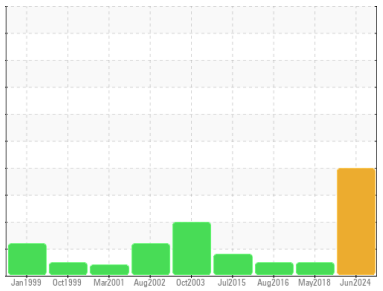
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
2
Machine Id
02-0030-000-010 HOPPER 3 GRP 1 (2M41) (S/N R122093)
Component
2 Gearbox
Fluid
SHELL OMALA S4 GXV 220 (6 LTR)

DIAGNOSIS

Recommendation
We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
PQ PQ levels are abnormal. Iron ppm levels are noted. Moderate concentration of visible metal present. Gear wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring.

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

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	history1	history2
Sample Number		Client Info		**WC0945377**	WC117172	WC965850
Sample Date		Client Info		**26 Jun 2024**	03 May 2018	08 Aug 2016
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		▲ **902**	95	27
Iron	ppm	ASTM D5185(m)	>200	● **475**	158	42
Chromium	ppm	ASTM D5185(m)	>15	**4**	2	<1
Nickel	ppm	ASTM D5185(m)	>15	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	<1	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>100	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>200	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>25	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**0**	<1	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)		**9**	<1	5
Barium	ppm	ASTM D5185(m)		**5**	23	<1
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**5**	2	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	1	0
Calcium	ppm	ASTM D5185(m)		**5**	13	3
Phosphorus	ppm	ASTM D5185(m)		**320**	473	419
Zinc	ppm	ASTM D5185(m)		**3**	2	3
Sulfur	ppm	ASTM D5185(m)		**5201**	2019	2633
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**5**	20	14
Sodium	ppm	ASTM D5185(m)		**<1**	3	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	1	0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.94**	0.788	0.831

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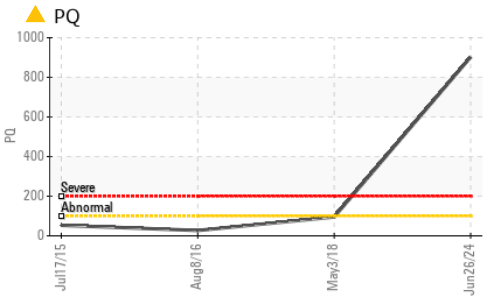
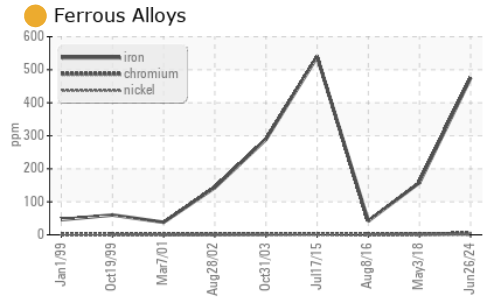
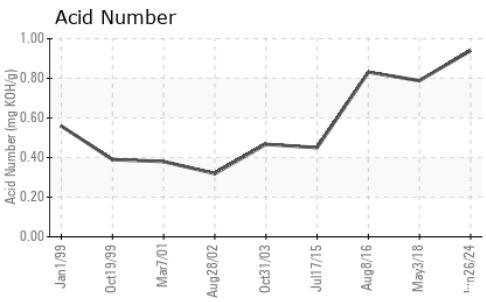
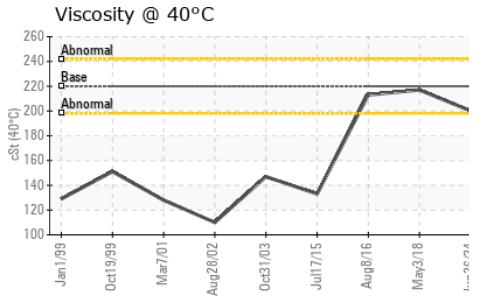


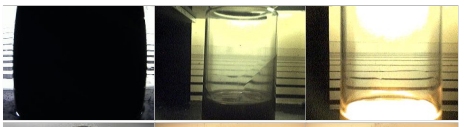
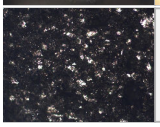




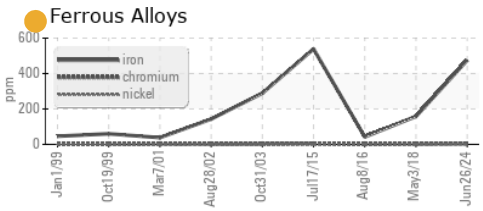


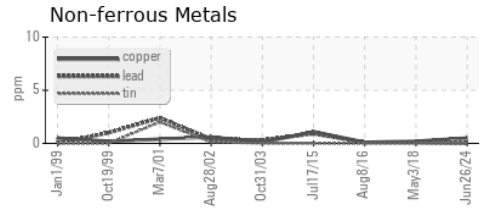
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ **LIGHT**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

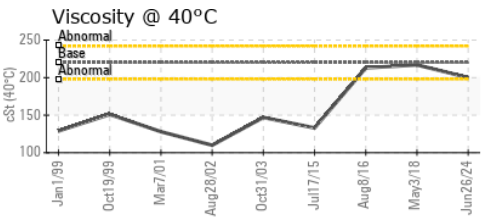
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	**200**	217	213

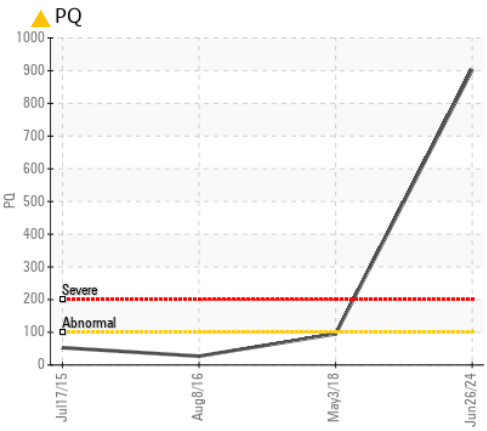
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter				*no image*	*no image*

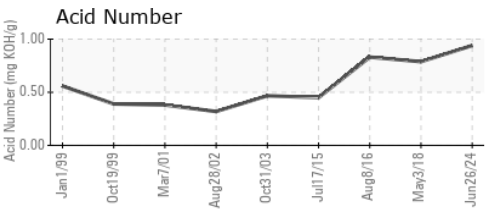
GRAPHS











ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0945377 **Received** : 02 Jul 2024
Lab Number : 02644998 **Tested** : 05 Jul 2024
Unique Number : 5802537 **Diagnosed** : 05 Jul 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FILTERPATCH, 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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