

# **OIL ANALYSIS REPORT**

# **NORMAL**



# Machine Id 130168M

Component

**Diesel Engine** 

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

## DIAGNOSIS

#### Recommendation

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

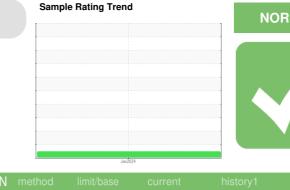
Metal levels are typical for a components first oil change.

### Contamination

There is no indication of any contamination in the

### **Fluid Condition**

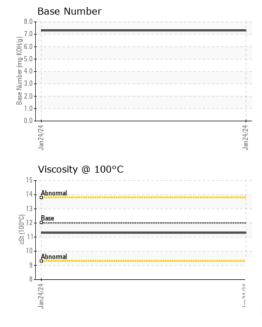
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



Client Info   24 Jan 2024					Jan2024			
Client Info   24 Jan 2024	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2	
Machine Age         mls         Client Info         27292            Oil Age         mls         Client Info         27292            Oil Oil Changed         Client Info         Changed            Sample Status         NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0	Sample Number		Client Info		PCA0113596			
Oil Age         mls         Client Info         27292	Sample Date		Client Info		24 Jan 2024			
Contamped   Client Info   Normal   Changed   Contamped   Contamp	Machine Age	mls	Client Info		27292			
CONTAMINATION   method   milit/base   current   history1   history2	Oil Age	mls	Client Info		27292			
Fuel	Oil Changed		Client Info		Changed			
Fuel	Sample Status				NORMAL			
Water         WC Method         >0.2         NEG             Glycol         WC Method         Ilmit/base         current         history1         history2           WEAR METALS         method         llimit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         72             Chromium         ppm         ASTM D5185m         >20         0             Nickel         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >4         0             Aluminum         ppm         ASTM D5185m         >40         3             Aluminum         ppm         ASTM D5185m         >40         3             Lead         ppm         ASTM D5185m         >40         3             Copper         ppm         ASTM D5185m         >15         1             Vanadium         ppm         ASTM D5185m         0         0	CONTAMINATION	NC	method	limit/base	current	history1	history2	
WEAR METALS	Fuel		WC Method	>5	<1.0			
WEAR METALS	Water		WC Method	>0.2	NEG			
Chromium	Glycol		WC Method		NEG			
Chromium         ppm         ASTM D5185m         >20         0             Nickel         ppm         ASTM D5185m         >4         0             Titanium         ppm         ASTM D5185m         >3         0             Siliver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         5             Lead         ppm         ASTM D5185m         >40         3             Copper         ppm         ASTM D5185m         >330         186             Tin         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0         0             Boron         ppm         ASTM D5185m         0         6	WEAR METALS	;	method	limit/base	current	history1	history2	
Chromium         ppm         ASTM D5185m         >20         0             Nickel         ppm         ASTM D5185m         >4         0             Titanium         ppm         ASTM D5185m         >0             Siliver         ppm         ASTM D5185m         >20         5             Aluminum         ppm         ASTM D5185m         >20         5             Lead         ppm         ASTM D5185m         >40         3             Copper         ppm         ASTM D5185m         >330         186             Tin         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         -	Iron	ppm	ASTM D5185m	>100	72			
Nickel				>20	0			
Description								
Silver								
Aluminum				>3				
Copper								
Copper								
Trin								
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         9             Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         50         67             Manganese         ppm         ASTM D5185m         950         956             Calcium         ppm         ASTM D5185m         995         1118             Zinc         ppm         ASTM D5185m         1050         1494             Phosphorus         ppm         ASTM D5185m         295         1118             Zinc         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1 <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td>								
ADDITIVES				710				
ADDITIVES								
Boron   ppm   ASTM D5185m   2   9       Barium   ppm   ASTM D5185m   0   0   0   0   0   0   0   0   0		ррпп						
Barium	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum         ppm         ASTM D5185m         50         67             Manganese         ppm         ASTM D5185m         0         <1	Boron	ppm	ASTM D5185m	2	9			
Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         956             Calcium         ppm         ASTM D5185m         1050         1494             Phosphorus         ppm         ASTM D5185m         995         1118             Zinc         ppm         ASTM D5185m         2600         3546             Sulfur         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844	Barium	ppm	ASTM D5185m	0	0			
Magnesium         ppm         ASTM D5185m         950         956             Calcium         ppm         ASTM D5185m         1050         1494             Phosphorus         ppm         ASTM D5185m         995         1118             Zinc         ppm         ASTM D5185m         1180         1566             Sulfur         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30 </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>50</td> <th>67</th> <td></td> <td></td>	Molybdenum	ppm	ASTM D5185m	50	67			
Calcium         ppm         ASTM D5185m         1050         1494             Phosphorus         ppm         ASTM D5185m         995         1118             Zinc         ppm         ASTM D5185m         1180         1566             Sulfur         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         lim	Manganese	ppm	ASTM D5185m	0	<1			
Phosphorus         ppm         ASTM D5185m         995         1118             Zinc         ppm         ASTM D5185m         1180         1566             Sulfur         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/ba	Magnesium	ppm	ASTM D5185m	950	956			
Zinc   ppm   ASTM D5185m   1180   1566       Sulfur   ppm   ASTM D5185m   2600   3546           CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   14         Sodium   ppm   ASTM D5185m   4         Potassium   ppm   ASTM D5185m   >20   1         INFRA-RED   method   limit/base   current   history1   history2     Soot %   % *ASTM D7844   >3   1.1         Nitration   Abs/cm *ASTM D7624   >20   12.6         Sulfation   Abs/.1mm *ASTM D7415   >30   22.1         FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm *ASTM D7414   >25   19.6	Calcium	ppm	ASTM D5185m	1050	1494			
Sulfur         ppm         ASTM D5185m         2600         3546             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/.1mm         *ASTM D7624         >20         12.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Phosphorus	ppm	ASTM D5185m	995	1118			
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Zinc	ppm	ASTM D5185m	1180	1566			
Silicon         ppm         ASTM D5185m         >25         14             Sodium         ppm         ASTM D5185m         4             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Sulfur	ppm	ASTM D5185m	2600	3546			
Sodium	CONTAMINANT	S	method	limit/base	current	history1	history2	
Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Silicon	ppm	ASTM D5185m	>25	14			
INFRA-RED	Sodium	ppm	ASTM D5185m		4			
Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Potassium	ppm	ASTM D5185m	>20	1			
Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	INFRA-RED		method	limit/base	current	history1	history2	
Nitration         Abs/cm         *ASTM D7624         >20         12.6             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6	Soot %	%	*ASTM D7844	>3	1.1			
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.6		Abs/cm	*ASTM D7624	>20				
Oxidation								
	FLUID DEGRADATION method limit/base current history1 history2							
	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6			
		mg KOH/g	ASTM D2896		7.3			



## **OIL ANALYSIS REPORT**





V	isc @ 100°C	cSt	ASTM D445	12.00	11.3
	GRAPHS				
250	Iron (ppm)				Lead (ppm)
200 -	Severe				80 - Severe
150 · 100 ·					60 Abnormal
	Abnormal				+0 + 0
50 -					20
	Jan24/24			Jan24/24	Jan24/24
50	Aluminum (ppm)				Chromium (ppm)
40 -	Severe				40 Severe
된 30· 20·	Abnormal				E 20 Abnormal
10-	-				10
0.	- 54			- 44	0 + +
	Jan24/24			Jan24/24	Jan24/24
	Copper (ppm)				Silicon (ppm)
400	Severe Abnormal				80 Severe
300 - E 200 -					60 + E 40 -
100-					Abnormal
0-					0
	Jan24/24			Jan24/24	Jan24/24
16-	Viscosity @ 100°C			Ä	Base Number
1/1	Abnormal				(B)
cSt (100°C)	Base				8 Base Number (mg KOH(0)
행 10·	Abnormal				gen 2.0+
8.					0.0
	Jan24/24			Jan24/24	Jan24/24
				->	7



Certificate L2367

Laboratory Sample No.

Lab Number : 06124679

Unique Number : 10938830

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0113596 Received : 21 Mar 2024

**Tested** : 22 Mar 2024 Diagnosed : 22 Mar 2024 - Wes Davis

Test Package : MOB 1 ( Additional Tests: TBN )

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)

**MILLER TRUCK LEASING #114** 

63 REPAUPO STATION ROAD LOGAN TOWNSHIP, NJ

US 08085 Contact: ED DAVIS

edavis@millertransgroup.com T: (856)214-3521

F: (856)214-3663

Report Id: MILLOG [WUSCAR] 06124679 (Generated: 03/22/2024 04:37:38) Rev: 1

Contact/Location: ED DAVIS - MILLOG