



Test Monitoring Center

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MEMORANDUM: 04-049
DATE: May 27, 2004
TO: Sequence III Surveillance Panel
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*
SUBJECT: Sequence IIIG/IIIGA Reference Oil 434 Test Target Update

On May 26, 2004, the Sequence III Surveillance Panel approved a motion to revise the test targets on 434 based upon all the data available to date in the LTMS. As part of the motion, the panel also approved a plan to update the targets when 30 and 35 data points on this oil become available. These revised targets, based upon the 23 data points available at this time, are shown in the following table:

Parameter	Mean	Standard Deviation
PVIS	4.7269	0.3859
WPD	4.80	0.96
ACLW	3.4657	0.1993
MRV	10.7881	0.45550

Any applicable severity adjustments were applied to the data prior to target generation. The data used to generate these targets is shown in Tables 1 & 2. Table 1 shows unadjusted data. Table 2 shows severity adjusted data, with the adjusted parameters shown in red. The above test targets; as well as the severity-adjusted data used to generate them; the raw test targets, the initial test targets, and the preliminary targets from the matrix (which were never used in the IIIG LTMS) for reference oil 434 are shown in the following figures. Figure 1 shows the PVIS data in transformed units. Figure 2 shows the PVIS data in original units. Figure 3 shows the WPD data in original units. Figures 4 and 5 show the ACLW data in transformed and original units, respectively. Figures 6 and 7 show the IIIGA MRV data in transformed and original units, respectively.

These targets are effective for all tests completed on or after June 1, 2004.

MTK/mtk

Attachments

c: John L. Zalar, TMC
<ftp://www.astmtmc.cmu.edu/docs/gas/sequenceiii/memos/mem04-049.pdf>

Distribution: Electronic Mail

Table 1 – Unadjusted Data

Testkey	LTMS Lab	LTMS App	Ind	Val	LTMS Date	LTMS Time	PVIS	PVISTI	ACLW	ACLWTI	WPD	MRV	MRVTI	OilCon
47942	E	1	434	AC	11/26/2003	5:03	185.7	5.224132	31.4	3.4468	3.66	29923	10.3064	3.65
47900	G	3	434	AO	8/12/2003	0:17	127.6	4.8489	43.7	3.7773	3.39	49200	10.8036	4.23
47901	G	5	434	AO	8/12/2003	0:14	133.3	4.892602	41.1	3.716	3.15	48900	10.7975	3.86
47902	G	3	434	AO	8/12/2003	0:22	99.2	4.597138	33.1	3.4995	4.32	45600	10.7277	3.9
48581	G	1	434	OC	9/29/2003	5:14	97.8	4.582925	24	3.1781	3.64	55200	10.9187	3.86
48582	G	2	434	AC	10/12/2003	3:54	82.8	4.416428	40.7	3.7062	4.1	36500	10.5051	3.51
48605	G	2	434	AO	8/12/2003	0:42	185.7	5.224132	40.2	3.6939	3.83	108900	11.5982	4.39
49510	G	1	434	AC	10/29/2003	16:36	110.2	4.702297	25.2	3.2268	4.08	65200	11.0852	4.5
50000	G	2	434	AC	1/5/2004	3:30	106.5	4.668145	33.9	3.5234	4.12	40200	10.6016	3.64
47933	D	1	434	AC	8/12/2003	0:58	226.3	5.421862	32.8	3.4904	5.28	97664	11.4893	4.72
47916	B	1	434	AC	8/12/2003	0:45	115.4	4.748404	28.6	3.3534	6.24	63900	11.0651	4.53
47917	B	3	434	AC	8/12/2003	0:50	70	4.248495	29	3.3673	6.19	40400	10.6066	3.82
49073	B	1	434	AC	12/21/2003	0:13	80.9	4.393214	26.5	3.2771	5.82	34700	10.4545	3.85
50450	B	3	434	AC	1/25/2004	13:15	122.7	4.809742	34.1	3.5293	5.34	67000	11.1124	4.4
47924	F	1	434	AC	8/12/2003	0:43	94.2	4.54542	29.7	3.3911	6.36	40983	10.6209	4.85
47925	F	1	434	AC	5/10/2004	23:04	205	5.32301	24.5	3.1987	5.22	141500	11.8601	4.27
47883	A	1	434	AO	8/12/2003	0:28	86.7	4.462454	39.1	3.6661	4.42	34200	10.44	3.47
47884	A	2	434	AO	8/12/2003	0:15	89.9	4.498698	26.2	3.2658	5.83	31900	10.3704	3.98
47885	A	3	434	AO	8/12/2003	0:33	62.8	4.139955	34.2	3.5322	4.99	29000	10.2751	3.71
47886	A	2	434	AO	8/12/2003	0:24	249.5	5.519459	37.1	3.6136	4.77	86400	11.3667	4.65
48584	A	7	434	AC	9/14/2003	17:31	110.8	4.707727	27.2	3.3032	4.95	36900	10.516	4.37
49705	A	3	434	AC	10/7/2003	22:07	69.2	4.237001	26.5	3.2771	5.48	27100	10.2073	3.44
49706	A	5	434	AC	2/11/2004	5:32	90.7	4.507557	30.2	3.4078	5.22	32800	10.3982	3.87

Table 2 – Severity Adjusted Data

Testkey	LTMS Lab	LTMS App	Ind	Val	LTMS Date	LTMS Time	PVIS	PVISTI	ACLW	ACLWTI	WPD	MRV	MRVTI	OilCon
47942	E	1	434	AC	11/26/2003	5:03	185.7	5.224132	31.4	3.4468	3.66	29923	10.3064	3.65
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48581	G	1	434	OC	9/29/2003	5:14	97.8	4.582925	24	3.1781	3.64	55200	10.9187	3.86
48582	G	2	434	AC	10/12/2003	3:54	82.8	4.416428	40.7	3.7062	4.1	36500	10.5051	3.51
48605	G	2	434	AO	8/12/2003	0:42	185.7	5.224132	40.2	3.6939	3.83	108900	11.5982	4.39
49510	G	1	434	AC	10/29/2003	16:36	110.2	4.702297	25.2	3.2268	4.08	65200	11.0852	4.5
50000	G	2	434	AC	1/5/2004	3:30	106.5	4.668145	43.8	3.7794	4.12	40200	10.6016	3.64
47933	D	1	434	AC	8/12/2003	0:58	226.3	5.421862	32.8	3.4904	5.28	97664	11.4893	4.72
47916	B	1	434	AC	8/12/2003	0:45	115.4	4.748404	28.6	3.3534	6.24	63900	11.0651	4.53
47917	B	3	434	AC	8/12/2003	0:50	70	4.248495	29	3.3673	6.19	40400	10.6066	3.82
49073	B	1	434	AC	12/21/2003	0:13	80.9	4.393214	23.8	3.1688	5.82	34700	10.4545	3.85
50450	B	3	434	AC	1/25/2004	13:15	122.7	4.809742	34.1	3.5293	5.34	67000	11.1124	4.4
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49706	A	5	434	AC	2/11/2004	5:32	90.7	4.507557	34.1	3.5287	5.22	32800	10.3982	3.87

Figure 1

Sequence IIIG Reference Oil 434 Test Target Data Set and Shewhart Bands

Percent Viscosity Increase, in transformed units

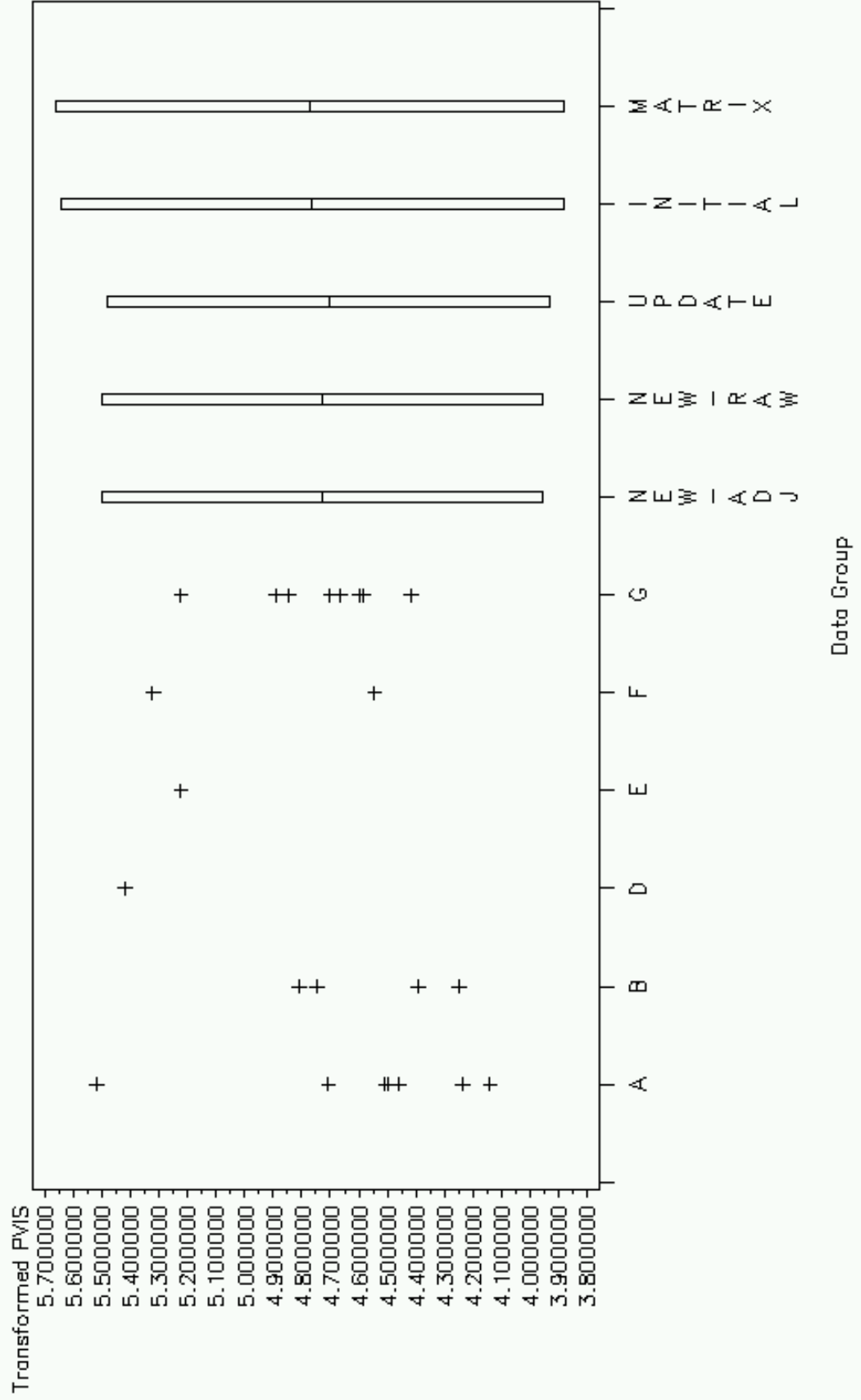


Figure 2

Sequence IIIG Reference Oil 434 Test Target Data Set and Shewhart Bands

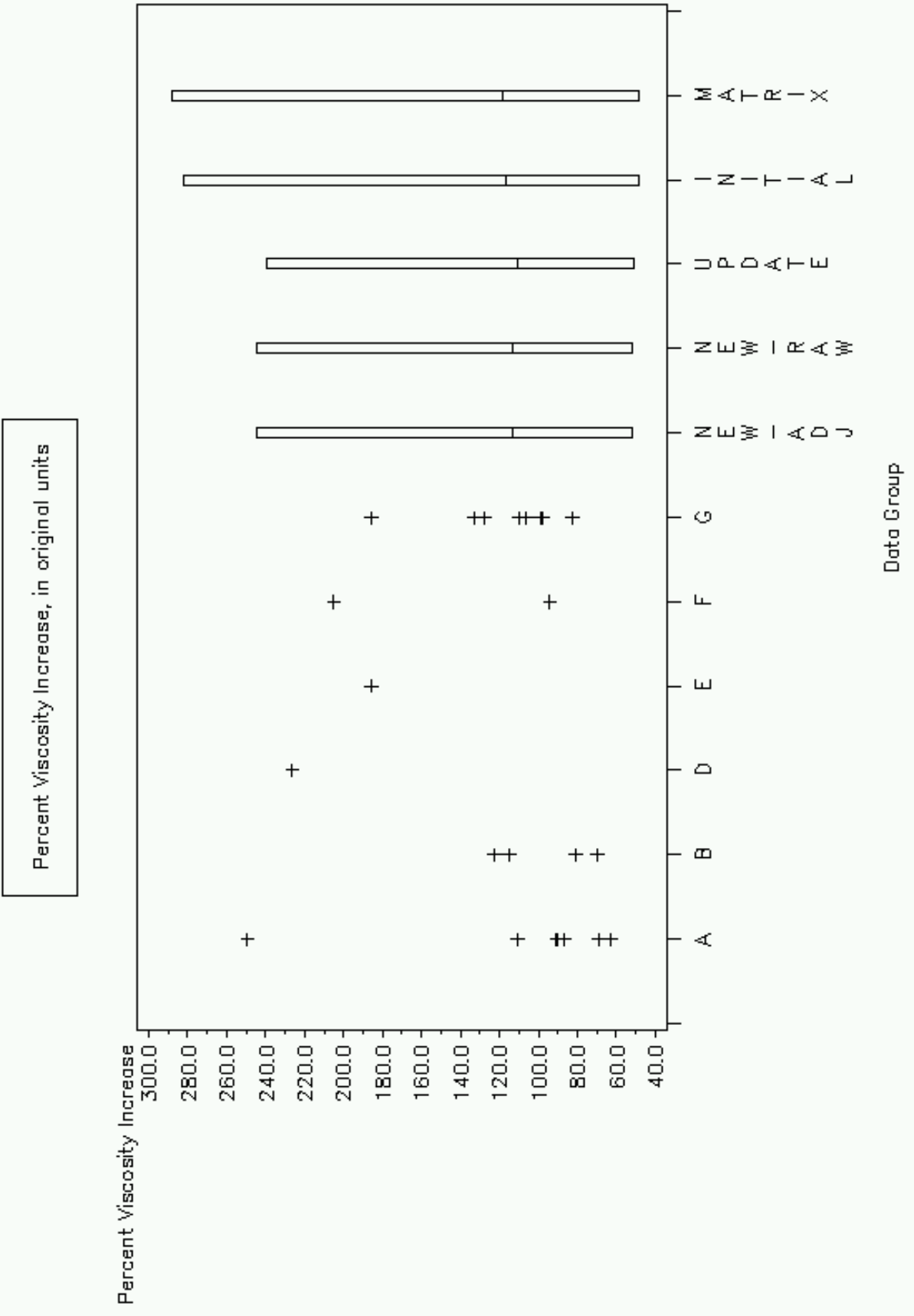
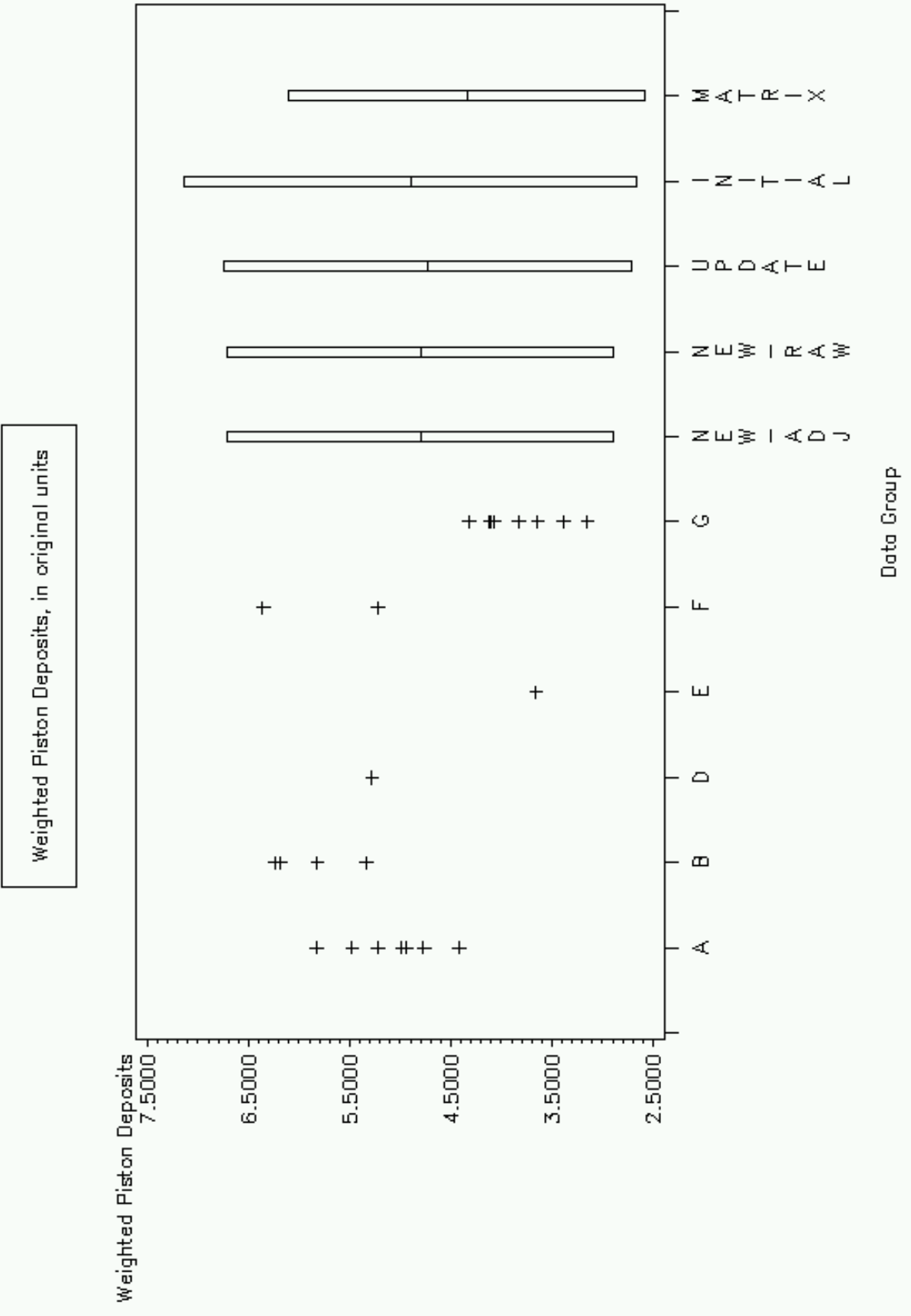


Figure 3

Sequence IIIG Reference Oil 434 Test Target Data Set and Shewhart Bands



Sequence III G Reference Oil 434 Test Target Data Set and Shewhart Bands

Average Camshaft & Lifter Wear, in original units

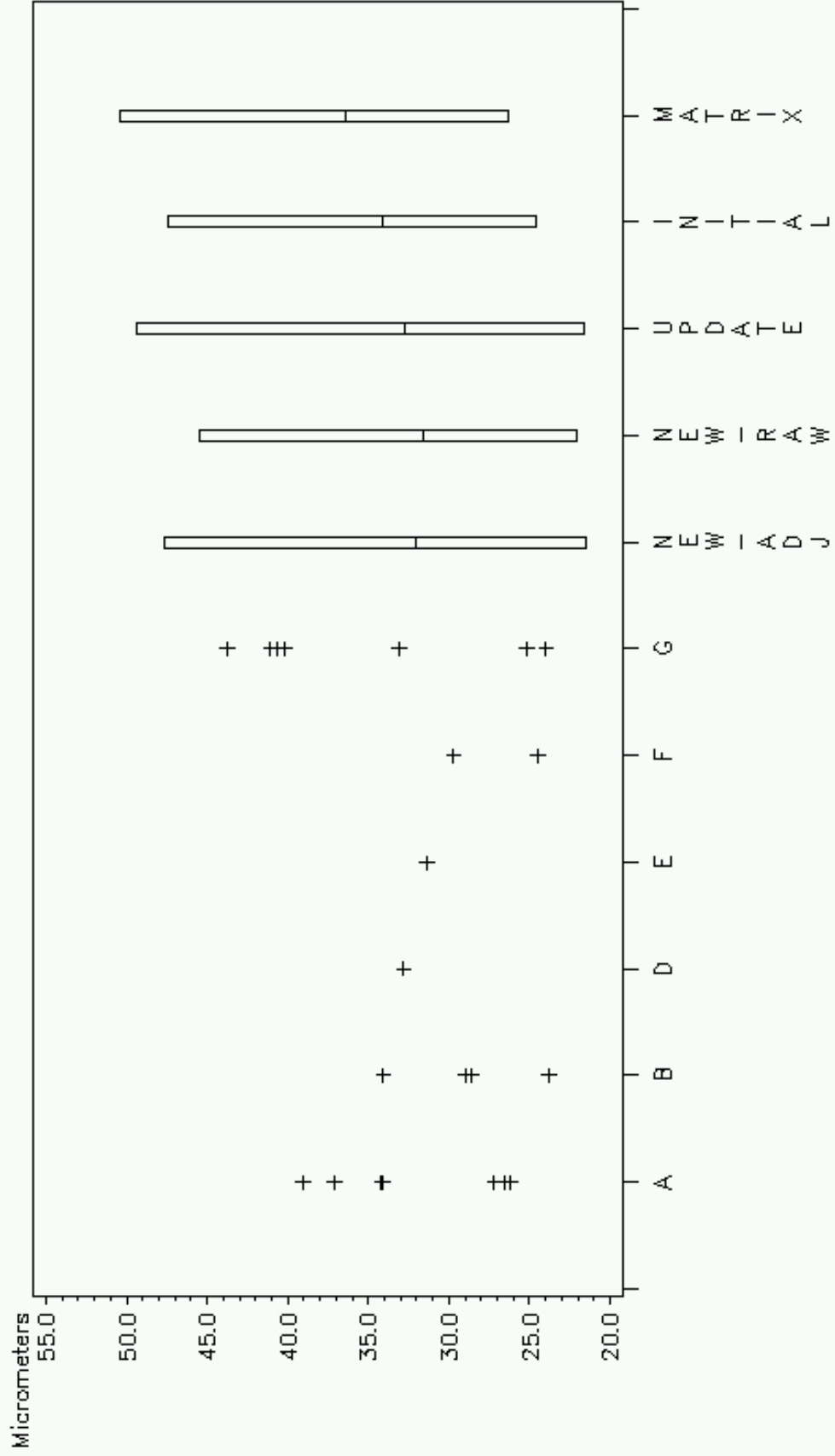


Figure 5

Figure 6

Sequence IIIG Reference Oil 434 Test Target Data Set and Shewhart Bands

Mini Rotary Viscometer Viscosity, in transformed units

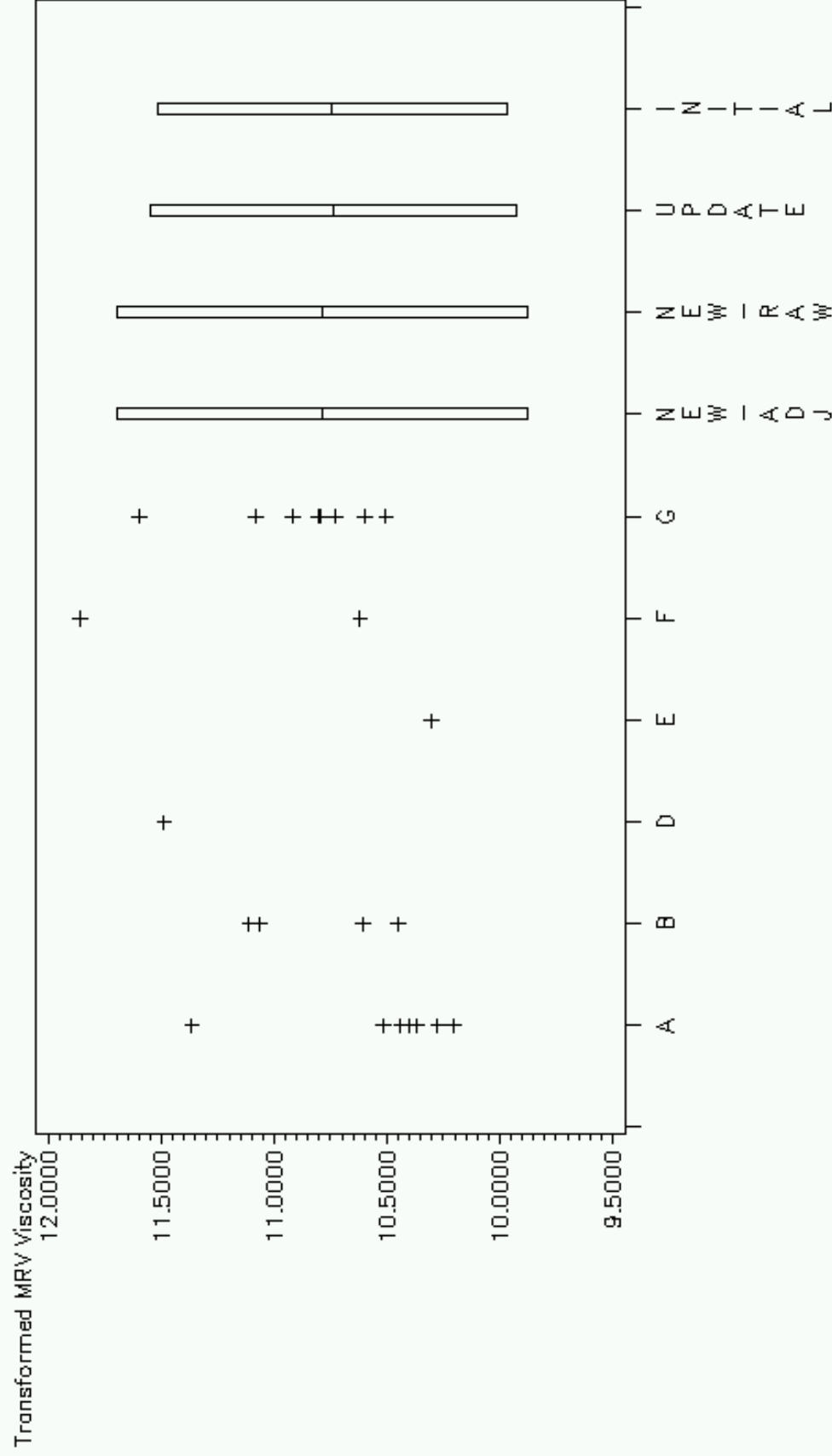


Figure 7

