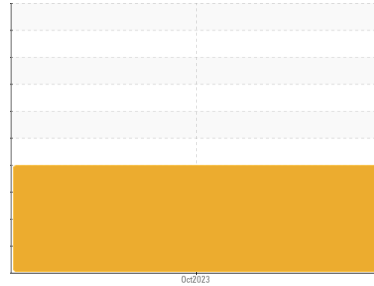


PROBLEM SUMMARY

Sample Rating Trend



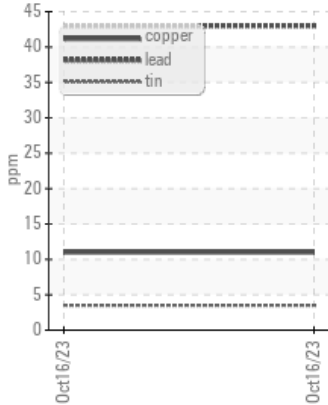
Machine Id
8936

Component
Diesel Engine

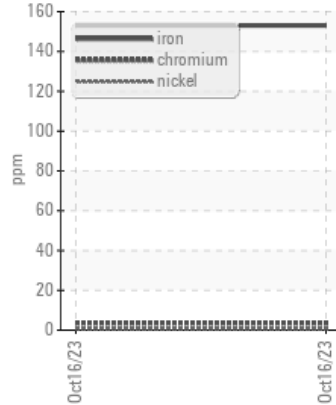
Fluid
DIESEL ENGINE OIL SAE 5W30 (--- GAL)

COMPONENT CONDITION SUMMARY

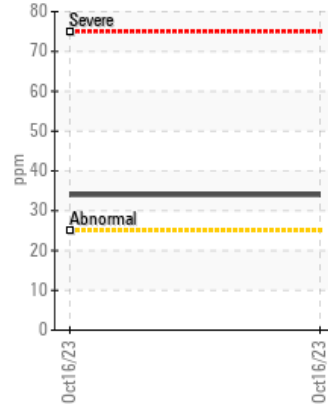
▲ Non-ferrous Metals



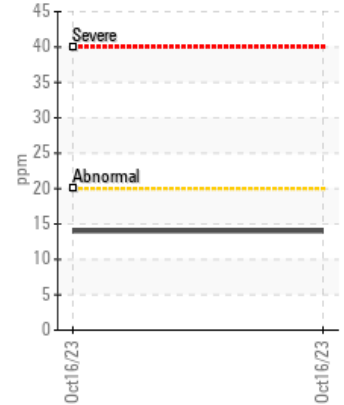
▲ Ferrous Alloys



▲ Silicon (ppm)



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>100	▲ 153	---	---
Aluminum	ppm	ASTM D5185m	>20	▲ 14	---	---
Lead	ppm	ASTM D5185m	>40	▲ 43	---	---
Silicon	ppm	ASTM D5185m	>25	▲ 34	---	---

Customer Id: CITSEQ
Sample No.: PE0002912
Lab Number: 06008050
Test Package: FLEET



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
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



Machine Id

8936

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 5W30 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

▲ Wear

Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated.

▲ 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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PE0002912	---	---
Sample Date	Client Info		16 Oct 2023	---	---
Machine Age	mls	Client Info	131327	---	---
Oil Age	mls	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	---	---
Water	WC Method	>0.2	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 153	---	---
Chromium	ppm	ASTM D5185m >20	4	---	---
Nickel	ppm	ASTM D5185m >4	<1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	<1	---	---
Aluminum	ppm	ASTM D5185m >20	▲ 14	---	---
Lead	ppm	ASTM D5185m >40	▲ 43	---	---
Copper	ppm	ASTM D5185m >330	11	---	---
Tin	ppm	ASTM D5185m >15	4	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	<1	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	38	---	---
Barium	ppm	ASTM D5185m 10	0	---	---
Molybdenum	ppm	ASTM D5185m 100	102	---	---
Manganese	ppm	ASTM D5185m	3	---	---
Magnesium	ppm	ASTM D5185m 450	491	---	---
Calcium	ppm	ASTM D5185m 3000	1254	---	---
Phosphorus	ppm	ASTM D5185m 1150	767	---	---
Zinc	ppm	ASTM D5185m 1350	979	---	---
Sulfur	ppm	ASTM D5185m 4250	2753	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 34	---	---
Sodium	ppm	ASTM D5185m	13	---	---
Potassium	ppm	ASTM D5185m >20	25	---	---

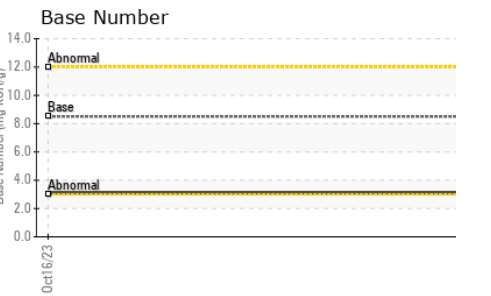
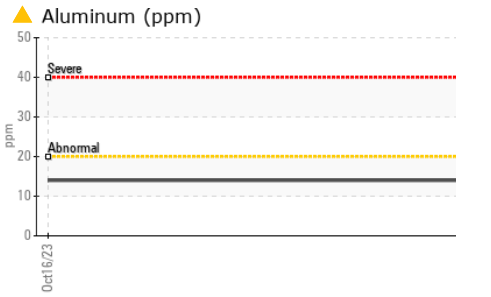
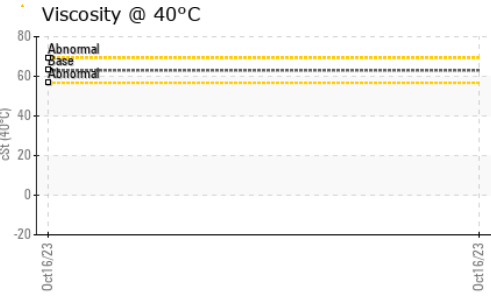
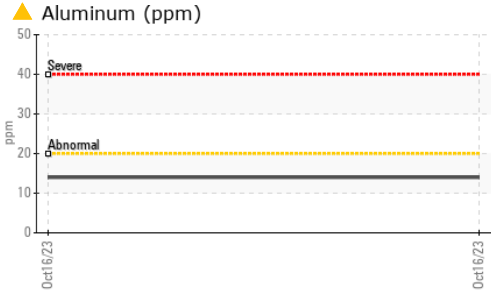
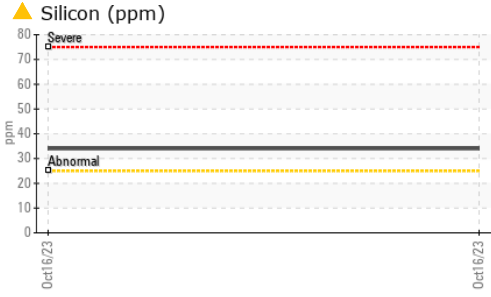
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624 >20	13.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	30.6	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	25.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	3.1	---	---

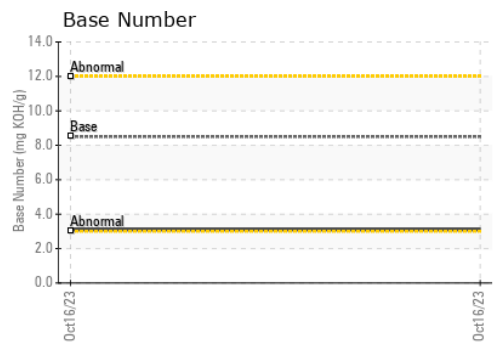
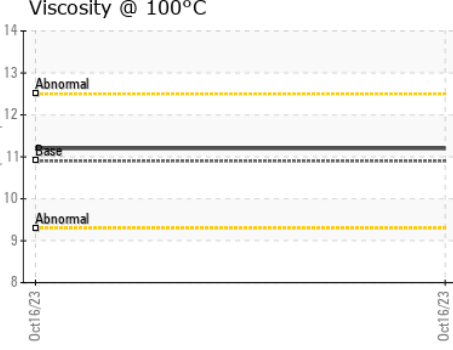
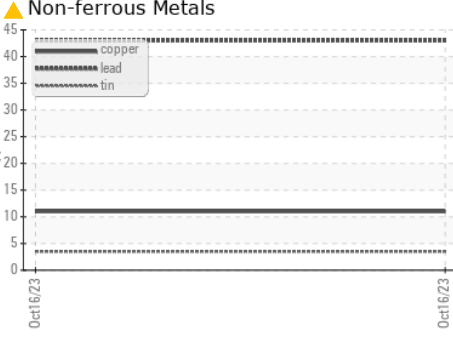
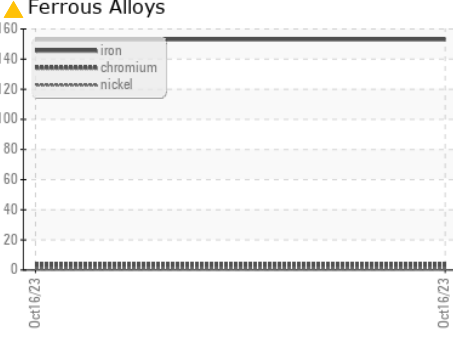
OIL ANALYSIS REPORT



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	10.9	11.2	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0002912 **Received** : 15 Nov 2023
Lab Number : 06008050 **Diagnosed** : 30 Nov 2023
Unique Number : 10741812 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FT-IR, ICP, KV100, KV40, SCREEN, TBN)

CITY OF SEQUIM
 152 W CEDAR ST
 SEQUIM, WA
 US 98382
 Contact: MARK BENEDICT
 mbenedict@sequimwa.gov
 T: (360)912-5639
 F:

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)