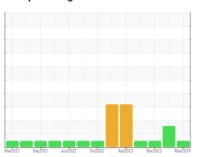


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **527029-734**

Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sampled oil)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

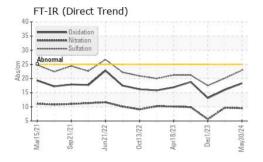
Fluid Condition

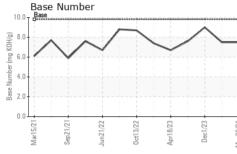
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

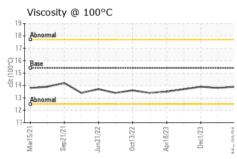
SAMPLE INFORMATION method limit/base current history1 history2	GAL)		Mar2021	Sep2021 Jun2022	Oct2022 Apr2023 Dec2023	May2024	
Sample Date Client Info 30 May 2024 17 Jan 2024 01 Dec 2023 Machine Age hrs Client Info 15117 14521 14252 Oil Age hrs Client Info 450 575 14116 Oil Changed Client Info Not Changd Changed Not Changd Sample Status Image: Client Info Not Changd Changed Not Changd CONTAMINATION method limit/bass current Interpretation 10 Fuel WC Method >0.2 NEG NEG NEG Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG WEAR METALS method limit/bass current history1 history2 Iron ppm ASTM D5185m >100 31 25 11 Chromium ppm ASTM D5185m >20 3 3 <1	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Oil Age hrs Client Info 450 575 14116 Oil Changed Sample Status Client Info Not Changed Act 1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <t< td=""><td>Sample Date</td><td></td><td>Client Info</td><td></td><th>30 May 2024</th><td>17 Jan 2024</td><td>01 Dec 2023</td></t<>	Sample Date		Client Info		30 May 2024	17 Jan 2024	01 Dec 2023
Oil Changed Sample Status Client Info Not Changd NORMAL Changed ABNORMAL Not Changed NORMAL Not Not Change NoEG Not Change NoEG Not Change NoEG Not Change					_		
NORMAL ABNORMAL NORMAL	•	nrs					
Fuel	-		Ollerit IIIIO				
Fuel	•	ION	method	limit/base			
Water Glycol WC Method Glycol >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/bass current history1 history2 Iron ppm ASTM D5185m >100 31 25 11 Chromium ppm ASTM D5185m >20 3 3 <1					<1.0	•	
WEAR METALS							
Iron							
Iron	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >4 0 0 <1 Titanium ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >40 10 3 3 Lead ppm ASTM D5185m >40 10 3 3 Copper ppm ASTM D5185m >330 2 3 1 Tin ppm ASTM D5185m >15 2 3 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1			ASTM D5185m		31		
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 2 3 3 Lead ppm ASTM D5185m >40 10 3 3 Copper ppm ASTM D5185m >30 2 3 1 Tin ppm ASTM D5185m >15 2 3 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 3 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 3	Chromium	ppm	ASTM D5185m	>20	3	3	<1
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >20 2 3 3 Lead ppm ASTM D5185m >40 10 3 3 Copper ppm ASTM D5185m >330 2 3 1 Tin ppm ASTM D5185m >15 2 3 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 2 3 Boron ppm ASTM D5185m 0 <1 2 3 Boron ppm ASTM D5185m 0 <1 2 3 Molybdenum ppm ASTM D5185m 0 <1 3 2	Nickel	ppm	ASTM D5185m	>4	0	0	<1
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Copper ppm ASTM D5185m >330 2 3 1 Tin ppm ASTM D5185m >15 2 3 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 6 9 Barium ppm ASTM D5185m 0 <1	Aluminum	ppm	ASTM D5185m	>20	2	3	3
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Calcium ppm ASTM D5185m 1070 1176 1046 1105 Phosphorus ppm ASTM D5185m 1150 1074 930 1117 Zinc ppm ASTM D5185m 1270 1282 1232 1350 Sulfur ppm ASTM D5185m 2060 3278 2818 3383 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 ≥9 22 Sodium ppm ASTM D5185m >20 0 0 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.7 0.7 0.2 Nitration Abs/.1mm *ASTM D7415 >30 22.9 20.1 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm	-						_
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Nitration Abs/cm *ASTM D7624 >20 9.5 9.7 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 20.1 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.3 16.0 13.1	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 9.5 9.7 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 22.9 20.1 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.3 16.0 13.1	Soot %	%	*ASTM D7844	>3	0.7	0.7	0.2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.3 16.0 13.1	Nitration	Abs/cm	*ASTM D7624	>20		9.7	5.6
Oxidation Abs/.1mm *ASTM D7414 >25 18.3 16.0 13.1	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.9	20.1	17.5
	FLUID DEGRAI	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.5 7.5 9.0	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	16.0	13.1
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.5	7.5	9.0



OIL ANALYSIS REPORT



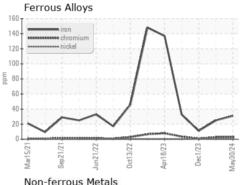


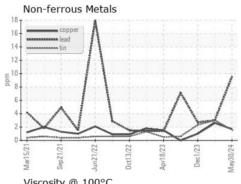


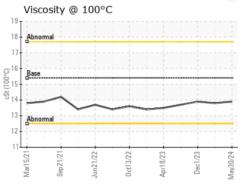
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

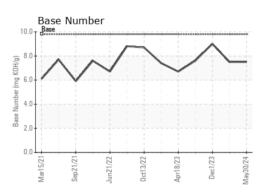
FLUID PROPE	RHES	method	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.8	13.9

GRAPHS













Certificate 12367

Laboratory

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Lab Number : 06198973

: GFL0120859

Unique Number : 11061096

Received : 04 Jun 2024 **Tested** Diagnosed

: 05 Jun 2024 : 06 Jun 2024 - Sean Felton

160 Hughes Dr Traverse City, MI US 49686

Contact: GARY BREWER

Test Package : FLEET 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)

Report Id: GFL622 [WUSCAR] 06198973 (Generated: 06/06/2024 09:42:14) Rev: 1

Submitted By: TECHNICIAN ACCOUNT

GFL Environmental - 622 - Traverse City Hauling

T:

F: