



OIL REPORT

LAB NUMBER: K09363
REPORT DATE: 4/4/2018
CODE: 20/32

UNIT ID: N7387Y-LH
CLIENT ID: 94754
PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming IO-320-B1A	OIL TYPE & GRADE: Aeroshell W100 Plus (AD)
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 43 Hours
	ADDITIONAL INFO: Piper PA-30 S/N L-1006-55	

CLIENT	NICK GILL	PHONE: (404) 548-2963
	115 TEAL VISTA	FAX:
	LOCUST GROVE, GA 30248	ALT PHONE:
		EMAIL: nickagill@me.com

COMMENTS	NICK: Report #2 looks fine for N7387Y's left engine - wear metals all tested at healthy levels, and we see no signs of internal trouble. You can see that aluminum bumped up a bit, showing some additional piston wear, but it's fine at 10 parts per million; nothing to worry about there. The sample was free of excessive fuel, water, and dirt contamination, and its viscosity was normal for used W100. Oil and air filtration systems were both in good working order. Very good report all the way around - nice engine!
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	43	UNIT / LOCATION AVERAGES	42					UNIVERSAL AVERAGES
	MI/HR on Unit	2,083		2,040					
	Sample Date	10/18/2017		12/30/2016					
	Make Up Oil Added	2 qts		1 qt					
ALUMINUM	10	8	6						6
CHROMIUM	3	3	3						5
IRON	37	36	35						26
COPPER	4	5	5						4
LEAD	3580	3446	3312						3348
TIN	1	1	1						1
MOLYBDENUM	0	0	0						0
NICKEL	2	2	2						2
MANGANESE	1	1	1						0
SILVER	0	0	0						0
TITANIUM	0	0	0						0
POTASSIUM	0	0	0						1
BORON	0	1	1						1
SILICON	4	4	3						5
SODIUM	1	2	2						1
CALCIUM	104	103	102						22
MAGNESIUM	1	1	1						1
PHOSPHORUS	999	935	870						496
ZINC	1	5	8						4
BARIUM	0	0	0						0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	92.6	86-105	88.6				
	cSt Viscosity @ 100°C	18.61	17.0-21.8	17.64				
	Flashpoint in °F	470	>460	455				
	Fuel %	<0.5	<1.0	TR				
	Antifreeze %	-		-				
	Water %	0.0	0.0	0.0				
	Insolubles %	0.4	<0.6	0.2				
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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OIL REPORT

LAB NUMBER: K10709
REPORT DATE: 4/10/2018
CODE: 20/32

UNIT ID: N7387Y-RH
CLIENT ID: 94754
PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Lycoming LIO-320-B1A
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Piper PA-30 S/N L-988-55

OIL TYPE & GRADE: Aeroshell W100 Plus (AD)
OIL USE INTERVAL: 43 Hours

CLIENT

NICK GILL
115 TEAL VISTA
LOCUST GROVE, GA 30248

PHONE: (404) 548-2963
FAX:
ALT PHONE:
EMAIL: nickagill@me.com

COMMENTS

NICK: Here's the most recent sample from the right engine, and you'll be happy to know that it looks a whole lot like its counterpart. Aluminum and iron both saw mild increases, but nothing that stands out as trouble. These readings still compare very well to universal averages. Lead blow-by is higher than before, but still within the average range, so it's just something to note for the time being. No fuel/water was found either. All things considered then, this is a very nice pair of reports for N7387Y. Just check back at your next regular service to continue building trends.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	43	UNIT / LOCATION AVERAGES	42					UNIVERSAL AVERAGES
	MI/HR on Unit	2,083		2,040					
	Sample Date	10/18/2017		12/30/2016					
	Make Up Oil Added	2 qts		1 qt					
ALUMINUM	9	7	5						7
CHROMIUM	3	3	2						4
IRON	42	37	32						35
COPPER	4	4	4						7
LEAD	4162	3537	2912						3515
TIN	1	1	1						1
MOLYBDENUM	0	0	0						0
NICKEL	2	2	1						2
MANGANESE	1	1	1						0
SILVER	0	0	0						0
TITANIUM	0	0	0						0
POTASSIUM	0	0	0						1
BORON	0	0	0						1
SILICON	4	4	3						5
SODIUM	3	3	2						2
CALCIUM	127	109	91						117
MAGNESIUM	1	1	0						1
PHOSPHORUS	1129	995	861						909
ZINC	3	5	7						37
BARIUM	0	0	0						0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	87.4	86-105	88.9				
	cSt Viscosity @ 100°C	17.36	17.0-21.8	17.72				
	Flashpoint in °F	465	>460	475				
	Fuel %	<0.5	<1.0	<0.5				
	Antifreeze %	-	-	-				
	Water %	0.0	0.0	0.0				
	Insolubles %	0.5	<0.6	0.3				
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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OIL REPORT

LAB NUMBER: J07174

UNIT ID: N7387Y-LH

REPORT DATE: 1/27/2017

CLIENT ID: 94754

CODE: 20/32

PAYMENT: CC: Visa

UNIT
MAKE/MODEL: Lycoming IO-320-B1A
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Piper PA-30 S/N L-1006-55

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

CLIENT
NICK GILL
115 TEAL VISTA
LOCUST GROVE, GA 30248

PHONE: (404) 548-2963
FAX:
ALT PHONE:
EMAIL: nickagill@me.com

COMMENTS
NICK: Thanks for the notes. You said this aircraft was inactive for about 4 years, and we never would've guessed that based on these results. Inactivity leads to corrosion, and that shows up as high aluminum and iron in our tests. Both metals are fine next to universal averages, which are based on a similar interval of about 40 hours. Whatever measures were taken to minimize corrosion seem to have done the trick - this engine looks great! The trace of fuel that showed up is probably from priming or cold sampling, and that's harmless. No moisture was detected.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	42	UNIT / LOCATION AVERAGES							UNIVERSAL AVERAGES
	MI/HR on Unit	2,040								
	Sample Date	12/30/2016								
	Make Up Oil Added	1 qt								
	ALUMINUM	6	6							6
	CHROMIUM	3	3							5
	IRON	35	35							26
	COPPER	5	5							4
	LEAD	3312	3312							3300
	TIN	1	1							1
	MOLYBDENUM	0	0							0
	NICKEL	2	2							2
	MANGANESE	1	1							0
	SILVER	0	0							0
	TITANIUM	0	0							0
	POTASSIUM	0	0							1
BORON	1	1								1
SILICON	3	3								5
SODIUM	2	2								1
CALCIUM	102	102								20
MAGNESIUM	1	1								1
PHOSPHORUS	870	870								476
ZINC	8	8								4
BARIUM	0	0								0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	88.6	86-105						
	cSt Viscosity @ 100°C	17.64	17.0-21.8						
	Flashpoint in °F	455	>460						
	Fuel %	TR	<1.0						
	Antifreeze %	-							
	Water %	0.0	<0.1						
	Insolubles %	0.2	<0.6						
	TBN								
	TAN								
	ISO Code								



OIL REPORT

LAB NUMBER: J07175
REPORT DATE: 1/27/2017
CODE: 20/32

UNIT ID: N7387Y-RH
CLIENT ID: 94754
PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming LIO-320-B1A	OIL TYPE & GRADE: Aeroshell W100 Plus (AD)
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 42 Hours
	ADDITIONAL INFO: Piper PA-30 S/N L-988-55	

CLIENT	NICK GILL	PHONE: (404) 548-2963
	115 TEAL VISTA	FAX:
	LOCUST GROVE, GA 30248	ALT PHONE:
		EMAIL: nickagill@me.com

COMMENTS	NICK: This engine looks a lot like the other, and that's what we like to see with twins since they see the same type of use and maintenance. Universal averages for the LIO-320-B1A are based on about 45 hours of oil use and these numbers stack up very well. We don't see any issues that would require any attention on your part, and there wasn't any fuel or water in this sample of W100 Plus. Just check back at the next oil change to start building trends for N7387Y. It's off to a great start as of 12/30/16, the sample date!
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	42	UNIT / LOCATION AVERAGES							UNIVERSAL AVERAGES
	MI/HR on Unit	2,040								
	Sample Date	12/30/2016								
	Make Up Oil Added	1 qt								
	ALUMINUM	5	5							7
	CHROMIUM	2	2							5
	IRON	32	32							36
	COPPER	4	4							8
	LEAD	2912	2912							3341
	TIN	1	1							1
	MOLYBDENUM	0	0							0
	NICKEL	1	1							2
	MANGANESE	1	1							0
	SILVER	0	0							0
	TITANIUM	0	0							0
	POTASSIUM	0	0							1
	BORON	0	0							1
	SILICON	3	3							5
	SODIUM	2	2							2
	CALCIUM	91	91							141
	MAGNESIUM	0	0							1
	PHOSPHORUS	861	861							918
	ZINC	7	7							44
	BARIUM	0	0							0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	88.9	86-105						
	cSt Viscosity @ 100°C	17.72	17.0-21.8						
	Flashpoint in °F	475	>460						
	Fuel %	<0.5	<1.0						
	Antifreeze %	-							
	Water %	0.0	<0.1						
	Insolubles %	0.3	<0.6						
	TBN								
	TAN								
	ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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