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COMMITTEE D02 ON PETROLEUM PRODUCTS, LIQUID FUELS, AND LUBRICANTS

Issued: January 06, 2016

Reply to: Dan Worcester
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These are the unapproved minutes of the 01.05.2016 Sequence VI Surveillance Panel call.

The meeting was called to order at 8:00 AM Central Time by Jerry Brys.

Agenda

The Agenda is the included as Attachment 1.

1.0 Roll Call

The Attendance list is Attachment 2.

2.0 Approval of minutes

2.1 Approval of the minutes of the 12.15.2015 meeting.

ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencevi/minutes/VIMinutes20151215ConferenceCall.pdf

MOTION: Approve the minutes from the 12.15.2015 conference call.

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[Jason Bowden, Dan Worcester, second] Minutes were approved unanimous.

3.0 Action Item Review

3.1 OHT to provide update on current VIE inventory and service engine order. –OHT
There are 37 -001 engines and 144 -002 version. There are no more VID engines.

3.2 Labs reported VID engine inventory and expected depletion date of VID engines.
-Expected life of engines range from 2016 Q1 to 2018
Lab1: 1 engines
Lab2: 1 *engines*
Lab3: 3 *engines*
Lab4: 1 engines There is no change in engine counts.

4.0 Old Business

4.1 List of items to be reviewed after the Precision Matrix
Do we really need to run three RO tests to establish the new engine for LTMS?
Discussion of reducing the new reference requirement to two oils, then a third oil run after a defined number of candidates.
Discussion of using FEI 2 and FEI Sum for references to match candidate pass/fail criteria.
Discussion of evaluating 80/20 ratio of BL before to after for FEI 1 and 10/90 for FEI 2.
Should the acceptance bands value of 1.96 be rounded up? Due to the rounding on FEI 1 and 2 the actual pass limit is 1.91 and 1.92.
-SP chair and test sponsor to investigate what is needed to establish VID equivalent limits for VIE
-Discussion of changing BLB1 to BLB2 delta acceptable limits
This will be an on-going effort.

4.2 Discussion on precision matrix. (Spreadsheet attached)–Rich Grundza/Labs.
Jo Martinez supplied a first review of the precision matrix results. See Attachment 3. There are no engine hour or severity adjustments applied to the results. Oil consumption is shown as this was one criteria to be considered in moving forward with the matrix. However there was discussion that consumption is related to the reference oil viscosity. There is no trend for engine hours. The discussion was to continue the matrix. Dave Glaenzer has generated an Excel sheet of the matrix results. See Attachment 4.

MOTION: The precision matrix will continue for stands A2, G2 and B per the existing matrix test order of oils.
Doyle Boese / Dave Glaenzer / Passed 10 – 0 – 2

4.3 Update from task force, to investigate alternative test procedure Sequence "VIF" that would improve 0W-16. – Dan Worcester/Satoshi Hirano SwRI has reported the third test. IAR will start their third test this week. The results are less than 3 sigma difference between labs. The first Sense Check portion will be done it a few weeks.

4.4 Update from task force to investigate option to prolong usable life of the available VIE engines. –Adrian Alfonso/Bill Buscher There will be prices and part numbers from GM 01.22.2015. There will also be a build parts review before that price and parts list is released. IAR and SwRI will compare parts to current versions used.

4.5 Chairman will be unavailable 12/23/2015-1/19/2016, Jerry Brys will be filling in.

4.6 Discussion of handling PM engine as calibrated test stands. –Dave Glaenzer
There was discussion on how to handle matrix engines while awaiting precision matrix final review and reference oil targets and engine calibration criteria. Storage criteria and the method to make the engines ready to run again will be reviewed later.

MOTION: Allow laboratories to remove their Sequence VIE precision matrix engine from their precision matrix stand that is put on hold after completing the initial 4 precision matrix tests, preserve and store their precision matrix engine in a climate controlled environment, install an alternate Sequence VIE test engine and conduct non-qualified testing until either that precision matrix stand is needed again for the precision matrix or the precision matrix completes.
Bill Buscher / Dave Glaenzer / Passed 12 – 0 – 1

5.0 New Business

5.1 Discussion on VID Industry action alarm.
One fail on a new engine triggered the alarm. TMC will continue to monitor.

5.2 Discussion on conditioning Sequence VI engines after extended downtime.
This will be discussed after labs have supplied their existing methods.

6.0 Next Meeting.

The next meeting will be 01.12.2016 conference call.

The meeting adjourned at 8:53 AM.

Sequence VI Surveillance Panel Conference Call Agenda
January 5 @ 9:00-10:00AM EST

Call-in information is included below:

Call-in Number: 866-528-2256
Conference Code: 3744024

1.0) Roll Call

Do we have any membership changes or additions?

2.0) Approval of minutes

2.1 Approve the minutes from the December 15, 2015 Sequence VI Surveillance Panel.

ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencevi/minutes/VIMinutes20151215ConferenceCall.pdf

3.0) Action Item Review

3.1 OHT to provide update on current VIE inventory and service engine order. –OHT

3.2 Update of VID engine inventory and expected depletion date of VID engines.

-Expected life of engines range from 2016 Q1
Lab1: 1 engines
Lab2: 1 engines
Lab3: 3 engines
Lab4: 1 engines

4.) Old Business

4.1 List of items to be reviewed after the Precision Matrix

-Do we really need to run three RO tests to establish the new engine for LTMS?
-Discussion of reducing the new reference requirement to two oils, then a third oil run after a defined number of candidates.

-Discussion of using FEI 2 and FEI Sum for references to match candidate pass/fail criteria.
-Discussion of evaluating 80/20 ratio of BL before to after for FEI 1 and 10/90 for FEI 2.
-Should the acceptance bands value of 1.96 be rounded up? Due to the rounding on FEI 1 and 2 the actual pass limit is 1.91 and 1.92.
-SP chair and test sponsor to investigate what is needed to establish VID equivalent limits for VIE
-Discussion of changing BLB1 to BLB2 delta acceptable limits

4.2 Discussion on precision matrix. (Spreadsheet attached)–Rich Grundza/Labs

4.3 Update from task force, to investigate alternative test procedure Sequence “VIF” that would improve 0W-16. – Dan Worcester/Satoshi Hirano

4.4 Update from task force to investigate option to use short blocks to supplement engine inventory. –Adrian Alfonso/Bill Buscher

4.5 Chairman will be unavailable 12/23/2015-1/19/2016, Jerry Brys will be filling in.

4.6 Discussion of handling PM engine as calibrated test stands. –Dave Glaenzer

5.) New Business

5.1 Discussion on VID Industry action alarm

5.2 Discussion on conditioning Sequence VI engines after extended downtime

6.) Next Meeting

Next Tuesday (reoccurring weekly meeting)

7.) Meeting Adjourned

ASTM SEQUENCE VI

Name	Address	Phone/Fax/Email	Attendance
Adrian Alfonso **Voting Member**	Intertek Automotive Research	Phone: (210) 838-0431 adrian.alfonso@intertek.com	ATTEND
Jason Bowden **Voting Member**	OH Technologies	Phone: (440) 354-7007 jhbowden@ohtech.com	ATTEND
Timothy Caudill **Voting Member**	Ashland	Phone: (606) 329-5708 Tlcaudill@ashland.com	
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David Glaenzer **Voting Member**	Afton	Phone: (804) 788-5214 Dave.Glaenzer@aftonchemical.com	ATTEND
Rich Grundza **Voting Member**	ASTM TMC	Phone: (412) 365-1034 reg@astmtmc.cmu.edu	ATTEND
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Dan Worcester **Voting Member**	Southwest Research Institute	Phone: (210) 522-2405 dan.worcester@swri.org	ATTEND

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Chris Taylor	Chris.taylor@vpracingfuels.com	VP Racing Fuels	

ASTM SEQUENCE VI

Name	Address	Phone/Fax/Email	Attendance

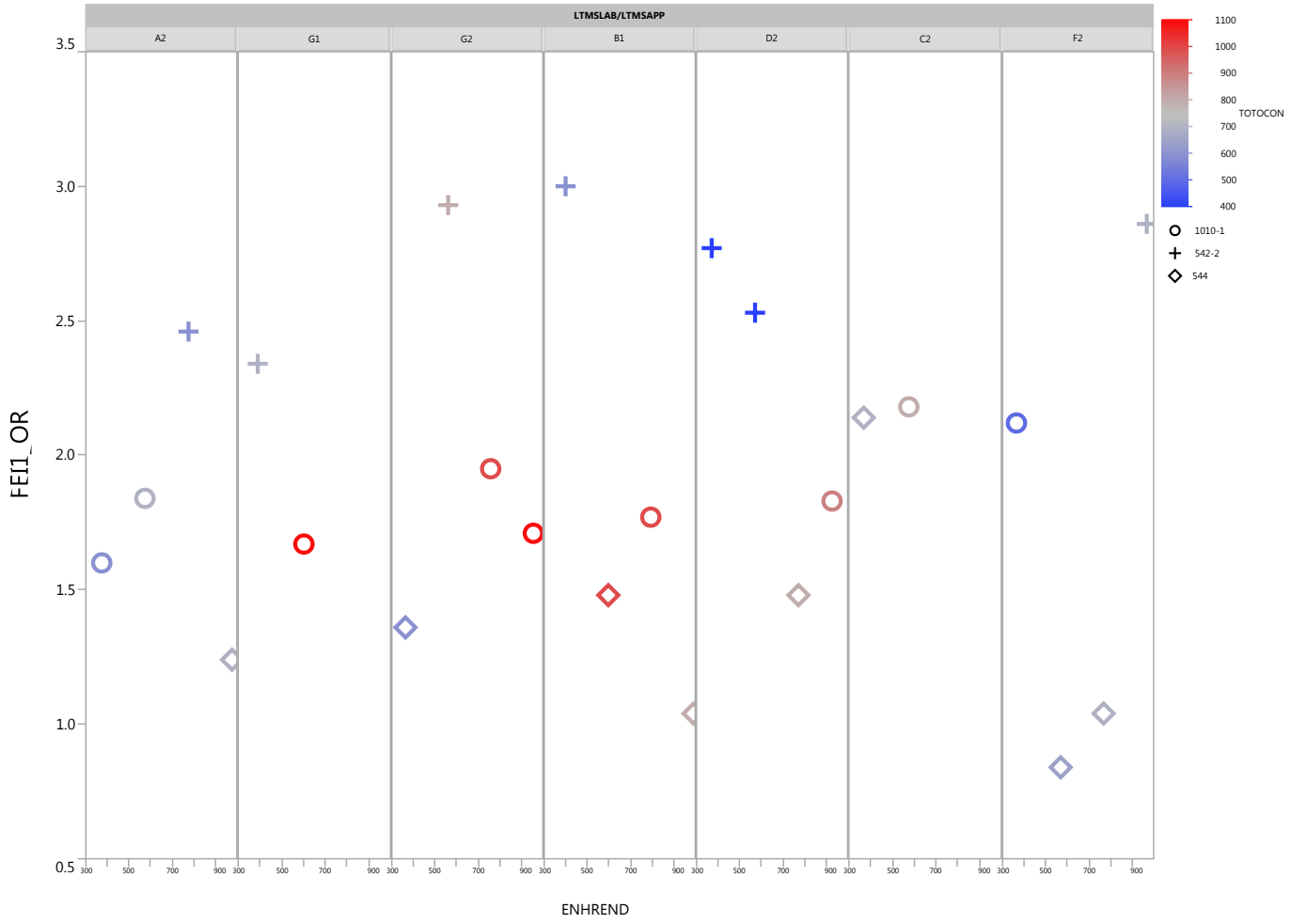
Sequence VIE Precision Matrix – Step 1

Jo Martinez

Jan. 4, 2016

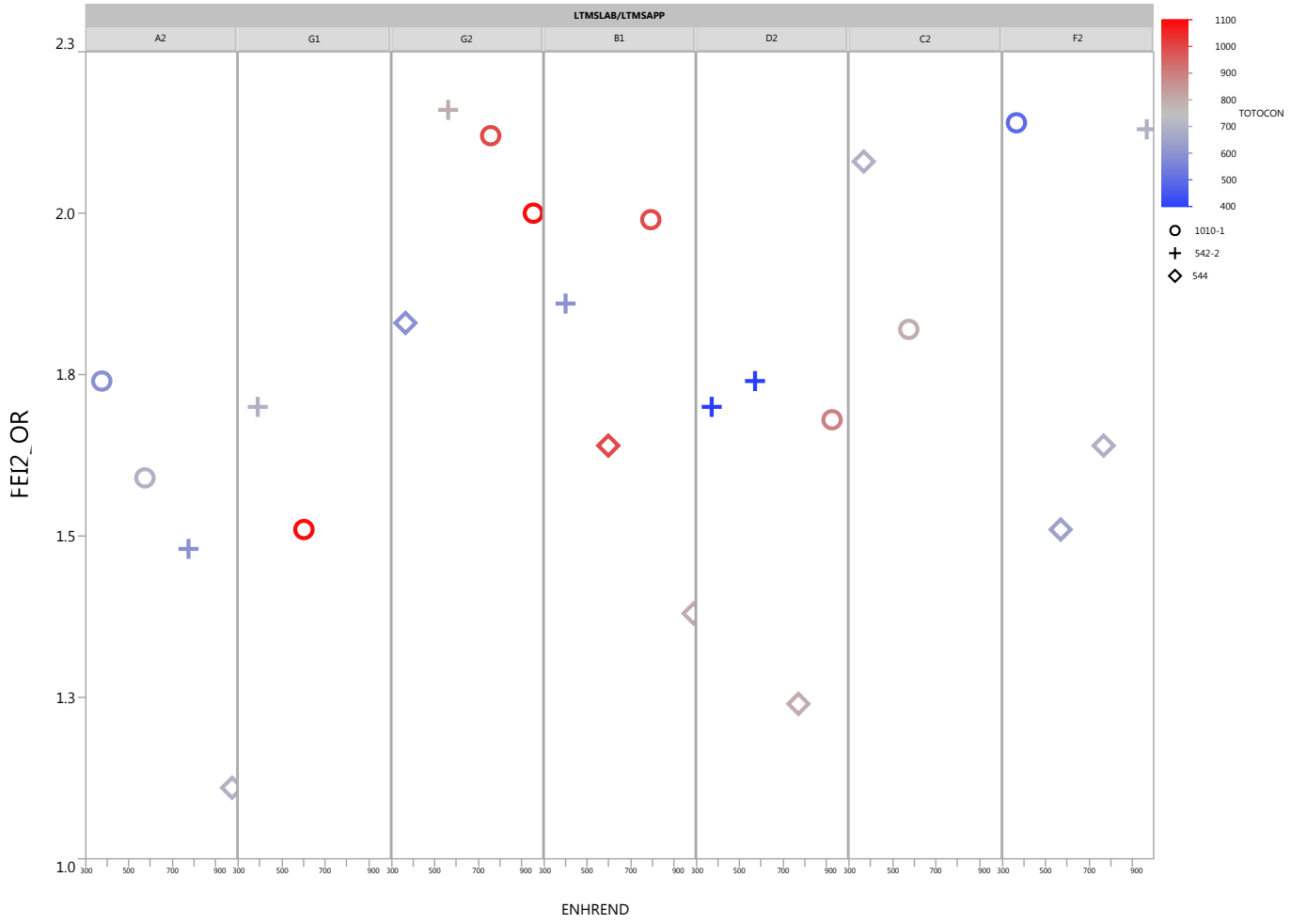
ADDING UP™

FEI1_OR



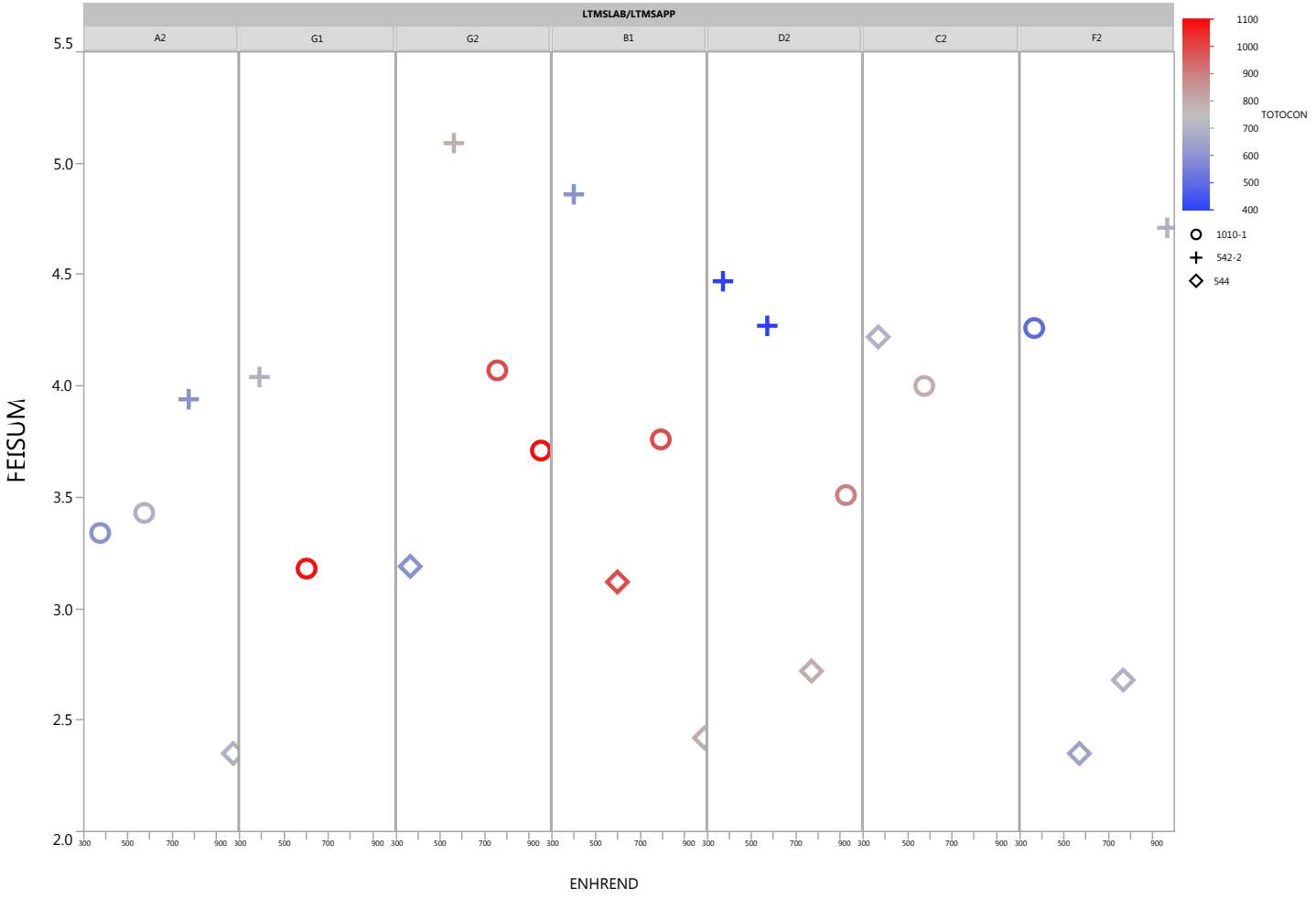
ADDING UP™

FEI2_OR



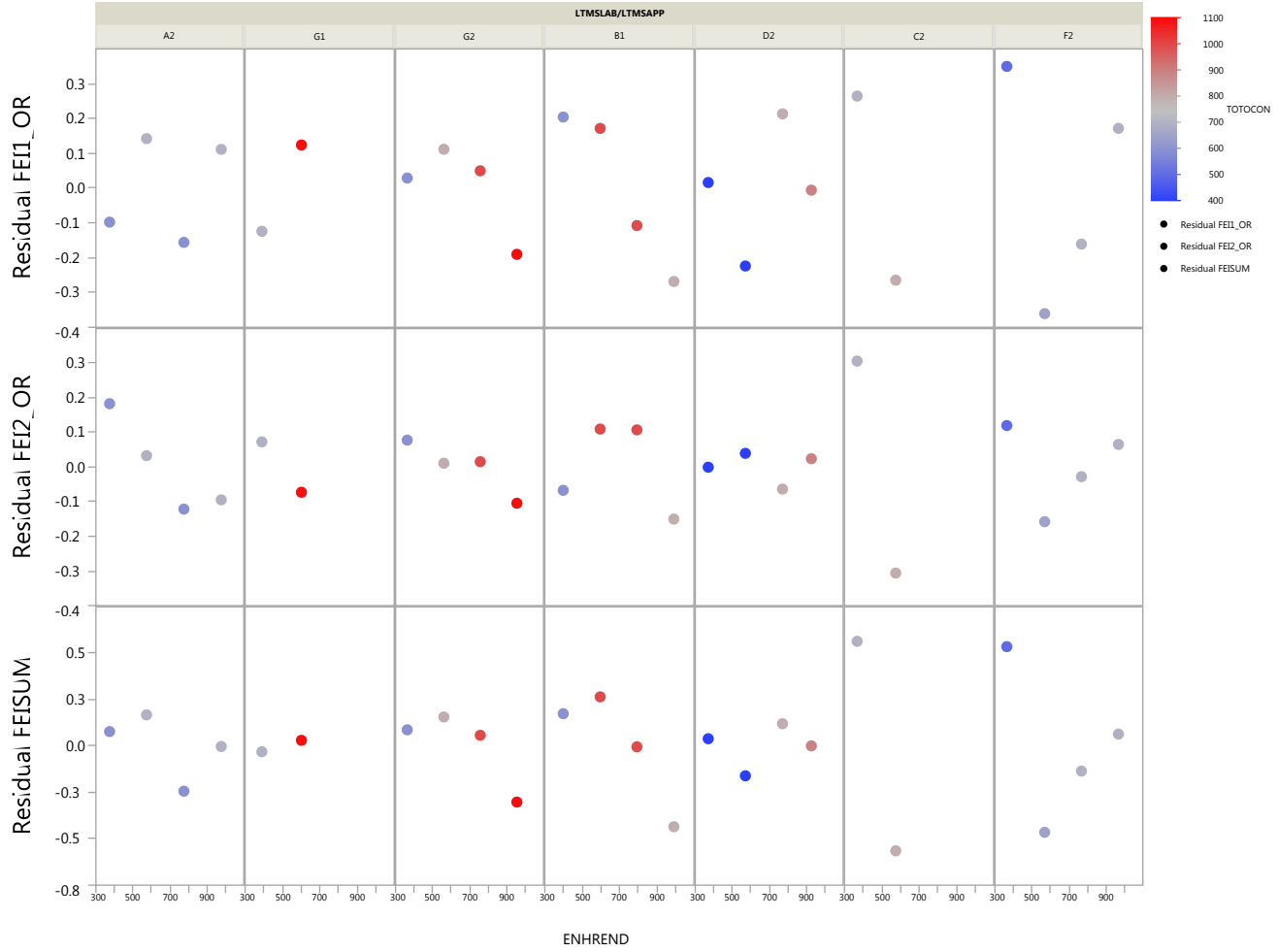
ADDING UP™

FEISUM



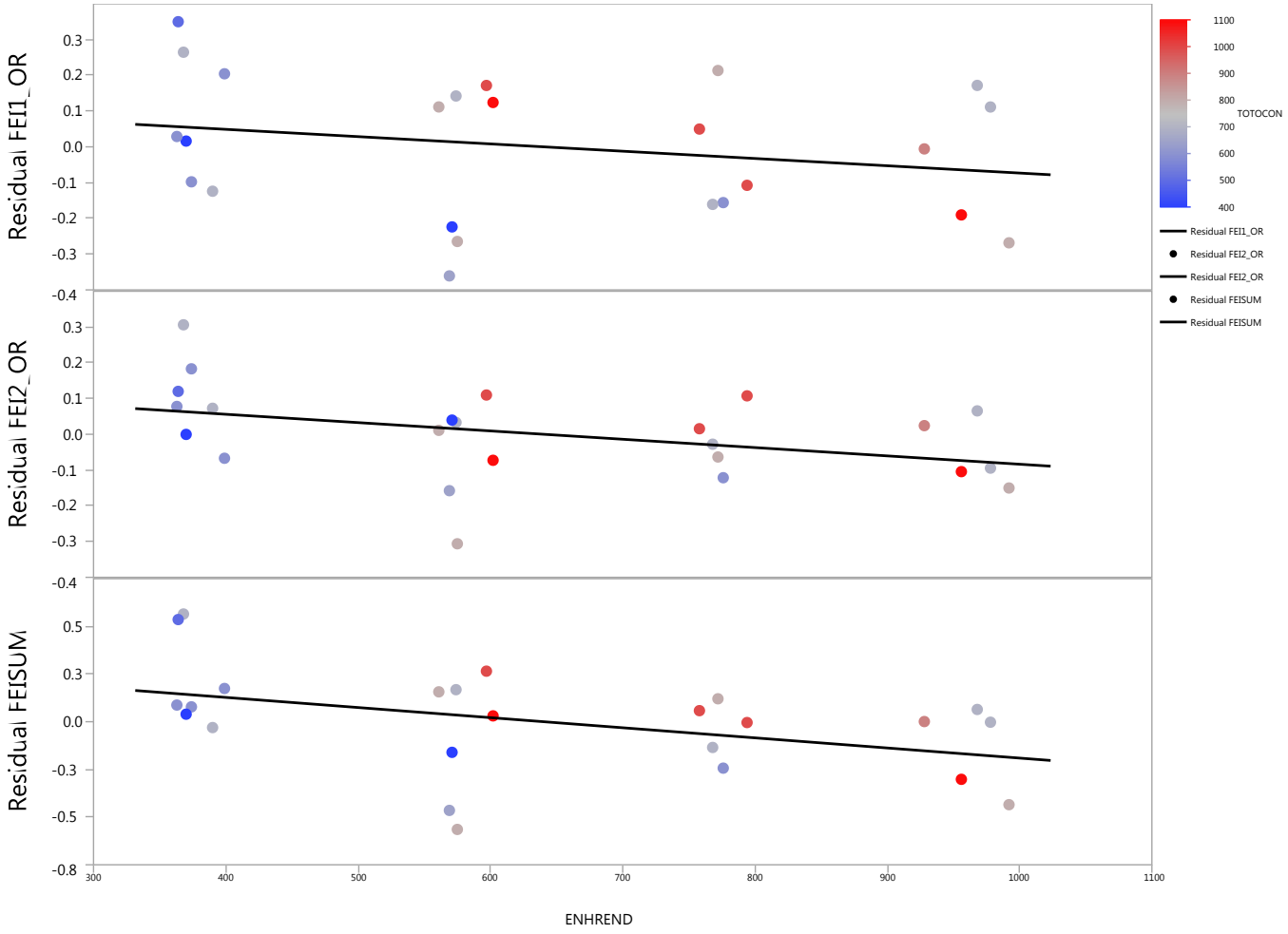
ADDING UP™

Residual [Oil, Lab, Eng(Lab)] by Engine Hour



ADDING UP™

Residual [Oil, Lab, Eng(Lab)] by Engine Hour



SEQUENCE VIE RESULTS WITH NO HOUR ADJUSTMENT

SW 1 (Lab A)				SW2 (Lab A)				IAR 1 (Lab G)				IAR 2 (Lab G)				LZ (Lab B)				Afton (Lab D)				Ashland (Lab C)				XOM (Lab F)			
	FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr		FEI 1	FEI 2	EOT hr
544				1010-1	1.60	1.74	374	542-2	2.34	1.70	390	544	1.36	1.83	363	542-2	3.00	1.86	399	542-2	2.77	1.70	370	544	2.14	2.08	368	1010-1	2.12	2.14	364
544				1010-1	1.84	1.59	574	1010-1	1.67	1.51	602	542-2	2.93	2.16	561	544	1.48	1.64	597	542-2	2.53	1.74	571	1010-1				544	0.84	1.51	569
542-2				542-2	2.46	1.48	776	1010-1	est1.55			1010-1	1.95	2.12	758	1010-1	1.77	1.99	794	544	1.48	1.24	772	542-2				544	1.04	1.64	768
1010-1				544	1.24	1.11	978	544				1010-1	1.71	2.00	956	544				1010-1	1.83	1.68	928	542-2				542-2	2.86	2.13	968
				544								542-2				544															
				1010-1								542-2				542-2															
				544								544				542-2															
				542-2								544				1010-1															
				542-2								1010-1				1010-1															
				1010-1								544				542-2															
				1010-1								542-2																			

Sequence VID Targets (Engine Hour Adjusted)			
		FEI 1	FEI 2
RO 542-2	0W-20	1.49	0.80
RO 1010-1	5W-20	1.34	1.10
RO 544	5W-30 T1	N/A	N/A

542-2

Lab	Stand	Stand Run		FEI 1	FEI 2	FEI Sum	EOT Hours	BLB1/BLB2 Shift	BLB2/BLA Shift	Oil Consumption
IAR (G)	1	1		2.34	1.70	4.04	390	0.23	0.60	700
LZ (B)	1	1		3.00	1.86	4.86	399	0.36	0.76	600
Afton (D)	1	1		2.77	1.70	4.47	370	0.17	1.03	400
IAR (G)	2	2		2.93	2.16	5.09	561	0.08	-0.30	800
Afton (D)	1	2		2.53	1.74	4.27	571	0.18	0.08	400
SRI (A)	1	3								
SRI (A)	2	3		2.46	1.48	3.94	776	0.20	-0.85	600
APAL (C)	1	3								
APAL (C)	1	4								
XOM (F)	1	4		2.86	2.13	4.99	965	0.23	-0.19	700
IAR (G)	2	5								
IAR (G)	2	6								
LZ (B)	1	6								
LZ (B)	1	7								
SRI (A)	2	8								
SRI (A)	2	9								
LZ (B)	1	10								
IAR (G)	2	11								

544

Lab	Stand	Stand Run		FEI 1	FEI 2	FEI Sum	EOT Hours	BLB1/BLB2 Shift	BLB2/BLA Shift	Oil Consumption
SRI (A)	1	1								
IAR (G)	2	1		1.36	1.83	3.19	363	0.23	0.72	600
APAL (C)	1	1		2.14	2.08	4.22	368	0.16	1.52	700
SRI (A)	1	2								
LZ (B)	1	2		1.48	1.64	3.12	597	0.24	0.46	1000
XOM (F)	1	2		0.84	1.51	2.35	569	0.22	-0.50	650
Afton (D)	1	3		1.48	1.24	2.72	772	0.30	0.12	800
XOM (F)	1	3		1.04	1.64	2.68	768	0.09	-0.37	700
SRI (A)	2	4		1.24	1.11	2.35	978	0.22	-1.53	700
IAR (G)	1	4								
LZ (B)	1	4								
SRI (A)	2	5								
LZ (B)	1	5								
SRI (A)	2	7								
IAR (G)	2	7								
IAR (G)	2	8								
IAR (G)	2	10								

1010-1

Lab	Stand	Stand Run		FEI 1	FEI 2	FEI Sum	EOT Hours	BLB1/BLB2 Shift	BLB2/BLA Shift	Oil Consumption
SRI (A)	2	1		1.60	1.74	3.34	374	0.34	0.51	600
XOM (F)	1	1		2.12	2.14	4.26	364	0.28	0.84	500
SRI (A)	2	2		1.84	1.59	3.43	574	0.22	-0.05	700
IAR (G)	1	2		1.67	1.51	3.18	602	-0.01	-0.02	1100
APAL (C)	1	2								
IAR (G)	1	3		est. 1.55						
IAR (G)	2	3		1.95	2.12	4.07	758	0.39	-0.09	1000
LZ (B)	1	3		1.77	1.99	3.76	794	0.28	-0.46	1000
SRI (A)	1	4								
IAR (G)	2	4		1.71	2.00	3.71	956	0.29	-0.51	1100
Afton (D)	1	4		1.83	1.68	3.51	928	0.12	-0.20	900
SRI (A)	2	6								
LZ (B)	1	8								
IAR (G)	2	9								
LZ (B)	1	9								
SRI (A)	2	10								
SRI (A)	2	11								