OIL REPORT

LAB NUMBER: P84646 **UNIT ID:** 01 M3
REPORT DATE: 6/16/2022 **CLIENT ID:** 203262
CODE: 20/68 **PAYMENT:** CC Online

UNIT

MAKE/MODEL: BMW 3.2L (S54B32) I-6
FUEL TYPE: Gasoline (Unleaded)
ADDITIONAL INFO:

OIL TYPE & GRADE: BMW TwinPower Turbo 10W/60
OIL USE INTERVAL: 650 Miles

CLIENT

[redacted]

PHONE: [redacted]
FAX:
ALT PHONE:
EMAIL: [redacted]

COMMENTS

ISAAC: Thanks for noting the bearing work at the 36K-mile mark. It's been a while since that service so we don't think it's influencing these results. Iron, copper, and lead are high and all three metals could show excess wear at a bearing/shaft interface, maybe even a problem. Universal averages show typical wear after ~4,300 miles of oil use. If an Engine Restore additive were used, then maybe that explains some of the copper and lead. That could be the case even if it were used several oil changes ago. Listen for odd noises and check back to monitor wear.

ELEMENTS IN PARTS PER MILLION

		UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
MI/HR on Oil	650							
MI/HR on Unit	95,825							
Sample Date	6/6/2022							
Make Up Oil Added	0 qts							
ALUMINUM	4	4						4
CHROMIUM	0	0						0
IRON	**11**	11						9
COPPER	**73**	73						8
LEAD	**63**	63						5
TIN	1	1						0
MOLYBDENUM	167	167						101
NICKEL	0	0						0
MANGANESE	0	0						1
SILVER	0	0						0
TITANIUM	35	35						11
POTASSIUM	1	1						1
BORON	58	58						58
SILICON	4	4						5
SODIUM	4	4						7
CALCIUM	2843	2843						2435
MAGNESIUM	22	22						136
PHOSPHORUS	848	848						857
ZINC	938	938						998
BARIUM	0	0						0

PROPERTIES

		Values Should Be*					
SUS Viscosity @ 210°F	82.3	80-100					
cSt Viscosity @ 100°C	16.10	15.5-20.6					
Flashpoint in °F	400	>395					
Fuel %	<0.5	<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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