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# **Status of ISM Test**

**D M Stehouwer**

**To HDEOCP**

**3/31/05**

# ISM / M11 EGR Correlation Methodology

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- **Ordinary Least Squares regression was used to establish the correlation for all of the pass fail parameters in the M11EGR test.**
- **The data set used for the correlation included:**
  - **ISM matrix runs on reference oil 830-2**
  - **Two candidate test oils that were submitted to the Test Monitoring Center as part of a solicitation for correlation data.**
- **The 830-2 data was outlier screened on CHWL and soot corrected to an average of 3.9%soot.**
  - **It is unclear if the candidate data was outlier screened**
    - **Verification is in progress**
  - **The correction for CHWL for soot was 3mg/%soot.**
  - **All CHWL data was soot corrected to 3.9 % soot.**

# ISM / M11 EGR Correlation Methodology

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- For OFDP a natural log transform was used for the ISM data.
- A square root transformation was used for the M11EGR data.
- For sludge the 830-2 and candidate data was so close to each other correlation was very difficult.
  - To aid in establishing a correlation the sludge values were transformed using the following equation (10-sludge rating) then the correlation line was forced through zero.

# ISM / M11 EGR Correlation

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	M11EGR performance	Equivalent ISM performance
CHWL	20 mg	7.5 mg
OFDP	275 kPa	55 kPa
Sludge	7.8 merits	8.1 merits

- **Note: these values are for correlation with M11 EGR, not PC10**
- **PC 10 limits will be defined around the performance of 830 in the ISM**

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# **Status of ISB Test**

**D M Stehouwer**

**To HDEOCP**

**3/31/05**

# ISB Status / Summary of Actions

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- **Draft of test procedure is under revision**
- **Definition of the test cycle was refined**
- **Intake and Exhaust restriction more closely defined**
- **Valve lash adjustment procedure defined**
- **Next batch of cams in hand and being measured**
  - **Will be at TEI by mid April**
- **Cam measurement procedure decided for matrix**
  - **Labs to measure before and after test with Seq. III procedure**
  - **Adcole measurement will be provided for full 360° before and after test**
  - **Decision on which to use going forward will follow matrix**

# ISB Lab Status

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- **Test discriminates at two labs**
  - **IND-2 and AEI**
    - **AEI will not be in matrix**
- **Lab visitations complete**
- **IND-1 will run 830-2 and 1004**
- **DEP-4 will run 830-2**
- **Both are on track to be complete by 4/15**

# ISB Matrix Readiness: Task Force Report

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- Test discriminates and is ready
- Procedure has been finalized
- All hardware for matrix and beyond will be in place by 4/15
- Labs should be matrix ready by 4/15
- ISB Task Force proposes that HDEOCP finalize an exit criteria ballot and declare the ISB matrix ready following ISB TF telcon confirming lab discrimination.