

REPORT ON SEQUENCE VG EVALUATION

CONDUCTED FOR

CC
 CCC

C	V = VALID
	I = INVALID
	N = RESULTS CAN NOT BE INTERPRETED AS REPRESENTATIVE OF OIL PERFORMANCE (NON-REFERENCE OIL) AND SHALL NOT BE USED IN DETERMINING AN AVERAGE TEST RESULT USING MULTIPLE TEST ACCEPTANCE CRITERIA.

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

Test Number			
Test Stand: CCCCC	Runs Between Calibration Tests: CCCC	Total Runs on Test Stand: CCCCC	
Date Completed: YYYYMMDD	End of Test Time: HH:MM		
Oil Code: CCC			
Formulation/Stand Code: CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCCC			
Alternate Codes:	CCCCCCCCCCCCCCCC	CCCCCCCCCCCCCCCC	CCCCCCCCCCCCCCCC

In my opinion this test CCCCCCbeen conducted in a valid manner in accordance with the VG Test Method D6593 and the appropriate amendments through the Information Letter system. The remarks included in the report describe the anomalies associated with this test.

SUBMITTED BY: _____
 Testing Laboratory

Signature Image
 Signature

 Typed Name

 Title

**SEQUENCE VG
FORM 4
TEST RESULT SUMMARY
NON-REFERENCE & REFERENCE OIL TESTS**

Laboratory: <i>CC</i>	Stand: <i>CCCC</i>	Stand Runs: <i>CCCC</i>	Oil Code: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i>
Date Started: <i>YYMMDD</i>	Time Started: <i>HH:MM</i>	Date Completed: <i>YYMMDD</i>	Time Completed: <i>HH:MM</i>
Formulation/Stand Code: <i>CC-CCCCCCCC-C-C-CCCC-CC-CC-CCCC</i>			

Lab Engine Number: <i>CCCCCC</i>	SAE Viscosity: <i>CCCCCC</i>
Test Length: <i>S1234</i>	Fuel Batch: <i>CCCCCC</i>
Industry Oil Code: <i>CCCCCC</i>	

CRITICAL PARAMETERS						
	Average Engine Sludge, merits	Rocker Cover Sludge, merits	Average Engine Varnish, merits	Average Piston Skirt Varnish, merits	Oil Screen Sludge, % Area	Number of Hot Stuck Rings
Original Result	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S123</i>	<i>S1</i>
Transformed Result					<i>S1.1234</i>	
Industry Correction Factor	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S1.1234</i>	<i>S1</i>
Corrected Transformed Result					<i>S1.1234</i>	
Severity Adjustment	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S1.1234</i>	<i>S1</i>
Final Transformed Result					<i>S1.1234</i>	
Final Original Unit Result	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>

Clogging Information		Additional Information	
Oil Screen Debris, % Area	<i>S123</i>	Number of Cold Stuck Rings	<i>S1</i>
Oil Ring Clogging, % Area	<i>S123</i>	Average Blowby Stage II, L/min	<i>S12.12</i>
PCV Valve @ 25 kPa, %	<i>S12.12</i>	Oil Consumption, grams	<i>S123456</i>
PCV Valve @ 60 kPa, %	<i>S12.12</i>		

Last Reference Oil Test Calibrating Stand Information - Fill Out For Non-reference Oil Tests Only						
Stand: <i>CCCC</i>	Total Runs on Test Stand: <i>CCCC</i>	Oilcode: <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i>				
Industry Oil Code: <i>CCCCCC</i>	Engine Number: <i>CCCCCC</i>	SAE Viscosity: <i>CCCCCC</i>	Date Completed: <i>YYMMDD</i>			
Test Length: <i>S1234</i>	Fuel Batch: <i>CCCCCC</i>	Calibration Expiration Date: <i>YYMMDD</i>				
Clogging Information		Additional Information				
Oil Screen Debris, % Area	<i>S123</i>	Number of Cold Stuck Rings		<i>S1</i>		
Oil Ring Clogging, % Area	<i>S123</i>	Average Blowby Stage II, L/min		<i>S12.12</i>		
PCV Valve @ 25 kPa, %	<i>S12.12</i>	Oil Consumption, grams		<i>S123456</i>		
PCV Valve @ 60 kPa, %	<i>S12.12</i>					
	Average Engine Sludge, merits	Average Rocker Cover Sludge, merits	Average Engine Varnish, merits	Average Piston Skirt Varnish, merits	Oil Screen Sludge, % Area	Number of Hot Stuck Rings
Final Original Unit Result	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>	<i>S123</i>	<i>S1</i>

FIG A7.4 Test Result Summary

**SEQUENCE VG
FORM 5
TEST RESULT SUMMARY
NON-REFERENCE & REFERENCE OIL TESTS**

Laboratory: <i>CC</i>	Stand: <i>CCCC</i>	Stand Runs: <i>CCCC</i>	Oil Code: <i>cc</i>
Date Started: <i>YYYYMMDD</i>	Time Started: <i>HH:MM</i>	Date Completed: <i>YYYYMMDD</i>	Time Completed: <i>HH:MM</i>
Formulation/Stand Code: <i>CC-CCCCCCCCC-C-C-CCCCCC-CC-CC-CCCC</i>			

Hardware Identification	Production Number <i>CCCCCCCCCCCCCCCC</i>	Serial Number <i>CCCCCCCCCCCCCCCC</i>	
Casting Numbers	Block <i>CCCCCCCCCCCCCCCC</i>	Cam, Left <i>CCCCCCCCCCCCCCCC</i>	Cam, Right <i>CCCCCCCCCCCCCCCC</i>
Piston Part Number	<i>CCCCCCCCCCCCCCCC</i>		
Piston Ring Casting Number	<i>CCCCCCCCCCCCCCCC</i>		
Cylinder Head Casting Number	Left <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCC</i>	Right <i>CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC</i>	<i>CCCC</i>

Sludge Deposits	
Area	Merit
Rocker Arm Cover, Left	<i>SI.12</i>
Rocker Arm Cover, Right	<i>SI.12</i>
Camshaft Baffle, Left	<i>SI.12</i>
Camshaft Baffle, Right	<i>SI.12</i>
Timing Chain Cover	<i>SI.12</i>
Oil Pan Baffle	<i>SI.12</i>
Oil Pan	<i>SI.12</i>
Valve Deck Area, Left	<i>SI.12</i>
Valve Deck Area, Right	<i>SI.12</i>
Average Engine Sludge	<i>SI2.12</i>

Varnish Deposits	
Area	Merit
Piston Skirt, Thrust	<i>SI2.12</i>
Cam Baffle, Left	<i>SI.12</i>
Cam Baffle, Right	<i>SI.12</i>
Average Engine Varnish	<i>SI2.12</i>

Wear Measurements		
Ring Wear	Units	Value
Follower Pin Wear, cyl #8, Intake.	μm	<i>SI23.1</i>
Follower Pin Wear, cyl #8, Exhaust.	μm	<i>SI23.1</i>
Ring Gap Increase, cyl #1 & #8, Max	μm	<i>SI23.1</i>
Ring Gap Increase, cyl #1 & #8, Avg	μm	<i>SI23.1</i>

Piston Varnish Deposits, Thrust Side	
Piston Number	Merit
1	<i>SI.12</i>
2	<i>SI.12</i>
3	<i>SI.12</i>
4	<i>SI.12</i>
5	<i>SI.12</i>
6	<i>SI.12</i>
7	<i>SI.12</i>
8	<i>SI.12</i>
Average	<i>SI2.12</i>

FIG A7.5 Deposit Breakdown

**SEQUENCE VG
FORM 6
OPERATIONAL SUMMARY**

Laboratory: <i>CC</i>	Date Completed: <i>YYYYMMDD</i>	Time Completed: <i>HH:MM</i>
Stand: <i>CCCC</i>	Stand Runs: <i>CCCC</i>	Total Runs on Stand: <i>CCCC</i>
Oil Code: <i>CC</i>		
Formulation/Stand Code: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i>		

	Parameter	Units	QI Threshold	EOT QI	Target			Average			Samples	BQD	Over/Under Range
					Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3			
Controlled Parameters	Speed	r/min	0.000	<i>S12.123</i>	1200	2900	700	<i>S1234</i>	<i>S1234</i>	<i>S1234</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Manifold Abs Press	kPa	0.000	<i>S12.123</i>	69	66	Record	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Engine Oil, In	°C	0.000	<i>S12.123</i>	68	100	45	<i>S123.1</i>	<i>S123.1</i>	<i>S123.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Engine Coolant, Out	°C	0.000	<i>S12.123</i>	57	85	45	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Engine Coolant Flow	L/min	0.000	<i>S12.123</i>	48	Record	Record	<i>S123.1</i>	<i>S123.1</i>	<i>S123.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Engine Coolant Pressure	kPa	0.000	<i>S12.123</i>	70	70	70	<i>S123.1</i>	<i>S123.1</i>	<i>S123.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	RAC Coolant, In	°C	0.000	<i>S12.123</i>	29	85	29	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	RAC Flow	L/min	0.000	<i>S12.123</i>	15	15	15	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Intake Air	°C	0.000	<i>S12.123</i>	30	30	30	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Intake Air Pressure	kPa	0.000	<i>S12.123</i>	0.05	0.05	0.05	<i>S1.123</i>	<i>S1.123</i>	<i>S1.123</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Intake Air Humidity	g/kg	0.000	<i>S12.123</i>	11.4	11.4	11.4	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
	Exhaust Backpressure	kPa	0.000	<i>S12.123</i>	104	107	Record	<i>S123.1</i>	<i>S123.1</i>	<i>S123.1</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>
Non-controlled Parameters	Parameter	Units		Specifications									
	Fuel Flow	kg/h		Record	Record	Record	<i>S12.1</i>	<i>S12.1</i>	<i>S12.1</i>				
	Blowby	L/min		Record	60-70			<i>S12.12</i>					
	Power	kW		Record	Record	1.3 ± 0.2	<i>S12.12</i>	<i>S12.12</i>	<i>S12.12</i>				
	Exhaust Gas												
	Lambda, Left Bank	AFR		1.0	1.0	0.75	<i>S1.12</i>	<i>S1.12</i>	<i>S1.12</i>				
Lambda, Right Bank	AFR		1.0	1.0	0.75	<i>S1.12</i>	<i>S1.12</i>	<i>S1.12</i>					

FIG A7.6 Operational Summary

**SEQUENCE VG
FORM 7
OIL ADDITION RECORD & BLOWBY RATES
NON-REFERENCE & REFERENCE OIL TESTS**

Laboratory: <i>CC</i>	Stand: <i>CCCCC</i>	Stand Runs: <i>CCCC</i>	Oil Code: <i>cc</i>
Date Started: <i>YYYYMMDD</i>	Time Started: <i>HH:MM</i>	Date Completed: <i>YYYYMMDD</i>	Time Completed: <i>HH:MM</i>
Formulation/Stand Code: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i>			

Cycle	Test Hour	Oil Added, g	Oil Consumed, g
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>	<i>S1234</i>	<i>S1234</i>
<i>S123</i>	<i>HHH:MM</i>		<i>S1234</i>
Total, g		<i>S123456</i>	<i>S123456</i>

Stage II	
Test Hours	Blowby, L/min
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
<i>HHH:MM</i>	<i>S12.12</i>
Maximum	<i>S12.12</i>
Minimum	<i>S12.12</i>
Average Blowby, Hours 23 - 119	<i>S12.12</i>
Average	<i>S12.12</i>

FIG A7.7 Blowby and Oil Additions

**SEQUENCE VG
FORM 8
ANALYSIS OF OIL**

Laboratory: <i>CC</i>	Stand: <i>CCCC</i>	Stand Runs: <i>CCCC</i>	Oil Code: <i>cc</i>
Date Started: <i>YYYYMMDD</i>	Time Started: <i>HH:MM</i>	Date Completed: <i>YYYYMMDD</i>	Time Completed: <i>HH:MM</i>
Formulation/Stand Code: <i>CC-CCCCCCCCC-C-C-CCCCC-CC-CC-CCCC</i>			

Test Hours	Ag, ppm	Al, ppm	Cr, ppm	Cu, ppm	Fe, ppm	Pb, ppm	Si, ppm	Sn, ppm	Fuel Dilution by GC, Wt. % D3525	Pentane Insolubles, Wt. % D893B ^A	TBN D4739 ^A	Vis. @ 40°C, cSt D445	Vis. @ 100°C, cSt D445 ^A
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>			<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>		<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>	<i>S1.12</i>	<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>		<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>	<i>S1.12</i>	<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>		<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>	<i>S1.12</i>	<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>		<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>	<i>S1.12</i>	<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>		<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>
<i>CCC</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12345</i>	<i>S12.1</i>	<i>S1.12</i>	<i>S12.12</i>	<i>S123.12</i>	<i>S123.12</i>

^A Analyses not required by Test Method

