

OIL ANALYSIS REPORT

Sample Rating Trend





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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0093020		
Sample Date		Client Info		26 Mar 2024		
Machine Age	mls	Client Info		190905		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	۹	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	34		
Chromium	ppm		>20	2		
Nickel	ppm	ASTM D5185m	>5			
Titanium Silver	ppm	ASTM D5185m	>2	<1		
Aluminum	ppm	ASTM D5185m ASTM D5185m	>2	<1 14		
	ppm			14		
Lead	ppm	ASTM D5185m	>40	10		
Copper Tin	ppm		>330 >15	2		
Vanadium	ppm	ASTM D5185m	>10	2 <1		
Cadmium	ppm	ASTM D5185m		<i 1</i 		
	ppm	ASTIVI DOTODITI		1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	11		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	60	82		
Manganese	ppm	ASTM D5185m	0	2		
Magnesium	ppm	ASTM D5185m	1010	210		
Calcium	ppm	ASTM D5185m	1070	2015		
Phosphorus	ppm	ASTM D5185m	1150	1006		
Zinc	ppm	ASTM D5185m	1270	1171		
Sulfur	ppm	ASTM D5185m	2060	3210		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	7		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	25		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	1.1		
Nitration	Abs/cm	*ASTM D7624	>20	10.7		
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.9		
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8		
Base Number (BN)	mg KOH/g	ASTM D7414 ASTM D2896	9.8	5.1		
	ing itoring	101102000	0.0	5.1		



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FT-IR (Direct Trend)	VISUAL	n	nethod l	limit/base	current	history1	history2
Oxidation	White Metal	scalar *V	isual N	ONE	NONE		
same Sulfation	Yellow Metal			ONE	NONE		
	Precipitate			ONE	NONE		
₹ ₂₀	Silt	scalar *V	isual NO	ONE	NONE		
15	Debris	scalar *V	isual NO	ONE	NONE		
10	Sand/Dirt	scalar *V	isual NO	ONE	NONE		
Mai 26/24	Appearance	scalar *V	isual NO	ORML	NORML		
Mar	Odor	scalar *V	isual NO	ORML	NORML		
Base Number	Emulsified Water	scalar *V	isual >0).2	NEG		
10.0 Base	Free Water	scalar *V	isual		NEG		
(0, 8.0 HOX But 6.0	FLUID PROP	ERTIES n	nethod li	limit/base	current	history1	history2
E 6.0	Visc @ 100°C	cSt AS	STM D445 15	5.4	14.0		
and the second sec	GRAPHS						
8 2.0 -	Ferrous Alloys						
0.0	35			-			
Mar26/24	30 - chromium						
Ma	25 -						
Viscosity @ 100°C	20- E 15-						
19 18 - Abnormal	15						
17	10-						
© 16 € 15	5						
5 14 8 14	0 5 5			24			
13 Abnormal	Mar26/24			Mar26/			
12	– Non-ferrous Meta	als		_			
Mar26/24	10 copper			-			
Mar	8 - management in						
	Б						
	4						
	2 -						

	24 52			24			
	Mar26/24			Mar26/24			
	 Viscosity @ 100°	C		-	Daga Numbar		
	¹⁹			10.0 T	Base Number	*****	
	18 - Abnormal						
	17-			(B/HO			
	ට ¹⁶ Base 0015 3 14			¥ 6.0-			
	53 14			- 0.8 - 0.6 Base Number (mg KOH/g)			
	13 Abnormal			ase N			
				° 2.0-			
	11			0.0			
	Mar26/24			Mar26/24	Marzb/ 24		Mar26/24
	M			2	Z		Ň
Laboratory	: WearCheck USA - 5	01 Madison A	ve., Carv. N	C 27513	GFL Env	ironmental - 413 - W	/hiteland Hauling
Sample No.	: GFL0093020	Received	1 : 18 Ap	or 2024		2959 S EN	MERSON AVE
	r : 06152871	Tested	: 19 Ap		Folton	W	HITELAND, IN
Certificate L2367 Test Packag	er:10982949 e:FLEET	Diagnose	eu . 22 Apr	r 2024 - Sear		ontact: Christyar	US 46184 Trent-Proctor
To discuss this sample repo	rt, contact Customer Ser				°,		or@gflenv.com
* - Denotes test methods that Statements of conformity to					10011 100	S-2012)	T:
Statements of conformity to		on the simple	ассеріансе			0:2012) vrietven Trent Bro	F:

Contact/Location: Christyan Trent-Proctor - GFL413