



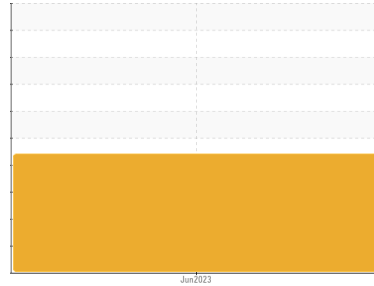
PROBLEM SUMMARY

Sample Rating Trend

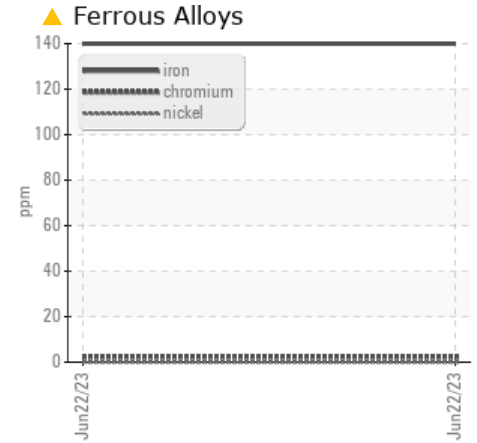
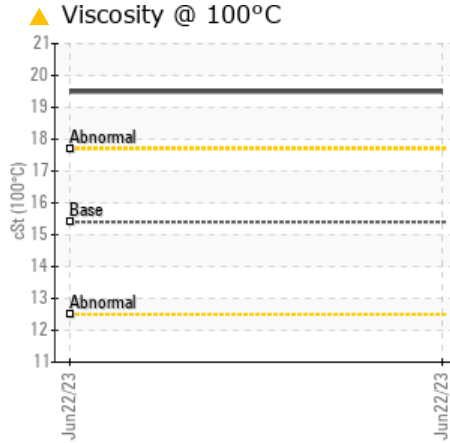
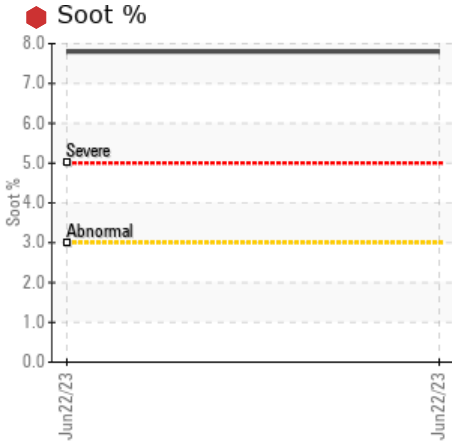
SOOT



Machine Id
425172
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (44 QTS)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>100	▲ 140	---	---
Soot %	%	*ASTM D7844	>3	◆ 7.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 0.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 19.5	---	---

Customer Id: GFL410
 Sample No.: GFL0084889
 Lab Number: 05897199
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
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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.
Alert	---	---	?	NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.
Check Combustion	---	---	?	We advise that you check for faulty combustion, plugged air filters, or aftercoolers.

HISTORICAL DIAGNOSIS



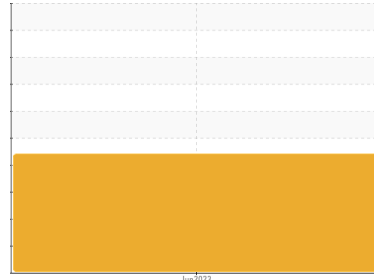
OIL ANALYSIS REPORT

Sample Rating Trend

SOOT



Machine Id
425172
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (44 QTS)



DIAGNOSIS

Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Wear

Cylinder, crank, or cam shaft wear is indicated.

Contamination

There is an abnormal amount of solids and carbon present in the oil.

Fluid Condition

The oil viscosity is higher than normal. The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0084889	---	---
Sample Date	Client Info		22 Jun 2023	---	---
Machine Age	mls	Client Info	558307	---	---
Oil Age	mls	Client Info	558307	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 140	---	---
Chromium	ppm	ASTM D5185m >20	2	---	---
Nickel	ppm	ASTM D5185m >2	0	---	---
Titanium	ppm	ASTM D5185m	88	---	---
Silver	ppm	ASTM D5185m >2	0	---	---
Aluminum	ppm	ASTM D5185m >25	6	---	---
Lead	ppm	ASTM D5185m >40	15	---	---
Copper	ppm	ASTM D5185m >330	6	---	---
Tin	ppm	ASTM D5185m >15	1	---	---
Vanadium	ppm	ASTM D5185m	2	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	45	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 60	3	---	---
Manganese	ppm	ASTM D5185m 0	1	---	---
Magnesium	ppm	ASTM D5185m 1010	442	---	---
Calcium	ppm	ASTM D5185m 1070	1935	---	---
Phosphorus	ppm	ASTM D5185m 1150	1019	---	---
Zinc	ppm	ASTM D5185m 1270	1286	---	---
Sulfur	ppm	ASTM D5185m 2060	4328	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	---	---
Sodium	ppm	ASTM D5185m	8	---	---
Potassium	ppm	ASTM D5185m >20	10	---	---

INFRA-RED

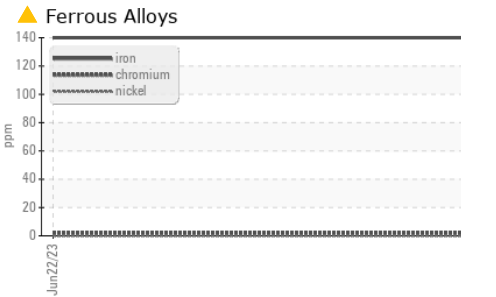
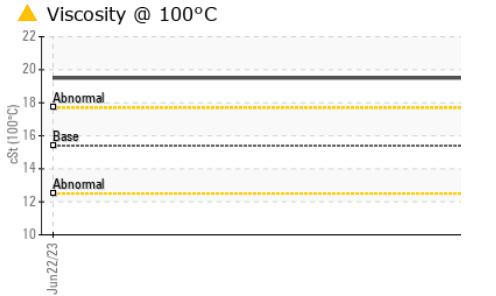
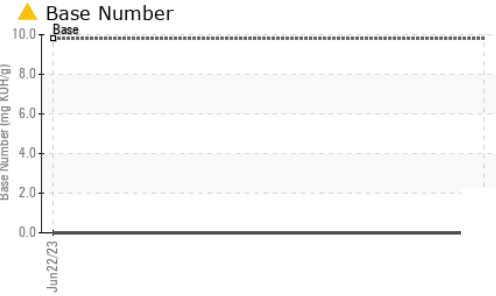
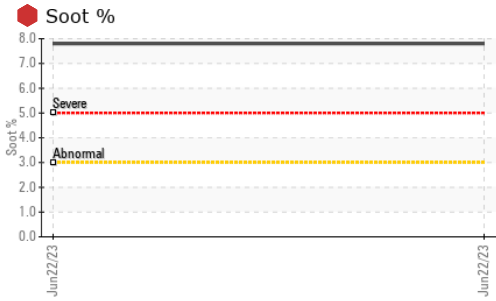
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	● 7.8	---	---
Nitration	Abs/cm	*ASTM D7624 >20	60.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	73.1	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	135.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 0.0	---	---



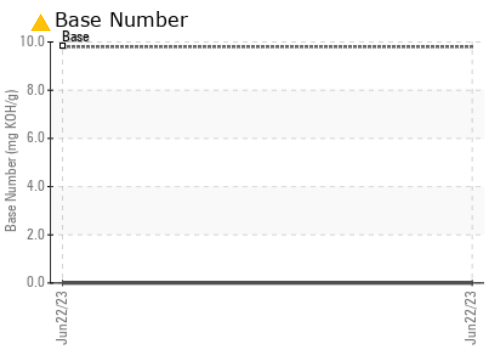
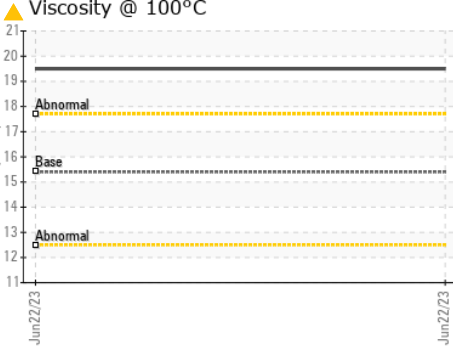
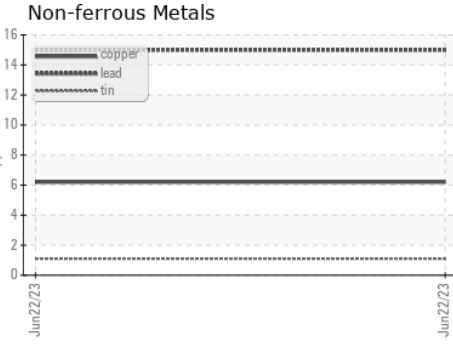
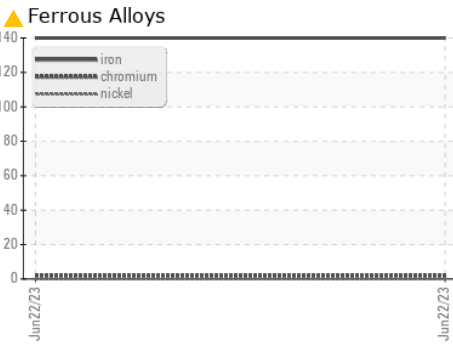
OIL ANALYSIS REPORT



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	15.4	▲ 19.5	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084889 **Received** : 13 Jul 2023
Lab Number : 05897199 **Diagnosed** : 17 Jul 2023
Unique Number : 10553009 **Diagnostician** : Jonathan Hester
Test Package : FLEET

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 US 48184
 Contact: Laura Wilson
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 F: (734)721-0172

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)