OIL REPORT

LAB NUMBER:	D95395	**UNIT ID:**	BMW M3
REPORT DATE:	11/19/2009	**CLIENT ID:**	38509
CODE:	20/284	**PAYMENT:**	CC:

UNIT

MAKE/MODEL: BMW 4.0L (S65B40) V-8
FUEL TYPE: Gasoline (Unleaded)
ADDITIONAL INFO:

OIL TYPE & GRADE: Castrol 10W/60
OIL USE INTERVAL: 7,200 Miles

CLIENT

AMPowerJ

PHONE:
FAX:
ALT PHONE:
EMAIL:

COMMENTS

AMPowerJ: Iron and copper were mildly high in this initial sample from your M3's engine. Universal averages show typical wear levels for the S65B40 after about 4,200 miles on the oil. This oil was used much longer than that, and that could explain iron. This is because iron is the only metal to typically track directly with miles on the oil. So, your wear rate (ppm/mile) for iron is actually close to average. Copper (brass/bronze bushings, oil cooler, etc) isn't high enough to lose sleep over. The thin viscosity wasn't from fuel and isn't a concern. No contamination was noted.

ELEMENTS IN PARTS PER MILLION

		UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
MI/HR on Oil	7,200							
MI/HR on Unit								
Sample Date	10/31/09							
Make Up Oil Added	0.5 qt							
ALUMINUM	4	4						3
CHROMIUM	0	0						0
IRON	**16**	16						7
COPPER	**12**	12						4
LEAD	2	2						6
TIN	3	3						1
MOLYBDENUM	1	1						60
NICKEL	0	0						1
MANGANESE	1	1						0
SILVER	0	0						0
TITANIUM	0	0						0
POTASSIUM	6	6						2
BORON	75	75						62
SILICON	5	5						5
SODIUM	5	5						5
CALCIUM	1490	1490						2234
MAGNESIUM	708	708						280
PHOSPHORUS	834	834						839
ZINC	1022	1022						982
BARIUM	2	2						0

PROPERTIES

		Values Should Be*					
SUS Viscosity @ 210°F	**82.2**	86-110					
cSt Viscosity @ 100°C	**16.08**	17.0-22.9					
Flashpoint in °F	400	>370					
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**

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com