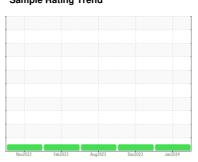


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **825068**

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

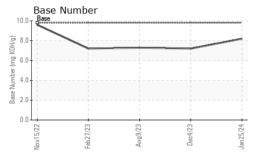
Fluid Condition

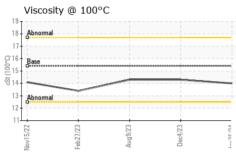
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info GFL0108535 GFL0103368 GFL0066055 Sample Date Client Info Dec 2023 O9 Aug 2023 O9 A	AL)		Nov2022	Feb2023	Aug2023 Dec2023	Jan2024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
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 Sample Status NoRMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Sample Number		Client Info		GFL0108535	GFL0103368	GFL0066055
Oil Age hrs Client Info N/A N/A N/A N/A Sample Status NORMAL	Sample Date		Client Info		25 Jan 2024	04 Dec 2023	09 Aug 2023
Cilient Info	Machine Age	hrs	Client Info		0	0	0
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 NEG N	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION	Oil Changed		Client Info		N/A	N/A	N/A
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method Solution NEG	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
Description	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	9	12	13
Silver	Chromium	ppm	ASTM D5185m	>20	<1		1
Silver	Nickel	ppm	ASTM D5185m	>4	0	0	0
Aluminum	Titanium	ppm	ASTM D5185m		<1	0	
Lead	Silver	ppm	ASTM D5185m				0
Copper ppm ASTM D5185m >330 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Aluminum	ppm	ASTM D5185m	>20	2	1	1
Tin	Lead	ppm	ASTM D5185m	>40	-		
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 15 7 8 Barium ppm ASTM D5185m 0 25 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 0 Magnesium ppm ASTM D5185m 1010 909 995 1030 Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base <t< td=""><td>Copper</td><td>ppm</td><td>ASTM D5185m</td><td>>330</td><td><1</td><td></td><td><1</td></t<>	Copper	ppm	ASTM D5185m	>330	<1		<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 15 7 8 Barium ppm ASTM D5185m 0 25 0 0 Molybdenum ppm ASTM D5185m 60 65 60 61 Manganese ppm ASTM D5185m 0 0 0 -1 Magnesium ppm ASTM D5185m 1010 909 995 1030 Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1270 1196 1273 1302 Zinc ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2		ppm		>15			<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
Boron		ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 25 0 0 Molybdenum ppm ASTM D5185m 60 65 60 61 Manganese ppm ASTM D5185m 0 0 0 <1	ADDITIVES		method	limit/base	current		
Molybdenum ppm ASTM D5185m 60 65 60 61 Manganese ppm ASTM D5185m 0 0 0 <1 Magnesium ppm ASTM D5185m 1010 909 995 1030 Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1150 1029 958 1050 Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td></td> <td></td> <td>8</td>	Boron	ppm	ASTM D5185m	0			8
Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m 1010 909 995 1030 Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1150 1029 958 1050 Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7845 >30	Barium	ppm	ASTM D5185m	0	25	0	0
Magnesium ppm ASTM D5185m 1010 909 995 1030 Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1150 1029 958 1050 Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/cm *ASTM D7415	Molybdenum	ppm	ASTM D5185m	60			61
Calcium ppm ASTM D5185m 1070 1105 1133 1205 Phosphorus ppm ASTM D5185m 1150 1029 958 1050 Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/.1mm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method<	Manganese	ppm	ASTM D5185m	0	0	0	<1
Phosphorus ppm ASTM D5185m 1150 1029 958 1050 Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method li	Magnesium	ppm			909	995	
Zinc ppm ASTM D5185m 1270 1196 1273 1302 Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D741	Calcium	ppm	ASTM D5185m	1070	1105	1133	1205
Sulfur ppm ASTM D5185m 2060 3073 3235 3594 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Phosphorus	ppm	ASTM D5185m	1150	1029	958	1050
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	•	ppm		1270	1196	1273	1302
Silicon ppm ASTM D5185m >25 3 3 4 Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3			ASTM D5185m	2060	3073	3235	3594
Sodium ppm ASTM D5185m 0 6 6 Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 0 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Silicon	ppm	ASTM D5185m	>25		3	4
INFRA-RED	Sodium	ppm	ASTM D5185m		0	6	6
Soot % % *ASTM D7844 >3 0.4 0.6 0.6 Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Potassium	ppm	ASTM D5185m	>20	2	0	3
Nitration Abs/cm *ASTM D7624 >20 8.5 9.6 9.7 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 21.6 21.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Soot %	%	*ASTM D7844	>3	0.4	0.6	0.6
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Nitration	Abs/cm	*ASTM D7624	>20	8.5	9.6	9.7
Oxidation Abs/.1mm *ASTM D7414 >25 16.2 18.2 18.3	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	21.6	21.5
	FLUID DEGRAI	NOITAC	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.2 7.2 7.3	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	18.2	18.3
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	7.2	7.3



OIL ANALYSIS REPORT

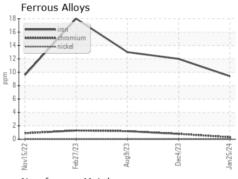


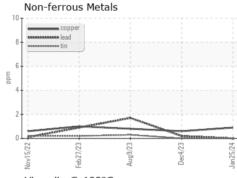


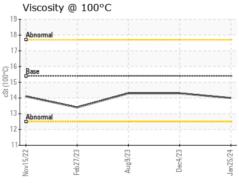
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

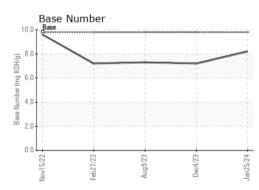
FLUID PROPE	RHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	14.3	14.3

GRAPHS













Laboratory Sample No.

Lab Number : 06084536 Unique Number : 10871981

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0108535 Received : 09 Feb 2024

Tested : 12 Feb 2024 Diagnosed : 12 Feb 2024 - Wes Davis

GFL Environmental - 904 - Chippewa Falls HC

11888 & 11863 30th Avenue Chippewa Falls, WI US 54729

Contact: Andy Kane

T: (715)202-3420

Test Package : FLEET Certificate L2367 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)

F: