

Report of the Month

This S2000 engine is no longer running. What happened?

To learn more about where the elements are coming from, [click here](#).

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	1,718	UNIT/ LOCATION AVERAGES				UNIVERSAL AVERAGES
	MI/HR on Unit	109,068					
	Sample Date	07/27/2011					
	ALUMINUM	20	20				5
	CHROME	2	2				0
	IRON	51	51				8
	COPPER	35	35				4
	LEAD	24	24				1
	TIN	1	1				1
	MO LYBDENUM	101	101				95
	NICKEL	1	1				1
	POTASSIUM	0	0				2
	BORON	70	70				69
	SILICON	42	42				9
	SODIUM	6	6				25
	CALCIUM	2630	2630				2317
	MAGNESIUM	17	17				249
PHOSPHORUS	760	760				745	
ZINC	901	901				870	
BARIUM	0	0				0	

Values
Should Be*

PROPERTIES	SUS Viscosity @210°F	55.2	58-68			
	cSt Viscosity @ 100°C	8.83	9.7-12.7			
	Flashpoint in °F	355	>365			
	Fuel %	0.5	<2.0			
	Antifreeze %	0.0	0.0			
	Water %	0.0	0.0			
	Insolubles %	0.2	<0.6			
	TBN					
	TAN					
	ISO Code					

*THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

If you're thinking "bearing failure," you're right on. Not 3,000 miles after this sample was taken, the bearings failed. The S2000, like a lot of modern engines, has a system that sprays the bottom of the piston with oil. In some (not all) older S2000s, the sprayer was not spraying enough oil. The owner said the pistons weren't being lubricated properly, which led to scoring, and that in turn caused excessive bearing wear on the steel crank. In essence, according to the owner, a lack of lubrication on two cylinders caused excessive piston scoring, which caused the bearing failure. This problem was apparently corrected in later S2000 engines.