



Test Monitoring Center

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

MEMORANDUM: 03-028

DATE: April 7, 2003

TO: Sequence IIF Surveillance Panel

FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*

SUBJECT: Reference Oil 1008-1 Updated Test Targets

The TMC has received 10 data points on reference oil 1008-1 and as such has sufficient data to update the test targets at this time. The current test targets for this oil (the final targets for reference oil 1008) are shown below for comparison purposes:

<i>Final Reference Oil 1008 Test Targets</i>		
<i>Parameter</i>	<i>Mean</i>	<i>Standard Deviation</i>
PVIS	0.0899551	0.009667
APV	9.74	0.100
WPD	4.52	0.773
PV60	4.21605	0.122356

The updated test targets, based on the 10 available data points on this reference oil, are shown below:

<i>Initial Reference Oil 1008-1 Test Targets</i>		
<i>Parameter</i>	<i>Mean</i>	<i>Standard Deviation</i>
PVIS	0.0911968	0.006381
APV	9.75	0.099
WPD	4.75	0.823
PV60	4.34110	0.139270

Any applicable severity adjustments were applied to the data prior to target generation. These targets will be updated when the TMC has 20 and 30 data points available on this reference oil. On the following pages are two tables showing the individual reference oil test results used in generation of these targets. The first table is the raw, unadjusted data as reported to the TMC and the second table is the severity-adjusted data used to calculate the test targets, with severity-adjusted parameters shown in *red italics*.

The new test targets, along with targets based on the raw data, the final test targets on reference oil 1008, and the individual data points are displayed graphically in the six attached plots. The first two plots show Percent Viscosity Increase at 80 hours, in transformed and reported units respectively. The third shows Weighted Piston Deposits in reported units and the fourth shows Average Piston Varnish in reported

Memo 03-028

Page 2

units. The fifth and sixth plots show Percent Viscosity Increase at 60 hours (the IIF-HD parameter) in transformed and reported units, respectively.

These new targets are effective for all tests completed on or after April 21, 2003.

MTK/mtk

Attachments

c: John L. Zalar, TMC

<ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/memos/mem03-028.pdf>

Distribution: Electronic Mail

Table 1 – Unadjusted Reference Oil 1008-1 Data

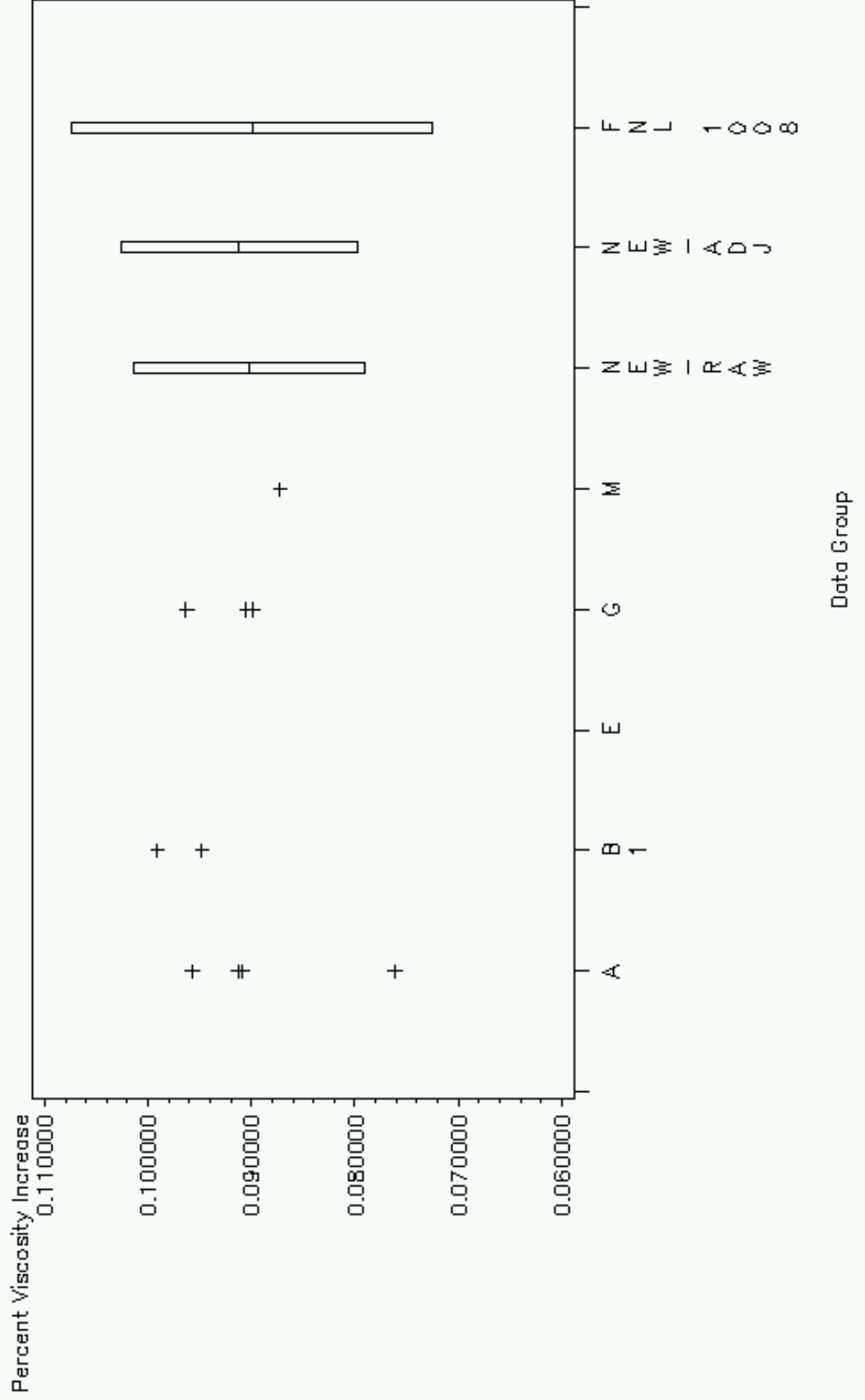
TESTKEY	LTMSLAB	LIMSAPP	IND	VAL	LIMSDATE	LTMSTIME	PVIS	PVISTI	APV	WPD	PV60	ACLW	SACLW	OILCON
44914	A	7	1008-1	AC	10/6/2002	22:07	172.4	0.076161	9.69	4.2	102.66	12.6	12.2	3.58
44917	A	4	1008-1	AC	11/1/2002	18:53	109.1	0.095739	9.76	4.22	68.84	10.8	10.6	3.17
44918	A	6	1008-1	AC	1/10/2003	18:47	121	0.090909	9.67	3.75	77.9	14.8	15	3.36
46565	A	7	1008-1	AC	2/9/2003	7:37	119.9	0.091325	9.72	3.98	77.91	12.8	12.9	3.08
47073	B1	3A	1008-1	OC	2/10/2003	7:53	101.8	0.099112	9.84	6.1	64.4	4.5	4.4	2.74
47074	B1	3A	1008-1	AC	2/26/2003	0:38	111.3	0.094788	9.82	4.91	68.8	11.2	11	2.71
44883	G	5	1008-1	OC	7/2/2002	14:21	131.8	0.087105	9.52	5.63	85.61	129	112.8	3.73
44885	G	5	1008-1	AC	7/13/2002	8:23	124	0.089803	9.8	4.57	67.17	10.2	9.8	3.47
44886	G	3	1008-1	AC	11/2/2002	10:52	122	0.090536	9.81	3.95	80.77	12.9	13	3.76
44897	M	1	1008-1	AC	10/7/2002	5:28	131.3	0.087271	9.82	5.71	80.79	5.8	5.6	3.31

Table 2 – Severity Adjusted Reference Oil 1008-1 Data

TESTKEY	LTMSLAB	LIMSAPP	IND	VAL	LTMDATE	LTMSTIME	PVIS	PVISTI	APV	WPD	PV60	ACLW	SACLW	OILCON
44914	A	7	1008-1	AC	10/6/2002	22:07	172.4	0.076161	9.69	4.66	102.66	12.6	12.2	3.58
44917	A	4	1008-1	AC	11/1/2002	18:53	109.1	0.095739	9.76	4.22	68.84	10.8	10.6	3.17
44918	A	6	1008-1	AC	1/10/2003	18:47	121	0.090909	9.67	3.75	77.9	14.8	15	3.36
46565	A	7	1008-1	AC	2/9/2003	7:37	119.9	0.091325	9.72	3.98	77.91	12.8	12.9	3.08
47073	B1	3A	1008-1	OC	2/10/2003	7:53	101.8	0.099112	9.84	6.1	64.4	4.5	4.4	2.74
47074	B1	3A	1008-1	AC	2/26/2003	0:38	111.3	0.094788	9.82	4.91	68.8	11.2	11	2.71
44883	G	5	1008-1	OC	7/2/2002	14:21	107.8	0.096326	9.52	5.63	85.61	129	112.8	3.73
44885	G	5	1008-1	AC	7/13/2002	8:23	124	0.089803	9.8	4.57	67.17	10.2	9.8	3.47
44886	G	3	1008-1	AC	11/2/2002	10:52	122	0.090536	9.81	3.95	80.77	12.9	13	3.76
44897	M	1	1008-1	AC	10/7/2002	5:28	131.3	0.087271	9.82	5.71	80.79	5.8	5.6	3.31

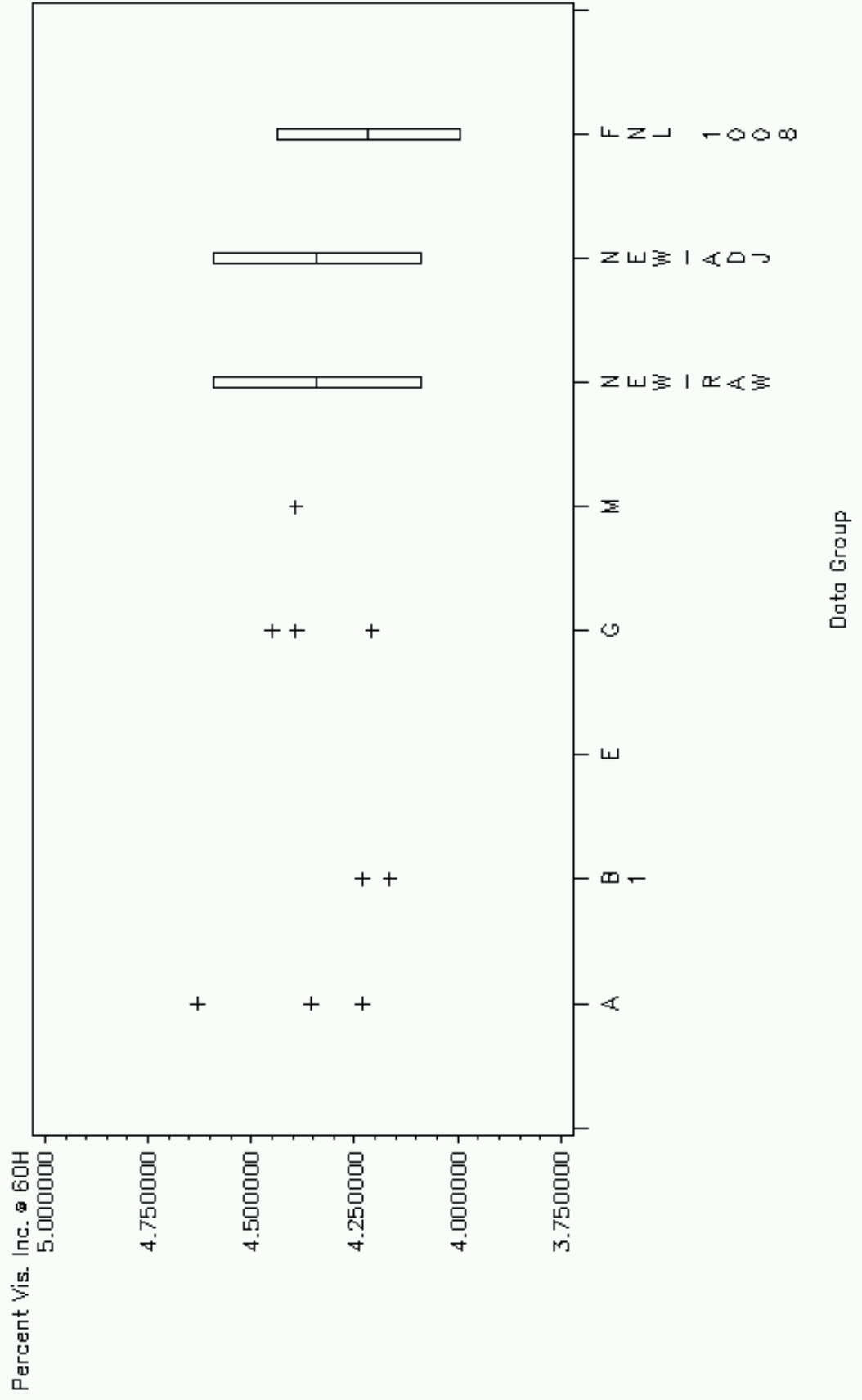
Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Percent Viscosity Increase, in transformed units



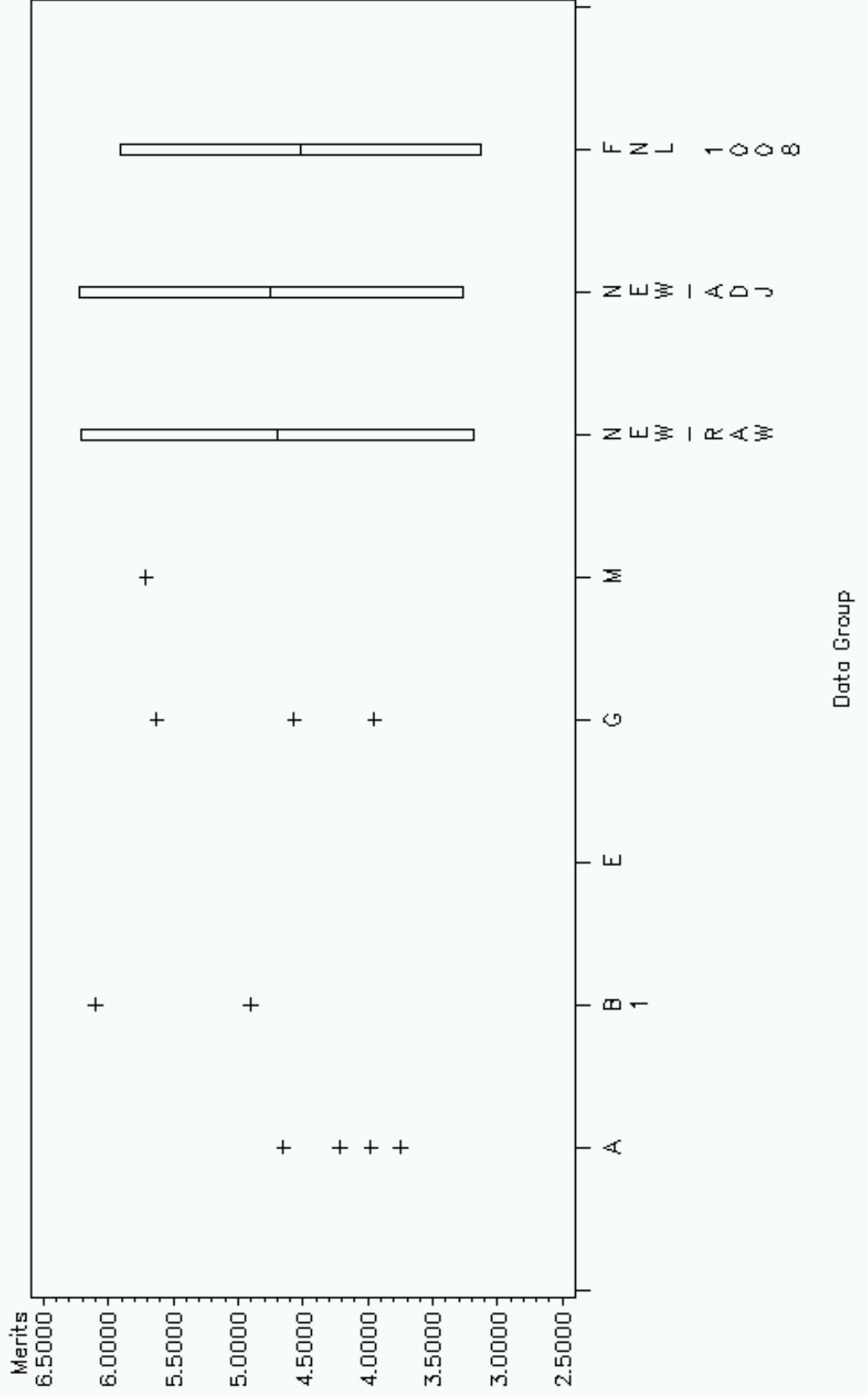
Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Percent Viscosity Increase @ 60H, in transformed units



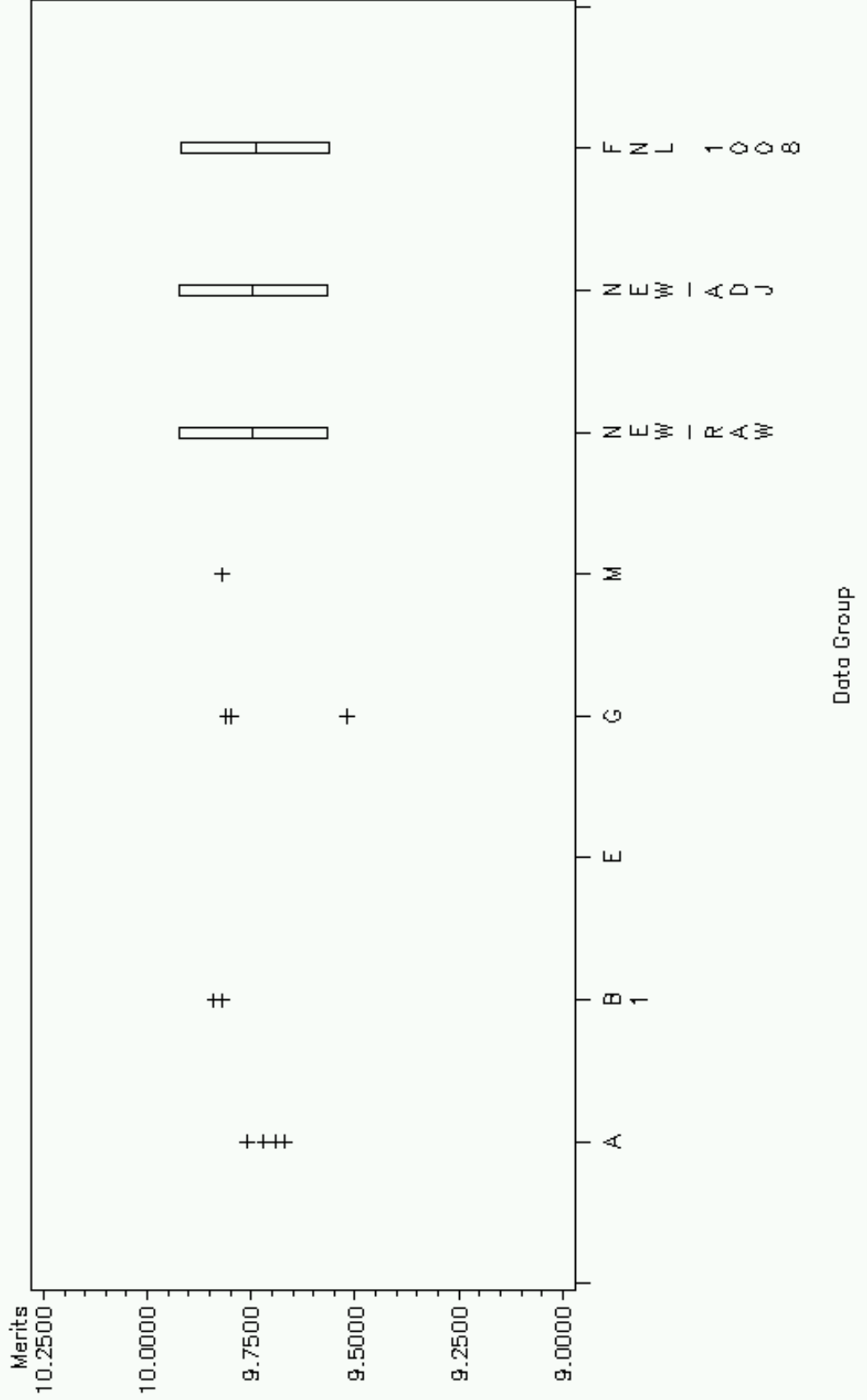
Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Weighted Piston Deposits, in reported units



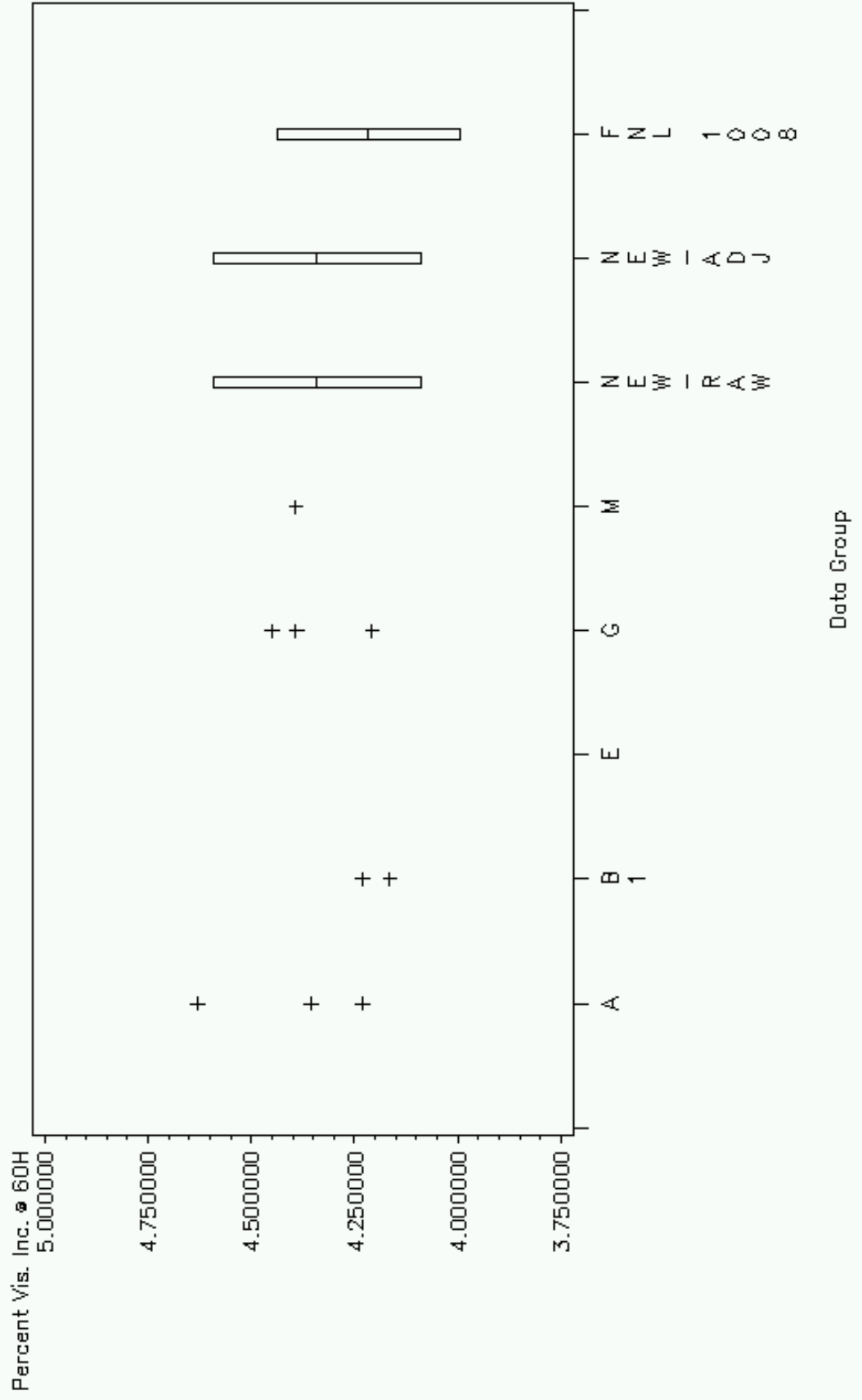
Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Average Piston Varnish, in reported units



Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Percent Viscosity Increase @ 60H, in transformed units



Sequence IIF Reference Oil 1008-1 Test Target Data Set and Shewhart Bands

Percent Viscosity Increase @ 60H, in original units

