



Report of the Month

A BMW with lead...you might think you know where it's from, but you don't.

To learn where the elements are coming from, [click here](#) and scroll down.

UNIT	MAKE/MODEL: BMW 2.0L (N47D20) I-4	OIL TYPE & GRADE: Mobil 1 ESP 5W/30
	FUEL TYPE: Diesel	OIL USE INTERVAL: 8,951 Miles
	ADDITIONAL INFO: Wagon, Stage 2 tune, Some track use	

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	8,951						UNIVERSAL AVERAGES
	MI/HR on Unit	75,496	8,951	1,986	9,206	8,882	8,385	
	Sample Date	10/2/2021	10/2/2021	12/13/2020	9/12/2020	12/14/2019	5/4/2019	
	Make Up Oil Added	0 qts	0 qts		0 qts	0 qts	0 qts	
		UNIT / LOCATION AVERAGES						
ALUMINUM	6	7	6	6	6	6	8	8
CHROMIUM	1	1	1	1	1	1	2	2
IRON	29	40	30	33	35	45	54	40
COPPER	4	5	4	3	4	5	5	5
LEAD	49	22	50	9	60	3	2	0
TIN	1	1	1	1	2	1	1	1
MOLYBDENUM	71	54	72	94	84	79	64	47
NICKEL	1	1	1	1	1	1	1	3
MANGANESE	1	1	1	1	1	1	2	2
SILVER	0	0	0	0	0	0	0	0
TITANIUM	0	0	0	0	0	0	0	2
POTASSIUM	4	5	4	0	3	3	7	6
BORON	86	108	84	154	94	110	86	51
SILICON	7	5	7	6	7	4	5	5
SODIUM	16	11	17	8	9	5	5	16
CALCIUM	931	1236	931	1205	1075	1048	1065	1707
MAGNESIUM	8	12	7	11	7	8	9	49
PHOSPHORUS	606	703	615	838	716	693	655	709
ZINC	684	787	708	933	794	772	738	804
BARIUM	0	0	0	0	0	0	0	0

Values Should Be*

PROPERTIES	Values Should Be*							
SUS Viscosity @ 210°F	60.0	57-65	58.7	63.2	63.9	61.9	60.0	
cSt Viscosity @ 100°C	10.22	9.4-11.9	9.85	11.11	11.30	10.76	10.23	
Flashpoint in °F	410	>410	460	450	445	430	405	
Fuel %	TR	<2.0	<0.5	<0.5	<0.5	<0.5	0.5	
Antifreeze %	?	0.0	?	0.0	0.0	0.0	0.0	
Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Insolubles %	0.2	<0.6	0.2	0.1	0.2	0.2	0.3	
TBN			2.0					
TAN								
ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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Okay, so finding out the answer to this one is a bit of an investment. The owner made a video to report his findings, and we aren't going to give it away here. The video is long, but it's worth it. Not to go all buzzfeed.com on you, but you'll have to trust us when we say that this is something we've never come across in 35 years of oil analysis reports. (Forward to the end for the big reveal, but you'll be missing the journey he went through to get there!) <https://youtu.be/ay59KjlQ8Bg>