



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
AMR-Manchester
 Machine Id
646242 144845
 Component
Swing Drive
 Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

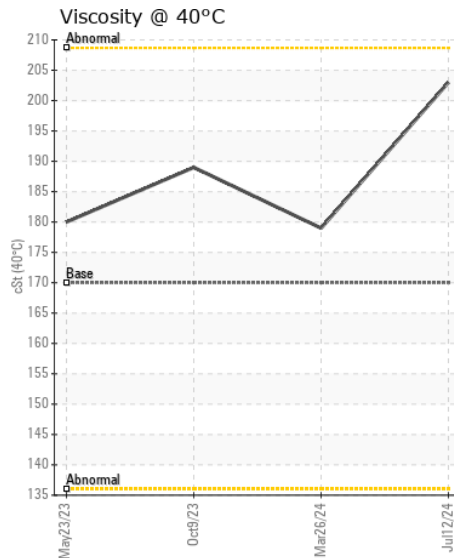
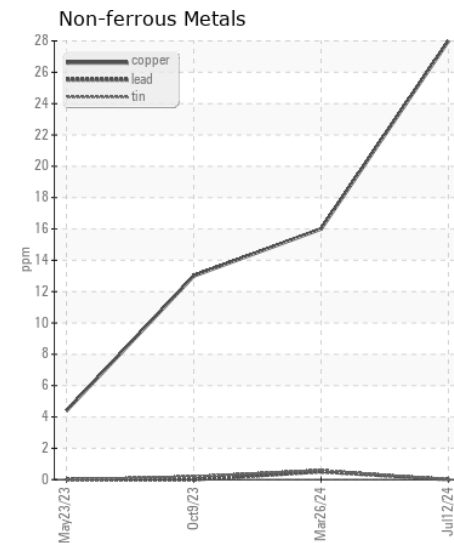
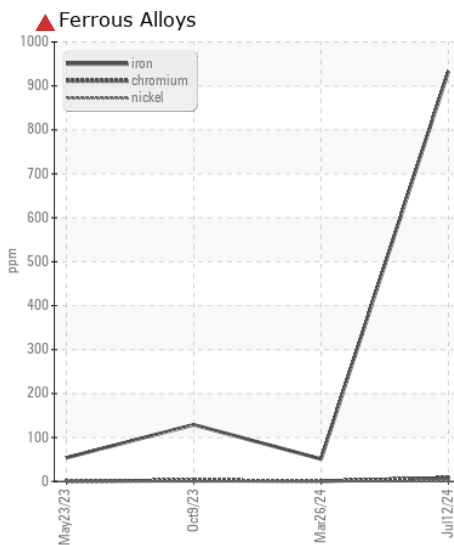
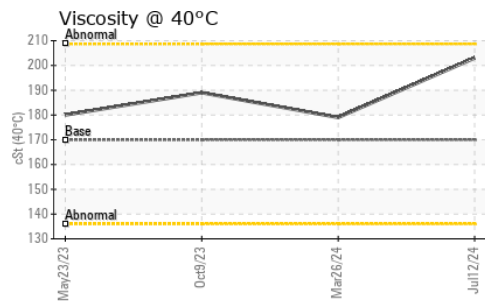
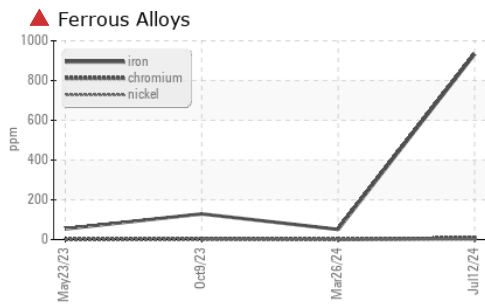
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0024838	DJJ0013973	DJJ0003531
Sample Date		Client Info		12 Jul 2024	26 Mar 2024	09 Oct 2023
Machine Age	hrs	Client Info		2131	1529	991
Oil Age	hrs	Client Info		1000	0	991
Filter Age	hrs	Client Info		1000	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	NORMAL	NORMAL

Iron	ppm	ASTM D5185m	>400	▲ 933	51	129
Chromium	ppm	ASTM D5185m	>10	▲ 8	<1	3
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	0
Lead	ppm	ASTM D5185m	>50	0	<1	0
Copper	ppm	ASTM D5185m	>200	28	16	13
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	2	<1	2
Potassium	ppm	ASTM D5185m	>20	2	<1	1
Water		WC Method	>0.2	NEG	NEG	NEG
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		<1	<1	1
Boron	ppm	ASTM D5185m	0	2	1	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	<1	<1
Manganese	ppm	ASTM D5185m	0	7	<1	<1
Magnesium	ppm	ASTM D5185m	<1	<1	1	2
Calcium	ppm	ASTM D5185m	<1	0	15	12
Phosphorus	ppm	ASTM D5185m	2143	2160	2561	2239
Zinc	ppm	ASTM D5185m	<1	7	8	6
Sulfur	ppm	ASTM D5185m	23468	27748	32808	29964
Visc @ 40°C	cSt	ASTM D445	170	203	179	189



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0024838
Lab Number : 06238621
Unique Number : 11127455
Test Package : CONST

Received : 16 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 18 Jul 2024 - Sean Felton

ADVANTAGE METALS RECYCLING - MANCHESTER
 3005 MANCHESTER TRAFFICWAY
 KANSAS CITY, MO
 US 64129

Contact: STEVE BROWN
 steve.brown@advantagerecycling.com

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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