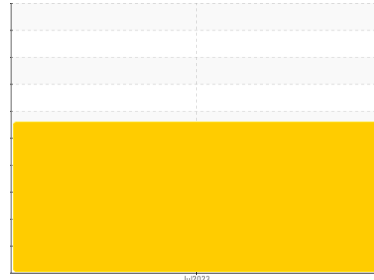




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
354
 Component
Diesel Engine
 Fluid
NOT GIVEN (--- 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 you service the filters on this component. We recommend an early resample to monitor this condition.

▲ Wear

Cylinder, crank, or cam shaft wear is indicated.

▲ Contamination

There is a high amount of particulates present in the oil. 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KL0011977	---	---
Sample Date	Client Info		13 Jul 2023	---	---
Machine Age	hrs	Client Info	0	---	---
Oil Age	hrs	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 176	---	---
Chromium	ppm	ASTM D5185m >20	8	---	---
Nickel	ppm	ASTM D5185m >4	1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	▲ 12	---	---
Lead	ppm	ASTM D5185m >40	<1	---	---
Copper	ppm	ASTM D5185m >330	20	---	---
Tin	ppm	ASTM D5185m >15	4	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	199	---	---
Barium	ppm	ASTM D5185m	2	---	---
Molybdenum	ppm	ASTM D5185m	113	---	---
Manganese	ppm	ASTM D5185m	2	---	---
Magnesium	ppm	ASTM D5185m	457	---	---
Calcium	ppm	ASTM D5185m	1787	---	---
Phosphorus	ppm	ASTM D5185m	1266	---	---
Zinc	ppm	ASTM D5185m	1636	---	---
Sulfur	ppm	ASTM D5185m	3339	---	---

CONTAMINANTS

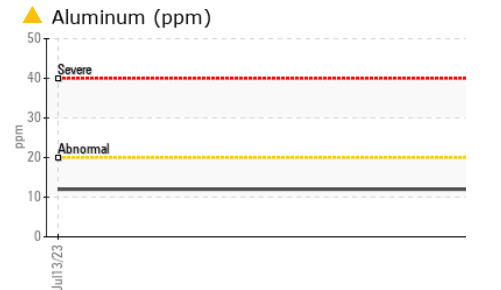
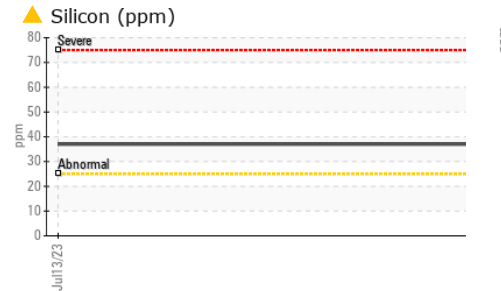
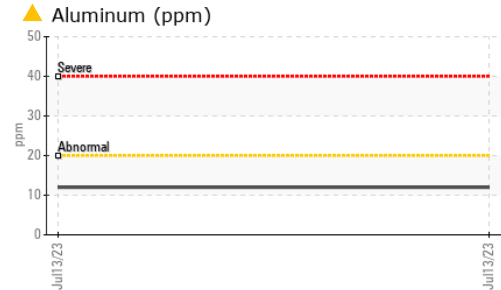
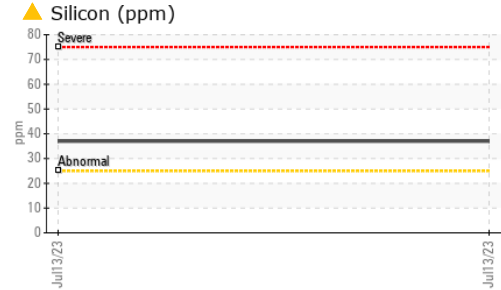
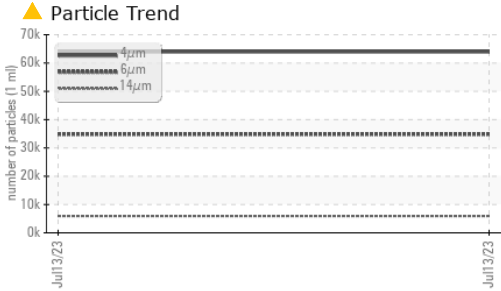
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 37	---	---
Sodium	ppm	ASTM D5185m	15	---	---
Potassium	ppm	ASTM D5185m >20	3	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.7	---	---
Nitration	Abs/cm	*ASTM D7624 >20	14.0	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	35.6	---	---



OIL ANALYSIS REPORT



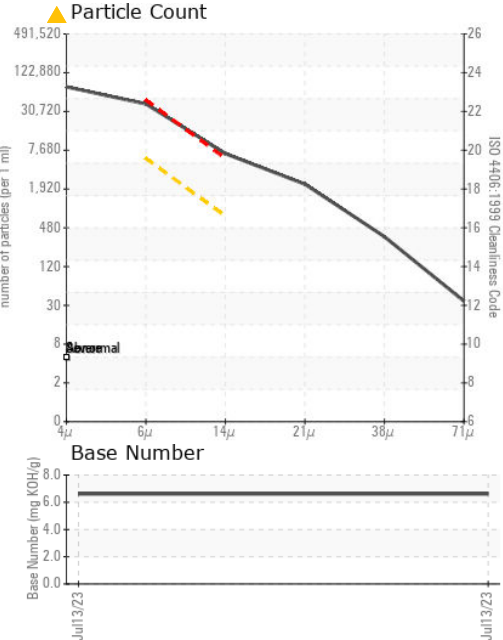
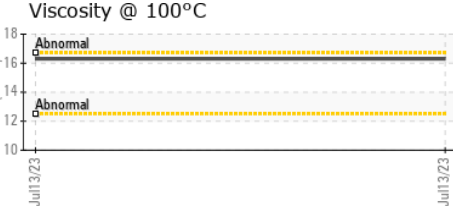
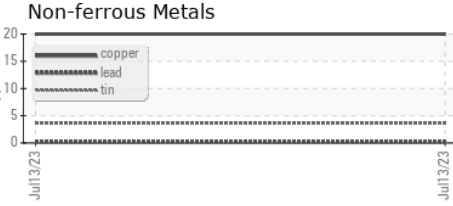
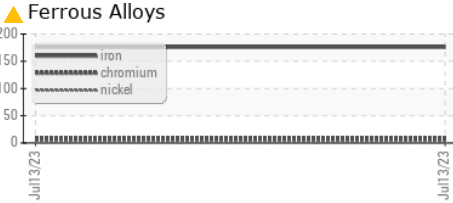
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		63969	---	---
Particles >6µm	ASTM D7647	>5000	▲ 34847	---	---
Particles >14µm	ASTM D7647	>640	▲ 5931	---	---
Particles >21µm	ASTM D7647	>160	▲ 1998	---	---
Particles >38µm	ASTM D7647	>40	▲ 308	---	---
Particles >71µm	ASTM D7647	>10	▲ 31	---	---
Oil Cleanliness	ISO 4406 (c)	>19/16	▲ 22/20	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	38.6	---	---
Base Number (BN)	mg KOH/g ASTM D2896		6.62	---	---

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		16.3	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011977 **Received** : 14 Jul 2023
Lab Number : **05898746** **Diagnosed** : 18 Jul 2023
Unique Number : 10560102 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

SAND REVOLUTION
 10800 W CO RD 72
 MIDLAND, TX
 US 79703
 Contact: Service Manager

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)

T:
F: