

M11EGR Industry Alarm Summary: Crosshead Weight Loss

The M11EGR Industry Control Chart for CWL has tripped an action alarm for severity, in the mild direction (see attached chart). A previous summary of this situation has been issued. The following is in response to a suggestion from a surveillance panel member which the panel may wish to consider.

One possible course of action that has been suggested is to combine the results for oils with the low temp flow improver (830-1 and 830-2) to use for reference targets until 10 tests have been run on 830-2. In total, this would amount to 11 tests, however, one of those tests should probably be excluded from the target generation. The test in question produced a 5.9 merit result for sludge. The test stand did not successfully calibrate and has been dropped from the referencing system. The combined results for oils 830-1 and -2 (with the excluded test) are shown below. Note, the standard deviation for CWL has been pooled due to the lab differences that occurred during the time that 830-1 was being used. Also attached are the lab distribution plots for all four parameters.

**Table 1:
M11EGR Test Results by Reference Oil**

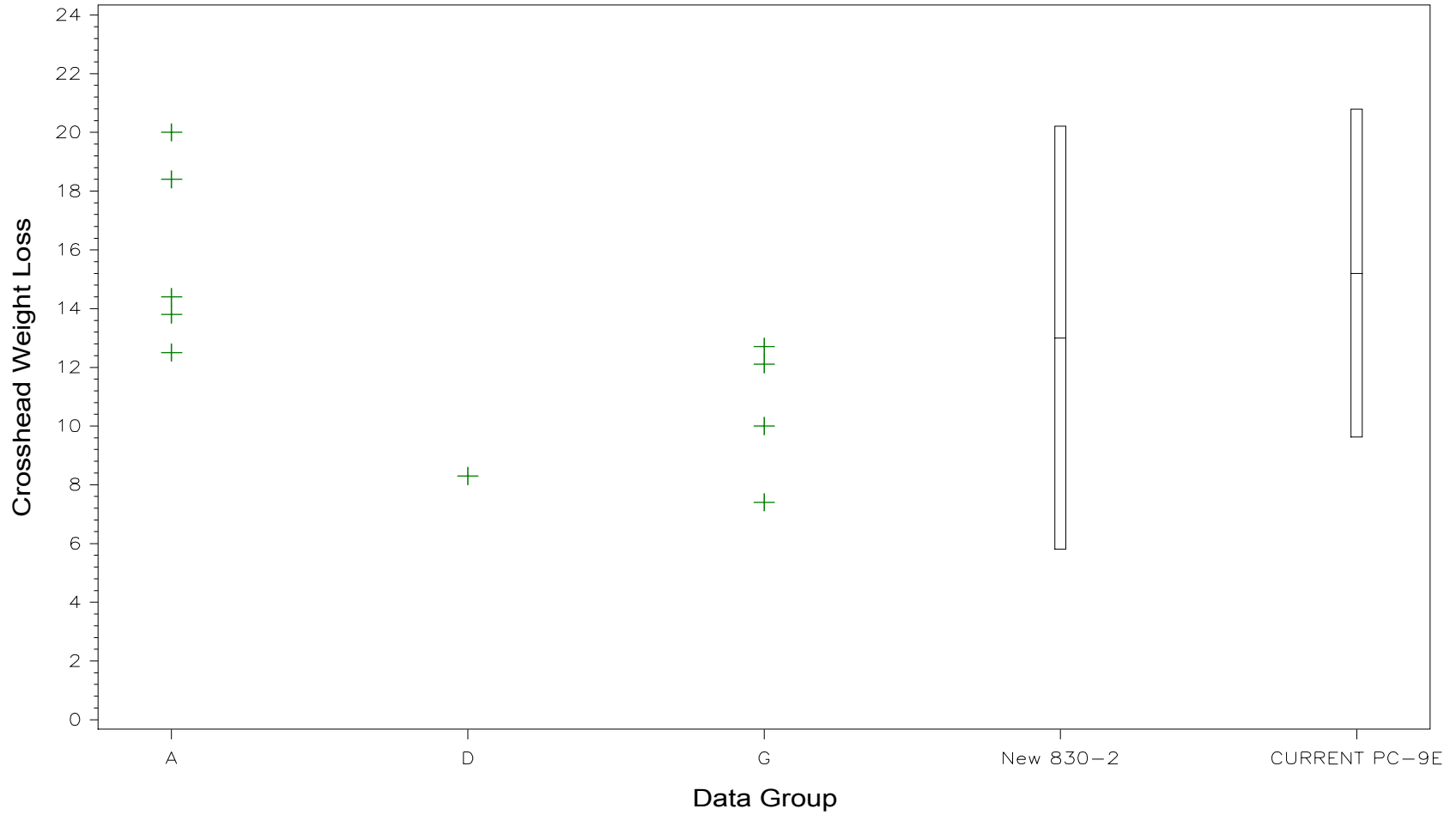
Oil	n	Mean / std. dev.			
		CWL	ASR	FPD	TRWL
PC-9E*	12	15.2 / 3.1	8.4 / 0.33	11.2915 / 0.8535	133.5 / 19.7
830 Reblends**	5	13.0 / 3.0	8.3 / 0.35	11.7505 / 1.0140	131.3 / 21.1

*Current Test Targets.

** Oils 830-1 and 830-2.

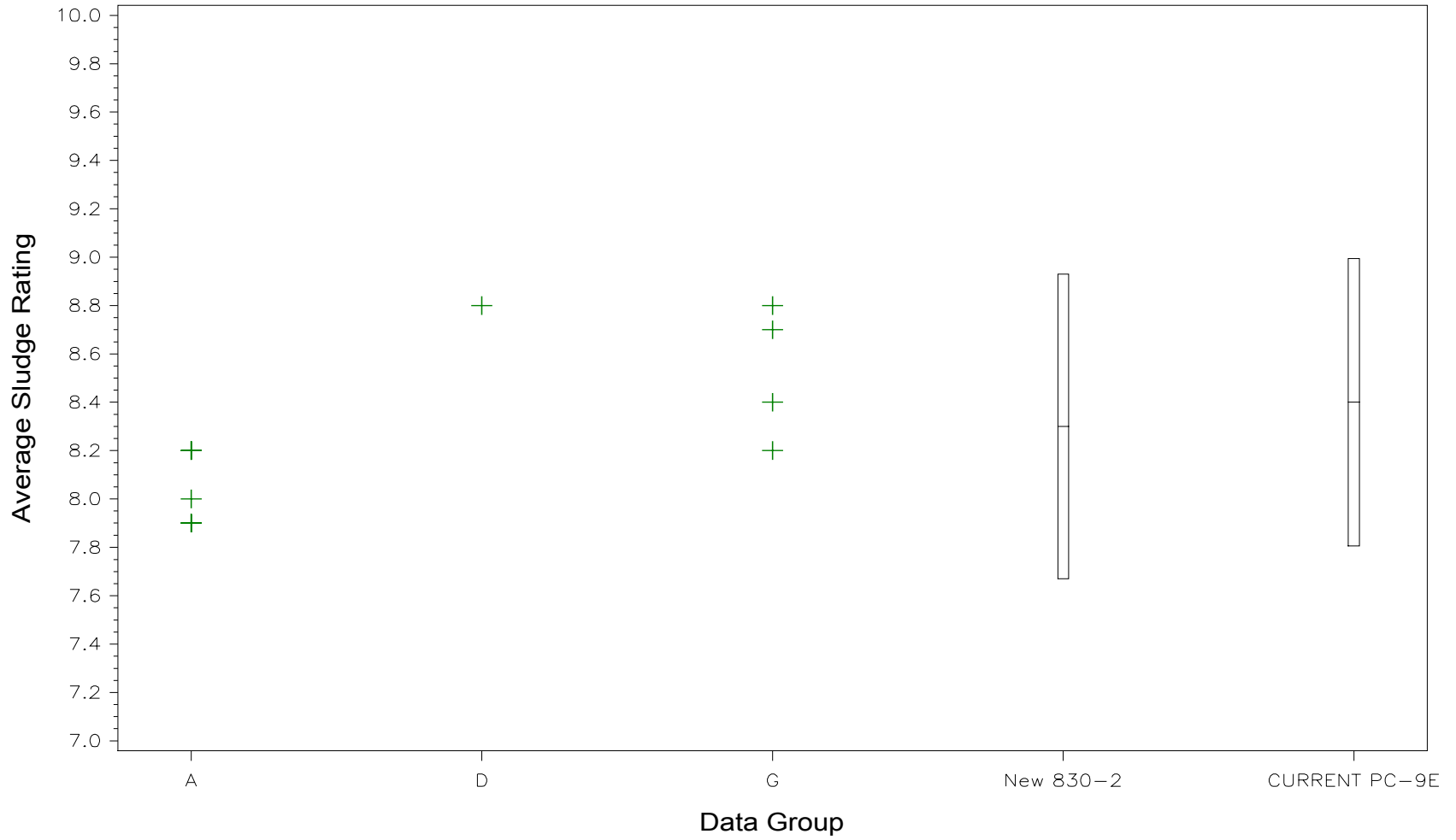
M11EGR: Reference Oil 830-2
Test Target Data Set and Shewart Severity Limits

Crosshead Weight Loss



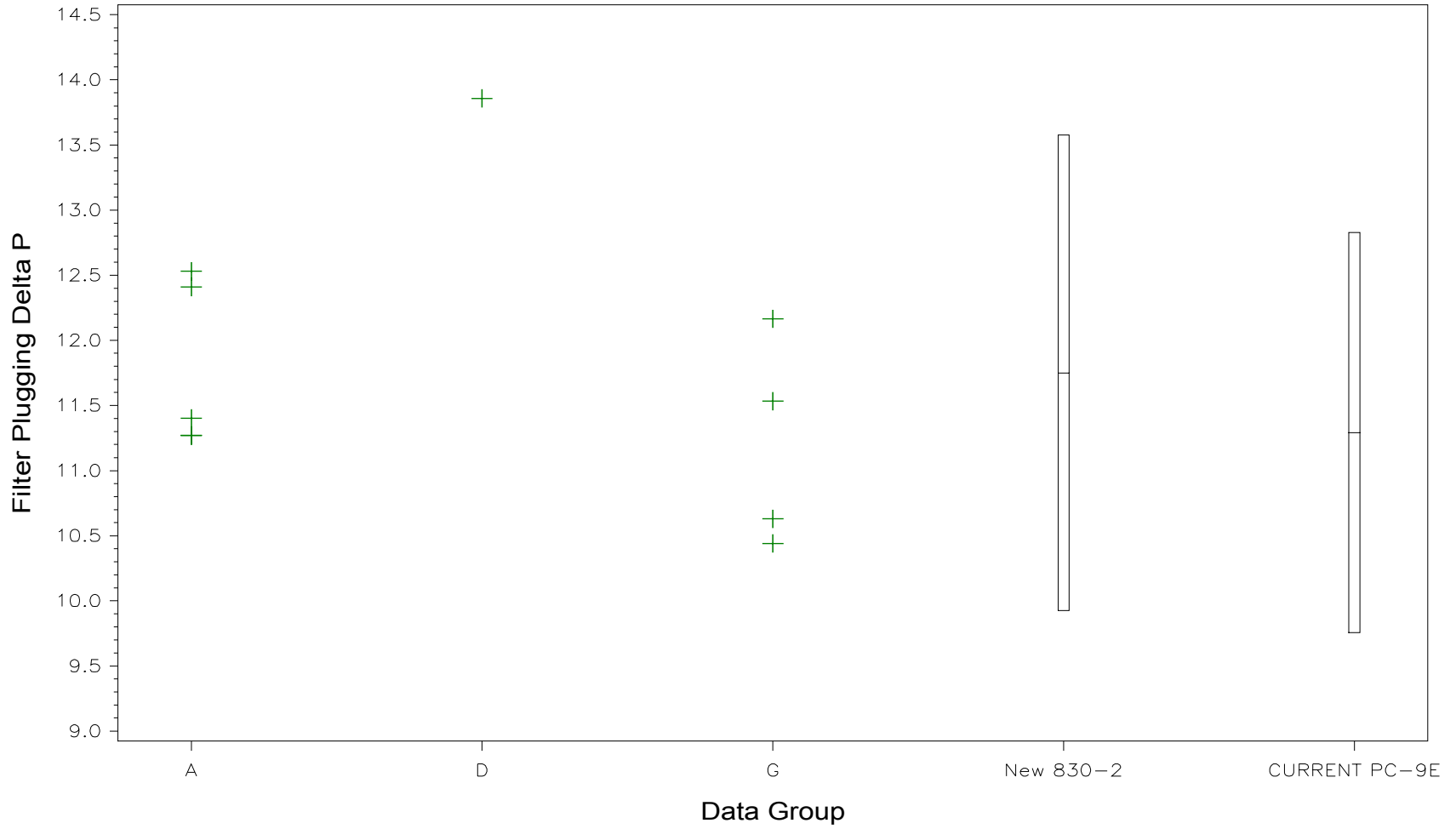
M11EGR: Reference Oil 830-2
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Average Sludge Rating



M11EGR: Reference Oil 830-2
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Filter Plugging Delta P



M11EGR: Reference Oil 830-2
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Average Top Ring Weight Loss

