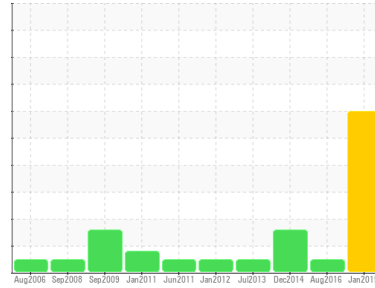




# PROBLEM SUMMARY

Sample Rating Trend



**WEAR**

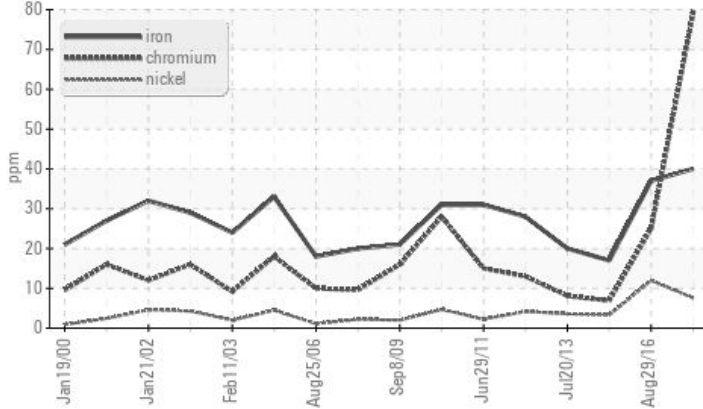


Area  
**(CGDAP)**  
 Machine Id  
**BEECH V-35 121080-6-B**

Component  
**Front Piston Aircraft Engine**  
 Fluid  
**PHILLIPS 66 AVIATION X/C OIL SAE20W50 (12 QTS)**

## COMPONENT CONDITION SUMMARY

### Ferrous Alloys



## RECOMMENDATION

We advise that you check the engine magneto timing. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status		SEVERE	NORMAL	ABNORMAL
Chromium	ppm ASTM D5185(m) >20	<b>79</b>	25	7

Customer Id: CUSANY  
 Sample No.: WC1234567  
 Lab Number: 01234567  
 Test Package: AVI 1



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Kevin Marson +1 (905)569-8600 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	MISSED	Feb 13 2020	?	We recommend an early resample to monitor this condition.
Check Timing	MISSED	Feb 13 2020	?	We advise that you check the engine magneto timing.

## HISTORICAL DIAGNOSIS

### 29 Aug 2016 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 component. The condition of the oil is acceptable for the time in service.

view report



### 16 Dec 2014 Diag: Kevin Marson

DIRT



We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate concentration of dirt present in the oil. The oil is no longer serviceable due to the presence of contaminants.

view report



### 20 Jul 2013 Diag: Bill Quesnel

NORMAL



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

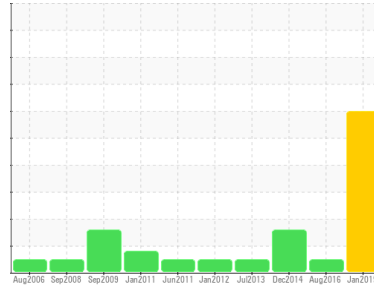
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**(CGDAP)**  
 Machine Id  
**BEECH V-35 121080-6-B**

Component  
**Front Piston Aircraft Engine**  
 Fluid  
**PHILLIPS 66 AVIATION X/C OIL SAE20W50 (12 QTS)**

## DIAGNOSIS

### Recommendation

We advise that you check the engine magneto timing. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Chromium ppm levels are severe. Ring wear is indicated. A cylinder ring may be cracked or broken.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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			<b>WC770089</b>	WC770087	WC770086
Sample Date			<b>03 Jan 2019</b>	29 Aug 2016	16 Dec 2014
TSN	hrs		<b>1361</b>	1177	2677
TSO	hrs		<b>1361</b>	1177	1052
Oil Age	hrs		<b>39</b>	74	22
Oil Changed			<b>Changed</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	NORMAL	ABNORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185(m)	>90	<b>40</b>	37	17
Chromium	ppm ASTM D5185(m)	>20	<b>79</b>	25	7
Nickel	ppm ASTM D5185(m)	>15	<b>8</b>	12	3
Titanium	ppm ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm ASTM D5185(m)	>25	<b>8</b>	10	6
Lead	ppm ASTM D5185(m)	>20000	<b>7823</b>	9967	3407
Copper	ppm ASTM D5185(m)	>25	<b>6</b>	6	8
Tin	ppm ASTM D5185(m)	>30	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)		<b>1</b>	2	3

## ADDITIVES

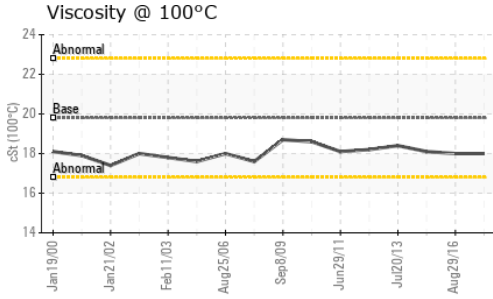
	method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185(m)		<b>0</b>	0	<1
Barium	ppm ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm ASTM D5185(m)		<b>&lt;1</b>	<1	0
Manganese	ppm ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm ASTM D5185(m)		<b>2</b>	<1	1
Calcium	ppm ASTM D5185(m)		<b>13</b>	7	6
Phosphorus	ppm ASTM D5185(m)		<b>13</b>	183	1292
Zinc	ppm ASTM D5185(m)		<b>12</b>	4	7
Sulfur	ppm ASTM D5185(m)		<b>989</b>	1354	2720
Lithium	ppm ASTM D5185(m)		<b>0</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m)	>15	<b>13</b>	32	▲ 30
Sodium	ppm ASTM D5185(m)		<b>0</b>	0	0
Potassium	ppm ASTM D5185(m)	>20	<b>0</b>	<1	1



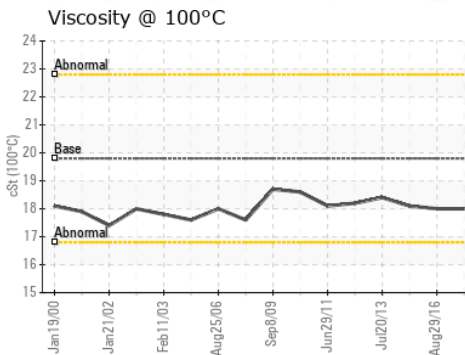
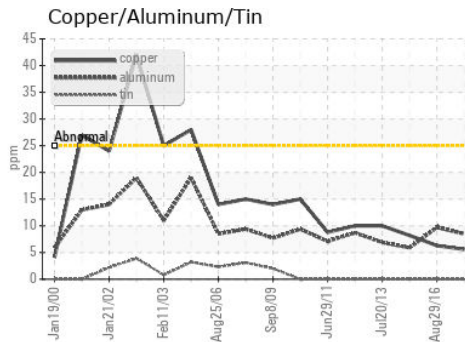
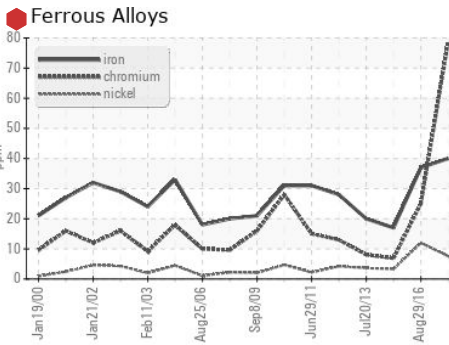
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 100°C	cSt	ASTM D7279(m)	19.8	<b>18.0</b>	18.0	18.1

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC1234567  
**Lab Number** : **01234567**  
**Unique Number** : 12345678  
**Test Package** : AVI 1  
**Received** : 10 Jan 2019  
**Diagnosed** : 10 Jan 2019  
**Diagnostician** : Kevin Marson

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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 F: (305)555-1222