



McCLUNG-LOGAN
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

[BUCHANON CONTRACTING]

Machine Id

TAKEUCHI TL12R2 412100089

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

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.

Test	UOM	Method	Limit/Abn	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	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				SEVERE	---	---

WEAR

Piston and cylinder wear is indicated.

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	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

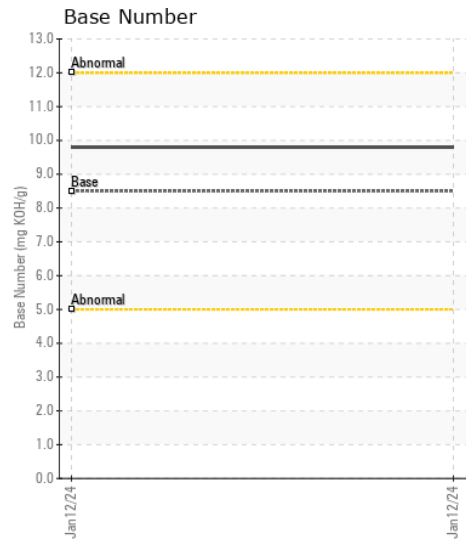
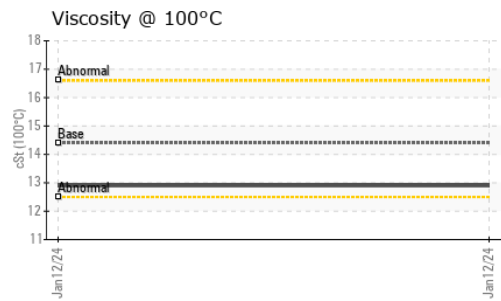
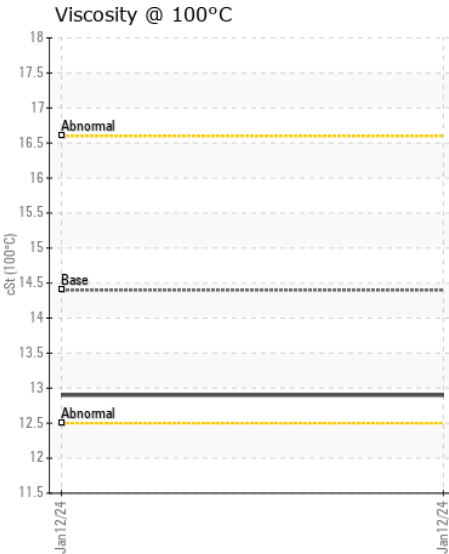
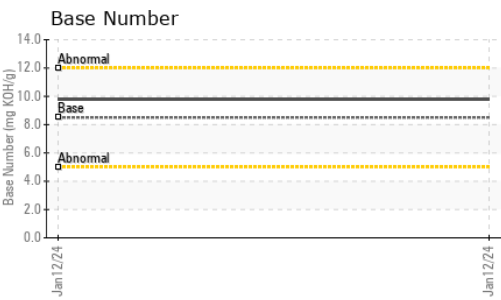
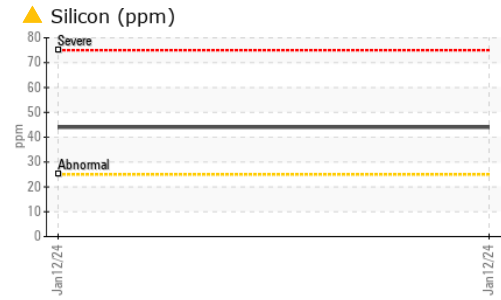
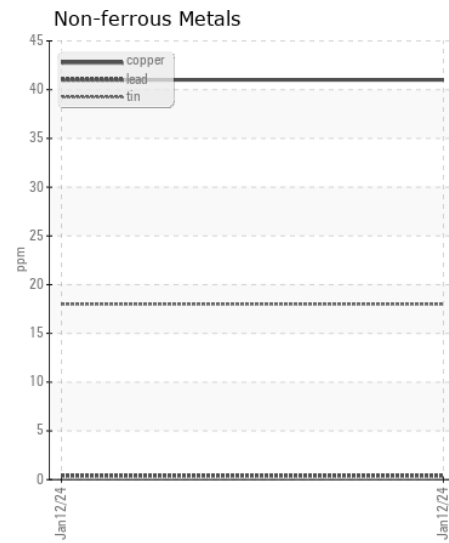
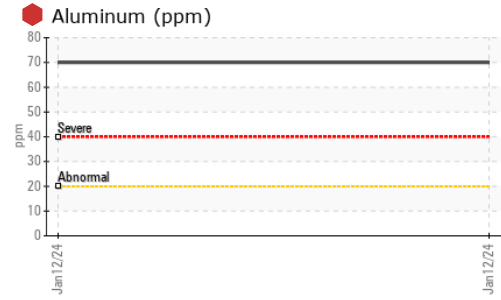
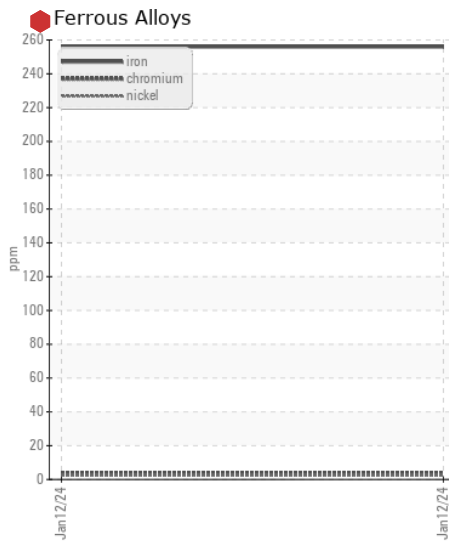
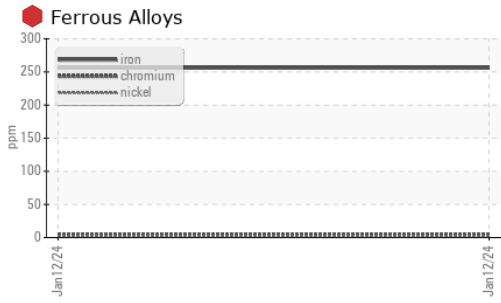
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	44	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	---	---
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	---	---

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.

Sodium	ppm	ASTM D5185m	>158	3	---	---
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	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.8	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	---	---



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

MCCLEUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@MCCLEUNG-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)