



OIL REPORT

LAB NUMBER: L08114
 REPORT DATE: 4/8/2019
 CODE:

UNIT ID: 4340152120
 PAYMENT: Verbal

UNIT	MAKE/MODEL: Gasoline Engine	OIL TYPE & GRADE: Gasoline Engine Oil
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 800 Miles
	ADDITIONAL INFO: BMW 2017 320XI	

CLIENT	
---------------	--

COMMENTS This sample is heavily contaminated by fuel at 8.5%. Note the viscosity read below the 0W/20 range, and the 2.5% insolubles (solids) indicate this oil is overly oxidized. Iron and copper read high in the spectral exam, showing wear at steel and brass/bronze parts, respectively.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	800	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit							
	Sample Date	3/28/2019						
	Make Up Oil Added	0 qts						
ALUMINUM	11	11					9	
CHROMIUM	1	1					1	
IRON	43	31					28	
COPPER	12	5					4	
LEAD	2	3					6	
TIN	2	1					1	
MOLYBDENUM	104	70					33	
NICKEL	1	0					1	
MANGANESE	4	2					3	
SILVER	0	0					0	
TITANIUM	0	2					1	
POTASSIUM	6	18					4	
BORON	72	60					45	
SILICON	7	13					9	
SODIUM	4	45					48	
CALCIUM	1001	1621					1229	
MAGNESIUM	23	82					332	
PHOSPHORUS	445	605					707	
ZINC	465	701					808	
BARIUM	0	0					3	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°	41.2					
	cSt Viscosity @ 100°C	4.55					
	Flashpoint in °F	205	>375				
	Fuel %	8.5	<2.0				
	Antifreeze %	0.0	0.0				
	Water %	0.0	0.0				
	Insolubles %	2.5	<0.6				
	TBN						
	TAN						
ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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