OIL REPORT

LAB NUMBER: J68817 **UNIT ID:** 10 X5
REPORT DATE: 10/13/2017 **CLIENT ID:** 47830
CODE: 20/685 **PAYMENT:** CC: Visa

UNIT

MAKE/MODEL: BMW 3.0L (M57) Twin Turbo I-6
FUEL TYPE: Diesel
ADDITIONAL INFO:

OIL TYPE & GRADE: Shell Rotella T6 5W/40
OIL USE INTERVAL: 13,692 Miles

CLIENT

COMMENTS

RYAN: Thanks for reminding us about the Archoil. You can see it in the potassium, sodium, and boron levels. We use potassium and sodium to determine if coolant is present or not, so the potassium in the additive will mask that if it's present, but sodium is low enough that we don't think you need to worry about coolant. Wear levels look great. Our averages show typical M57 wear after about 7,6000 miles on the oil, and you've got better wear levels than average after running longer on the oil. The TBN is strong too, so feel free to do 15,000 miles next time.

ELEMENTS IN PARTS PER MILLION

	MI/HR on Oil	13,692	UNIT / LOCATION AVERAGES	11,849					UNIVERSAL AVERAGES
	MI/HR on Unit	196,064		161,710					
	Sample Date	9/30/2017		6/25/2016					
	Make Up Oil Added	1.5 qts		0 qts					
	ALUMINUM	4	4	6					7
	CHROMIUM	2	2	3					2
	IRON	33	33	47					53
	COPPER	3	3	4					7
	LEAD	0	0	0					1
	TIN	0	0	1					1
	MOLYBDENUM	72	72	55					23
	NICKEL	1	1	1					1
	MANGANESE	1	1	1					3
	SILVER	0	0	0					0
	TITANIUM	0	0	0					1
	POTASSIUM	1204	1204	1552					21
	BORON	373	373	514					38
	SILICON	4	4	4					5
	SODIUM	12	12	18					4
	CALCIUM	1043	1043	689					1667
	MAGNESIUM	1303	1303	965					97
	PHOSPHORUS	1046	1046	748					714
	ZINC	1410	1410	980					830
	BARIUM	0	0	0					0

PROPERTIES

			Values Should Be*					
	SUS Viscosity @ 210°F	78.3	66-78	72.5				
	cSt Viscosity @ 100°C	15.10	11.9-15.3	13.61				
	Flashpoint in °F	430	>410	**410**				
	Fuel %	<0.5	<2.0	TR				
	Antifreeze %	0.0	0.0	0.0				
	Water %	0.0	0.0	0.0				
	Insolubles %	0.2	<0.6	0.4				
	TBN	6.7	>1.0	4.7				
	TAN							
	ISO Code							

*** THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE**

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