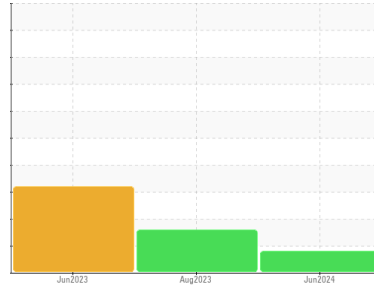


# OIL ANALYSIS REPORT

## Sample Rating Trend



**FUEL**



Machine Id  
**FREIGHTLINER 83**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (13 LTR)**

## DIAGNOSIS

### Recommendation

The oil 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

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0115335</b>	PCA0102641	PCA0100704
Sample Date	Client Info			<b>11 Jun 2024</b>	10 Aug 2023	19 Jun 2023
Machine Age	mls	Client Info		<b>564930</b>	442736	418909
Oil Age	mls	Client Info		<b>25000</b>	28645	27622
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>25</b>	31	43
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m	>30	<b>2</b>	5	13
Copper	ppm	ASTM D5185m	>150	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

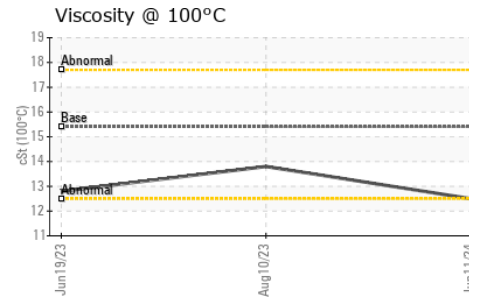
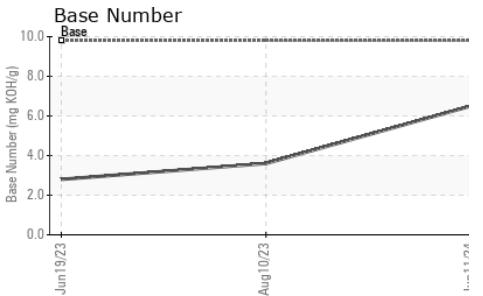
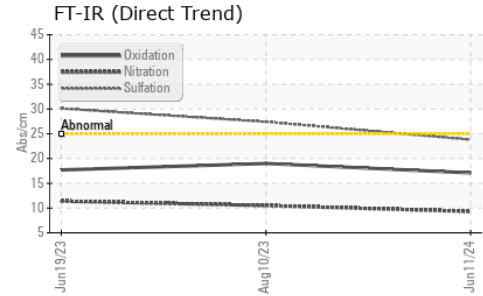
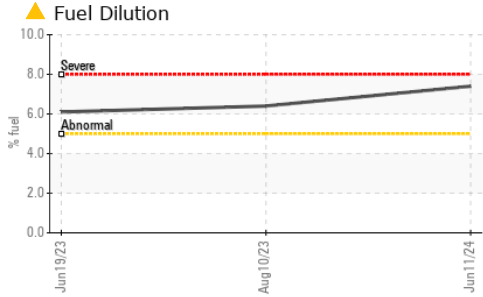
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	2	19
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>53</b>	51	20
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>770</b>	843	135
Calcium	ppm	ASTM D5185m	1070	<b>943</b>	1140	2037
Phosphorus	ppm	ASTM D5185m	1150	<b>866</b>	918	804
Zinc	ppm	ASTM D5185m	1270	<b>897</b>	1115	1036
Sulfur	ppm	ASTM D5185m	2060	<b>2539</b>	3254	3272

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	5
Sodium	ppm	ASTM D5185m		<b>4</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel	%	ASTM D3524	>5	<b>▲ 7.4</b>	▲ 6.4	▲ 6.1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>2.7</b>	▲ 3.9	▲ 3.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	10.5	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.8</b>	27.4	30.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.1</b>	19.0	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>6.5</b>	3.6	▲ 2.8

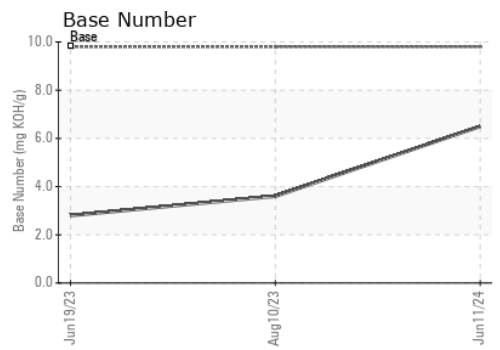
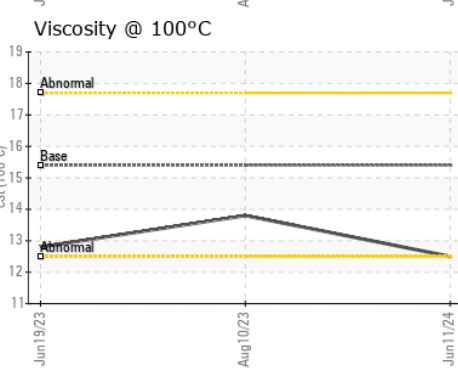
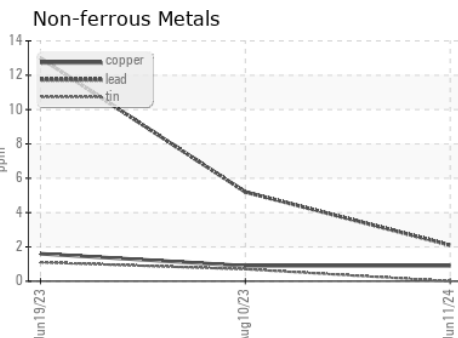
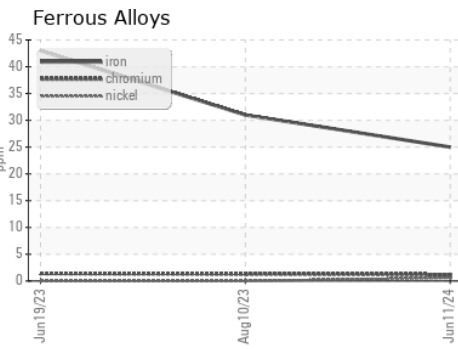
# OIL ANALYSIS REPORT



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	12.5	13.8 ▲ 12.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0115335      **Received** : 18 Jul 2024  
**Lab Number** : 06239999      **Tested** : 19 Jul 2024  
**Unique Number** : 11128833      **Diagnosed** : 19 Jul 2024 - Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**A Truck Repair**  
 9349 China Grove Church Road  
 Pineville, NC  
 US 28134  
 Contact: Vlad Melnichuk  
 shop@migway.com  
 T: (980)255-3200  
 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)