

LAB NUMBER: K54118 **REPORT DATE:** 9/18/2018 **CODE:** 44/32

**UNIT ID:** 11 M3 CLIENT ID: PAYMENT: CC: Visa

UNIT

MAKE/MODEL: BMW 4.0L (S65B40) V-8 2011-2013 FUEL TYPE: Gasoline (Unleaded) ADDITIONAL INFO:

**OIL TYPE & GRADE:** OIL USE INTERVAL:

Castrol TWS 10W/60 3,500 Miles

CLIENT

COMMENTS

∴ This engine is in good shape. Our averages show typical S65 wear after ~5,700 miles of oil use. Bearing wear is a common point of interest for M-car owners, so we'll start there. BMW changed from lead bearings to aluminum bearings some time in 2011. Since no lead showed up, it's safe bet you have aluminum bearings, and that metal is low at 3 ppm. Other metals are low as well, all in good standing for a 3,500-mile run. The only contaminant is fuel, and trace is harmless. Fuel additives don't show up in testing, but we certainly appreciate the info. Great report!

OIL

MI/HR on Oil	3,500				
MI/HR on Unit	73,000				UNIVERSAL
Sample Date	9/2/2018	AVERAGES			AVERAGES
Make Up Oil Added	0.25 qts				
ALUMINUM	3	3			4
CHROMIUM	0	0			0
IRON	5	5			8
COPPER	2	2			3
LEAD	0	0			0
TIN	0	0			1
MOLYBDENUM	52	52			123
NICKEL	0	0			0
MANGANESE	0	0			1
SILVER	0	0			0
TITANIUM	1	1			17
POTASSIUM	1	1			2
BORON	51	51			48
SILICON	2	2			4
SODIUM	5	5			6
CALCIUM	2623	2623			2553
MAGNESIUM	53	53			59
PHOSPHORUS	1031	1031			840
ZINC	1146	1146			980
BARIUM	0	0			0

## Values Should Be\*

		Officula DC	-	 -	-
SUS Viscosity @ 210°F	85.2	80-100			
cSt Viscosity @ 100°C	16.82	15.5-20.6			
S Flashpoint in °F	370	>375			
Fuel %	TR	<2.0			
✓ Antifreeze %	0.0	0.0			
Water %	0.0	0.0			
Insolubles %	0.1	<0.6			
TBN					
TAN					
ISO Code					

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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