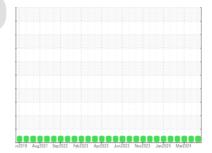


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

929088-205308

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

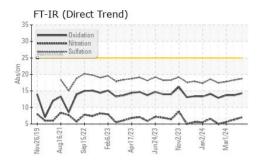
Fluid Condition

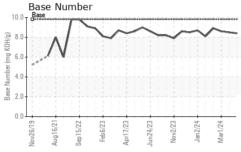
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

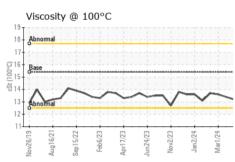
Client Info 08 Apr 2024 19 Mar 2024 11 Mar 2024 12846 14198 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 1257	AAL)		WZUI9 AUGZU	zi sepzuzz Feozuza Api	rzuza Junzuza Novzuza Janzuz4	Marzuz4	
Client Info 08 Apr 2024 19 Mar 2024 11 Mar 2024 12846 14198 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 12578 1257	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 12846 14198 12578 Oil Age hrs Client Info 300 150 700 Oil Changed Client Info N/A N/A Not Changd Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method Imitibase current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Iron ppm ASTM 05185m >10.0 6 7 3 Iron ppm ASTM 05185m >20 0 <1 0 VEAR METALS method Imitibase current history1 history1 history2 Iron ppm ASTM 05185m >20 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0	Sample Number		Client Info		GFL0109195	GFL0109134	GFL0109178
Oil Age hrs Client Info 300 150 700 Oil Changed Client Info N/A N/A N/A Not Changd Sample Status Normal Normal Normal Normal Normal CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 6 7 3 Chromium ppm ASTM D5185m >100 6 7 3 Iron ppm ASTM D5185m >20 0 <1 0 Chromium ppm ASTM D5185m >20 0 <1 0 Iron ppm ASTM D5185m >30 0 <1 0<	Sample Date		Client Info		08 Apr 2024	19 Mar 2024	01 Mar 2024
Cilient Info	Machine Age	hrs	Client Info		12846	14198	12578
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2	Oil Age	hrs	Client Info		300	150	700
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Changed		Client Info		N/A	N/A	Not Changd
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >10.0 6 7 3 Chromium ppm ASTM D5185m >20 0 <1 0 Nickel ppm ASTM D5185m >4 <1 <1 0 Silver ppm ASTM D5185m >4 <1 <1 0 Silver ppm ASTM D5185m >40 <1 2 <1 OSliver ppm ASTM D5185m >40 <1 2 <1 Copper ppm ASTM D5185m >40 <1 2 <1 Copper ppm ASTM D5185m >15 <1 1 0 Vanadium ppm ASTM D5185m 0 <1 0 <1 Cadmium ppm ASTM D5185m 0 <td< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	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
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 0 <1 0 Nickel ppm ASTM D5185m >4 <1 <1 0 Titanium ppm ASTM D5185m >4 <1 <1 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 1 3 <1 Lead ppm ASTM D5185m >40 <1 2 <1 0 Copper ppm ASTM D5185m >40 <1 2 <1 0 Vanadium ppm ASTM D5185m >15 <1 1 0 Vanadium ppm ASTM D5185m 0 <1 0 <1 0 ADDITIVES method limit/base current history1 history1 history2 Boron ppm ASTM D5185m 0 2 9 2 Barium ppm <	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	6	7	3
Titanium	Chromium	ppm	ASTM D5185m	>20	0	<1	0
Silver	Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	0
Lead	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper ppm ASTM D5185m >330 0 <1 0 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	1	3	<1
Tin	Lead	ppm	ASTM D5185m	>40	<1	2	<1
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 2 Barium ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 0 0 -1 0 Manganese ppm ASTM D5185m 0 0 -1 -1 Manganesium ppm ASTM D5185m 1070 979 931 850 Calcium ppm ASTM D5185m 1070 1090 1184 941 Phosphorus ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440	Copper	ppm	ASTM D5185m	>330	0	<1	0
Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 2 Barium ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 0 0 -1 <1	Tin	ppm	ASTM D5185m	>15	<1	1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 2 Barium ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 60 61 64 50 Manganese ppm ASTM D5185m 0 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron	Cadmium	ppm	ASTM D5185m		0	<1	0
Barium ppm ASTM D5185m 0 0 1 0 Molybdenum ppm ASTM D5185m 60 61 64 50 Manganese ppm ASTM D5185m 0 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 61 64 50 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 979 931 850 Calcium ppm ASTM D5185m 1070 1090 1184 941 Phosphorus ppm ASTM D5185m 1150 1081 1092 948 Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>2</th> <td>9</td> <td>2</td>	Boron	ppm	ASTM D5185m	0	2	9	2
Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 979 931 850 Calcium ppm ASTM D5185m 1070 1090 1184 941 Phosphorus ppm ASTM D5185m 1150 1081 1092 948 Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D78	Barium	ppm	ASTM D5185m	0	0	1	0
Magnesium ppm ASTM D5185m 1010 979 931 850 Calcium ppm ASTM D5185m 1070 1090 1184 941 Phosphorus ppm ASTM D5185m 1150 1081 1092 948 Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/cm *ASTM D7415 >30	Molybdenum	ppm	ASTM D5185m	60	61	64	50
Calcium ppm ASTM D5185m 1070 1090 1184 941 Phosphorus ppm ASTM D5185m 1150 1081 1092 948 Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus ppm ASTM D5185m 1150 1081 1092 948 Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs	Magnesium	ppm	ASTM D5185m	1010	979	931	850
Zinc ppm ASTM D5185m 1270 1323 1247 1140 Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM	Calcium	ppm	ASTM D5185m	1070	1090	1184	941
Sulfur ppm ASTM D5185m 2060 3755 3440 3169 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Phosphorus	ppm	ASTM D5185m	1150	1081	1092	948
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Zinc	ppm	ASTM D5185m	1270	1323	1247	1140
Silicon ppm ASTM D5185m >25 2 4 2 Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Sulfur	ppm	ASTM D5185m	2060	3755	3440	3169
Sodium ppm ASTM D5185m 24 11 2 Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 15 8 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Silicon	ppm	ASTM D5185m	>25	2	4	2
INFRA-RED	Sodium	ppm	ASTM D5185m		24	11	2
Soot % *ASTM D7844 >3 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Potassium	ppm	ASTM D5185m	>20	15	8	0
Nitration Abs/cm *ASTM D7624 >20 7.0 6.3 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.7 18.3 17.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Soot %	%	*ASTM D7844	>3	0.4	0.3	0.2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Nitration	Abs/cm	*ASTM D7624	>20	7.0	6.3	5.6
Oxidation Abs/.1mm *ASTM D7414 >25 14.3 13.7 13.7	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	18.3	17.8
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	13.7	13.7
	Base Number (BN)					8.5	



OIL ANALYSIS REPORT



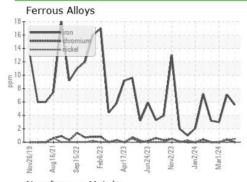


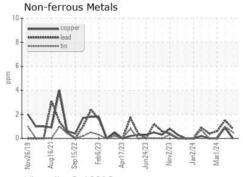


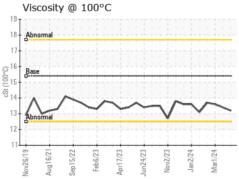
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

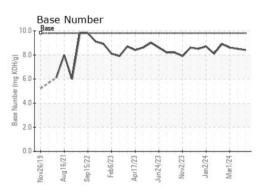
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.4	13.6	

GRAPHS













Certificate 12367

Laboratory Sample No. Lab Number : 06146427 Unique Number : 10976505

: GFL0109195

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Apr 2024

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

2120 West Bennett Street Springfield, MO

GFL Environmental - 822 - Springfield Hauling

US 65807 Contact: Dennis Moore dennis.moore@gflenv.com T: (417)403-3641

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)