



# OIL REPORT

LAB NUMBER: N00948  
 REPORT DATE: 1/13/2021  
 CODE: 63/16

UNIT ID: N167JW  
 CLIENT ID: 39078  
 PAYMENT: Bulk CC

UNIT	MAKE/MODEL: Continental IO-520-BA	OIL TYPE & GRADE: Aircraft Engine Oil
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 50 Hours
	ADDITIONAL INFO: 1968 Beech Bonanza V35A, E/N 807023-R, Nickel	

CLIENT	BO HARPER	PHONE: (847) 226-0330
	HARPER SALES	FAX:
	PO BOX 95 611 ROCKLAND RD	ALT PHONE:
	# 101	EMAIL: bo.harper2@icloud.com
	LAKE BLUFF, IL 60044	

**COMMENTS**  
 BO: Cold sampling could result in small amounts of fuel dilution, but no excess fuel showed up in this sample so your sampling method was perfect. This latest sample from N167JW shows more metal than we were seeing from this engine in the past. As a reminder, universal averages show typical wear after about 35 hours of oil use. Only chrome is high enough to flag and it usually shows ring wear. It could be from chrome or Millennium steel cylinders too, if any are on board. If temps are normal and the engine runs well, then just check back to build current wear trends.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	50	UNIT / LOCATION AVERAGES	33	50		40	40	UNIVERSAL AVERAGES
	MI/HR on Unit	2,249		2,032	1,925		1,843	1,804	
	Sample Date	11/15/2020		8/5/2014	8/1/2013	6/24/2013	1/30/2013	8/22/2012	
	Make Up Oil Added	1 qt		1.5 qts	1 qt		1 qt		
	ALUMINUM	12	5	8	4	6	5	3	7
	CHROMIUM	15	4	12	4	6	3	2	6
	IRON	89	40	38	27	29	27	28	32
	COPPER	4	2	6	2	3	2	1	4
	LEAD	5187	3680	3700	3424	2919	3904	3240	3894
	TIN	0	0	0	0	1	0	0	1
	MOLYBDENUM	6	2	4	2	2	2	1	3
	NICKEL	6	3	5	4	4	5	3	6
	MANGANESE	1	1	0	1	1	1	1	0
	SILVER	0	0	0	0	0	0	0	0
	TITANIUM	0	0	0	0	0	0	0	0
	POTASSIUM	0	0	2	1	0	1	3	1
	BORON	1	0	1	1	1	1	0	1
	SILICON	6	5	6	4	4	3	2	7
	SODIUM	2	1	1	1	0	1	1	1
	CALCIUM	1	4	4	1	2	4	5	26
	MAGNESIUM	1	1	4	1	1	0	1	1
	PHOSPHORUS	164	40	39	24	122	869	7	493
	ZINC	2	2	7	2	7	2	1	4
	BARIUM	0	0	0	0	0	0	0	0

Values Should Be\*

PROPERTIES	SUS Viscosity @ 210°F	91.2		90.8	93.3	87.9	86.2	89.0
	cSt Viscosity @ 100°C	18.26		18.18	18.78	17.47	17.06	17.74
	Flashpoint in °F	450	>440	475	510	490	490	480
	Fuel %	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5
	Antifreeze %	-		-	-	-	-	-
	Water %	0.0	0.0	0.0	TR	0.0	0.0	0.0
	Insolubles %	0.3	<0.6	0.3	0.3	0.3	0.4	0.4
	TBN							
	TAN							
	ISO Code							

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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