

**COMMENTS**

GREGG: Lead is the most notable metal in this sample. Most M owners are worried about bearing wear, and lead can be a sign of a bearing problem. But it'd be pretty rare for lead to increase to this level this suddenly without any other metals reading notably higher and have this be a bearing problem. So with that in mind, we're guessing this lead is from leaded fuel or octane booster. Even unleaded fuel at the track can have some lead in it. Monitor for low oil pressure/engine noises as a sign of bearing trouble. Everything else still looks great. Check back on lead, though.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	2,000	UNIT / LOCATION AVERAGES	1,500					UNIVERSAL AVERAGES
	MI/HR on Unit	62,000		60,000					
	Sample Date	3/4/2020		8/17/2018					
	Make Up Oil Added	0 qts		0 qts					
	ALUMINUM	3	3	3					4
	CHROMIUM	0	0	0					0
	IRON	13	11	8					9
	COPPER	4	4	3					8
	LEAD	73	37	1					6
	TIN	0	0	0					0
	MOLYBDENUM	117	128	139					94
	NICKEL	0	0	0					0
	MANGANESE	1	1	1					1
	SILVER	0	0	0					0
	TITANIUM	0	1	1					12
	POTASSIUM	0	2	4					1
	BORON	44	48	51					59
	SILICON	6	6	5					5
	SODIUM	3	3	3					7
	CALCIUM	3098	3052	3006					2320
	MAGNESIUM	14	14	14					169
	PHOSPHORUS	954	962	970					847
	ZINC	1126	1113	1099					989
	BARIUM	0	0	0					0

Values  
Should Be\*

PROPERTIES	SUS Viscosity @ 210°F	84.9	80-110	87.4				
	cSt Viscosity @ 100°C	16.74	15.5-22.9	17.35				
	Flashpoint in °F	405	>385	390				
	Fuel %	<0.5	<2.0	<0.5				
	Antifreeze %	0.0	0.0	0.0				
	Water %	0.0	0.0	0.0				
	Insolubles %	0.1	<0.6	0.3				
	TBN							
	TAN							
	ISO Code							

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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