

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 | | | | | | | |
| Alternate Codes | | | | | | | |
| Date Started | | | Time Started | | | | |
| Date Completed | | | Time Completed | | | | |
| Test Length | | | Total Downtime | | | | |

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 Engine Oil Aeration Test for Gen2 dexos ®

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 | |
|---|--------|
| | Result |
| 0.5 - 1 Hour Average Aeration (%) | |
| 4-5 Hour Average Aeration (%) | |
| 19-20 Hour Average Aeration (%) | |
| 28-29 Hour Average Hour 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 | |

| Last GM-AER1 Reference Oil Test Results for Specification Assessment: Aeration vs. Time Curve at 100 kPaA | |
|--|--------|
| | Result |
| 0.5 – 1 Hour Average Aeration (%) | |
| 4-5 Hour Average Aeration (%) | |
| 19-20 Hour Average Aeration (%) | |
| 28-29 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 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 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 Engine Oil Aeration Test for Gen2 dexos®

Form 6

Aeration Plot

| | |
|------------------------|--|
| Test Number | |
| Formulation Stand Code | |

