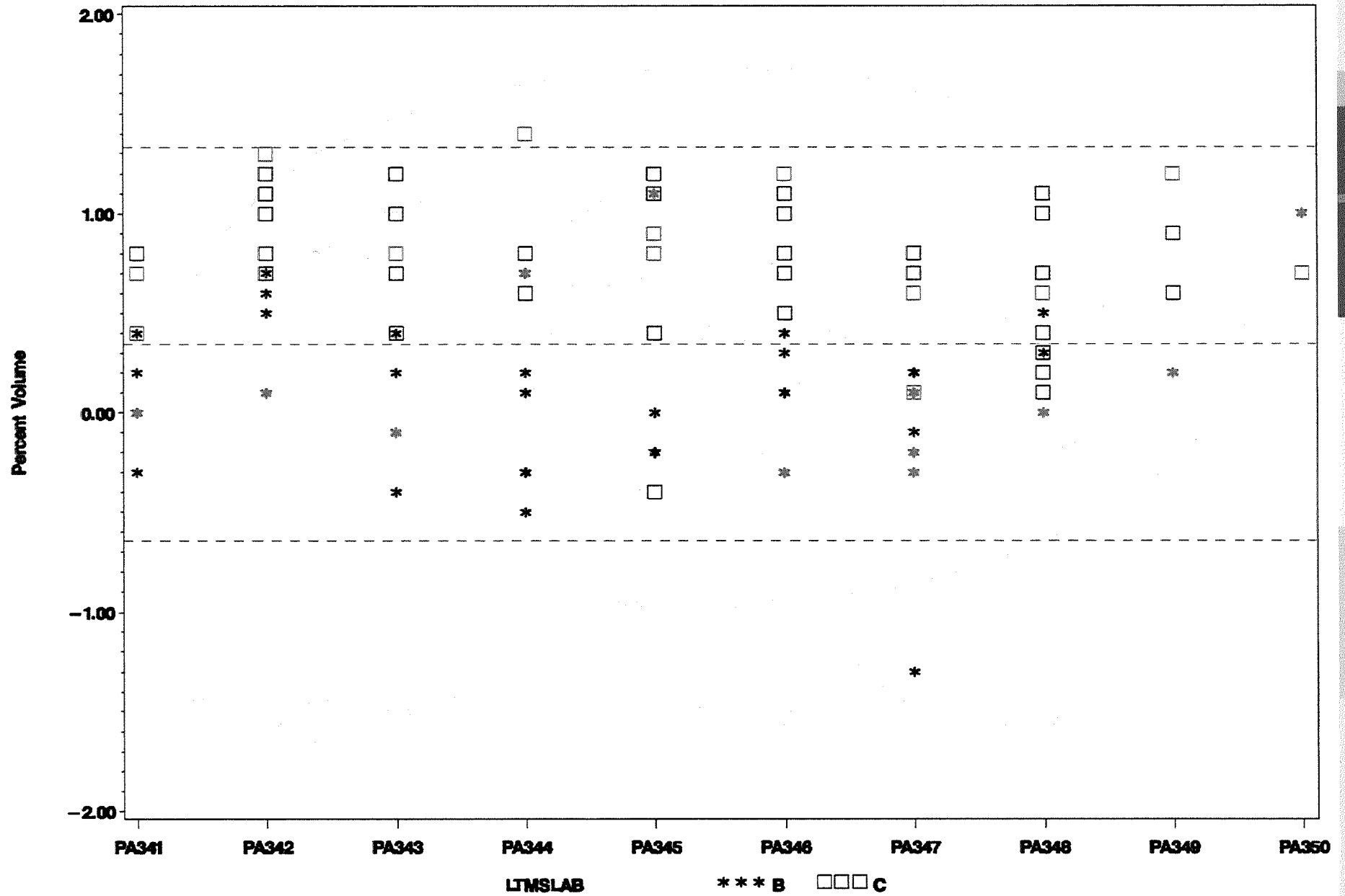
PA350 Qualification Data

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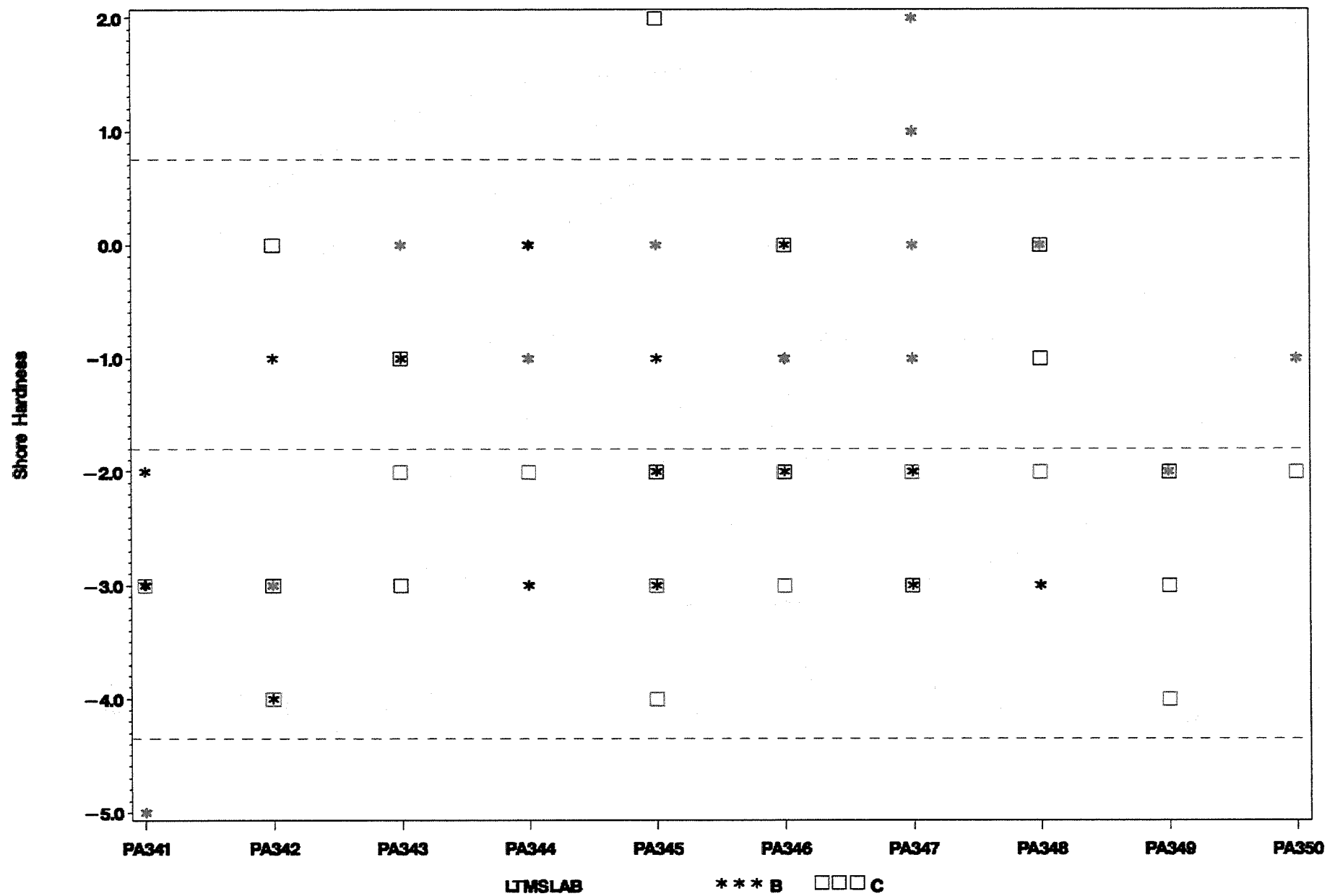
OSCT (PA)
Reference Oil 160-1 (Mean = 23.04)
Percent Elongation Results VS Shewhart Severity Limits



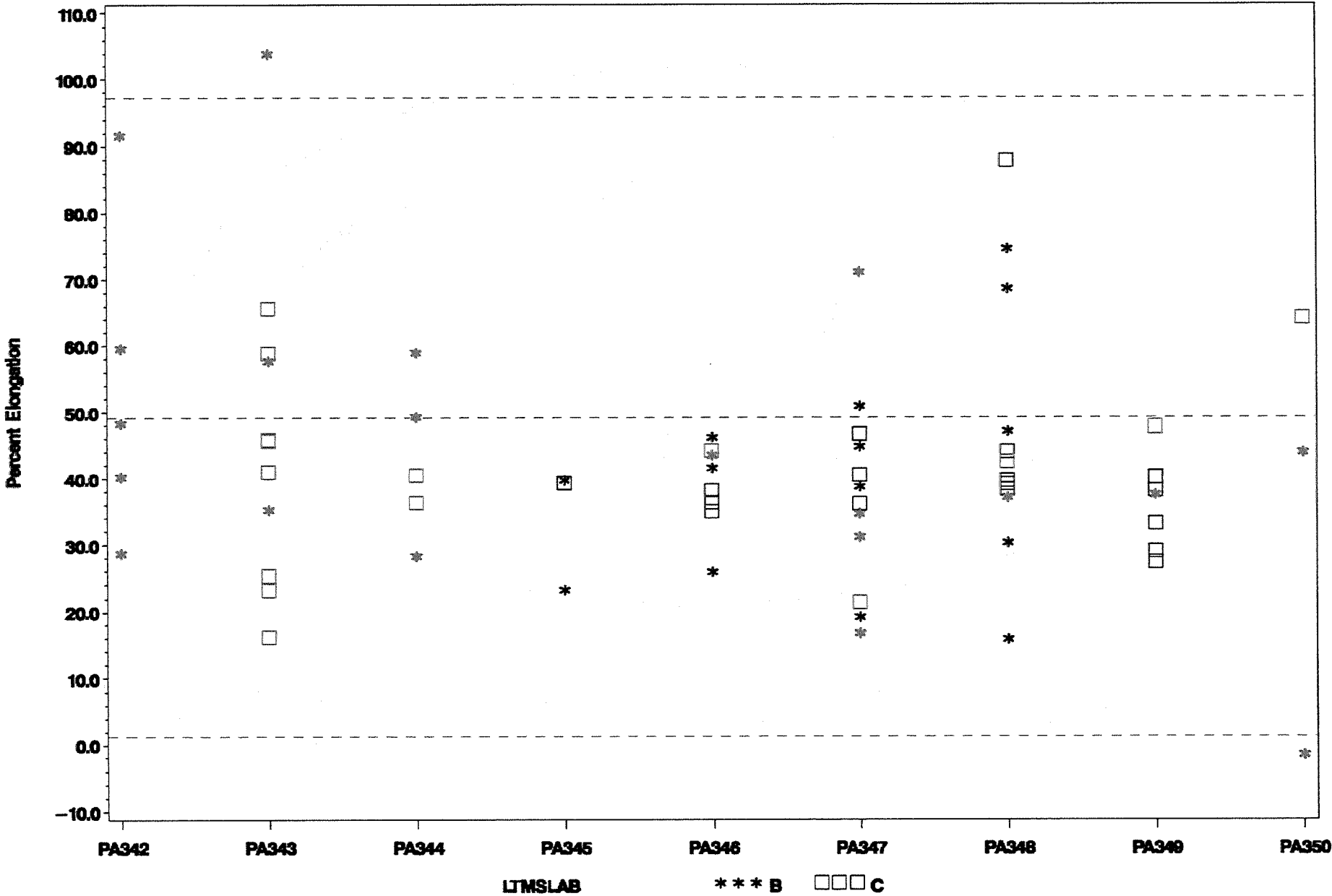
OSCT (PA)
Reference Oil 160-1 (Mean = 0.343)
Percent Volume Results VS Shewhart Severity Limits



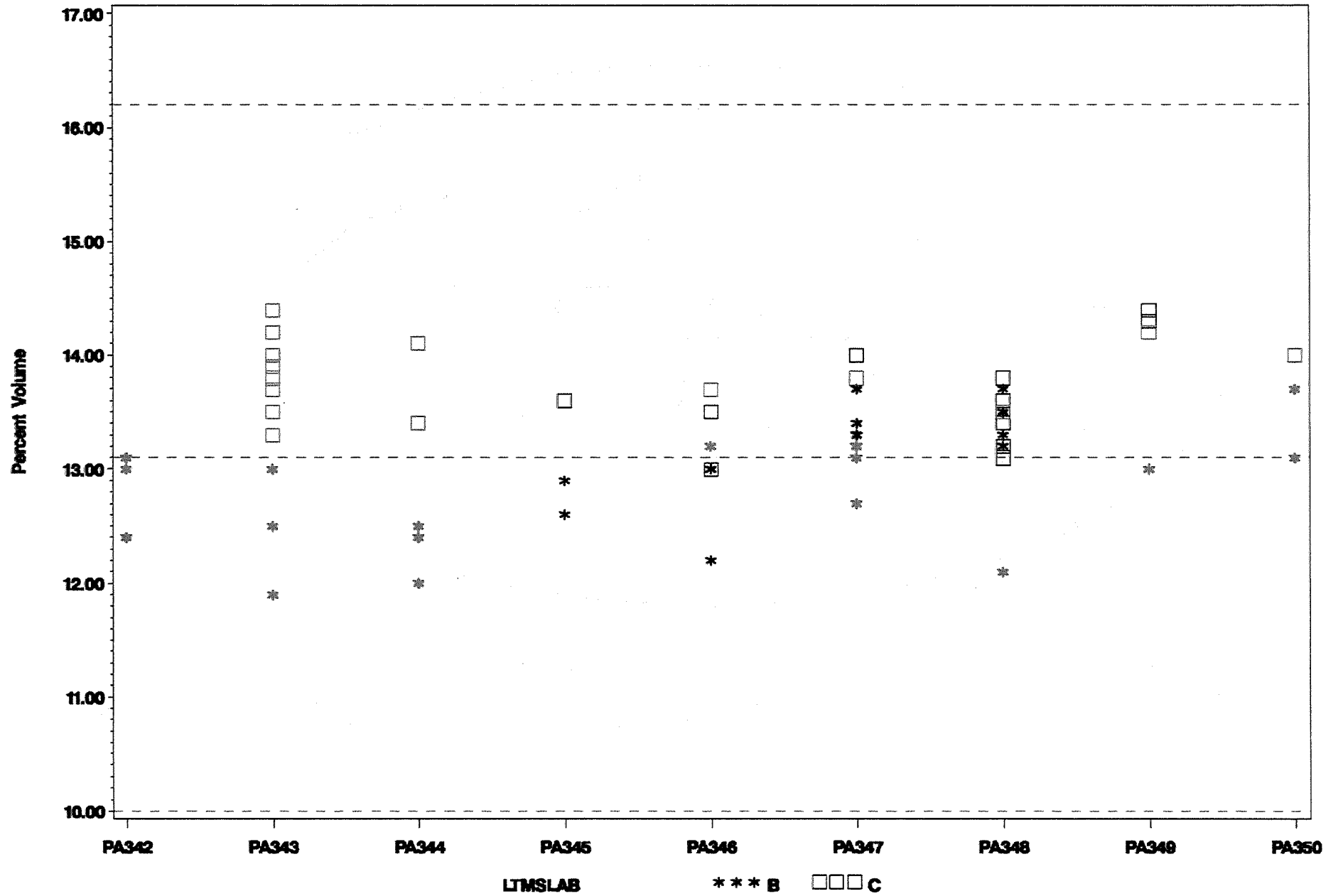
OSCT (PA)
Reference Oil 160-1 (Mean = -1.8)
Shore Hardness Results VS Shewhart Severity Limits



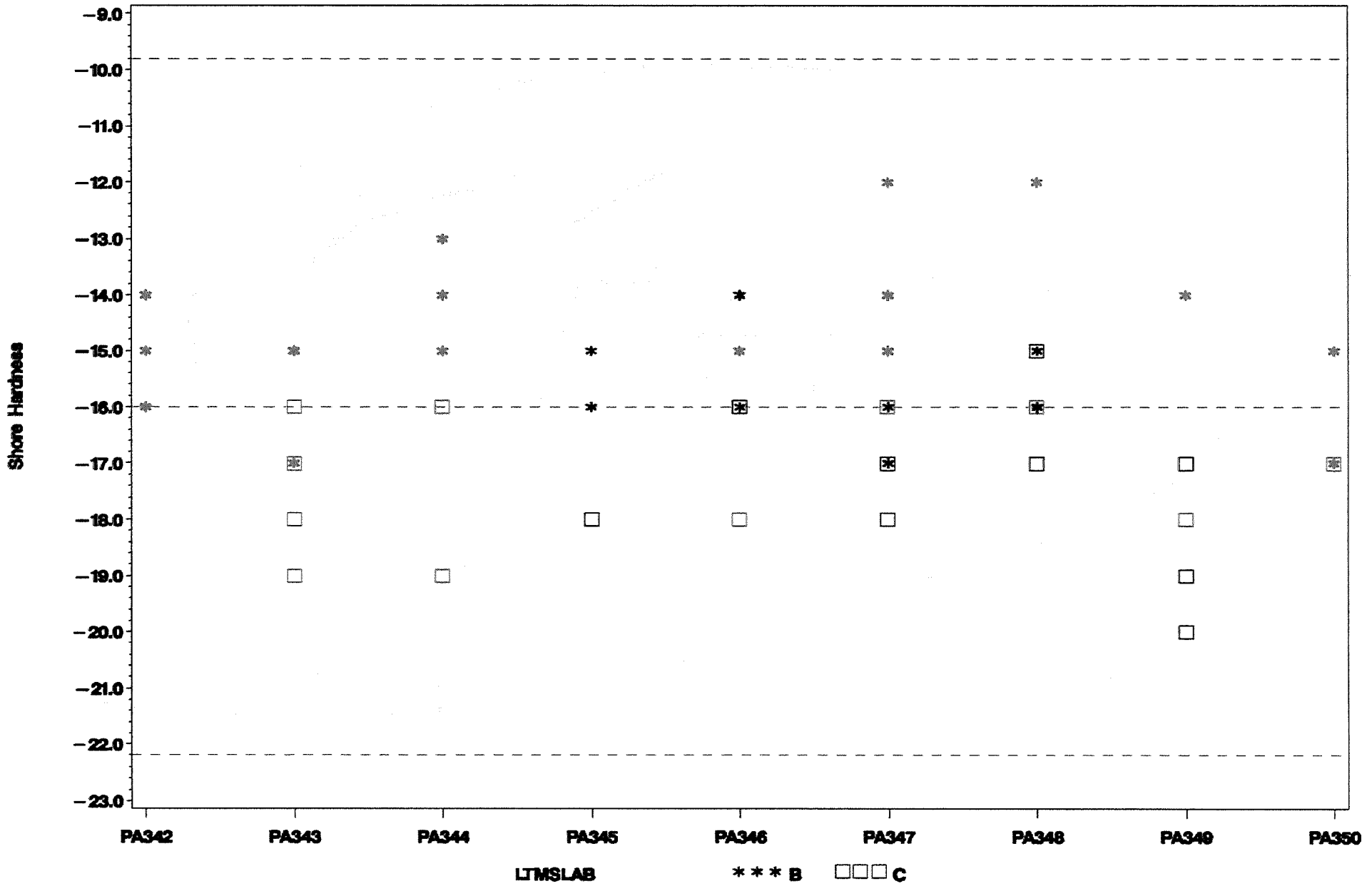
OSCT (PA)
Reference Oil 169 (Mean = 49.2)
Percent Elongation Results VS Shewhart Severity Limits



OSCT (PA)
Reference Oil 169 (Mean = 13.1)
Percent Volume Results VS Shewhart Severity Limits



OSCT (PA)
Reference Oil 169 (Mean = -16.0)
Shore Hardness Results VS Shewhart Severity Limits

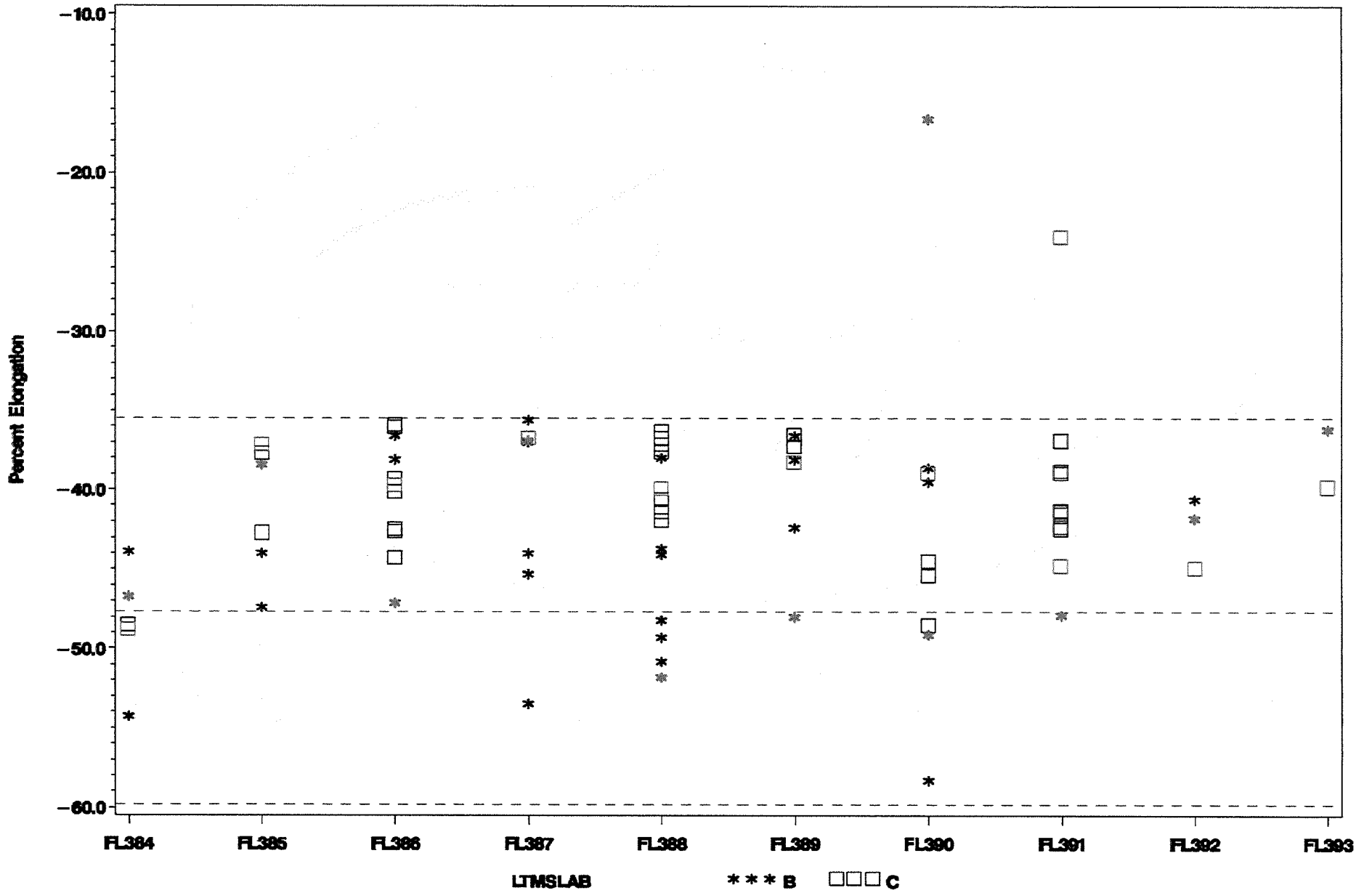




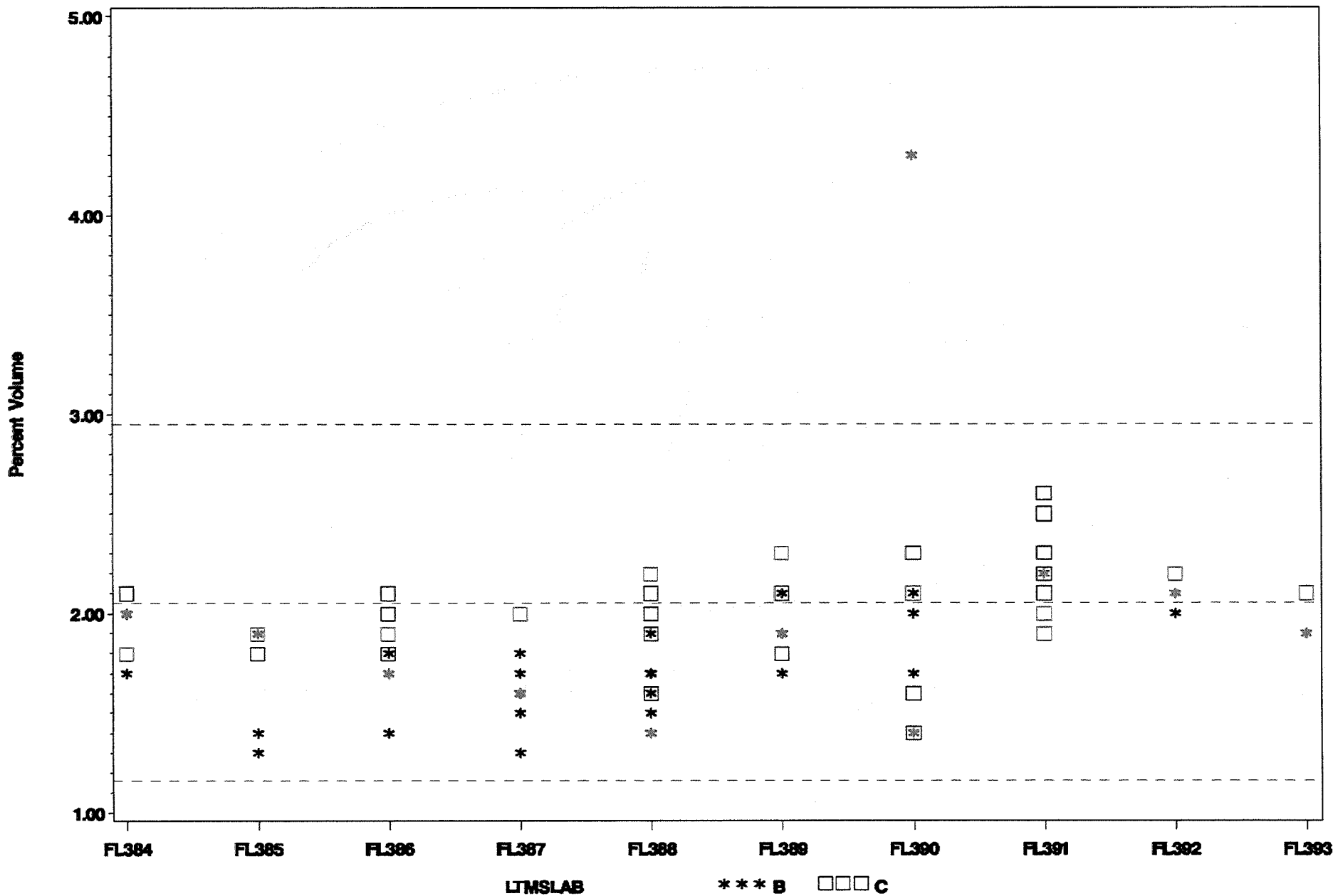
FL393 Qualification Data

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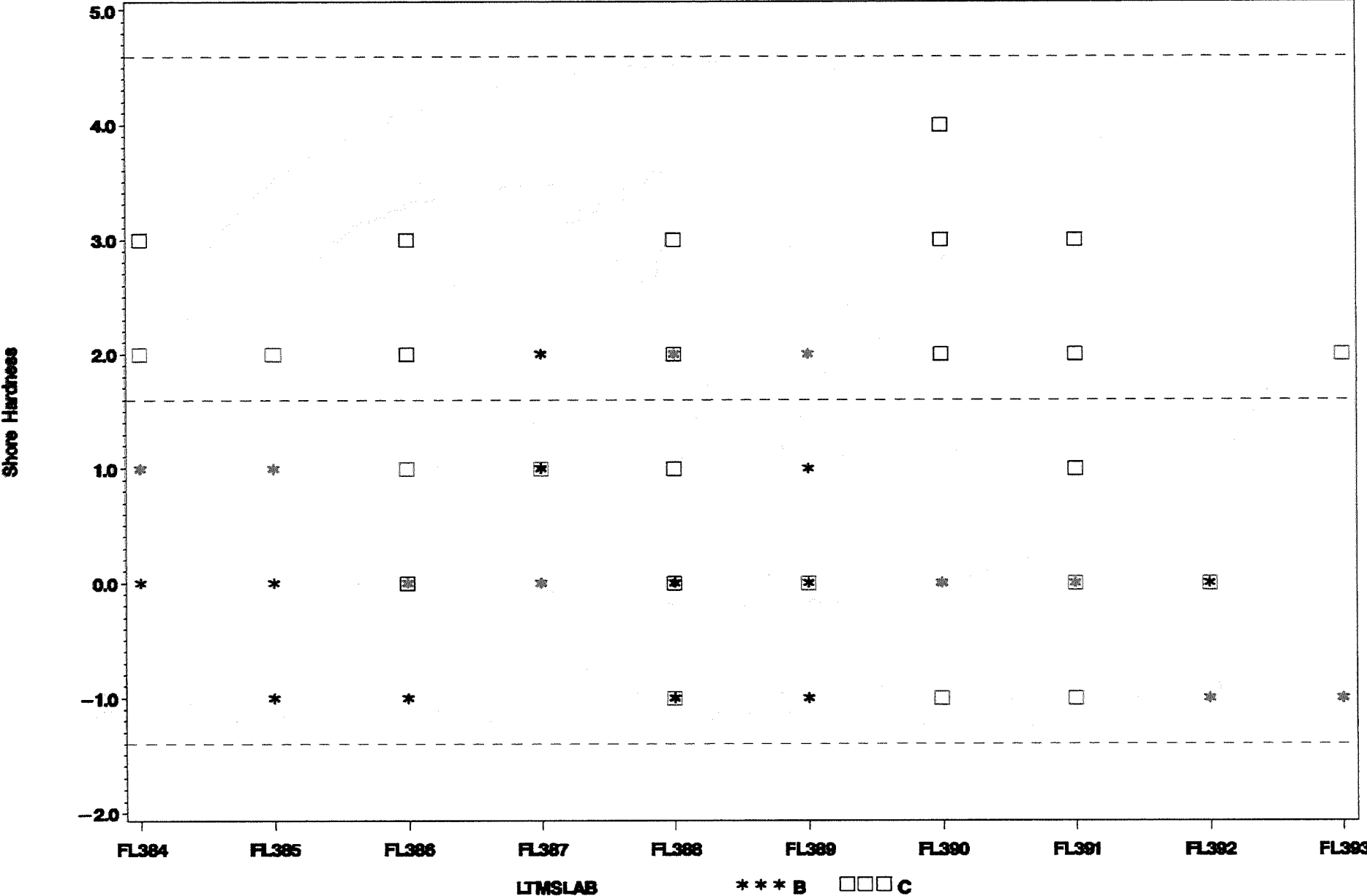
OSCT (FL)
Reference Oil 160-1 (Mean = -47.65)
Percent Elongation Results VS Shewhart Severity Limits



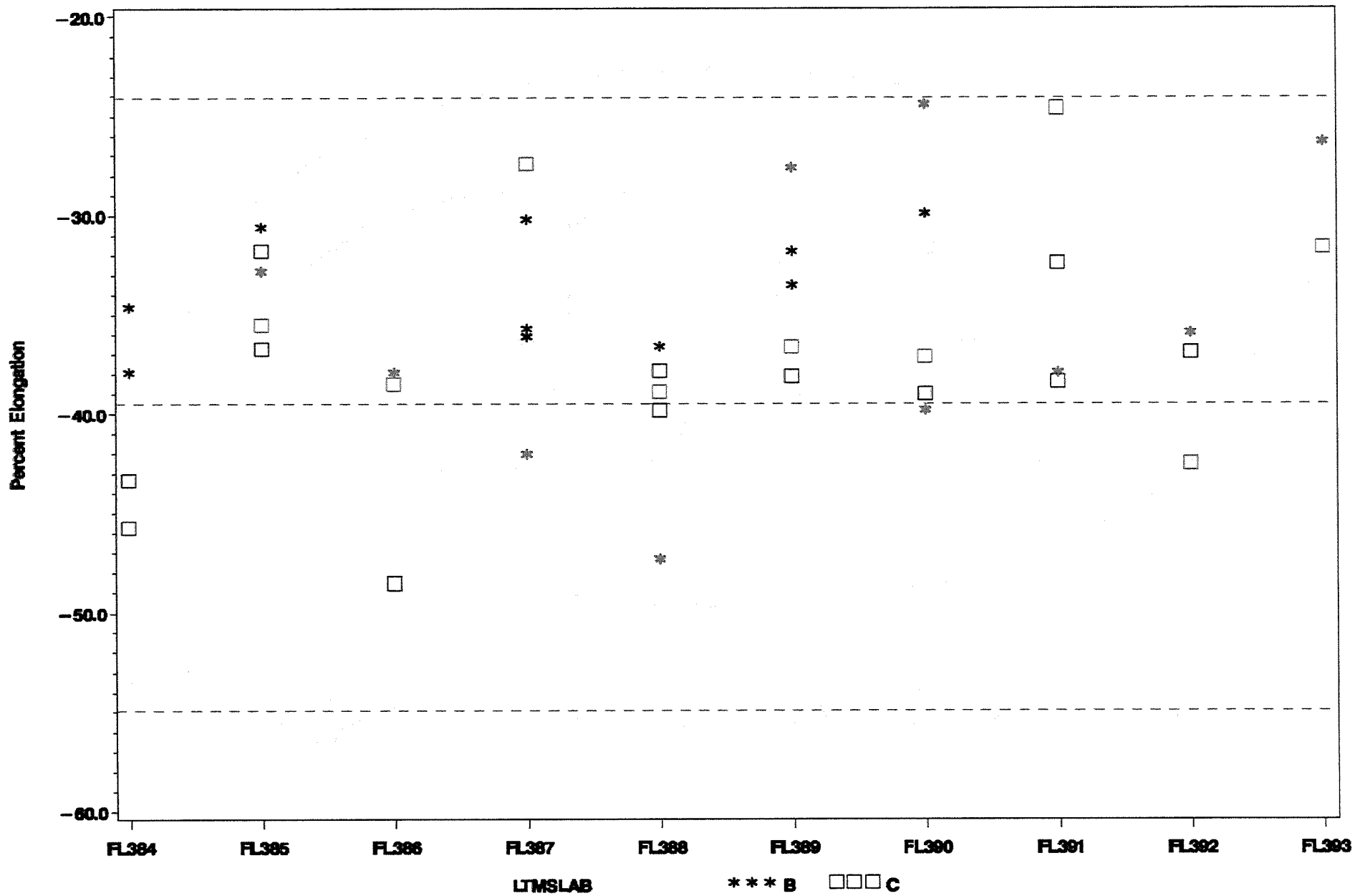
OSCT (FL)
Reference Oil 160-1 (Mean = 2.053)
Percent Volume Results VS Shewhart Severity Limits



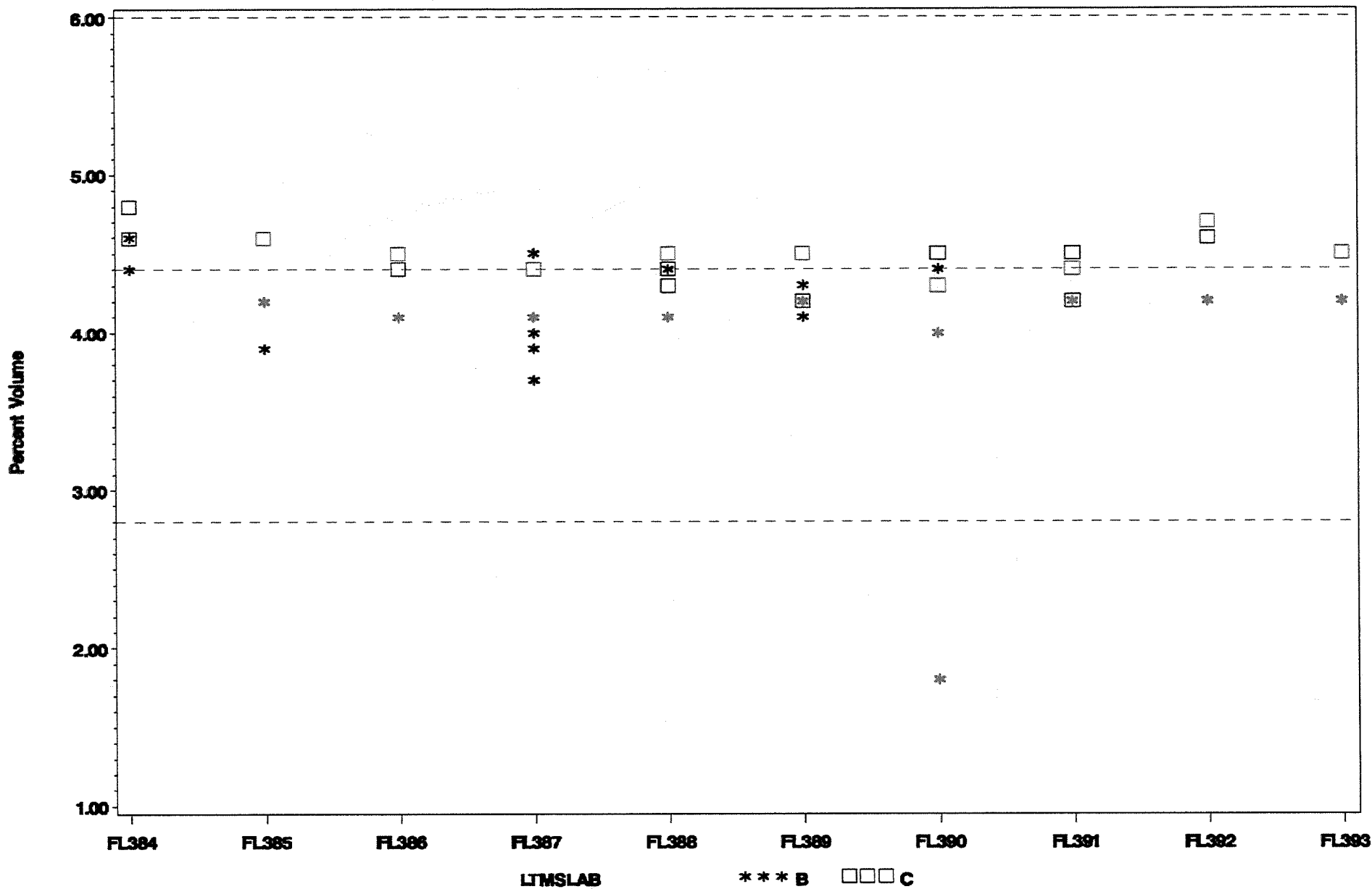
OSCT (FL)
Reference Oil 160-1 (Mean = 1.6)
Shore Hardness Results VS Shewhart Severity Limits



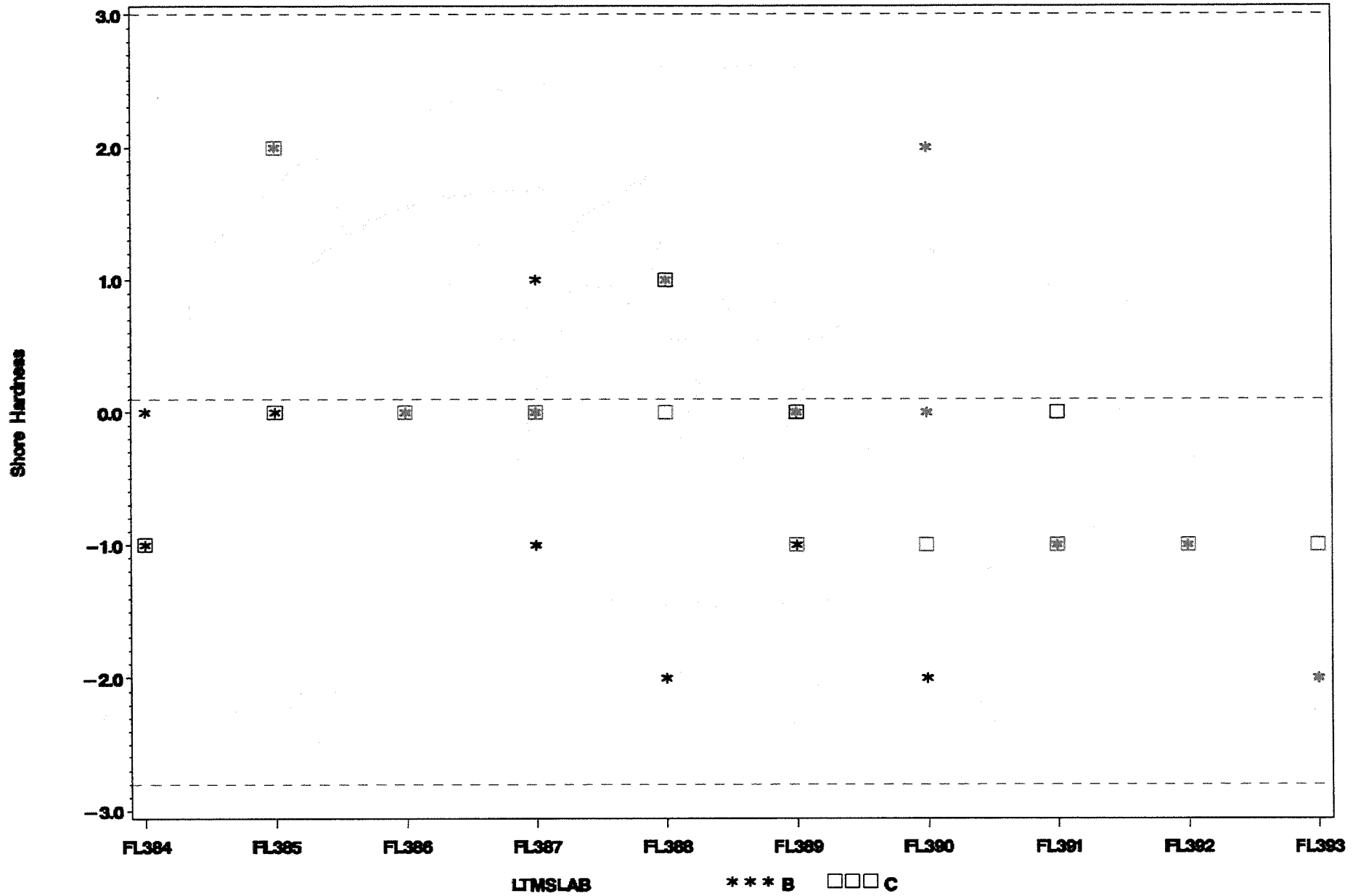
OSCT (FL)
Reference Oil 169 (Mean = -39.5)
Percent Elongation Results VS Shewhart Severity Limits



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



OIL SEAL COMPATIBILITY SURVEILLANCE PANEL

Date: Nov. 12, 2014

Initials	V = Voting NV = Non-voting		Name	Company & Address	Phone / FAX / e-Mail	
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Michale Hdzar

SWRI







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