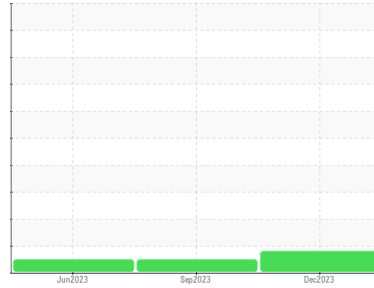


# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**2227033**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### ▲ Wear

Valve 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			<b>PCA0094596</b>	PCA0094591	PCA0052350
Sample Date	Client Info			<b>21 Dec 2023</b>	15 Sep 2023	01 Jun 2023
Machine Age	mls	Client Info		<b>93170</b>	60771	24034
Oil Age	mls	Client Info		<b>32399</b>	36737	24034
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	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
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>43</b>	45	39
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>▲ 7</b>	3	1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>6</b>	17	16
Lead	ppm	ASTM D5185m	>40	<b>2</b>	3	6
Copper	ppm	ASTM D5185m	>330	<b>18</b>	57	300
Tin	ppm	ASTM D5185m	>15	<b>2</b>	3	5
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<b>1</b>	6	94
Barium	ppm	ASTM D5185m	0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	50	<b>70</b>	73	111
Manganese	ppm	ASTM D5185m	0	<b>1</b>	2	5
Magnesium	ppm	ASTM D5185m	950	<b>1031</b>	878	680
Calcium	ppm	ASTM D5185m	1050	<b>1249</b>	1092	1449
Phosphorus	ppm	ASTM D5185m	995	<b>991</b>	900	704
Zinc	ppm	ASTM D5185m	1180	<b>1306</b>	1157	887
Sulfur	ppm	ASTM D5185m	2600	<b>2746</b>	2663	2453

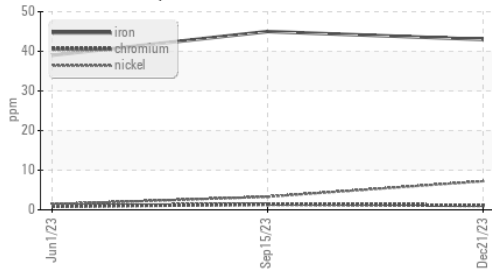
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	8	27
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>23</b>	47	44

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.0</b>	11.2	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.4</b>	23.4	24.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.9</b>	20.0	24.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>4.9</b>	5.9	6.8

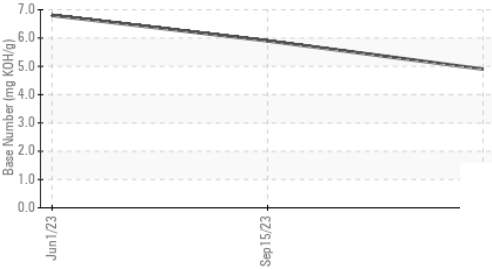
# OIL ANALYSIS REPORT

**▲ Ferrous Alloys**



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

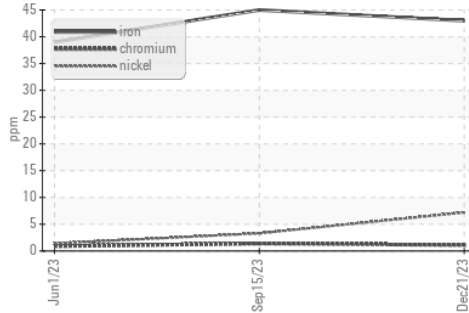
**Base Number**



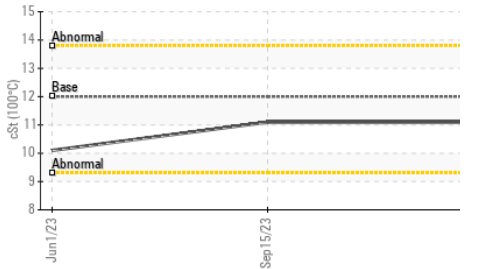
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1	10.1

**GRAPHS**

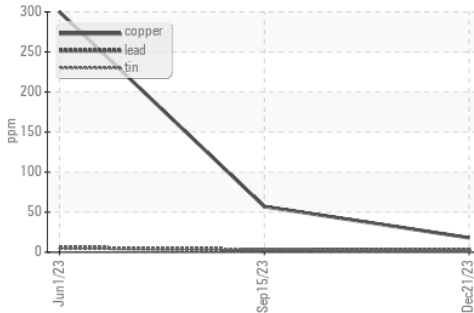
**▲ Ferrous Alloys**



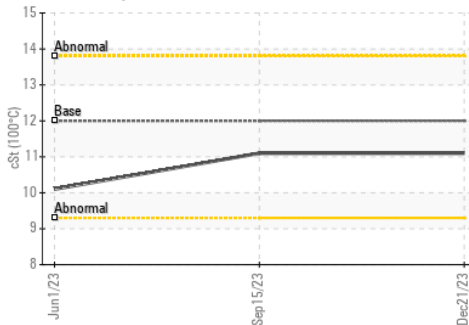
**Viscosity @ 100°C**



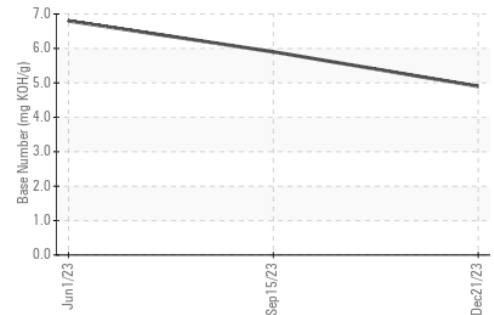
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0094596 **Received** : 02 Jan 2024  
**Lab Number** : 06049500 **Diagnosed** : 04 Jan 2024  
**Unique Number** : 10810108 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

**PERDUE FARMS - WASHINGTON**  
P.O. BOX 539  
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)