



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]
		FAX: [REDACTED]
		ALT PHONE: [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					
	CHROMIUM	4		4					
	IRON	96		96					
	COPPER	8		8					
	LEAD	0		0					
	TIN	0		0					
	MOLYBDENUM	76		76					
	NICKEL	1		1					
	MANGANESE	4		4					
	SILVER	0		0					
	TITANIUM	0		0					
	POTASSIUM	11		11					
	BORON	90		90					
	SILICON	5		5					
	SODIUM	5		5					
	CALCIUM	1229		1229					
	MAGNESIUM	7		7					1681
	PHOSPHORUS	771		771					76
	ZINC	867		867					706
	BARIUM	0		0					819
									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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