

OIL ANALYSIS REPORT

Sample Rating Trend

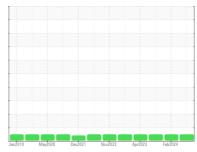




(KBR8501)
Machine Id
428044-402447

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

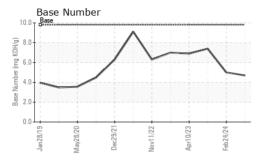
Fluid Condition

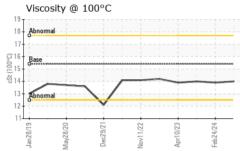
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Date Client Info 27 Feb 2024 24 Feb 2024 16 N Machine Age hrs Client Info 18315 18289 1760 Oil Age hrs Client Info 0 18289 1760 Oil Changed Client Info Changed Not Changd Not Changd Oil Changed Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 Fuel WC Method >3.0 <1.0 <1.0 < Water WC Method >0.2 NEG NEG NEG NEG Weare WC Method NEG	e Date			GFL0114418	GFL0114498	GFL0100485
Machine Age hrs Client Info 18315 18289 1766 Oil Age hrs Client Info 0 18289 1766 Oil Changed Not Changed 10<		0" . 1 .				GI 20100100
Oil Age hrs Client Info 0 18289 176 Oil Changed Client Info Changed Not Changd Not Changd		Client Info		27 Feb 2024	24 Feb 2024	16 Nov 2023
Oil Changed Sample Status Client Info Changed NORMAL Not Changd NoRMAL Not Call Old Call Old Call Old NoRMAL Not Changd NoRMAL Not Call Old Call Old Call Old Call Old Call Old Call Call Call Call Old Call Call Call Call Call Call Call Ca	i e Age hr	rs Client Info		18315	18289	17682
Sample Status	hr	rs Client Info		0	18289	17682
CONTAMINATION method limit/base current history1 Fuel WC Method >3.0 <1.0	anged	Client Info		Changed	Not Changd	Not Changd
Fuel WC Method >3.0 <1.0	e Status			NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG <t< td=""><td>OITAMINATIO</td><td>N method</td><td>limit/base</td><th>current</th><td>history1</td><td>history2</td></t<>	OITAMINATIO	N method	limit/base	current	history1	history2
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 Iron ppm ASTM D5185m >120 18 21 1 Chromium ppm ASTM D5185m >20 <1		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 Iron ppm ASTM D5185m >120 18 21 1 Chromium ppm ASTM D5185m >20 <1		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >120 18 21 1 Chromium ppm ASTM D5185m >20 <1 0 < Nickel ppm ASTM D5185m >5 <1 0 0 Titanium ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 6 7 3 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 3 3 2 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 <1 <1 <1 <td></td> <td>WC Method</td> <td></td> <th>NEG</th> <td>NEG</td> <td>NEG</td>		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 0 < Nickel ppm ASTM D5185m >5 <1	AR METALS	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >5 <1 0 0 Titanium ppm ASTM D5185m >2 <1	pr	pm ASTM D5185m	>120	18	21	10
Titanium ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 6 7 3 Lead ppm ASTM D5185m >40 <1	ium pr	pm ASTM D5185m	>20	<1	0	<1
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 6 7 3 Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 3 3 2 Tin ppm ASTM D5185m >15 <1 0 < Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 <1 <1 8 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 0 <1 <1 8 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 0 < Manganese ppm ASTM D5185m 0 <1 0 <	pr	pm ASTM D5185m	>5	<1	0	0
Aluminum ppm ASTM D5185m >20 6 7 3 Lead ppm ASTM D5185m >40 <1	m pr	pm ASTM D5185m	>2	<1	0	0
Lead ppm ASTM D5185m >40 <1	pr	pm ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 3 2 Tin ppm ASTM D5185m >15 <1	um pr	pm ASTM D5185m	>20	6	7	3
Tin ppm ASTM D5185m >15 <1 0 < Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 0 <1 <1 8 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 59 65 6 Manganese ppm ASTM D5185m 0 <1 0 <	pr	pm ASTM D5185m	>40	<1	0	0
Tin ppm ASTM D5185m >15 <1 0 < Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 0 <1 <1 8 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 59 65 6 Manganese ppm ASTM D5185m 0 <1 0 <			>330	3	3	2
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 0 <1			>15	<1		<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 0 <1				0	0	0
Boron ppm ASTM D5185m 0 <1 <1 8 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 60 59 65 6 Manganese ppm ASTM D5185m 0 <1 0 <				0		0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 59 65 6 Manganese ppm ASTM D5185m 0 <1	ITIVES	method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 59 65 6 Manganese ppm ASTM D5185m 0 <1 0 <	bk	pm ASTM D5185m	0	<1	<1	8
Manganese ppm ASTM D5185m 0 <1 0 <	pr	pm ASTM D5185m	0	0	0	0
	lenum pr	pm ASTM D5185m	60	59	65	68
Magnesium ppm ASTM D5185m 1010 919 1102 1	nese pr	pm ASTM D5185m	0	<1	0	<1
			1010	919	1102	1096
Calcium ppm ASTM D5185m 1070 1054 1254 1			1070	1054	1254	1226
Phosphorus ppm ASTM D5185m 1150 892 1121 1	norus pr	pm ASTM D5185m	1150	892	1121	1090
			1270	1194	1494	1393
			2060	2345	2923	3149
CONTAMINANTS method limit/base current history1	TAMINANTS	method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m >25 7 15 6	pr	pm ASTM D5185m	>25	7	15	6
				7		5
Potassium ppm ASTM D5185m >20 5 3 2	ium pr	pm ASTM D5185m	>20	5	3	2
INFRA-RED method limit/base current history1	RA-RED	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.7	0.6	0.4
Nitration Abs/cm *ASTM D7624 >20 10.6 10.1 8	n Ab	bs/cm *ASTM D7624	>20	10.6	10.1	8.4
	n Ab	os/.1mm *ASTM D7415	>30	22.5	22.2	19.8
Sulfation Abs/.1mm *ASTM D7415 >30 22.5 22.2 1		TION	limit/baca	current	history1	history2
	D DEGRADA	HON method	IIIIIIIIIIIII	Current	riistory i	1113101 y 2
FLUID DEGRADATION method limit/base current history1					•	15.8



OIL ANALYSIS REPORT

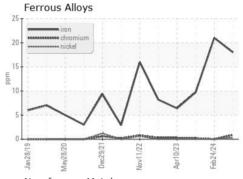


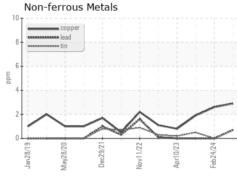


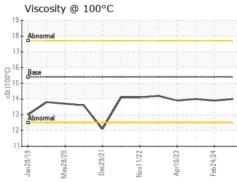
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

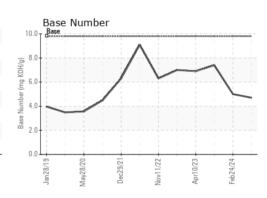
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.9	14.0

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number : 06113377

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0114418

Tested Unique Number: 10916874 Diagnosed

Received : 08 Mar 2024 : 11 Mar 2024 : 11 Mar 2024 - Wes Davis

GFL Environmental - 865 - East Mount Hauling

7213 East Mount Houston Road Houston, TX US 77050

Contact: TECHNICIAN ACCOUNT wcgfldemo@gmail.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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