



# Test Monitoring Center

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**MEMORANDUM:** 08-007  
**DATE:** March 21, 2008  
**TO:** Mack Test Surveillance Panel  
**FROM:** Jeff Clark  
**SUBJECT:** T-12 Reference Oil Test Target Update

As approved by the Mack Test Surveillance Panel, the twenty-five test targets for T-12 reference oil 821 (PC10E) are shown in the table below. These targets went into effect March 13, 2008. Attached is the T-12 target dataset as well as plots showing the lab distribution for all test parameters. These targets will also be used for the first four tests on reference oil 821-1. Please contact me if you have any questions.

**T-12 Reference Oil 821 Twenty-Five Test Targets**

Parameter (units)	Mean	Std. Deviation
Cylinder Liner Wear, Stand Level ( $\mu\text{m}$ )	16.2	3.7
Cylinder Liner Wear, Lab Level ( $\mu\text{m}$ )	15.1	2.8
Delta PB at EOT, ln(ppm)	3.106	0.242
Delta PB 250h – 350h, ln(ppm)	2.125	0.333
Top Ring Weight Loss (mg)	62.0	28.2
Oil Consumption, ln(g/h)	4.093	0.079

JAC/jac /mem08-007.jac.doc

c: <ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/memos/mem08-007.pdf>

Frank Farber  
John Zalar

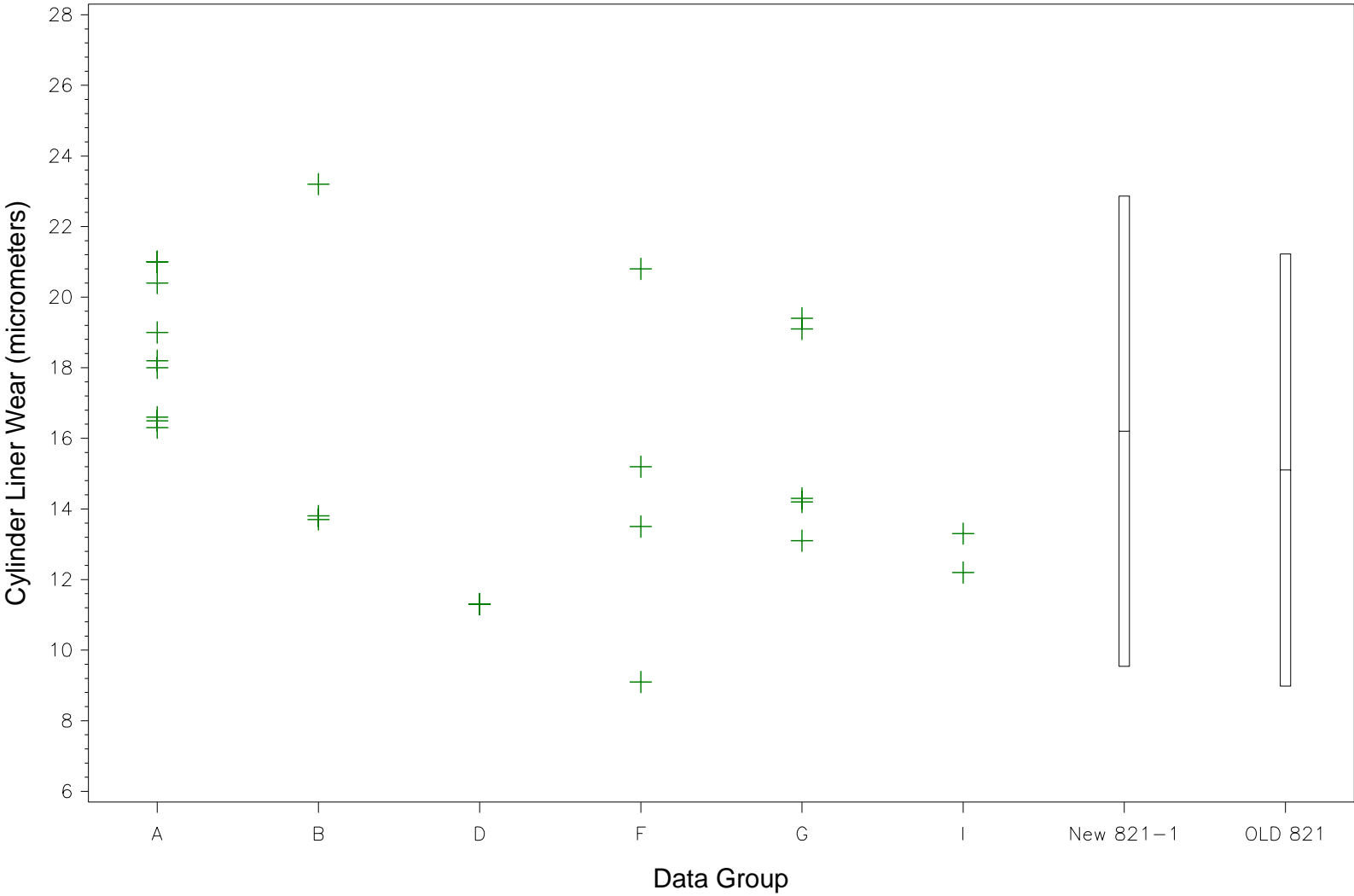
Distribution: email

**T-12 Reference Oil 821 (PC10E)  
Twenty-Five Test Target Dataset**

<u>CMIR</u>	<u>LAB</u>	<u>EOT</u>	<u>Delta PB at EOT</u>	<u>Cylinder Liner Wear</u>	<u>Top Ring Weight Loss</u>	<u>Oil Consumption</u>	<u>Delta PB 250 - 300 h</u>
55713	A	20050613	43	16.6	35	56.9	23
55718	G	20050728	18	13.1	36	62.6	7
55725	D	20050801	23	11.3	106	62.4	8
56726	B	20050830	23	13.7	67	57.2	9
55937	A	20051004	27	21	65	54.7	10
55940	F	20051006	26	15.2	87	58.6	7
55938	A	20060107	24	16.5	101	65.1	9
58205	G	20060322	18	14.3	64	59.6	8
58211	D	20060326	17	11.3	43	55.9	4
58131	F	20060403	31	13.5	76	73.7	14
59749	F	20060602	25	9.1	99	60.1	10
59957	G	20060622	28	19.4	40	65.2	10
59958	G	20060629	17	14.2	56	57.7	8
58209	A	20060716	23	21	40	56.1	6
57447	A	20060726	23	20.4	42	61.4	8
59037	I	20060815	20	12.2	125	61.8	8
59038	I	20060924	31	13.3	56	66.1	12
58210	A	20061123	21	18.2	36	57.6	6
60426	A	20061130	23	19	45	54.9	9
58057	B	20070402	22	23.2	38	60.2	9
60133	G	20070418	19	19.1	50	57.8	7
58058	B	20070421	21	13.8	44	62.7	8
60427	A	20070524	18	18	43	67.4	6
60428	A	20070528	21	16.3	38	53.1	10
59750	F	20071115	13	20.8	119	53.4	6

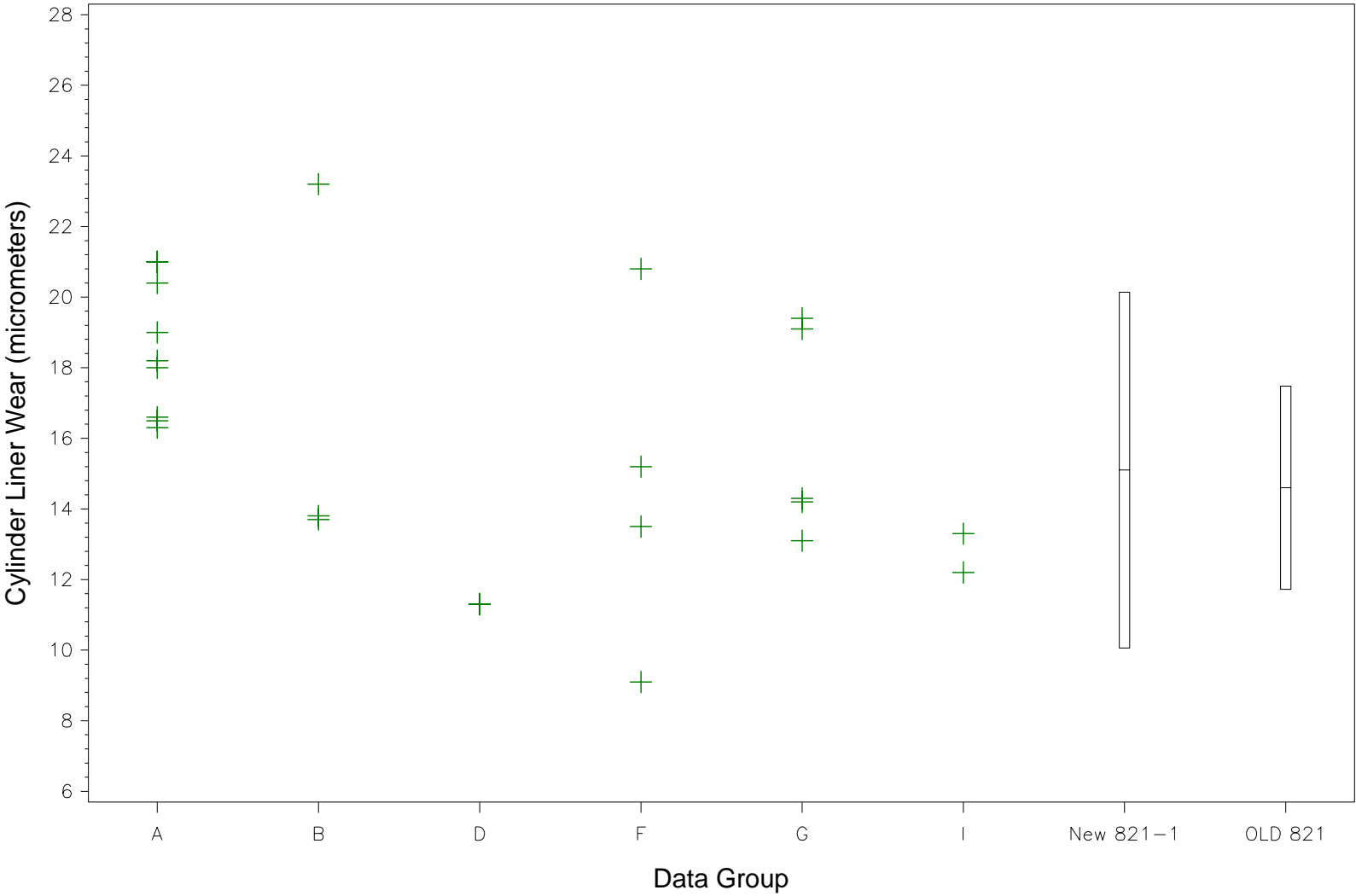
T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Cylinder Liner Wear – Stand Level



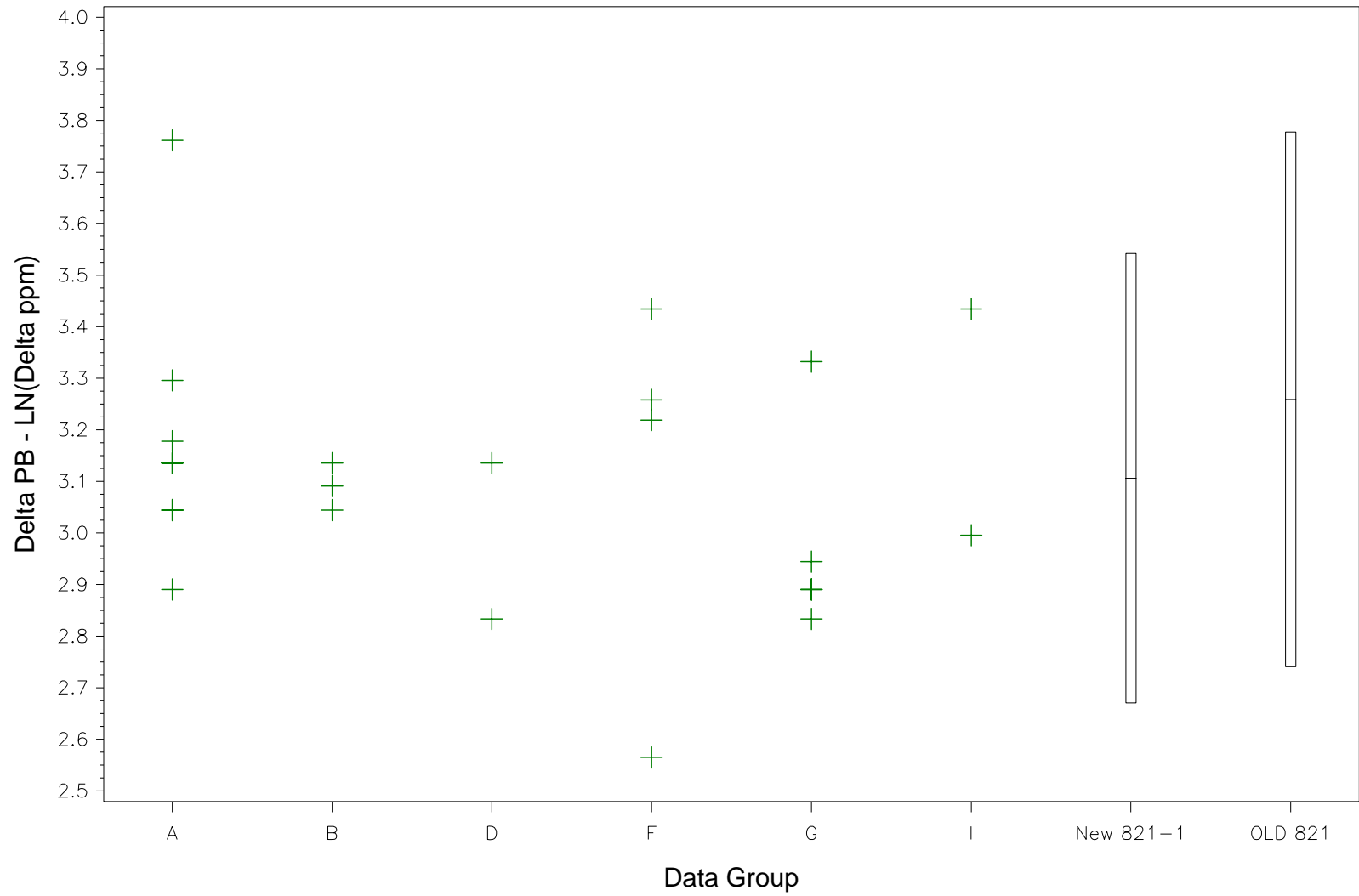
T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Cylinder Liner Wear – Lab Level



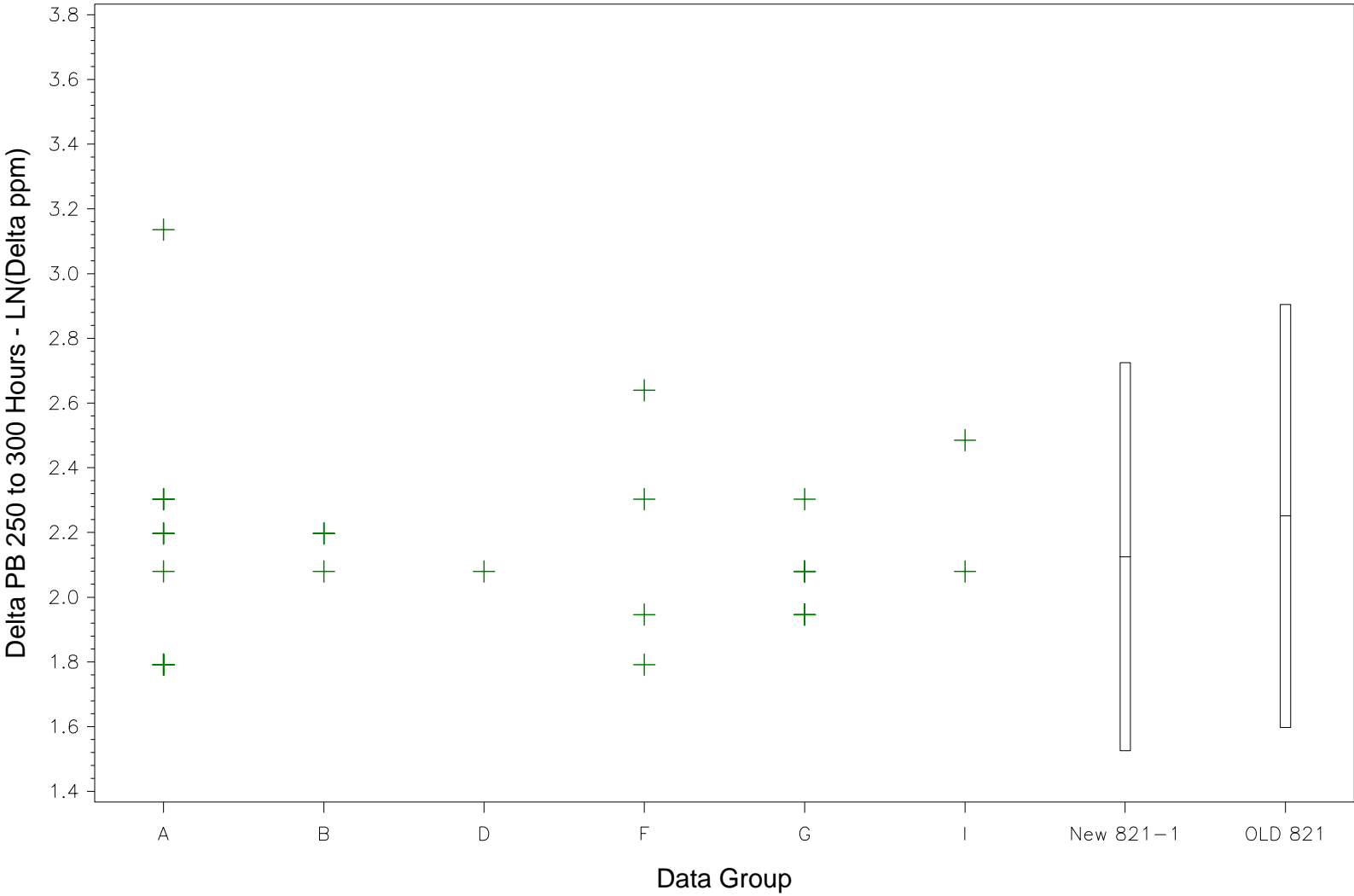
T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Delta PB at End of Test



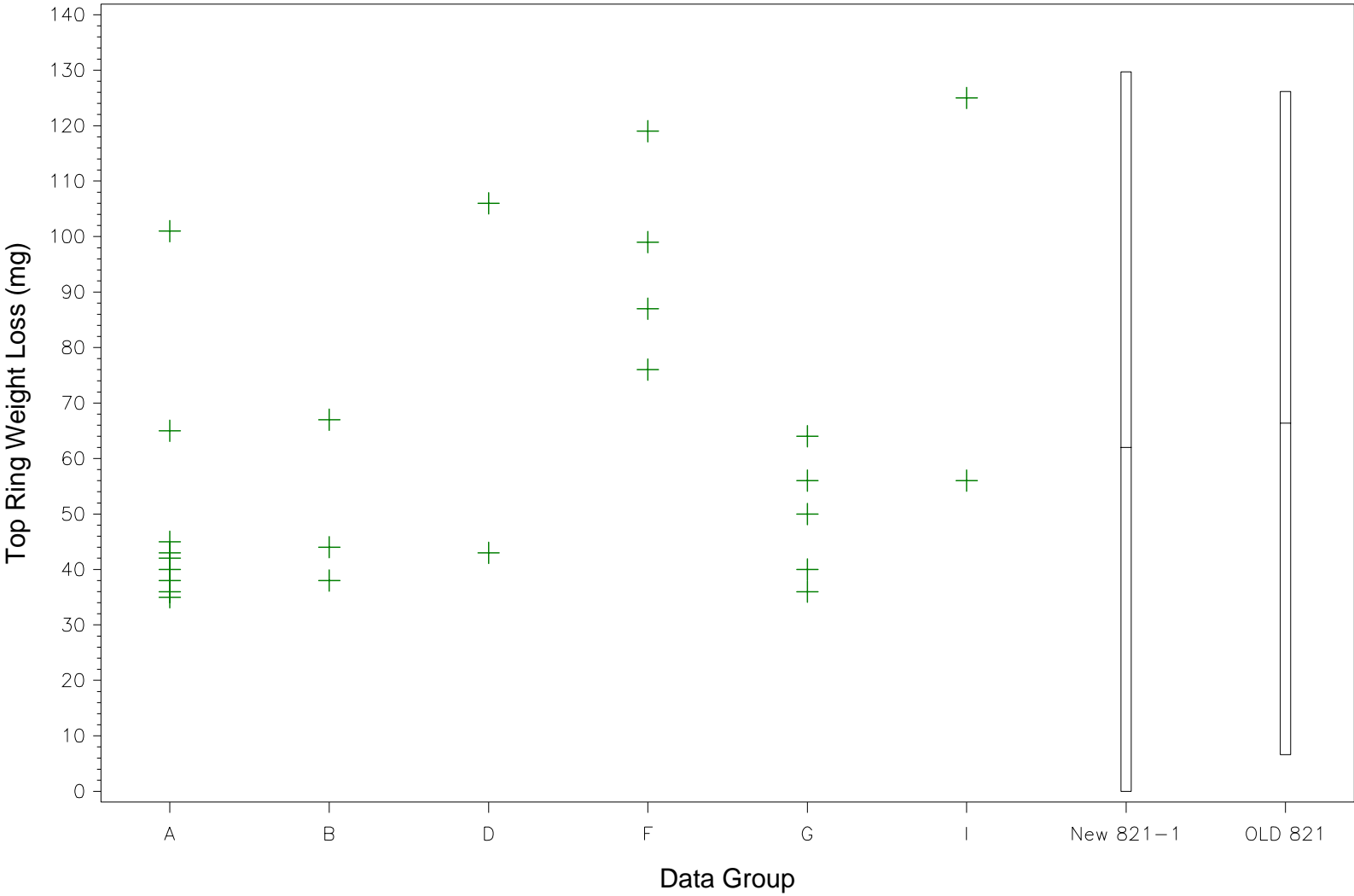
T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Delta PB 250 to 300 Hours



T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Top Ring Weight Loss



T-12: Reference Oil 821-1  
Test Target Data Set and Shewart Severity Limits

Oil Consumption

