



MEMORANDUM: 26-021

DATE: September 23, 2026

TO: Corrosion Bench Test Surveillance Panel

FROM: John G. Loop 

SUBJECT: Reference Oil Target and Acceptance Band Updates for HTCBT

The Corrosion Bench Test Surveillance Panel conducted a round robin using a new batch of test coupons (Batch Q) with Reference Oils 1005-5 and 44-5. Single runs with current coupons (Batch P) were included along with Batch Q coupons to confirm bath validity. Results from the round robin were reviewed during a teleconference held on September 22, 2026. The Surveillance Panel voted and accepted the use of Batch Q coupons in ASTM D 6594 (HTCBT) testing with the following targets, standard deviations, and acceptance bands (Table 1).

Table 1: ASTM D 6594 Reference Oil Targets and Acceptance Bands				
Reference Oil	Parameter	Targets, Standard Deviations and Acceptance Bands		
		$\bar{X}$	s	Acceptance Bands ¹
1005-5 (n = 138) ³	Copper Change	1.8497 ²	0.3363 ²	3 to 12
	Lead Change	9.5	7.5	0 to 24
44-5 (n = 18)	Copper Change	4.664 ²	0.372 ²	52 to 219
	Lead Change	33.222	8.171	18 to 49

1 – Non-Transformed result (ppm)

2 – Transformed unit (natural log)

3 – Previous acceptance bands for Reference Oil 1005-5 were carried forward

All data collected in the Batch Q Coupon round robin is shown in Table 2 on the following page.

New Targets, Standard Deviations, and Acceptance Bands are effective as of September 22, 2026.

This document is available on the [TMC Website](http://www.astmtmc.org).

c: J.A. Clark, TMC
S.A. Moyer, TMC
B07 Section Mailing List



Table 2: Round Robin Test Results

TESTKEY	IND	Coupon	LAB2	CUC	PBC
208969	1005-5	P	A	8	6
208971	1005-5	Q	A	8	6
208979	44-5	Q	A	164	42
208977	44-5	P	A	164	46
208980	44-5	Q	A	176	52
208970	1005-5	Q	A	8	6
208978	44-5	Q	A	165	42
209434	1005-5	Q	B	7	9
209436	44-5	Q	B	89	31
209431	1005-5	P	B	8	10
209432	1005-5	Q	B	7	9
209437	44-5	Q	B	72	36
209433	1005-5	Q	B	7	8
209435	45-5	P	B	86	34
209356	1005-5	Q	G	7	9
209367	44-5	Q	G	89	28
209354	1005-5	P	G	8	9
209358	44-5	Q	G	66	29
209353	1005-5	Q	G	6	6
209359	44-5	Q	G	57	33
209357	44-5	P	G	87	34
203520	1005-5	Q	P	8	13
203544	44-5	Q	P	87	21
203521	1005-5	P	P	9	15
203541	44-5	Q	P	90	24
203519	1005-5	Q	P	8	12
203542	44-5	P	P	82	25
203543	44-5	Q	P	93	25
209446	1005-5	Q	BE	8	9
209448	44-5	Q	BE	143	28
209443	1005-5	P	BE	9	11
209444	1005-5	Q	BE	8	7
209449	44-5	Q	BE	164	32
209445	1005-5	Q	BE	8	8
209447	44-5	P	BE	163	36