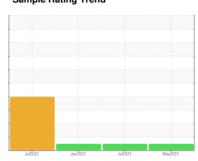


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 728012 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

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

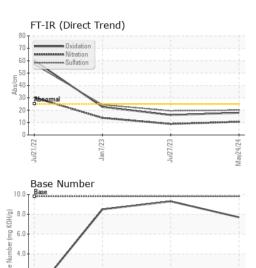
Fluid Condition

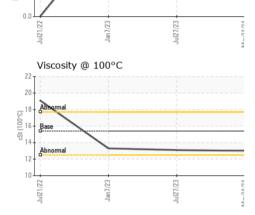
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limibbase current history1 history2	āAL)		Jul202	2 Jan2023	Jul2023 M		
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 24 May 2024 27 Jul 2023 07 Jan 2023 Machine Age hrs Client Info 6670 4494 4174 Oil Age hrs Client Info 600 600 600 Oil Changed Client Info Changed Changed Changed Changed Sample Status Image: Control of Changed Changed NORMAL NORMAL NORMAL CONTAMINATION method Imit base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG WEAR METALS method Imit base current history1 history2 Iron ppm ASTM 05185n >10 <1 <1 <1 WEAR METALS method Imit base current h	Sample Number		Client Info		GFL0110205	GFL0060486	GFL0060421
Machine Age hrs Client Info 6670 4494 4174 Oil Age hrs Client Info 600 600 600 Oil Changed Client Info Changed Changed Changed Sample Status NCRMAL NCRMAL NCRMAL NCRMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG Mycarr WC Method NEG NEG NEG WEAR METALS method limit/base current history2 Iron ppm ASTM D5185m >100 12 14 45 Chromium ppm ASTM D5185m >20 <1 <1 31 17 Silver ppm ASTM D5185m >20 <1 <1 2 2 Copper ppm ASTM D5185m >30 <td< th=""><th></th><th></th><th>Client Info</th><th></th><th>24 May 2024</th><th>27 Jul 2023</th><th>07 Jan 2023</th></td<>			Client Info		24 May 2024	27 Jul 2023	07 Jan 2023
Oil Age hrs Client Info 600 600 600 600 Oil Changed Sample Status Client Info Changed Changed Changed Changed Changed NORMAL NORMAL NORMAL NORM	•	hrs	Client Info		-	4494	4174
NORMAL NORMAL NORMAL	•	hrs	Client Info		600	600	600
NORMAL NORMAL NORMAL	Oil Changed		Client Info		Changed	Changed	Changed
Fuel WC Method >5	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imilibase current history1 history2 WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >10.0 12 14 45 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >4 0 <1 0 Silver ppm ASTM D5185m >4 0 <1 3 17 Silver ppm ASTM D5185m >40 <1 <1 2 2 Silver ppm ASTM D5185m >40 <1 <1 2 2 3 11 1 2 3 11 1 2 2 3 11 1 0 0 0 0 0 0 0 0 0 0 0 </th <th>CONTAMINAT</th> <th>ION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	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 >20 <1 <1 <1 Nickel ppm ASTM D5185m >4 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	12	14	45
Titanium ppm ASTM D5185m -1 3 17 Silver ppm ASTM D5185m >3 <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >20 4 4 8 Lead ppm ASTM D5185m >40 <1 <1 2 Copper ppm ASTM D5185m >330 2 3 11 Tin ppm ASTM D5185m >15 0 <1 1 Vanadium ppm ASTM D5185m 0 <1 0 <1 0 Cadmium ppm ASTM D5185m 0 1 5 2 2 Boron ppm ASTM D5185m 0 1 5 2 2 Barium ppm ASTM D5185m 0 0 0 2 2 Molybdenum ppm ASTM D5185m 0 0 0 2 4 Manganesium ppm ASTM D5185m 0 -1 -1 5 49 Calcium <	Nickel	ppm	ASTM D5185m	>4	0	<1	0
Aluminum ppm ASTM D5185m >20 4 4 8 Lead ppm ASTM D5185m >40 <1	Titanium	ppm	ASTM D5185m		<1	3	17
Lead	Silver	ppm	ASTM D5185m	>3	<1	0	0
Copper ppm ASTM D5185m >330 2 3 11 Tin ppm ASTM D5185m >15 0 <1	Aluminum	ppm	ASTM D5185m	>20	4	4	8
Tin ppm ASTM D5185m >15 0 <1 1 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 1 5 2 Barium ppm ASTM D5185m 0 0 0 0 2 Molybdenum ppm ASTM D5185m 0 0 0 0 2 Manganese ppm ASTM D5185m 0 <1 <1 1 Magnesium ppm ASTM D5185m 1010 1058 882 791 Calcium ppm ASTM D5185m 1070 1248 1078 1283 Phosphorus ppm ASTM D5185m 1270 1506 1202 1260 Sulfur ppm ASTM D5185m 2060 4012 <td>Lead</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>40</td> <th><1</th> <td><1</td> <td>2</td>	Lead	ppm	ASTM D5185m	>40	<1	<1	2
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Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 1 5 2 Barium ppm ASTM D5185m 0 0 0 2 Molybdenum ppm ASTM D5185m 0 -1 -1 1 Manganese ppm ASTM D5185m 0 -1 -1 1 Magnesium ppm ASTM D5185m 1010 1058 882 791 Calcium ppm ASTM D5185m 1070 1248 1078 1283 Phosphorus ppm ASTM D5185m 1150 1229 976 1022 Zinc ppm ASTM D5185m 1270 1506 1202 1260 Sulfur ppm ASTM D5185m >2060 4012 3381 2953 CONTAMINANTS method limit/base current<	Tin	ppm	ASTM D5185m	>15	0	<1	1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 1 5 2 Barium ppm ASTM D5185m 0 0 0 2 Molybdenum ppm ASTM D5185m 60 62 55 49 Manganese ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron ppm ASTM D5185m 0 1 5 2 Barium ppm ASTM D5185m 0 0 0 2 Molybdenum ppm ASTM D5185m 60 62 55 49 Manganese ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 2 Molybdenum ppm ASTM D5185m 60 62 55 49 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 62 55 49 Manganese ppm ASTM D5185m 0 <1 <1 1 Magnesium ppm ASTM D5185m 1010 1058 882 791 Calcium ppm ASTM D5185m 1070 1248 1078 1283 Phosphorus ppm ASTM D5185m 1150 1229 976 1022 Zinc ppm ASTM D5185m 1270 1506 1202 1260 Sulfur ppm ASTM D5185m 2060 4012 3381 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 7 10 Sodium ppm ASTM D5185m >20 2 4 12 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >	Boron	ppm	ASTM D5185m	0			
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Zinc ppm ASTM D5185m 1270 1506 1202 1260 Sulfur ppm ASTM D5185m 2060 4012 3381 2953 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 7 10 Sodium ppm ASTM D5185m >20 2 0 Potassium ppm ASTM D5185m >20 2 4 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.7 1.5 Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 <td></td> <td>ppm</td> <td></td> <td></td> <th></th> <td></td> <td></td>		ppm					
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CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 7 10 Sodium ppm ASTM D5185m 0 2 0 Potassium ppm ASTM D5185m >20 2 4 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.7 1.5 Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6		ppm					
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Sodium ppm ASTM D5185m 0 2 0 Potassium ppm ASTM D5185m >20 2 4 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.7 1.5 Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6		ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 4 12 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.8 0.7 1.5 Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6				>25			
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Soot % % *ASTM D7844 >3 0.8 0.7 1.5 Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6	Potassium	ppm	ASTM D5185m	>20	2	4	12
Nitration Abs/cm *ASTM D7624 >20 10.6 8.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6	INFRA-RED			limit/base		history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.5 24.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6	Soot %						
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6		Abs/cm	*ASTM D7624	>20			
Oxidation Abs/.1mm *ASTM D7414 >25 17.9 16.1 22.6	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.5	24.4
	FLUID DEGRA	NOITAC	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.7 9.3 8.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	16.1	22.6
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	9.3	8.5



OIL ANALYSIS REPORT

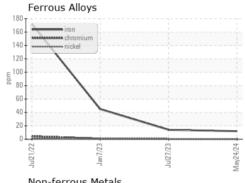


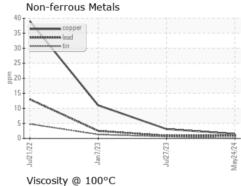


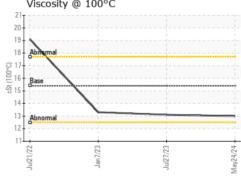
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

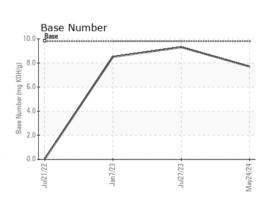
L LOID PROPI	ERITES	memoa			riistory i	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.1	13.3

GRAPHS













Certificate 12367

Laboratory Sample No.

Test Package : FLEET

: GFL0110205 Lab Number : 06193333 Unique Number : 11050085

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 May 2024 **Tested** : 30 May 2024

Diagnosed : 30 May 2024 - Wes Davis

2410 Mayflower Drive

Lynchburg, VA US 24501 Contact: Delbert Beasley dbeasley@countyrecycling.net T: (434)665-5998

GFL Environmental - 660 - Lynchburg Hauling

* - 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: GFL660 [WUSCAR] 06193333 (Generated: 05/30/2024 08:49:55) Rev: 1

Submitted By: RYAN JONES