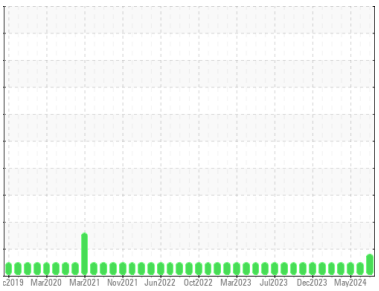
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
(C-FECP)
Machine Id
[C-FECP] DIAMOND DA20 650000
Component
Piston Aircraft Engine
Fluid
SHELL AEROSHELL OIL W 100 PLUS (6 LTR)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

Wear
Iron ppm levels are marginal. A sharp increase in the iron level is noted. All other component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0956619**	WC0936586	WC0936595
Sample Date		Client Info		**17 Jun 2024**	24 May 2024	02 May 2024
TSN	hrs	Client Info		**0**	0	0
TSO	hrs	Client Info		**2295**	2251	2214
Oil Age	hrs	Client Info		**45**	37	57
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.1	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

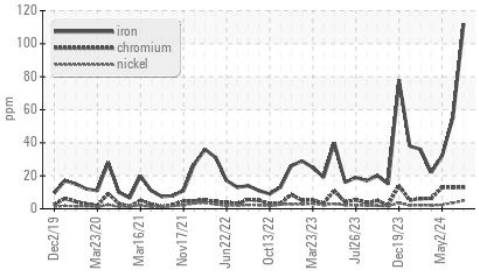
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**62**	---	---
Iron	ppm	ASTM D5185(m)	>90	▲ **112**	55	32
Chromium	ppm	ASTM D5185(m)	>20	**13**	13	13
Nickel	ppm	ASTM D5185(m)	>15	**5**	4	2
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>5	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**5**	4	6
Lead	ppm	ASTM D5185(m)	>20000	**4997**	4550	6118
Copper	ppm	ASTM D5185(m)	>25	**7**	5	5
Tin	ppm	ASTM D5185(m)	>30	**0**	0	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)		**<1**	<1	1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**11**	11	3
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**0**	<1	<1
Calcium	ppm	ASTM D5185(m)	0	**2**	5	<1
Phosphorus	ppm	ASTM D5185(m)		**1110**	1149	965
Zinc	ppm	ASTM D5185(m)	0	**7**	8	4
Sulfur	ppm	ASTM D5185(m)	2600	**2937**	3005	3113
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

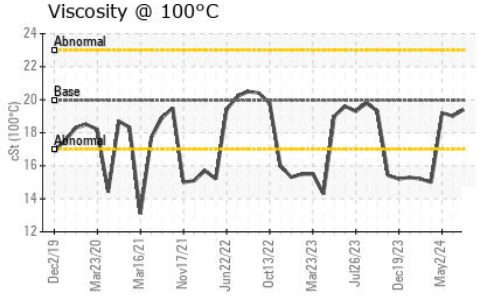
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**8**	8	6
Sodium	ppm	ASTM D5185(m)		**<1**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	0

OIL ANALYSIS REPORT

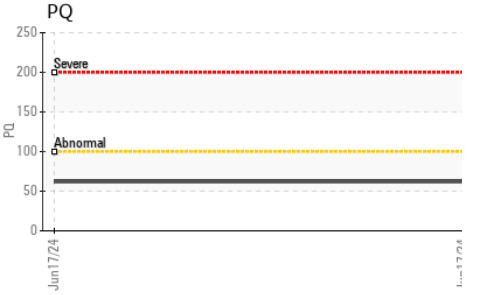
Ferrous Alloys



Viscosity @ 100°C



PQ

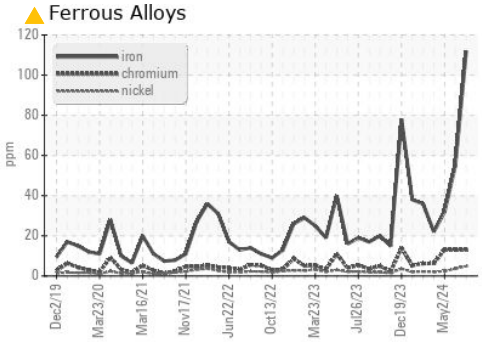


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	VLITE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

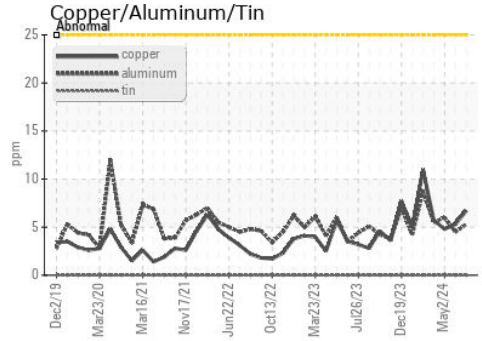
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	19.96	**19.4**	19.0	19.2

GRAPHS

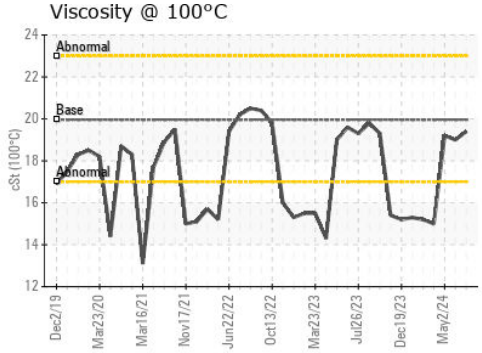
Ferrous Alloys



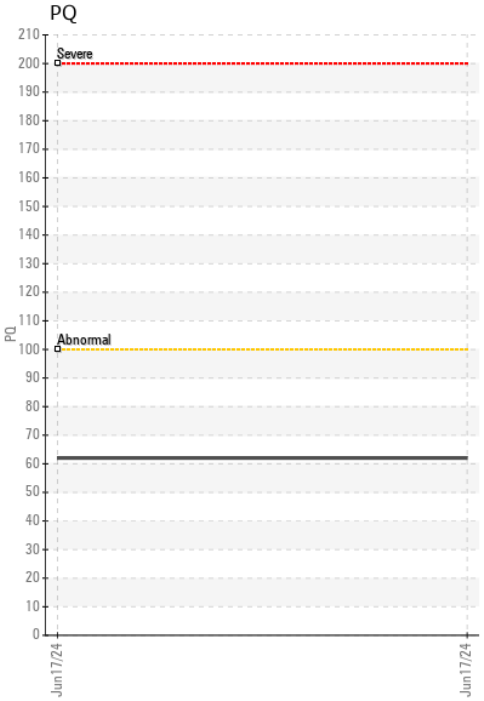
Copper/Aluminum/Tin



Viscosity @ 100°C



PQ



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0956619 **Received** : 25 Jun 2024
Lab Number : 02644034 **Tested** : 25 Jun 2024
Unique Number : 5801573 **Diagnosed** : 25 Jun 2024 - Kevin Marson
Test Package : AVI 1 (Additional Tests: PQ)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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