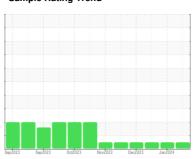


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 914032 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

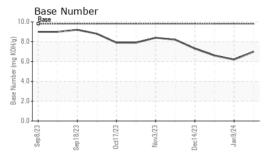
Fluid Condition

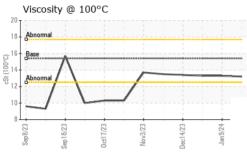
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2	GAL)		Sep 2023	Sep 2023 Oct 2023	Nov2023 Dec2023 Ja	in 2024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 40 1149 1130 Oil Age hrs Client Info 40 19 164 Oil Changed Client Info Changed Changed Changed Changed Sample Status method Ilmit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Rigorol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history2 history2 Iron pam ASTM D5185m >100 27 24 25 Chromium ppm ASTM D5185m >20 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Sample Number		Client Info		GFL0046910	GFL0090970	GFL0090974
Oil Age hrs Client Info 40 19 164 Oil Changed Sample Status Client Info Changed Changed Changed Changed Changed NORMAL Changed Changed Changed Changed Changed NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Sample Date		Client Info		19 Jan 2024	09 Jan 2024	05 Jan 2024
Oil Changed Sample Status Client Info Changed NORMAL Change And NoRMAL Chan	Machine Age	hrs	Client Info		1189	1149	1130
Sample Status	Oil Age	hrs	Client Info		40	19	164
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel WC Method >5	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10.0 27 24 25 Chromium ppm ASTM D5185m >20 1 <1 <1 Nickel ppm ASTM D5185m >4 6 5 4 Sliver ppm ASTM D5185m >4 6 5 4 Sliver ppm ASTM D5185m >4 1 0 0 Sliver ppm ASTM D5185m >20 4 3 2 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >15 2 2 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 6	CONTAMINAT	ION	method	limit/base	current	history1	history2
Second WC Method MEG NEG NEG	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	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	27	24	25
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m >3 <1	Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>4	6	5	4
Aluminum ppm ASTM D5185m >20 4 3 2 Lead ppm ASTM D5185m >40 <1	Titanium	ppm	ASTM D5185m		<1	0	0
Lead	Silver	ppm	ASTM D5185m	>3	<1	1	0
Copper ppm ASTM D5185m >330 247 270 304 Tin ppm ASTM D5185m >15 2 2 <1	Aluminum	ppm	ASTM D5185m	>20	4	3	2
Tin	Lead	ppm	ASTM D5185m	>40	<1	0	0
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 6 8 4 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Manganese ppm ASTM D5185m 0 2 1 <1 Magnesium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <th< td=""><td>Copper</td><td>ppm</td><td>ASTM D5185m</td><td>>330</td><th>247</th><td>270</td><td>304</td></th<>	Copper	ppm	ASTM D5185m	>330	247	270	304
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 6 8 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 2 1 <1	Tin	ppm	ASTM D5185m	>15	2	2	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 6 8 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 62 62 63 Manganese ppm ASTM D5185m 0 2 1 <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 62 62 63 Manganese ppm ASTM D5185m 0 2 1 <1 Magnesium ppm ASTM D5185m 1010 911 946 939 Calcium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 62 62 63 Manganese ppm ASTM D5185m 0 2 1 <1 Magnesium ppm ASTM D5185m 1010 911 946 939 Calcium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >3	Boron	ppm	ASTM D5185m	0			4
Manganese ppm ASTM D5185m 0 2 1 <1 Magnesium ppm ASTM D5185m 1010 911 946 939 Calcium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m >25 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 </td <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>-</th> <td></td> <td>-</td>	Barium	ppm	ASTM D5185m		-		-
Magnesium ppm ASTM D5185m 1010 911 946 939 Calcium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/:1mm "ASTM D7415 >30		ppm					
Calcium ppm ASTM D5185m 1070 1011 1025 1047 Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415		ppm	ASTM D5185m				
Phosphorus ppm ASTM D5185m 1150 916 1050 1008 Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm		ppm			-		
Zinc ppm ASTM D5185m 1270 1139 1240 1165 Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM		ppm					
Sulfur ppm ASTM D5185m 2060 2534 2587 2807 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m >20 7 6 7 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2							
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2							
Silicon ppm ASTM D5185m >25 13 12 12 Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2			ASTM D5185m	2060	2534	2587	2807
Sodium ppm ASTM D5185m 5 3 2 Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2		ITS	method	limit/base	current	•	
Potassium ppm ASTM D5185m >20 7 6 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2				>25			
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2							
Soot % % *ASTM D7844 >3 0.6 0.5 0.5 Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2	Potassium	ppm	ASTM D5185m	>20	7	6	7
Nitration Abs/cm *ASTM D7624 >20 9.4 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 19.8 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2							
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2		Abs/cm	*ASTM D7624	>20			
Oxidation Abs/.1mm *ASTM D7414 >25 16.5 16.4 16.2	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.8	20.1
	FLUID DEGRA	NOITAC	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.0 6.2 6.6	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	16.4	16.2
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.0	6.2	6.6



OIL ANALYSIS REPORT

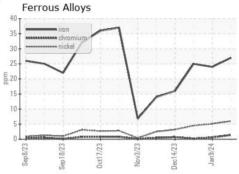


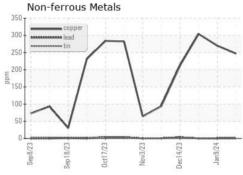


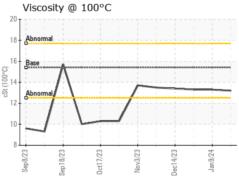
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

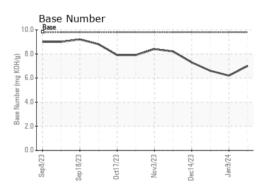
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.3	13.3	

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : FLEET

: GFL0046910 : 06070938 : 10847615

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 25 Jan 2024

Diagnosed : 26 Jan 2024 Diagnostician : Wes Davis

GFL Environmental - 814 - Little Rock Hauling

4005 Hwy 161 N. Little Rock, AR US 72117

Contact: Brad Manager

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)

T:

F: