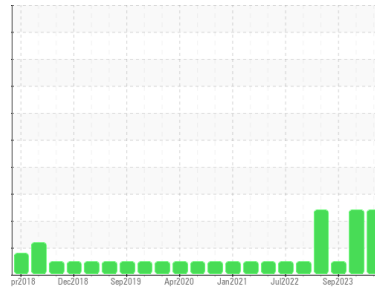


# OIL ANALYSIS REPORT

Sample Rating Trend



**GLYCOL**



Machine Id  
**VOLVO VNR 26607 (S/N 4V4WC9EH2JN901285)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 10W30 (33 QTS)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0094631</b>	PCA0094587	PCA0094589
Sample Date	Client Info			<b>21 Mar 2024</b>	28 Nov 2023	29 Sep 2023
Machine Age	mls Client Info			<b>602930</b>	573819	546602
Oil Age	mls Client Info			<b>28571</b>	27217	46802
Oil Changed	Client Info			<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>6.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>26</b>	25	54
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	4
Copper	ppm	ASTM D5185m	>330	<b>3</b>	4	9
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<b>&lt;1</b>	<1	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>76</b>	78	73
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	950	<b>888</b>	932	933
Calcium	ppm	ASTM D5185m	1050	<b>1152</b>	1110	1118
Phosphorus	ppm	ASTM D5185m	995	<b>750</b>	935	1021
Zinc	ppm	ASTM D5185m	1180	<b>1223</b>	1234	1260
Sulfur	ppm	ASTM D5185m	2600	<b>3018</b>	2655	2696

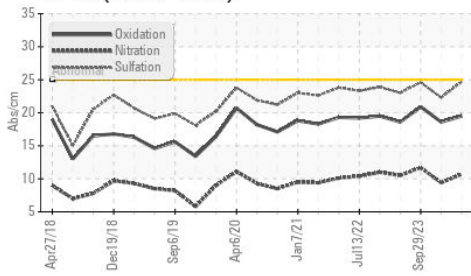
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	9
Sodium	ppm	ASTM D5185m		<b>▲ 286</b>	▲ 220	148
Potassium	ppm	ASTM D5185m	>20	<b>▲ 346</b>	▲ 241	156
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.7</b>	9.4	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.7</b>	22.3	24.6

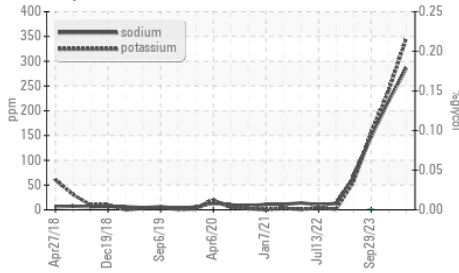
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.5</b>	18.6	20.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>3.9</b>	5.2	4.2

# OIL ANALYSIS REPORT

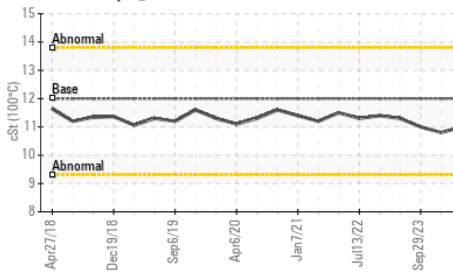
FT-IR (Direct Trend)



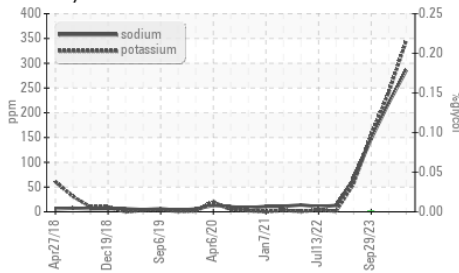
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

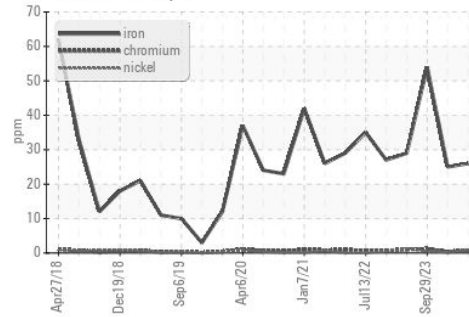


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

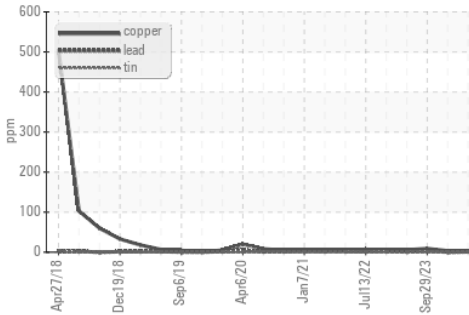
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	10.8

## GRAPHS

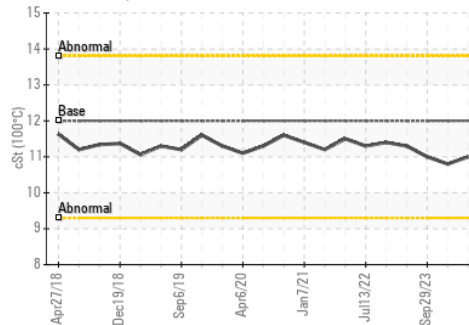
Ferrous Alloys



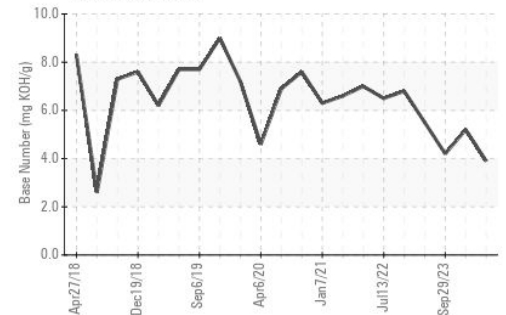
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : PCA0094631

**Lab Number** : 06139219

**Unique Number** : 10964027

**Test Package** : FLEET ( Additional Tests: Glycol )

**Received** : 04 Apr 2024

**Tested** : 09 Apr 2024

**Diagnosed** : 09 Apr 2024 - Jonathan Hester

**PERDUE FARMS - WASHINGTON**

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WASHINGTON, IN

US 47501

Contact: DEREK RYAN

derek.ryan@perdue.com

T: (812)257-3023

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)