



# OIL REPORT

LAB NUMBER: L38686

UNIT ID: N4559A

REPORT DATE: 7/18/2019

CLIENT ID: 94166

CODE: 63/75

PAYMENT: CC: MC (Bulk)

<b>UNIT</b>	MAKE/MODEL: Lycoming O-360-A4K	OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 46 Hours
	ADDITIONAL INFO: Gruman AA5B, S/N L-27042-36A	

<b>CLIENT</b>	FRANS DEBLOIS	PHONE: (301) 641-1547
	DEBLOIS AEROSPACE	FAX:
	7940 AIRPARK ROAD - HANGAR B	ALT PHONE: (301) 641-1547
	GAITHERSBURG, MD 20879	EMAIL: ADMIN@DEBLOISAEROSPACE.COM,
		frans@debloisaerospace.com

**COMMENTS** FRANS: This engine is making a pretty good amount of metal. Aluminum tested quite high, and that, along with iron might show piston/steel wear, or maybe the two are related to corrosion. Nickel is also high, and unless that's a cylinder metal, it shows a good amount of exhaust valve guide wear. Maybe silicon is responsible for some of this, if it's abrasive. Check for air intake leaks or issues to monitor for that possibility. Watch for metal in the oil filter. Depending on how many oil changes have been done since OH, maybe some of this is wear-in. Monitor for trouble, though.

<b>ELEMENTS IN PARTS PER MILLION</b>	MI/HR on Oil	46	UNIT / LOCATION AVERAGES	8	34				<b>UNIVERSAL AVERAGES</b>
	MI/HR on Unit	153		432	424				
	Sample Date	7/10/2019		7/11/2015	4/14/2015				
	Make Up Oil Added				2 qts				
ALUMINUM	45	25	17	29				7	
CHROMIUM	5	8	4	5				6	
IRON	89	83	71	129				34	
COPPER	8	12	5	16				8	
LEAD	2518	3509	1865	4337				3601	
TIN	0	1	0	1				1	
MOLYBDENUM	0	0	0	1				0	
NICKEL	27	20	21	47				2	
MANGANESE	1	1	1	1				0	
SILVER	0	0	0	0				0	
TITANIUM	0	0	0	0				0	
POTASSIUM	0	1	2	2				1	
BORON	1	1	0	0				1	
SILICON	14	8	7	9				6	
SODIUM	0	1	1	2				1	
CALCIUM	8	4	4	2				17	
MAGNESIUM	1	0	0	0				1	
PHOSPHORUS	7	584	75	707				705	
ZINC	6	15	9	21				7	
BARIUM	0	0	0	0				0	

Values Should Be\*

<b>PROPERTIES</b>	SUS Viscosity @ 210°F	95.4	86-105	100.4	98.2			
	cSt Viscosity @ 100°C	19.26	17.0-21.8	20.45	19.94			
	Flashpoint in °F	445	>430	445	460			
	Fuel %	<0.5	<1.0	<0.5	<0.5			
	Antifreeze %	-		-	-			
	Water %	0.0	0.0	0.0	0.0			
	Insolubles %	0.4	<0.6	0.4	0.2			
	TBN							
	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