



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
LOADER 18
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component. (oil is foaming).

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0032383	---	---
Sample Date		Client Info		01 Jul 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		500	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

The iron level is abnormal.

Iron	ppm	ASTM D5185m	>20	▲ 44	---	---
Chromium	ppm	ASTM D5185m	>20	4	---	---
Nickel	ppm	ASTM D5185m	>20	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>20	● 9	---	---
Lead	ppm	ASTM D5185m	>20	0	---	---
Copper	ppm	ASTM D5185m	>20	9	---	---
Tin	ppm	ASTM D5185m	>20	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

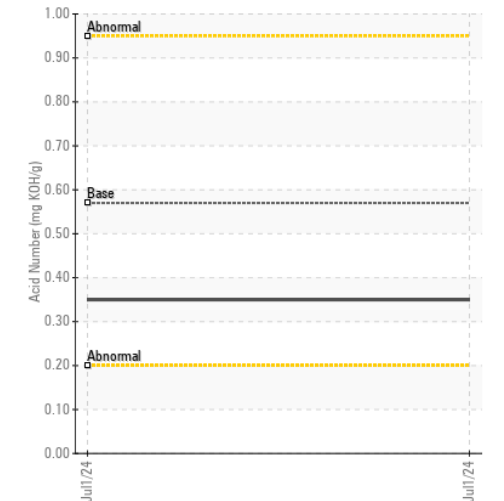
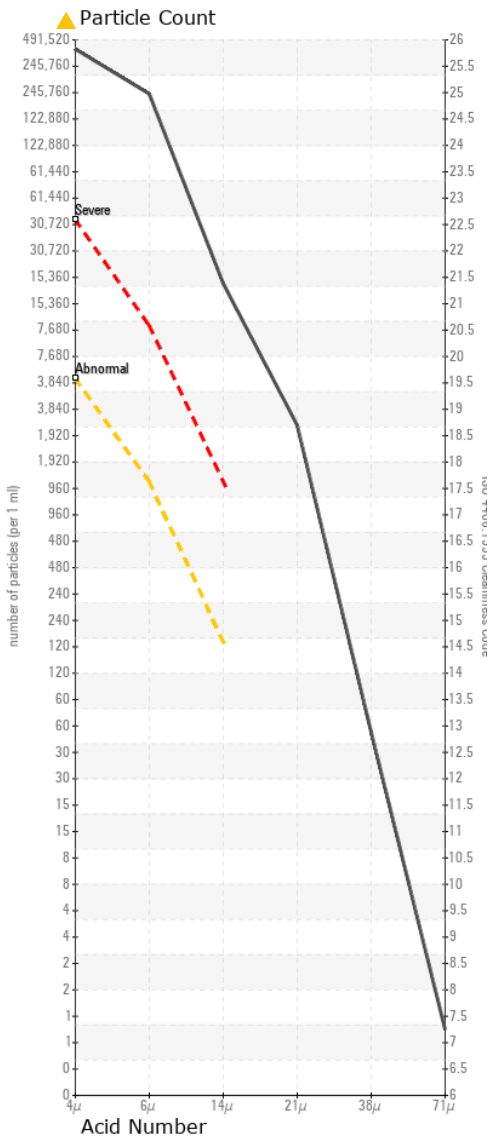
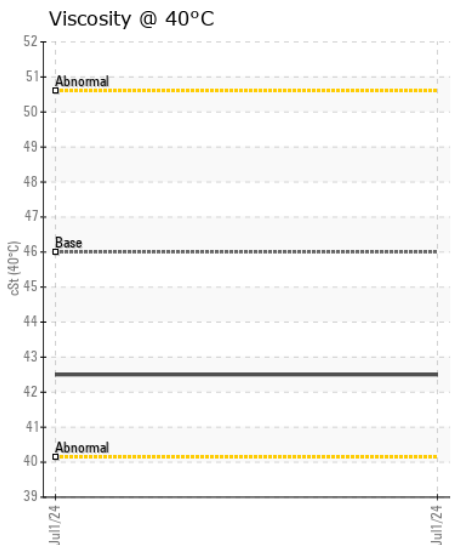
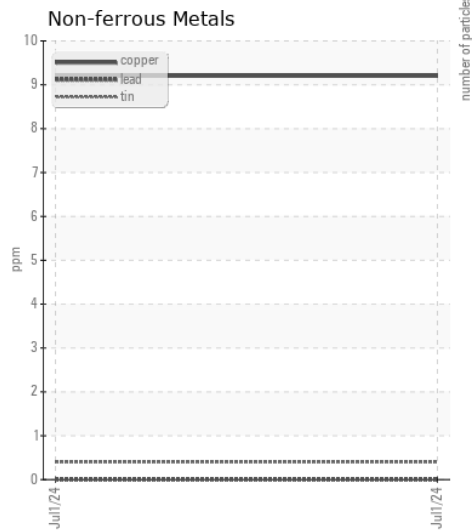
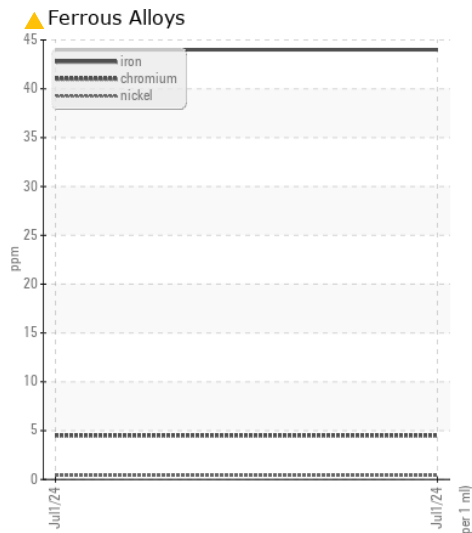
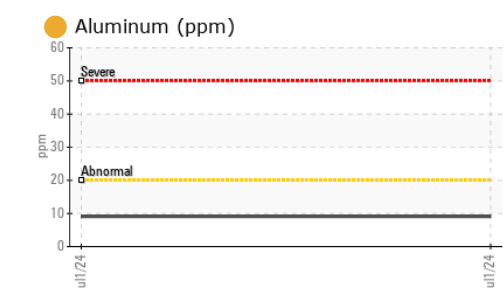
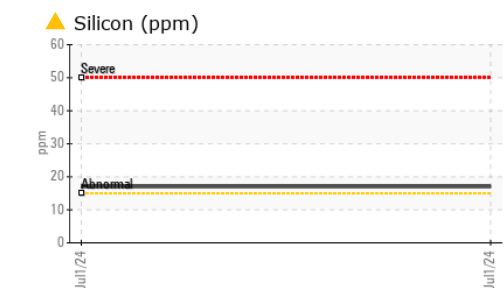
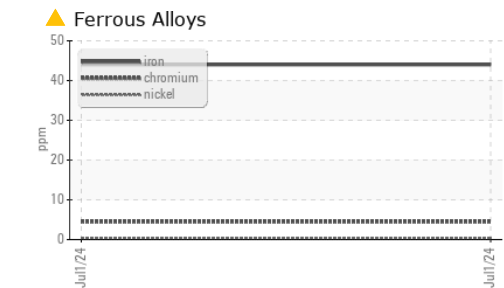
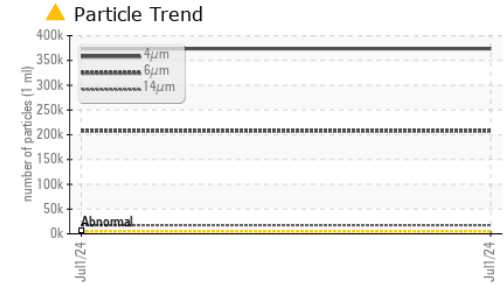
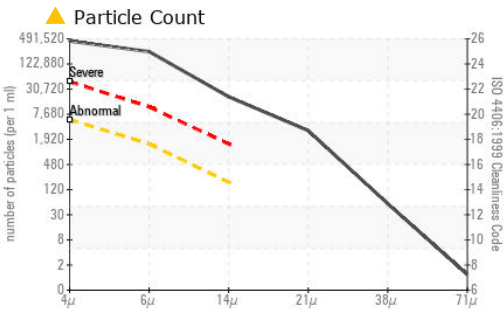
There is a high amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a moderate amount of visible silt present in the sample.

Silicon	ppm	ASTM D5185m	>15	▲ 17	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Water		WC Method	>0.05	NEG	---	---
Particles >4µm		ASTM D7647	>5000	▲ 373785	---	---
Particles >6µm		ASTM D7647	>1300	▲ 207930	---	---
Particles >14µm		ASTM D7647	>160	▲ 17372	---	---
Particles >21µm		ASTM D7647	>40	▲ 2719	---	---
Particles >38µm		ASTM D7647	>10	▲ 49	---	---
Particles >71µm		ASTM D7647	>3	1	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 26/25/21	---	---
Silt	scalar	*Visual	NONE	▲ MODER	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---	---

FLUID CONDITION

The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		8	---	---
Boron	ppm	ASTM D5185m	5	2	---	---
Barium	ppm	ASTM D5185m	5	0	---	---
Molybdenum	ppm	ASTM D5185m	5	0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	25	59	---	---
Calcium	ppm	ASTM D5185m	200	210	---	---
Phosphorus	ppm	ASTM D5185m	300	372	---	---
Zinc	ppm	ASTM D5185m	370	436	---	---
Sulfur	ppm	ASTM D5185m	2500	6599	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.35	---	---
Visc @ 40°C	cSt	ASTM D445	46	42.5	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : DC0032383
 Lab Number : 06232244
 Unique Number : 11115737
 Test Package : MOB 2

Received : 10 Jul 2024
 Tested : 11 Jul 2024
 Diagnosed : 11 Jul 2024 - Don Baldrige

TIR STATE STONE AND BUILDING
 8200 SEVEN LOCKS RD
 BETHESDA, MD
 US 20814
 Contact: GREG V
 GREGV@CARDEROCK.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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F: