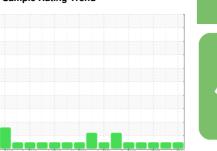


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
701029
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (22 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

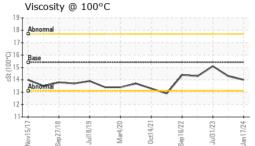
Fluid Condition

The condition of the oil is acceptable for the time in service.

0.1.151.	Vov2017 Smp2018 Jul2019 Min2020 Oct2021 Smp2022 Jul2023 Jun2024									
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2				
Sample Number		Client Info		GFL0107124	GFL0091056	GFL0091041				
Sample Date	Client Info		17 Jan 2024	16 Aug 2023	31 Jul 2023					
Machine Age	hrs	Client Info		0	161592	161592				
Oil Age	il Age hrs			0	0	0				
Oil Changed	•		Client Info		Changed	Changed				
Sample Status				NORMAL	NORMAL	NORMAL				
CONTAMINAT	ION	method	limit/base	current	history1	history2				
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0				
Water		WC Method	>0.2	NEG	NEG	NEG				
Glycol		WC Method		NEG	NEG	NEG				
WEAR METAL	S	method	limit/base	current	history1	history2				
Iron	ppm	ASTM D5185(m)	>75	36	12	46				
Chromium	ppm	ASTM D5185(m)	>5	1	<1	2				
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1				
Titanium	ppm	ASTM D5185(m)	>2	0	0	0				
Silver	ppm	ASTM D5185(m)	>2	0	0	<1				
Aluminum	ppm	ASTM D5185(m)		5	2	4				
Lead	ppm	ASTM D5185(m) ASTM D5185(m)	>25	<1	0	0				
Copper	per ppm		>100	2	<1	2				
Tin ppm		ASTM D5185(m)	>4	0	0	0				
Antimony	ppm	ASTM D5185(m)		0	0	0				
Vanadium	ppm	ASTM D5185(m)		0	0	0				
Beryllium	ppm	ASTM D5185(m)		0	0	0				
Cadmium	ppm	ASTM D5185(m)		0	0	0				
ADDITIVES		method	limit/base	current	history1	history2				
Boron	ppm	ASTM D5185(m)	0	3	8	5				
Barium	ppm	ASTM D5185(m)	0	0	0	0				
Molybdenum	ppm	ASTM D5185(m)	60	62	59	60				
Manganese	ppm	ASTM D5185(m)		0	<1	<1				
Magnesium	ppm	ASTM D5185(m)	1010	987	944	949				
Calcium	ppm	ASTM D5185(m)	1070	1122	1045	1039				
Phosphorus	ppm	ASTM D5185(m)	1150	1021	1035	1012				
Zinc	ppm	ASTM D5185(m)	1270	1230	1162	1170				
Sulfur Lithium	ppm	ASTM D5185(m) ASTM D5185(m)	2060	2464	2549	2251				
	ppm	()		<1	<1	<1				
CONTAMINAN	TS	method	limit/base	current	history1	history2				
Silicon	ppm	ASTM D5185(m)	>25	9	4	11				
Sodium	ppm ASTM D5185(m)			8	5	10				
Potassium	ppm	ASTM D5185(m)	>20	10	<1	2				
INFRA-RED		method	limit/base	current	history1	history2				
Soot %	%	ASTM D7844*	>6	0.7	0.1	0.6				
Nitration	Abs/cm	ASTM D7624*	>20	11.6	7.6	14.0				
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.5	20.6	27.1				



OIL ANALYSIS REPORT



FLUID DEGRA	DATION	method	limit/base	current	history1	history2		
Oxidation Abs/.1mm		ASTM D7414*	>25	22.0	15.7	26.9		
VISUAL		method	limit/base	current	history1	history2		
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG		
Free Water scalar		Visual*		NEG	NEG	NEG		
FLUID PROPE	method	limit/base	current	history1	history2			
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.0	14.3	15.1		

Jan	Visc @ 100°C		cSt		ASTM D7279(m)		15.4		14.0			14.3		15.1			
	GF	RAPH	IS														
1	Iron (ppm)							Lead (ppm)									
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	00								40								
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					00	Sep	Π	Jan						0	Sep	- In	Jan
	Alu 30 T	Aluminum (ppm)								Chromium (ppm)							
	25 - Seve	re		-	-				10	Sever	e		-	-			
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	0 1/1/5	- 81//	Jul18/19	Mar4/20 -	Oct14/21-	6/22	Jul31/23 -	1/24	0.	5/17	7/18	Jul18/19 +	Mar4/20 +	0ct14/21	6/22	Jul31/23 +	Jan17/24
	Nov15/17	Sep27/18			Octl	Sep16/22	Jul3	Jan17/24		Nov15/17	Sep27/18	la In	Mar	Oct1	Sep16/22	Jul3	Jan
	Viso	cosity	@ 100	0°C					8.0	Soo Sever							
	18 - Abno	ormal							7.0	Abno							
0-1	17- 16- Base								6.0 5.0	-							
cSt (100°C)	15						^		5.0- to 4.0- 3.0-								
	13 - Aont	emal							2.0								
	12								1.0 · 0.0 ·							^	/
	Nov15/17	Sep27/18	Jul18/19	Mar4/20	Oct14/21	Sep16/22	Jul31/23	Jan17/24		Nov15/17	Sep27/18	Jul18/19	Mar4/20	Oct14/21	Sep16/22	Jul31/23	Jan17/24
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CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5710956 Test Package : MOB 1

: GFL0107124 : 02609870

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Recieved : 19 Jan 2024 Diagnosed

: 19 Jan 2024 Diagnostician : Wes Davis

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 217 - Aurora 14131 BAYVIEW AVE, AURORA YARD

AURORA, ON CA L4G 0K6 Contact: Mike Havens

Submitted By: Scott Ewan

MHavens@gflenv.com

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

F: (905)713-2445