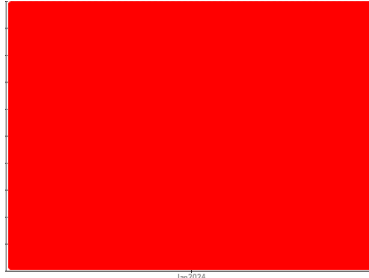


PROBLEM SUMMARY

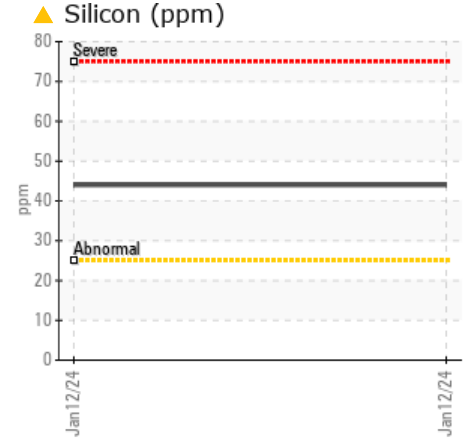
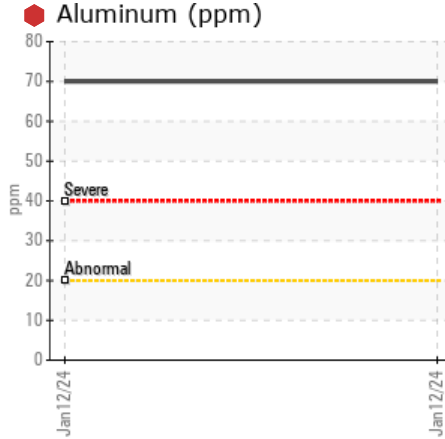
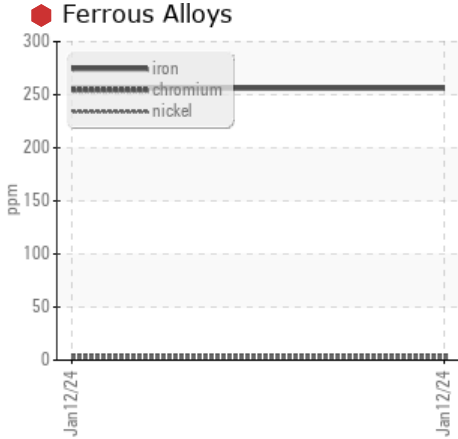
Sample Rating Trend

WEAR



Area
[BUCHANON CONTRACTING]
 Machine Id
TAKEUCHI TL12R2 412100089
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>100	256	---	---
Aluminum	ppm	ASTM D5185m	>20	70	---	---
Silicon	ppm	ASTM D5185m	>25	44	---	---

Customer Id: VOLVO8882
 Sample No.: ML0000503
 Lab Number: 06062336
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

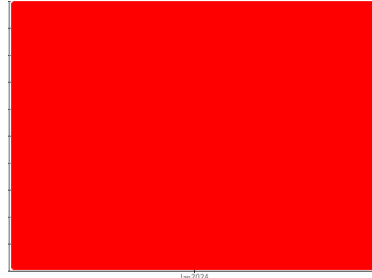
HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Area
[BUCHANON CONTRACTING]
 Machine Id
TAKEUCHI TL12R2 412100089
 Component
Diesel Engine
 Fluid
 DIESEL ENGINE OIL SAE 15W40 (--- GAL)



DIAGNOSIS

Recommendation
 We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear
 Piston and cylinder wear is indicated.

Contamination
 Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
 The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		ML0000503	---	---
Sample Date	Client Info		12 Jan 2024	---	---
Machine Age	hrs	Client Info	1294	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		Not Changd	---	---
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	256	---	---
Chromium	ppm	ASTM D5185m >20	4	---	---
Nickel	ppm	ASTM D5185m >4	2	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	70	---	---
Lead	ppm	ASTM D5185m >40	<1	---	---
Copper	ppm	ASTM D5185m >330	41	---	---
Tin	ppm	ASTM D5185m >15	18	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	46	---	---
Barium	ppm	ASTM D5185m 10	0	---	---
Molybdenum	ppm	ASTM D5185m 100	43	---	---
Manganese	ppm	ASTM D5185m	3	---	---
Magnesium	ppm	ASTM D5185m 450	534	---	---
Calcium	ppm	ASTM D5185m 3000	1695	---	---
Phosphorus	ppm	ASTM D5185m 1150	778	---	---
Zinc	ppm	ASTM D5185m 1350	923	---	---
Sulfur	ppm	ASTM D5185m 4250	2430	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	44	---	---
Sodium	ppm	ASTM D5185m >158	3	---	---
Potassium	ppm	ASTM D5185m >20	2	---	---

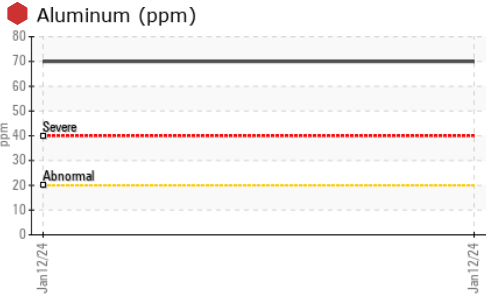
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624 >20	8.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.6	---	---

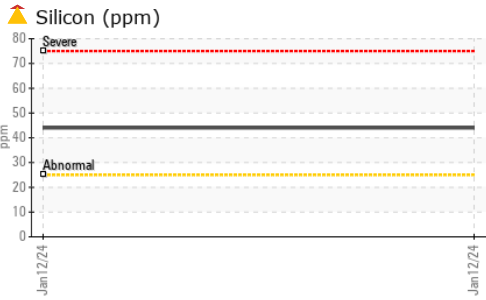
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	9.8	---	---

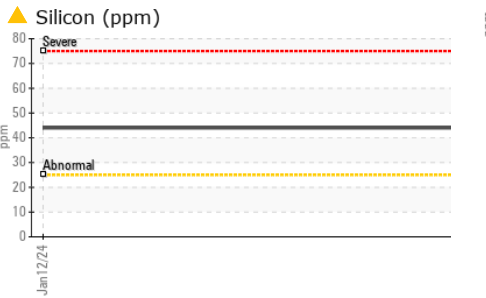
OIL ANALYSIS REPORT



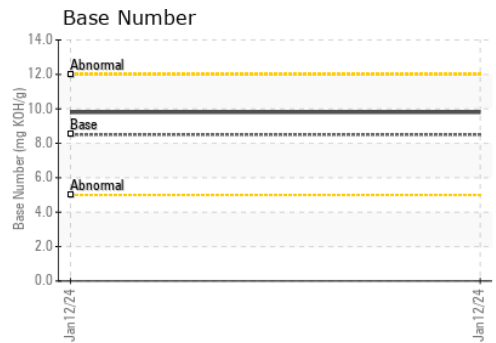
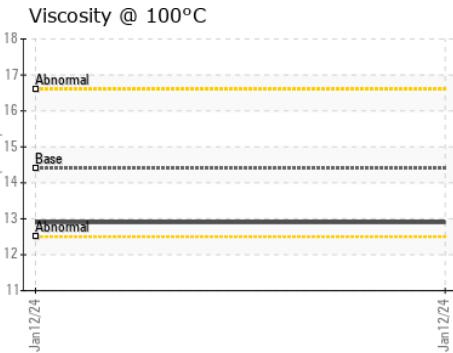
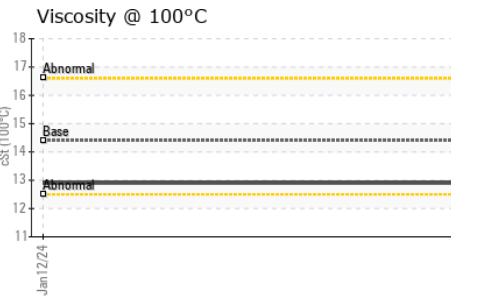
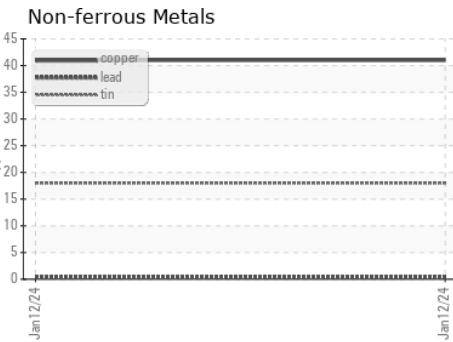
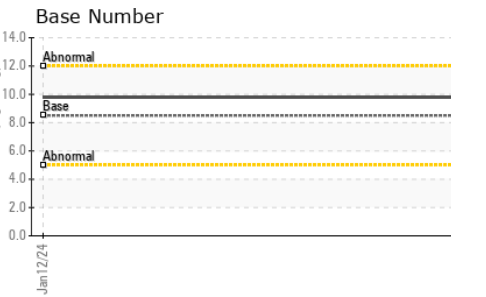
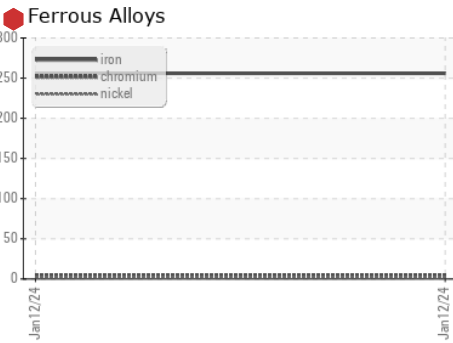
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	14.4	12.9	---



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0000503 **Recieved** : 17 Jan 2024
Lab Number : 06062336 **Diagnosed** : 18 Jan 2024
Unique Number : 10833718 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

McCLUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@MCCLUNG-LOGAN.COM
 T:
 F: (804)266-1611

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)