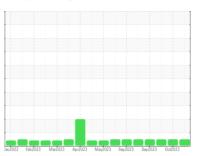


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **413026**

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

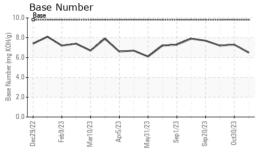
Fluid Condition

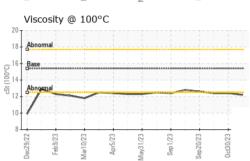
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info GFL0101207 GFL0088737 GFL00978 GRample Date Client Info 17 Nov 2023 30 Oct 2023 09 Oct 202 Machine Age hrs Client Info 2577 2435 2295 2295 Client Info Grample Not Change NorMAL NORMAL	AL)		Jec2022 Feb2	023 Mar2023 Apr2023	May2023 Sep2023 Sep2023	Oct2023	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 2577 2435 2295 Oil Age hrs Client Info 570 428 288 Oil Changed Client Info 570 428 288 Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method Imitibase current history1 history1 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >120 15 8 7 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 </th <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>GFL0101207</th> <th>GFL0088737</th> <th>GFL0097860</th>	Sample Number		Client Info		GFL0101207	GFL0088737	GFL0097860
Oil Age hrs Client Info 570 428 288 Oil Changed Client Info Changed Not Changd	Sample Date		Client Info		17 Nov 2023	30 Oct 2023	09 Oct 2023
Oil Changed Sample Status Client Info MoRMAL Changed NORMAL Not Changed NORMAL NORMAL	Machine Age	hrs	Client Info		2577	2435	2295
Sample Status	Oil Age	hrs	Client Info		570	428	288
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >3.0 <1.0	Oil Changed		Client Info		Changed	Not Changd	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >120 15 8 7 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >2 <1 1 0 Silver ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >2 0 <1 0 Lead ppm ASTM D5185m >40 0 1 0 Copper ppm ASTM D5185m >40 0 1 0 Caddium ppm ASTM D5185m >15 1 <1 <1 0 Vanadium ppm ASTM D5185m 0	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >5 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	15	8	7
Titanium ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 0 <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Silver	Nickel	ppm	ASTM D5185m	>5	<1	1	0
Aluminum	Titanium	ppm	ASTM D5185m	>2	<1	0	0
Lead ppm ASTM D5185m >40 0 1 0 Copper ppm ASTM D5185m >330 3 2 Tin ppm ASTM D5185m >15 1 <1 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 6 8 3 Boron ppm ASTM D5185m 0 6 8 3 Barium ppm ASTM D5185m 0 6 8 3 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1270 1196 1038 1096 <tr< td=""><td>Silver</td><td>ppm</td><td>ASTM D5185m</td><td>>2</td><th>0</th><td></td><td>0</td></tr<>	Silver	ppm	ASTM D5185m	>2	0		0
Copper ppm ASTM D5185m >330 3 2 Tin ppm ASTM D5185m >15 1 <1	Aluminum	ppm	ASTM D5185m	>20	6	5	3
Tin ppm ASTM D5185m >15 1 <1 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 6 8 3 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 63 55 60 Manganese ppm ASTM D5185m 1010 857 761 806 Calcium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 220 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 24	Lead	ppm	ASTM D5185m	>40	0	1	0
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Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 0 6 8 3 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 63 55 60 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	1	<1	0
ADDITIVES	Vanadium	ppm			<1	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 63 55 60 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 857 761 806 Calcium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 1270 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 9 6 Potassium ppm ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 63 55 60 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 857 761 806 Calcium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 1270 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 <td>Boron</td> <td>ppm</td> <td></td> <td></td> <th></th> <td>8</td> <td></td>	Boron	ppm				8	
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Magnesium ppm ASTM D5185m 1010 857 761 806 Calcium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 1270 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm	•	ppm					
Calcium ppm ASTM D5185m 1070 1122 960 1042 Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 1270 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 6 Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION *ASTM D7414 <t< td=""><td>-</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th></th><td></td><td></td></t<>	-	ppm	ASTM D5185m	0			
Phosphorus ppm ASTM D5185m 1150 993 909 885 Zinc ppm ASTM D5185m 1270 1196 1038 1096 Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 6 Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION *ASTM D7414 >25	-	ppm					
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Sulfur ppm ASTM D5185m 2060 2791 2429 2723 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 6 Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2		ppm					
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 6 Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2							
Silicon ppm ASTM D5185m >25 5 4 4 Sodium ppm ASTM D5185m 9 9 6 Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2					2791		
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Potassium ppm ASTM D5185m >20 14 13 9 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2				>25			
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Soot % % *ASTM D7844 >4 0.3 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2	Potassium	ppm	ASTM D5185m	>20	14	13	9
Nitration Abs/cm *ASTM D7624 >20 8.2 7.2 6.0 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.9 18.0 16.9 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2			*ASTM D7844	>4	0.3		0.2
FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2	Nitration	Abs/cm	*ASTM D7624	>20	8.2	7.2	6.0
Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.5 12.2	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	18.0	16.9
	FLUID DEGRAD	NOITAC	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 6.5 7.3 7.2	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	13.5	12.2
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.5	7.3	7.2



OIL ANALYSIS REPORT

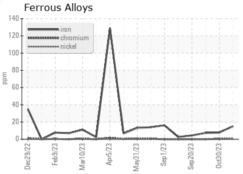


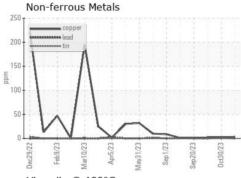


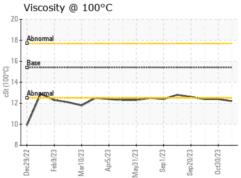
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

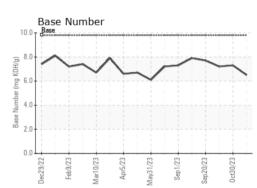
FLUID PROPE	KIIES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	12.2	12.4	12.4

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0101207 : 06011916 : 10751060

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

Received Diagnosed : 20 Nov 2023 : 21 Nov 2023

Diagnostician : Wes Davis

GFL Environmental - 010 - Stockbridge

1280 Rum Creek Parkway Stockbridge, GA US 30281

Contact: JOSHUA TINKER

joshuatinker@gflenv.com T:

* - 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)

F: