OIL REPORT

LAB NUMBER: F59160 **UNIT ID:** 06 CDI
REPORT DATE: 6/13/2013
CODE: 20/75 **PAYMENT:** Prepaid

UNIT

MAKE/MODEL: Mercedes Benz 3.2L CDI
FUEL TYPE: Diesel
ADDITIONAL INFO: 648.961
OIL TYPE & GRADE: Mobil 1 5W/40 ESP
OIL USE INTERVAL: 10,000 Miles

CLIENT

FAX:
ALT PHONE:
EMAIL:

COMMENTS

MICHAEL: We usually start highlighting metals when they go above twice the average level, and iron and copper both meet that criteria this time around. In part, your long oil run has something to do with these levels, although both metals are reading more than twice the average level even though you've gone less than twice the average miles (averages are based on ~6,500 miles of oil use). That means your engine is making more metal than normal on a per-mile basis. Copper and iron show wear at a bronze/steel interface, like bushings. For now, just check back to monitor.

ELEMENTS IN PARTS PER MILLION

			UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
	MI/HR on Oil	10,000		7,800	8,200	8,150	8,115		
	MI/HR on Unit	90,000		80,000	72,300	64,300	56,150		
	Sample Date	06/04/13		10/12/12	03/19/12	07/30/11	10/29/10		
	Make Up Oil Added	0 qts		0 qts	0 qts	0 qts	0 qts		
	ALUMINUM	5	4	5	4	4	4		4
	CHROMIUM	4	3	3	2	3	3		2
	IRON	**107**	79	91	75	72	49		48
	COPPER	**6**	4	5	4	4	3		3
	LEAD	0	0	1	0	0	0		1
	TIN	0	1	0	2	0	2		1
	MOLYBDENUM	93	87	88	85	94	75		72
	NICKEL	1	1	1	1	0	1		0
	MANGANESE	1	1	1	1	1	0		0
	SILVER	0	0	0	0	0	0		0
	TITANIUM	0	0	0	0	0	0		0
	POTASSIUM	2	3	3	2	3	4		3
	BORON	113	116	108	122	119	118		124
	SILICON	4	4	4	4	4	4		4
	SODIUM	4	5	5	3	10	3		6
	CALCIUM	1150	1345	1268	1185	1251	1873		1724
	MAGNESIUM	13	16	13	9	11	32		78
	PHOSPHORUS	753	788	768	746	782	892		829
	ZINC	901	912	907	826	1023	902		952
	BARIUM	0	0	0	0	0	0		0

PROPERTIES

		Values Should Be*					
	SUS Viscosity @ 210°F	70.0	63-78	69.4	71.7	68.8	67.1	
	cSt Viscosity @ 100°C	12.96	11.1-15.3	12.79	13.41	12.63	12.18	
	Flashpoint in °F	450	>410	**410**	435	420	**405**	
	Fuel %	<0.5	<2.0	TR	<0.5	<0.5	0.5	
	Antifreeze %	0.0	0.0	0.0	0.0	0.0	0.0	
	Water %	0.0	<0.1	0.0	0.0	0.0	0.0	
	Insolubles %	0.3	<0.8	0.2	0.3	0.3	0.2	
	TBN							
	TAN							
	ISO Code							

*** THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE**

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