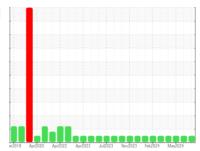


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

428058-402378

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 oil.

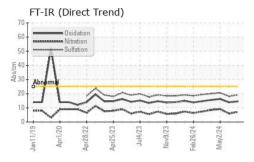
Fluid Condition

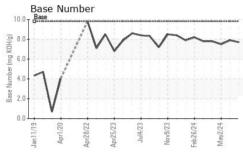
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

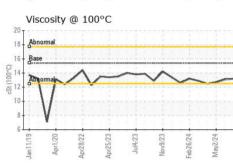
SAMPLE INFORMATION method limit/base current history1 history2	āAL)		in2019 Apr21	020 Apr2022 Apr2023	Jul2023 Nov2023 Feb2024	May2024	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date	Sample Number		Client Info		GFL0105246	GFL0105286	GFL0105061
Machine Age hrs Client Info 14173 14042 13901 Oil Age hrs Client Info 150 150 600 Oil Changed Client Info Not Changd NORMAL NORMAL Sample Status Image: Client Info NORMAL NORMAL NORMAL CONTAMINATION method limit/bass current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/bass current history2 NEG NEG WEAR METALS method limit/bass current history2 NEG NEG NEG WEAR METALS method limit/bass current history2 1 1 6 15 Tron ppm ASTM D5185m > 2 0 0			Client Info		31 May 2024	15 May 2024	02 May 2024
Oil Age hrs Client Info 150 600 Oil Changed Client Info Not Changd Not Changd Changed Sample Status Contained NoRMAL NoRMAL NoRMAL NoRMAL NoRMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0		hrs					
Oil Changed Sample Status Client Info Not Changd NORMAL Not Changd NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL NORMAL 1.0	•	hrs	Client Info		150	150	600
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 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 11 6 15 Chromium ppm ASTM D5185m >2 0 0 0 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 1 0 Lead ppm ASTM D5185m >25 2 1 2 2 Lead ppm ASTM D5185m >85 <1 0 0 <1 1 1 <1 <1 <1 <1 <1 <1 <1<	-		Client Info		Not Changd	Not Changd	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method Glycol NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >110 11 6 15 Chromium ppm ASTM D5185m >4 <1 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 0 Silver ppm ASTM D5185m >2 0 <1 0 0 Sliver ppm ASTM D5185m >2 0 <1 0 0 Aluminum ppm ASTM D5185m >25 2 1 2 1 2 1 2 1 2 1 0 <t< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	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 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>110	11	6	15
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >2 0 <1 0 Aluminum ppm ASTM D5185m >25 2 1 2 Lead ppm ASTM D5185m >45 <1 <1 <1 Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 <tr< td=""><td>Chromium</td><td>ppm</td><td>ASTM D5185m</td><td>>4</td><th><1</th><td><1</td><td><1</td></tr<>	Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum ppm ASTM D5185m >25 2 1 2 Lead ppm ASTM D5185m >45 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >45 <1 <1 <1 Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m >4 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 ADDITIVES method limit/base current history1	Silver	ppm	ASTM D5185m	>2	0	<1	0
Copper ppm ASTM D5185m >85 <1 0 <1 Tin ppm ASTM D5185m >4 <1	Aluminum	ppm	ASTM D5185m	>25	2	1	2
Tin ppm ASTM D5185m >4 <1 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 54 54 56 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1170 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m >30	Lead	ppm	ASTM D5185m	>45	<1	<1	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 54 54 56 Manganese ppm ASTM D5185m 1010 841 930 896 Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current hi	Copper	ppm	ASTM D5185m	>85	<1	0	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>4	<1	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 54 54 56 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 841 930 896 Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 54 54 56 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 841 930 896 Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m >20 2 <1	Boron	ppm	ASTM D5185m	0	<1	0	0
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 841 930 896 Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 841 930 896 Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1	Molybdenum	ppm				54	
Calcium ppm ASTM D5185m 1070 978 1034 985 Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m	0	<1	0	<1
Phosphorus ppm ASTM D5185m 1150 963 998 990 Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1	-	ppm					
Zinc ppm ASTM D5185m 1270 1135 1222 1197 Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m >5 2 4 Potassium ppm ASTM D5185m >20 2 <1	Calcium	ppm	ASTM D5185m	1070			
Sulfur ppm ASTM D5185m 2060 3164 3548 3224 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1							
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1		ppm			1135		
Silicon ppm ASTM D5185m >30 4 3 3 Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.2 0.6 Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2			ASTM D5185m	2060	3164	3548	3224
Sodium ppm ASTM D5185m 5 2 4 Potassium ppm ASTM D5185m >20 2 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.2 0.6 Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.2 0.6 Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2				>30			
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.4 0.2 0.6 Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2		ppm	ASTM D5185m		5	2	4
Soot % % *ASTM D7844 >3 0.4 0.2 0.6 Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2	Potassium	ppm	ASTM D5185m	>20	2	<1	2
Nitration Abs/cm *ASTM D7624 >20 7.1 6.0 9.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.1 18.1 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2	Soot %	%	*ASTM D7844	>3	0.4		0.6
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 13.9 16.2	Nitration	Abs/cm	*ASTM D7624	>20	7.1	6.0	9.1
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	18.1	20.6
	FLUID DEGRAI	NOITAC	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.7 7.9 7.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	13.9	16.2
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	7.9	7.5



OIL ANALYSIS REPORT



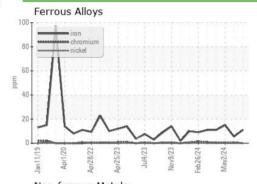


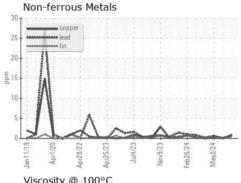


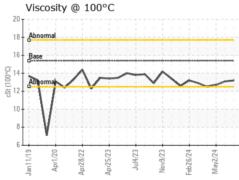
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

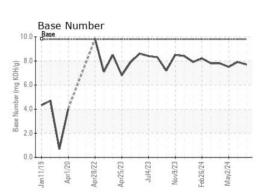
FLUID PROP	EKITES	method	ilmit/base		nistory i	nistory∠
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.1	12.7

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0105246 Lab Number : 06209775

Unique Number : 11082639 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received : 14 Jun 2024 **Tested** : 15 Jun 2024

Diagnosed : 15 Jun 2024 - Wes Davis

GFL Environmental - 821 - Ozarks Hauling 33924 Olath Drive Lebanon, MO US 65536

Contact: Landen Johnson landen.johnson@gflenv.com T: (417)664-0010

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)