OIL DIAGNOSTICS

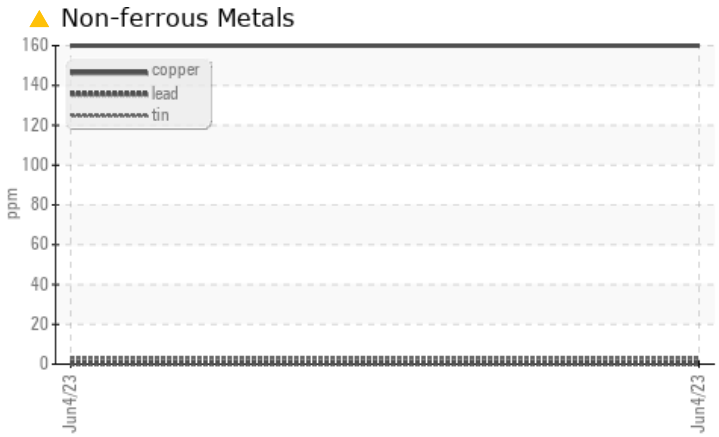
PROBLEM SUMMARY

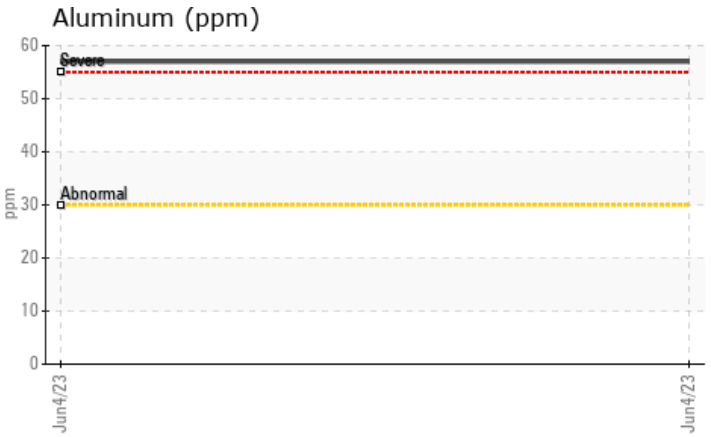
Sample Rating Trend

WEAR

Area
Walgreens
Machine Id
[Walgreens] 136A63398
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (40 QTS)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Copper	ppm	ASTM D5185m	>150	▲ **160**	---	---

Customer Id: TSV1363
Sample No.: PCA0094361
Lab Number: 05864920
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Area
Walgreens
Machine Id
[Walgreens] 136A63398
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (40 QTS)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**PCA0094361**	---	---
Sample Date		Client Info		**04 Jun 2023**	---	---
Machine Age	mls	Client Info		**50079**	---	---
Oil Age	mls	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ABNORMAL**	---	---

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	**<1.0**	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>80	**57**	---	---
Chromium	ppm	ASTM D5185m	>5	**3**	---	---
Nickel	ppm	ASTM D5185m	>2	**<1**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m	>3	**0**	---	---
Aluminum	ppm	ASTM D5185m	>30	**57**	---	---
Lead	ppm	ASTM D5185m	>30	**<1**	---	---
Copper	ppm	ASTM D5185m	>150	▲ **160**	---	---
Tin	ppm	ASTM D5185m	>5	**3**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	2	**25**	---	---
Barium	ppm	ASTM D5185m	0	**0**	---	---
Molybdenum	ppm	ASTM D5185m	50	**46**	---	---
Manganese	ppm	ASTM D5185m	0	**5**	---	---
Magnesium	ppm	ASTM D5185m	950	**569**	---	---
Calcium	ppm	ASTM D5185m	1050	**1872**	---	---
Phosphorus	ppm	ASTM D5185m	995	**707**	---	---
Zinc	ppm	ASTM D5185m	1180	**896**	---	---
Sulfur	ppm	ASTM D5185m	2600	**2213**	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>20	**11**	---	---
Sodium	ppm	ASTM D5185m		**11**	---	---
Potassium	ppm	ASTM D5185m	>20	**146**	---	---
Glycol	%	*ASTM D2982		**0.0**	---	---

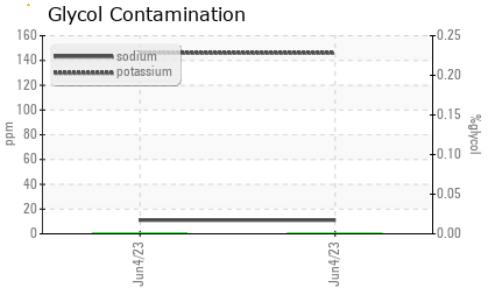
INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.6**	---	---
Nitration	Abs/cm	*ASTM D7624	>20	**11.7**	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.0**	---	---

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**26.5**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		**7.0**	---	---

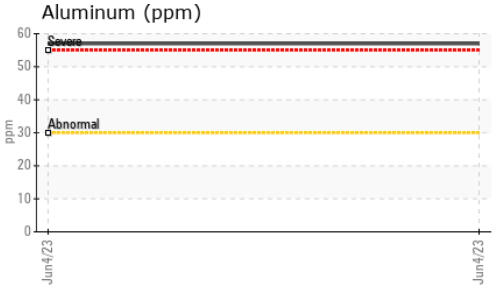
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

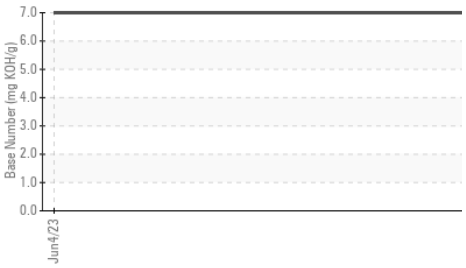
Glycol Contamination



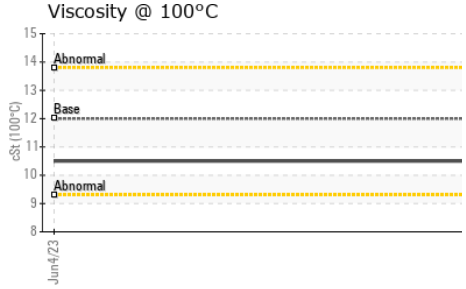
Aluminum (ppm)



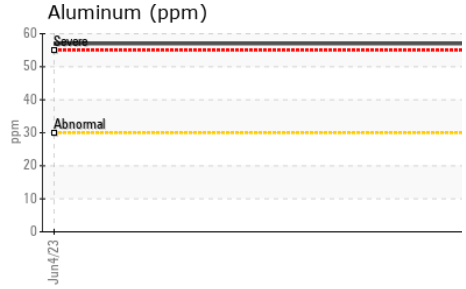
Base Number



Viscosity @ 100°C



Aluminum (ppm)

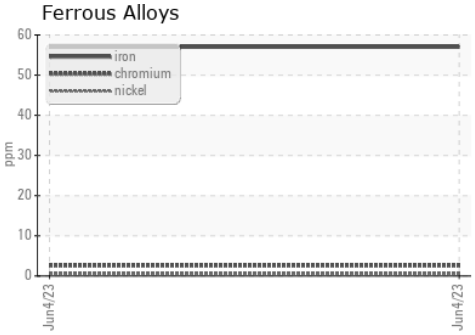


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*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**	---	---

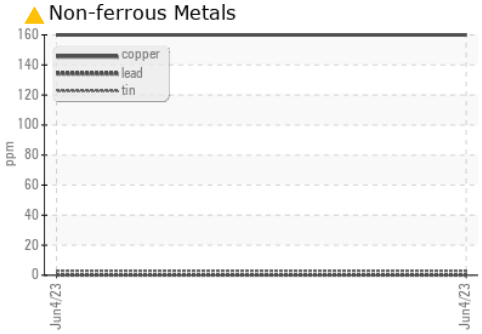
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	12.00	**10.5**	---	---

GRAPHS

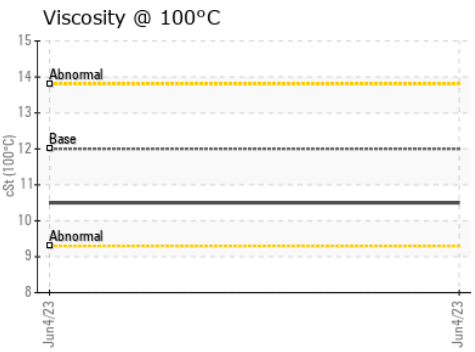
Ferrous Alloys



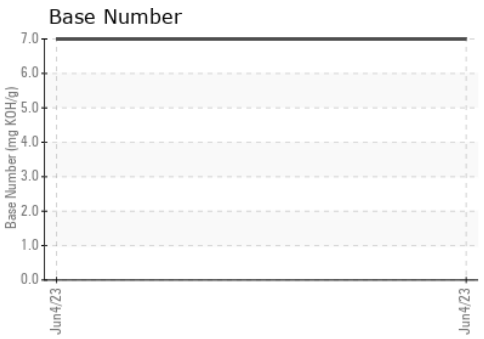
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0094361 **Received** : 05 Jun 2023
Lab Number : 05864920 **Diagnosed** : 07 Jun 2023
Unique Number : 10499385 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: Glycol)

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)

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