



OIL REPORT

LAB NUMBER: [REDACTED]
REPORT DATE: 11/7/2013
CODE: 20/75

UNIT ID: 11 M3
CLIENT ID: [REDACTED]
PAYMENT: [REDACTED]

UNIT	MAKE/MODEL:	BMW 4.0L (S65) V-8	OIL TYPE & GRADE:	Castrol TWS 10W/60
	FUEL TYPE:	Gasoline (Unleaded)	OIL USE INTERVAL:	7,599 Miles
	ADDITIONAL INFO:			

CLIENT	[REDACTED]	PHONE:	[REDACTED]
		FAX:	
		ALT PHONE:	
		EMAIL:	[REDACTED]

COMMENTS	[REDACTED] Wear metals continue to look pretty good for your M3. Nickel was high last time, but it came back down to 5 ppm, which is where we typically see it in your engine. Nothing here suggests that internal parts aren't getting along with each other, so it looks like your S65 is wearing well as it approaches the 60,000-mile mark. The viscosity was on target for a 10W/60 this time and no harmful contamination like dirt, fuel, antifreeze, or water was found. Insolubles only read a trace again, so your oil filter is running a tight ship, even after 7,599 miles on the oil!		
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	7,599	UNIT / LOCATION AVERAGES	7,392	7,319	7,666	7,433	7,172	UNIVERSAL AVERAGES
	MI/HR on Unit	59,969		52,370	44,978	37,659	29,993	22,560	
	Sample Date	10/25/13		06/01/13	01/14/13	09/15/12	03/30/12	11/05/11	
	Make Up Oil Added	0 qts		0 qts	0 qts	0 qts	0 qts	0 qts	
	ALUMINUM	2	4	4	4	3	3	4	5
	CHROMIUM	0	0	0	0	0	0	0	0
	IRON	4	7	5	4	5	5	7	8
	COPPER	1	4	2	2	2	2	3	4
	LEAD	0	0	0	0	0	0	1	8
	TIN	1	2	2	0	0	0	1	1
	MOLYBDENUM	204	69	186	153	2	1	1	60
	NICKEL	5	6	7	5	5	6	8	1
	MANGANESE	1	1	1	1	1	1	1	1
	SILVER	0	0	0	0	0	0	0	0
	TITANIUM	42	15	42	33	0	0	0	8
	POTASSIUM	1	3	2	2	4	4	1	2
	BORON	27	67	33	43	78	92	78	73
	SILICON	2	4	3	3	3	3	4	4
	SODIUM	3	4	4	4	5	3	3	6
	CALCIUM	2986	2050	2904	2596	1597	1664	1613	2026
	MAGNESIUM	17	446	52	137	615	688	646	446
	PHOSPHORUS	806	785	783	754	782	782	812	859
	ZINC	978	947	928	907	976	997	962	1016
	BARIUM	0	0	0	0	0	0	1	0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	92.5	85-110	96.9	93.5	93.8	91.7	95.7
	cSt Viscosity @ 100°C	18.58	16.8-22.9	19.62	18.81	18.89	18.39	19.34
	Flashpoint in °F	390	>375	440	410	455	435	415
	Fuel %	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	Antifreeze %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	TR	<0.6	TR	0.0	TR	0.0	0.0
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com