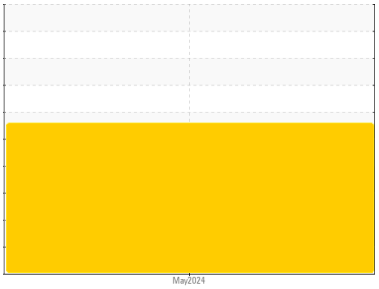
PROBLEM SUMMARY

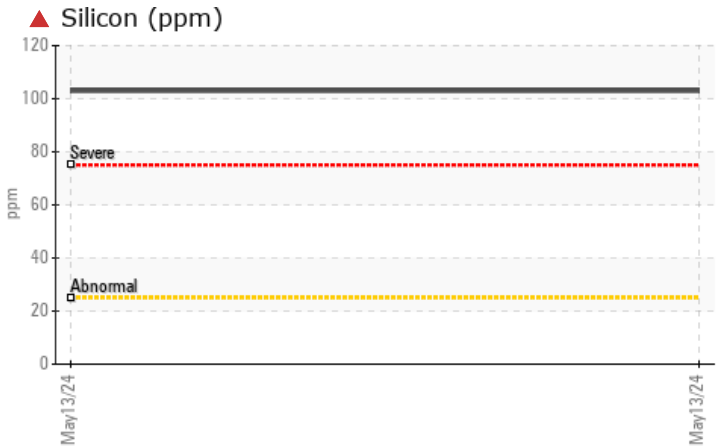
Sample Rating Trend

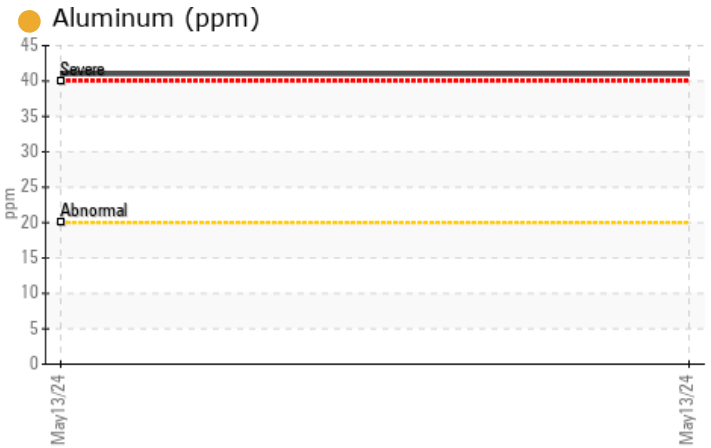


DIRT

Area
MINING
Machine Id
ME-327 KOMATSU WA470-8 A49714
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition. (Customer Sample
Comment: Rotella 15w40
Total hours 7896
)

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Silicon	ppm	ASTM D5185m	>25	▲ **103**	---	---

Customer Id: COVTRO
Sample No.: WC0938508
Lab Number: 06182592
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

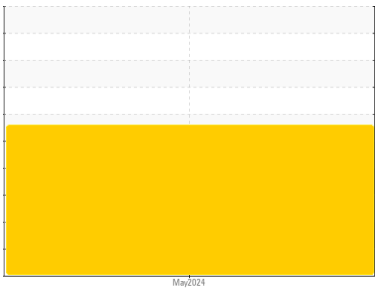
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
MINING
Machine Id
ME-327 KOMATSU WA470-8 A49714
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition. (Customer Sample Comment: Rotella 15w40
Total hours 7896
)

Wear
All component wear rates are normal.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0938508**	---	---
Sample Date		Client Info		**13 May 2024**	---	---
Machine Age	hrs	Client Info		**7896**	---	---
Oil Age	hrs	Client Info		**400**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**SEVERE**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	---	---
Water		WC Method	>0.2	**NEG**	---	---
Glycol		WC Method		**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**48**	---	---
Chromium	ppm	ASTM D5185m	>20	**4**	---	---
Nickel	ppm	ASTM D5185m	>4	**0**	---	---
Titanium	ppm	ASTM D5185m		**3**	---	---
Silver	ppm	ASTM D5185m	>3	**<1**	---	---
Aluminum	ppm	ASTM D5185m	>20	**41**	---	---
Lead	ppm	ASTM D5185m	>40	**<1**	---	---
Copper	ppm	ASTM D5185m	>330	**2**	---	---
Tin	ppm	ASTM D5185m	>15	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	**130**	---	---
Barium	ppm	ASTM D5185m	0.0	**0**	---	---
Molybdenum	ppm	ASTM D5185m	1.2	**3**	---	---
Manganese	ppm	ASTM D5185m		**<1**	---	---
Magnesium	ppm	ASTM D5185m	24	**42**	---	---
Calcium	ppm	ASTM D5185m	2292	**2410**	---	---
Phosphorus	ppm	ASTM D5185m	1064	**1165**	---	---
Zinc	ppm	ASTM D5185m	1160	**1370**	---	---
Sulfur	ppm	ASTM D5185m	4996	**4616**	---	---

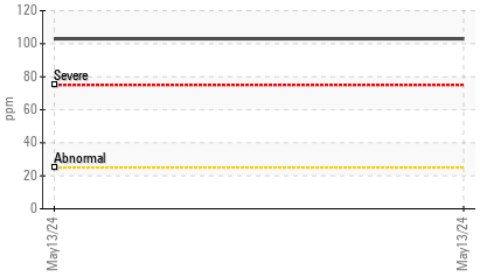
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**103**	---	---
Sodium	ppm	ASTM D5185m		**2**	---	---
Potassium	ppm	ASTM D5185m	>20	**6**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	---	---
Nitration	Abs/cm	*ASTM D7624	>20	**9.3**	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.6**	---	---

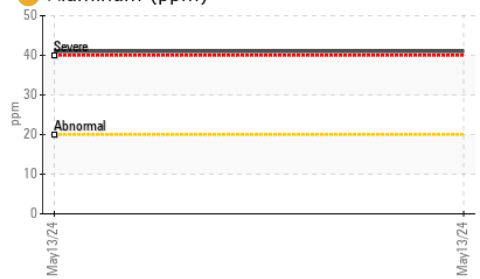
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.4**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**6.8**	---	---

OIL ANALYSIS REPORT

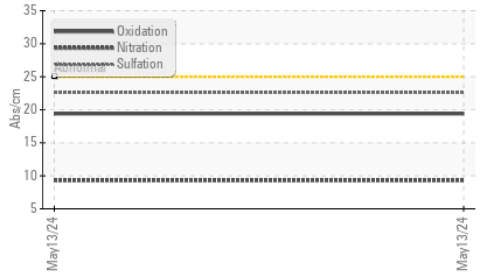
Silicon (ppm)



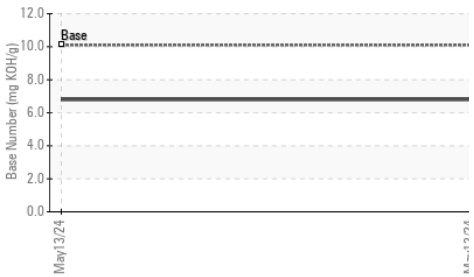
Aluminum (ppm)



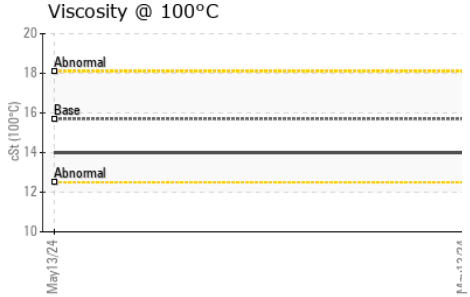
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

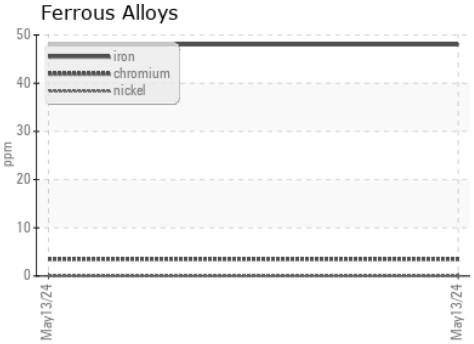


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

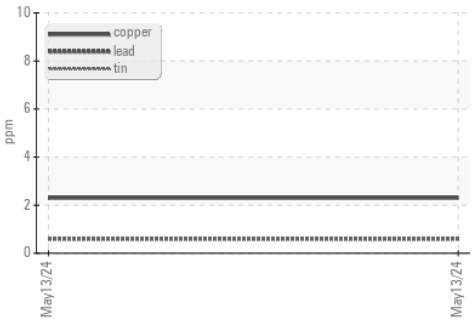
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	**14.0**	---	---

GRAPHS

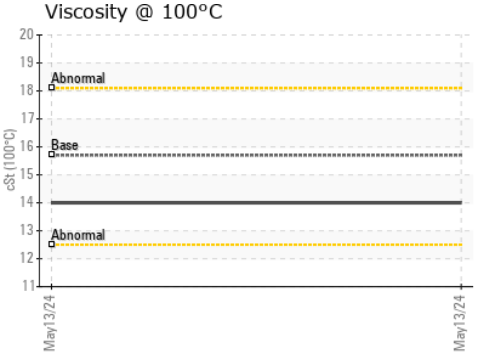
Ferrous Alloys



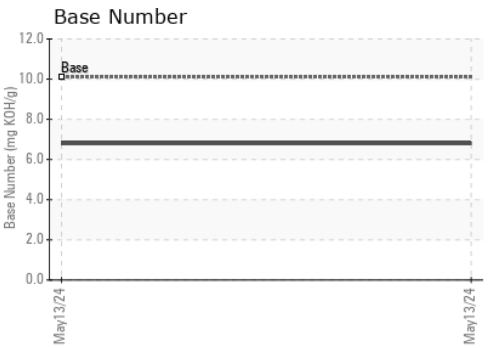
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0938508
Lab Number : 06182592
Unique Number : 11033918
Test Package : CONST (Additional Tests: TBN)

Received : 17 May 2024
Tested : 20 May 2024
Diagnosed : 20 May 2024 - Don Baldridge

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)

COVIA - TROUP - 084
23769 STATE HWY 110 NORTH
TROUP, TX
US 75789
Contact: Forrest Howell
forrest.howell@coviacorp.com
T: (903)574-0693
F:

Report Id: COVTRO [WUSCAR] 06182592 (Generated: 05/20/2024 14:58:10) Rev: 1

Submitted By: Wes Davis