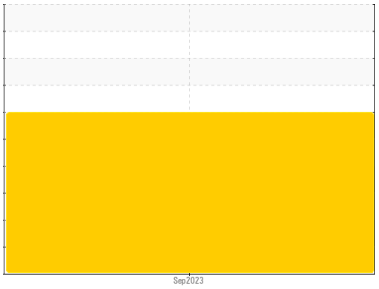
OIL DIAGNOSTICS

PROBLEM SUMMARY

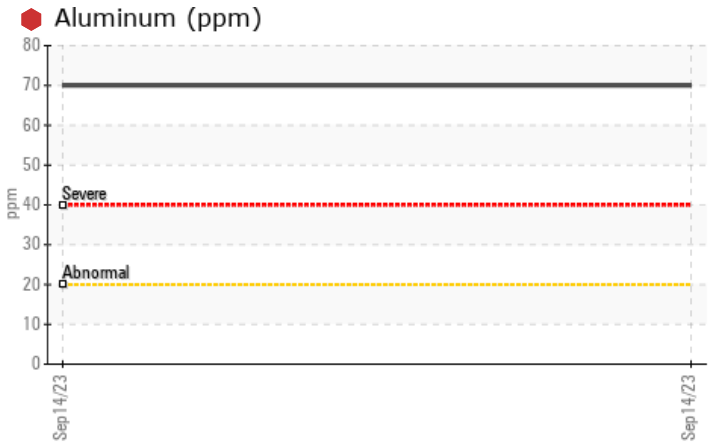
Sample Rating Trend



WEAR

Machine Id
VAN HOOL 63
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Aluminum	ppm	ASTM D5185m	>20	**70**	---	---

Customer Id: NOREAG
Sample No.: PCA0082960
Lab Number: 05974885
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

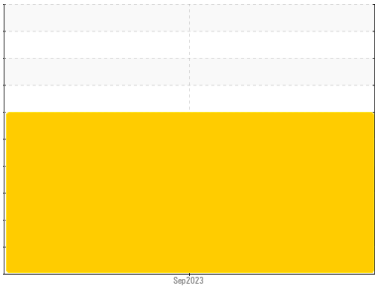
Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
VAN HOOL 63
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear

The aluminum level is severe. Piston wear is indicated.

Contamination

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0082960**	---	---
Sample Date		Client Info		**14 Sep 2023**	---	---
Machine Age	mls	Client Info		**351272**	---	---
Oil Age	mls	Client Info		**15000**	---	---
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	**63**	---	---
Chromium	ppm	ASTM D5185m	>20	**2**	---	---
Nickel	ppm	ASTM D5185m	>4	**<1**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m	>3	**0**	---	---
Aluminum	ppm	ASTM D5185m	>20	**70**	---	---
Lead	ppm	ASTM D5185m	>40	**<1**	---	---
Copper	ppm	ASTM D5185m	>330	**3**	---	---
Tin	ppm	ASTM D5185m	>15	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**<1**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**2**	---	---
Barium	ppm	ASTM D5185m		**2**	---	---
Molybdenum	ppm	ASTM D5185m		**92**	---	---
Manganese	ppm	ASTM D5185m		**<1**	---	---
Magnesium	ppm	ASTM D5185m		**1289**	---	---
Calcium	ppm	ASTM D5185m		**1446**	---	---
Phosphorus	ppm	ASTM D5185m		**1312**	---	---
Zinc	ppm	ASTM D5185m		**1725**	---	---
Sulfur	ppm	ASTM D5185m		**4295**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**5**	---	---
Sodium	ppm	ASTM D5185m		**9**	---	---
Potassium	ppm	ASTM D5185m	>20	**10**	---	---

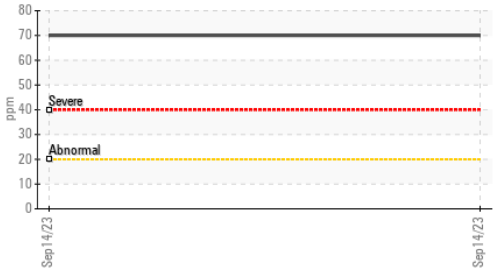
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**1.3**	---	---
Nitration	Abs/cm	*ASTM D7624	>20	**10.8**	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.2**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.3**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.3**	---	---

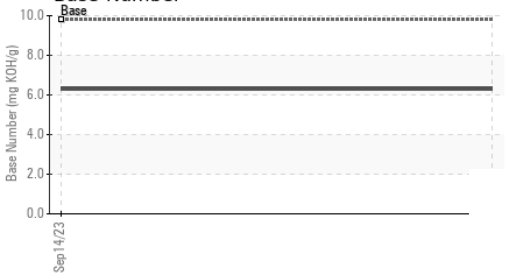
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

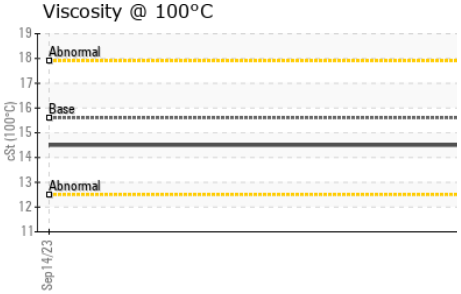
Aluminum (ppm)



Base Number



Viscosity @ 100°C

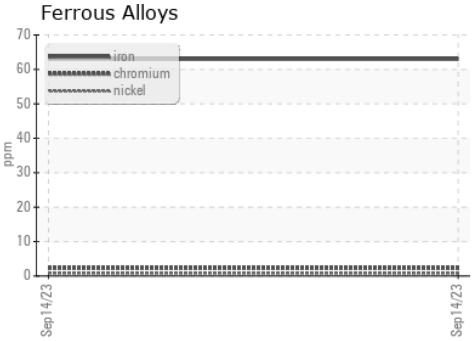


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*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**	---	---

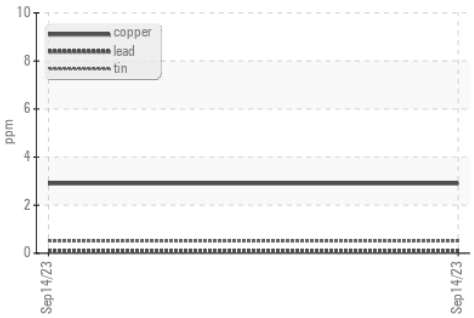
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6	**14.5**	---	---

GRAPHS

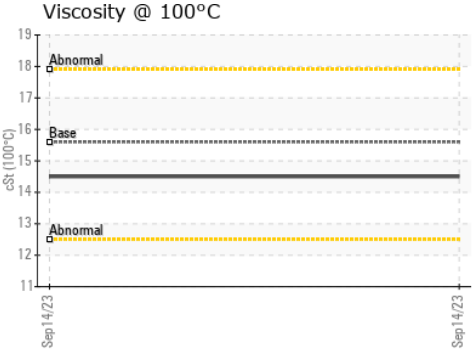
Ferrous Alloys



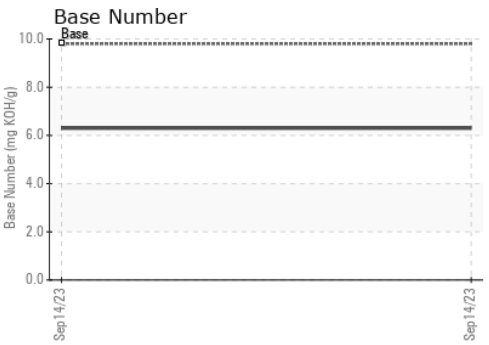
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0082960
Lab Number : 05974885
Unique Number : 10686835
Test Package : FLEET

Received : 10 Oct 2023
Diagnosed : 12 Oct 2023
Diagnostician : Jonathan Hester

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)

NORTHFIELD LINES
1034 GEMINI RD
EAGAN, MN
US 55121
Contact: DISPATCH
dispatch@northfieldlines.com
T: (651)203-8888
F: