**MEMORANDUM:** 02-097

**DATE:** October 18, 2002

TO Clair Whitton, Chairman, OSCT Surveillance Panel

**FROM:** Donald Lind

**SUBJECT:** OSCT Reference Oil Test Results from April 1, 2002 through

September 30, 2002

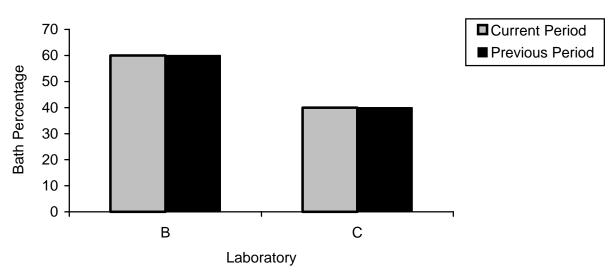
A total of 77 OSCT reference oil results from 2 laboratories were completed during the period April 1, 2002 through September 30, 2002.

The following table summarizes the status of the reference oil test results reported to the TMC this report period:

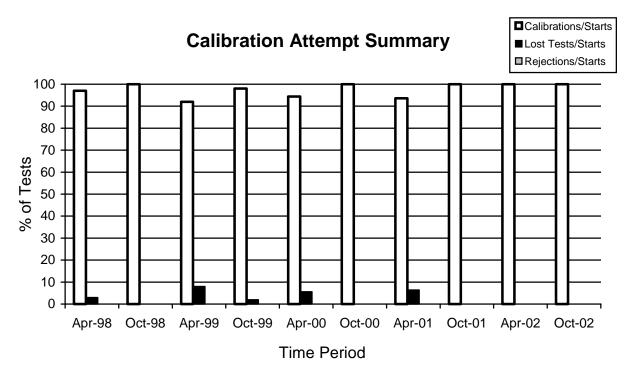
		TMC	No. of Test
Elastomer Type		Validity	Oil Results
Fluoroelastomer	Operationally and Statistically Acceptable	AC	30
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Polyacrylate	Operationally and Statistically Acceptable	AC	30
	Statistically Unacceptable	OC	0
	Operationally Invalid	LC	0
	Aborted	XC	0
	Information Only	NN	0
Nitrile	Information Only	NI	17
	Operationally Invalid	LI	0
	Information Only	NN	0
	Aborted	XI	0
	TOTAL		77

The following chart shows the laboratory bath distribution for data reported during this report period:





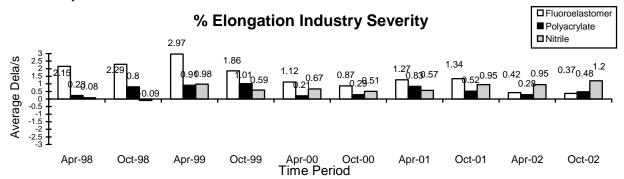
Attempted calibration tests are depicted graphically below by report period:



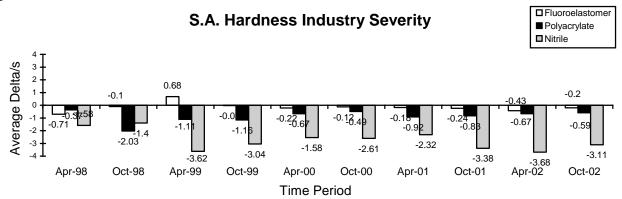
The calibrations per start rate remains the same as the previous period. There were no statistically rejected or lost tests this report period. All rates are well within historical levels.

### **INDUSTRY TEST SEVERITY**

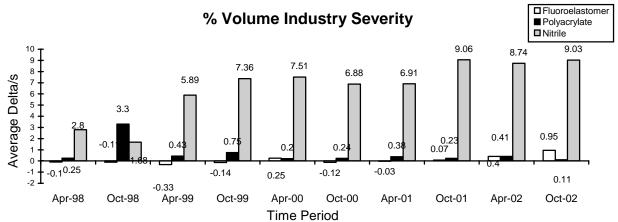
Percent elongation industry mean delta/s bar charts for each elastomer material are shown below by report period. Percent elongation for all three materials (fluoroelastomer, nitrile and polyacrylate) trended mild for the period.



S.A. hardness industry mean delta/s bar charts for each elastomer material are shown below by report period. S.A. hardness for all three materials (fluoroelastomer, nitrile and polyacrylate) trended mild for the period.

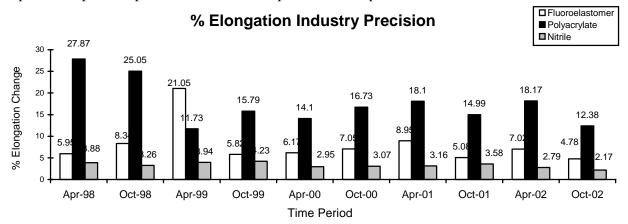


Percent volume industry mean delta/s bar charts for each elastomer material are shown below by report period. Nitrile materials were significantly mild of target. Fluoroelastomer and polyacrylate materials trended slightly mild this period. Both labs experienced mild results with the nitrile elastomer as much as 14 standard deviations from target.

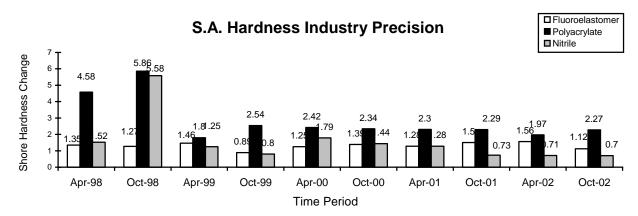


### INDUSTRY TEST PRECISION

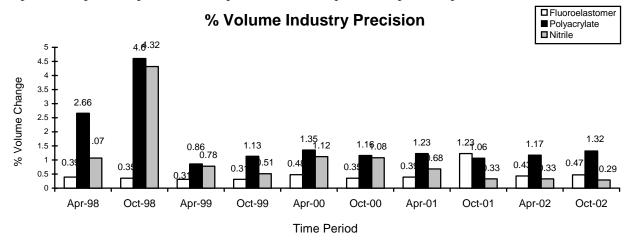
Percent elongation industry precision estimates for elastomer material are shown below by report period. Precision for fluoroelastomer and polyacrylate and nitrile precision has improved slightly with respect to the previous period. Precision for all parameters compares well with historical rates.



Shore hardness industry precision estimates for elastomer material are shown below by report period. Precision for all elastomers compares well with the previous period and historical rates.

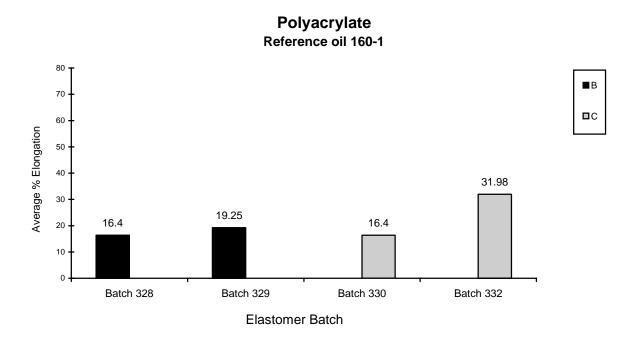


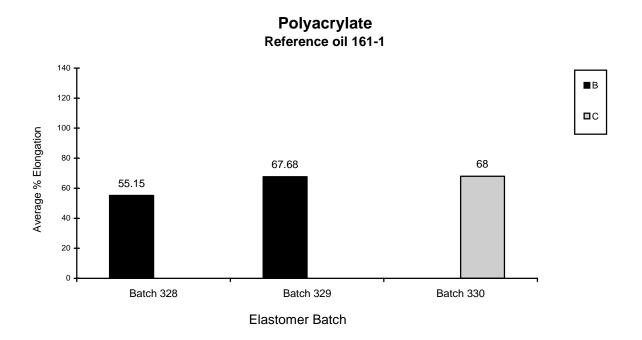
Percent volume industry precision estimates for elastomer materials are shown below by report period. Precision for polyacrylate, fluoroelastomer and nitrile elastomers show very little change with respect to the previous period and compares well with respect to the previous periods.



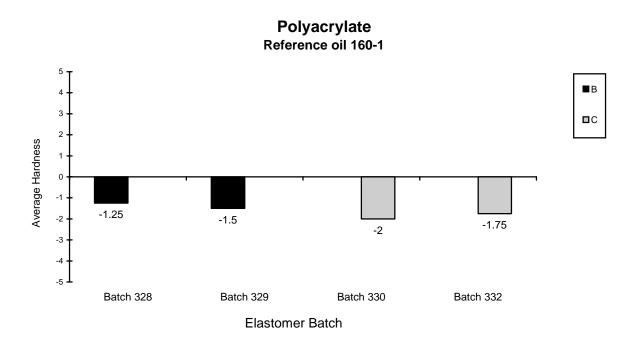
# LABORATORY TEST SEVERITY

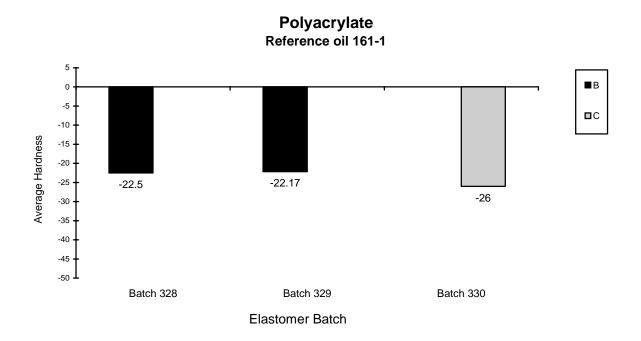
Average percent elongation bar charts for polyacrylate material are shown below by lab, elastomer batch, and reference oil. The bar charts illustrate small lab and elastomer batch differences.



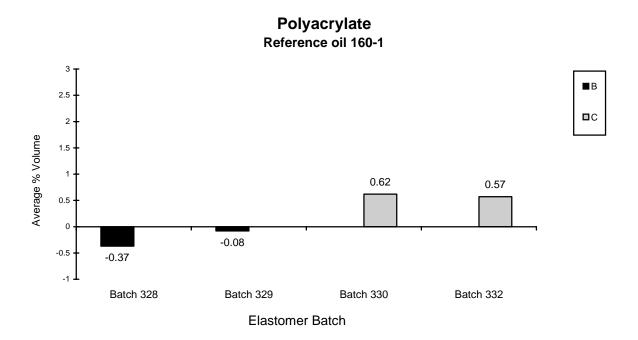


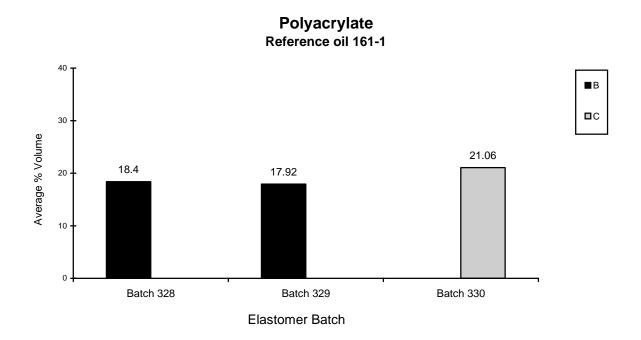
Average hardness bar charts for polyacrylate material are shown below by lab, elastomer batch, and reference oil. The bar charts illustrate small lab and elastomer batch differences.



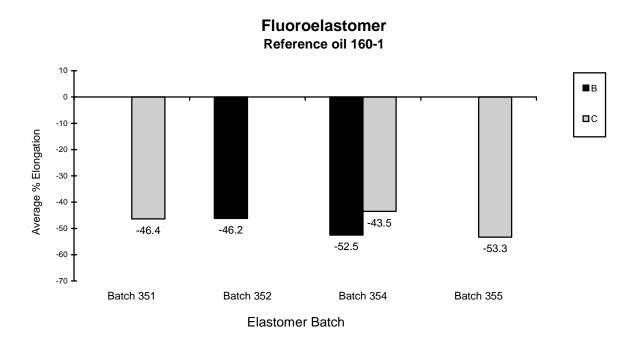


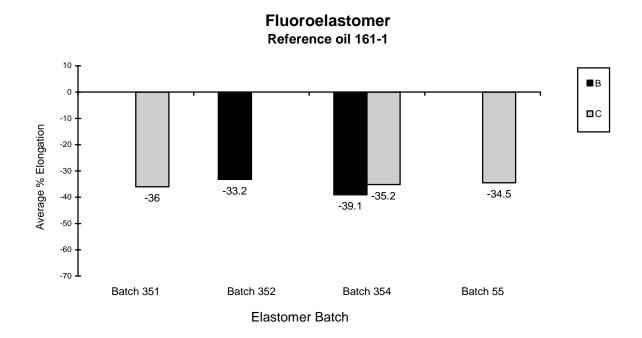
Average percent volume bar charts for polyacrylate material are shown below by lab, elastomer batch, and reference oil. The bar charts illustrate small lab and elastomer batch differences.



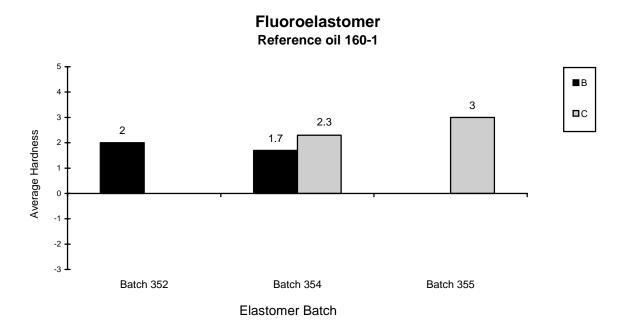


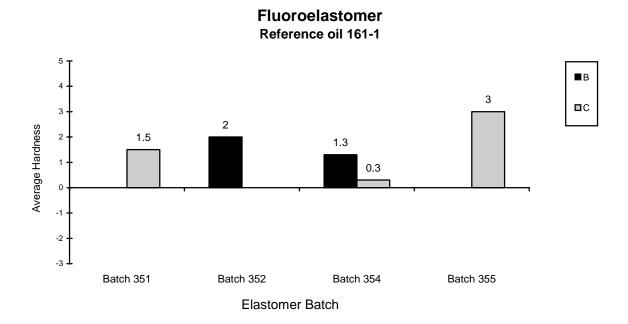
Average percent elongation bar charts for fluoroelastomer material are shown below by lab, elastomer batch, and reference oil. The bar charts illustrate small lab and elastomer batch differences.



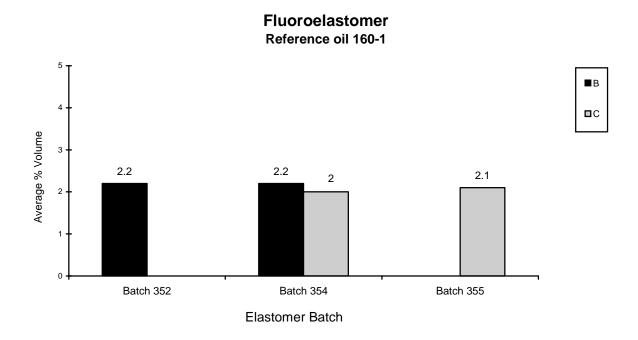


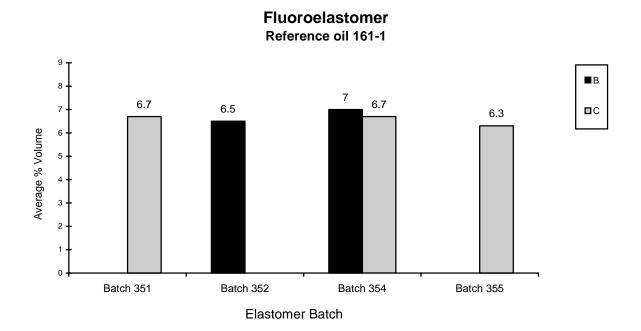
Average hardness bar charts for fluoroelastomer material are shown below by lab, elastomer batch, and reference oil. The bar charts illustrate small lab and elastomer batch differences.



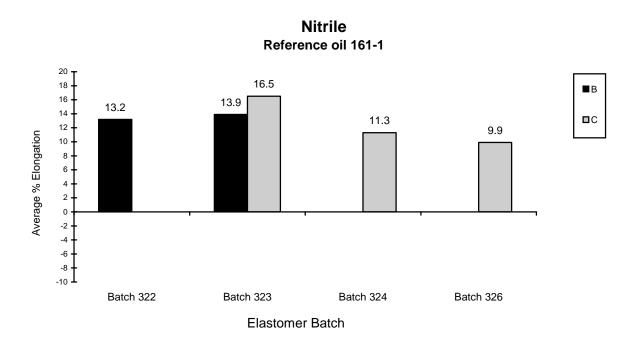


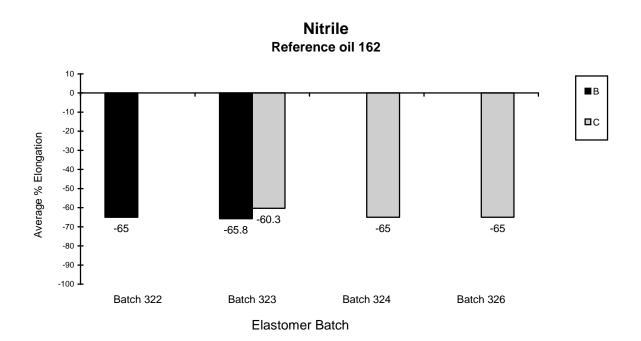
Average percent volume bar charts for fluoroelastomer material are shown below by lab, elastomer batch, and reference oil. The bar charts show comparable results on all batches with little discernable lab difference with both reference oils.



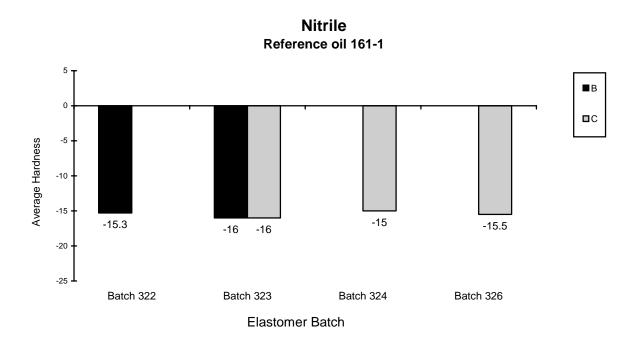


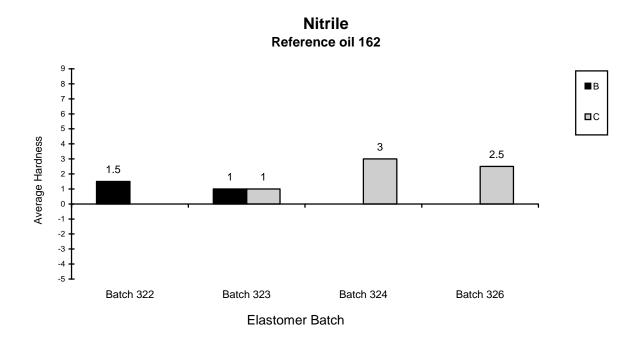
Average percent elongation bar charts for nitrile material are shown below by lab, elastomer batch, and reference oil. The bar charts show comparable results on all batches with little discernable lab difference with both reference oils.



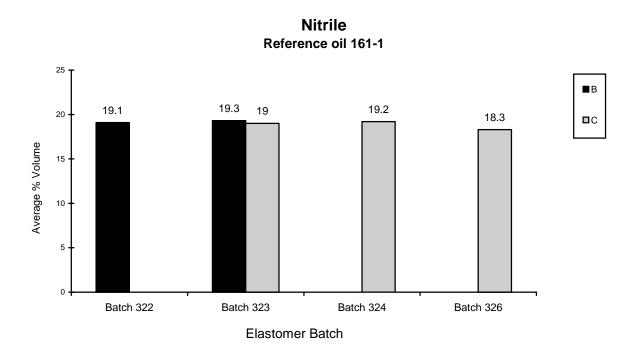


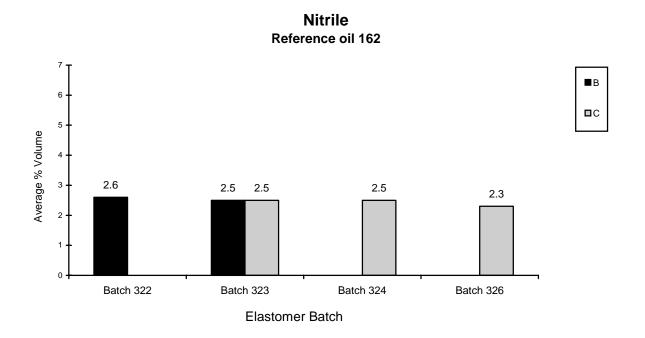
Average hardness bar charts for nitrile material are shown below by lab, elastomer batch, and reference oil. The bar charts show comparable results on all batches with little discernable lab difference with both reference oils.





Average percent volume bar charts for nitrile material are shown below by lab, elastomer batch, and reference oil. The bar charts show comparable results on all batches with little discernable lab difference with both reference oils.





# **REFERENCE OILS**

The following table quantifies each reference oil by the number of reference oil containers remaining at the TMC and each laboratory. Each reference oil container has 750 ml (0.2 gallons) of oil.

LAB	160-1	161-1	162
В	11	15	9
С	9	9	5
TMC	880	515	65

### **INFORMATION LETTERS**

There were no information letters issued during this report period.

# **TMC ACTIVITIES**

There was one lab visit conducted this report period with no discrepancies to report.

### DML/dml

### Attachments

c: OSCT Surveillance Panel

F. M. Farber, TMC

ftp://ftp.astmtmc.cmu.edu/docs/gears/osct/semiannualreports/osct-10-2002

Distribution: Email