

## PC-11 VGRA Matrix Test Status

### January 18, 2016

#### T-13:

The T-13 matrix has completed and all tests have been reviewed by the surveillance panel and determined to be operationally valid. The statisticians are in the process of analyzing the data. All T-13 data is posted at:

<ftp://ftp.astmtmc.cmu.edu/refdata/diesel/T13/data/ltms.csv>

#### COAT:

Lab A's last test is pending the return of the oil system micromotion from the calibration source. The lab hopes to have it returned sometime the week of January 25<sup>th</sup>. A successful reference oil test will then need to be run before the VGRA test can be conducted. All the reported tests need to be reviewed by the task force for operational validity. All COAT data is posted at: <ftp://ftp.astmtmc.cmu.edu/refdata/diesel/COAT/data/ltms.csv>

The field COM1 will identify the tests as VGRA matrix tests with a value of "VGRA".  
Estimated COAT Matrix Completion: ?

### T-13 VGRA Matrix Test Status

	Lab-Stand	A-1	A-2	D-1	G-1	G-2
Run Order	1	PC11A* 10W30 BS1 Tech1 111339-T13 ✓	PC11Y 10W40 BS1 Tech 1 111446-T13 ✓	PC11LL 15W40 BS2 Tech3 111349-T13 ✓	PC11A 10W30 BS1 Tech1 111337-T13 ✓	PC11KK 15W40 BS2 Tech2 111439-T13 ✓
	2	PC11KK 15W40 BS2 Tech2 111438-T13 ✓		PC11Y 10W40 BS1 Tech1 111445-T13 ✓	PC11G 15W40 BS1 Tech1 113302-T13 ✓	PC11LL 15W40 BS2 Tech3 111350-T13 ✓
	3	PC11G 15W40 BS1 Tech1 108381-T13 ✓				

✓ Surveillance Panel judged operationally valid.

Test Reported

Invalid

Wrong Oil

\* Failed reference criteria

T-13 Reported Results  
(Results are not lab severity adjusted)

Oil	TestKey	Lab	Stand	IR Peak Height @ EOT	Viscosity Increase@ 40°C (%)	Comment
PC11A	111339-T13	A	1	91.8	32.4	Failed reference criteria in mild direction
	111337-T13	G	1	116	61.2	Passed reference criteria
PC11KK	111439-T13	G	2	38.0	4.9	
	111438-T13	A	1	64.8	16.1	
PC11LL	111349-T13	D	1	117.3	56.1	
	111350-T13	G	2	100.0	48.6	
PC11Y	111446-T13	A	2	123.0	59.8	
	111445-T13	D	1	116.1	51.3	
PC11G	113302-T13	G	1	116.0	53.5	
	108381-T13	A	1	119.6	62.9	

Wrong Oil

## COAT

Run #	A	G
1	823 10W30 BS1 Tech 1 110156-COAT	832* 15W40 BS1 Tech 1 110729-COAT
2	PC11X 10W40 BS2 Tech 2 111441-COAT	PC11FF 10W30 BS2 Tech 3 111352-COAT
3	PC11FF 10W30 BS2 Tech 3 111351-COAT	PC11EE 10W30 BS2 Tech 2 111564-COAT
4	PC11EE 10W30 BS2 Tech 2 111563-COAT Aborted Oil Leak	PC11X 10W40 BS2 Tech2 111442-COAT
	PC11EE Re-run Aborted Oil Leak	
		PC11FF (rerun) 10W30 BS2 Tech 3 113212-COAT
		823 (Correct Oil) 10W30 BS1 Tech 1 113303-COAT

✓ Judged operationally valid.

\* Failed reference criteria

Test Reported

Invalid

Wrong Oil

COAT Reported Results  
(Results are not lab severity adjusted)

Oil	TestKey	Lab	Stand	Average Aeration (40-50) - %	Comment
832	110729-COAT	G	1	10.99	Failed reference prediction error criteria in the severe direction
PC11X	111442-COAT	G	1	11.40	
	111441-COAT	A	1	10.80	
PC11EE	111564-COAT	G	1	10.01	
		A	1	?	Pending Micromotion Return
PC11FF	111351-COAT	A	1	10.73	
	113212_COAT	G	1	11.03	
823	110156-COAT	A	1	10.19	
	113303-COAT	G	1	10.39	

Wrong Oil

If there are any questions please let me know.

Best regards,  
Frank

Frank Farber  
PC-11 VGRA Matrix Project Supervisor  
[ftp://ftp.astmtmc.cmu.edu/docs/diesel/PC11matrix/20160118\\_VGRAMatrixTestStatus.pdf](ftp://ftp.astmtmc.cmu.edu/docs/diesel/PC11matrix/20160118_VGRAMatrixTestStatus.pdf)