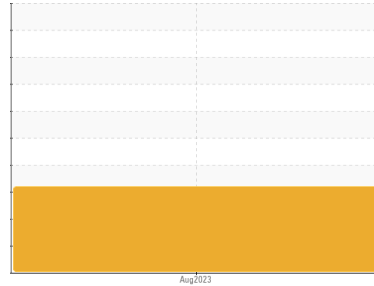


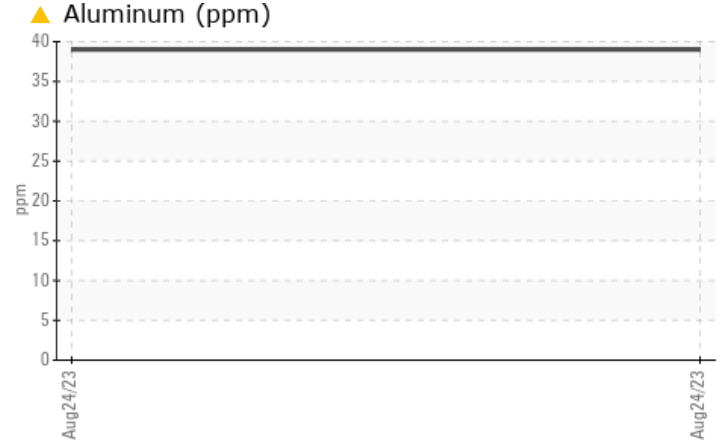
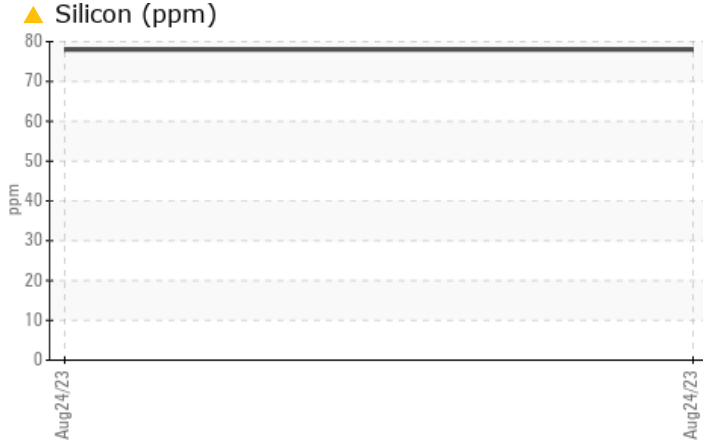
PROBLEM SUMMARY

Sample Rating Trend



Machine Id
VOLVO VNL 190
 Component
Oil
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	---	---
Silver	ppm	ASTM D5185m	▲ 22	---	---
Aluminum	ppm	ASTM D5185m	▲ 39	---	---
Silicon	ppm	ASTM D5185m	▲ 78	---	---

Customer Id: TVAPLAIL
 Sample No.: PCA0097420
 Lab Number: 05971989
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

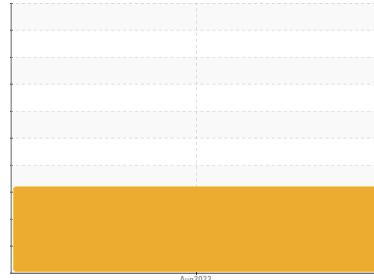
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
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
VOLVO VNL 190

 Component
Oil
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)
DIAGNOSIS
▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear

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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0097420	---	---
Sample Date	Client Info			24 Aug 2023	---	---
Machine Age	hrs	Client Info		17000	---	---
Oil Age	hrs	Client Info		17000	---	---
Oil Changed	Client Info			Changed	---	---
Sample Status				ABNORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method			NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		29	---	---
Chromium	ppm	ASTM D5185m		<1	---	---
Nickel	ppm	ASTM D5185m		<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		▲ 22	---	---
Aluminum	ppm	ASTM D5185m		▲ 39	---	---
Lead	ppm	ASTM D5185m		<1	---	---
Copper	ppm	ASTM D5185m		16	---	---
Tin	ppm	ASTM D5185m		3	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

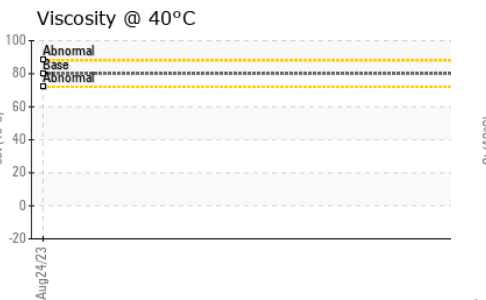
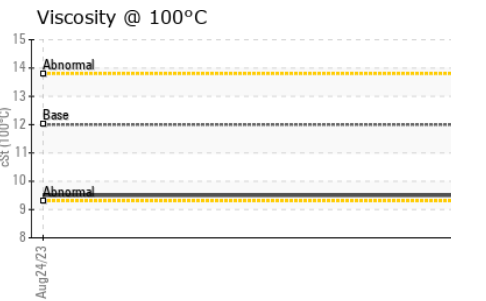
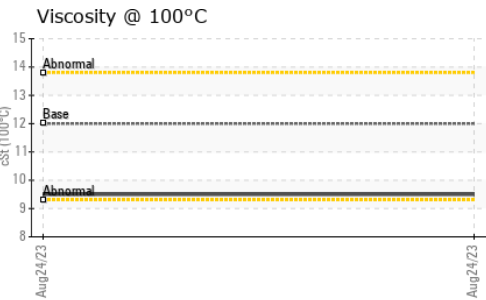
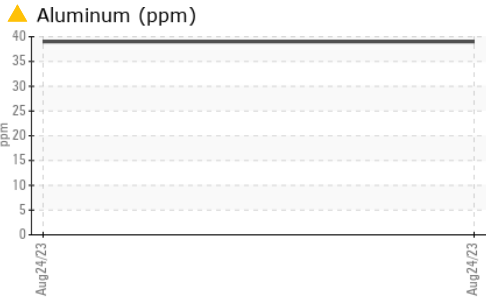
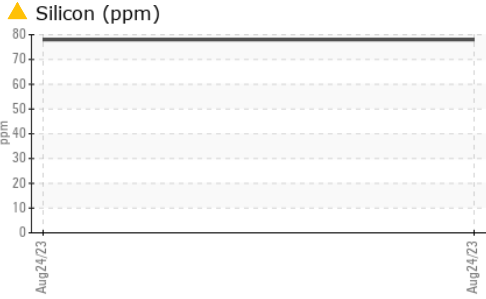
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	212	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	50	127	---	---
Manganese	ppm	ASTM D5185m	0	4	---	---
Magnesium	ppm	ASTM D5185m	950	684	---	---
Calcium	ppm	ASTM D5185m	1050	1468	---	---
Phosphorus	ppm	ASTM D5185m	995	704	---	---
Zinc	ppm	ASTM D5185m	1180	860	---	---
Sulfur	ppm	ASTM D5185m	2600	2662	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		▲ 78	---	---
Sodium	ppm	ASTM D5185m		5	---	---
Potassium	ppm	ASTM D5185m	>20	93	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.2	---	---
Nitration	Abs/cm	*ASTM D7624		9.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415		23.5	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		22.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.50	---	---

OIL ANALYSIS REPORT



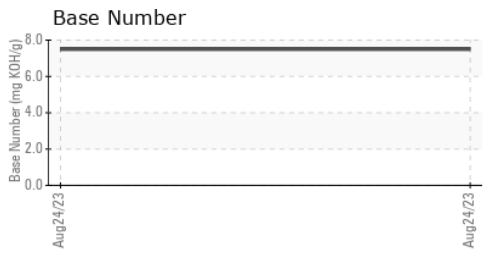
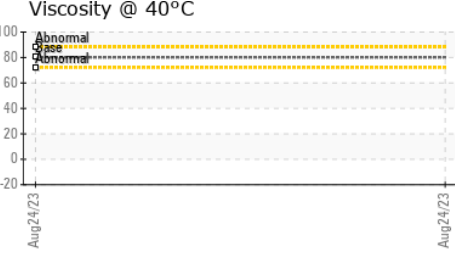
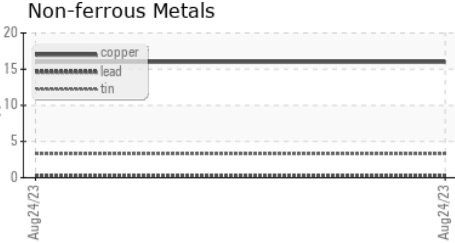
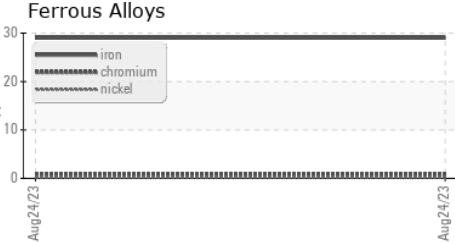
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	NEG	---	---
Free Water	scalar	*Visual	NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	9.5	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color				no image	no image	no image
Bottom				no image	no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0097420 **Received** : 06 Oct 2023
Lab Number : 05971989 **Diagnosed** : 18 Oct 2023
Unique Number : 10683939 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: FT-IR, KV100, TBN)

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 13915 W ROUTE 30
 PLAINFIELD, IL
 US 60544
 Contact: JOSHUA HUBBARD
 joshua@tvarepairllc.com
 T: (815)306-0330
 F:

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)