



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
WQ
Machine Id
NORDBERG 00901
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (15 QTS)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0721332	WC0570595	WC0524403
Sample Date		Client Info		25 Feb 2024	17 Jan 2023	07 Feb 2022
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

The iron level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	▲ 27	6	4
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	6	7	6
Copper	ppm	ASTM D5185m	>75	2	2	3
Tin	ppm	ASTM D5185m	>10	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

CONTAMINATION

Moderate concentration of visible dirt/debris present in the oil.

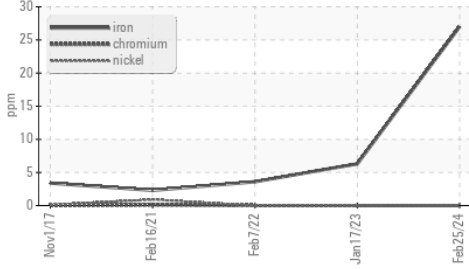
Silicon	ppm	ASTM D5185m	>20	1	<1	<1
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	● 47929	---
Particles >6µm		ASTM D7647	>1300	---	▲ 4220	---
Particles >14µm		ASTM D7647	>160	---	▲ 234	---
Particles >21µm		ASTM D7647	>40	---	▲ 74	---
Particles >38µm		ASTM D7647	>10	---	6	---
Particles >71µm		ASTM D7647	>3	---	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	● 23/19/15	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	NONE	▲ MODER
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

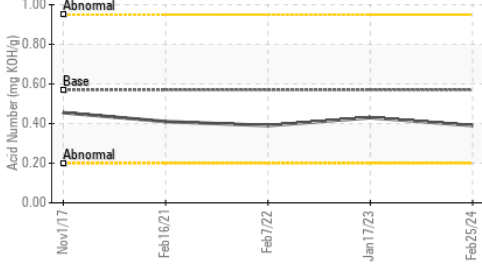
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	0	<1
Boron	ppm	ASTM D5185m	5	0	0	<1
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	25	0	2	0
Calcium	ppm	ASTM D5185m	200	42	39	33
Phosphorus	ppm	ASTM D5185m	300	298	314	330
Zinc	ppm	ASTM D5185m	370	354	390	391
Sulfur	ppm	ASTM D5185m	2500	801	1002	938
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.39	0.43	0.39
Visc @ 40°C	cSt	ASTM D445	32	30.0	33.0	33.4

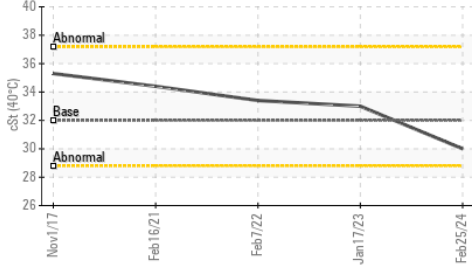
▲ Ferrous Alloys



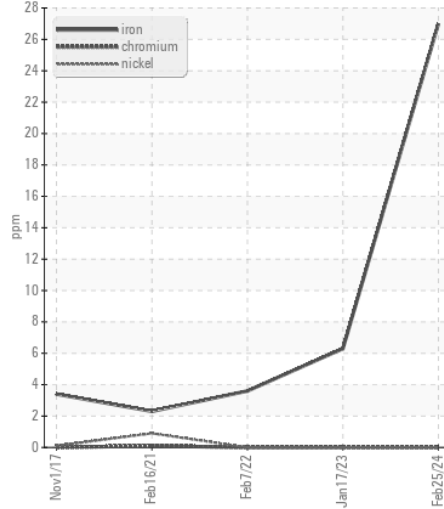
Acid Number



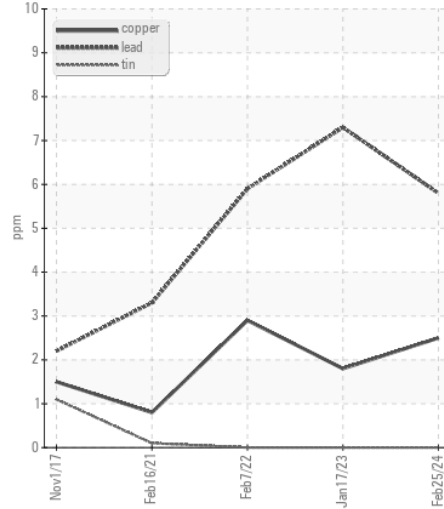
Viscosity @ 40°C



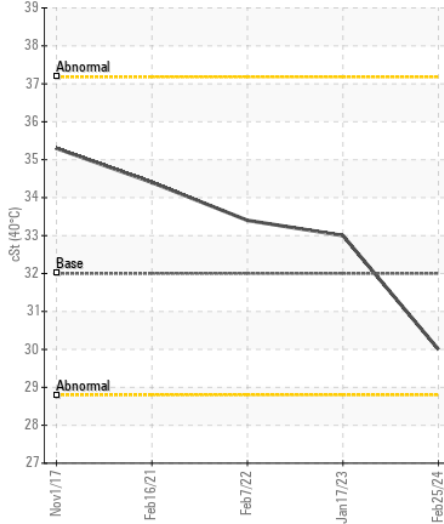
▲ Ferrous Alloys



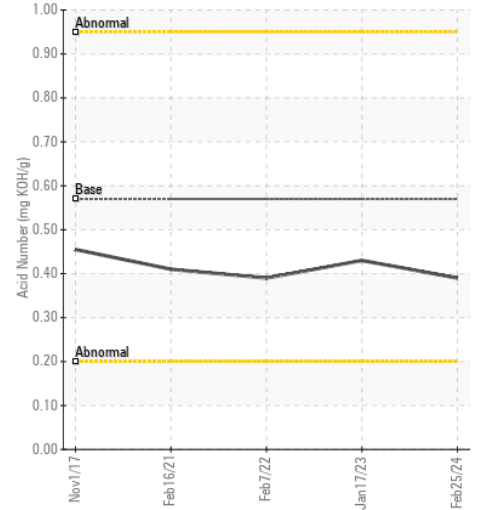
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0721332

Lab Number : 06100107

Unique Number : 10898337

Test Package : MOB 2

Received : 26 Feb 2024

Tested : 27 Feb 2024

Diagnosed : 27 Feb 2024 - Don Baldrige

S.M. LORUSSO & SONS

221 NORFOLK ST.

WALPOLE, MA

US 02081

Contact: PAUL BECKMAN

pbeckman@smlorusso.com

T: (508)668-2603

F: (508)660-0232

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)