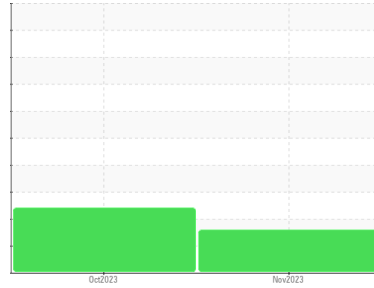




PROBLEM SUMMARY

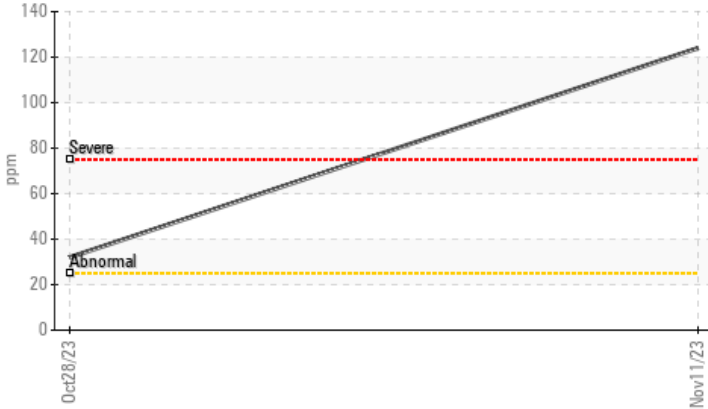
Sample Rating Trend



Machine Id
WESTERN STAR WESTERN STAR
 Component
Diesel Engine
 Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Silicon (ppm)



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	---
Silicon	ppm	ASTM D5185m	>25	▲ 124	▲ 32	---

Customer Id: SHOQUI
 Sample No.: WC0838326
 Lab Number: 06028314
 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
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

28 Oct 2023 Diag: Don Baldrige

DIRT



We advise that you check the fuel injection system. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. Elemental level of silicon (Si) above normal. There is a moderate amount of fuel present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

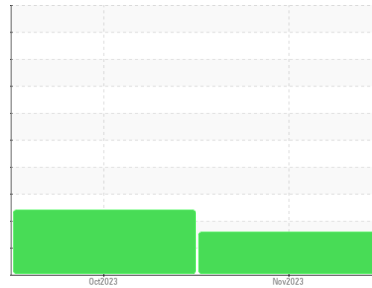
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
WESTERN STAR WESTERN STAR

Component
Diesel Engine

Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ 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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0838326	WC0838329	---
Sample Date	Client Info		11 Nov 2023	28 Oct 2023	---
Machine Age	mls	Client Info	767492	764000	---
Oil Age	mls	Client Info	0	0	---
Oil Changed	Client Info		Changed	N/A	---
Sample Status			ABNORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	9	35	---
Chromium	ppm	ASTM D5185m >20	<1	2	---
Nickel	ppm	ASTM D5185m >4	0	0	---
Titanium	ppm	ASTM D5185m	<1	<1	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	3	2	---
Lead	ppm	ASTM D5185m >40	0	2	---
Copper	ppm	ASTM D5185m >330	<1	2	---
Tin	ppm	ASTM D5185m >15	<1	4	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	138	43	---
Barium	ppm	ASTM D5185m 0	6	0	---
Molybdenum	ppm	ASTM D5185m 0	129	40	---
Manganese	ppm	ASTM D5185m	0	1	---
Magnesium	ppm	ASTM D5185m 0	652	524	---
Calcium	ppm	ASTM D5185m	1259	1651	---
Phosphorus	ppm	ASTM D5185m	718	771	---
Zinc	ppm	ASTM D5185m	839	949	---
Sulfur	ppm	ASTM D5185m	3494	2501	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 124	▲ 32	---
Sodium	ppm	ASTM D5185m	<1	2	---
Potassium	ppm	ASTM D5185m >20	2	<1	---
Fuel	%	ASTM D3524 >5	<1.0	▲ 4.4	---

INFRA-RED

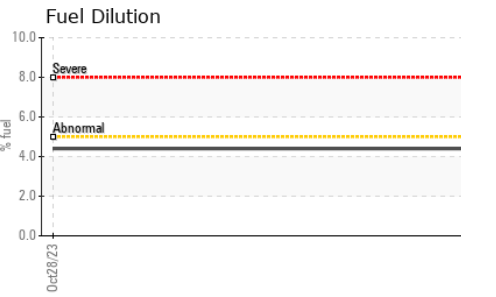
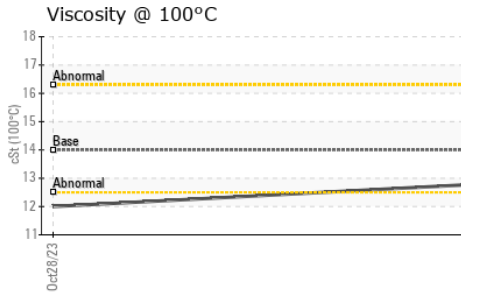
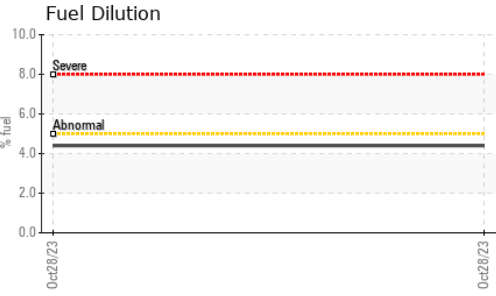
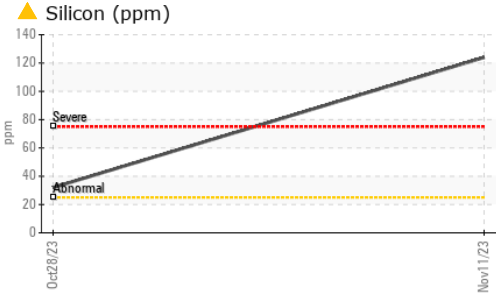
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	1.4	---
Nitration	Abs/cm	*ASTM D7624 >20	7.6	7.2	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.3	24.2	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.0	19.6	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.4	7.4	9.5	---



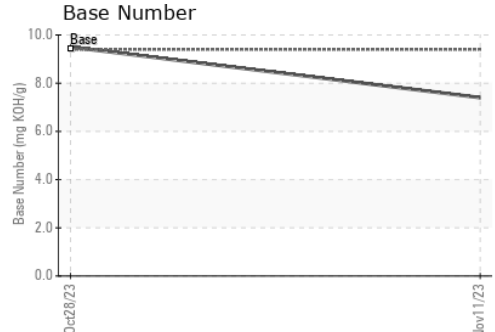
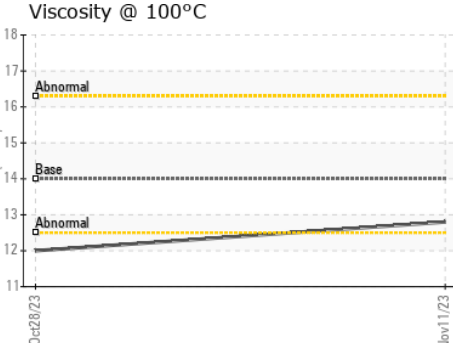
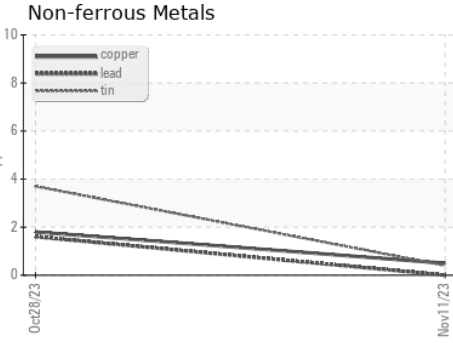
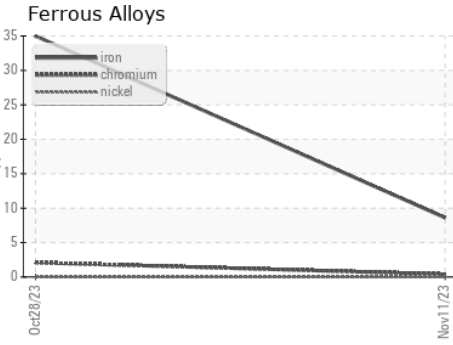
OIL ANALYSIS REPORT



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	12.8	12.0	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0838326 **Received** : 07 Dec 2023
Lab Number : 06028314 **Diagnosed** : 11 Dec 2023
Unique Number : 10778105 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION)

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 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)