



M11 EGR Test Matrix Status

**Presentation to
HDEOCP
May 25, 2001
David M Stehouwer**

M-11 EGR Test Matrix Status

- All runs on Oil E are Complete
- Only 3 runs remain
- Expect Matrix completion no later than 6/18

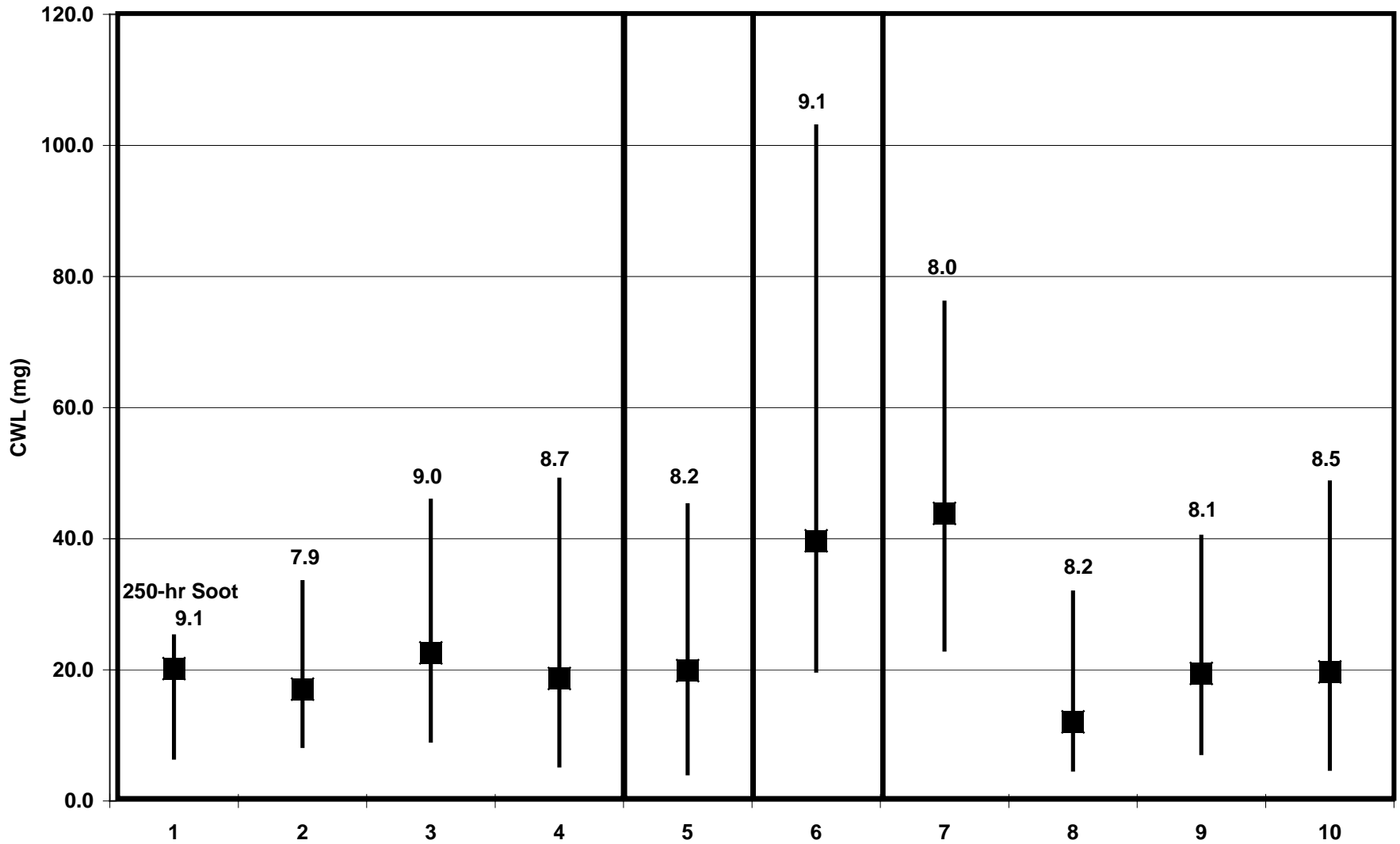
Cummins Inc. M11 - EGR Test Matrix Design					
Featured Oil E					
Lab 1		Lab 2	Lab 3		Lab 4
1	2	3	4	5	6
E	E	E	E	E	E
H	E	H	B	E	B
A	G	D	G	A	D
F	C	C	F	J	J
E			E		
		Complete			
		Pending			

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M11 EGR: Status of Data Analysis

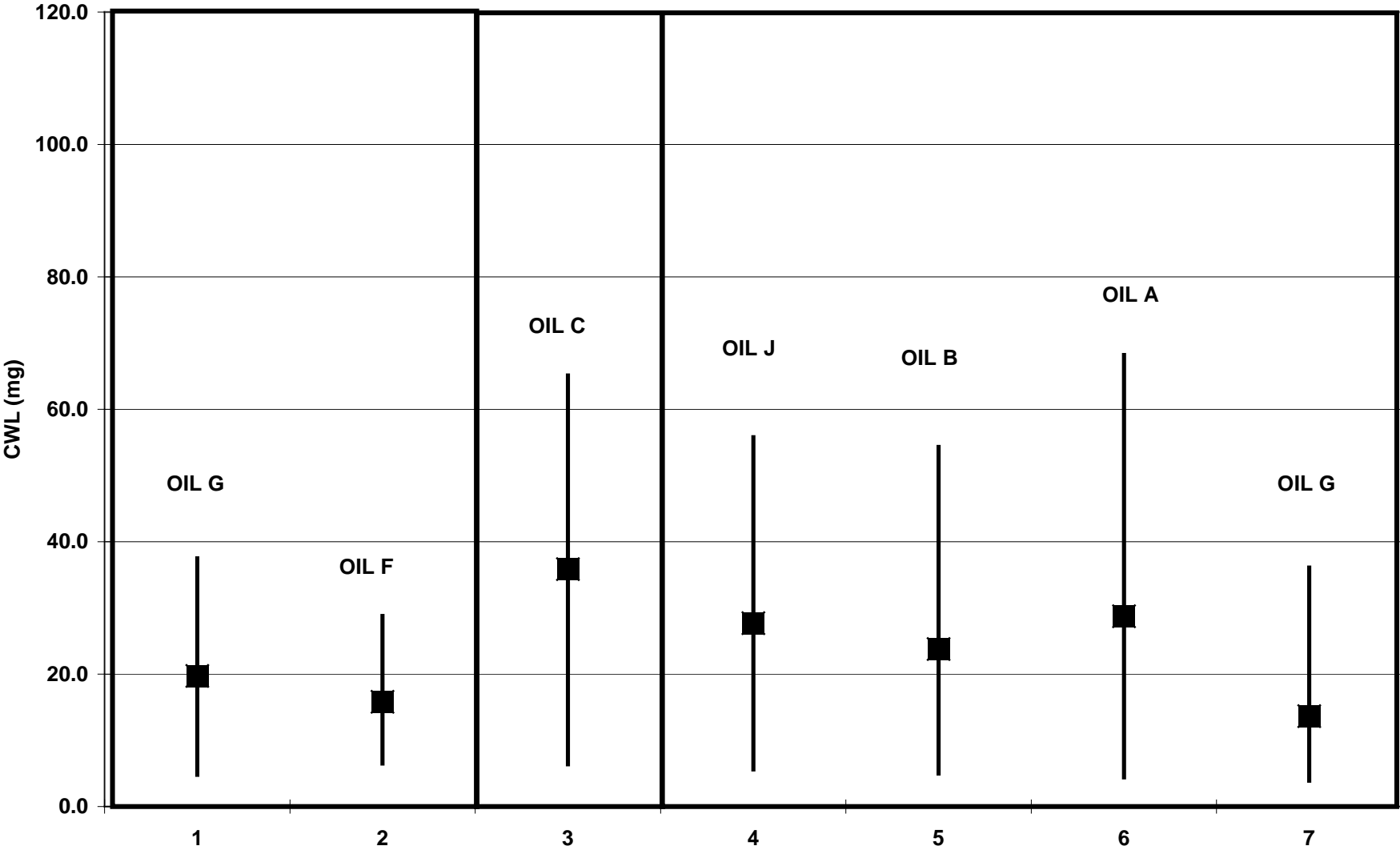
- Full data sets from 16 of 26 runs
- 7 additional runs are completed and in process

Crosshead Weight Loss - Matrix Oil E



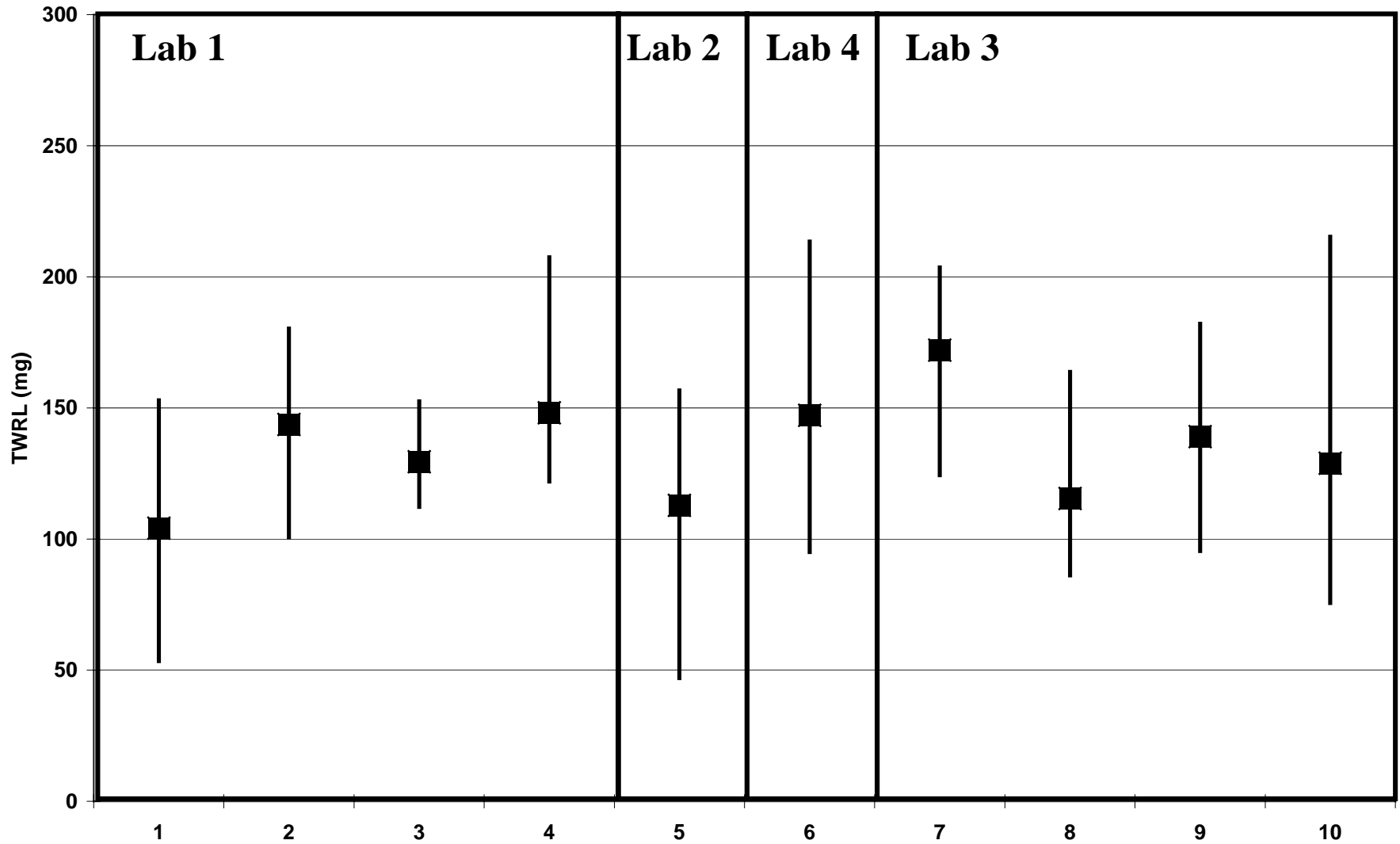
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Crosshead Weight Loss



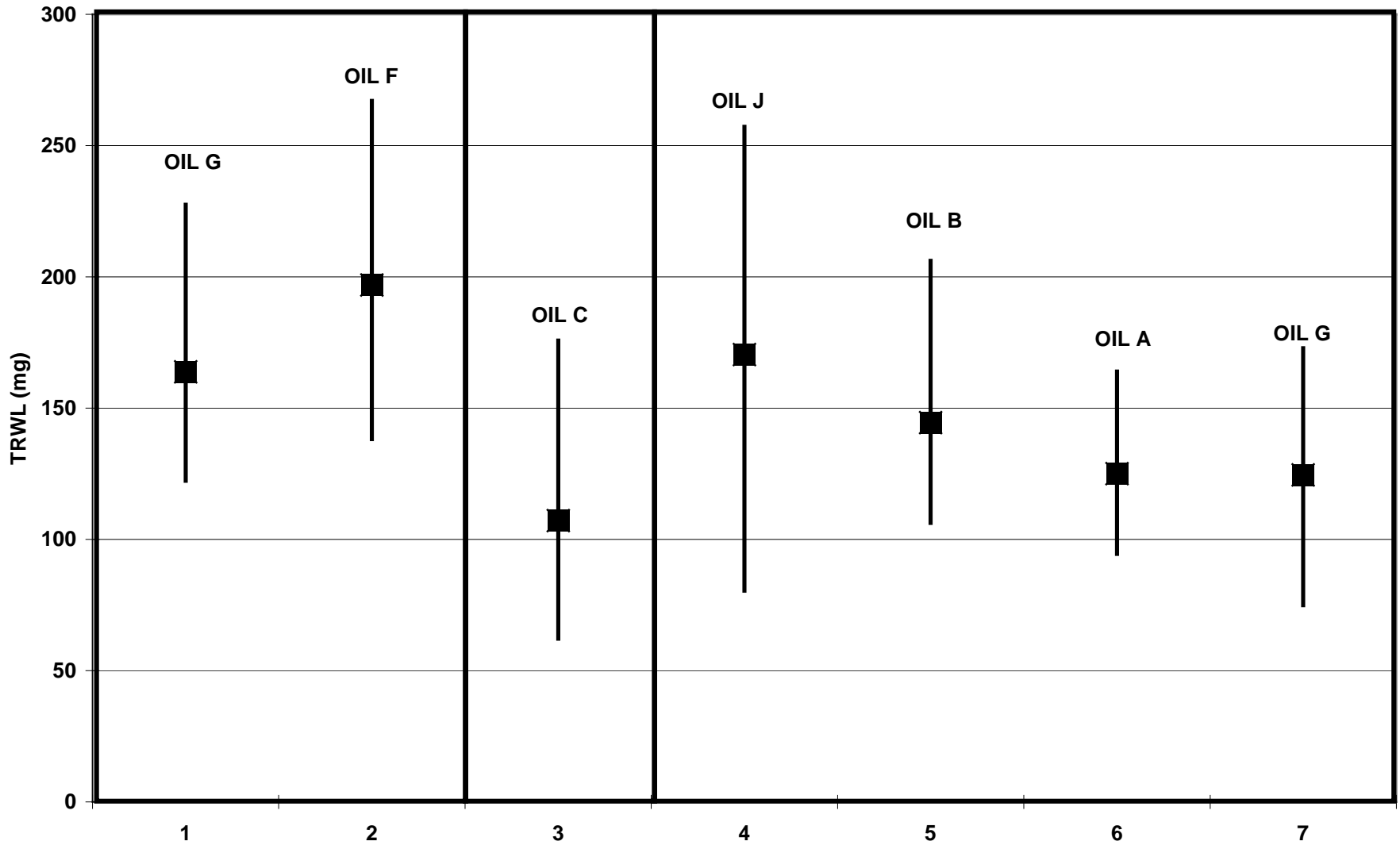
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Top Ring Weight Loss - Matrix Oil E



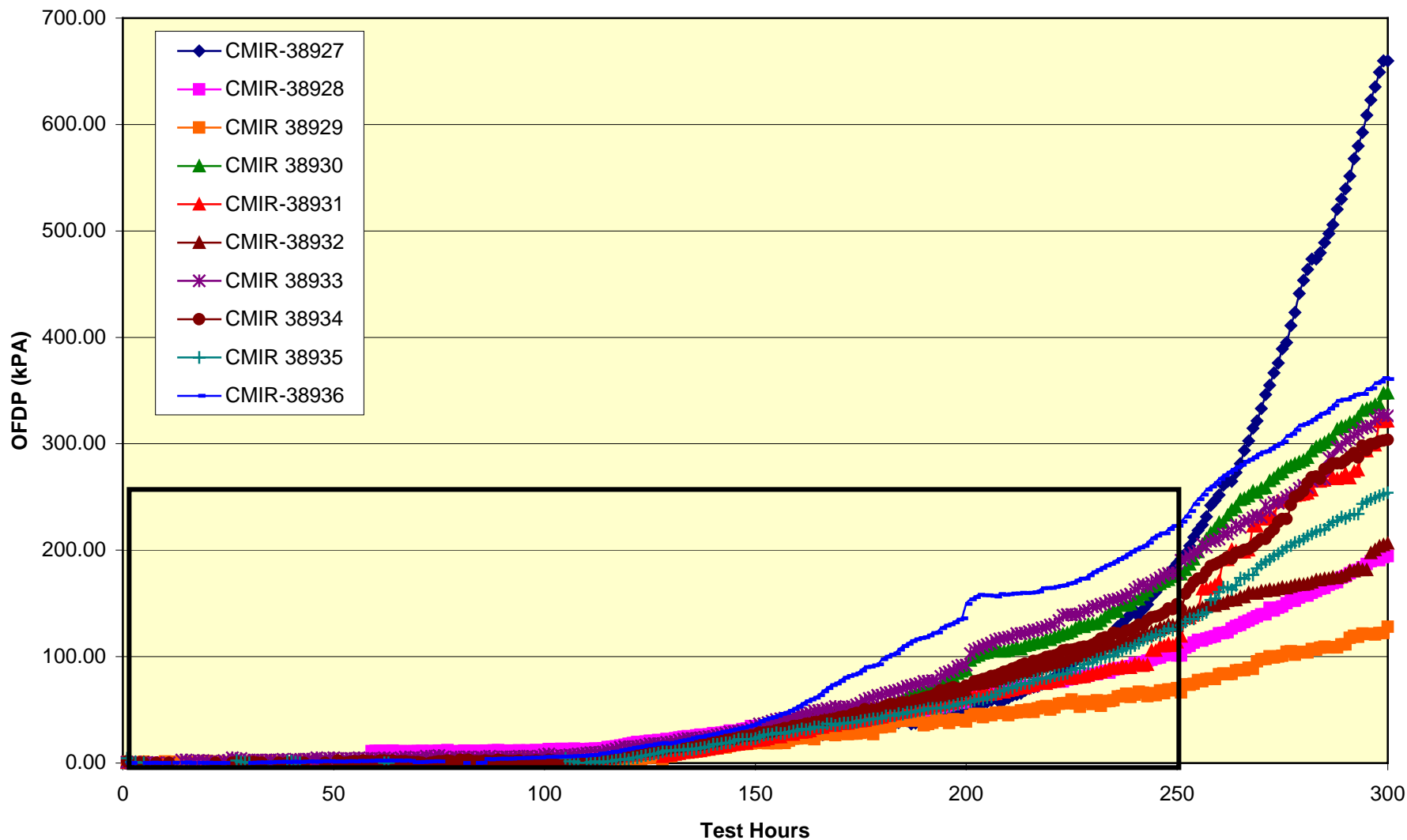
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Top Ring Weight Loss



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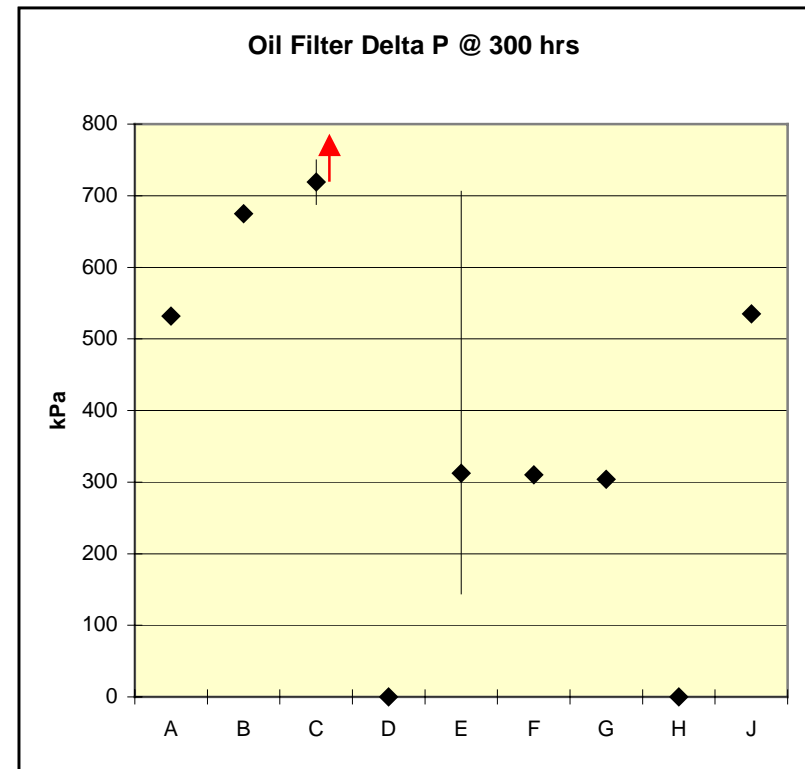
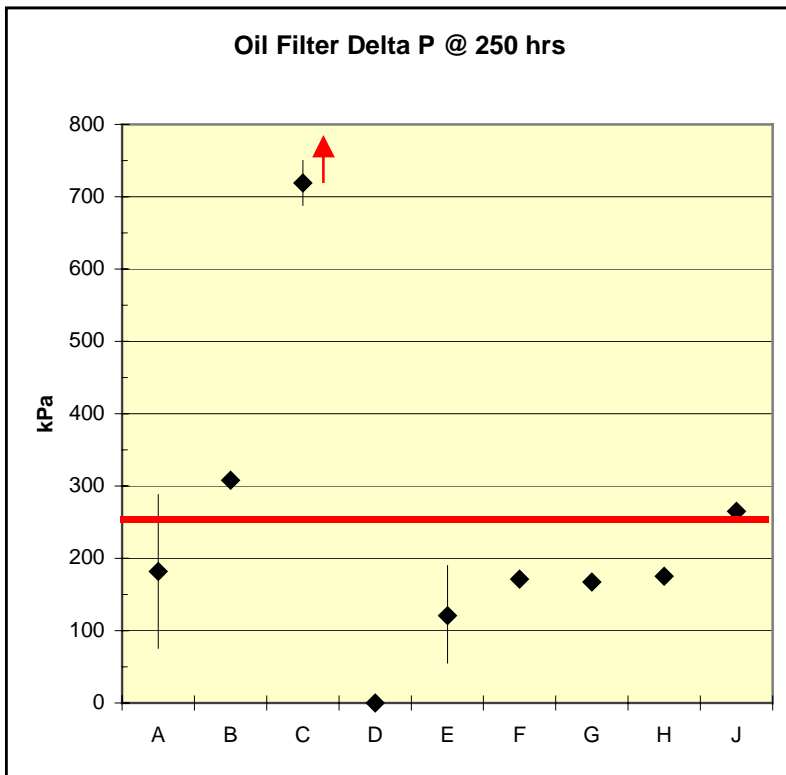
PC9 Matrix Data Oil E, Corrected & Normalized



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M11 EGR: Filter Delta P Matrix Results

- Apply HST correction factor
- Report 250 hr and 300 hr corrected DP
- Plots show range and mean
- Set limit at 250 hr



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Filter Modification

- SWRI will run oil E with modified filter
- Surveillance Panel to review proper action

Shifting pleats cause loss of flow area



Hot-melt beads stabilize pleats

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