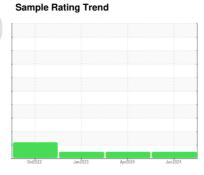


OIL ANALYSIS REPORT

MONTGOMERY KENWORTH 123060

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- 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

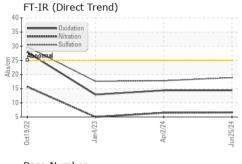
Fluid Condition

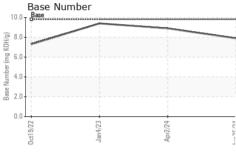
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

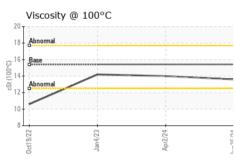
Sample Number Client Info CFL0127237 CFL0083547 CFL0070111 Cample Date Client Info CFL0127237 CFL0083547 CFL0070111 CFL0127237 CFL0083547 CFL0083547 CFL0083547 CFL0083547 CFL0083547 CFL0083547 CFL0083547 CFL0083547 CFL0127237 CFL0083547 CFL0083547 CFL0127237 CFL0083547 CFL0127237 CFL0083547 CFL0127237 CFL0127237	SAMPLE INFORM	ATI <u>ON</u>	method	limit/base	current	history1	history2
Sample Date					GFL0127237	GFL0083547	
Machine Age hrs Client Info 19407 19382 19336 Oil Age hrs Client Info 71 0 19336 Oil Changed Client Info N/A NOT Changed Changed Changed Sample Status NoRMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0			Client Info		25 Jun 2024	02 Apr 2024	04 Jan 2023
Oil Age hrs Client Info 71 0 19336 Oil Changed Sample Status Client Info N/A Not Changed Changed Sample Status Client Info N/A Not Changed Changed CONTAMINATION method Imilibase current history1 history2 Fuel WC Method >5 <1.0 <1.0 0.3 Water WC Method >5 <1.0 <1.0 0.3 WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >100 6 42 12 Chromium ppm ASTM D5185m >20 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1		hrs					
Oil Changed Sample Status Client Info N/A Not Changed NORMAL Changed NORMAL		hrs	Client Info		71	0	19336
CONTAMINATION	-					Not Changd	
Fuel	-				NORMAL	Ü	Ü
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 6 42 12 Chromium ppm ASTM D5185m >20 <1	CONTAMINATIO	NC	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	0.3
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >4 0 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	6	42	12
Silver	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>4	0	0	<1
Aluminum	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead	Silver	ppm	ASTM D5185m	>3	<1	0	0
Copper ppm ASTM D5185m >330 <1 3 <1 Tin ppm ASTM D5185m >15 0 0 0 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>20	2	8	2
Tin	Lead	ppm	ASTM D5185m	>40	<1	0	0
Vanadium ppm ASTM D5185m <1 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 5 46 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 954 949 814 Calcium ppm ASTM D5185m 1070 1057 1069 1194 Phosphorus ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current	Copper	ppm	ASTM D5185m	>330	<1	3	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	0	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 57 61 68 Manganese ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 57 61 68 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 954 949 814 Calcium ppm ASTM D5185m 1070 1057 1069 1194 Phosphorus ppm ASTM D5185m 1150 1010 1050 908 Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m >20 2 1 <1 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3	Boron	ppm	ASTM D5185m	0	<1	5	46
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 954 949 814 Calcium ppm ASTM D5185m 1070 1057 1069 1194 Phosphorus ppm ASTM D5185m 1150 1010 1050 908 Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m >20 2 1 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 954 949 814 Calcium ppm ASTM D5185m 1070 1057 1069 1194 Phosphorus ppm ASTM D5185m 1150 1010 1050 908 Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m 3 1 <1 Potassium ppm ASTM D5185m >20 2 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844 >3 0.2 0.3 0.1 Nitration Abs/cm *ASTM D7415 >30 18.9 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>60</td> <th>57</th> <td>61</td> <td>68</td>	Molybdenum	ppm	ASTM D5185m	60	57	61	68
Calcium ppm ASTM D5185m 1070 1057 1069 1194 Phosphorus ppm ASTM D5185m 1150 1010 1050 908 Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m >20 2 1 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 1150 1010 1050 908 Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m >20 2 1 <1	Magnesium	ppm	ASTM D5185m	1010	954	949	814
Zinc ppm ASTM D5185m 1270 1297 1270 1103 Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m 3 1 <1	Calcium	ppm	ASTM D5185m	1070	1057	1069	1194
Sulfur ppm ASTM D5185m 2060 3403 3743 3206 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m 3 1 <1	Phosphorus	ppm	ASTM D5185m	1150	1010	1050	908
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m 3 1 <1	Zinc	ppm	ASTM D5185m	1270	1297	1270	1103
Silicon ppm ASTM D5185m >25 4 5 6 Sodium ppm ASTM D5185m 3 1 <1 Potassium ppm ASTM D5185m >20 2 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.6 6.5 5 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	Sulfur	ppm	ASTM D5185m	2060	3403	3743	3206
Sodium ppm ASTM D5185m 3 1 <1 Potassium ppm ASTM D5185m >20 2 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.6 6.5 5 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.6 6.5 5 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	Silicon	ppm		>25	4	5	
INFRA-RED	Sodium	ppm	ASTM D5185m		3	1	<1
Soot % % *ASTM D7844 >3 0.2 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.6 6.5 5 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	Potassium	ppm	ASTM D5185m	>20	2	1	<1
Nitration Abs/cm *ASTM D7624 >20 6.6 6.5 5 Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 18.9 17.8 17.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	Soot %	%	*ASTM D7844	>3	0.2	0.3	0.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm 'ASTM D7414 >25 14.4 14.4 12.9	Nitration	Abs/cm	*ASTM D7624	>20	6.6	6.5	5
Oxidation Abs/.1mm *ASTM D7414 >25 14.4 14.4 12.9	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	17.8	17.6
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.9 8.9 9.4	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	14.4	12.9
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.9	8.9	9.4



OIL ANALYSIS REPORT



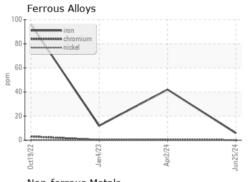


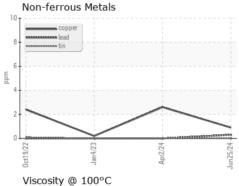


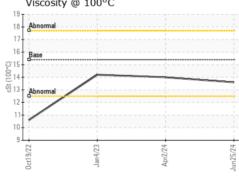
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

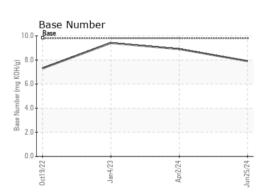
FLUID PROP	ERHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	14.0	14.2

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0127237 Lab Number : 06223327 Unique Number : 11101524 Test Package : FLEET

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

: 28 Jun 2024 **Tested** : 01 Jul 2024 Diagnosed : 01 Jul 2024 - Wes Davis

1121 Wilbanks St Montgomery, AL US 36108

Contact: LISA REEVES

GFL Environmental - 955 - Montgomery

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: GFL955 [WUSCAR] 06223327 (Generated: 07/01/2024 08:51:43) Rev: 1

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