



OIL REPORT

LAB NUMBER: F31148

UNIT ID: 07 M COUPE

REPORT DATE: 11/29/2012

CLIENT ID: 59572

CODE: 20/501

PAYMENT: PayPal

UNIT	MAKE/MODEL: BMW 3.2L (S-54) Inline 6 Cylinder	OIL TYPE & GRADE: Castrol TWS 10W/60
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 5,700 Miles
	ADDITIONAL INFO:	

CLIENT	
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COMMENTS	Lead is the only metal we marked. It shows a bit more bearing wear than universal averages, which show typical wear levels for this type of engine after about 4,900 miles on the oil. Some S54 engines had rod bearing issues, but from what we've read, most of that was fixed by 2007. Still, it's something to be aware of. Sodium can show coolant, but with little potassium here it's probably just harmless additive. The trace of fuel isn't harmful. The TBN was 4.7 showing plenty of active additive; less than 1.0 is low. Check back in 5,000 miles or so to monitor.
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	5,700	UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
	MI/HR on Unit	32,536							
	Sample Date	11/11/12							
	Make Up Oil Added	0 qts							
	ALUMINUM	3	3						5
	CHROMIUM	0	0						0
	IRON	7	7						10
	COPPER	3	3						8
	LEAD	10	10						4
	TIN	0	0						1
	MOLYBDENUM	1	1						19
	NICKEL	0	0						1
	MANGANESE	1	1						2
	SILVER	0	0						0
	TITANIUM	0	0						0
	POTASSIUM	4	4						2
	BORON	108	108						90
	SILICON	4	4						5
	SODIUM	122	122						6
	CALCIUM	1633	1633						1680
	MAGNESIUM	587	587						524
	PHOSPHORUS	790	790						837
	ZINC	1057	1057						1004
	BARIUM	0	0						0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	86.5	85-110					
	cSt Viscosity @ 100°C	17.12	16.8-22.9					
	Flashpoint in °F	375	>375					
	Fuel %	TR	<2.0					
	Antifreeze %	?	0.0					
	Water %	0.0	0.0					
	Insolubles %	0.0	<0.6					
	TBN	4.7	>1.0					
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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