



Test Monitoring Center

Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

<http://astmtmc.cmu.edu>
412-365-1000

MEMORANDUM: 11-035
DATE: September 1, 2011
TO: Sequence V Surveillance Panel
FROM: Richard E. Grundza
SUBJECT: Reference Oil Standard Deviation Update

On the August 2, 2011 Sequence V Surveillance Panel conference call, the panel approved an update to the standard deviations for AEV and APV parameters for reference oils 925-3, 1006-2, 1007 and 1009, based upon the data presented at that meeting.

The updated standard deviations, which take effect on July 29, 2011, are shown in the following table:

Oil	AEV	APV
925-3	0.25	0.36
1006-2	0.12	0.22
1007	0.11	0.23
1009	0.22	0.43

The standard deviations for severity calculations were also updated. For AEV, the updated standard deviation is 0.16 and for APV, the standard deviation is 0.31. These values, 0.16 and 0.31 are the pooled standard deviations, by oil, from the same data set used for the updated standard deviations. Reference Oil 925-3 was not included in the calculations.

The individual data points used to calculate the standard deviations are tabulated on the following pages. Please contact me if you have any questions.

REG/reg

c: <ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceV/memo/mem11-035.reg.pdf>

Distribution: email

<u>TESTKEY</u>	<u>APPARATS</u>	<u>IND</u>	<u>LTMSDATE</u>	<u>FUELBTID</u>	<u>AEVBti</u>	<u>APVti</u>
56176-VG	A 5A	1006-2	20050624	9906416	9.16	8.66
53494-VG	B 2	1006-2	20051002	NF0121LS01	9.23	8.5
53396-VG	D 3	1006-2	20051028	TF2221LS20	9.3	8.36
49889-VG	E 1A	1006-2	20051102	NF0121LS01	9.07	8.7
59708-VG	B 1	1006-2	20060602	TF2221LS20	9.3	8.55
55565-VG	G 7A	1006-2	20060729	TF2221LS20	9.12	8.55
61888-VG	A 8A	1006-2	20070117	TF2221LS20	9.34	8.63
62507-VG	D 3	1006-2	20070224	TF2221LS20	9.36	8.73
65362-VG	A 5A	1006-2	20070525	TF2221LS20	9.44	8.98
64632-VG	G 3A	1006-2	20071110	TF2221LS20	9.22	8.68
65705-VG	A 5A	1006-2	20080512	TF2221LS20	9.31	8.62
67496-VG	D1 2	1006-2	20080817	TF2221LS20	9.18	8.53
66058-VG	B 1	1006-2	20080820	TF2221LS20	9.37	8.97
67927-VG	B 1	1006-2	20080926	TF2221LS20	9.37	8.67
68387-VG	A 8B	1006-2	20081130	TF2221LS20	9.16	8.65
69039-VG	D1 3	1006-2	20090618	TF2221LS20	9.34	8.74
71475-VG	A 7A	1006-2	20090712	XC2721NX10	9.17	8.49
70914-VG	A 7A	1006-2	20090725	C2721NX10	9.17	8.12
71249-VG	A 3A	1006-2	20090801	C2721NX10	9.17	8.31
70915-VG	A 7A	1006-2	20090810	XC2721NX10	9.2	8.36
68453-VG	B 2A	1006-2	20090814	XC2721NX10	8.97	8.02
70922-VG	G 3A	1006-2	20090818	XC2721NX10	9.11	8.29
71955-VG	A 3A	1006-2	20100216	XC2721NX10	9.38	8.67
73643-VG	G 7A	1006-2	20100220	XC2721NX10	9.19	8.5
71856-VG	B 2A	1006-2	20100401	XC2721NX10	9.21	8.27
73644-VG	G 4A	1006-2	20100807	XC2721NX10	9.24	8.53
72039-VG	D1 3	1006-2	20100909	XC2721NX10	9.29	8.47
74092-VG	A 3A	1006-2	20100920	XC2721NX10	9.33	8.4
78525-VG	G 7A	1006-2	20110723	YJ0621NX10-1	9.45	8.44
81516-VG	D1 2	1006-2	20110725	YJ0621NX10-1	9.52	8.75
42677-VG	G 3A	1007	20011116	9906416	9.13	8.4
40677-VG	D 3	1007	20020414	9906416	9.31	8.84
42679-VG	G 4	1007	20020519	9906416	9.11	8.66
40635-VG	B 2	1007	20050317	NF0121LS01	9.23	8.4
37669-VG	D 2	1007	20050421	NF0121LS01	9.14	8.29
37658-VG	G 7A	1007	20050525	NF0121LS01	9.24	8.58
36655-VG	E 1A	1007	20051220	NF0121LS01	9.18	8.66
58204-VG	G 7A	1007	20060705	TF2221LS20	9.02	8.3
57901-VG	D 2	1007	20060730	TF2221LS20	9.25	8.41
37274-VG	A 9A	1007	20061115	TF2221LS20	9.33	8.72
36659-VG	E 1	1007	20061215	TF2221LS20	9.28	8.39
37293-VG	B 1	1007	20061217	TF2221LS20	9.31	8.59
65706-VG	A 7A	1007	20080412	TF2221LS20	9.38	8.82

<u>TESTKEY</u>	<u>APPARATS</u>	<u>IND</u>	<u>LTMSDATE</u>	<u>FUELBTID</u>	<u>AEVBti</u>	<u>APVti</u>
36429-VG	G 3A	1007	20080609	TF2221LS20	9.24	8.52
67114-VG	A 7A	1007	20081119	TF2221LS20	9.3	8.78
47083-VG	D1 2	1007	20081227	TF2221LS20	9.33	8.61
69127-VG	A 3A	1007	20090116	TF2221LS20	9.32	8.45
68454-VG	B 1	1007	20090329	TF2221LS20	9.19	8.35
69145-VG	A 5A	1007	20090610	TF2221LS20	9.35	8.78
69445-VG	G 4A	1007	20090705	XC2721NX10	9.14	8.39
71476-VG	A 8B	1007	20090713	XC2721NX10	9.18	8.32
71857-VG	B 2A	1007	20090828	XC2721NX10	9.01	7.97
71956-VG	A 9A	1007	20090831	XC2721NX10	9.11	8.29
72409-VG	B 2A	1007	20090926	XC2721NX10	9.11	8.29
70569-VG	D1 2	1007	20100222	XC2721NX10	9.33	8.43
71957-VG	A 7A	1007	20100312	XC2721NX10	9.29	8.4
71996-VG	G 7A	1007	20100902	XC2721NX10	9.21	8.38
78200-VG	A 5A	1007	20101023	XC2721NX10	9.13	8.34
75660-VG	B 2A	1007	20101024	XC2721NX10	8.97	7.88
78817-VG	A 8B	1007	20101204	XC2721NX10	9.33	8.81
42677-VG	G 3A	1007	20011116	9906416	9.13	8.4
40677-VG	D 3	1007	20020414	9906416	9.31	8.84
42679-VG	G 4	1007	20020519	9906416	9.11	8.66
40635-VG	B 2	1007	20050317	NF0121LS01	9.23	8.4
37669-VG	D 2	1007	20050421	NF0121LS01	9.14	8.29
37658-VG	G 7A	1007	20050525	NF0121LS01	9.24	8.58
36655-VG	E 1A	1007	20051220	NF0121LS01	9.18	8.66
58204-VG	G 7A	1007	20060705	TF2221LS20	9.02	8.3
57901-VG	D 2	1007	20060730	TF2221LS20	9.25	8.41
37274-VG	A 9A	1007	20061115	TF2221LS20	9.33	8.72
36659-VG	E 1	1007	20061215	TF2221LS20	9.28	8.39
37293-VG	B 1	1007	20061217	TF2221LS20	9.31	8.59
65706-VG	A 7A	1007	20080412	TF2221LS20	9.38	8.82
36429-VG	G 3A	1007	20080609	TF2221LS20	9.24	8.52
67114-VG	A 7A	1007	20081119	TF2221LS20	9.3	8.78
47083-VG	D1 2	1007	20081227	TF2221LS20	9.33	8.61
69127-VG	A 3A	1007	20090116	TF2221LS20	9.32	8.45
68454-VG	B 1	1007	20090329	TF2221LS20	9.19	8.35
69145-VG	A 5A	1007	20090610	TF2221LS20	9.35	8.78
69445-VG	G 4A	1007	20090705	XC2721NX10	9.14	8.39
71476-VG	A 8B	1007	20090713	XC2721NX10	9.18	8.32
71857-VG	B 2A	1007	20090828	XC2721NX10	9.01	7.97
61890-VG	A 9A	1009	20070603	TF2221LS20	8.86	8.22
44882-VG	G 7A	1009	20070916	TF2221LS20	9.15	8.27
64419-VG	A 5A	1009	20071014	TF2221LS20	9.15	8.01
59707-VG	B 1	1009	20080203	TF2221LS20	9.02	8
64420-VG	A 7A	1009	20080426	TF2221LS20	9.02	7.91
66063-VG	D 2	1009	20080518	TF2221LS20	9.14	8.29

<u>TESTKEY</u>	<u>APPARATS</u>	<u>IND</u>	<u>LTMSDATE</u>	<u>FUELBTID</u>	<u>AEVBti</u>	<u>APVti</u>
66059-VG	B 1	1009	20080831	TF2221LS20	8.98	7.75
69129-VG	A 8B	1009	20081213	TF2221LS20	9.14	8.09
69040-VG	D1 2	1009	20090126	TF2221LS20	9.17	8.28
69446-VG	G 3A	1009	20090127	TF2221LS20	9.04	8.04
69130-VG	A 9A	1009	20090213	TF2221LS20	9.01	7.59
68455-VG	B 1	1009	20090423	TF2221LS20	8.99	7.58
71477-VG	A 7A	1009	20090628	XC2721NX10	8.72	7.89
70570-VG	D1 3	1009	20090706	TF2221LS20	9.15	8.27
70921-VG	G 7A	1009	20090806	XC2721NX10	8.93	7.75
71858-VG	B 2A	1009	20090912	XC2721NX10	8.82	7.3
71958-VG	A 5A	1009	20100105	XC2721NX10	8.91	7.38
72041-VG	D1 3	1009	20100114	XC2721NX10	9.04	7.88
73641-VG	G 4A	1009	20100121	XC2721NX10	9.08	7.98
70912-VG	A 9A	1009	20100329	XC2721NX10	8.96	7.4
73642-VG	G 3A	1009	20101010	XC2721NX10	9.08	8.12
78861-VG	B 2A	1009	20101114	XC2721NX10	8.87	7.34
78201-VG	A 7A	1009	20101118	XC2721NX10	8.87	7.56
67439-VG	B 2A	1009	20110204	XC2721NX10	8.8	7.54
79682-VG	G 7A	1009	20110512	ZD2821GP01	9.18	8.26
79684-VG	A 9A	1009	20110512	ZD2821GP01	8.83	8.09
79685-VG	D1 2	1009	20110512	ZD2821GP01	9.17	8.07
80641-VG	B 2A	1009	20110513	ZD2821GP01	8.12	6.49
82175-VG	A 9A	1009	20110722	YJ0621NX10-1	8.91	7.52
82179-VG	B 2A	1009	20110722	YJ0621NX10-1	8.49	6.99
50582-VG	A 9A	925-3	20041112	9906416	8.43	7.47
53973-VG	A 7	925-3	20050312	9906416	8.27	7.36
53493-VG	B 1	925-3	20050423	NF0121LS01	8.38	7.52
53270-VG	G 5	925-3	20050820	NF0121LS01	8.54	7.05
46241-VG	D 2	925-3	20051112	TF2221LS20	8.81	7.69
58127-VG	D 2	925-3	20051225	TF2221LS20	8.94	7.91
58202-VG	G 7A	925-3	20051231	TF2221LS20	8.8	7.5
56178-VG	A 7	925-3	20060123	TF2221LS20	8.8	7.54
56179-VG	A 5A	925-3	20060401	TF2221LS20	8.71	7.78
58203-VG	G 7A	925-3	20070202	TF2221LS20	8.85	7.76
59706-VG	B 1	925-3	20070713	TF2221LS20	8.76	7.84
64258-VG	A 9A	925-3	20071223	TF2221LS20	8.68	7.06
62479-VG	G 7A	925-3	20080529	TF2221LS20	8.9	7.81
65708-VG	A 9A	925-3	20080731	TF2221LS20	8.81	7.42
67284-VG	G 7A	925-3	20090113	TF2221LS20	8.89	7.81
68155-VG	B 1	925-3	20090410	TF2221LS20	8.67	7.07
58366-VG	D1 2	925-3	20090807	TF2221LS20	8.9	7.8
71859-VG	B 1	925-3	20091028	XC2721NX10	8.61	6.96
71998-VG	G 3A	925-3	20100305	XC2721NX10	8.46	7.66
71959-VG	A 8B	925-3	20100305	XC2721NX10	8.25	7.43
78199-VG	A 9A	925-3	20101011	XC2721NX10	8.3	7.16

<u>TESTKEY</u>	<u>APPARATS</u>	<u>IND</u>	<u>LTMSDATE</u>	<u>FUELBTID</u>	<u>AEVBti</u>	<u>APVti</u>
58367-VG	D1 2	925-3	20101030	XC2721NX10	8.64	7.07
79680-VG	G 7A	925-3	20110414	ZC1821GP01	8.88	7.83
79683-VG	A 9A	925-3	20110415	ZC1821GP01	7.89	7.44
80493-VG	D1 2	925-3	20110416	ZC1821GP01	8.66	7.6
80642-VG	B 2A	925-3	20110417	ZC1821GP01	8.53	6.79
82174-VG	A 9A	925-3	20110708	YJ0621NX10-1	8.51	7.28
82185-VG	G 7A	925-3	20110710	YJ0621NX10-1	8.49	8.4
82181-VG	B 2A	925-3	20110711	YJ0621NX10-1	8.46	6.95
82861-VG	D1 2	925-3	20110711	YJ0621NX10-1	8.89	7.56