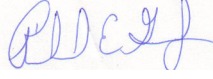




Test Monitoring Center

6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

MEMORANDUM: 05-025
DATE: May 2, 2005
TO: Gordon R. Farnsworth, Chairman, Sequence VG Surveillance Panel
FROM: Richard Grundza 
SUBJECT: Sequence VG Reference Oil Tests Statistics, Reference Oil 925-3

The following are the statistics for Sequence VG reference oil 925-3, based on twenty-six test results. These targets are effective for reference oil tests completing on or after May 3, 2005.

Parameter	Mean	Standard Deviation
AES	6.49	0.55
RAC	7.43	0.44
AEV	8.56	0.20
APV	7.38	0.26
OSCR	3.997	0.669
HSR	None Allowed	

Figures 1 through 5 plot the results by laboratory and the Shewhart acceptance ranges for AES, RAC, AEV, APV and OSCR, respectively. Hot stuck ring data was not plotted since no hot stuck rings are allowed and no tests exhibited hot ring sticking. Please note that laboratory results in Figures 1 through 5 have not been severity adjusted. Figure 6 summarizes the reported results, uncorrected, while Figure 7 tabulates the severity adjusted results, used to calculate the targets. All results are in reported units except Oil Screen Clogging (OSCR), which has been transformed using $\ln(1+\text{result})$ transformation.

REG/reg

Attachments

c: Sequence VG Surveillance Panel
Sequence VG Test Engineers
John Zalar, TMC
Frank Farber, TMC
<ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencev/memos/mem05-025.pdf>

Distribution: Email

Figure 1

Sequence VG (Reference Oil 925-3) Test Target Data Set and Shewart Severity Limits

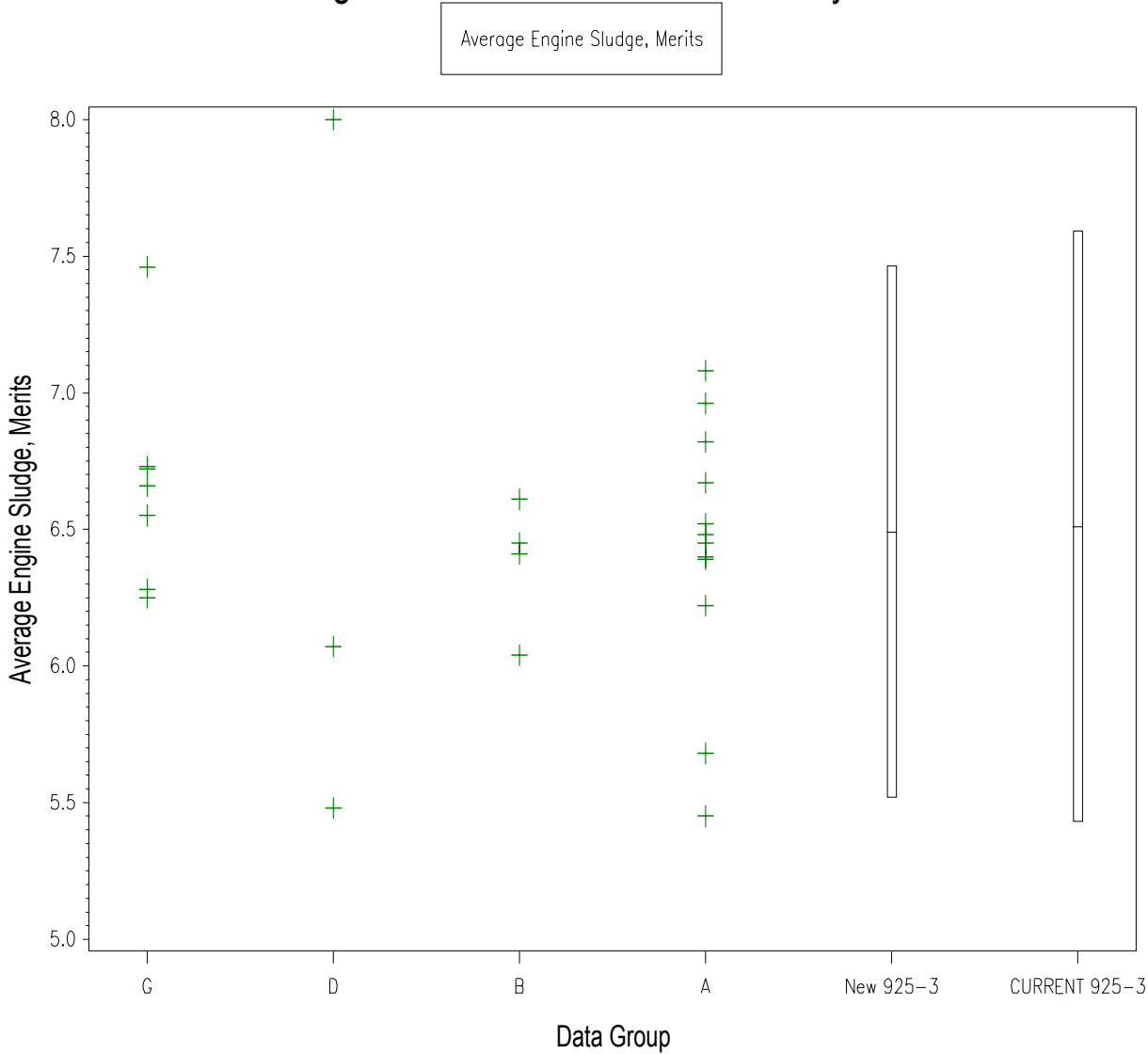


Figure 2

Sequence VG (Reference Oil 925-3) Test Target Data Set and Shewart Severity Limits

Rocker Cover Sludge, Merits

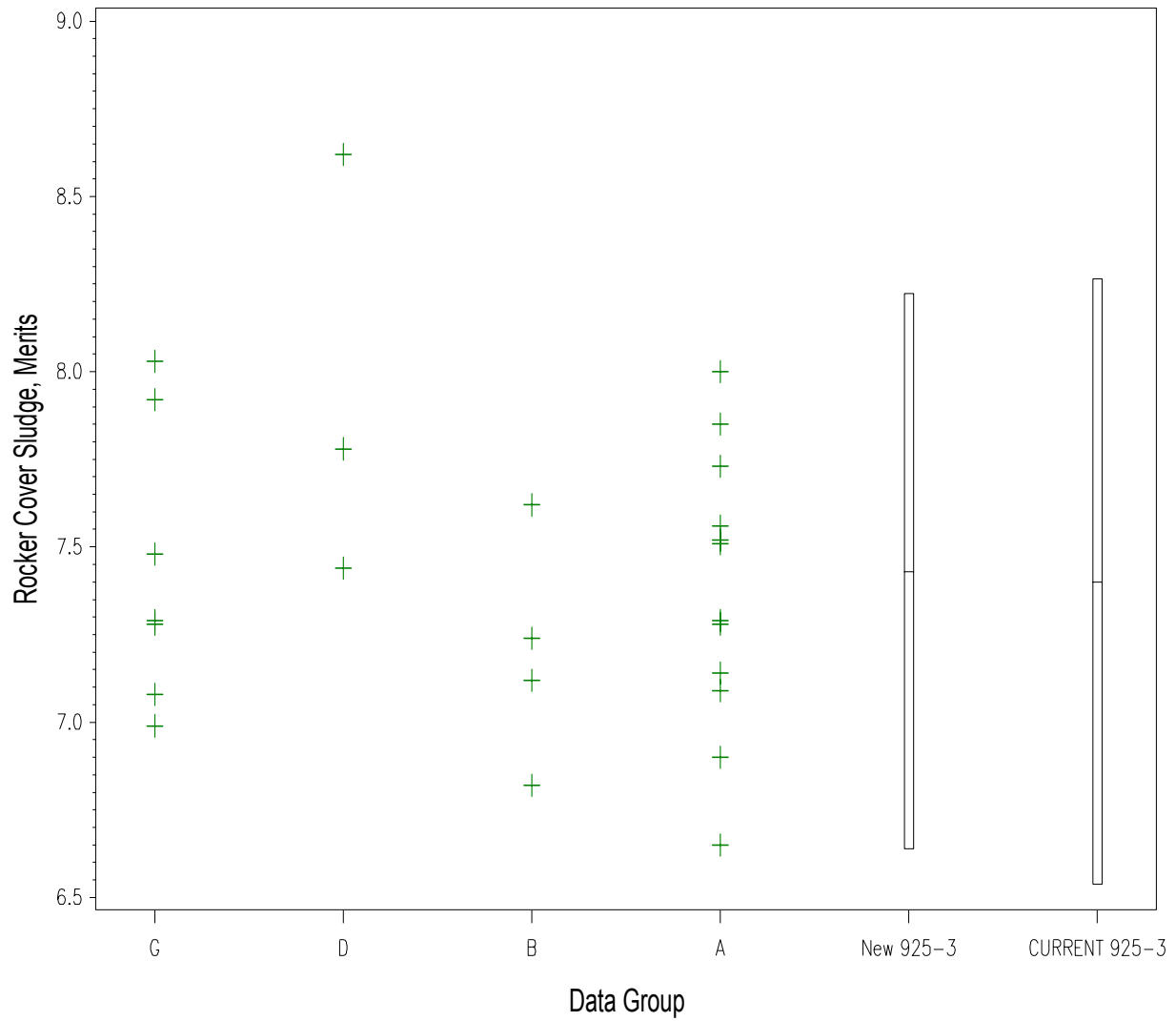


Figure 3

Sequence VG (Reference Oil 925-3) Test Target Data Set and Shewart Severity Limits

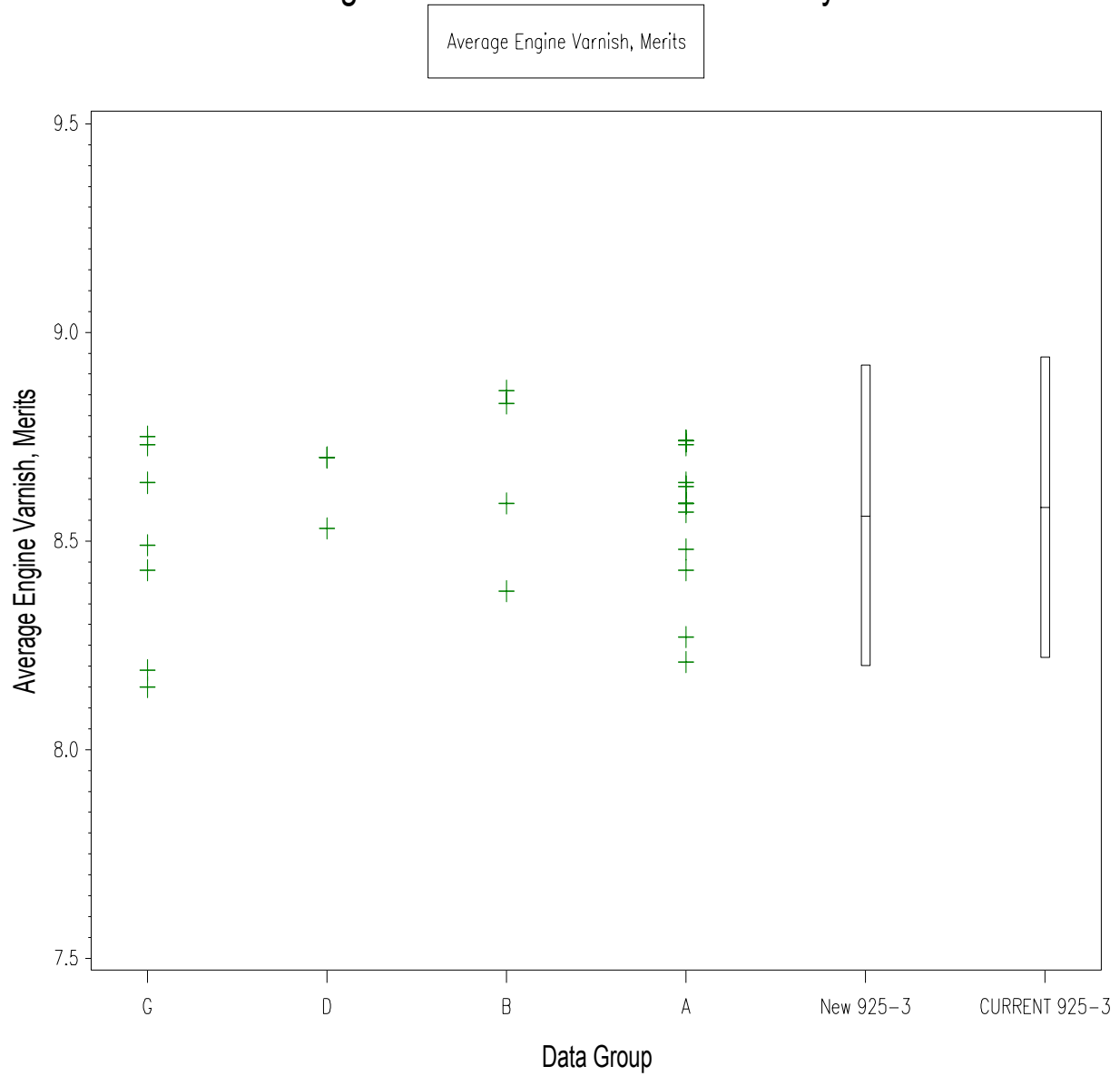


Figure 4

Sequence VG (Reference Oil 925-3) Test Target Data Set and Shewart Severity Limits

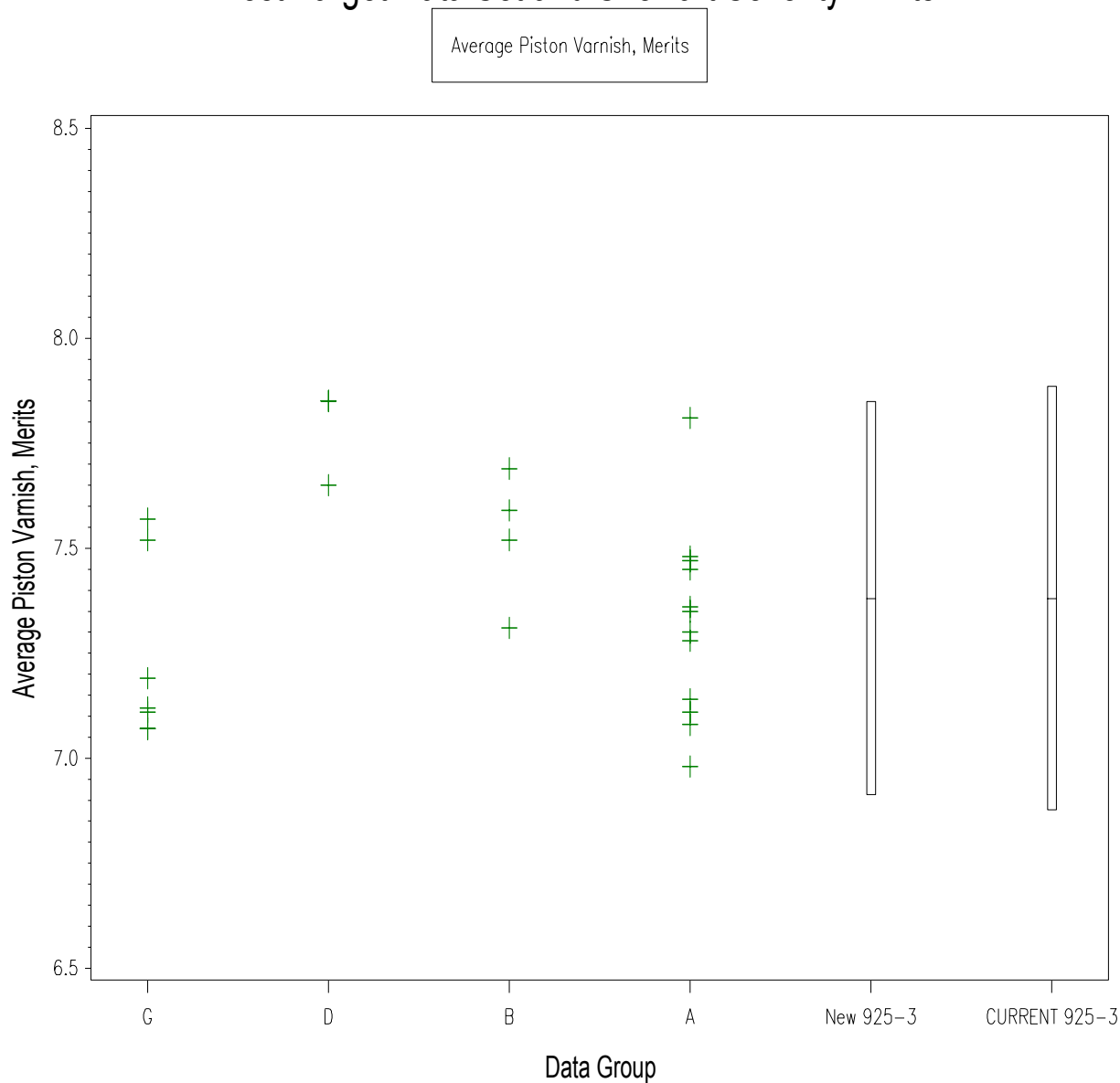


Figure 5

Sequence VG (Reference Oil 925-3) Test Target Data Set and Shewart Severity Limits

Oil Screen Clogging, Transformed Units

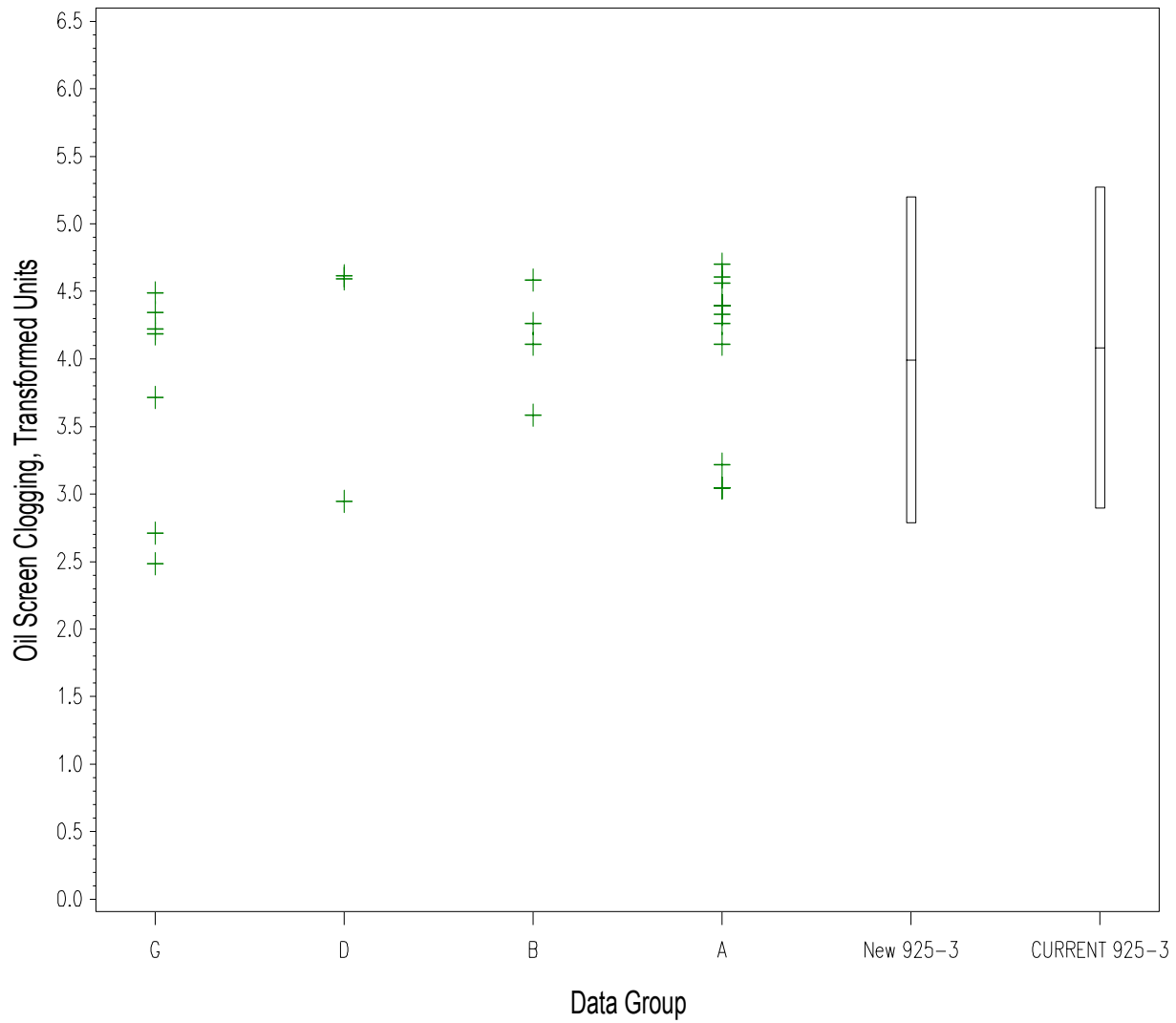


Figure 6

925-3 Uncorrected Results

La b	TESTKEY	AES	RAC	AEV	APV	OSCR	HSR	ENGINE
G	35351	7.46	7.92	8.06	7.12	2.4849	0	AER
D	35553	5.48	7.54	8.53	7.85	4.6151	0	AER
B	35348	6.61	7.62	8.83	7.59	4.2627	0	AER
A	35349	6.22	7.09	8.59	6.98	4.6052	0	AER
A	35350	5.45	6.65	8.69	7.35	4.5643	0	AER
A	34260	5.68	7.02	8.70	7.30	4.3944	0	AER
A	39881	6.40	7.29	8.74	7.45	4.1109	0	AER
G	35352	6.73	8.03	8.41	7.52	4.4886	0	AER
G	40399	6.25	6.99	8.19	7.11	4.3438	0	AER
B	39924	6.04	7.12	8.86	7.69	4.5850	0	AER
D	41080	6.07	7.44	8.70	7.65	4.5951	0	AER
A	42383	6.48	7.56	8.73	7.08	3.0445	0	AER
A	42384	7.08	8.00	8.59	7.48	4.2627	0	AER
G	42860	6.66	7.28	8.64	7.07	3.5558	0	AER
A	43747	6.39	7.14	8.74	7.14	4.1897	0	AER
A	43748	6.67	6.90	8.48	7.12	4.3944	0	AER
A	46247	6.82	7.51	8.57	7.69	4.3944	0	ROMEO
G	40401	6.55	7.08	8.75	7.57	3.1355	0	AER
D	43144	7.68	8.38	8.70	7.97	2.9444	0	ROMEO
G	44247	6.72	7.29	8.43	7.07	2.7081	0	ROMEO
A	46248	6.52	7.52	8.21	7.28	4.3307	0	ROMEO
B	46693	6.41	7.24	8.59	7.31	4.1109	0	ROMEO
G	46422	6.72	7.48	8.73	7.19	3.4340	0	ROMEO
A	50582	7.54	7.99	8.43	7.47	3.0445	0	ROMEO
A	53973	7.08	8.14	8.27	7.36	3.2189	0	ROMEO
B	53493	6.06	6.82	8.38	7.52	3.5835	0	ROMEO

Figure 7
925-3 Corrected Results

Lab	TESTKEY	AES	RAC	AEV	APV	OSCR	HSR	ENGINE
G	35351	7.46	7.92	8.15	7.12	2.4849	0	AER
D	35553	5.48	7.78	8.53	7.85	4.6151	0	AER
B	35348	6.61	7.62	8.83	7.59	4.2627	0	AER
A	35349	6.22	7.09	8.59	6.98	4.6052	0	AER
A	35350	5.45	6.65	8.63	7.35	4.5643	0	AER
A	34260	5.68	7.28	8.64	7.30	4.3944	0	AER
A	39881	6.40	7.29	8.74	7.45	4.1109	0	AER
G	35352	6.73	8.03	8.49	7.52	4.4886	0	AER
G	40399	6.25	6.99	8.19	7.11	4.3438	0	AER
B	39924	6.04	7.12	8.86	7.69	4.5850	0	AER
D	41080	6.07	7.44	8.70	7.65	4.5951	0	AER
A	42383	6.48	7.56	8.73	7.08	3.0445	0	AER
A	42384	7.08	8.00	8.59	7.48	4.2627	0	AER
G	42860	6.66	7.28	8.64	7.07	4.1858	0	AER
A	43747	6.39	7.14	8.74	7.14	4.6997	0	AER
A	43748	6.67	6.90	8.48	7.12	4.3944	0	AER
A	46247	6.82	7.51	8.57	7.81	4.3944	0	ROMEO
G	40401	6.55	7.08	8.75	7.57	3.7155	0	AER
D	43144	8.00	8.62	8.70	7.85	2.9444	0	ROMEO
G	44247	6.72	7.29	8.43	7.07	2.7081	0	ROMEO
A	46248	6.52	7.52	8.21	7.28	4.3307	0	ROMEO
B	46693	6.41	7.24	8.59	7.31	4.1109	0	ROMEO
G	46422	6.28	7.48	8.73	7.19	4.2240	0	ROMEO
A	50582	6.96	7.73	8.43	7.47	3.0445	0	ROMEO
A	53973	6.45	7.85	8.27	7.36	3.2189	0	ROMEO
B	53493	6.44	6.82	8.38	7.52	3.5835	0	ROMEO