



# OIL REPORT

LAB NUMBER: D92403      UNIT ID: 09 COOPER  
 REPORT DATE: 10/23/2009      CLIENT ID: 38122  
 CODE: 44/286      PAYMENT: CC: Visa

<b>UNIT</b>	MAKE/MODEL: Cooper, Mini 1.6L 4-cyl Supercharged	OIL TYPE & GRADE: Castrol Syntec 5W/30
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 12,400 Miles
	ADDITIONAL INFO:	

<b>CLIENT</b>	KEN OSBORNE	PHONE: (407) 810-4163
	1301 PALMER STREET	FAX:
	APT. 5	ALT PHONE:
	ORLANDO, FL 32801	EMAIL: kbo63@earthlink.net

**COMMENTS**  
 KEN: For a factory fill of oil that's been in place more than 12,000 miles, this one doesn't look too bad. Universal averages show typical wear levels for this type of engine after about 5900 miles on the oil, so your long oil run is part of the reason for the high metals. Wear-in of new parts is the other reason, so you should see some nice all-around improvements in wear and silicon now that you've changed out this fill. The TBN read 3.1, still active additive left, but we're glad you changed this one when you did. The oil had enough metal in it to make it abrasive. Check back.

<b>ELEMENTS IN PARTS PER MILLION</b>	MI/HR on Oil	12,400	<b>UNIT / LOCATION AVERAGES</b>					<b>UNIVERSAL AVERAGES</b>
	MI/HR on Unit	12,400						
	Sample Date	10/20/09						
	Make Up Oil Added	0.5 qt						
ALUMINUM	17	17						3
CHROMIUM	1	1						1
IRON	68	68						15
COPPER	45	45						8
LEAD	1	1						3
TIN	1	1						1
MOLYBDENUM	362	362						116
NICKEL	2	2						1
MANGANESE	16	16						2
SILVER	0	0						0
TITANIUM	0	0						0
POTASSIUM	6	6						2
BORON	23	23						45
SILICON	41	41						6
SODIUM	9	9						7
CALCIUM	1693	1693						2439
MAGNESIUM	986	986						67
PHOSPHORUS	875	875						757
ZINC	1184	1184						926
BARIUM	1	1						0

Values Should Be\*

<b>PROPERTIES</b>	SUS Viscosity @ 210°F	62.2	56-63					
	cSt Viscosity @ 100°C	10.84	9.1-11.3					
	Flashpoint in °F	380	>365					
	Fuel %	<0.5	<2.0					
	Antifreeze %	0.0	0.0					
	Water %	0.0	<0.1					
	Insolubles %	0.2	<0.6					
	TBN	3.1						
	TAN							
	ISO Code							

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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