



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
015-R0006
Component
Hydraulic System
Fluid
LIEBHERR HYDRAULIC 37 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample
Comment: Hydraulic fluid sample. Hours: 6637)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0903924	WC0904118	WC0750614
Sample Date		Client Info		15 May 2024	25 Mar 2024	11 Oct 2023
Machine Age	hrs	Client Info		6637	6362	5413
Oil Age	hrs	Client Info		6637	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<1	0	0
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	0
Lead	ppm	ASTM D5185m	>10	2	0	<1
Copper	ppm	ASTM D5185m	>75	4	0	4
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

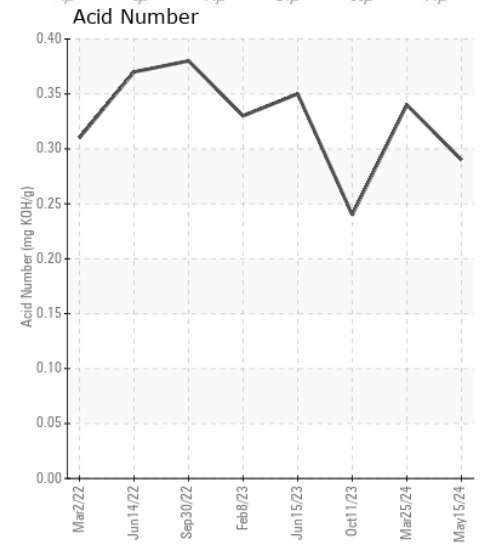
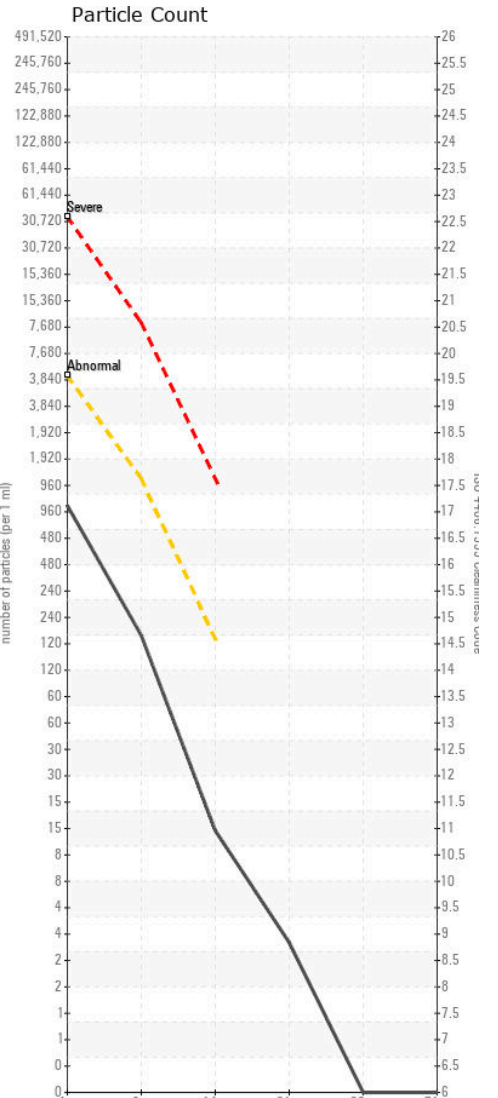
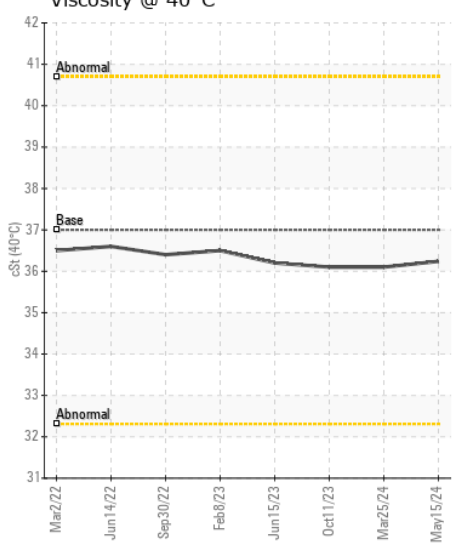
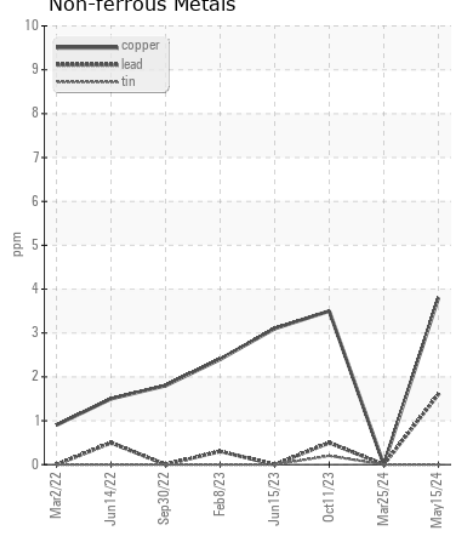
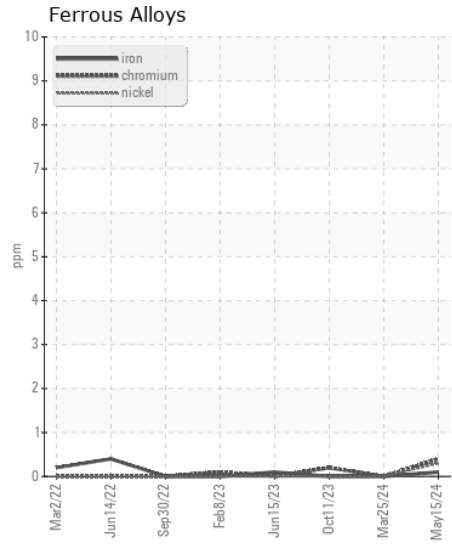
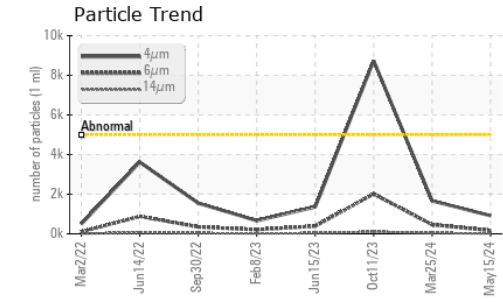
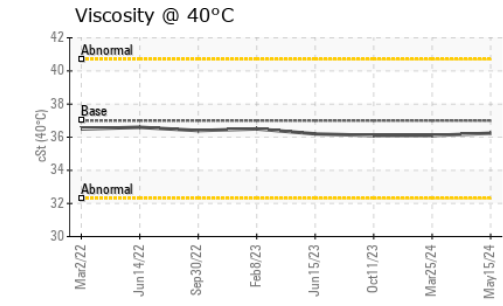
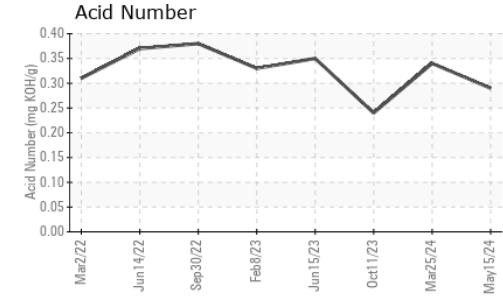
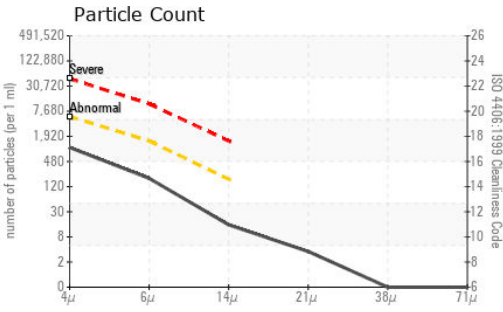
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<1	0	<1
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	914	1663	8731
Particles >6µm		ASTM D7647	>1300	167	464	2013
Particles >14µm		ASTM D7647	>160	13	40	106
Particles >21µm		ASTM D7647	>40	3	10	28
Particles >38µm		ASTM D7647	>10	0	0	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/11	18/16/12	20/18/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	0	1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		<1	<1	<1
Calcium	ppm	ASTM D5185m		167	43	39
Phosphorus	ppm	ASTM D5185m		308	275	257
Zinc	ppm	ASTM D5185m		383	320	320
Sulfur	ppm	ASTM D5185m		1329	1114	989
Acid Number (AN)	mg KOH/g	ASTM D8045		0.29	0.34	0.24
Visc @ 40°C	cSt	ASTM D445	37	36.24	36.1	36.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0903924
Lab Number : 06186657
Unique Number : 11043409
Test Package : CONST
Received : 21 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Don Baldrige

SHIMMICK CONSTRUCTION
 5535 TRAILHEAD DRIVE
 CHATTANOOGA, TN
 US 37415
 Contact: DANIEL LISELLA
 daniel.lisella@shimmick.com
 T:
 F:

Certificate L2367
 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)