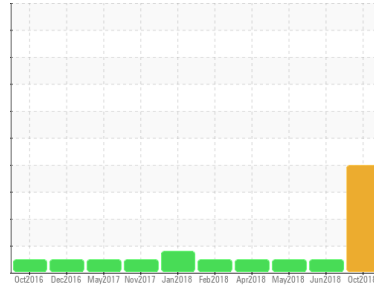




PROBLEM SUMMARY

Area
(N580CX)
 Machine Id
BEECHCRAFT TH2277/1001703
 Component
Right Piston Aircraft Engine
 Fluid
SHELL AEROSHELL W 15W50 MGR (11 LTR)

Sample Rating Trend

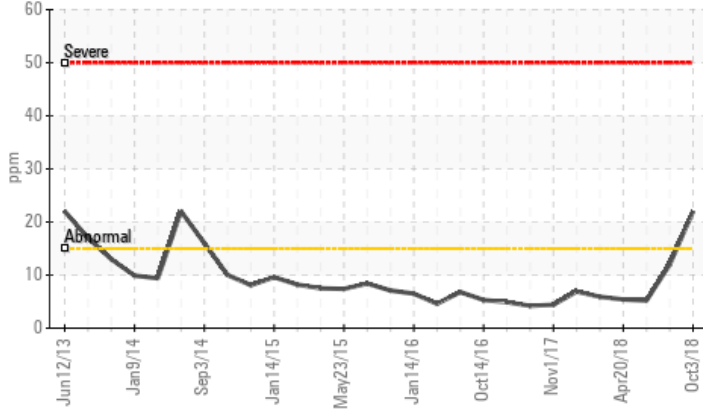


WEAR PARTICLES

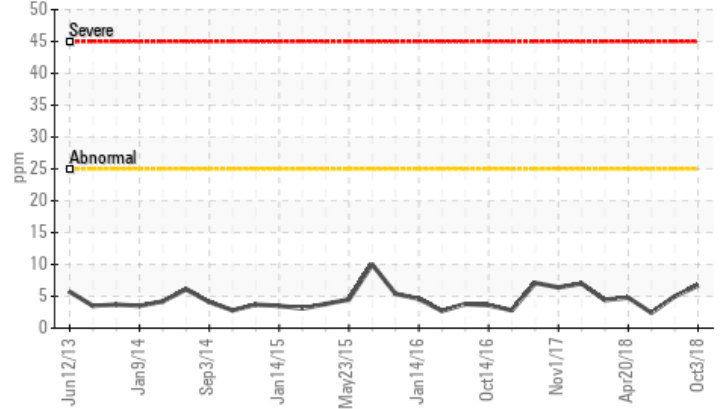


COMPONENT CONDITION SUMMARY

▲ Silicon (ppm)



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	NORMAL	
Aluminum	ppm	ASTM D5185(m)	>25	▲ 7	5	2
Ferrous Cutting	Scale 0-10	ASTM D7684		▲ 3		
Silicon	ppm	ASTM D5185(m)	>15	▲ 22	12	5
Filter Image 1					no image	no image
Filter Image 2					no image	no image

Customer Id: CUSANY
 Sample No.: WC1234567
 Lab Number: 01234567
 Test Package: AVI 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1
 (905)569-8600 x4641
Bill.Quesnel@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (905)569-8600 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	MISSED	Jan 30 2019	?	We recommend you service the filters on this component.
Resample	MISSED	Jan 30 2019	?	We recommend an early resample to monitor this condition.
Check Dirt Access	MISSED	Jan 30 2019	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

04 Jun 2018 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



04 May 2018 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report



20 Apr 2018 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

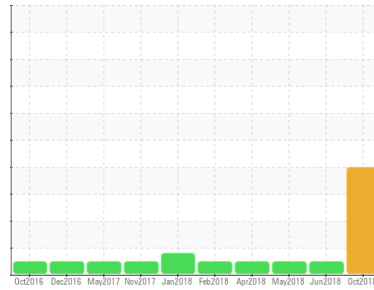
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR PARTICLES



Area
(N580CX)
Machine Id
BEECHCRAFT TH2277/1001703
Component
Right Piston Aircraft Engine
Fluid
SHELL AEROSHELL W 15W50 MGR (11 LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

▲ Wear

Wear particle analysis indicates that the ferrous cutting particles (stringers) are abnormal. Aluminum ppm levels are noted.

▲ Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number			WC995021	WC916249	WC916250
Sample Date			03 Oct 2018	04 Jun 2018	04 May 2018
TSN	hrs		1190	1157	1151
TSO	hrs		1190	0	0
Oil Age	hrs		33	7	6
Oil Changed			Changed	Changed	Not Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	ASTM D3524	>4.0	<1.0	<1.0	<1.0
Glycol	ASTM D2982		NEG	NEG	NEG

WEAR METALS

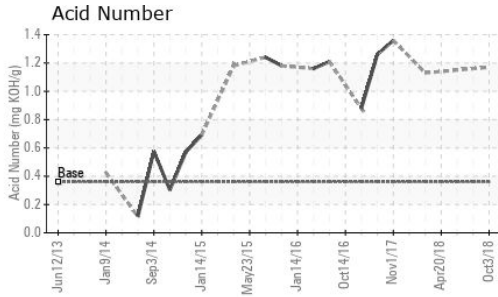
	method	limit/base	current	history 1	history 2
PQ	In-house		6	---	---
Iron	ppm ASTM D5185(m)	>90	39	25	27
Chromium	ppm ASTM D5185(m)	>20	12	9	8
Nickel	ppm ASTM D5185(m)	>15	12	12	15
Titanium	ppm ASTM D5185(m)		<1	<1	<1
Silver	ppm ASTM D5185(m)		0	0	0
Aluminum	ppm ASTM D5185(m)	>25	▲ 7	5	2
Lead	ppm ASTM D5185(m)	>20000	6334	1652	1993
Copper	ppm ASTM D5185(m)	>25	12	6	5
Tin	ppm ASTM D5185(m)	>30	0	<1	0
Antimony	ppm ASTM D5185(m)		0	0	0
Vanadium	ppm ASTM D5185(m)		0	0	0
Beryllium	ppm ASTM D5185(m)		0	0	0
Cadmium	ppm ASTM D5185(m)		2	<1	<1

FERROGRAPHY

	method	limit/base	current	history 1	history 2
Ferrous Rubbing	Scale 0-10 ASTM D7684		2		
Ferrous Sliding	Scale 0-10 ASTM D7684				
Ferrous Cutting	Scale 0-10 ASTM D7684		▲ 3		
Ferrous Rolling	Scale 0-10 ASTM D7684		1		
Ferrous Break-in	Scale 0-10 ASTM D7684				
Ferrous Spheres	Scale 0-10 ASTM D7684				
Ferrous Black Oxides	Scale 0-10 ASTM D7684				
Ferrous Red Oxides	Scale 0-10 ASTM D7684				
Ferrous Corrosive	Scale 0-10 ASTM D7684				
Ferrous Other	Scale 0-10 ASTM D7684				
Nonferrous Rubbing	Scale 0-10 ASTM D7684				
Nonferrous Sliding	Scale 0-10 ASTM D7684				
Nonferrous Cutting	Scale 0-10 ASTM D7684				
Nonferrous Rolling	Scale 0-10 ASTM D7684				
Nonferrous Other	Scale 0-10 ASTM D7684				
Sand/Dirt	Scale 0-10 ASTM D7684		2		
Fibres	Scale 0-10 ASTM D7684				
Spheres	Scale 0-10 ASTM D7684				
Other	Scale 0-10 ASTM D7684		2		
Patch Weight	mg ASTM D7684		162	---	---



OIL ANALYSIS REPORT



ADDITIVES	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)	<1	<1	0
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	5	4	2
Manganese	ppm	ASTM D5185(m)	<1	1	0
Magnesium	ppm	ASTM D5185(m)	10	<1	<1
Calcium	ppm	ASTM D5185(m)	10	8	2
Phosphorus	ppm	ASTM D5185(m)	1280	1093	1287
Zinc	ppm	ASTM D5185(m)	10	14	3
Sulfur	ppm	ASTM D5185(m)	1800	1837	3220
Lithium	ppm	ASTM D5185(m)		0	<1

CONTAMINANTS	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>15	▲ 22	12
Sodium	ppm	ASTM D5185(m)		<1	0
Potassium	ppm	ASTM D5185(m)	>20	<1	1

FLUID DEGRADATION	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974	.36	1.17	---

VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	Visual	NONE	NONE	VLITE
Yellow Metal	scalar	Visual	NONE	NONE	NONE
Precipitate	scalar	Visual	NONE	NONE	NONE
Silt	scalar	Visual	NONE	LIGHT	VLITE
Debris	scalar	Visual	NONE	NONE	NONE
Sand/Dirt	scalar	Visual	NONE	NONE	NONE
Appearance	scalar	Visual	NORML	NORML	NORML
Odor	scalar	Visual	NORML	NORML	NORML
Emulsified Water	scalar	Visual	>0.1	NEG	NEG
Free Water	scalar	Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	19.9	17.8	17.1

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
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Filter Image 1				no image	no image
Filter Image 2				no image	no image



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 24 Oct 2018
Lab Number : 01234567 **Diagnosed** : 26 Oct 2018
Unique Number : 12345678 **Diagnostician** : Bill Quesnel
Test Package : AVI 2 (Additional Tests: PQ)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 (m) Denotes a modified test method, (e) Denotes a test conducted using an external laboratory.

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