

C13 Development Task Force

Report to the HDEOCP

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C13 – Matrix Ready?

The Task Force Position

- ⇒ Discrimination Testing
- ⇒ Lab/Stand Visits
- ⇒ Test Procedure
- ⇒ Hardware Supply
- ⇒ Matrix Participation (stands) Requirements
- ⇒ Outstanding Needs

Discrimination Testing

- ⇒ Six Test Mini-matrix – as described by Caterpillar - Task Force does not support the validity of one of the six tests
- ⇒ Conclusions supported by statistical analyses using six or five tests
- ⇒ Task Force concerned that the level of discrimination may not be sustainable

Summary

Courtesy of Jim Rutherford

- ⇒ Five tests with two oils in an assortment of labs.
- ⇒ Simple t-tests for most of the result variables.
- ⇒ ATGC, ATLC, and TGA_H500 had significant ($p < 0.05$) oil differences
- ⇒ OCONPINC, TGFAVG, and FEWMH500 had marginally significant ($0.05 < p < 0.10$) oil differences
- ⇒ Adding sixth test from Caterpillar didn't change much.
 - The only test for oil difference that changed substantially was IRINH500 – strange result. Looks like different units for some measurements.
- ⇒ **If this test continues and it has averages over cylinders we will probably have to have cylinder outlier procedures.**
- ⇒ After outlier screening, oil difference for TGF is no longer significant.
- ⇒ ALSCT oil difference is significant with or without outlier screening.
- ⇒ ALSCI and ALSCO did not have significant oil differences

Lab Visits

- ⇒ Team formed – Jeff Clark, leader
- ⇒ Three labs visited, no significant discrepancies
- ⇒ Two more labs scheduled for mid-March

Test Procedure

- ⇒ Fully developed in ASTM format
- ⇒ Draft #5 due out next week to correct loose ends discovered in the lab visits and adopted by the Task Force on 2/21
- ⇒ Procedure is ready to be incorporated into an ASTM Research Report and subsequently given to a Facilitator to process as a Standard

Hardware Supply

- ⇒ Caterpillar to be the CPD
- ⇒ Critical parts (PRL) from production with reduced tolerances on critical parameters
- ⇒ 1Y parts system to be used
- ⇒ Matrix hardware in production, sufficient hardware is in-hand for the matrix
- ⇒ Five year parts supply to be in place by the end of 2006

Matrix Participation Req'm'ts

- ⇒ MOA Draft followed
- ⇒ Task Force agreed that any lab/stand combination that has generated two valid C13 tests with either PC-9 or PC-10 fuel is acceptable

Outstanding Needs

- ⇒ Task Force supports moving the C13 to Matrix (vote 9-2-1)
- ⇒ However, the Task Force remains concerned that the level of demonstrated discrimination may not be sustainable.
- ⇒ The Task Force highly recommends that an oil or oils be included in the matrix to further support the conclusion that the test discriminates.