

**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

<b>Test Number</b>					
Stand		Engine	Engine Runs		Lab Runs
Test Number					
Oil Code					
Formulation/Stand Code					
SAE Viscosity Grade			Reference Oil Code: <sup>A</sup>		
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**

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**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	°C	100							
	Oil Gallery Temp	°C	110							
	Sample Oil Flow	L/min	1.5							
	Sample Oil Pressure	kPaA	100							
	Crankcase Pressure	kPaA	100							
Uncontrolled Parameters	Power	kW	Record							
	Coolant In Temp	°C	Record							
	Intake Air Temp, Engine	°C	Record							
	Oil Sump Temp	°C	Record							
	Fuel Temp at Rail	°C	Record							
	Ambient Temp	°C	Record							
	Right Side Exhaust Temp	°C	Record							
	Left Side Exhaust Temp	°C	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							
	Sample Oil Temperature	°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	

# **General Motors dexos® Engine Oil Aeration Test Form 8**

## Test Comments – Test Oil

Test Number	
Formulation Stand Code	

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

Baseline Oil Test Number									
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<b>Operational Summary</b>										
	Parameter	Units	Target	Average	SD	Min	Max	QI	Samples	BQD
Controlled Parameters	Speed	r/min	3000							
	Torque	Nm	150							
	Coolant Out Temp	°C	100							
	Oil Gallery Temp	°C	110							
	Sample Oil Flow	L/min	1.5							
	Sample Oil Pressure	kPaA	100							
	Crankcase Pressure	kPaA	100							
Uncontrolled Parameters	Power	kW	Record							
	Coolant In Temp	°C	Record							
	Intake Air Temp, Engine	°C	Record							
	Oil Sump Temp	°C	Record							
	Fuel Temp at Rail	°C	Record							
	Ambient Temp	°C	Record							
	Right Side Exhaust Temp	°C	Record							
	Left Side Exhaust Temp	°C	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							
	Sample Oil Temperature	°C	Record							

**General Motors dexos® Engine Oil Aeration Test  
Form 10**

**Aeration Plot – Baseline Oil**

Baseline Oil Test Number	
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**General Motors dexos® Engine Oil Aeration Test  
Form 11**

**Downtime Summary – Baseline Oil**

Baseline Oil Test Number
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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	