

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id 401117 Component

Diesel Engine

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

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

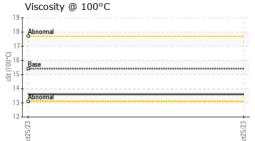
Fluid Condition

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

GAL)				0ct2023		
SAMPLE INFOF	RMATION	method	limit/base		history1	history2
		Client Info	ming bass	GFL0096711		
Sample Number		0.101.10		25 Oct 2023		
Sample Date	Luna	Client Info				
Machine Age	kms	Client Info		535321		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	TION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	_S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	21		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	<1		
Aluminum	ppm	ASTM D5185(m)	>20	2		
Lead	ppm	ASTM D5185(m)	>40	0		
Copper	ppm	ASTM D5185(m)	>330	<1		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	2		
Barium	ppm	ASTM D5185(m)	0	<1		
Molybdenum	ppm	ASTM D5185(m)	60	59		
Manganese	ppm	ASTM D5185(m)	0	0		
Magnesium	ppm	ASTM D5185(m)	1010	951		
Calcium	ppm	ASTM D5185(m)	1070	1033		
Phosphorus	ppm	ASTM D5185(m)	1150	962		
Zinc	ppm	ASTM D5185(m)	1270	1179		
Sulfur	ppm	ASTM D5185(m)	2060	2348		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	6		
Sodium	ppm	ASTM D5185(m)		5		
Potassium	ppm	ASTM D5185(m)	>20	<1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.4		
Nitration	Abs/cm	ASTM D7624*	>20	9.6		
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.5		



OIL ANALYSIS REPORT



FLUID DEGRAI	DATION	method	limit/base	current	history1	history2			
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.2					
VISUAL		method	limit/base	current	history1	history2			
White Metal	scalar	Visual*	NONE	NONE					
Yellow Metal	scalar	Visual*	NONE	NONE					
Precipitate	scalar	Visual*	NONE	NONE					
Silt	scalar	Visual*	NONE	NONE					
Debris	scalar	Visual*	NONE	NONE					
Sand/Dirt	scalar	Visual*	NONE	NONE					
Appearance	scalar	Visual*	NORML	NORML					
Odor	scalar	Visual*	NORML	NORML					
Emulsified Water	scalar	Visual*	>0.2	NEG					
Free Water	scalar	Visual*		NEG					
FLUID PROPE	RTIES	method	limit/base	current	history1	history2			
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.6					
GRAPHS									
Iron (ppm)			10	Lead (ppm)					
200 - Severe			8	Common					
150 - Abnormal			E 6	0+					
Abnormal		***************************************	E 4	0 + Abnormal					
50			2	1					
0 √23 √23 √33				0 1/23		/23			
0ct25/23			Oct25/23	0ct25/23		0ct25/23			
Aluminum (ppm)									
50 50 50 50 50 50 50 50 50 50 50 50 50 5									
10									
Abnormal	30 - Abnormal - 20 - Abnormal - 20 - Abnormal								
10				1					
23				0 1 23		23			
0ct25/23			0ct25/23	0ct25/23		Oct25/23			
Copper (ppm)				Silicon (ppm)					
400 Severe			8	0 - Severe					
300			6	l i					
E 200			Ed 4	Abnormal					
100			2	0 - 9					
0 2				0					
0ct25/23			0ct25/23	0ct25/23		Oct25/23			
Viscosity @ 100°C			J	Soot %		0			
20			r	n					



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5685461

: GFL0096711

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet Received : 02600381

Diagnosed Diagnostician : Wes Davis Test Package : MOB 1 (Additional Tests: Visual)

: 04 Dec 2023

: 04 Dec 2023

0ct25/23

0.0

70 Golden Drive, Coquitlam, BC CA V3K 6B5 Contact: Gary Ewasiuk

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

gewasiuk@gflenv.com T:

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: