REPORT ON
SEQUENCE IIIFHD EVALUATION

VERSION *IIIFHD VERSION 20020725*

CONDUCTED FOR

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CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

C	V = VALID
	I = INVALID
	N = RESULTS CANNOT BE INTERPRETED AS REPRESENTATIVE OF OIL PERFORMANCE (NON-REFERENCE OIL) AND SHALL NOT BE USED FOR MULTIPLE TEST ACCEPTANCE

CC	NR = Non-Reference Oil Test
	RO = Reference Oil Test

Test Number					
Test Stand	*CCCCC*	Stand Test Number	*CCCC*	Lab Test Number	*CCCCC*
Oil Code	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*				
Formulation/Stand Code	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*				
Alternate Codes	*CCCCCCCCCCCCCCC*	*CCCCCCCCCCCCCCC*	*CCCCCCCCCCCCCCC*		
EOT Date	*YYYYMMDD*	EOT Time	*HH:MM*		

In my opinion this test *CCCCCC* been conducted in a valid manner in accordance with the latest draft of Sequence IIIF-HD procedure and the appropriate amendments through the information letter system. The remarks included in the report describe the anomalies associated with this test.

SUBMITTED BY: *CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*

Testing Laboratory

Signature Image

Signature

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Typed Name

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Title

SEQUENCE IIIFHD
FORM 4
TEST RESULT SUMMARY

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

DATE STARTED	*YYYYMMDD*	ENGINE NO.	*CCCCCCCCCCCCCC*
TIME STARTED	*HH:MM*	FUEL BATCH	*CCCCCCCCCCCCCC*
DATE COMPLETED	*YYYYMMDD*	SAE VISCOSITY	*CCCCCCC*
TIME COMPLETED	*HH:MM*	TMC OIL CODE [A]	*CCCCCC*
TEST LENGTH	*S1234*		

Pass/Fail Results	
	Viscosity Increase (%)
Original Units	*S1234.12*
Transformed Results	*S12.123456*
Industry Correction Factor	*S12.123456*
Corrected Transformed Result	*S12.123456*
Severity Adjustment	*S12.123456*
Final Transformed Result	*S12.123456*
Final Original Unit Result	*S1234.1*

Additional Results			
Oil Consumption Hours, h [B]	*S12*	Oil Consumption (L) [B]	*S12.12*

Most Recent Stand Reference Oil Test History [C]			
Test Number	*CCCCC CCCC - CCCCC*		
Oilcode	*CCCCCCCCCC*	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*	
Date Completed	*YYYYMMDD*	TMC Oil Code	*CCCCCC*
Final Viscosity Increase, %	*S1234.1*	Fuel Batch	*CCCCCCCCCCCCCC*

[A] Reference Oil Tests Only

[B] Test Hours at which Oil Consumption was calculated

[C] Non-Reference Oil Tests Only

SEQUENCE IIIFHD
FORM 5
OPERATIONAL SUMMARY

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

	Parameter	Units	QI Threshold	EOT QI	Target	Average	Standard Deviation	Number Of	
								Samples	BQD
Controlled Parameters	Speed	r/min	0.000	*S12.123*	3600	*S12345*	*S12.123*	*S12345*	*S12345*
	Load	Nm	0.000	*S12.123*	200	*S12345*	*S12.123*	*S12345*	*S12345*
	Oil Filter Block	˚C	0.000	*S12.123*	155.0	*S12345*	*S12.123*	*S12345*	*S12345*
	Engine Coolant Out	˚C	0.000	*S12.123*	122.0	*S123.1*	*S12.123*	*S12345*	*S12345*
	Condenser Coolant Out	˚C	0.000	*S12.123*	40.0	*S123.1*	*S12.123*	*S12345*	*S12345*
	Left Air-to-Fuel Ratio		0.000	*S12.123*	15.0	*S12.1*	*S12.123*	*S12345*	*S12345*
	Right Air-to-Fuel Ratio		0.000	*S12.123*	15.0	*S12.1*	*S12.123*	*S12345*	*S12345*
	Left Exhaust Back Pressure	kPa	0.000	*S12.123*	6.0	*S1.12*	*S12.123*	*S12345*	*S12345*
	Right Exhaust Back Pressure	kPa	0.000	*S12.123*	6.0	*S1.12*	*S12.123*	*S12345*	*S12345*
	Intake Air	kPa	0.000	*S12.123*	0.05	*S1.12*	*S12.123*	*S12345*	*S12345*
	Engine Coolant Flow	L/min	0.000	*S12.123*	160.0	*S123.1*	*S12.123*	*S12345*	*S12345*

	Parameter	Units	Average	Standard Deviation	Number Of	
					Samples	BQD
Non-controlled Parameters	Oil Sump	˚C	*S123.1*	*S12.123*	*S12345*	*S12345*
	Pump Outlet Pressure	kPa	*S123.1*	*S12.123*	*S12345*	*S12345*
	Gallery Pressure	kPa	*S1234*	*S12.123*	*S12345*	*S12345*
	Engine Coolant In	˚C	*S1234*	*S12.123*	*S12345*	*S12345*
	Fuel Inlet	˚C	*S12345*	*S12.123*	*S12345*	*S12345*
	Intake Air	˚C	*S12345*	*S12.123*	*S12345*	*S12345*
	Intake Air Dew Point	˚C	*S123.1*	*S12.123*	*S12345*	*S12345*
	Intake Vacuum	kPa	*S12345*	*S12.123*	*S12345*	*S12345*
	Crankcase	kPa	*S1.123*	*S12.123*	*S12345*	*S12345*
	Fuel Pressure	kPa	*S1234*	*S12.123*	*S12345*	*S12345*

OIL CONSUMPTION DATA							
HOURS	Initial Run-in	*S12*	*S12*	*S12*	*S12*	*S12*	*S12*
LEVEL (ml) low	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*	*S123*

NO_x Measurement		
Hours	*S12*	*S12*
NO_x, ppm	*S12345*	*S12345*

SEQUENCE IIIFHD
FORM 6
USED OIL ANALYSIS RESULTS

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

VISCOSITY INCREASE DATA (cSt AT 40˚C)			
HOURS	VISCOSITY [A]	CHANGE	PERCENT
NEW OIL	*S1234.12*		
INITIAL [B]	*S1234.12*		
S12	*S1234.12*	*S1234.12*	*S1234.12*
S12	*S1234.12*	*S1234.12*	*S1234.12*
S12	*S1234.12*	*S1234.12*	*S1234.12*
S12	*S1234.12*	*S1234.12*	*S1234.12*
S12	*S1234.12*	*S1234.12*	*S1234.12*
S12	*S1234.12*	*S1234.12*	*S1234.12*
S1234	*S1234.12*	*S1234.12*	*S1234.12*

[A] 8000 cSt is maximum allowable viscosity

[B] At end of leveling run

Results of ICP Analysis of Used Oil								
Test Hours	Initial	*S12*	*S12*	*S12*	*S12*	*S12*	*S12*	*S1234*
Iron	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*
Copper	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*
Lead	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*	*S12345*

SEQUENCE IIIFHD
FORM 7
BLOWBY VALUES & PLOT

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

Blowby Plot

*CCCCCCCCCCCCCCCCCCCC

SEQUENCE IIIFHD
FORM 8
VISCOSITY INCREASE PLOT

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

*CCCCCCCCCCCCCCCCCCCC

SEQUENCE IIIFHD
FORM 9
HARDWARE INFORMATION

LAB	*CC*	OIL CODE	*CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC*
TEST STAND NO.	*CCCCC*	TEST NO.	*CCCCC - CCCC - CCCCC*
LABORATORY OIL CODE	*CCCCCCCCCCCCCCCCCCCC*		
FORMULATION STAND CODE	*CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC*		

Build Completion Date	*YYYYMMDD*	Piston Batch (Code)	*CCCCC*
Block Serial Number	*CCCCCC*	Piston Size (Grade)	*CC*
Crankshaft Serial Number	*CCCCC*	Piston Ring Batch Code	*CCCCC*
Camshaft Serial Number	*CCCCCCC*	Oil Filter Batch Code	*CCCCC*
Cylinder Head Serial Number, Left	*CCCCCCCCCCC*	Intake Valve Seals Batch Code	*CCCCC*
Cylinder Head Serial Number, Right	*CCCCCCCCCCC*	Valve Springs Batch Code	*CCCCC*
Bearing Kit Serial Number	*CCCCCC*		
Top Ring Gap, mils	*S12*		
Bottom Ring Gap, mils	*S12*		

SEQUENCE IIIFHD
FORM 10
DOWNTIME & OUTLIER REPORT FORM

LAB	*CC*	OIL CODE	*CCCC