COMMENTS

MARK: Thanks for the note that these engines averages 5-10% fuel dilution. Universal averages show typical wear levels for the 1.3L at ~1,200 oil miles. Copper and lead were high, and both reading in this pattern show excessive wear at bearings. You noted that this engine was rebuilt about 10K miles ago, but bearings don't typically wear-in like other parts. Fuel may be softening the babbitt of the bearings, so watch your oil pressure. The 5.7 TBN shows lots of active additive left (1.0 is low). Resample at 2,000 miles on the next fill of oil.

ELEMENTS IN PARTS PER MILLION

		UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
MI/HR on Oil	4,000							
MI/HR on Unit	82,000							
Sample Date	10/31/09							
Make Up Oil Added	0 qts							
ALUMINUM	2	2						3
CHROMIUM	1	1						2
IRON	24	24						13
COPPER	**22**	22						4
LEAD	**42**	42						5
TIN	3	3						0
MOLYBDENUM	16	16						22
NICKEL	1	1						0
MANGANESE	0	0						5
SILVER	0	0						0
TITANIUM	0	0						0
POTASSIUM	3	3						3
BORON	14	14						11
SILICON	10	10						16
SODIUM	17	17						8
CALCIUM	2206	2206						1862
MAGNESIUM	10	10						14
PHOSPHORUS	758	758						629
ZINC	952	952						768
BARIUM	0	0						2

PROPERTIES

		Values Should Be*					
SUS Viscosity @ 210°F	**57.8**	79-97					
cSt Viscosity @ 100°C	**9.59**	15.3-19.9					
Flashpoint in °F	**285**	>385					
Fuel %	**5.0**	<2.0					
Antifreeze %	0.0	0.0					
Water %	0.0	<0.1					
Insolubles %	0.3	<0.6					
TBN	5.7						
TAN							
ISO Code							

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

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