General Motors Engine Oil Aeration Test
For dexos ®
Form 1

Version

Conducted For

	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

Test Number							
Stand		Engine		Engine Runs		Lab Runs	
Test Number							
Oil Code							
Formulation/Stand Code							
SAE Viscosity Grade				Reference Oil Code:[A]			
Alternate Codes							
Date Started				Time Started			
Date Completed				Time Completed			
Test Length				Total Downtime			

A: Reference Oil tests only

In my opinion this test _____ been conducted in a valid manner in accordance with test procedure GMAER and appropriate amendments. The remarks included in the report describe the anomalies associated with this test.

Submitted By: _____

Testing Laboratory

_____

Signature

_____

Typed Name

_____

Title

General Motors dexos® Engine Oil Aeration Test
Form 2
Table of Contents

General Motors dexos® Engine Oil Aeration Test
Form 3

Test Summary

Test Number	
Formulation Stand Code	

Test Info			
Engine Number		Engine Hours @ SOT	
Engine Run #		Labs Runs	
Oil Weight SOT (g)		Fuel Batch ID	
Oil Weight EOT (g)			
Total Oil Consumption (g)			

Test Results: Extracted Aeration Readings from Aeration vs. Time Curve at 100 kPaA	
	Test Oil Result
28-29 Hour Average Aeration (%)	
	Other Information
0.5 - 1 Hour Average Aeration (%)	
4-5 Hour Average Aeration (%)	
19-20 Hour Average Aeration (%)	
Maximum Micromotion Aeration (%)	
Oil Density at 160 kPaA by Micromotion, g/mL	

Post Test Pressure Sweep	
Pressure, kPaA	Average Aeration % (last 5 minutes)
84	
140	
160	

Baseline Oil Test Information			
Baseline Oil Code		Test Length	
Date Started		Time Started	
Date Completed		Time Completed	
Baseline Oil Test Results for Specification Assessment: Aeration vs. Time Curve at 100 kPaA			
		Baseline Oil Result	
28-29 Hour Average Aeration (%)			
		Other Information	
0.5 – 1 Hour Average Aeration (%)			
4-5 Hour Average Aeration (%)			
19-20 Hour Average Aeration (%)			
Maximum Micromotion Aeration (%)			
Oil Density at 160 kPaA by Micromotion, g/mL			

General Motors dexos® Engine Oil Aeration Test
Form 4
Operational Summary – Test Oil

Test Number	
Formulation Stand Code	

	Operational Summary									
	Parameter	**Units**	**Target**	**Average**	**SD**	**Min**	**Max**	**QI**	**Samples**	**BQD**
Controlled Parameters	Speed	r/min	3000							
	Torque	Nm	150							
	Coolant Out Temp	℃	100							
	Oil Gallery Temp	℃	110							
	Sample Oil Flow	L/min	1.5							
	Sample Oil Pressure	kPaA	100							
	Sample Oil Temperature	°C	115							
	Crankcase Pressure	kPaA	100							
Uncontrolled Parameters	Power	kW	Record							
	Coolant In Temp	℃	Record							
	Intake Air Temp, Engine	℃	Record							
	Oil Sump Temp	℃	Record							
	Fuel Temp at Rail	℃	Record							
	Ambient Temp	℃	Record							
	Right Side Exhaust Temp	℃	Record							
	Left Side Exhaust Temp	℃	Record							
	Intake Manifold Air Pressure	kPaA	Record							
	Oil Gallery Pressure	kPaG	Record							
	Fuel Pressure	kPaG	Record							
	Pressure Ambient	kPaA	Record							
	Exhaust back Pressure	kPaG	Record							
	Oil Temp In to Micromotion	°C	Record							
	Oil Temp Out of Micromotion	°C	Record							

General Motors dexos® Engine Oil Aeration Test
Form 5

Oil Analysis – Test Oil

Test Number	
Formulation Stand Code	

ICP (ppm)		
Element	**New**	**30 Hrs**
Aluminum (Al)		
Copper (Cu)		
Iron (Fe)		
Silicon (Si)		

	New	**30 Hrs**
Viscosity at 100 °C (cSt)		

General Motors dexos® Engine Oil Aeration Test
Form 6

Aeration Plot – Test Oil

Test Number	
Formulation Stand Code	

General Motors dexos® Engine Oil Aeration Test
Form 7

Downtime Summary – Test Oil

Test Number	
Formulation Stand Code	

Number of Downtime Occurrences			
Test Hours	**Date**	**Downtime**	**Reasons**
			Total Downtime (hours)

General Motors dexos® Engine Oil Aeration Test
Form 8

Test Comments – Test Oil

Test Number	
Formulation Stand Code	

Number of Comment Lines	

General Motors dexos® Engine Oil Aeration Test
Form 9
Operational Summary – Baseline Oil

Baseline Oil Test Number	

				Operational Summary						
	Parameter	**Units**	**Target**	**Average**	**SD**	**Min**	**Max**	**QI**	**Samples**	**BQD**
Controlled Parameters	Speed	r/min	3000							
	Torque	Nm	150							
	Coolant Out Temp	℃	100							
	Oil Gallery Temp	℃	110							
	Sample Oil Flow	L/min	1.5							
	Sample Oil Pressure	kPaA	100							
	Sample Oil Temperature	°C	115							
	Crankcase Pressure	kPaA	100							
Uncontrolled Parameters	Power	kW	Record							
	Coolant In Temp	℃	Record							
	Intake Air Temp, Engine	℃	Record							
	Oil Sump Temp	℃	Record							
	Fuel Temp at Rail	℃	Record							
	Ambient Temp	℃	Record							
	Right Side Exhaust Temp	℃	Record							
	Left Side Exhaust Temp	℃	Record							
	Intake Manifold Air Pressure	kPaA	Record							
	Oil Gallery Pressure	kPaG	Record							
	Fuel Pressure	kPaG	Record							
	Pressure Ambient	kPaA	Record							
	Exhaust back Pressure	kPaG	Record							
	Oil Temp In to Micromotion	°C	Record							
	Oil Temp Out of Micromotion	°C	Record							

General Motors dexos® Engine Oil Aeration Test
Form 10

Aeration Plot – Baseline Oil

Baseline Oil Test Number	

General Motors dexos® Engine Oil Aeration Test
Form 11

Downtime Summary – Baseline Oil

Baseline Oil Test Number	

Number of Downtime Occurrences		
Test Hours	**Date**	**Downtime**	**Reasons**
			Total Downtime (hours)

General Motors dexos® Engine Oil Aeration Test
Form 12

Test Comments – Baseline Oil

Baseline Oil Test Number	

Number of Comment Lines	