



OIL REPORT

LAB NUMBER:
REPORT DATE: 2/19/2019
CODE: 20/37

UNIT ID: 69 R60/2
CLIENT ID:
PAYMENT: CC: Visa (Bulk)

UNIT	MAKE/MODEL: BMW Motorcycle 594cc 2-cyl Boxer	OIL TYPE & GRADE: 40W
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 1,000 Miles
	ADDITIONAL INFO:	

CLIENT	
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COMMENTS Metals didn't go the direction we were hoping for. Aluminum held steady, but iron and lead increased. This oil didn't stay in use as long as the previous fill, so we're seeing more wear at steel parts and bearings on a per mile basis (ppm/mile). There wasn't any contamination from dirt, fuel, or water that might explain the poor wear, so maybe something operational explains it. Lead is cautionary though. The viscosity was on the mark for a 40W oil this time. If the engine is running well, try another 1,000-mile run and check back.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	1,000	UNIT / LOCATION AVERAGES	1,263	1,000				UNIVERSAL AVERAGES
	MI/HR on Unit	28,378		27,763	26,500				
	Sample Date	12/30/2018		6/26/2018	11/3/2017				
	Make Up Oil Added	0.25 qt		.25 qt	0.5 qt				
ALUMINUM	5	7	5	11				2	
CHROMIUM	1	1	1	2				1	
IRON	30	31	18	46				7	
COPPER	4	7	3	14				5	
LEAD	99	134	88	215				2	
TIN	0	1	0	3				0	
MOLYBDENUM	2	2	1	2				8	
NICKEL	1	1	0	1				1	
MANGANESE	4	7	4	13				0	
SILVER	0	0	0	1				0	
TITANIUM	0	0	0	0				0	
POTASSIUM	4	5	5	5				0	
BORON	4	8	4	16				35	
SILICON	11	13	12	17				16	
SODIUM	460	444	454	419				4	
CALCIUM	2193	2215	2297	2154				1515	
MAGNESIUM	25	63	28	135				733	
PHOSPHORUS	1373	1355	1384	1309				923	
ZINC	1375	1515	1584	1587				1071	
BARIUM	1	1	1	2				0	

Values Should Be*

PROPERTIES								
SUS Viscosity @ 210°	66.3	65-80	59.0	63.9				
cSt Viscosity @ 100°C	11.96	11.6-15.8	9.94	11.31				
Flashpoint in °F	415	>375	445	385				
Fuel %	<0.5	<2.0	<0.5	<0.5				
Antifreeze %	-	0.0	-	-				
Water %	0.0	0.0	0.0	0.0				
Insolubles %	0.3	<0.6	0.2	0.4				
TBN								
TAN								
ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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