OIL REPORT

LAB NUMBER: **UNIT ID:**
REPORT DATE: 11/9/2016 **CLIENT ID:**
CODE: 63/685 **PAYMENT:**

UNIT

EQUIP. MAKE/MODEL: Mazda 1.8L 4-cyl
FUEL TYPE: Gasoline (Unleaded)
ADDITIONAL INFO: Turbo, Some track use

OIL TYPE & GRADE: Red Line 10W/40
OIL USE INTERVAL: 1,000 Miles

CLIENT

PHONE:
FAX:
ALT PHONE:
EMAIL:

COMMENTS

If those miles are correct, then this engine was rebuilt between the last sample and this one, and we can attribute some of the high metal levels to the wear-in process. But to be honest, that's a lot of lead and copper (bushing and bearing wear), even for a fresh engine. Silicon has been high all along for this unit, but much of that is additive in the Red Line o and we don't see it as a problem. Viscosity was good, fuel and coolant contamination were absent, and the TBN showe a strong additive package. Monitor oil pressure in case there's a bearing problem.

ELEMENTS IN PARTS PER MILLION

MI/HR on Oil	1,000	UNIT / LOCATION AVERAGES	1,200	2,000	3,000			UNIVERSAL AVERAGES
MI/HR on Unit	3,000		10,000	9,000	7,000			
Sample Date	10/7/2016		8/23/2014	4/28/2014	12/8/2012			
Make Up Oil Added	0 qts		0 qts	0 qts	0 qts			
ALUMINUM	2	3	2	3	4			3
CHROMIUM	1	1	1	1	0			1
IRON	**22**	25	**24**	**35**	**20**			10
COPPER	**44**	19	**8**	**13**	**10**			4
LEAD	**45**	20	**9**	**15**	**12**			3
TIN	4	1	0	0	0			1
MOLYBDENUM	606	697	736	749	698			90
NICKEL	1	1	2	1	1			0
MANGANESE	1	1	1	2	1			1
SILVER	1	0	0	0	0			0
TITANIUM	3	1	0	0	0			0
POTASSIUM	7	6	6	7	4			2
BORON	76	81	100	84	65			62
SILICON	**29**	26	**24**	**26**	**26**			11
SODIUM	20	19	17	16	21			42
CALCIUM	2760	2634	2586	2602	2589			2116
MAGNESIUM	6	9	11	11	9			239
PHOSPHORUS	1138	1173	1152	1215	1187			801
ZINC	1355	1336	1187	1403	1397			935
BARIUM	0	0	0	0	0			0

PROPERTIES

		Values Should Be*					
SUS Viscosity @ 210°F	74.7	65-76	70.4	68.9	65.3		
cSt Viscosity @ 100°C	14.18	11.6-14.8	13.05	12.67	11.70		
Flashpoint in °F	440	>375	420	385	**360**		
Fuel %	<0.5	<2.0	<0.5	<0.5	0.8		
Antifreeze %	0.0	0.0	0.0	0.0	0.0		
Water %	0.0	<0.1	0.0	0.0	0.0		
Insolubles %	0.2	<0.6	0.2	0.3	0.3		
TBN	5.9	>1.0					
TAN							
ISO Code							

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

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