



OIL REPORT

LAB NUMBER:
 REPORT DATE: 7/23/2018
 CODE: 35/66

UNIT ID:
 CLIENT ID:
 PAYMENT: CC: MC

UNIT	MAKE/MODEL: Lycoming O-540-J3A5D	OIL TYPE & GRADE: Chevron AC 20W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 63 Hours
	ADDITIONAL INFO:	

CLIENT	
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COMMENTS This analysis is troubling. You mentioned that the engine is running hot in the #2 cylinder, and that, coupled with the inactivity this engine has seen, has caused wear levels to increase to cautionary levels. Nickel shows wear at the exhaust valve guides. Aluminum, chrome, and iron show cylinder/ring wear. Copper shows wear at a bronze or brass part. Insolubles indicate this oil has been exposed to excessive heat. We suggest checking compression and possibly a borescope. If those are okay, and the filter is clean, resample in 15-20 hours to monitor.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	63	UNIT / LOCATION AVERAGES	65	18	54	50	25	UNIVERSAL AVERAGES
	MI/HR on Unit	288		225	160	139	85	35	
	Sample Date	7/16/2018		8/10/2017	3/14/2017	10/15/2016	7/28/2016	2/7/2016	
	Make Up Oil Added	12 qts		3 qts	1	3	5	2	
	ALUMINUM	45	9	11	8	5	7	11	6
	CHROMIUM	32	8	10	6	8	11	9	4
	IRON	164	46	51	45	34	68	65	28
	COPPER	14	7	11	7	12	20	16	8
	LEAD	7478	4462	6439	3170	5185	4320	1940	3950
	TIN	1	1	0	1	1	4	2	1
	MOLYBDENUM	9	2	3					0
	NICKEL	14	6	10	2	3	4	5	2
	MANGANESE	2	1	1					0
	SILVER	0	0	0	0	0	0	0	0
	TITANIUM	0	0	0					0
	POTASSIUM	0	1	0					1
	BORON	0	0	0					1
	SILICON	10	7	8	7	6	13	14	6
	SODIUM	1	1	1					1
	CALCIUM	5	5	4					13
	MAGNESIUM	6	2	3	1	2	3	3	6
	PHOSPHORUS	7	4	6					698
	ZINC	3	3	2					5
	BARIUM	0	0	0					0

Values Should Be*

PROPERTIES	97.1	88-105	96.1				
SUS Viscosity @ 210°	97.1	88-105	96.1				
cSt Viscosity @ 100°C	19.67	17.5-21.8	19.43				
Flashpoint in °F	490	>460	-				
	<0.5	<1.0	-				
Antifreeze %	-	-	-				
Water %	0.0	0.0	0.0				
Insolubles %	0.6	<0.6	0.5				
TBN							
TAN							
ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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