



OIL REPORT

LAB NUMBER: [REDACTED]
 REPORT DATE: 7/10/2017
 CODE: 63/983

UNIT ID: 11 X5D
 CLIENT ID: [REDACTED]
 PAYMENT: CC: Visa

UNIT	MAKE/MODEL: BMW 3.0L (M57) Twin Turbo I-6	OIL TYPE & GRADE: Mobil 1 5W/30 ESP
	FUEL TYPE: Diesel	OIL USE INTERVAL: 9,026 Miles
	ADDITIONAL INFO:	

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

COMMENTS [REDACTED] Amended for oil/engine type. Universal averages show typical wear levels for the M57 after ~7,600 miles on the oil. You ran longer, which explains the higher iron reading since iron likes to track with miles on the oil. Aluminum doesn't track as directly with oil use, and that metal comes from pistons and bearings. Unfortunately we can't tell a difference in the source of aluminum, but with chrome, from rings, slightly higher, piston wear seems more likely. The TBN is just above the lower limit, at 1.6, and the TAN is 5.5. Stick with 9,000 miles to monitor wear.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	9,026	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	117,547						
	Sample Date	6/23/2017						
	Make Up Oil Added	0.5 qts						
	ALUMINUM	18	18					7
	CHROMIUM	4	4					2
	IRON	96	96					54
	COPPER	8	8					7
	LEAD	0	0					1
	TIN	0	0					1
	MOLYBDENUM	76	76					22
	NICKEL	1	1					1
	MANGANESE	4	4					3
	SILVER	0	0					0
	TITANIUM	0	0					1
	POTASSIUM	11	11					14
	BORON	90	90					35
	SILICON	5	5					4
	SODIUM	5	5					4
	CALCIUM	1229	1229					1681
	MAGNESIUM	7	7					76
	PHOSPHORUS	771	771					706
	ZINC	867	867					819
	BARIUM	0	0					0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	65.2	57-65				
	cSt Viscosity @ 100°C	11.66	9.4-11.9				
	Flashpoint in °F	455	>410				
	Fuel %	<0.5	<2.0				
	Antifreeze %	0.0	0.0				
	Water %	0.0	<0.1				
	Insolubles %	0.3	<0.6				
	TBN	1.6	>1.0				
	TAN	5.5					
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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