

OIL ANALYSIS REPORT



Machine Id

R99766

Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service. $\label{eq:condition}$

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0096820	GFL0096758	
Sample Date		Client Info		04 Apr 2024	01 Nov 2023	
Machine Age	kms	Client Info		50580	29576	
Oil Age	kms	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	22	66	
Chromium	ppm	ASTM D5185(m)	>20	<1	2	
Nickel	ppm	ASTM D5185(m)	>4	2	11	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	<1	
Aluminum	ppm	ASTM D5185(m)	>20	2	5	
Lead	ppm	ASTM D5185(m)	>40	0	2	
Copper	ppm	ASTM D5185(m)	>330	9	76	
Tin	ppm	ASTM D5185(m)	>15	<1	3	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	25	48	
Barium	ppm	ASTM D5185(m)	0	0	<1	
Molybdenum	ppm	ASTM D5185(m)	60	77	108	
Manganese	ppm	ASTM D5185(m)	0	<1	5	
Magnesium	ppm	ASTM D5185(m)	1010	903	721	
Calcium	ppm	ASTM D5185(m)	1070	1176	1336	
Phosphorus	ppm	ASTM D5185(m)	1150	885	701	
Zinc	ppm	ASTM D5185(m)	1270	1065	867	
Sulfur	ppm	ASTM D5185(m)	2060	2185	1661	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	55	
Sodium	ppm	ASTM D5185(m)		1	4	
Potassium	ppm	ASTM D5185(m)	>20	2	6	
Fuel	%	ASTM D7593*	>5	0.0	0.6	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.6	0.7	
Nitration	Abs/cm	ASTM D7624*	>20	9.1	12.1	
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.3	24.9	



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FLUID DEGRADATION method 25.9 Oxidation Abs/.1mm ASTM D7414* >25 17.6 VISUAL **Emulsified Water** Visual* >0.2 NEG NEG scalar Free Water NEG scalar Visual* NEG FLUID PROPERTIES Visc @ 100°C cSt 12.7 11.1 ASTM D7279(m) 15.4 GRAPHS Iron (ppm) Lead (ppm) 250 100 200 Severe 81 150 60 Δſ 100 20 Vov1/23 Aluminum (ppm) Chromium (ppm) 50 50 30 30 10 10 n Ο Copper (ppm) Silicon (ppm) 400 8 Se 350 70 300 60 250 50 E 200 E 40 150 30 Ab 100 20 50 10 0 0 Soot % Viscosity @ 100°C 20 6.0 5.0 18 4.0 ≈ ₫3.0 cst(1.0 10 0.0 .or4/24

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet CALA Sample No. : GFL0096820 Received : 23 Apr 2024 70 Golden Drive, Lab Number : 02630874 Tested : 24 Apr 2024 Coquitlam, BC ISO 17025:2017 Accredited Unique Number : 5772027 Diagnosed : 24 Apr 2024 - Wes Davis CA V3K 6B5 Laboratory Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel) Contact: Gary Ewasiuk To discuss this sample report, contact Customer Service at 1-800-268-2131. gewasiuk@gflenv.com Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Т: Validity of results and interpretation are based on the sample and information as supplied. F:

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Contact/Location: Gary Ewasiuk - GFL574 Page 2 of 2