IND II

FLUID FORENSICS
ADVANCED OIL ANALYSIS SERVICES

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
BT-FOR-A7 (S/N TANK FT7 AGITATOR)
Component
Gearbox
Fluid
SHELL OMALA S2 GX 220 (--- GAL)

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. This could indicate accelerated wear.

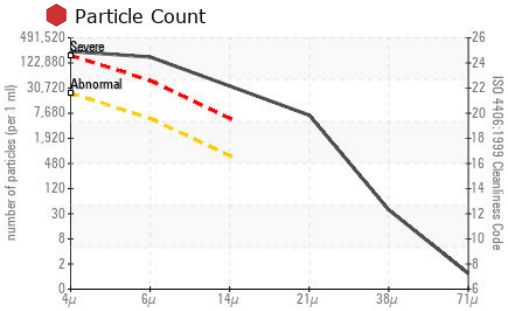
CONTAMINATION

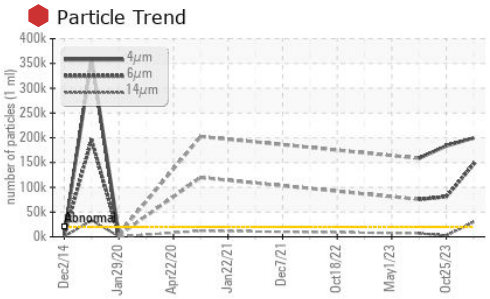
Particle contamination is highly elevated. Filtration can help extend machine life.

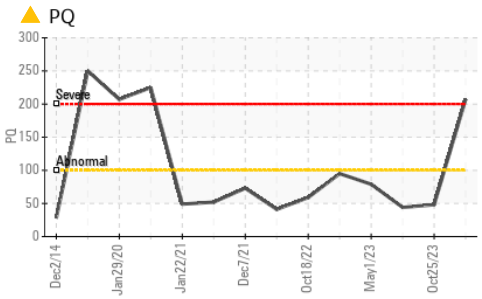
FLUID CONDITION

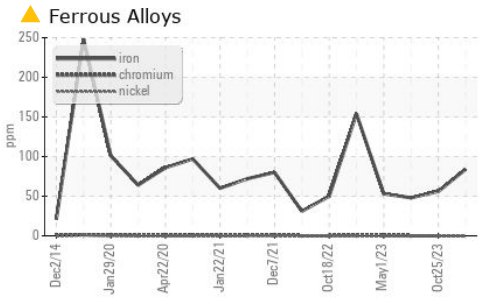
Fluid health is acceptable for continued use provided that contamination can be brought under control.

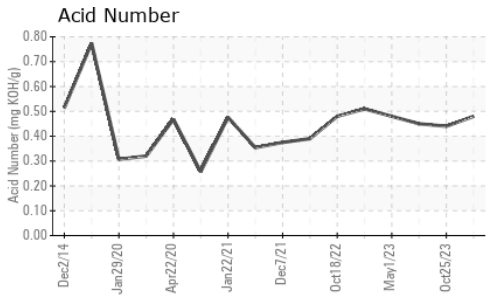
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PLS0000718	PLS0000784	PLS0000562
Sample Date		Client Info		31 Jan 2024	25 Oct 2023	09 Aug 2023
Machine Age	mths	Client Info		3	0	0
Oil Age	mths	Client Info		0	1	0
Filter Age	mths	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE
PQ		ASTM D8184		▲ 207	48	44
Iron	ppm	ASTM D5185m	>200	▲ 84	56	48
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
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	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>50	3	1	2
Potassium	ppm	ASTM D5185m	>20	0	0	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624		3.0	3.0	2.9
Sulfation	Abs/.1mm	*ASTM D7415		12.1	12.1	11.8
Particles >4µm		ASTM D7647	>20000	⬢ 199674	⬢ 183672	▲ 158644
Particles >6µm		ASTM D7647	>5000	⬢ 146589	⬢ 81053	⬢ 75548
Particles >14µm		ASTM D7647	>640	⬢ 29815	▲ 2529	⬢ 6914
Particles >21µm		ASTM D7647	>160	⬢ 6012	▲ 244	⬢ 1363
Particles >38µm		ASTM D7647	>40	33	2	23
Particles >71µm		ASTM D7647	>10	1	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	⬢ 25/24/22	⬢ 25/24/19	⬢ 24/23/20
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	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		0	1	0
Boron	ppm	ASTM D5185m	6.2	0	0	0
Barium	ppm	ASTM D5185m	0.0	<1	0	<1
Molybdenum	ppm	ASTM D5185m	0	0	0	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	1	0	4
Calcium	ppm	ASTM D5185m	0.0	5	0	5
Phosphorus	ppm	ASTM D5185m	290	303	218	273
Zinc	ppm	ASTM D5185m	3.8	15	0	14
Sulfur	ppm	ASTM D5185m	8167	9749	8641	10188
Oxidation	Abs/.1mm	*ASTM D7414		2.9	3.0	2.8
Acid Number (AN)	mg KOH/g	ASTM D8045		0.48	0.44	0.45
Visc @ 40°C	cSt	ASTM D445	220	215	210	210

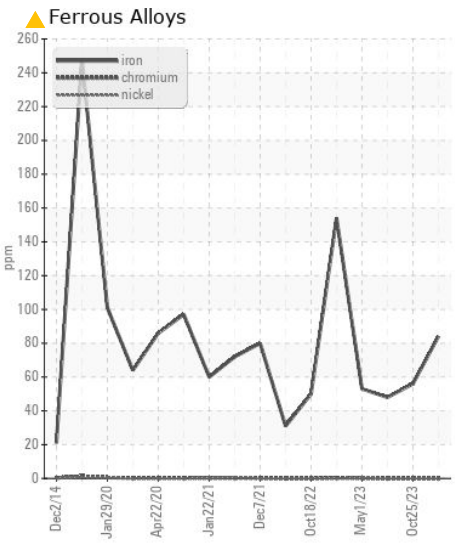


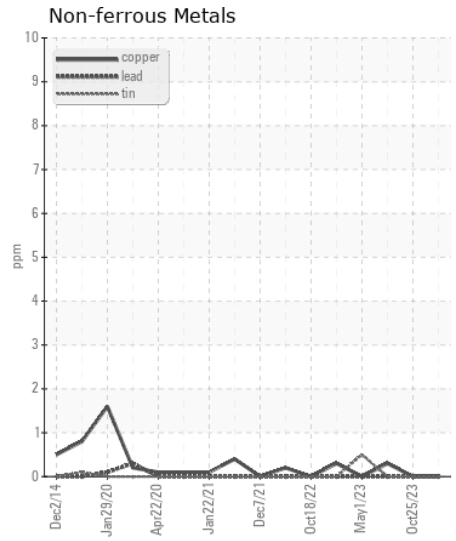


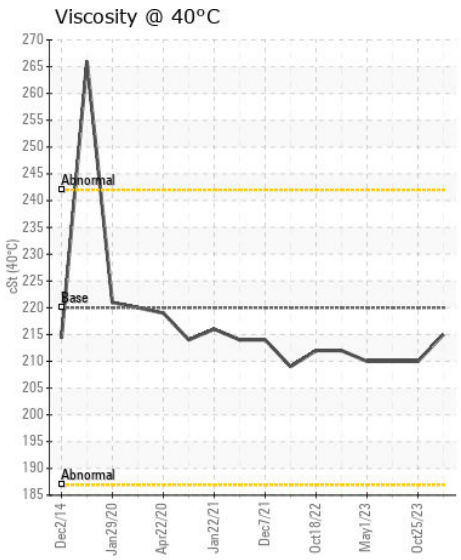


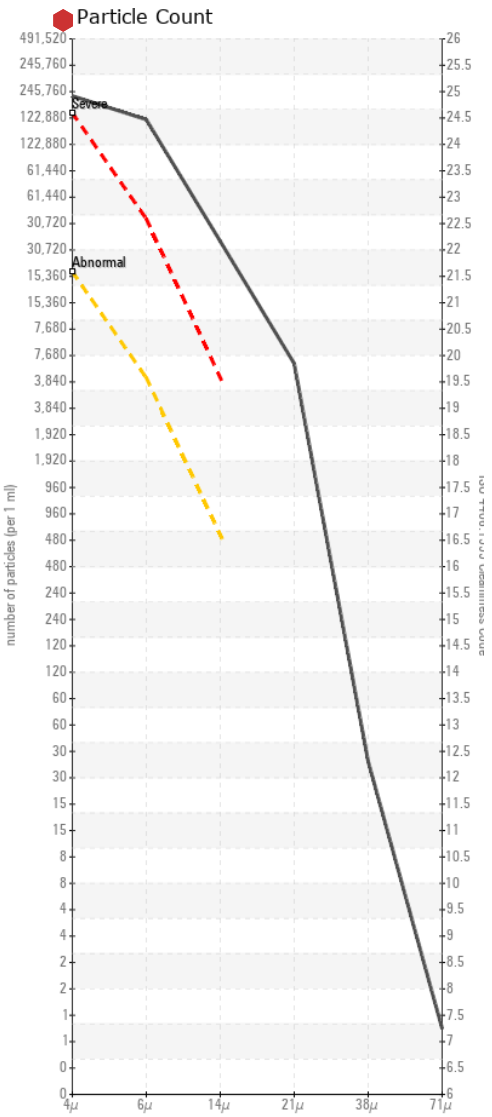


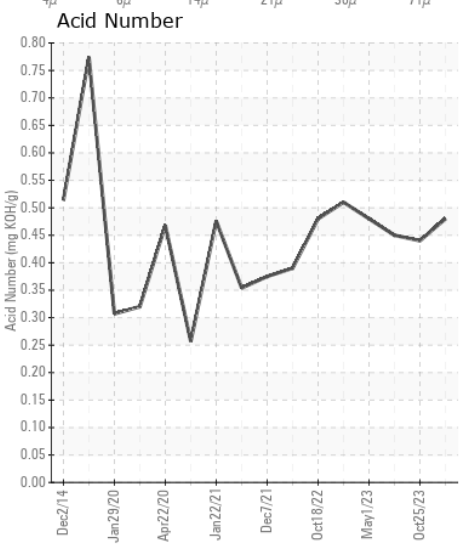












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000718
Lab Number : 06077613
Unique Number : 10859704
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)

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