

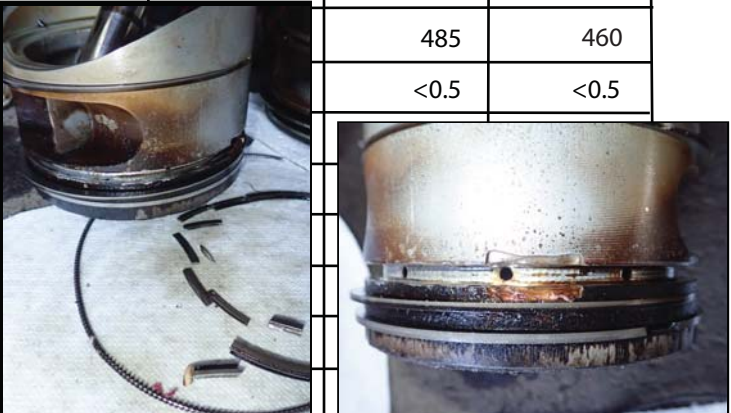
Report of the Month

This O-470's trends started getting erratic back in 2016, but it took until 2018 for the problem to become clear. Can you tell what was wrong?

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

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	19	UNIT/ LOCATION AVERAGES	20	34	30	7	UNIVERSAL AVERAGES
	MI/HR on Unit	1725		1706	1640	1592	1541	
	Sample Date	6/4/2018		3/24/2018	3/16/2017	2/19/2016	3/3/2015	
	ALUMINUM	19		6	25	8	11	
	CHROME	7	4	6	4	4	3	5
	IRON	57	49	55	31	37	28	43
	COPPER	8	3	8	4	5	3	3
	LEAD	2808	4146	3597	3512	4534	3026	2673
	TIN	0	1	1	0	1	0	1
	MO LYBDENUM	2	2	1	1	1	1	1
	NICKEL	18	5	12	7	6	5	3
	POTASSIUM	0	0	1	2	0	0	1
	BORON	4	0	3	0	1	2	1
	SILICON	8	8	9	4	5	7	7
	SODIUM	2	1	2	1	1	1	1
	CALCIUM	0	3	0	0	0	1	35
	MAGNESIUM	1	1	0	0	1	1	1
	PHOSPHORUS	949	379	1265	664	1213	1499	354
	ZINC	3	4	1	0	4	4	4
	BARIUM	0	0	0	0	0	0	0

Should Be*

PROPERTIES	SUS Viscosity @210°F	92.8	82-105	92.4	96.0	91.4	85.1
	cSt Viscosity @ 100°C	18.66	16.0-21.8	18.55	19.41	18.31	16.80
	Flashpoint in °F	465	>440			485	460
	Fuel %	<0.5	<1.0			<0.5	<0.5
	Antifreeze %	-	-				
	Water %	0.0	0.0				
	Insolubles %	0.4	<0.6				
	TBN						
	TAN						
	ISO Code						

*THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

From the owner: We have taken this aircraft out of service now and pulled the cylinders. On the #3 cylinder, the oil scraper ring had failed and was eating up the piston. The valve seals are definitely worn on all the cylinders, and blow-by was marked on inspection. We are now doing a top overhaul on the engine. Thank you for the information.