AMERICAN CHEMISTRY COUNCIL
PRODUCT APPROVAL
CODE OF PRACTICE

APPENDIX A

Requirements for Engine Test Stand/Laboratory Calibration

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Introduction

The engine test stand/laboratory calibration requirements, which are monitored and benchmarked by American Chemistry Council (ACC), consist of state-of-the-art calibration methodologies to manage test precision and severity. The ACC requirements are supplementary to ASTM Test Monitoring Center (TMC) test stand and test laboratory requirements, i.e., TMC calibration is a prerequisite for Code practice.

Purpose

This Appendix provides the minimum calibration requirements for engine test stands and laboratories that must be met in order for candidate testing to commence under the Code.

Discussion

Details on the calibration requirements are provided in the ASTM Lubricant Test Monitoring System (LTMS) Manual defined in ASTM Test Monitoring Center Technical Memorandum 94-200. This manual *must* be adhered to for the purposes of ACC calibration. The manual may be obtained from the ASTM TMC at the following address:

ASTM Test Monitoring Center, 6555 Penn Avenue, Pittsburgh, PA 15206-4489 (phone) 412/365-1000, (fax) 412/365-1047

When the use of the LTMS is called for, there is a potential need for the application of engineering judgment. The process for acceptance of such engineering judgment is included as Addendum A1, in this Appendix.

The requirements for the engine test types currently covered by the Code are defined by test type as:

Sequences IIIF, IIIFHD, IIIFVS, IIIG, IIIGA, IIIGB, IIIGVS, IIIH, IIIHA, IIIHB, IIIH60, IIIH70, IVA, IVB, VG, VH, VID, VIE, VIF, VIII, IX, X; Caterpillar 1K, 1M-PC, 1N, 1P, 1R, C13, Caterpillar engine Oil Aeration Test (COAT); Mack T-8, T-8E, T-11, T-12; RFWT; Cummins ISB, ISM and Volvo T-13.

In the event that there are any questions relating to this Appendix, or the fulfillment of the requirements for engine test stand and laboratory calibration for candidate testing under the Code, please contact the American Chemistry Council Monitoring Agency (ACC MA). ACC MA contact information is located on the cover page of Appendix C of the ACC Code of Practice.

ADDENDUM A1

PROCESS FOR ACCEPTANCE OF ENGINEERING JUDGMENT

Engineering Judgment of Control Chart Process

The Lubricant Test Monitoring System (LTMS) control charts should be viewed as a tool used to monitor and interpret the stand/lab/industry calibration process. Failure of a calibration test on a reference oil to meet control chart limits can sometimes be indicative of a false alarm or may wrongly attribute the cause. In other cases, a real problem can exist and LTMS charts do not trigger alarms.

When this occurs, engineering judgment is exercised to determine whether actions other than those specified by the LTMS should be taken. Alarms may likely be triggered by required changes in hardware, fuels or procedures; or by the resolution of laboratory or industry problems.

Review of Engineering Judgment of Control Chart Process

The TMC notifies the ACC Monitoring Agency when it determines that the application of engineering judgment in the interpretation of control charts is appropriate, and reaches a preliminary decision on such application. The program manager of the ACC Monitoring Agency will determine if the application of specific engineering judgment falls within the intent of the Code. The ACC Monitoring Agency program manager may elect to use resources from a mix of individuals with an in-depth knowledge of the Code, the ASTM test methodology and a full understanding of the development and application of the LTMS charts, if applicable.

The program manager will target to close the review and express an opinion to the TMC within one week of notification.

Disseminating Information

The program manager of the ACC Monitoring Agency will maintain a file of engineering judgment actions and report these actions to the ACC Monitoring Agency Advisory Group (MAAG) on a yearly basis. The program manager will also advise MAAG of any disagreement on the application of engineering judgment. MAAG is responsible for communicating this discrepancy to the Product Approval Protocol Task Group (PAPTG).