



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
AMR-Manchester
 Machine Id
146889 LIEBHERR 146889
 Component
Transmission (Manual)
 Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0013896	DJJ0003539	---
Sample Date		Client Info		27 Mar 2024	08 Nov 2023	---
Machine Age	hrs	Client Info		1079	518	---
Oil Age	hrs	Client Info		0	518	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	28	20	---
Chromium	ppm	ASTM D5185m	>5	1	0	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>7	0	0	---
Aluminum	ppm	ASTM D5185m	>25	5	4	---
Lead	ppm	ASTM D5185m	>45	<1	<1	---
Copper	ppm	ASTM D5185m	>225	58	40	---
Tin	ppm	ASTM D5185m	>10	2	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

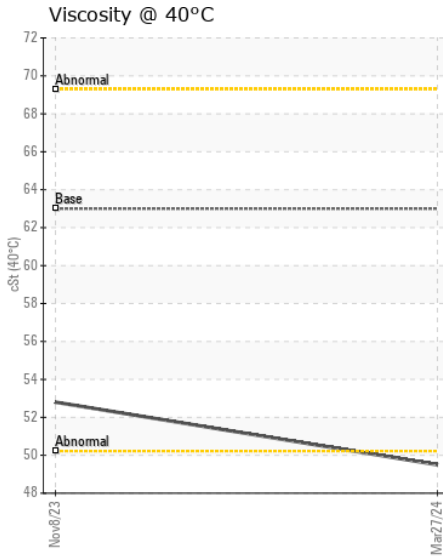
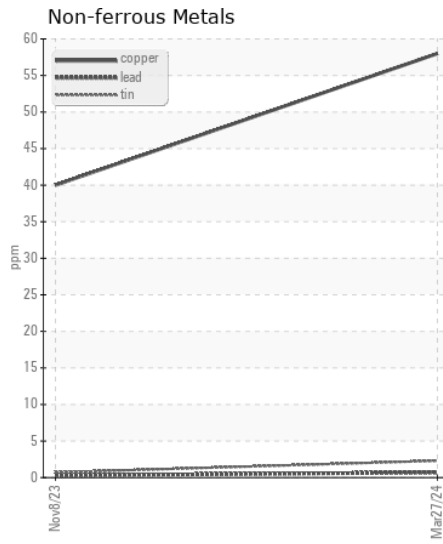
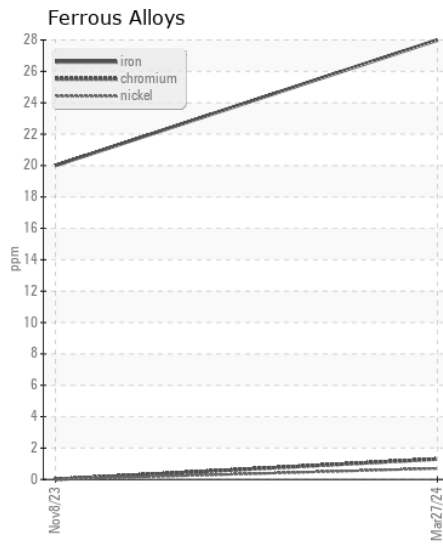
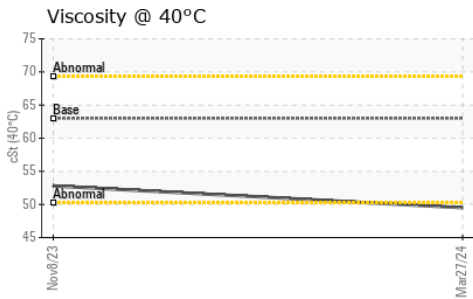
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185m	>125	6	4	---
Potassium	ppm	ASTM D5185m	>20	6	3	---
Water		WC Method	>0.1	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	---

FLUID CONDITION

The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		37	34	---
Boron	ppm	ASTM D5185m	250	14	6	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	<1	0	---
Manganese	ppm	ASTM D5185m		59	41	---
Magnesium	ppm	ASTM D5185m	450	10	10	---
Calcium	ppm	ASTM D5185m	3000	3606	3136	---
Phosphorus	ppm	ASTM D5185m	1150	1262	1024	---
Zinc	ppm	ASTM D5185m	1350	1237	1055	---
Sulfur	ppm	ASTM D5185m	4250	11721	8834	---
Visc @ 40°C	cSt	ASTM D445	63	49.5	52.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0013896
Lab Number : 06147830
Unique Number : 10977908
Test Package : CONST

Received : 12 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 16 Apr 2024 - Don Baldrige

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

Contact: STEVE BROWN
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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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