



P.O. NUMBER CC: Visa  
 CODE: 20/13260/37

UNIT NUMBER 1 OF 1  
 REPORT DATE: 8/9/04  
 LAB NUMBER: C24287

## OIL REPORT

<b>CLIENT</b>	CONTACT:	PHONE: (860) 295-9986
	NAME: RON STYGAR	FAX:
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	MARLBOROUGH, CT 06447	

<b>UNIT</b>	EQUIPMENT MAKE: BMW	OIL USE INTERVAL: 4,441 Miles
	EQUIPMENT MODEL: 3.2L I-6 (S-54)	OIL TYPE & GRADE: Castrol 10W/60 (Gas)
	FUEL TYPE: Gasoline (Unleaded)	MAKE-UP OIL ADDED: 0 qts
	ADDITIONAL INFO: M-Z3 Coupe '01	

**COMMENTS**  
 RON: Lead, from bearings, hasn't changed enough from the last sample to notice. 3 ppm lead is average for this type engine, and the miles oil use was average (for the type) as well. Copper came up a little high, source unknown. It may be from a bronze bushing and is at about twice average in this sample (see universal averages). We will keep an eye on the copper for you in the next sample. Chances are, it is a one-time anomaly. Your air and oil filtration systems are still doing well. We found no gas, moisture or any signs of engine coolant in this sample.

<b>ELEMENTS IN PARTS PER MILLION</b>	MI/HR ON OIL	4,441	UNIT / LOCATION AVERAGES	4,518	4,531					
	MI/HR ON UNIT	27,500		23,059	18,541					UNIVERSAL AVERAGES
	SAMPLE DATE	08/01/04		12/04/03	08/12/03					
ALUMINUM	4	4	4	5						5
CHROMIUM	1	1	1	1						1
IRON	8	10	9	14						11
COPPER	15	11	7	10						7
LEAD	3	4	2	8						3
TIN	1	1	1	2						1
MOLYBDENUM	1	1	1	0						15
NICKEL	1	1	1	1						1
MANGANESE	0	0	0	0						2
SILVER	0	0	0	0						0
TITANIUM	0	0	0	0						0
POTASSIUM	0	0	0	0						1
BORON	91	104	118	103						87
SILICON	4	5	5	5						6
SODIUM	7	4	2	3						4
CALCIUM	1248	1564	1539	1904						1659
MAGNESIUM	504	568	558	643						531
PHOSPHORUS	690	802	753	964						797
ZINC	829	957	927	1114						946
BARIIUM	0	0	0	0						0

<b>PROPERTIES</b>	TEST	cST VISCOSITY @ 40 °C	SUS VISCOSITY @ 100 °F	VISCOSITY INDEX	cST VISCOSITY @ 100 °C	SUS VISCOSITY @ 210 °F	FLASHPOINT IN °F	FUEL %	ANTIFREEZE %	WATER %	INSOLUBLES %
	VALUES SHOULD BE					86-98	>370	<1.0	0	0.0	<0.6
	TESTED VALUES WERE					86.4	380	<0.5	0.0	0.0	0.2