

# **OIL ANALYSIS REPORT**

т



NORMAL



Machine Id **2126960** 

Component **Diesel Engine** 

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

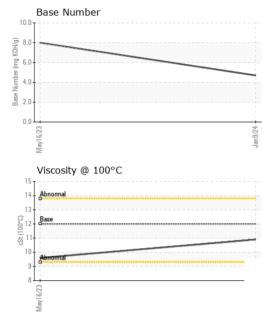
### **Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status  CONTAMINATI Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium	mls mls  ON  ppm ppm ppm ppm ppm ppm ppm ppm ppm	method Client Info Client Info Client Info Client Info Client Info Client Info Wc Method Wc Method Wc Method Wc Method ASTM D5185m	limit/base >5 >0.2 limit/base >100 >20 >4 >3 >20	current PCA0116228 09 Jan 2024 0 0 N/A NORMAL current <1.0 NEG NEG current 34 <1 3 0 <1	history1 PCA0093038 16 May 2023 0 0 N/A ABNORMAL history1 <1.0 NEG NEG history1 35 <1 <1 <1	history2 history2 history2
Sample Date Machine Age Oil Age Oil Age Oil Changed Sample Status  CONTAMINATI Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium	ppm ppm 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 ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	09 Jan 2024 0 0 N/A NORMAL current <1.0 NEG NEG current 34 <1 3 0	16 May 2023 0 0 N/A ABNORMAL history1 <1.0 NEG NEG history1 35 <1 <1 <1	history2 history2
Machine Age Oil Age Oil Age Oil Changed Sample Status  CONTAMINATI Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium	ppm ppm ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info  Method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	0 0 N/A NORMAL current <1.0 NEG NEG current 34 <1 3	0 0 N/A ABNORMAL history1 <1.0 NEG NEG 135 <1 <1 <1	history2 history2
Oil Age Oil Age Oil Changed Sample Status  CONTAMINATI Fuel Water Glycol  WEAR METALS  ron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium	ppm ppm 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 ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	0 N/A NORMAL  current <1.0 NEG NEG Current  34 <1 3 0	0 N/A ABNORMAL history1 <1.0 NEG NEG instory1 35 <1 <1 <1 <1	history2 history2 history2
Dil Changed Sample Status  CONTAMINATI Fuel Water Glycol  WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Wanadium	DN  ppm ppm ppm ppm ppm ppm ppm	method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	N/A NORMAL  current <1.0 NEG NEG current  34 <1 3 0	N/A ABNORMAL history1 <1.0 NEG NEG history1 35 <1 <1 <1	history2 history2 history2
CONTAMINATI Fuel Water Glycol WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium	ppm ppm ppm ppm ppm ppm	method WC Method WC Method WC Method METHOD METHOD ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	current <1.0 NEG NEG current 34 <1 3 0	ABNORMAL history1 <1.0 NEG NEG history1 35 <1 <1 <1	history2 history2
CONTAMINATI Fuel Water Glycol WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin //anadium	ppm ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	current <1.0 NEG NEG current 34 <1 3 0	history1 <1.0 NEG NEG history1 35 <1 <1 <1	history2
Fuel  Water  Glycol  WEAR METALS  ron  Chromium  Nickel  Fitanium  Silver  Aluminum  Lead  Copper  Fin  /anadium	ppm ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m	>5 >0.2 limit/base >100 >20 >4 >3	<1.0 NEG NEG current 34 <1 3 0	<1.0 NEG NEG history1 35 <1 <1 <1	  history2 
Water Glycol  WEAR METALS ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium	ppm ppm ppm ppm ppm ppm	WC Method WC Method method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.2 limit/base >100 >20 >4 >3	NEG NEG current 34 <1 3	NEG NEG history1 35 <1 <1 <1	history2
Glycol  WEAR METALS  ron Chromium Nickel Fitanium Silver Aluminum Lead Copper Fin Vanadium	ppm ppm ppm ppm ppm ppm	WC Method method ASTM D5185m	limit/base >100 >20 >4 >3	ourrent 34 <1 3 0	NEG history1 35 <1 <1 <1	history2
WEAR METALS  ron Chromium  Nickel Fitanium Silver Aluminum Lead Copper Fin //anadium	ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	>100 >20 >4 >3	current 34 <1 3 0	history1 35 <1 <1 <1	history2  
ron Chromium Vickel Fitanium Silver Aluminum Lead Copper Fin	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >4 >3	34 <1 3 0	35 <1 <1 <1	
Chromium  Nickel  Fitanium  Silver  Aluminum  Lead  Copper  Fin  /anadium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >4 >3	<1 3 0	<1 <1 <1	
lickel Fitanium Filver Sluminum Lead Copper Fin Vanadium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>4 >3	3	<1 <1	
itanium Silver Aluminum Lead Copper Tin	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>3	0	<1	
Silver Aluminum ead Copper Tin Vanadium	ppm ppm	ASTM D5185m ASTM D5185m		-		
Aluminum ead Copper in Vanadium	ppm	ASTM D5185m		<1		
ead Copper Tin Vanadium	ppm		>20		<1	
Copper in /anadium		ASTM D5185m		7	<b>1</b> 26	
in /anadium		0 1111 20 100111	>40	2	2	
anadium/	ppm	ASTM D5185m	>330	39	110	
	ppm	ASTM D5185m	>15	3	5	
	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	0	233	
Barium	ppm	ASTM D5185m	0	0	0	
Nolybdenum	ppm	ASTM D5185m	50	61	103	
Manganese	ppm	ASTM D5185m	0	1	5	
/lagnesium	ppm	ASTM D5185m	950	903	681	
Calcium	ppm	ASTM D5185m	1050	1018	1548	
Phosphorus	ppm	ASTM D5185m	995	865	713	
Zinc	ppm	ASTM D5185m	1180	1186	864	
Sulfur	ppm	ASTM D5185m	2600	2308	2901	
CONTAMINAN <sup>*</sup>	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	<b>4</b> 4	
Sodium	ppm	ASTM D5185m		0	4	
Potassium	ppm	ASTM D5185m	>20	14	69	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.2	
Nitration	Abs/cm	*ASTM D7624	>20	10.8	9.2	
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	24.2	
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	22.1	
Base Number (BN)	mg KOH/g	ASTM D2896		4.7	8.0	



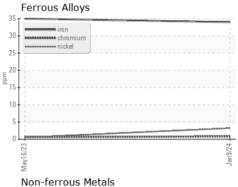
# **OIL ANALYSIS REPORT**

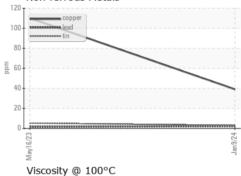


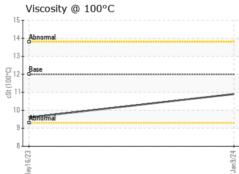
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

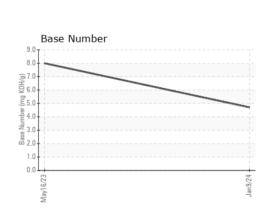
FLUID FROFI	ENTIES	memou			HISTOLAL	HISTOLYZ
Visc @ 100°C	cSt	ASTM D445	12.00	10.9	9.6	

### **GRAPHS**











Certificate L2367

Laboratory Sample No.

Lab Number Unique Number : 10829282 Test Package : FLEET

: PCA0116228 : 06057900

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 11 Jan 2024 : 12 Jan 2024 Diagnosed

Diagnostician : Wes Davis

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)

**PERDUE FARMS - DILLON** 

2047 HWY 9 WEST DILLON, SC US 29536

Contact: KEVIN HOOKS kevin.hooks@perdue.com T: (843)841-8069

Submitted By: KEVIN HOOKS

F: (843)841-8070