

OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id **834002**

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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.

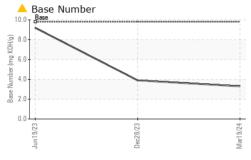
Fluid Condition

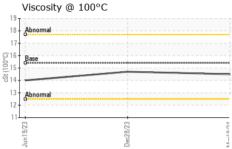
The BN level is low. The condition of the oil is acceptable for the time in service.

Sample Number Client Info GFL0106925 GFL0092001 GFL00847 Sample Date Client Info 19 Mar 2024 28 Dec 2023 19 Jun 202 Machine Age hrs Client Info 516 1790 2006 Oil Age hrs Client Info 516 1790 0 Oil Changed Client Info Changed Changed Not Changed Sample Status Client Info Changed Changed Not Changed CONTAMINATION method limit/base current history1 history1 Fuel WC Method 55 < 1.0	TS)		Jur	2023	Dec2023 Mar20.	24	
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 2460 1790 2306 Oil Age hrs Client Info 516 1790 0 Oil Changed Changed Not Changed Not Changed NoRMAL NEG NEG <t< td=""><td>Sample Number</td><td></td><td>Client Info</td><td></td><td>GFL0106925</td><td>GFL0092001</td><td>GFL0084740</td></t<>	Sample Number		Client Info		GFL0106925	GFL0092001	GFL0084740
Oil Age hrs Client Info 516 1790 0 Oil Changed Sample Status Client Info Changed ABNORMAL Not Changed Normal Not Changed Normal Not Changed Normal <	Sample Date		Client Info		19 Mar 2024	28 Dec 2023	19 Jun 2023
Client Info Changed ABNORMAL Normal No	Machine Age	hrs	Client Info		2460	1790	2306
CONTAMINATION	Oil Age	hrs	Client Info		516	1790	0
CONTAMINATION method limit/base current history1 history1 Fuel WC Method >5 <1.0			Client Info			Ü	Not Changd
Fuel	Sample Status				ABNORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG Ned Ned <t< td=""><td>CONTAMINAT</td><td>ION</td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >110 14 19 29 Chromium ppm ASTM D5185m >4 1 2 <1	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >110 14 19 29 Chromium ppm ASTM D5185m >4 1 2 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Concording Con	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >4	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	-	• • • • • • • • • • • • • • • • • • • •					
Titanium		ppm					
Silver				>2			
Aluminum							
Lead		• • • • • • • • • • • • • • • • • • • •					
Copper ppm ASTM D5185m >85 2 2 11 Tin ppm ASTM D5185m 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 0 7 6 42 Barium ppm ASTM D5185m 0 0 0 <1							
Tin							
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Barium							
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Sodium ppm ASTM D5185m 7 10 4 Potassium ppm ASTM D5185m >20 32 63 19 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 11.2 11.4 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.8 20.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.4 18.6 17.9			ASTM D5185m	>30	5		
Potassium ppm ASTM D5185m >20 32 63 19 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 11.2 11.4 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.8 20.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 18.6 17.9	Sodium	• • • • • • • • • • • • • • • • • • • •				10	4
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Nitration Abs/cm *ASTM D7624 >20 11.2 11.4 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.8 20.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 19.4 18.6 17.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.8 20.5 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 18.6 17.9	Soot %	%	*ASTM D7844	>3	0	0	0.1
Sulfation Abs/.1mm *ASTM D7415 >30 23.2 22.8 20.5 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 18.6 17.9	Nitration	Abs/cm	*ASTM D7624	>20	11.2	11.4	8.8
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30			
	FLUID DEGRAD	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 .3.3 3.9 9.2	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	18.6	17.9
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	△ 3.3	3.9	9.2



OIL ANALYSIS REPORT



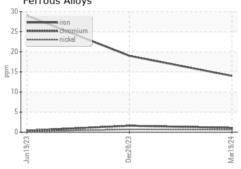


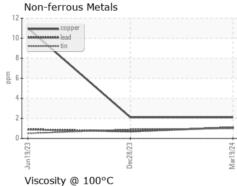
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
	DTIEO		Don't de a com		Internal	la la La ma O

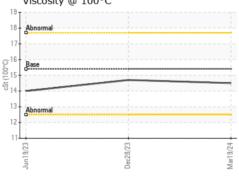
FLUID FROF	LHILS	memou	IIIIII/Dase	Current	HISTOLAL	HISTOLA
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	14.7	14.0

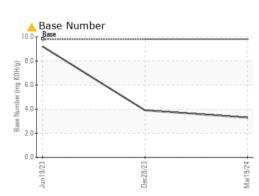
GRAPHS

Ferrous Alloys













Certificate L2367

Laboratory Sample No. Lab Number : 06126134

: GFL0106925

Unique Number : 10940285 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Mar 2024 **Tested**

: 22 Mar 2024 Diagnosed : 26 Mar 2024 - Don Baldridge

GFL Environmental - 856 - Houston South

8515 Highway 6 South Houston, TX US 77083

Contact: Apolinar Zacarias pzacariascano@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: