

# **OIL ANALYSIS REPORT**

Samp

Sample Rating Trend

NORMAL



Machine Id 1924320

**Diesel Engine** 

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

### DIAGNOSIS

#### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

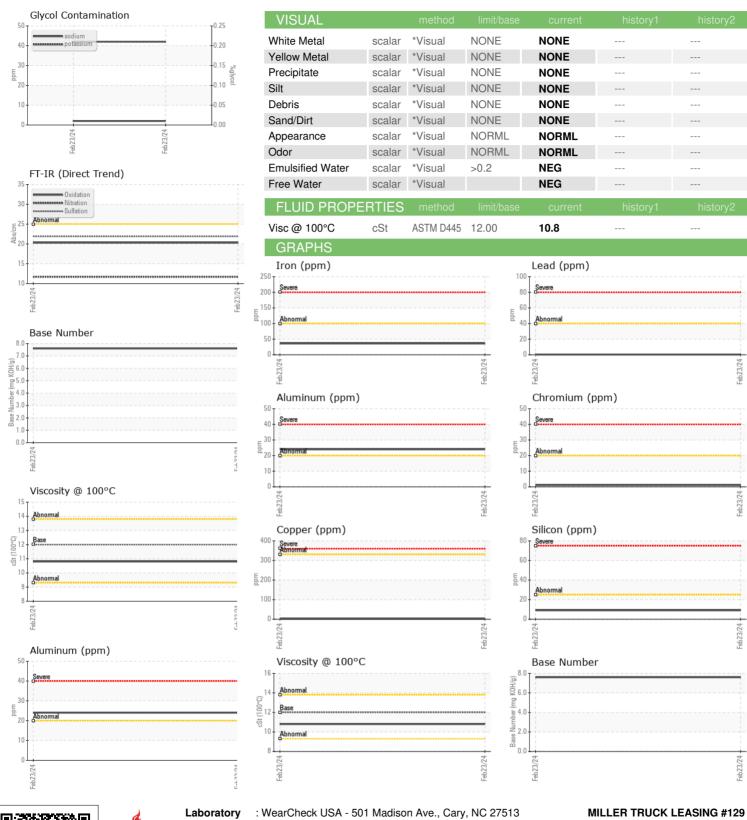
#### **Fluid Condition**

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.

Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead	mls mls	method Client Info Client Info Client Info Client Info Client Info Client Info WC Method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base limit/base >5	current PCA0119243 23 Feb 2024 80998 0 Changed NORMAL current <1.0 NEG NEG Current 36 1	history1 history1 history1 history1	history2 history2 history2 history2
Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead	mls mls  DN  ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info Client Info Method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >5 >0.2 limit/base >100 >20	PCA0119243 23 Feb 2024 80998 0 Changed NORMAL	history1 history1	history2 history2
Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead	mls mls  DN  ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info Client Info Method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >5 >0.2 limit/base >100 >20	PCA0119243 23 Feb 2024 80998 0 Changed NORMAL	history1 history1	history2 history2
Sample Date Machine Age Dil Age Dil Age Dil Changed Sample Status  CONTAMINATIO Fuel Water Glycol WEAR METALS fron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info MC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	23 Feb 2024 80998 0 Changed NORMAL current <1.0 NEG NEG current 36 1	history1 history1 history1	history2
Machine Age Dil Age Dil Age Dil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead	ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info  MC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	80998 0 Changed NORMAL current <1.0 NEG NEG current 36 1	history1 history1 history1	history2
Dil Age Dil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead	ppm ppm ppm ppm ppm	Client Info Client Info Client Info  Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	0 Changed NORMAL current <1.0 NEG NEG current 36 1	history1 history1 history1	history2 history2 history2
Contamped Contam	ppm ppm ppm ppm ppm	method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	Changed NORMAL  current  <1.0 NEG NEG current  36 1	history1 history1	history2 history2 history2
CONTAMINATION Fuel Vater Citycol WEAR METALS Fron Chromium Chromium Citycel Citanium Citycol C	ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	verified to the control of the contr	history1 history1	history2 history2
Fuel Vater Glycol WEAR METALS Fon Chromium Lickel Fitanium Gliver Suminum Lead	ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	<1.0 NEG NEG current 36	  history1	  history2
Vater Glycol  WEAR METALS  ron Chromium Jickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm ppm	WC Method WC Method method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.2 limit/base >100 >20	NEG NEG current 36	history1	history2
WEAR METALS  Ton Chromium Jickel Titanium Silver Juminum Jead	ppm ppm ppm ppm ppm	WC Method  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	limit/base >100 >20	NEG current 36	history1	history2
WEAR METALS  ron Chromium lickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20	current 36 1	history1	
Chromium  Jickel Titanium  Silver Aluminum ead	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20	36 1		
Chromium  Jickel  Titanium  Silver  Aluminum  Jead	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>20	1		
lickel itanium bilver sluminum ead	ppm ppm ppm	ASTM D5185m ASTM D5185m		-		
lickel litanium iilver uluminum ead	ppm ppm ppm	ASTM D5185m ASTM D5185m				
itanium iilver Iluminum ead	ppm ppm			<1		
Silver Numinum ead	ppm	ASTM D5185m		0		
uluminum ead			>3	<1		
ead	1 1	ASTM D5185m	>20	24		
	ppm	ASTM D5185m	>40	<1		
	ppm	ASTM D5185m	>330	2		
in	ppm	ASTM D5185m	>15	- <1		
	ppm	ASTM D5185m		<1		
	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	36		
	ppm	ASTM D5185m	0	0		
	ppm	ASTM D5185m	50	66		
-	ppm	ASTM D5185m	0	<1		
	ppm	ASTM D5185m	950	496		
_	ppm	ASTM D5185m	1050	1848		
	ppm	ASTM D5185m	995	1074		
	ppm	ASTM D5185m	1180	1289		
	ppm	ASTM D5185m		3767		
CONTAMINANT	S	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	9		
	ppm	ASTM D5185m		2		
	ppm	ASTM D5185m	>20	42		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.7		
litration	Abs/cm	*ASTM D7624	>20	11.7		
	Abs/.1mm	*ASTM D7415		21.9		
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3		
	mg KOH/g	ASTM D2896		7.6		



## **OIL ANALYSIS REPORT**





Certificate 12367

Sample No.

: PCA0119243 Lab Number : 06188298 Unique Number : 11045050

Received **Tested** 

: 26 May 2024 Diagnosed : 26 May 2024 - Don Baldridge Test Package : MOB 1 ( Additional Tests: TBN )

: 22 May 2024

To discuss this sample report, contact Customer Service at 1-800-237-1369.

 $^st$  - 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)

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