



## Test Monitoring Center

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**MEMORANDUM:** 04-079

**DATE:** October 8, 2004

**TO:** Ed Callis, Chairman, ASTM Section D02.B0.06

**FROM:** Richard E. Grundza

**SUBJECT:** Two-Stroke Cycle Reference Test Status from April 1, 2004 through September 30, 2004

### Status

#### **RING STICKING (D 4857)**

Two non-reference oil results were reported from one laboratory during the period ending September 30, 2004. Figures 1 and 2 plot the summation delta/s for Second Ring Sticking and Piston Skirt Varnish of both the calibration attempts and the reference oil results obtained with reference oil 606, run to evaluate the performance of non-reference oils. Figure 1 shows severity trending mild for the period. The target values used for plotting purposes are the mean values used to generate the correction factor to be applied to reference oil 606, when run for non-reference oil evaluation. Figure 2 plots the summation delta/s for Piston Skirt Varnish for the period ending September 30, 2004. Figure 2 shows Piston Skirt Varnish to be on or near target.

#### **LUBRICITY TEST (D 4863)**

A total of two non-reference oil tests were reported to the Test Monitoring Center during the period ending September 30, 2004.

#### **PREIGNITION TEST (D 4858)**

One reference oil result from one laboratory was reported during this period. Figure 3 charts the performance of this result relative to the acceptance criteria and historical levels. This result was within the acceptance criteria and Figure 3 shows this result well within the historic performance of the test.

**Summary**

Results with Test Method D 4857 showed Second Ring Sticking trending mild and Piston Skirt Varnish on or near target. Preignition (D4858) test method is performing at or near historical levels.

REG/reg

Attachments

c: F. M. Farber, TMC

J. L. Zalar, TMC

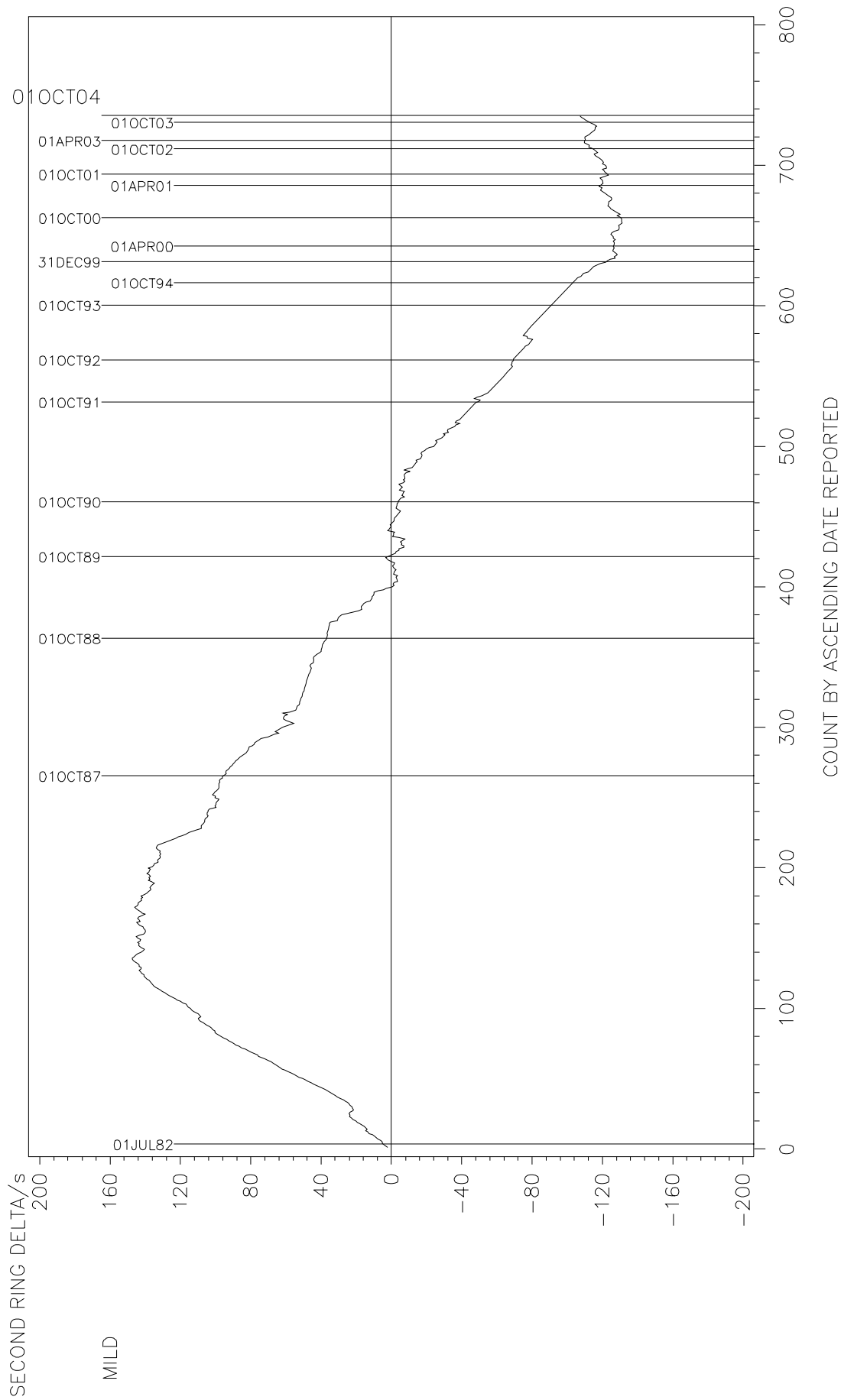
Two-Stroke Cycle Mailing List

<ftp://ftp.astmtmc.cmu.edu/docs/gas/tc/semiannualreports/tc-10-2004.pdf>

Distribution: Email

FIGURE 1

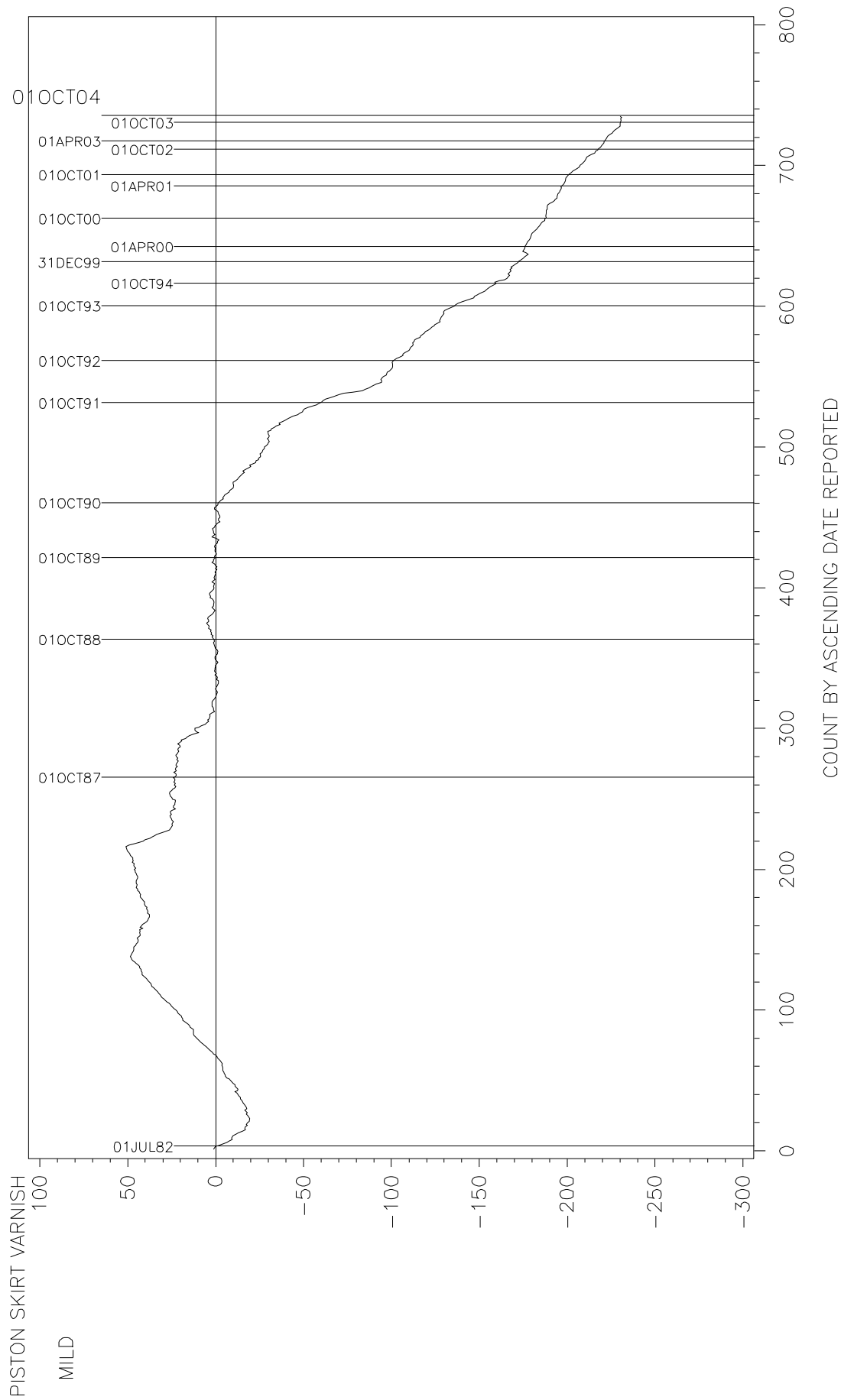
TWO-STROKE-CYCLE  
RING STICKING TEST (D 4857)  
CUSUM PLOT OF SECOND RING STICKING  
Using Updated Targets after 4/1/00



Test Targets Based on Data Reported Prior to 10/16/90 for Reference Oil 600  
Tests Targets for Reference Oil 606 is the Mean of the Data Used to Develop the Correction Factor

FIGURE 2

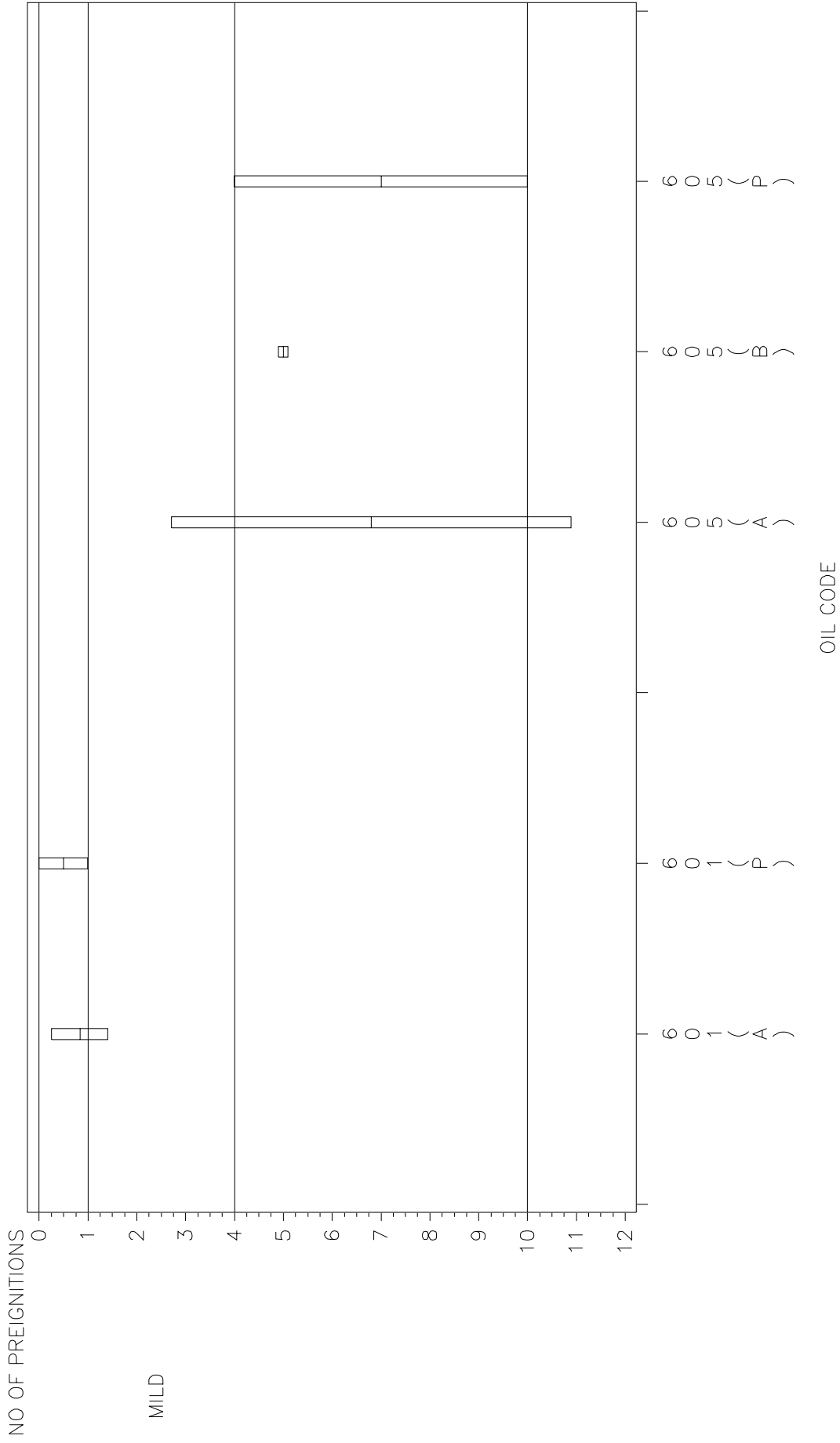
TWO-STROKE-CYCLE  
RING STICKING TEST (D 4857)  
CUSUM PLOT OF PISTON SKIRT VARNISH  
Using Updated Targets After 4/1/00



TEST TARGETS BASED ON DATA REPORTED PRIOR TO 10/16/90 for Reference Oil 600  
Tests Targets for Reference Oil 606 is the Mean of the Data Used to Develop the Correction Factor

FIGURE 3

TWO STROKE CYCLE PREIGNITION TEST  
 MEAN AND  $\pm 1$  STANDARD DEVIATION BAND PLOT OF ACTUAL PREIGNITIONS  
 FOR ALL HISTORICAL DATA AND ASTM PERIOD ENDING 9/30/04



(A) AFTER OIL CODE REPRESENTS ALL HISTORICAL DATA  
 (B) AFTER OIL CODE REPRESENTS CURRENT ASTM REFERENCE PERIOD  
 (P) AFTER OIL CODE REPRESENTS LIMITS FOR STAND CALIBRATION GIVEN  
 IN STANDARD TEST PROCEDURE D-4858  
 TMC OIL CODE 605 = VI-NA, TMC OIL CODE 601 = VI-E

SEVERE