



OIL REPORT

LAB NUMBER: K22056
REPORT DATE: 5/22/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660, 1639

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 23 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE: (813) 621-7476
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: We're glad to hear you aren't having any problems. We marked nickel last time because it was a change from what we normally see from your engine, but 14 ppm is still within the average range for this type of engine and so is the 16 ppm here. We'll continue to monitor it in case it does show increasing wear at the exhaust valve guides, but as long as the engine is running well on your end (and it sounds like it is), then we wouldn't get too worked up over it. The rest of the metals look great as well. Overall then, this is another good report for N262WH.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	23	UNIT / LOCATION AVERAGES	15	24	22	15	15	UNIVERSAL AVERAGES
	MI/HR on Unit	202		179	164	141	119	104	
	Sample Date	5/11/2018		4/27/2018	4/17/2018	3/29/2018	2/28/2018	2/13/2018	
	Make Up Oil Added	0.5 qts		1 qt	1.5 qts	1.25 qts		0 qts	
	ALUMINUM	4		3	4	4	3	4	
	CHROMIUM	17		14	18	18	17	19	
	IRON	39		29	36	38	34	36	
	COPPER	13		10	14	14	13	15	
	LEAD	6125		4350	5054	4865	4348	4121	
	TIN	1		0	1	1	1	1	
	MOLYBDENUM	6		5	6	6	5	6	
	NICKEL	16		14	10	9	5	5	
	MANGANESE	1		0	1	1	1	1	
	SILVER	0		0	0	0	0	0	
	TITANIUM	1		0	1	0	0	0	
	POTASSIUM	0		0	0	0	0	2	
	BORON	1		0	2	1	0	0	
	SILICON	7		7	17	7	7	7	
	SODIUM	1		0	2	1	1	1	
	CALCIUM	8		6	7	5	8	7	
	MAGNESIUM	0		0	0	0	0	0	
	PHOSPHORUS	3		0	3	1	3	1	
	ZINC	2		1	2	1	3	4	
	BARIUM	0		0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	96.3	86-105	97.3	96.2	93.7	95.8	90.9
	cSt Viscosity @ 100°C	19.49	17.0-21.8	19.72	19.46	18.86	19.36	18.20
	Flashpoint in °F	440	>430	475	435	450	455	460
	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 %	0.4	<0.6	0.3	0.4	0.4	0.4	0.4
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: K18570
REPORT DATE: 5/9/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT	MAKE/MODEL:	Continental TSIO-550-K	OIL TYPE & GRADE:	Phillips XC (A/C) 20W/50
	FUEL TYPE:	Gasoline (Leaded)	OIL USE INTERVAL:	15 Hours
	ADDITIONAL INFO:	Cirrus SR22, S/N: 1034660, 1639		

CLIENT	JIM STROH	PHONE: (813) 679-7474
	935 MAIN ST	FAX:
	SUITE D3	ALT PHONE: (813) 621-7476
	SAFETY HARBOR, FL 34695	EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS	JIM: Most metals came down since last time, which is what we want to see after a shorter oil run. Nickel went the opposite direction though, increasing to 14 ppm. That's better than the average of 28 ppm, but the trend is worth keeping an eye on as it could show increasing exhaust valve guide wear. Silicon dropped to 7 ppm, which is low enough to show proper air filtration. No fuel or water was found and the viscosity is in spec. Overall, this is still a great report so as long as you're not having any issues, then nickel will just be something we'll keep a casual eye on.
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	15	UNIT / LOCATION AVERAGES	24	22	15	15	18	UNIVERSAL AVERAGES
	MI/HR on Unit	179		164	141	119	104	89	
	Sample Date	4/27/2018		4/17/2018	3/29/2018	2/28/2018	2/13/2018	1/24/2018	
	Make Up Oil Added	1 qt		1.5 qts	1.25 qts		0 qts	0.9 qts	
ALUMINUM	3	4	4	4	3	4	4	6	
CHROMIUM	14	20	18	18	17	19	22	23	
IRON	29	37	36	38	34	36	40	78	
COPPER	10	18	14	14	13	15	16	13	
LEAD	4350	4157	5054	4865	4348	4121	4286	7959	
TIN	0	1	1	1	1	1	1	2	
MOLYBDENUM	5	6	6	6	5	6	7	7	
NICKEL	14	7	10	9	5	5	6	28	
MANGANESE	0	1	1	1	1	1	1	1	
SILVER	0	0	0	0	0	0	0	0	
TITANIUM	0	0	1	0	0	0	0	1	
POTASSIUM	0	0	0	0	0	2	0	1	
BORON	0	1	2	1	0	0	1	1	
SILICON	7	9	17	7	7	7	8	8	
SODIUM	0	1	2	1	1	1	1	2	
CALCIUM	6	6	7	5	8	7	7	26	
MAGNESIUM	0	0	0	0	0	0	1	1	
PHOSPHORUS	0	4	3	1	3	1	5	335	
ZINC	1	6	2	1	3	4	7	8	
BARIUM	0	0	0	0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	97.3	86-105	96.2	93.7	95.8	90.9	94.8
	cSt Viscosity @ 100°C	19.72	17.0-21.8	19.46	18.86	19.36	18.20	19.14
	Flashpoint in °F	475	>430	435	450	455	460	455
	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	0.4	0.4	0.4	0.4	0.3
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: K15165
REPORT DATE: 4/26/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660, 1639

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 24 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE: (813) 621-7476
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: Another nice report for the TSIO-550 in this SR22. It's been steady as a rock all year now, and those trends are an excellent indication that nothing unusual is going on under the cowl. We're not entirely sure where the silicon is coming from, but it's probably from Dow-4 or another silicone product. If it were from dirt, we'd expect it to be affecting wear. Blow-by is okay and no moisture or fuel was present. Insolubles look good at 0.4%. Even with silicon, nice report.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	24	UNIT / LOCATION AVERAGES	22	15	15	18	16	UNIVERSAL AVERAGES
	MI/HR on Unit	164		141	119	104	89	72	
	Sample Date	4/17/2018		3/29/2018	2/28/2018	2/13/2018	1/24/2018	1/8/2018	
	Make Up Oil Added	1.5 qts		1.25 qts		0 qts	0.9 qts	1 qt	
	ALUMINUM	4		4	3	4	4	4	
	CHROMIUM	18		18	17	19	22	21	
	IRON	36		38	34	36	40	36	
	COPPER	14		19	14	13	15	19	
	LEAD	5054		4133	4865	4348	4121	4286	
	TIN	1	1	1	1	1	1	1	2
	MOLYBDENUM	6	7	6	5	6	7	6	7
	NICKEL	10	6	9	5	5	6	4	28
	MANGANESE	1	1	1	1	1	1	1	1
	SILVER	0	0	0	0	0	0	0	0
	TITANIUM	1	0	0	0	0	0	0	1
	POTASSIUM	0	0	0	0	2	0	1	1
	BORON	2	1	1	0	0	1	1	1
	SILICON	17	10	7	7	7	8	9	8
	SODIUM	2	1	1	1	1	1	1	2
	CALCIUM	7	6	5	8	7	7	7	26
	MAGNESIUM	0	1	0	0	0	1	1	1
	PHOSPHORUS	3	4	1	3	1	5	2	338
	ZINC	2	7	1	3	4	7	8	8
	BARIUM	0	0	0	0	0	0	0	0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	96.2	86-105	93.7	95.8	90.9	94.8	91.0
	cSt Viscosity @ 100°C	19.46	17.0-21.8	18.86	19.36	18.20	19.14	18.22
	Flashpoint in °F	435	>430	450	455	460	455	430
	Fuel %	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	TR
	Antifreeze %	-		-	-	-	-	-
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.4	<0.6	0.4	0.4	0.4	0.3	0.4
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: K11948
REPORT DATE: 4/13/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660, 1639

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 22 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE: (813) 621-7476
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: We like the looks of this latest sample. We'd noted a trend of increasing lead (from blow-by) last time, but it's come to an end here, and that's great because this level is entirely appropriate for the interval. As for the wear metals, they're once again in great shape. There's only some very minor increases, which is impressive considering this was a ~50% longer oil run. We don't see any sign of a mechanical problem and no contamination or other issues were found with the oil's physical properties. Keep up the good work with this Cirrus. It's doing great!

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	22	UNIT / LOCATION AVERAGES	15	15	18	16	19	UNIVERSAL AVERAGES
	MI/HR on Unit	141		119	104	89	72	56	
	Sample Date	3/29/2018		2/28/2018	2/13/2018	1/24/2018	1/8/2018	12/18/2017	
	Make Up Oil Added	1.25 qts			0 qts	0.9 qts	1 qt	1 qt	
	ALUMINUM	4		3	4	4	4	5	
	CHROMIUM	18		17	19	22	21	26	
	IRON	38		34	36	40	36	44	
	COPPER	14		13	15	16	19	30	
	LEAD	4865		4348	4121	4286	3621	3969	
ELEMENTS IN PARTS PER MILLION	TIN	1	UNIT / LOCATION AVERAGES	1	1	1	1	2	UNIVERSAL AVERAGES
	MOLYBDENUM	6		5	6	7	6	8	
	NICKEL	9		5	5	6	4	4	
	MANGANESE	1		1	1	1	1	1	
	SILVER	0		0	0	0	0	0	
	TITANIUM	0		0	0	0	0	0	
	POTASSIUM	0		0	2	0	1	0	
	BORON	1		0	0	1	1	1	
	SILICON	7		7	7	8	9	13	
	SODIUM	1		1	1	1	1	2	
	CALCIUM	5		8	7	7	7	6	
	MAGNESIUM	0		0	0	1	1	1	
	PHOSPHORUS	1		3	1	5	2	7	
	ZINC	1		3	4	7	8	11	
	BARIUM	0		0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	93.7	86-105	95.8	90.9	94.8	91.0	93.5
	cSt Viscosity @ 100°C	18.86	17.0-21.8	19.36	18.20	19.14	18.22	18.82
	Flashpoint in °F	450	>430	455	460	455	430	460
	Fuel %	<0.5	<1.0	<0.5	<0.5	<0.5	TR	<0.5
	Antifreeze %	-	-	-	-	-	-	-
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.4	<0.6	0.4	0.4	0.3	0.4	0.4
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: K03863

UNIT ID: N262WH

REPORT DATE: 3/14/2018

CLIENT ID: 96552

CODE: 20/32

PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50

FUEL TYPE: Gasoline (Leaded)

OIL USE INTERVAL: 15 Hours

ADDITIONAL INFO: Cirrus SR22, S/N: 1034660, 1639

CLIENT

JIM STROH

PHONE: (813) 679-7474

935 MAIN ST

FAX:

SUITE D3

ALT PHONE: (813) 621-7476

SAFETY HARBOR, FL 34695

EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: We're happy to hear this engine is running well. These results agree and don't show any obvious issues. Wear metals are steady compared to last time, which is nice to see after using a similar interval. One thing to note is the increased lead. This is the most 100LL blow-by on a per-hour basis in recent memory, but that could simply be the result of higher power settings or flying at higher altitudes. It isn't high enough to flag or call a problem, but if it continues to climb, we may change our stance. We like these results overall, so just keep up the good work!

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	15	UNIT / LOCATION AVERAGES	15	18	16	19	15	UNIVERSAL AVERAGES
	MI/HR on Unit	119		104	89	72	56	37	
	Sample Date	2/28/2018		2/13/2018	1/24/2018	1/8/2018	12/18/2017	11/28/2017	
	Make Up Oil Added			0 qts	0.9 qts	1 qt	1 qt	1.5 qts	
	ALUMINUM	3	4	4	4	4	5	4	6
	CHROMIUM	17	21	19	22	21	26	22	23
	IRON	34	38	36	40	36	44	37	78
	COPPER	13	20	15	16	19	30	28	13
	LEAD	4348	3857	4121	4286	3621	3969	2799	8010
	TIN	1	1	1	1	1	2	2	2
	MOLYBDENUM	5	7	6	7	6	8	8	7
	NICKEL	5	5	5	6	4	4	5	28
	MANGANESE	1	1	1	1	1	1	1	1
	SILVER	0	0	0	0	0	0	0	0
	TITANIUM	0	0	0	0	0	0	0	1
	POTASSIUM	0	1	2	0	1	0	0	1
	BORON	0	1	0	1	1	1	1	1
	SILICON	7	9	7	8	9	13	10	8
	SODIUM	1	1	1	1	1	2	2	2
	CALCIUM	8	6	7	7	7	6	3	26
	MAGNESIUM	0	1	0	1	1	1	1	1
	PHOSPHORUS	3	5	1	5	2	7	10	345
	ZINC	3	9	4	7	8	11	20	8
	BARIUM	0	0	0	0	0	0	0	0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	95.8	86-105	90.9	94.8	91.0	93.5	93.9
	cSt Viscosity @ 100°C	19.36	17.0-21.8	18.20	19.14	18.22	18.82	18.91
	Flashpoint in °F	455	>430	460	455	430	460	440
	Fuel %	<0.5	<1.0	<0.5	<0.5	TR	<0.5	<0.5
	Antifreeze %	-		-	-	-	-	-
	Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.4	<0.6	0.4	0.3	0.4	0.4	0.2
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: J94647
REPORT DATE: 2/2/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Continental TSIO-550-K	OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 18 Hours
	ADDITIONAL INFO: Cirrus SR22, S/N: 1034660	

CLIENT	JIM STROH	PHONE: (813) 679-7474
	935 MAIN ST	FAX:
	SUITE D3	ALT PHONE:
	SAFETY HARBOR, FL 34695	EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS	JIM: We're not sure what's causing the right mag to misfire randomly, but it doesn't seem to be affecting wear that we can see. The metals are holding low and steady compared to past samples and copper even saw another slight improvement. Even the trace of fuel that showed up last time disappeared for this sample. Once you fix the mag issue, you should be good to go with this TSIO-550-K. The air and oil filters kept silicon and insolubles low. No problems on this end at 89.4 hours SNew.
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	18	UNIT / LOCATION AVERAGES	16	19	15			UNIVERSAL AVERAGES
	MI/HR on Unit	89		72	56	37			
	Sample Date	1/24/2018		1/8/2018	12/18/2017	11/28/2017			
	Make Up Oil Added	0.9 qts		1 qt	1 qt	1.5 qts			
	ALUMINUM	4	4	4	5	4			6
	CHROMIUM	22	23	21	26	22			23
	IRON	40	39	36	44	37			79
	COPPER	16	23	19	30	28			13
	LEAD	4286	3669	3621	3969	2799			8051
	TIN	1	2	1	2	2			2
	MOLYBDENUM	7	7	6	8	8			7
	NICKEL	6	5	4	4	5			29
	MANGANESE	1	1	1	1	1			1
	SILVER	0	0	0	0	0			0
	TITANIUM	0	0	0	0	0			1
	POTASSIUM	0	0	1	0	0			1
	BORON	1	1	1	1	1			1
	SILICON	8	10	9	13	10			8
	SODIUM	1	2	1	2	2			2
CALCIUM	7	6	7	6	3			26	
MAGNESIUM	1	1	1	1	1			1	
PHOSPHORUS	5	6	2	7	10			351	
ZINC	7	12	8	11	20			8	
BARIUM	0	0	0	0	0			0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	94.8	86-105	91.0	93.5	93.9
	cSt Viscosity @ 100°C	19.14	17.0-21.8	18.22	18.82	18.91
	Flashpoint in °F	455	>430	430	460	440
	Fuel %	<0.5	<1.0	TR	<0.5	<0.5
	Antifreeze %	-	-	-	-	-
	Water %	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.3	<0.6	0.4	0.4	0.2
	TBN					
	TAN					
	ISO Code					

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: J91960
REPORT DATE: 1/22/2018
CODE: 20/32

UNIT ID: N262WH
CLIENT ID: 96552
PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 16 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE:
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: N262WH has produced a great-looking sample here at 71.8 hours SNew. Copper improved enough this time to dodge the mark, showing that residual wear-in has just about all washed out. Copper may decrease a bit more in the future, but it's not a problem if that doesn't happen. This level of copper is low enough that we don't suspect any poor wear is occurring at brass/bronze parts. A trace of fuel turned up, but that's harmless and likely from normal operation. Insolubles at 0.4% shows proper oil filtration. Nice report! Just keep on flying and check back on trends.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	16	UNIT / LOCATION AVERAGES	19	15				
	MI/HR on Unit	72		56	37				
	Sample Date	1/8/2018		12/18/2017	11/28/2017				
	Make Up Oil Added	1 qt		1 qt	1.5 qts				
	ALUMINUM	4		5	4				6
	CHROMIUM	21		26	22				23
	IRON	36		44	37				79
	COPPER	19		30	28				13
	LEAD	3621		3969	2799				8058
ELEMENTS IN PARTS PER MILLION	TIN	1	2	2	2				2
	MOLYBDENUM	6	7	8	8				7
	NICKEL	4	4	4	5				29
	MANGANESE	1	1	1	1				1
	SILVER	0	0	0	0				0
	TITANIUM	0	0	0	0				1
	POTASSIUM	1	0	0	0				1
	BORON	1	1	1	1				1
	SILICON	9	11	13	10				8
	SODIUM	1	2	2	2				2
	CALCIUM	7	5	6	3				26
	MAGNESIUM	1	1	1	1				1
	PHOSPHORUS	2	6	7	10				351
	ZINC	8	13	11	20				8
	BARIUM	0	0	0	0				0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	91.0	86-105	93.5	93.9			
	cSt Viscosity @ 100°C	18.22	17.0-21.8	18.82	18.91			
	Flashpoint in °F	430	>430	460	440			
	Fuel %	TR	<1.0	<0.5	<0.5			
	Antifreeze %	-		-	-			
	Water %	0.0	0.0	0.0	0.0			
	Insolubles %	0.4	<0.6	0.4	0.2			
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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OIL REPORT

LAB NUMBER: J88107

UNIT ID: N262WH

REPORT DATE: 1/3/2018

CLIENT ID: 96552

CODE: 20/32

PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 19 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE:
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: Overall, these numbers are steady compared to last time. We were hoping to find some improvements as wear-in material worked its way out, but maybe there was still some wearing in to do. By the time this engine has about 100 hours on it, copper should be closer to the average range. Other metals are already there and copper didn't go up much, so we aren't too worried about excess wear. If oil consumption is stabilizing and the oil filter is free of excess metal, just check back at the next service for another look. We'll keep an eye on things from here.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	19	UNIT / LOCATION AVERAGES	15						UNIVERSAL AVERAGES
	MI/HR on Unit	56		37						
	Sample Date	12/18/2017		11/28/2017						
	Make Up Oil Added	1 qt		1.5 qts						
	ALUMINUM	5	5	4						6
	CHROMIUM	26	24	22						23
	IRON	44	41	37						79
	COPPER	30	29	28						13
	LEAD	3969	3384	2799						8087
	TIN	2	2	2						2
	MOLYBDENUM	8	8	8						7
	NICKEL	4	5	5						29
	MANGANESE	1	1	1						1
	SILVER	0	0	0						0
	TITANIUM	0	0	0						1
	POTASSIUM	0	0	0						1
	BORON	1	1	1						1
	SILICON	13	12	10						8
	SODIUM	2	2	2						2
	CALCIUM	6	5	3						26
	MAGNESIUM	1	1	1						1
	PHOSPHORUS	7	9	10						354
	ZINC	11	16	20						8
	BARIUM	0	0	0						0

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	93.5	86-105	93.9				
	cSt Viscosity @ 100°C	18.82	17.0-21.8	18.91				
	Flashpoint in °F	460	>430	440				
	Fuel %	<0.5	<1.0	<0.5				
	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: J83227

UNIT ID: N262WH

REPORT DATE: 12/12/2017

CLIENT ID: 96552

CODE: 20/32

PAYMENT: CC: Visa

UNIT

MAKE/MODEL: Continental TSIO-550-K
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Cirrus SR22, S/N: 1034660

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 15 Hours

CLIENT

JIM STROH
935 MAIN ST
SUITE D3
SAFETY HARBOR, FL 34695

PHONE: (813) 679-7474
FAX:
ALT PHONE:
EMAIL: jim.stroh@proggex.com, steve@leadingedgeaviation.com

COMMENTS

JIM: Thanks for the notes. You've found a worthy successor with this SR22. Universal averages show typical wear levels for the TSIO-550-K with oil run 40 hours. You've got some extra copper here, but that's perfectly normal at this point. Most of the copper is residual from wear-in and that should already be on its way to completely washing out now that the oil has been changed twice. Other metals are already at good levels so we'll just be looking for them to track steadily from here. No fuel or water was found. Looks good so far! Just check back to see how metals trend.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	15	UNIT / LOCATION AVERAGES							UNIVERSAL AVERAGES
	MI/HR on Unit	37								
	Sample Date	11/28/2017								
	Make Up Oil Added	1.5 qts								
	ALUMINUM	4		4						
	CHROMIUM	22		22						
	IRON	37		37						
	COPPER	28		28						
	LEAD	2799		2799						
	TIN	2		2						
	MOLYBDENUM	8		8						
	NICKEL	5		5						
	MANGANESE	1		1						
	SILVER	0		0						
	TITANIUM	0		0						
	POTASSIUM	0		0						
	BORON	1		1						
	SILICON	10		10						
	SODIUM	2		2						
	CALCIUM	3		3						
	MAGNESIUM	1		1						
	PHOSPHORUS	10		10						
	ZINC	20		20						
	BARIUM	0		0						

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	93.9	86-105					
	cSt Viscosity @ 100°C	18.91	17.0-21.8					
	Flashpoint in °F	440	>430					
	Fuel %	<0.5	<1.0					
	Antifreeze %	-						
	Water %	0.0	0.0					
	Insolubles %	0.2	<0.6					
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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