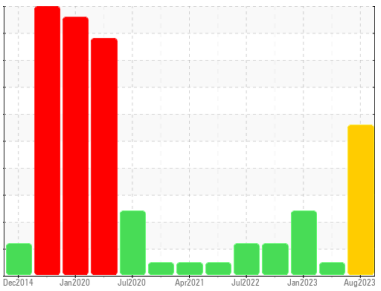
PROBLEM SUMMARY

Sample Rating Trend

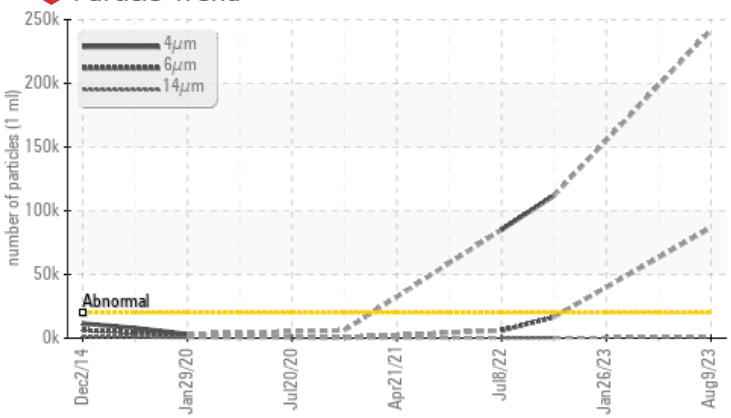


ISO

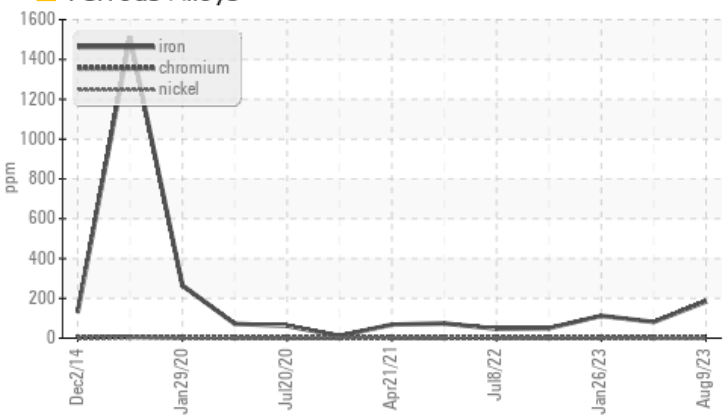
Machine Id
BT-FOR-A5 (S/N TANK FT5 AGITATOR)
Component
Gearbox
Fluid
SHELL OMALA S2 GX 220 (--- GAL)

COMPONENT CONDITION SUMMARY

Particle Trend



Ferrous Alloys



RECOMMENDATION

Filter oil if possible using B6=75 filter media or better. If filtration is not possible consider changing oil. No other action required at this time. Resample at next normal interval.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>200	▲ **184**	81	▲ 112
Particles >4µm		ASTM D7647	>20000	⬢ **241893**	---	---
Particles >6µm		ASTM D7647	>5000	⬢ **86767**	---	---
Particles >14µm		ASTM D7647	>640	▲ **1188**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	⬢ **25/24/17**	---	---
Appearance	scalar	*Visual	NORML	▲ **HAZY**	NORML	NORML

Customer Id: MOMBAY
Sample No.: PLS0000566
Lab Number: 05926005
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Mike Johnson +1 (615)771-6030
mike.johnson@amrri.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

01 May 2023 Diag: Mike Johnson

NORMAL

Ferrous wear rate is at above the trend line. The is sufficient visual evidence (above 40 micron particles) that a particle count could not be performed. If this unit is being sampled from a drain line RESAMPLE and be sure to flush the drain line before collecting the sample. The unit should be filtered using B6=75 quality filter media to remove particulate and wear debris.The Fe wear rate is elevated for both small and large particles. Other metals are stable. Particle count could not be provided due to the debris in the oil. Filtration is strongly recommended. Fluid health properties suggest oil is acceptable for continued use.

view report

26 Jan 2023 Diag: Mike Johnson

VISUAL METAL

Sample is contaminated with visible metal particles. No particle contamination tests were run. Resample immediately with correct sampling procedures and if metal is present in the sample, consider filtering or changing oil.Iron particles are elevated from previous samples. This can indicated accelerated wear. Fluid health indicators are acceptable for continued use provided that contamination can be controlled.

view report

18 Oct 2022 Diag: Mike Johnson

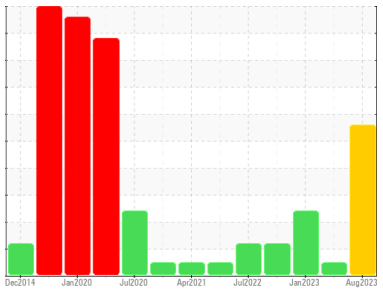
ISO

Particle counts are elevated. Filter oil if possible with B6=75 filter media or better. If filtration is not possible consider changing oil. No other action recommended at this time. Resample at next normal interval.Wear particles are low and acceptable. Particle contamination are elevated. This can cause accelerated wear and premature machine failure. Filter or change oil when possible. Fluid health is acceptable for continued use provided that contamination is brought under control.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BT-FOR-A5 (S/N TANK FT5 AGITATOR)
Component
Gearbox
Fluid
SHELL OMALA S2 GX 220 (--- GAL)

DIAGNOSIS

Recommendation
Filter oil if possible using B6=75 filter media or better. If filtration is not possible consider changing oil. No other action required at this time. Resample at next normal interval.

Wear
Iron wear particles are elevated from previous samples. Wear may be accelerating or sample methods may have changed.

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

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000566**	PLS0000705	PLS0000482
Sample Date		Client Info		**09 Aug 2023**	01 May 2023	26 Jan 2023
Machine Age	mths	Client Info		**0**	0	3
Oil Age	mths	Client Info		**0**	3	0
Oil Changed		Client Info		**N/A**	Changed	N/A
Sample Status				**SEVERE**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**64**	51	45
Iron	ppm	ASTM D5185m	>200	▲ **184**	81	▲ 112
Chromium	ppm	ASTM D5185m	>15	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>15	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	<1	0
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**<1**	0	0
Tin	ppm	ASTM D5185m	>25	**0**	<1	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	**<1**	0	0
Barium	ppm	ASTM D5185m	0.0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	0	**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**2**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**2**	0	2
Calcium	ppm	ASTM D5185m	0.0	**4**	<1	4
Phosphorus	ppm	ASTM D5185m	290	**256**	324	278
Zinc	ppm	ASTM D5185m	3.8	**35**	0	22
Sulfur	ppm	ASTM D5185m	8167	**10321**	13612	9575

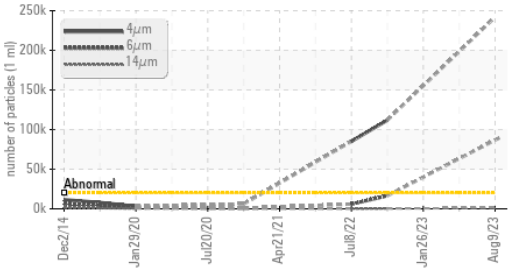
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**1**	1	1
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0
Nitration	Abs/cm	*ASTM D7624		**2.8**	3.0	3.2
Sulfation	Abs/.1mm	*ASTM D7415		**11.8**	12.2	12.2

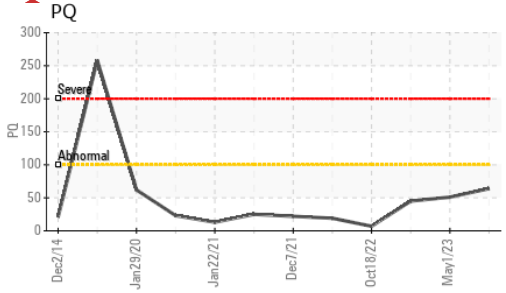
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	⬢ **241893**	---	---
Particles >6µm		ASTM D7647	>5000	⬢ **86767**	---	---
Particles >14µm		ASTM D7647	>640	▲ **1188**	---	---
Particles >21µm		ASTM D7647	>160	**193**	---	---
Particles >38µm		ASTM D7647	>40	**3**	---	---
Particles >71µm		ASTM D7647	>10	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	⬢ **25/24/17**	---	---

OIL ANALYSIS REPORT

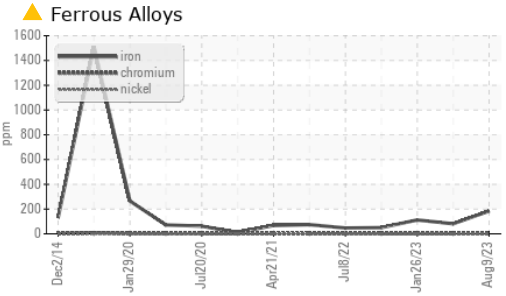
Particle Trend



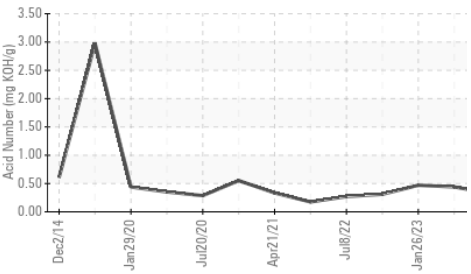
PQ



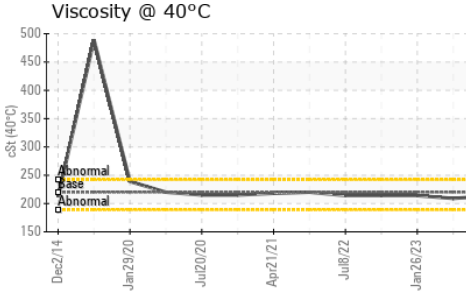
Ferrous Alloys



Acid Number



Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**3.1**	3.0	3.1
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.33**	0.44	0.47

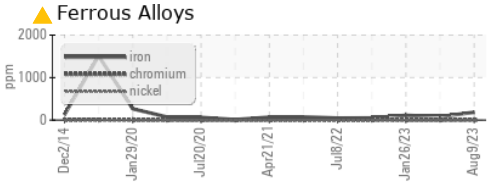
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	MODER	▲ MODER
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ LIGHT
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ **HAZY**	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	**213**	209	214

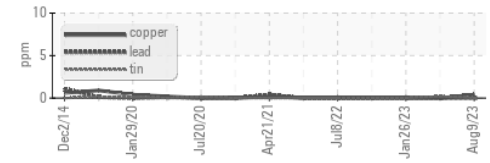
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

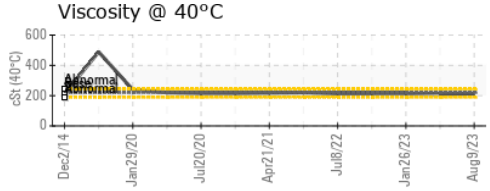
Ferrous Alloys



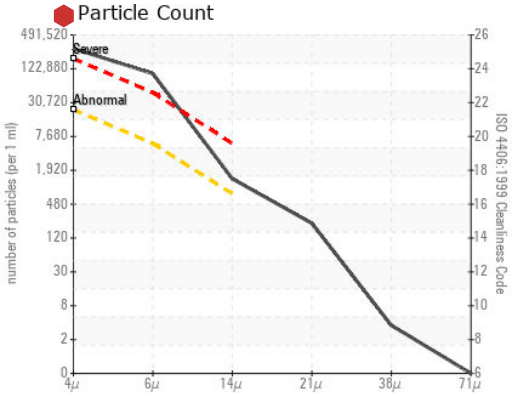
Non-ferrous Metals



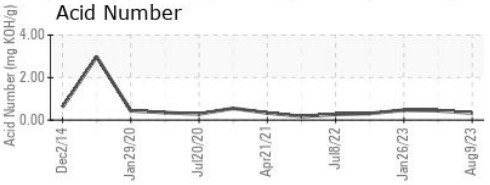
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000566 **Received** : 16 Aug 2023
Lab Number : 05926005 **Diagnosed** : 23 Aug 2023
Unique Number : 10605952 **Diagnostician** : Mike Johnson
Test Package : PLANT (Additional Tests: FT-IR, PrtCount)

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)

HEXION - BAYTOWN PLANT
8450 WEST BAY RD
BAYTOWN, TX
US 77520
Contact: BILL MINER
bill.miner@momentive.com
T:
F: