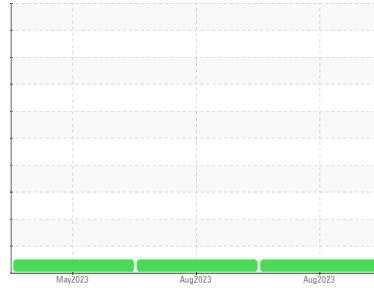


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**FREIGHTLINER 177**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### 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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0097543</b>	PCA0097587	PCA0097487
Sample Date	Client Info			<b>24 Aug 2023</b>	24 Aug 2023	24 May 2023
Machine Age	mls	Client Info		<b>283000</b>	306000	261000
Oil Age	mls	Client Info		<b>22000</b>	22000	0
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>16</b>	13	20
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>1</b>	0	4
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

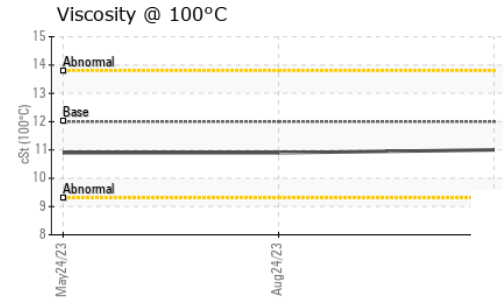
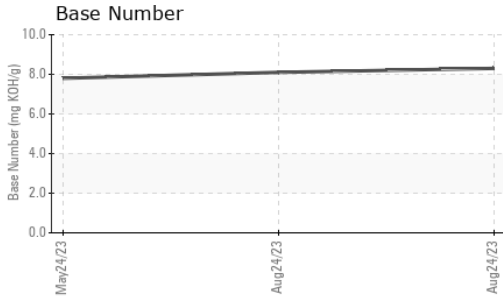
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<b>0</b>	<1	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	50	<b>62</b>	64	68
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	950	<b>951</b>	976	943
Calcium	ppm	ASTM D5185m	1050	<b>1042</b>	1044	1240
Phosphorus	ppm	ASTM D5185m	995	<b>1035</b>	1025	1144
Zinc	ppm	ASTM D5185m	1180	<b>1260</b>	1278	1363
Sulfur	ppm	ASTM D5185m	2600	<b>3026</b>	3222	3503

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	4
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.7	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.6	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	19.7	21.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	16.1	17.7
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.3</b>	8.1	7.8

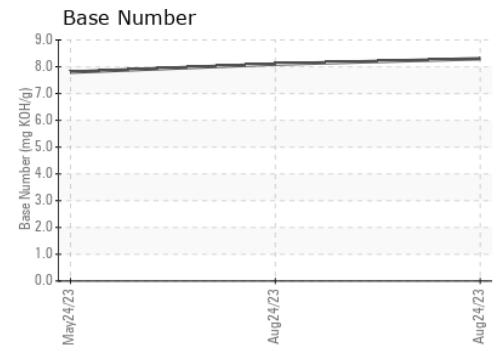
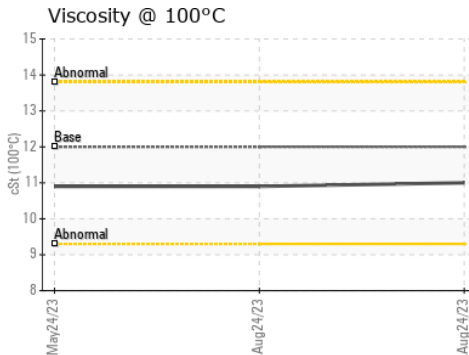
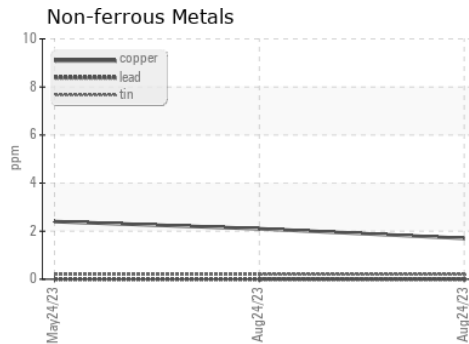
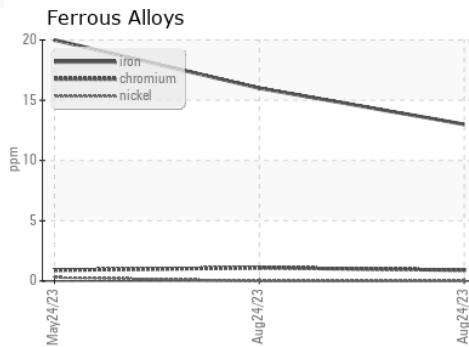
# OIL ANALYSIS REPORT



PARAMETER	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	<b>11.0</b>	10.9	10.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0097543 **Received** : 06 Oct 2023  
**Lab Number** : **05971952** **Diagnosed** : 09 Oct 2023  
**Unique Number** : 10683902 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**TVA REPAIR LLC**  
 13915 W ROUTE 30  
 PLAINFIELD, IL  
 US 60544

Contact: JOSHUA HUBBARD  
 joshua@tvarepairllc.com  
 T: (815)306-0330  
 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)