

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id 714059 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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.

N SHP 15W40 (-	GAL)			Dec2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0107060		
Sample Date		Client Info		22 Dec 2023		
Machine Age	hrs	Client Info		1181		
Oil Age	hrs	Client Info		600		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	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 D5185m	>80	23		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	2		
Lead	ppm	ASTM D5185m	>30	<1		
Copper	ppm	ASTM D5185m	>150	2		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	5		
Barium	ppm	ASTM D5185m	0	<1		
Molybdenum	ppm	ASTM D5185m	60	61		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	1010	901		
Calcium	ppm	ASTM D5185m	1070	1084		
Phosphorus	ppm	ASTM D5185m	1150	1032		
Zinc	ppm	ASTM D5185m	1270	1182		
Sulfur	ppm	ASTM D5185m	2060	2936		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	4		
Sodium	ppm	ASTM D5185m		4		
Potassium	ppm	ASTM D5185m	>20	0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6		
Nitration	Abs/cm	*ASTM D7624	>20	9.1		
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2		
FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0		
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.3		
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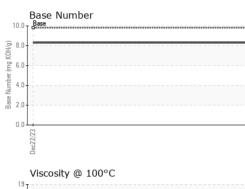


18. Abnormal

17 () 10.00 15. 14. Base

13 Abnormal 12 11 Dec22/23

OIL ANALYSIS REPORT



	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		
		scalar	*Visual	NORML	NORML		
	Appearance Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water		*Visual	>0.2	NEG		
)°C	Free Water	scalar	*Visual	>0.2	NEG		
	FLUID PROF		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445		14.2		
	GRAPHS	cor	A011010443	10.4	17.2		
	Ferrous Alloys						
	²⁵ T						
	iron chromium						
	20 - unserver nickel						
	15						
	E dd						
	10						
	5-						
	0						
	Dec2/23			Dec22/23			
	Non-ferrous Me	etals					
	10 copper						
	8 meansane lead						
	sesses tin						
	6						
	е е 4						
	2						
	0						
	22/23			22/23			
	Deci			Deci			
	Viscosity @ 100)°C			Base Number		
	19 18			10.0	Base		
	18 - Abnormal			8.0			
				B/HO			
	Base 00 15 314			(b)/HOX (but) 6.1 Bayes Mumber (b) 888	D -		
	ts 14						
	13 Abnormal			ase N			
	12			° 2.0)		
	11			0.0			
	Dec2//23			Dec22/23	Dec22/23		Dec22/23
	Dec			Dec	Dec		Dec
Labora Sample	e No. : GFL0107060	Recieved	d : 08 .	Jan 2024	3 GFL E	nvironmental	• 465 - Pontiac 888 Baldwin
		Diagnos		Jan 2024			Pontiac, MI
Certificate L2367 Certificate L2367		Diagnost	ucian : We	s Davis		Contact.	US 48340 Ricky Matthews
	report, contact Customer Se	ervice at 1-8	300-237-136	9.			s@gflenv.com
* - Denotes test method	s that are outside of the ISC	C 17025 sco	pe of accred	litation.			(586)825-9514
Statements of conformity	to specifications are based o	on the simple	acceptance	decision rule (JCGM 106:2012)		F:

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Submitted By: Ricky Matthews