



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

UNIT ID: CLIENT ID: PAYMENT: CC: MC

OIL TYPE & GRADE: Chevron AC 20W/50 OIL USE INTERVAL: 63 Hours

LIND

CLIENT

COMMENTS

MAKE/MODEL: Lycoming O-540-J3A5D FUEL TYPE: Gasoline (Leaded) ADDITIONAL INFO:

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.

	MI/HR on Oil	63		65	18	54	50	25	
	MI/HR on Unit	288		225	160	139	85	35	UNIVERSAL
	Sample Date	7/16/2018	AVERAGES	8/10/2017	3/14/2017	10/15/2016	7/28/2016	2/7/2016	AVERAGES
N	Make Up Oil Added	12 qts		3 qts	1	3	5	2	
4									
	ALUMINUM	45	9	11	8	5	7	11	6
Μ	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
٩	LEAD	7478	4462	6439	3170	5185	4320	1940	3950
<i>(</i>)	TIN	1	1	0	1	1	4	2	1
Ë	MOLYBDENUM	9	2	3					0
Å	NICKEL	14	6	10	2	3	4	5	2
Ъ	MANGANESE	2	1	1					0
	SILVER	0	0	0	0	0	0	0	0
Z	TITANIUM	0	0	0					0
	POTASSIUM	0	1	0					1
ŝ	BORON	0	0	0					1
Z	SILICON	10	7	8	7	6	13	14	6
Ν	SODIUM	1	1	1					1
Щ	CALCIUM	5	5	4					13
Π	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*										
	SUS Viscosity @ 210°	97.1	88-105	96.1							
	cSt Viscosity @ 100°C	19.67	17.5-21.8	19.43							
ŝ	Flashpoint in °F	490	>460	-							
		<0.5	<1.0	-							
È	Antifreeze %	-		-							
Д	Water %	0.0	0.0	0.0							
õ	Insolubles %	0.6	<0.6	0.5							
Ц	TBN										
	TAN										
	ISO Code										

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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LIABILITY LIMITED TO COST OF ANALYSIS