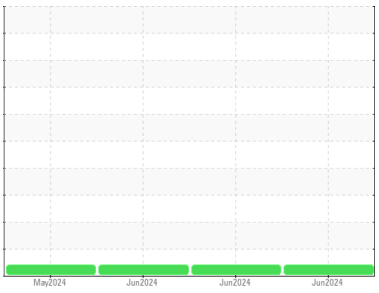
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
CARRIER 365 POW CHILLER (S/N 3811Q21049)
Component
Compressor
Fluid
COMP OIL (POE) ISO 68 (12 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition
Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PP0001129**	PP0001122	PP0001121
Sample Date		Client Info		**26 Jun 2024**	17 Jun 2024	12 Jun 2024
Machine Age	hrs	Client Info		**14035**	13827	13739
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>50	**1**	1	<1
Chromium	ppm	ASTM D5185(m)	>10	**0**	0	0
Nickel	ppm	ASTM D5185(m)		**<1**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>25	**0**	0	0
Copper	ppm	ASTM D5185(m)	>50	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>15	**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)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	5	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	5	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	5	**0**	0	<1
Calcium	ppm	ASTM D5185(m)	5	**0**	0	0
Phosphorus	ppm	ASTM D5185(m)	400	**1842**	1815	1795
Zinc	ppm	ASTM D5185(m)	5	**2**	2	3
Sulfur	ppm	ASTM D5185(m)	100	**28**	27	24
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**19**	21	22
Sodium	ppm	ASTM D5185(m)		**0**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>0.1	**0.016**	0.021	0.016
ppm Water	ppm	ASTM D6304*	>1000	**164**	215	163

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0.1**	---	---
Nitration	Abs/cm	ASTM D7624*		**4.3**	---	---
Sulfation	Abs/.1mm	ASTM D7415*		**177.3**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**221.0**	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	**0.09**	0.10	0.11

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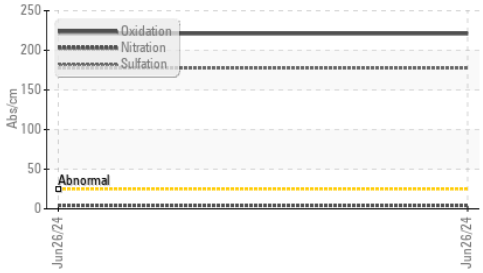
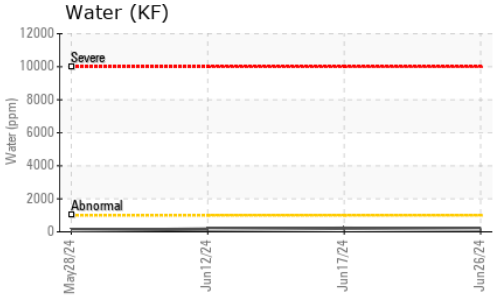
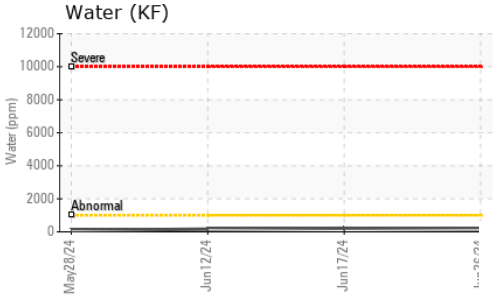
FT-IR (Direct Trend)



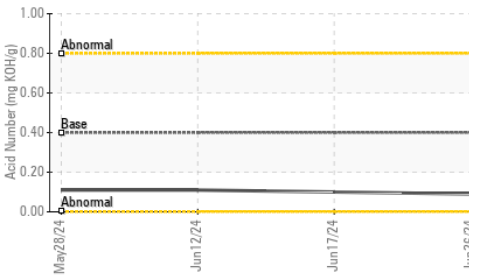
Water (KF)



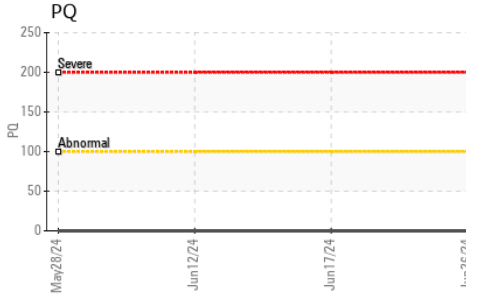
Water (KF)



Acid Number



PQ



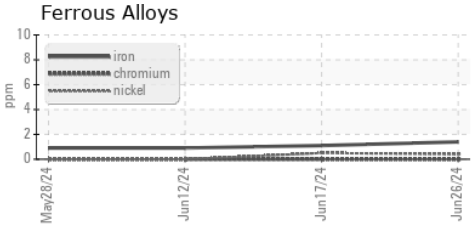
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**FREON**	FREON	FREON
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 @ 40°C	cSt	ASTM D7279(m)	68	▲ **48.0**	▲ 45.9	▲ 47.4

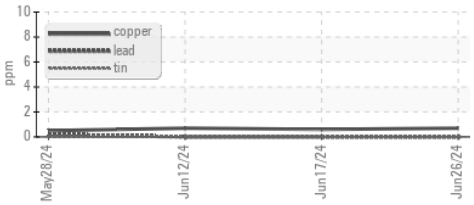
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

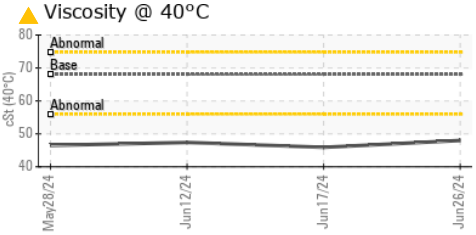
Ferrous Alloys



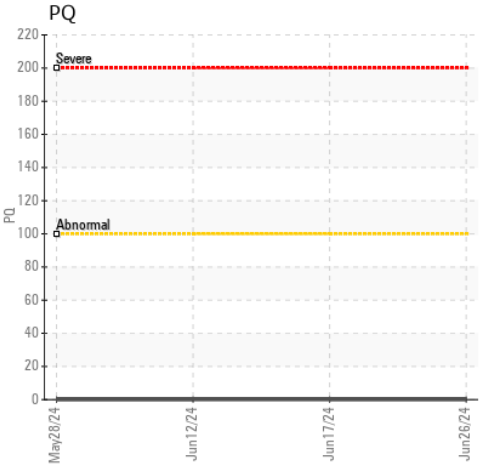
Non-ferrous Metals



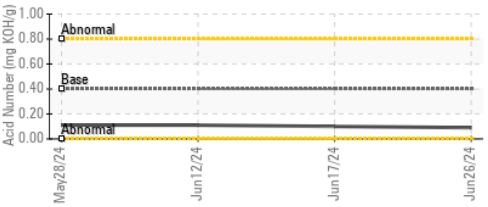
▲ Viscosity @ 40°C



PQ



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP0001129 **Received** : 26 Jun 2024
Lab Number : 02644281 **Tested** : 27 Jun 2024
Unique Number : 5801820 **Diagnosed** : 28 Jun 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: FT-IR, KF, TAN Man)

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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