

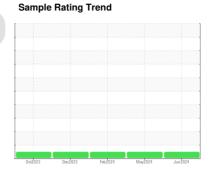
OIL ANALYSIS REPORT



Area (BD49685) 914020 Component

Diesel Engine

PETRO CANADA DURON SHP 15W40 (9 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

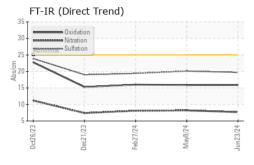
Fluid Condition

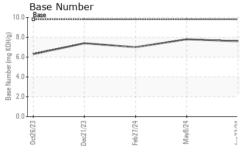
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

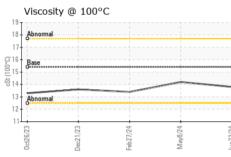
Sample Number Client Info GFL0124755 GFL0115007 GFL011 Sample Date Client Info 23 Jun 2024 08 May 2024 27 Feb Machine Age hrs Client Info 3424 2973 2326 Oil Age hrs Client Info 451 647 596 Oil Changed Client Info Changed Changed Changed Changed Changed Changed Changed NORMAL NOR	SAMPLE INFORM	/ATION	method	limit/base	current	history1	history2
Sample Date Citent Info 23 Jun 2024 27 Feb Machine Age hrs Citent Info 3424 2973 2326 Oil Age hrs Citent Info 451 647 647 647 647 Oil Changed Citent Info Changed Change							GFL0115053
Machine Age hrs Client Info 3424 2973 2326 Oil Age hrs Client Info 451 647 596 Oil Changed Client Info Changed Changed Changed Changed Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 his Fuel WC Method >0.2 NEG NEG NEG Wear WC Method >0.2 NEG NEG NEG Iron ppm ASTM D5185m >12.0 7 9 9 Chromium ppm ASTM D5185m >12.0 7 9 9 Chromium ppm ASTM D5185m >12.0 41 0 41 Nickel ppm ASTM D5185m >2.0 <1							27 Feb 2024
Oil Age hrs Client Info 451 647 596 Oil Changed Client Info Changed Changed<		hrs				,	
Contamped Sample Status							
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 hist hist history1 hist hist	•	0			-		Changed
Fuel			CHOIL HIIO			_	NORMAL
Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185m >120 7 9 9 9 Chromium ppm ASTM D5185m >20 <1		ON	method	limit/base	current	history1	history2
WEAR METALS	-uel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Vater		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol				NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >5 0 0 1 Titanium ppm ASTM D5185m >2 <1	WEAR METALS	S	method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >5 0 0 1 Titanium ppm ASTM D5185m >2 <1			ASTM D5185m	>120	7	9	9
Nickel	Chromium		ASTM D5185m	>20	<1		<1
Titanium							
Silver ppm ASTM D5185m >2 0 0 <1 Aluminum ppm ASTM D5185m >20 <1					-		
Aluminum ppm ASTM D5185m >20 <1 1 2 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 1 2 2 Tin ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185m 0 2 2 2 2 Boron ppm ASTM D5185m 0 0 0 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185m 0 2 2 2 2 2 Barium ppm ASTM D5185m 0 <td></td> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td>							
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Calcium ppm ASTM D5185m 1070 1188 1009 983 Phosphorus ppm ASTM D5185m 1150 1126 1034 1086 Zinc ppm ASTM D5185m 1270 1395 1229 1289 Sulfur ppm ASTM D5185m 2060 3885 3073 3010 CONTAMINANTS method limit/base current history1 hist Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D5185m >20 0 0 0 INFRA-RED method limit/base current history1 hist Soot % "ASTM D7844 >4 0.3 0.6 0.3 Nitration Abs/cm "ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm "ASTM D7415 >30 19.	•						
Phosphorus ppm ASTM D5185m 1150 1126 1034 1086 Zinc ppm ASTM D5185m 1270 1395 1229 1289 Sulfur ppm ASTM D5185m 2060 3885 3073 3010 CONTAMINANTS method limit/base current history1 hist Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D5185m >20 0 0 0 INFRA-RED method limit/base current history1 hist Soot % "ASTM D7844 >4 0.3 0.6 0.3 Nitration Abs/cm "ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm "ASTM D7415 >30 19.7 20.1 19.4							
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Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D5185m >20 0 0 0 INFRA-RED method limit/base current history1 hist Soot % % *ASTM D7844 >4 0.3 0.6 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 20.1 19.4 FLUID DEGRADATION method limit/base current history1 hist	CONTAMINAN	TS	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 2 4 2 Potassium ppm ASTM D5185m >20 0 0 0 INFRA-RED method limit/base current history1 hist Soot % % *ASTM D7844 >4 0.3 0.6 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 20.1 19.4 FLUID DEGRADATION method limit/base current history1 hist			ASTM D5185m	>25	3	3	3
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Nitration Abs/cm *ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 20.1 19.4 FLUID DEGRADATION method limit/base current history1 history1 history1 history1	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 7.7 8.2 8.1 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 20.1 19.4 FLUID DEGRADATION method limit/base current history1 history1 history1 history1	Soot %	%	*ASTM D7844	>4	0.3	0.6	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 19.7 20.1 19.4 FLUID DEGRADATION method limit/base current history1 hist							
·							
Oxidation Abs/.1mm *ASTM D7414 >25 15.9 15.9 16.0	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
		Abs/.1mm	*ASTM D7414	>25	15.9	15.9	16.0
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.6 7.8 7.0		. 1997 1 1 1 1 1 1 1		. ==			



OIL ANALYSIS REPORT



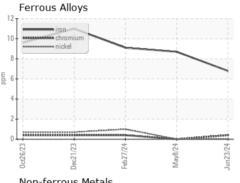


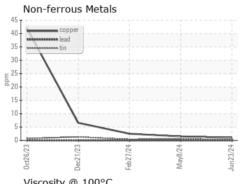


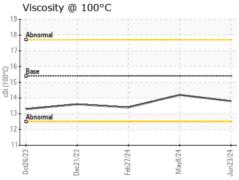
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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

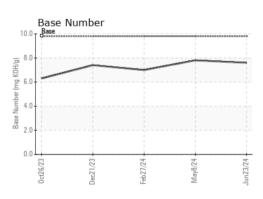
FLUID PROPI	ERHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.2	13.4

GRAPHS













Certificate 12367

Laboratory Sample No. Unique Number : 11102557 Test Package : FLEET

: GFL0124755 Lab Number : 06224360

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 01 Jul 2024 **Tested** : 02 Jul 2024

Diagnosed : 02 Jul 2024 - Jonathan Hester

GFL Environmental - 405 - Arbor Hills

7811 Chubb Rd NORTHVILLE, MI US 48168

Contact: Anthony Hopkins ahopkins@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)

T:

F: