Sequence IIIF
Test Report

Version IIIF VERSION 20040521

Conducted For

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
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
	RO = Reference oil

Test Number					
Test Stand	CCCCC	Stand Test Number	CCCC	Lab Run 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 CCCCCCC been conducted in a valid manner in accordance with ASTM Test Method D6984 and the appropriate amendments through the Information Letter System. The remarks included in this report describe anomalies associated with this test.

Submitted By:

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Testing Laboratory

Signature Image
Signature

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Typed Name

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Title

Sequence IIIF
Form 2

Table of Contents

Sequence IIIF
Form 3

Summary of Test Method

The Sequence IIIF Test is a fired-engine, dynamometer lubricant test for evaluating automotive engine oils for certain high-temperature performance characteristics, including oil thickening, varnish deposition, oil consumption, and engine wear. Such oils include both single viscosity grade and multi-viscosity grade oils that are used in spark-ignition, gasoline-fueled engines, as well as diesel engines.

The Sequence IIIF Test utilizes a 1996 General Motors Powertrain 3800 Series II, water-cooled, 4 cycle, V-6 engine as the test apparatus. The Sequence IIIF test engine is an overhead valve design (OHV) and uses a single camshaft operating both intake and exhaust valves via pushrods and hydraulic valve lifters in a sliding-follower arrangement. The engine uses one intake and one exhaust valve per cylinder. Induction is handled by a modified GM port fuel injection system setting the Air-to-Fuel ratio at 15:1. The test engine is overhauled prior to each test, during which critical engine dimensions are measured and rated or measured parts (pistons, camshaft, valve lifters, etc.) are replaced.

The Sequence IIIF Test consists of a 10-minute operational check, followed by 80 hours of engine operation at moderately high speed, load, and temperature conditions. The 80-hour segment is broken down into eight 10-hour test segments. Following each 10-hour segment, and the 10-minute operational check, oil samples are drawn from the engine. The kinematic viscosities of the 10-hour segment samples are compared to the viscosity of the 10-minute sample to determine the viscosity increase of the test oil.

The Sequence IIIF Test is operated at the following test states during the 80-hour portion of the test:

Parameter	**Set Point**
Engine Speed	3600 r/min
Engine Load	200 N·m
Oil Filter Block Temperature	155 °C
Coolant Outlet Temperature	122 °C
Fuel Pressure	365 kPa
Intake Air Temperature	27 °C
Intake Air Pressure	0.05 kPa
Intake Air Dew Point	16.1 °C
Exhaust Back Pressure	6 kPa
Engine Coolant Flow	160 L/min
Condenser Coolant Flow	10 L/min
Air-to-Fuel Ratio	15.0:1
Condenser Coolant Outlet Temperature	40 °C

Sequence IIIF
Form 4

Test Result Summary

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		

Date Started	YYYYMMDD	Engine No.	CCCCCCCCCCCCCCC
Time Started	HH:MM	Fuel Batch	CCCCCCCCCCCCCCC
Date Completed	YYYYMMDD	SAE Viscosity	CCCCCCC
Time Completed	HH:MM	TMC Oil Code[A]	CCCCCC
Test Length	S1234		

Pass/Fail Results

	Viscosity Increase (%)	Screened Average Cam + Lifter Wear (µm)	Average Weighted Piston Deposits (merits)	Average Piston Skirt Varnish (merits)	Number of Hot Stuck Rings	Oil Consumption (L)[B]
Original Units	S1234.12	S1234.1	S12.12	S12.12	S12	S12.12
Transformed Results[C]	S12.123456					
Industry Correction Factor	S12.123456	S1.1234	S1.1234	S1.1234		
Corrected Transformed Result	S12.123456					
Severity Adjustment	S12.123456		S1.1234	S1.1234		
Final Transformed Result	S12.123456					
Final Original Unit Result	S1234.1	S1234.1	S12.12	S12.12		

Additional Results

Oil Consumption Hours, h	S12	Average Oil Ring Plugging , %	S1234
Maximum Cam + Lifter Wear, µm	S12345	Number of Cold-Stuck Rings	S12
Average Cam + Lifter Wear, µm	S1234.1		

Most Recent Stand Reference Oil Test History[D]

Test Number	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
Date Completed	YYYYMMDD	TMC Oil Code	CCCCCC
Final Viscosity Increase, %	S1234.1	Fuel Batch	CCCCCCCCCCCCCCC
Final Average Piston Skirt Varnish, merits	S12.12		
Final Screened Average Cam + Lifter Wear, µm	S123.1		
Final Maximum Cam + Lifter Wear, µm	S12345		
Final Average Weighted Piston Deposit, merits	S12.12		

[A] Reference Oil Tests Only

[B] Test Hours at which Oil Consumption was calculated

[C] Percent Viscosity Increase Transformation is 1/SQRT(Viscosity Increase)

[D] Non-reference Oil Tests Only

Sequence IIIF
Form 5

Operational Summary

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		

	Parameter	Units	QI Limit	EOT QI	Target	Average	Standard Deviation	Number of	
								Samples[A]	BQD[B]
Controlled Parameters	Speed	r/min	0.000	S12.123	3600	S12345	S12.123	S12345	S12345
	Load	N·m	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[A]	BQD[B]
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	S12	S12
LEVEL (ml) low	S123	S123	S123	S123	S123	S123	S123	S123	S123

NO_X Measurement			
Hours	S12	S12	S12
NO_X, ppm	S12345	S12345	S12345

Sequence IIIF
Form 6

Used Oil Analysis Results

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		

Viscosity Increase Data (cSt @ 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
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	S12	S12	S1234
Iron	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA
Copper	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA
Lead	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA	AAAAAA

Cold Crank Simulator Results, D5293	
Final Temperature, °C	AAA
Final Cold-Crank Simulator Viscosity, cP	AAAAAA

Mini-Rotary Viscometer Results, D4684	
MRV Temperature, °C	AAA
MRV Result, cP	AAAAAAA
Yield Stress, cP	AAAA

Sequence IIIF
Form 7

Valve Lifter and Camshaft Wear Results

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No..	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		

Number	Camshaft Lobe, µm	Valve Lifter, µm	Cam & Lifter Wear, µm
1	S1234	S1234	S1234
2	S1234	S1234	S1234
3	S1234	S1234	S1234
4	S1234	S1234	S1234
5	S1234	S1234	S1234
6	S1234	S1234	S1234
7	S1234	S1234	S1234
8	S1234	S1234	S1234
9	S1234	S1234	S1234
10	S1234	S1234	S1234
11	S1234	S1234	S1234
12	S1234	S1234	S1234
Maximum	S1234	S1234	S12345
Minimum	S1234	S1234	S12345
Average	S1234	S1234	S1234.1
Screened Average Cam + Lifter Wear[A]			S1234.1

[A] Average Cam + Lifter Wear based on ten positions, excluding the minimum and maximum positions.

Sequence IIIF
Form 8

Summary Of Oil Ring Land Deposit Ratings

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		
Rater	CCC	Rating Date	YYYYMMDD

Piston	Oil Ring Land Deposit Rating, Merits	% Chipped
1	S12.12	S1234
2	S12.12	S1234
3	S12.12	S1234
4	S12.12	S1234
5	S12.12	S1234
6	S12.12	S1234
Average	S12.12	S1.12

Piston	% Oil Ring Plugging	Ring Sticking [A]	
		Hot-Stuck Rings	Cold-Stuck Rings
1	S1234	CCC	CCC
2	S1234	CCC	CCC
3	S1234	CCC	CCC
4	S1234	CCC	CCC
5	S1234	CCC	CCC
6	S1234	CCC	CCC
Total		S12	S12
Average	S1234		

[A] Possible values: T = top compression ring
B = bottom compression ring
O = oil ring
N = none

Sequence IIIF
Form 9

Summary Of Piston Deposits

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		
Rater	CCC	Rating Date	YYYYMMDD

Note: CRC Manual 20 used for all ratings.

Note: These are all unweighted ratings.

	Grooves, merits			Lands, merits		Undercrown, merits
	1	2	3	2	3	
Piston 1	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
Piston 2	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
Piston 3	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
Piston 4	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
Piston 5	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
Piston 6	S12.12	S12.12	S12.12	S12.12	S12.12	S12.12
WF	0.05	0.10	0.20	0.15	0.30	0.10

Note: These are all unweighted ratings.

	Piston Skirt Varnish, merits		
	Thrust	Anti-Thrust	Average
Piston 1	S12.12	S12.12	S1.12
Piston 2	S12.12	S12.12	S1.12
Piston 3	S12.12	S12.12	S1.12
Piston 4	S12.12	S12.12	S1.12
Piston 5	S12.12	S12.12	S1.12
Piston 6	S12.12	S12.12	S1.12
Average	S12.12	S12.12	S12.12
WF			0.10

	Total Weighted Deposits, merits
Piston 1	S12.12
Piston 2	S12.12
Piston 3	S12.12
Piston 4	S12.12
Piston 5	S12.12
Piston 6	S12.12

Average Weighted Piston Deposits, merits	S12.12

Sequence IIIF
Form 10

Blowby Values & Plot

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code	CCCCCCCCCCCCCCCCCCCCC		
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC		

Blowby Plot

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Test Hours	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12
Blowby, L/min	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1
Test Hours	S12	S12	S12	S12	S12	S12	S12			**Average**
Blowby, L/min	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1	S12.1			S12.1

Sequence IIIF
Form 11

Viscosity Increase Plot

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Laboratory Oil Code	CCCCCCCCCCCCCCCCCCCCC
Formulation Stand Code	CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Sequence IIIF
Form 12

Hardware Information

Laboratory	CC	Oilcode	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
Test Stand No.	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
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	Lifter Serial Number	Lifter Position 1	CCCCCCCC
Top Ring Gap, mils	S12		Lifter Position 2	CCCCCCCC
Bottom Ring Gap, mils	S12		Lifter Position 3	CCCCCCCC
Connecting Rod Type (CAST or PM)	CCCC		Lifter Position 4	CCCCCCCC
			Lifter Position 5	CCCCCCCC
			Lifter Position 6	CCCCCCCC
			Lifter Position 7	CCCCCCCC
			Lifter Position 8	CCCCCCCC
			Lifter Position 9	CCCCCCCC
			Lifter Position 10	CCCCCCCC
			Lifter Position 11	CCCCCCCC
			Lifter Position 12	CCCCCCCC

Sequence IIIF
Form 13

Downtime & Outlier Report Form

Lab	CC	Oil Code	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Stand	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code		CCCCCCCCCCCCCCCCCCCC	
Formulation Stand Code		CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC	

Number of Downtime Occurrences	S1		
Test Hours	**Date**	**Downtime**	**Reasons**
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
		HHH:MM	**Total Downtime (hours) – Maximum allowable downtime: 24 hours**

Other Comments	
Number of Comment Lines	S1
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	

Sequence IIIF
Form 13A

Downtime & Outlier Report Form

Lab	CC	Oil Code	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Stand	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code		CCCCCCCCCCCCCCCCCCCC	
Formulation Stand Code		CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC	

Number of Downtime Occurrences		S1	
Test Hours	**Date**	**Downtime**	**Reasons**
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
		HHH:MM	**Total Downtime (hours) – Maximum allowable downtime: 24 hours**

Other Comments	
Number of Comment Lines	S1
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	

Sequence IIIF
Form 13B

Downtime & Outlier Report Form

Lab	CC	Oil Code	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Stand	CCCCC	Test No.	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Laboratory Oil Code		CCCCCCCCCCCCCCCCCCCC	
Formulation Stand Code		CC-CCCCCCCCCC-C-C-CCCCCC-CC-CC-CCCCC	

Number of Downtime Occurrences		S1	
Test Hours	**Date**	**Downtime**	**Reasons**
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCC	CCCCCCCC	CCCCCC	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
		HHH:MM	**Total Downtime (hours) – Maximum allowable downtime: 24 hours**

Other Comments		
Number of Comment Lines	S1	
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC		

Sequence IIIF
Form 14
American Chemistry Council Code Of Practice
Test Laboratory Conformance Statement

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

Declarations

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)*

Check The Appropriate Conclusion

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
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

Signature Image
Signature

YYYYMMDD
Date

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Typed Name

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Title