

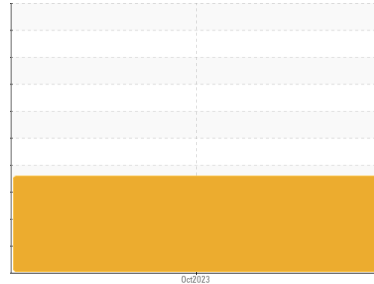
PROBLEM SUMMARY

Sample Rating Trend

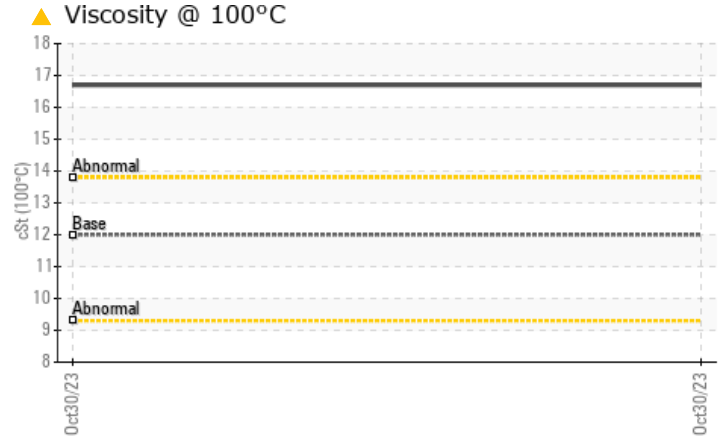
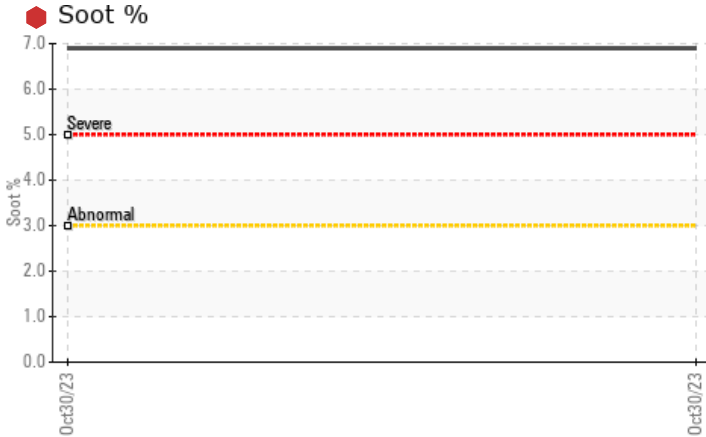
SOOT



Area
(N/A) Preferred Service-Yard Horse
 Machine Id
[Preferred Service-Yard Horse] 192A03-9070
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



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	---	---
Soot %	%	*ASTM D7844	>3	6.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		0.0	---	---
Visc @ 100°C	cSt	ASTM D445	12.00	16.7	---	---

Customer Id: TSV1920
 Sample No.: PCA0109415
 Lab Number: 06001482
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
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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.
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



Area
(N/A) Preferred Service-Yard Horse
Machine Id
[Preferred Service-Yard Horse] 192A03-9070
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



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
All component wear rates are normal.

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	PCA0109415	---	---
Sample Date	Client Info	30 Oct 2023	---	---
Machine Age	mls Client Info	36245	---	---
Oil Age	mls Client Info	713	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		SEVERE	---	---

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	79	---	---
Chromium	ppm ASTM D5185m >20	1	---	---
Nickel	ppm ASTM D5185m >4	0	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >3	0	---	---
Aluminum	ppm ASTM D5185m >20	2	---	---
Lead	ppm ASTM D5185m >40	0	---	---
Copper	ppm ASTM D5185m >330	0	---	---
Tin	ppm ASTM D5185m >15	0	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	3	---	---
Barium	ppm ASTM D5185m 0	0	---	---
Molybdenum	ppm ASTM D5185m 50	59	---	---
Manganese	ppm ASTM D5185m 0	<1	---	---
Magnesium	ppm ASTM D5185m 950	949	---	---
Calcium	ppm ASTM D5185m 1050	1070	---	---
Phosphorus	ppm ASTM D5185m 995	994	---	---
Zinc	ppm ASTM D5185m 1180	1260	---	---
Sulfur	ppm ASTM D5185m 2600	2927	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	---	---
Sodium	ppm ASTM D5185m	<1	---	---
Potassium	ppm ASTM D5185m >20	0	---	---

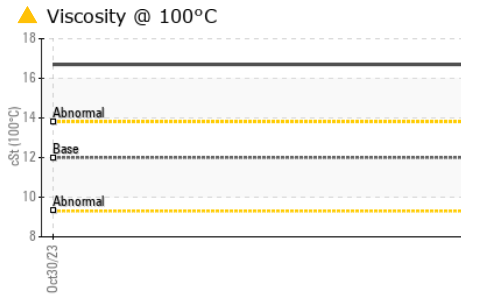
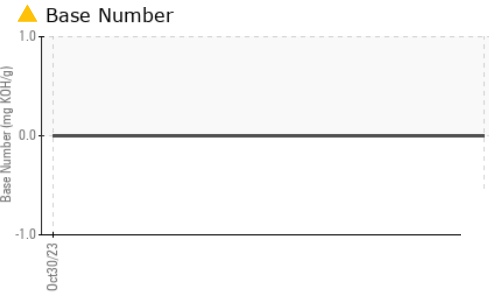
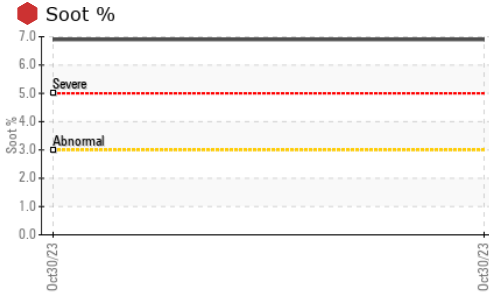
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	6.9	---	---
Nitration	Abs/cm *ASTM D7624 >20	19.1	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	34.1	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	31.9	---	---
Base Number (BN)	mg KOH/g ASTM D2896	0.0	---	---

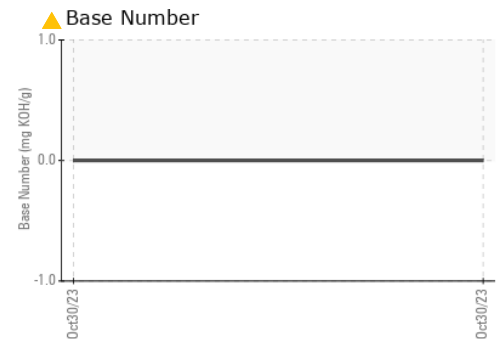
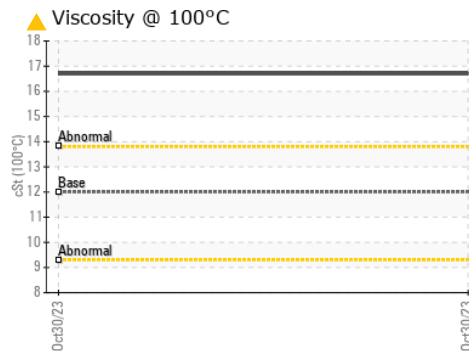
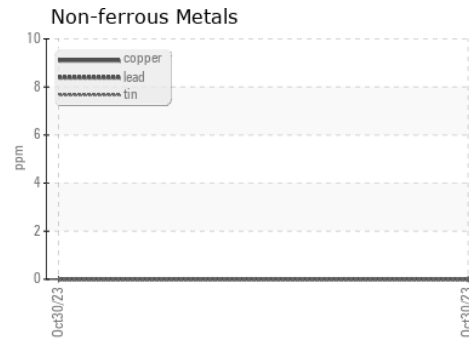
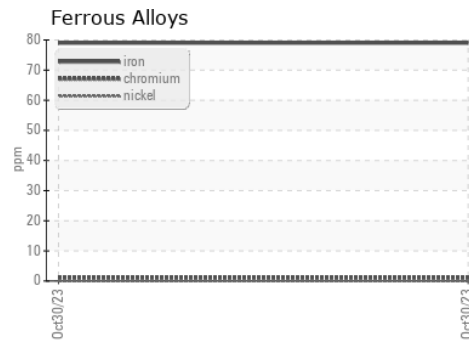
OIL ANALYSIS REPORT



PARAMETER	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	---	---

PARAMETER	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	12.00	▲ 16.7	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109415 **Received** : 08 Nov 2023
Lab Number : 06001482 **Diagnosed** : 09 Nov 2023
Unique Number : 10729842 **Diagnostician** : Jonathan Hester
Test Package : FLEET

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 Melrose Park, IL
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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)