

D 6750
1K/1N Final Report Cover

Method 1K1N VERSION 20040513 BETA
Version CC

Conducted For:
CC
CC

| | |
|---|--|
| C | V = Valid |
| | I = Invalid |
| | N = Results Cannot Be Interpreted As Representative Of Oil Performance (Non-Reference) And Shall Not Be Used In Determining An Average Test Result Using Multiple Test Criteria. |

| | | |
|---|--------------------|------------------|
| Test Number | | |
| Test Stand: CCCCC | Engine Run #: CCCC | |
| EOT Time: HH:MM | EOT Date: YYYYMMDD | |
| Oil Code ^A : CCC | CCCCCC | |
| Formulation/Stand Code:CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCC | | |
| Alternate Codes: CCCCCCCCCCCCCC | CCCCCCCCCCCCCCCC | CCCCCCCCCCCCCCCC |

In my opinion this test CCCCCCC been conducted in a valid manner in accordance with ASTM Test Method D 6750 (1K/1N) and the appropriate amendments through the information letter system. The remarks included in this report describe the anomalies associated with this test.

^A CMIR or Non-Reference Oil Code

Submitted By: _____
Testing Laboratory

_____ Signature Image
Signature

_____ Typed Name

_____ Title

**1K/1N
Form 1
Test Report Summary**

| | | | |
|--|-------------------------|--------------------|-----------|
| Lab CC | EOT Date YYYYMMDD | End Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCC |
| Start Date YYYYMMDD | Total Test Length S1234 | TMC Oil Type CCCCC | |
| Laboratory Internal Oil Code CCCCCCCCCCCCCCCCCC | | | |

| | Correction Effective Date | WDK/WDN | TGF % | TLHC% | Transformed TLHC% | BSOC g/KW-h | EOTOC g/kW-h |
|--|---------------------------|---------|-------|---------|-------------------|-------------|--------------|
| Unadjusted Lab Rating | | S1234.1 | S123 | S123 | S123.123 | S1.12 | S1.12 |
| Industry Correction(If Any) | YYYYMMDD | S1234.1 | S123 | | S123.123 | S1.12 | S1.12 |
| Subtotal | | S1234.1 | S123 | | S123.123 | S1.12 | S1.12 |
| Lab Severity Adjustment(If Any) ^A | YYYYMMDD | S1234.1 | S123 | | S12.123 | S1.12 | S1.12 |
| Total | | S1234.1 | S123 | S123.12 | S123.123 | S1.12 | S1.12 |

| | Effective Date | WDK/WDN | TGF % | TLHC % | Transformed TLHC% | BSOC g/KW-h | EOTOC g/kW-h |
|------------------------------|----------------|---------|--------|--------|-------------------|-------------|--------------|
| Test Target Mean B | YYYYMMDD | S1234.1 | S123.1 | | S12.123 | S1.12 | S1.12 |
| Test Target STD ^B | YYYYMMDD | S1234.1 | S123.1 | | S12.1 | S1.12 | S1.12 |
| CCCCCCCCCCCC ^{A, C} | YYYYMMDD | S1234.1 | S123.1 | S123.1 | | S1.12 | S1.12 |

| | Referee Lab | WDK/WDN | TGF % | |
|-----------------|-------------|---------|-------|--|
| Referee Ratings | CC | S1234.1 | S123 | |

| | Top | Int. 1 | Oil | Piston | Liner |
|---------------------------------|--------|--------|--------|--------|--------|
| Ring Loss Of Side Clearance(mm) | S1.123 | S1.123 | S1.123 | | |
| Ring End Gap Increase (mm) | S1.123 | S1.123 | S1.123 | | |
| Is The Ring Stuck? | CCC | CCC | CCC | | |
| Scuffed Area % | S123 | S123 | S123 | S123 | S123 |
| Average Wear Step (µm) | | | | | S1.123 |
| % Bore Polish | | | | | S123.1 |

Notes: ^A Reference oil tests or as requested by test sponsor ^C See Appendix X4
^B Non-reference oil tests only

**1K/1N
Form 2
Operational Summary**

| Lab CC | EOT Date YYYYMMDD | End Time HH:MM | Method CC | | |
|--|-------------------|------------------|-------------------------|-----------------|---------------|
| Stand CCCCC | Run Number CCCC | | | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC | | | | | |
| Oilcode/CMIR CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | | | CCCCCC |
| Operating Condition | | Minimum | Maximum | Average | Specification |
| Engine Speed | r/min | S1234.1 | S1234.1 | S1234.1 | 2100 ± 10 |
| Engine Power | kW | S123.1 | S123.1 | S123.1 | Report |
| Fuel Flow | g/min | S123.1 | S123.1 | S123.1 | 185 ± 1 |
| Humidity | g/kg | S12.1 | S12.1 | S12.1 | 17.8 ± 1.7 |
| Temperature °C | | | | | |
| Coolant Out | °C | S12.1 | S12.1 | S12.1 | 93 ± 2.5 |
| Coolant In | °C | S12.1 | S12.1 | S12.1 | Report |
| Coolant delta T | °C | S12.1 | S12.1 | S12.1 | 5 ± 1.0 |
| Oil To Bearing | °C | S123.1 | S123.1 | S123.1 | 107 ± 2.5 |
| Oil Cooler In | °C | S123.1 | S123.1 | S123.1 | Report |
| Inlet Air | °C | S123.1 | S123.1 | S123.1 | 127 ± 2.5 |
| Exhaust | °C | S123.1 | S123.1 | S123.1 | 550 ± 30 |
| Fuel @ Injector Housing | °C | S123.1 | S123.1 | S123.1 | 57 + 3 |
| Pressures | | | | | |
| Oil To Bearing | kPa | S123.1 | S123.1 | S123.1 | 482 Max |
| Oil To Jet | kPa | S123.1 | S123.1 | S123.1 | 360 ± 13 |
| Inlet Air | kPa | S123.1 | S123.1 | S123.1 | 240 ± 1 |
| Exhaust (ABS) | kPa | S123.1 | S123.1 | S123.1 | 216 ± 1 |
| Fuel @ Filter HSG | kPa | S123.1 | S123.1 | S123.1 | 210 ± 20 |
| Crankcase Vacuum | kPa | S1.12 | S1.12 | S1.12 | 0.7 ± 0.1 |
| Coolant Jug Pressure | kPa | S123.1 | S123.1 | S123.1 | Report |
| Flows | | | | | |
| Blowby | L/min | S123.1 | S123.1 | S123.1 | Report |
| Coolant Flow | L/min | S1234.1 | S1234.1 | S1234.1 | 65 ± 2 |
| Air/Fuel Ratio: 24 hr. | S123.1 | | Air/Fuel Ratio: 252 hr. | S123.1 | |
| Assembly Measurements And Parts Record | | | | | |
| Piston/Head Clearance mm | S1.123 | | Intake Valve Open °ATC | | S1234.1 |
| | | Fuel Timing °BTC | | | S1234.1 |
| | Part No. (1) | Serial No. (2) | Date Code | Inspection Code | |
| Liner | CCCCCCCCCCCC | CCCCCCCCCCCC | F CCCCCCCCCCCC | G CCCCCCCCCCCC | |
| Ring Set (1) | CCCCCCCCCCCC | | CCCCCCCCCCCC I | H CCCCCCCCCCCC | |
| Piston | CCCCCCCCCCCC | CCCCCCCCCCCC | D CCCCCCCCCCCC | E CCCCCCCCCCCC | |

D Number blow "E" located on top of piston

(1) And (2) Number On Parts Box Yellow Label

E Number on top of "E" located on top of piston

F Four alphanumeric characters (NNAN) on liner O.D.

G Four digit number on liner O.D.

1K/1N
Form 3
Operational Summary - Offset And Deviation

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | End Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCC |

| Controlled Parameter | Allowable % Out | This Test % Out | Allowable % Off | This Test % Off |
|--------------------------|-----------------|-----------------|-----------------|-----------------|
| Speed | 5 | S123.1 | 20 | S123.1 |
| Fuel Flow | 10 | S123.1 | 25 | S123.1 |
| Humidity | 10 | S123.1 | 25 | S123.1 |
| Coolant Flow | 5 | S123.1 | 25 | S123.1 |
| Temperatures | | | | |
| Coolant Out | 5 | S123.1 | 20 | S123.1 |
| Oil To Bearing | 5 | S123.1 | 20 | S123.1 |
| Intake Air | 5 | S123.1 | 20 | S123.1 |
| Fuel At Injector Housing | 5 | S123.1 | 20 | S123.1 |
| Pressures | | | | |
| Oil Jet | 5 | S123.1 | 25 | S123.1 |
| Intake Air | 10 | S123.1 | 25 | S123.1 |
| Exhaust | 10 | S123.1 | 25 | S123.1 |
| Fuel At Filter Housing | 5 | S123.1 | 20 | S123.1 |
| Crankcase Vacuum | 10 | S123.1 | 20 | S123.1 |

**1K/IN
Form 4
Piston Rating Summary**

| | | | | | | |
|---|-----------------------------------|------------------------|--------------------------|---------------------------|---------------------------|-----------|
| Test | Lab CC | EOT Date YYYYMMDD | END Time HH:MM | Stand CCCCC | Run No. CCCC | Method CC |
| Formulation/Stand Code | CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | | Oilcode CCCCCCCCCCCCCCCCC | CCCCC |
| Test Fuel CCCCCCCCCC | Fuel Batch CCCCCCCCCC | Date Rated YYYYMMDD | Rating Number CCCCCCCCCC | Rater CCC | | |
| Last Stand Reference Information | Date Completed YYYYMMDD | Stand No. CCCCC | Run No. CCCC | TMC Oil Code CCCCC | | |
| | WDK/WDN | TGF | Transformed TLHC | BSOC | EOTOC | |
| Last Ref. This Stand | S123.1 | S123 | S12.123 | S1.12 | S1.12 | |
| Industry Average | S123.1 | S12.1 | S12.123 | S1.12 | S1.12 | |
| Industry STD | S123.1 | S123.1 | S12.123 | S1.12 | S1.12 | |

| Total Piston Ratings Summary | | | | | | | | | | | | | S123.12 | | | | | | | | | | | |
|------------------------------|-----------------|-----------------------------------|---------|---------|---------|---------|---------|----------------|---------|---------|---------|---------|-------------|---------------------------|---------|-------------|----------------------------|---------|-----------|-----------------------------|---------|---------|---------|---------|
| Dep. Factor | Grooves | | | | | | Lands | | | | | | Upper Skirt | | | Under Crown | | | Pin Bores | | | | | |
| | NO. 1 | | NO. 2 | | NO. 3 | | NO. 1 | | NO. 2 | | NO. 3 | | A, % | | Dem. | | A, % | | Dem. | | A, % | | Dem. | |
| | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. | A, % | Dem. |
| C | | | | | | | | | | | | | | | | | | | | | | | | |
| A | HC-1.0 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| B | MC-0.5 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| O | LC-25 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| N | Total | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| L | 8 - 9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| A | 7 - 7.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| C | 6 - 6.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| Q | 5 - 5.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| U | 4 - 4.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| E | 3 - 3.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| R | 2 - 2.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| | 1 - 1.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| | >0 - 0.9 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| | Clean | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 | 0 | S123 |
| | Total | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 | S123.12 | S123 |
| | Rating | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 |
| | Location Factor | 1.5 | 1.5 | 25 | 1 | 1 | 1 | 1 | 1 | 25 | 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Weighted Rating | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 | S123.12 |
| | TGF % | Intermediate Groove Fill % | | | | | | WDK/WDN | | | | | | Unweighted Deposit | | | T.L. Heavy Carbon % | | | T.L. Flaked Carbon % | | | | |
| S123 | S123 | S1234.1 | | | | | | S1234.1 | | | | | | S1234.1 | | | S123 | | | S123 | | | | |

1K/1N
Form 4A
Piston Rating Worksheet

| | | | |
|--|-----------------|-------------------|-----------|
| Lab CC | EOT Date HH:MM | END Time YYYYMMDD | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR:CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCCC |

CC

Refer to Appendix C for an example of Piston Rating Worksheet.

**1K/1N
Form 8
Ring Measurements**

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | END Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCC |

| Ring Gaps (mm) | Top | Intermediate | Oil |
|-----------------------|-------------------------|----------------------|----------------------|
| Specifications | 0.724 ± 0.076 mm | 0.673 ± 0.076 mm | 0.572 ± 0.190 mm |
| Pre-Test | S1.123 | S1.123 | S1.123 |
| Post-Test | S1.123 | S1.123 | S1.123 |
| Increase | S1.123 | S1.123 | S1.123 |

| Ring Side Clearance* | A | B | C | D | Avg. | Min. | Specification |
|----------------------|-----------|---------|---------|---------|---------|---------|--------------------|
| Top | Pre-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | 0.193+0.032 mm |
| | Post-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | |
| | LSC | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | S1.123 | |
| Int.. | Pre-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | 0.090+0.020 mm |
| | Post-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | |
| | LSC | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | S1.123 | |
| Oil | Pre-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | 0.073 +0.016 mm |
| | Post-Test | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | |
| | LSC | AAAAAAA | AAAAAAA | AAAAAAA | AAAAAAA | S1.123 | |

***Notes:**

1. Write "Stuck" In Place Of Dimension When Applicable.
2. Write "<0.038 mm" For Clearance When Applicable.
3. Write ">" Before Calculated Decrease Or Average Decrease Values That Incorporate A "<0.038 mm" In Calculation.
- 4 LSC: Loss Of Side Clearance.
5. Min: Intermediate And Oil Ring Minimum Side Clearance Is Measured 360° Around Piston.

**1K/IN
Form 9
Liner Measurements**

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | END Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCCC |

| Liner Surface Finish (Micrometer) | | | |
|--|------------|--------------|---------|
| Distance From Top | Transverse | Longitudinal | Average |
| 130 mm | S1.12 | S1.12 | S1.12 |
| 50 mm | S1.12 | S1.12 | S1.12 |
| 25 mm | S1.12 | S1.12 | S1.12 |
| Total Average | | | S1.12 |

| % Liner Bore Polish - Grid (Add T/AT Values From Grid) | |
|---|--------|
| Thrust | S123.1 |
| Anti-Thrust | S123.1 |
| Total | S123.1 |

| Liner Bore Measurement (mm) | | | | |
|--|--------------|------------|------------|--------|
| Before Test – Diameter (Dial Bore Gage) | | | | |
| Bore Height | Longitudinal | Transverse | | |
| 230 mm | S123.123 | S123.123 | | |
| 130 mm | S123.123 | S123.123 | | |
| 50 mm | S123.123 | S123.123 | | |
| 25 mm | S123.123 | S123.123 | | |
| 15 mm | S123.123 | S123.123 | | |
| After Test - (Surface Profile) | | | | |
| | Longitudinal | | Transverse | |
| | Front | Rear | T | AT |
| Wear Step @ 15mm | S1.123 | S1.123 | S1.123 | S1.123 |

Characteristics Of The Data Acquisition System

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | END Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC CCCCC | | | |

| Parameter (1) | Sensing Device (2) | Calibration Frequency (3) | Record Device (4) | Observation Frequency (5) | Record Frequency (6) | Log Frequency (7) | System Response (8) |
|-----------------------------|--------------------|---------------------------|-------------------|---------------------------|----------------------|-------------------|---------------------|
| Operation Conditions | | | | | | | |
| Engine Speed (R/min) | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Engine Power (kW) | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Fuel Flow (g/min) | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Humidity (g/kg) | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Coolant Out | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Coolant In | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Oil To Bearing | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Oil Cooler In | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Inlet Air | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Exhaust | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Fuel | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Pressures (kPa) | | | | | | | |
| Oil To Bearing | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Oil To Jet | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Inlet Air | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Exhaust | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Fuel @ Filter HSG | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Crankcase VAC | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Flows (L/min) | | | | | | | |
| Blowby | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |
| Coolant Flow | CCCCCCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCCCCCC | CCCCCCCC |

Legend:

- (1) Operating Parameter
- (2) The Type Of Device Used To Measure Temperature, Pressure Or Flow
- (3) Frequency At Which The Measurement System Is Calibrated
- (4) The Type Of Device Where Data Is Recorded
 - LG - Hanglog Sheet
 - DL - Automatic Data Logger
 - C/M - Computer, Using Manual Data Entry
 - SC - Strip Chart Recorder
 - C/D - Computer, Using Direct I/O Entry
- (5) Data Area Observed But Only Recorded If Off Spec.
- (6) Data Are Recorded But Are Not Retained At EOT
- (7) Data Are Logged As Permanent Record, Note Specify If:
 - SS - Snapshot Taken At Specified Frequency
 - AG/X Average Of X Data Points At Specified Frequency
- (8) Time For The Output To Reach 63.2% Of Final Value For Step Change At Input

1K/IN
Form 14
Piston, Ring And Liner Photographs

| | | | |
|--|--------------------|----------------|-----------|
| Lab CC | EOT DATE: YYYYMMDD | End Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CC | | | CCCCC |

CC

1K/1N
Form 16
TMC Control Chart Analysis

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | End Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC | | | |
| Oilcode/CMIR: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | | | CCCCCC |

CC

**1K/IN
Form 17
Fuel Batch Analysis**

| | | | |
|--|-------------------|----------------|-----------|
| Lab CC | EOT Date YYYYMMDD | End Time HH:MM | Method CC |
| Stand CCCCC | Run Number CCCC | | |
| Formulation/Stand Code CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC | | | |
| Oilcode/CMIR: CC | | | CCCCCC |

CC

Refer to Appendix C for examples of appropriate Fuel Batch Analysis pages.

**1K/IN
Form 18
American Chemistry Council Code of Practice
Test Laboratory Conformance Statement**

| | | | | | |
|--------------------------|--|------------|-------|-----------|-----|
| Test Laboratory | CC | | | | |
| Test Sponsor | CC | | | | |
| Formulation / Stand Code | CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCC | | | | |
| Test Number | CC | | | | |
| Start Date | YYYYMMDD | Start Time | HH:MM | Time Zone | CCC |

No. 1 All requirements of the ACC Code of Practice for which the test laboratory is responsible were met in the conduct of this test. Yes C No C *

No. 2 The laboratory ran this test for the full duration following all procedural requirements; and all operational validity requirements of the latest version of the applicable test procedure (ASTM or other), including all updates issued by the organization responsible for the test, were met.
Yes C No C *

If the response to this Declaration is “No”, does the test engineer consider the deviations from operational validity requirements that occurred to be beyond the control of the laboratory? Yes C * No C

No 3. A deviation occurred for one of the test parameters identified by the organization responsible for the test as being a special case. Yes C * No C
(This currently applies only to specific deviations identified in the ASTM Information Letter System)

| | |
|---|---|
| C | Operational review of this test indicates that the results should be included in the Multiple Test Acceptance Criteria calculations. |
| C | *Operational review of this test indicates that the results should not be included in the Multiple Test Acceptance Criteria calculations. |

Note: *Supporting comments are required for all responses identified with an asterisk.*

| Comments |
|--|
| CC |
| CC |
| CC |
| CC |

Signature Image _____
Signature

YYYYMMDD _____
Date

CC
Typed Name

CC
Title