

# **OIL ANALYSIS REPORT**



**NORMAL** 



Machine Id **820042** 

Component **Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (--- 0

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

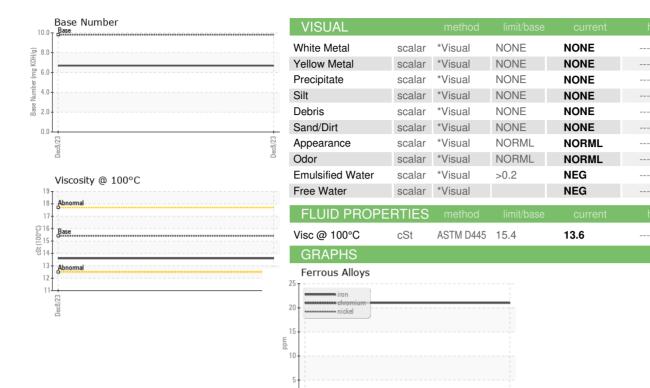
### **Fluid Condition**

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

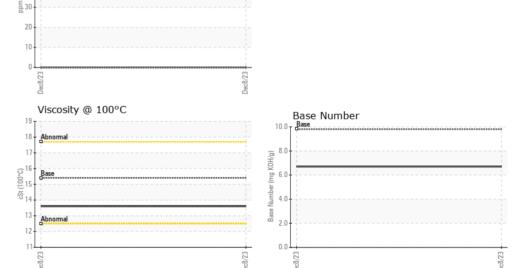
SAMPLE INFORMATION   method   imitibase   current   history1   history2   Sample Number   Client Info   08 Dec 2023         Machine Age   hrs   Client Info   0   0							, Y
Cample Number   Client Info   GFL0093845   Client Info   O8 Dec 2023   Client Info   O8 Dec 2024   Client Info	AL)				Dec2023		
Cample Date   Client Info   08 Dec 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		GFL0093845		
Dil Changed	Sample Date		Client Info		08 Dec 2023		
Client Info   N/A	Machine Age	hrs	Client Info		0		
CONTAMINATION   method   limit/base   current   history1   history2   value   WC Method   >5   <1.0	Oil Age	hrs	Client Info		0		
CONTAMINATION   method   limit/base   current   history1   history2	Oil Changed		Client Info		N/A		
Fuel	Sample Status				NORMAL		
Water   WC Method   So.2   NEG   Silycol   WC Method   NEG   WC Method   WC	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	uel		WC Method	>5	<1.0		
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >110         21             Chromium         ppm         ASTM D5185m         >4         <1	Nater		WC Method	>0.2	NEG		
Chromium	Glycol		WC Method		NEG		
ASTM D5185m	WEAR METAL	.S	method	limit/base	current	history1	history2
Side   Pom   ASTM D5185m   Pom   Pom   ASTM D5185m   Pom   Pom   ASTM D5185m   Pom   Pom   ASTM D5185m   Pom   Pom   Pom   P	ron	ppm	ASTM D5185m	>110	21		
Silver	Chromium	ppm	ASTM D5185m	>4	<1		
Silver	Nickel	ppm	ASTM D5185m	>2	0		
Ast   Ast	- Titanium	ppm	ASTM D5185m		0		
December   December	Silver	ppm	ASTM D5185m	>2	0		
Description	Aluminum	ppm	ASTM D5185m	>25	5		
Academium	ead	ppm	ASTM D5185m	>45	0		
Acade   Part	Copper	ppm	ASTM D5185m	>85	60		
ADDITIVES	- in	ppm	ASTM D5185m	>4	<1		
ADDITIVES	/anadium	ppm	ASTM D5185m		0		
Soron   ppm   ASTM D5185m   0   1	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         60         60             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         1010         966             Calcium         ppm         ASTM D5185m         1070         1074             Phosphorus         ppm         ASTM D5185m         1150         954             Zinc         ppm         ASTM D5185m         1270         1288             Zinc         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Goldium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Soot %         *ASTM D7844         >3	Boron	ppm	ASTM D5185m	0	1		
Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         1010         966             Calcium         ppm         ASTM D5185m         1070         1074             Phosphorus         ppm         ASTM D5185m         1150         954             Zinc         ppm         ASTM D5185m         1270         1288             Sulfur         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Godium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             Soot %         %         *ASTM D7844         >3         0.9             Siliration         Abs/cmm         *ASTM D7415 </td <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td>0</td> <td></td> <td></td>	Barium	ppm	ASTM D5185m	0	0		
Magnesium         ppm         ASTM D5185m         1010         966             Calcium         ppm         ASTM D5185m         1070         1074             Phosphorus         ppm         ASTM D5185m         1150         954             Zinc         ppm         ASTM D5185m         1270         1288             Sulfur         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Sodium         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         10.5             Sulfation         Abs/.1mm         *ASTM D7414 </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>60</td> <td>60</td> <td></td> <td></td>	Molybdenum	ppm	ASTM D5185m	60	60		
Calcium         ppm         ASTM D5185m         1 070         1074             Phosphorus         ppm         ASTM D5185m         1 150         954             Zinc         ppm         ASTM D5185m         1 270         1 288             Sulfur         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Potassium         ppm         ASTM D5185m         1              Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.3             FLUID DEGRADATION         *ASTM D7414	Manganese	ppm	ASTM D5185m	0	<1		
Phosphorus         ppm         ASTM D5185m         1150         954             Zinc         ppm         ASTM D5185m         1270         1288             Sulfur         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         >30         3             Solicon         ppm         ASTM D5185m         >20         3             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Solf acidention         Abs/cm         *ASTM D7624         >20         10.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	/lagnesium	ppm	ASTM D5185m	1010	966		
Contamination   State   Stat	Calcium	ppm	ASTM D5185m	1070	1074		
Sulfur         ppm         ASTM D5185m         2060         2570             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Godium         ppm         ASTM D5185m         1              Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Goot %         %         *ASTM D7844         >3         0.9             Sulfation         Abs/.mm         *ASTM D7624         >20         10.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Phosphorus	ppm	ASTM D5185m	1150	954		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         3             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         >20         3            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9             Sulfration         Abs/cm         *ASTM D7624         >20         10.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.3             Dxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Zinc	ppm	ASTM D5185m	1270	1288		
Solicon   ppm   ASTM D5185m   >30   3	Sulfur	ppm	ASTM D5185m	2060	2570		
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Description	Silicon	ppm	ASTM D5185m	>30	3		
Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9             Sultration         Abs/cm         *ASTM D7624         >20         10.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.3             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Sodium		ASTM D5185m		1		
Goot %         %         *ASTM D7844         >3         0.9             Nitration         Abs/cm         *ASTM D7624         >20         10.5             Gulfation         Abs/.1mm         *ASTM D7415         >30         22.3             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Potassium	ppm	ASTM D5185m	>20	3		
Abs/cm   *ASTM D7624   >20   10.5         Sulfation   Abs/.1mm   *ASTM D7415   >30   22.3         FLUID DEGRADATION   method   limit/base   current   history1   history2     Dividation   Abs/.1mm   *ASTM D7414   >25   18.1	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.3             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Soot %	%	*ASTM D7844	>3	0.9		
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.3             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.1	Nitration	Abs/cm	*ASTM D7624	>20	10.5		
Oxidation Abs/.1mm *ASTM D7414 >25 <b>18.1</b>	Sulfation	Abs/.1mm	*ASTM D7415	>30			
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.1		
	Base Number (BN)	mg KOH/g			6.7		



## **OIL ANALYSIS REPORT**



Non-ferrous Metals







Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: GFL0093845 : 06037520 : 10792749 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 18 Dec 2023 Recieved Diagnosed Diagnostician

: 19 Dec 2023 : Wes Davis

GFL Environmental - 952 - New London

E8257 WIS-54 NEW LONDON, WI US 54961

Contact: MATTHEW TAYLOR

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)

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