

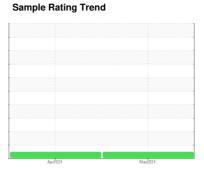
OIL ANALYSIS REPORT



Machine Id 727166 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

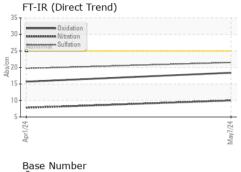
Fluid Condition

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

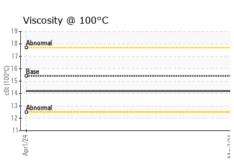
Sample Number Client Info GFL0120372 GFL0066293	110111 1011-10 (J.:,					
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 0 0 0 0 0 0	Sample Number		Client Info		GFL0120372	GFL0066293	
Machine Age hrs Client Info 0 0 0 0 0 0 0 0 0	Sample Date		Client Info		07 May 2024	01 Apr 2024	
Oil Changed	Machine Age	hrs	Client Info		-	·	
NORMAL NORMAL CONTAMINATION method limit/base current history1 history history water WC Method S <1.0 <1.0	Oil Age	hrs	Client Info		0	0	
NORMAL NORMAL CONTAMINATION method limit/base current history1 history1 history2 history3 history3 history4 history4 history4 history4 history4 history5 history5 history5 history6 history6 history6 history6 history6 history6 history6 history7 history8 history8	Oil Changed		Client Info		N/A	N/A	
Fuel WC Method So.2 NEG NE	Sample Status				NORMAL	NORMAL	
Water WC Method >0.2 NEG NEG Glycol WC Method NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >80 27 20 Chromium ppm ASTM D5185m >5 1 <1 Nickel ppm ASTM D5185m >2 0 0 Sliver ppm ASTM D5185m >3 0 0 Sliver ppm ASTM D5185m >30 0 0 Aluminum ppm ASTM D5185m >30 0 0 Aluminum ppm ASTM D5185m >30 0 0 Aluminum ppm ASTM D5185m >30 0 0 Copper ppm ASTM D5185m 0 0 0 <t< td=""><td>CONTAMINAT</td><td>ION</td><td>method</td><td>limit/base</td><th>current</th><td>history1</td><td>history2</td></t<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	
Chromium	Glycol		WC Method		NEG	NEG	
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	27	20	
Titanium	Chromium	ppm	ASTM D5185m	>5	1	<1	
Silver	Nickel	ppm	ASTM D5185m	>2	0	0	
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	
Lead	Silver	ppm	ASTM D5185m	>3	0	0	
Copper ppm ASTM D5185m >150 <1 <1	Aluminum	ppm	ASTM D5185m	>30	3	2	
Tin	Lead	ppm	ASTM D5185m	>30	0	0	
Vanadium ppm ASTM D5185m 0 <1 Cadmium ppm ASTM D5185m 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 4 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 1010 941 979 Calcium ppm ASTM D5185m 1070 1156 1176 Phosphorus ppm ASTM D5185m 1270 1234 1210 Sulfur ppm ASTM D5185m 2060 3446 3661 CONTAMINANTS method limit/base current	Copper	ppm	ASTM D5185m	>150	<1	<1	
ADDITIVES	Tin	ppm	ASTM D5185m	>5	0	0	
ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 0 0 4 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 60 58 58 Manganese ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	
Boron ppm ASTM D5185m 0 0 0 0 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 60 58 58 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 58 58 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	0	4	
Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 1010 941 979 Calcium ppm ASTM D5185m 1070 1156 1176 Phosphorus ppm ASTM D5185m 1270 1234 1210 Zinc ppm ASTM D5185m 2060 3446 3661 Sulfur ppm ASTM D5185m 20 4 5 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m 20 4 5 Sodium ppm ASTM D5185m 20 1 <1	Barium	ppm	ASTM D5185m	0	0	0	
Magnesium ppm ASTM D5185m 1010 941 979 Calcium ppm ASTM D5185m 1070 1156 1176 Phosphorus ppm ASTM D5185m 1150 1051 974 Zinc ppm ASTM D5185m 1270 1234 1210 Sulfur ppm ASTM D5185m 2060 3446 3661 Silicon ppm ASTM D5185m 20 4 5 Sodium ppm ASTM D5185m 20 4 5 Potassium ppm ASTM D5185m 20 <1	Molybdenum	ppm	ASTM D5185m	60	58	58	
Calcium ppm ASTM D5185m 1070 1156 1176 Phosphorus ppm ASTM D5185m 1150 1051 974 Zinc ppm ASTM D5185m 1270 1234 1210 Sulfur ppm ASTM D5185m 2060 3446 3661 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 4 5 Sodium ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	
Phosphorus ppm ASTM D5185m 1150 1051 974	Magnesium	ppm	ASTM D5185m	1010	941	979	
Zinc ppm ASTM D5185m 1270 1234 1210 Sulfur ppm ASTM D5185m 2060 3446 3661 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 4 5 Sodium ppm ASTM D5185m 2 1 Potassium ppm ASTM D5185m >20 <1 <1 INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	Calcium	ppm	ASTM D5185m	1070	1156	1176	
Sulfur ppm ASTM D5185m 2060 3446 3661 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 4 5 Sodium ppm ASTM D5185m 2 1 Potassium ppm ASTM D5185m >20 <1	Phosphorus	ppm	ASTM D5185m	1150	1051	974	
CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >20 4 5 Sodium ppm ASTM D5185m 2 1 Potassium ppm ASTM D5185m >20 <1	Zinc	ppm	ASTM D5185m	1270	1234	1210	
Solicon ppm ASTM D5185m >20 4 5	Sulfur	ppm	ASTM D5185m	2060	3446	3661	
Sodium ppm ASTM D5185m 2 1 Potassium ppm ASTM D5185m >20 <1	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 <1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	Silicon	ppm	ASTM D5185m	>20	4	5	
INFRA-RED	Sodium	ppm	ASTM D5185m		2	1	
Soot % % *ASTM D7844 >3 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 Sulfation Abs/.1mm *ASTM D7415 >30 21.5 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	Potassium	ppm	ASTM D5185m	>20	<1	<1	
Nitration Abs/cm *ASTM D7624 >20 10.0 7.8 Sulfation Abs/.1mm *ASTM D7615 >30 21.5 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 21.5 19.7 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	Soot %	%	*ASTM D7844	>3	0.7	0.6	
FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 18.4 15.7	Nitration	Abs/cm	*ASTM D7624	>20	10.0	7.8	
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	19.7	
	FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.2 8.8	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	15.7	
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	8.8	



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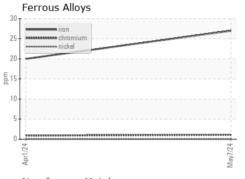
Base Number	
-0.8 (B)	
8.0 0 6.0 4.0 4.0 4.0 4.0 4.0 5.1 8.2 8.2 2.0 4.0 5.2 8.2 8.2 2.0 5.2 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8.2 8	
4.0 4.0	
2.0	
Apri / 24	ACCE

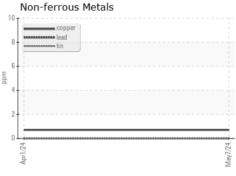


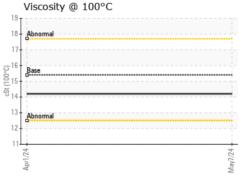
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

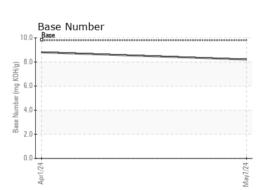
FLUID PROPE	ERITES	method	limit/base		history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.2	

GRAPHS













Certificate 12367

Laboratory

Sample No. : GFL0120372 Lab Number : 06197316

Unique Number : 11059439 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 03 Jun 2024

Tested : 03 Jun 2024 Diagnosed : 03 Jun 2024 - Wes Davis

GFL Environmental - 938 - Hager City W9724 WIS-35

HAGER CITY, WI US 54014

T: (715)202-3420

Contact: ANDY KANE

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)

Report Id: GFL938 [WUSCAR] 06197316 (Generated: 06/03/2024 18:37:06) Rev: 1

Contact/Location: See also GFL904,A,B,C, 927, 938 - ANDY KANE - GFL938