

COMMENTS

Iron and copper dropped a bit in this sample from your Carrera, which is good since they were the only metals on the high side last year. Copper is still a bit excessive, but iron is low enough to be considered normal. We're not sure what brass/bronze part is producing the extra metal, but it's hard to call it a problem since the other metals are low. It's likely not an IMS problem since that would show up as high iron and probably an oil leak at the back of the engine. No fuel or coolant showed up. Stay at 5,000 miles on the oil and check back on copper.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	5,049	UNIT / LOCATION AVERAGES	5,136				UNIVERSAL AVERAGES
	MI/HR on Unit	54,879		49,830				
	Sample Date	01/21/13		02/12/12				
	Make Up Oil Added	3.22 qts		2.6 qts				
ALUMINUM	4	4	4				4	
CHROMIUM	1	2	2				1	
IRON	18	21	23				11	
COPPER	25	26	26				11	
LEAD	4	4	4				6	
TIN	0	0	0				1	
MOLYBDENUM	2	2	1				75	
NICKEL	0	0	0				1	
MANGANESE	0	1	1				1	
SILVER	0	0	0				0	
TITANIUM	0	0	0				0	
POTASSIUM	2	1	0				2	
BORON	44	27	10				88	
SILICON	4	5	5				11	
SODIUM	6	7	7				13	
CALCIUM	2582	2112	1641				2434	
MAGNESIUM	223	636	1048				151	
PHOSPHORUS	915	914	912				894	
ZINC	1102	1044	985				1037	
BARIUM	0	0	0				0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	66.6	65-78	66.8			
	cSt Viscosity @ 100°C	12.04	11.6-15.3	12.10			
	Flashpoint in °F	380	>375	390			
	Fuel %	<0.5	<2.0	<0.5			
	Antifreeze %	0.0	0.0	0.0			
	Water %	0.0	<0.1	0.0			
	Insolubles %	0.1	<0.6	0.3			
	TBN			6.7			
	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