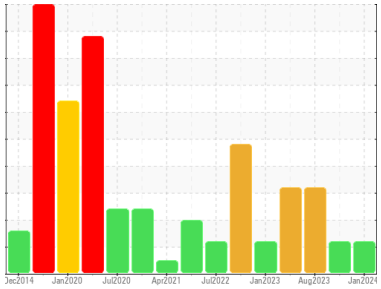
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BT-FOR-A2 (S/N TANK FT2 AGITATOR)
Component
Gearbox
Fluid
SHELL OMALA S2 GX 220 (--- GAL)

DIAGNOSIS

Recommendation
Filter oil if possible using B6=75 filter media or better. Resample at next normal interval.

Wear
Wear particles are low and acceptable.

Contamination
Particle contamination is elevated. Filtration can help extend machine life.

Fluid Condition
Fluid health indicators are acceptable for continued use provided that contamination can be brought under control.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000810**	PLS0000779	PLS0000568
Sample Date		Client Info		**31 Jan 2024**	25 Oct 2023	09 Aug 2023
Machine Age	mths	Client Info		**3**	0	0
Oil Age	mths	Client Info		**0**	1	0
Oil Changed		Client Info		**N/A**	Changed	N/A
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

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		**17**	38	28
Iron	ppm	ASTM D5185m	>200	**36**	65	70
Chromium	ppm	ASTM D5185m	>15	**0**	0	<1
Nickel	ppm	ASTM D5185m	>15	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	0	0
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**0**	0	<1
Tin	ppm	ASTM D5185m	>25	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6.2	**0**	0	0
Barium	ppm	ASTM D5185m	0.0	**<1**	0	<1
Molybdenum	ppm	ASTM D5185m	0	**0**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**4**	0	2
Calcium	ppm	ASTM D5185m	0.0	**4**	0	6
Phosphorus	ppm	ASTM D5185m	290	**299**	189	276
Zinc	ppm	ASTM D5185m	3.8	**28**	22	38
Sulfur	ppm	ASTM D5185m	8167	**9785**	8736	10402

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**2**	1	2
Sodium	ppm	ASTM D5185m		**0**	2	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0
Nitration	Abs/cm	*ASTM D7624		**3.0**	3.0	2.9
Sulfation	Abs/.1mm	*ASTM D7415		**12.1**	12.3	12.0

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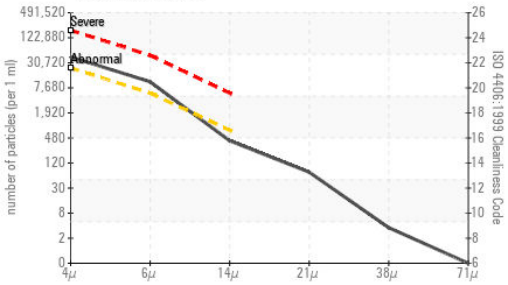
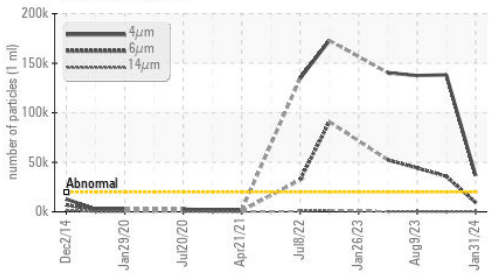
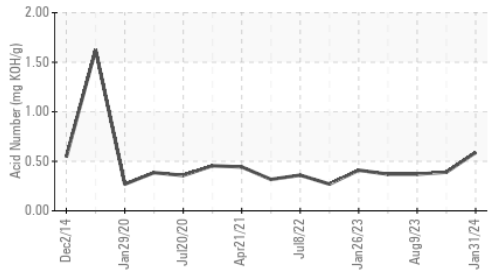
Particle Count



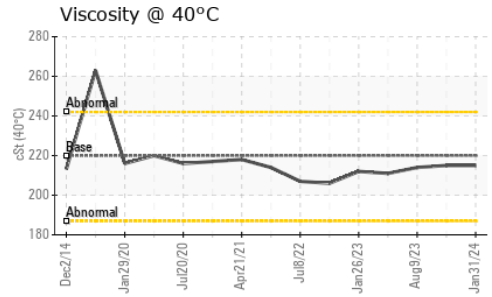
Particle Trend



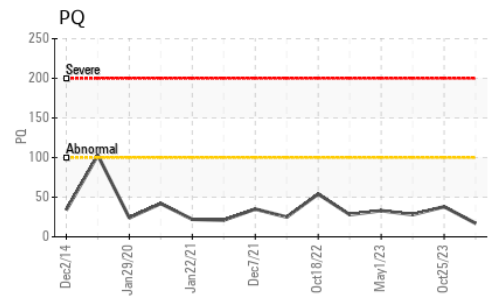
Acid Number



Viscosity @ 40°C



PQ



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **36698**	▲ 138272	▲ 137516
Particles >6µm		ASTM D7647	>5000	▲ **9348**	▲ 35742	⬢ 44240
Particles >14µm		ASTM D7647	>640	**362**	186	355
Particles >21µm		ASTM D7647	>160	**64**	17	25
Particles >38µm		ASTM D7647	>40	**3**	0	1
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/20/16**	▲ 24/22/15	⬢ 24/23/16

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**2.8**	3.3	3.0
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.59**	0.39	0.37

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	LIGHT
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 D445	220	**215**	215	214

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000810
Lab Number : 06077612
Unique Number : 10859703
Test Package : IND 2 (Additional Tests: FT-IR, PQ, PrtCount)

Received : 01 Feb 2024
Tested : 02 Feb 2024
Diagnosed : 09 Feb 2024 - Mike Johnson

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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