



OIL REPORT

LAB NUMBER: P31150

UNIT ID: N3212T

REPORT DATE: 1/19/2022

CLIENT ID: 23123

CODE: 41/68

PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Lycoming O-320-E2D
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cessna Cardinal 177; Eng S/N L-20623-27A, 17700512, Nitrided steel cyls

OIL TYPE & GRADE: Aeroshell W100 (AD)
OIL USE INTERVAL: 42 Hours

CLIENT

CHARLES MOUNT
3504 MORNINGWOOD CT NE
SUWANEE, GA 30024

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COMMENTS

CHARLES: Thank you for noting the work on the #3 cylinder. Maybe the excessive amount of chrome in this oil is related to the new rings seating. Even in a break-in scenario, though, it's uncommon for chrome to read higher than iron (from the many steel parts), so excess wear may be taking place. Monitor for a change in the rate of oil consumption, inspect the oil filter for metal, and follow up on chrome after a shorter oil change, maybe 30 hours. You might test compressions, too. Aside from chrome, wear metals look okay. The oil is physically fine.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	42	UNIT / LOCATION AVERAGES	30	52	29	6	52	UNIVERSAL AVERAGES
	MI/HR on Unit	876		835	804	752	722	678	
	Sample Date	12/22/2021		11/14/2020	6/20/2020	10/17/2019	9/20/2018	9/17/2017	
	Make Up Oil Added	2 qts		3 qts	3 qts	2 qts	0 qts	2 qts	
	ALUMINUM	10		7	9	6	3	16	
	CHROMIUM	42		12	19	12	5	23	
	IRON	37		45	70	51	32	78	
	COPPER	4		4	6	3	2	5	
	LEAD	2165		2699	3696	3018	1352	4809	
	TIN	2		2	3	0	0	1	
	MOLYBDENUM	0		0	0	0	0	0	
	NICKEL	3		5	6	4	2	4	
	MANGANESE	1		0	1	1	0	1	
	SILVER	0		0	0	0	0	0	
	TITANIUM	0		0	0	0	0	0	
	POTASSIUM	0		1	0	0	1	1	
	BORON	0		0	1	0	2	0	
	SILICON	7		3	4	4	4	5	
	SODIUM	1		1	1	1	2	1	
	CALCIUM	1		1	1	0	1	1	
	MAGNESIUM	1		1	1	0	0	0	
	PHOSPHORUS	4		4	8	15	17	342	
	ZINC	2		2	3	1	1	3	
	BARIUM	0		0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	92.2	86-105	94.2	91.5	94.4	95.2	98.5
	cSt Viscosity @ 100°C	18.52	17.0-21.8	18.99	18.33	19.03	19.23	20.00
	Flashpoint in °F	500	>460	515	485	515	495	520
	Fuel %	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5
	Antifreeze %	-		-	-	-	-	-
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.3	<0.6	0.3	0.2	0.4	0.3	0.2
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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