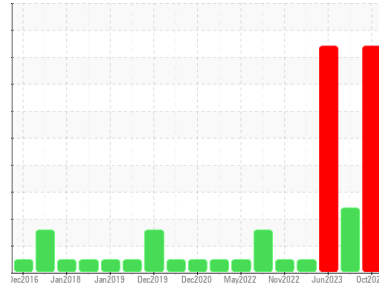




Machine Id  
**KENWORTH 150-16**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## 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. Test for glycol is positive.

### 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>PCA0106852</b>	PCA0082153	PCA0082160
Sample Date	Client Info	<b>23 Oct 2023</b>	24 Jul 2023	20 Jun 2023
Machine Age	mls	<b>323608</b>	319532	321512
Oil Age	mls	<b>10000</b>	1500	10000
Oil Changed	Client Info	<b>Changed</b>	N/A	Changed
Sample Status		<b>SEVERE</b>	ATTENTION	SEVERE

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	<1.0

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >75	<b>40</b>	15	45
Chromium	ppm ASTM D5185m >4	<b>1</b>	<1	2
Nickel	ppm ASTM D5185m >5	<b>&lt;1</b>	0	<1
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >54	<b>4</b>	0	1
Lead	ppm ASTM D5185m >20	<b>5</b>	2	8
Copper	ppm ASTM D5185m >240	<b>6</b>	4	7
Tin	ppm ASTM D5185m >5	<b>1</b>	<1	2
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Molybdenum	ppm ASTM D5185m 60	<b>95</b>	78	105
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1001</b>	1034	953
Calcium	ppm ASTM D5185m 1070	<b>1079</b>	1107	1028
Phosphorus	ppm ASTM D5185m 1150	<b>1074</b>	1080	990
Zinc	ppm ASTM D5185m 1270	<b>1319</b>	1265	1219
Sulfur	ppm ASTM D5185m 2060	<b>3699</b>	3729	3504

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	<b>9</b>	6	12
Sodium	ppm ASTM D5185m	<b>▲ 140</b>	▲ 81	▲ 198
Potassium	ppm ASTM D5185m >20	<b>▲ 244</b>	▲ 143	▲ 338
Glycol	% *ASTM D2982	<b>● 0.10</b>	0.0	● 0.10

## INFRA-RED

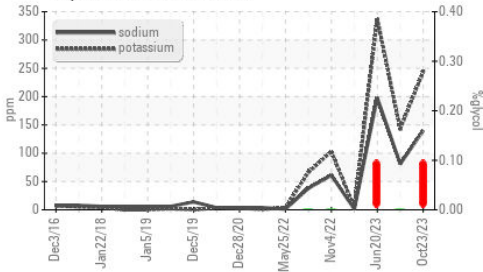
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.3	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>8.9</b>	7.0	10.7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.0</b>	19.0	23.2

## FLUID DEGRADATION

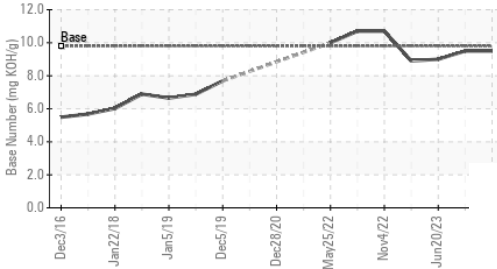
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.8</b>	14.7	20.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.5</b>	9.5	9.0

# OIL ANALYSIS REPORT

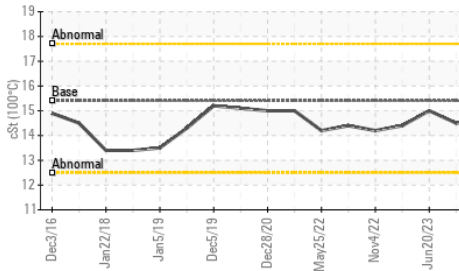
## Glycol Contamination



## Base Number



## Viscosity @ 100°C



## VISUAL

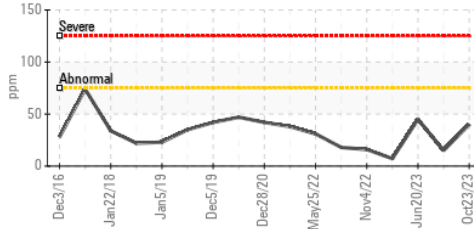
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

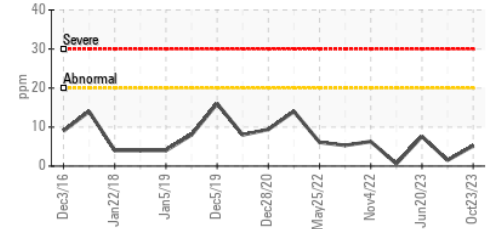
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	14.5

## GRAPHS

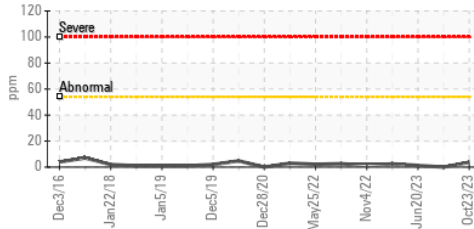
### Iron (ppm)



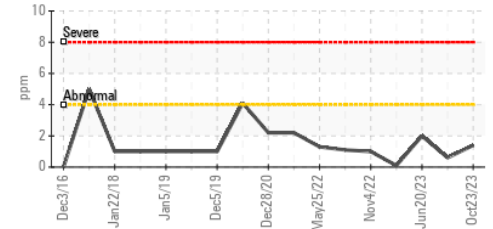
### Lead (ppm)



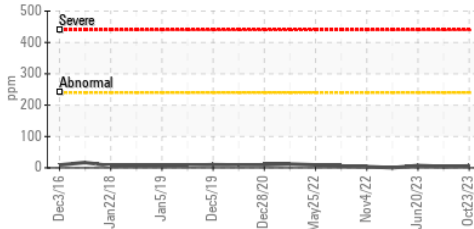
### Aluminum (ppm)



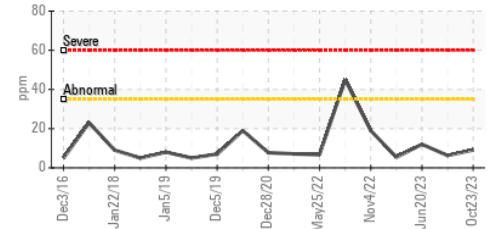
### Chromium (ppm)



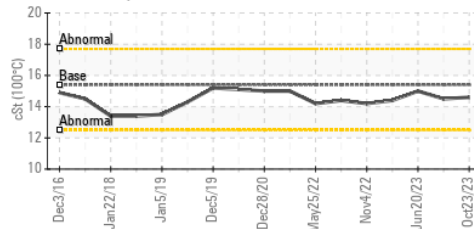
### Copper (ppm)



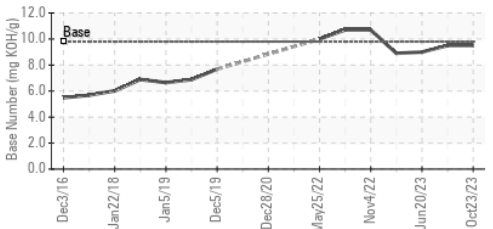
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0106852 **Received** : 01 Nov 2023  
**Lab Number** : 05995406 **Diagnosed** : 03 Nov 2023  
**Unique Number** : 10723766 **Diagnostician** : Don Baldrige

**Test Package** : MOB 1 ( Additional Tests: Glycol, TBN )

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)

**GE MARSHALL EXCAVATION**

1351 JOLIET RD  
VALPARAISO, IN  
US 46385

Contact: MARK STEFFEL  
mark.steffel@gemarshall.com

T:  
F: