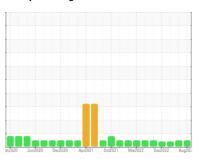


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



12072 autocar ACX64

Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (28 QTS)

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.

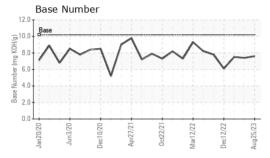
Fluid Condition

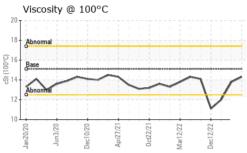
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method Imit/base current history1 history2	(28 QTS)						
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 9307 8597 1031 Oil Age hrs Client Info 710 862 396 Oil Changed Client Info Changed Changed Not Changd Sample Status NORMAL NORMAL ATTENTION WEAR METALS method limit/base current history1 Iron ppm ASTM D5185m >50 16 16 14 Chromium ppm ASTM D5185m >4 1 1 <1 Nickel ppm ASTM D5185m >2 0 <1 <1 0 Silver ppm ASTM D5185m >3 0 <1 0 <1 0 Aluminum ppm ASTM D5185m >30 0 1 <1 <1 Lead ppm ASTM D5185m >30 0 1 <1 <1 Copper ppm ASTM D5185m >4 0 <1	Sample Number		Client Info		GFL0089357	GFL0056756	GFL0056589
Oil Age hrs Client Info 710 862 396 Oil Changed Client Info Changed Changed Not Changed Sample Status method Imit base current history1 history2 Iron ppm ASTM D5185m >50 16 16 14 Chromium ppm ASTM D5185m >4 1 1 <1	Sample Date		Client Info		25 Aug 2023	24 May 2023	03 Mar 2023
Oil Changed Sample Status Client Info Changed NORMAL Changed NORMAL NORMAL NORMAL ATTENTION WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 16 16 14 Chromium ppm ASTM D5185m >4 1 1 <1 Nickel ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >3 0 <1 0 Aluminum ppm ASTM D5185m >9 2 4 3 Lead ppm ASTM D5185m >9 2 4 3 Copper ppm ASTM D5185m >3 0 <1 <1 Vanadium ppm ASTM D5185m >4 0 <1 <1 Caddmium ppm ASTM D5185m 5	Machine Age	hrs	Client Info		9307	8597	1031
Sample Status method limit/base current history1 history2 Iron ppm ASTM D5185m >50 16 16 14 Chromium ppm ASTM D5185m >4 1 1 <1	Oil Age	hrs	Client Info		710	862	396
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 16 16 14 Chromium ppm ASTM D5185m >4 1 1 <1 Nickel ppm ASTM D5185m >2 0 <1 <1 Titanium ppm ASTM D5185m >3 0 <1 0 Aluminum ppm ASTM D5185m >3 0 <1 <1 Lead ppm ASTM D5185m >9 2 4 3 Lead ppm ASTM D5185m >9 2 4 3 Lead ppm ASTM D5185m >9 2 4 3 Copper ppm ASTM D5185m >4 0 <1 <1 Capper ppm ASTM D5185m 0 <1 <1 <1 Capper ppm ASTM D5185m 50 9 4 10	Oil Changed		Client Info		Changed	Changed	Not Changd
Iron	Sample Status				NORMAL	NORMAL	ATTENTION
Chromium ppm ASTM D5185m >4 1 1 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >2 0 <1	Iron	ppm	ASTM D5185m	>50	16	16	14
Titanium ppm ASTM D5185m 0 <1	Chromium	ppm	ASTM D5185m	>4	1	1	<1
Silver ppm ASTM D5185m >3 0 <1	Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	Titanium	ppm	ASTM D5185m		0	<1	0
Lead	Silver	ppm	ASTM D5185m	>3		<1	
Copper ppm ASTM D5185m >35 1 5 2 Tin ppm ASTM D5185m >4 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 9 4 10 Barium ppm ASTM D5185m 50 9 4 10 Barium ppm ASTM D5185m 50 65 58 52 Manganese ppm ASTM D5185m 50 65 58 52 Magnesium ppm ASTM D5185m 560 947 924 758 Calcium ppm ASTM D5185m 780 1078 962 859 Zinc ppm ASTM D5185m 70 1319 1177 1032 <th>Aluminum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>9</th> <th>2</th> <th>4</th> <th>3</th>	Aluminum	ppm	ASTM D5185m	>9	2	4	3
Tin ppm ASTM D5185m >4 0 <1	Lead	ppm	ASTM D5185m	>30	0	1	
Vanadium ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>35	1	5	2
Cadmium ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>4	0	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	<1
Boron	Cadmium	ppm	ASTM D5185m		0	<1	0
Barium ppm ASTM D5185m 5 0 0 2 Molybdenum ppm ASTM D5185m 50 65 58 52 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 947 924 758 Calcium ppm ASTM D5185m 1510 1311 1070 986 Phosphorus ppm ASTM D5185m 780 1078 962 859 Zinc ppm ASTM D5185m 870 1319 1177 1032 Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m 20	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 65 58 52 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	50	9	4	10
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	5	0	0	2
Magnesium ppm ASTM D5185m 560 947 924 758 Calcium ppm ASTM D5185m 1510 1311 1070 986 Phosphorus ppm ASTM D5185m 780 1078 962 859 Zinc ppm ASTM D5185m 870 1319 1177 1032 Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7415 >30<	Molybdenum	ppm	ASTM D5185m	50	65	58	52
Calcium ppm ASTM D5185m 1510 1311 1070 986 Phosphorus ppm ASTM D5185m 780 1078 962 859 Zinc ppm ASTM D5185m 870 1319 1177 1032 Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m >20 0 2 5 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/:nm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION *ASTM D7414	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 780 1078 962 859 Zinc ppm ASTM D5185m 870 1319 1177 1032 Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current <th>Magnesium</th> <th>ppm</th> <th>ASTM D5185m</th> <th>560</th> <th>947</th> <th>924</th> <th>758</th>	Magnesium	ppm	ASTM D5185m	560	947	924	758
Zinc ppm ASTM D5185m 870 1319 1177 1032 Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/:nm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/:nm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/:1mm *ASTM D7414 >25	Calcium	ppm	ASTM D5185m	1510	1311	1070	986
Sulfur ppm ASTM D5185m 2040 3616 2996 2463 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Phosphorus	ppm	ASTM D5185m	780	1078	962	859
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0		ppm	ASTM D5185m	870	1319	1177	1032
Silicon ppm ASTM D5185m >+100 8 5 4 Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Sulfur	ppm	ASTM D5185m	2040	3616	2996	2463
Sodium ppm ASTM D5185m 7 9 12 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Silicon	ppm	ASTM D5185m	>+100	8	5	4
INFRA-RED	Sodium	ppm	ASTM D5185m		7	9	12
Soot % % *ASTM D7844 0.5 0.5 0.3 Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Potassium	ppm	ASTM D5185m	>20	0	2	5
Nitration Abs/cm *ASTM D7624 >20 9.3 9.3 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.2 21.0 20.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Soot %	%	*ASTM D7844		0.5	0.5	0.3
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm Abs/.	Nitration	Abs/cm	*ASTM D7624	>20	9.3	9.3	9.5
Oxidation Abs/.1mm *ASTM D7414 >25 16.9 18.6 20.0	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	21.0	20.6
	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.2 7.6 7.4 7.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	18.6	20.0
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	7.6	7.4	7.5



OIL ANALYSIS REPORT



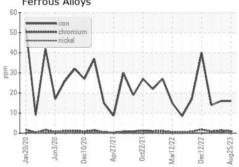


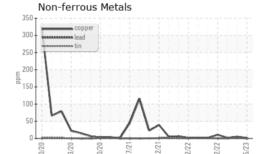
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

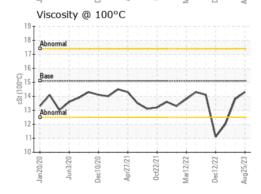
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	13.8	▲ 12.0	

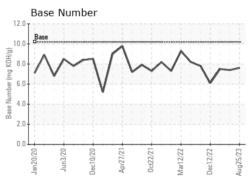
GRAPHS

Ferrous Alloys













Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** Test Package : FLEET

: GFL0089357 : 05935990

: 10621261

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 Aug 2023 Diagnosed : 29 Aug 2023

Diagnostician : Don Baldridge

3741 Conquest Drive Garner, NC US 27529 Contact: Craig Johnson

GFL Environmental - 001 - Raleigh(CNG)

craig.johnson@gflenv.com T: (919)662-7100

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)

F: (919)662-7130