

**D 6750**  
**1K/1N Final Report Cover**

**Method** 1K1N VERSION 20040205 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.

<b>Test Number</b>		
Test Stand: CCCCC	Engine Run #: CCCC	
EOT Time: HH:MM	EOT Date: YYYYMMDD	
Oil Code <sup>A</sup> : CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	CCCCC	
Formulation/Stand Code: CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC		
Alternate Codes: CCCCCCCCCCCCCC	CCCCCCCCCCCCCCCC	CCCCCCCCCCCCCCCC

In my opinion this test CCCCCC 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.
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<sup>A</sup> 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	S12.123	S1.12	S1.12
Industry Correction(If Any)	YYYYMMDD	S1234.1	S123	S123	S12.123	S1.12	S1.12
Subtotal		S1234.1	S123	S123	S12.123	S1.12	S1.12
Lab Severity Adjustment(If Any) <sup>A</sup>	YYYYMMDD	S1234.1	S123	S123	S12.123	S1.12	S1.12
Total		S1234.1	S123	S123	S12.123	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 <sup>B</sup>	YYYYMMDD	S1234.1	S123.1		S12.1	S1.12	S1.12
CCCCCCCCCCCC <sup>A,C</sup>	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: <sup>A</sup> Reference oil tests or as requested by test sponsor      <sup>C</sup> See Appendix X4  
<sup>B</sup> 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-CCCC					
Oilcode/CMIR CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC					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

<b>Controlled Parameter</b>	<b>Allowable % Out</b>	<b>This Test % Out</b>	<b>Allowable % Off</b>	<b>This Test % Off</b>
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
<b>Temperatures</b>				
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
<b>Pressures</b>				
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**

<b>Test</b>	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 CCCCCCCCC	Fuel Batch CCCCCCCCC	Date Rated YYYYMMDD	Rating Number CCCCCCCCC	Rater CCC		
<b>Last Stand Reference Information</b>	<b>Date Completed</b> YYYYMMDD	<b>Stand No.</b> CCCCC	<b>Run No.</b> CCCC	<b>TMC Oil Code</b> CCCCC		
	<b>WDK/WDN</b>	<b>TGF</b>	<b>Transformed TLHC</b>	<b>BSOC</b>	<b>EOTOC</b>	
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.
<b>C</b>																								
<b>A</b>	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>B</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
<b>O</b>	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
<b>N</b>	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
<b>L</b>	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
<b>A</b>	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
<b>C</b>	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
<b>Q</b>	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
<b>U</b>	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
<b>E</b>	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
<b>R</b>	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	50	20	0	0	0	0	0	0	0	0	0	0	0
	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
	<b>TGF %</b>	<b>Intermediate Groove Fill %</b>						<b>WDK/WDN</b>						<b>Unweighted Deposit</b>			<b>T.L. Heavy Carbon %</b>			<b>T.L. Flaked Carbon %</b>				
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/IN  
Form 5A  
Referee Rating**

<b>Test Identification</b>	
Lab CC	EOT Date YYYYMMDD
Stand CCCCC	Run No. CCCC
End Time HH:MM	
Method CC	
Formulation/Stand Code CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC	
Oilcode CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCC	

<b>Referee Rating Information</b>	
Company CC	Rating Number CCCCCCCCCC
Date Rated YYYYMMDD	Rater CCC

**Total Piston Ratings Summary**

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.			
C																							
A	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	
R	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	
B	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	
O	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	
N																							
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	
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	
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	
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	
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	
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	
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	
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	
>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	
Clean	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	S123	0	
Total Rating	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	
Location Factor	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	
Weighted Rating	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	S123.12	1.5	
<b>TGF %</b>	S123	<b>Intermediate Groove Fill %</b>				<b>WDK/WDN</b>				<b>Unweighted Deposit</b>				<b>Test Lab TLHC%</b>				<b>Test Lab TLHC %</b>					
S123	S123	S123				S1234.1				S1234.1				S123				S123					



**1K/1N  
Form 6  
Oil Analysis And Results Summary**

<b>Test Identification</b>			
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-CCCC			
Oilcode CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC			CCCCCC
Test Fuel CCCCCCCCCC	Fuel Batch CCCCCCCCCC		

<b>Oil Analysis/Engine Hours</b>		NEW / 0	24	204	252
Viscosity @ 100°C	S123.12	S123.12	S123.12	S123.12	S123.12
TBN D4739	S123.12	S123.12	S123.12	S123.12	S123.12
Wear Metals:	Fe/Al	AAAA	AAAA	AAAA	AAAA
	Si/Cu	AAAA	AAAA	AAAA	AAAA
	Cr/Pb	AAAA	AAAA	AAAA	AAAA
Fuel Dilution		S12.1	S12.1	S12.1	S12.1
Blowby (L/min)		S123.1	S123.1	S123.1	S123.1
<b>24 Hr.. Avg. BSOC (g/kW-h) For Hours End</b>		0-252 Hr. Avg. BSOC (g/kW-h):	S1.12	EOT Oil Consumption(g/kW-h):	S1.12
24	48	72	108	132	156
S1.12	S1.12	S1.12	S1.12	S1.12	S1.12
<b>Inspection And Measurement Summary</b>	<b>Ring Gap Incr. (mm)</b>	<b>Side Cl. Loss (mm)</b>	<b>Ring Stuck (1)</b>	<b>Scuffed Area % (2)</b>	<b>% Bore Polish (With Grid)</b>
Top Ring	S1.123	S1.123	CCC	S123	
Int. Ring	S1.123	S1.123	CCC	S123	
Oil Ring	S1.123	S1.123	CCC	S123	
Piston				S123	
Cylinder Liner				S123	
<b>Piston Deposit Summary</b>	<b>TGF %</b>	<b>Int. Gr. F. %</b>	<b>WDK/WDN</b>	<b>Un Wt Dep</b>	<b>T.L. Heavy Carb. %</b>
	S123	S123	S1234.1	S1234.1	S123
<b>UNWEIGHTED PISTON DEPOSITS</b>					
<b>Grooves</b>		<b>Lands</b>		<b>Upper Skirt</b>	<b>Under Crown</b>
1	2	3	1	2	3
S123.12	S123.12	S123.12	S123.12	S123.12	S123.12
				<b>Pin Bores</b>	<b>Rear</b>
				<b>Front</b>	<b>S123.12</b>
				S123.12	S123.12



**1K/1N  
Form 7A  
Unscheduled Downtime & Maintenance Summary**

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

Number of Downtime Occurrences		S12	
Test Hours	Date	Downtime	Reasons
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
CCCCCC	CCCCCCCC	CCCCCC	CC
		HHH:MM	Total Downtime (125 Hr. Max)

Other Comments		
Number of Comment Lines	S12	
CC		
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**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
<b>Specifications</b>	$0.724 \pm 0.076$ mm	$0.673 \pm 0.076$ mm	$0.572 \pm 0.190$ 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
<b>Top</b>	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	
<b>Int..</b>	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	
<b>Oil</b>	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

<b>Liner Surface Finish (Micrometer)</b>			
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

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

<b>Liner Bore Measurement (mm)</b>				
<b>Before Test – Diameter (Dial Bore Gage)</b>				
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		
<b>After Test - (Surface Profile)</b>				
	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: CCC			

Parameter (1)	Sensing Device (2)	Calibration Frequency (3)	Record Device (4)	Observation Frequency (5)	Record Frequency (6)	Log Frequency (7)	System Response (8)
<b>Operation Conditions</b>							
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
<b>Pressures (kPa)</b>							
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
<b>Flows (L/min)</b>							
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/1N  
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-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCC			
Oilcode/CMIR: CCC			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: CCC			CCCCC

CC

**1K/1N**  
**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: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC			CCCCC

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-CCCCCCCCCCC-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

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC \_\_\_\_\_  
Typed Name

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC \_\_\_\_\_  
Title