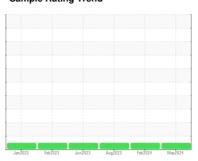


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
813056
Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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

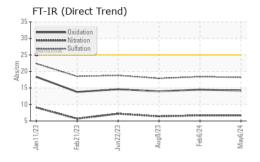
Fluid Condition

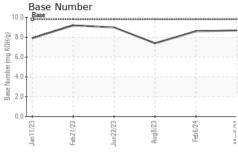
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

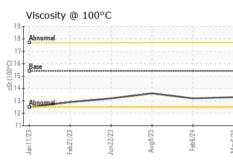
SAMPLE INFORMATION method limit/base current history1 nistory2	aal)		Janzuza	F80ZUZ3 JUNZUZ:	s Augzuza Febzuz4	May2024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date	Sample Number		Client Info		GFL0120576	GFL0108491	GFL0066039
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A N/A Sample Status Client Info N/A N/A </th <th></th> <th></th> <th>Client Info</th> <th></th> <th>06 May 2024</th> <th>06 Feb 2024</th> <th>08 Aug 2023</th>			Client Info		06 May 2024	06 Feb 2024	08 Aug 2023
Oil Changed Sample Status Client Info MoRMAL N/A NORMAL N/A NORMAL </th <th>Machine Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>-</th> <th>0</th> <th>_</th>	Machine Age	hrs	Client Info		-	0	_
Sample Status	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method 0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 7 8 10 Chromium ppm ASTM D5185m >2 0 0 <1 Nickel ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >2 0 0 <1 Lead ppm ASTM D5185m >2 0 0 <1 Lead ppm ASTM D5185m >8.85 <1 0 <1 Lead ppm ASTM D5185m 8.85 <1 0 <1 Vanacitium <td< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th>N/A</th><th>N/A</th></td<>	Oil Changed		Client Info		N/A	N/A	N/A
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method Glycol NEG NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 7 8 10 Chromium ppm ASTM D5185m >4 <1 0 <1 Nickel ppm ASTM D5185m >2 0 0 0 Sliver ppm ASTM D5185m >2 0 0 0 Sliver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 4 3 6 Lead ppm ASTM D5185m >45 0 0 <1 Copper ppm ASTM D5185m >4 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 0 14 <	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<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 >4 <1 0 <1 Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 4 3 6 Lead ppm ASTM D5185m >45 0 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>110	7	8	10
Titanium ppm ASTM D5185m 0 0 <1 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 4 3 6 Lead ppm ASTM D5185m >45 0 0 <1	Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 4 3 6 Lead ppm ASTM D5185m >45 0 0 <1 Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m >4 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 14 7 Barium ppm ASTM D5185m 0 41 0 1	Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum	Titanium	ppm	ASTM D5185m		0	0	<1
Lead ppm ASTM D5185m >45 0 0 <1 Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m >4 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 0 0 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m >4 0 0 <1	Aluminum	ppm	ASTM D5185m	>25	4	3	6
Tin ppm ASTM D5185m >4 0 0 <1 Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 14 7 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 59 57 59 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623	Lead	ppm	ASTM D5185m	>45	0	0	<1
Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 144 7 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 59 57 59 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base curre	Copper	ppm	ASTM D5185m	>85	<1	0	<1
Cadmium ppm ASTM D5185m 0 0 0 0 0 0 0 0 14 7 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 59 57 59 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 4 18	Tin	ppm	ASTM D5185m	>4	0	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 59 57 59 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 2 2 2 3 Sodium ppm ASTM D5185m 20 3 4 18 INFRA-RED method limit/base </th <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 59 57 59 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844	Boron	ppm	ASTM D5185m	0	0	14	7
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/:1mm *AS	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 1018 956 982 Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm "ASTM D7845 >20 6.7 6.7 6.4 Sulfation Abs/.1mm "ASTM D7415 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>60</td> <th>59</th> <td>57</td> <td>59</td>	Molybdenum	ppm	ASTM D5185m	60	59	57	59
Calcium ppm ASTM D5185m 1070 1155 1118 1129 Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Ab	Manganese	ppm	ASTM D5185m	0	<1	0	<1
Phosphorus ppm ASTM D5185m 1150 1069 1001 1012 Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm	Magnesium	ppm	ASTM D5185m	1010	1018	956	982
Zinc ppm ASTM D5185m 1270 1241 1215 1237 Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 2 3 Sodium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Calcium	ppm	ASTM D5185m	1070	1155	1118	1129
Sulfur ppm ASTM D5185m 2060 3623 3099 3625 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m 2 2 4 Potassium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Phosphorus	ppm	ASTM D5185m	1150	1069	1001	1012
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 2 2 3 Sodium ppm ASTM D5185m 2 2 4 Potassium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Zinc	ppm	ASTM D5185m	1270	1241	1215	1237
Silicon ppm ASTM D5185m >30 2 2 2 4 Sodium ppm ASTM D5185m 2 2 2 4 Potassium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Sulfur	ppm	ASTM D5185m	2060	3623	3099	3625
Sodium ppm ASTM D5185m 2 2 4 Potassium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 4 18 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Silicon	ppm	ASTM D5185m	>30	2	2	3
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Sodium	ppm	ASTM D5185m		2	2	4
Soot % % *ASTM D7844 >3 0.2 0.2 0.2 Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Potassium	ppm	ASTM D5185m	>20	3	4	18
Nitration Abs/cm *ASTM D7624 >20 6.7 6.7 6.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.2 18.4 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.5 14.0	Nitration	Abs/cm	*ASTM D7624	>20	6.7	6.7	6.4
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	18.4	17.9
	FLUID DEGRADATION method limit/base current history1 history2						
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.7 8.6 7.4	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	14.5	14.0
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.7	8.6	7.4



OIL ANALYSIS REPORT



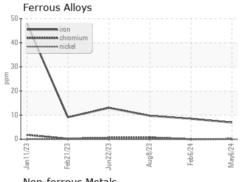


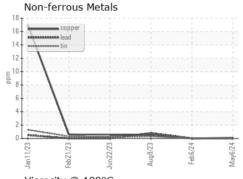


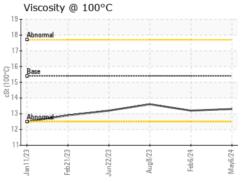
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

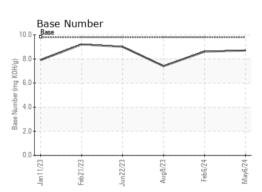
FLUID PROPI	EHILO	method			riistory i	nistoryz
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.2	13.6

GRAPHS













Certificate 12367

Laboratory Sample No. Lab Number : 06178343

: GFL0120576

Unique Number : 11029669 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 May 2024

Tested : 14 May 2024 Diagnosed : 14 May 2024 - Wes Davis

11888 & 11863 30th Avenue Chippewa Falls, WI

GFL Environmental - 904 - Chippewa Falls HC

US 54729

T: (715)202-3420

Contact: Andy Kane

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)

Report Id: GFL904 [WUSCAR] 06178343 (Generated: 05/14/2024 18:36:41) Rev: 1

Submitted By: BRAYDON SMITH