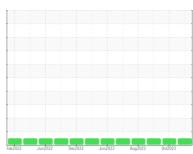


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



731117 Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 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

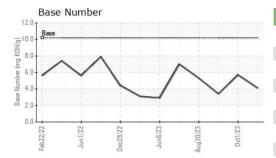
Fluid Condition

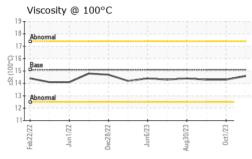
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2	Sample Number Client Info GFL0095180 Sample Date Client Info 07 Nov 2023 Machine Age hrs Client Info 5494 Oil Age hrs Client Info 0 Oil Changed Client Info Not Changd Sample Status NORMAL WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >3 0 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m	Oct2023	
Sample Date	Sample Date Client Info 07 Nov 2023 Machine Age hrs Client Info 5494 Oil Age hrs Client Info 0 Oil Changed Client Info Not Changd Sample Status NORMAL WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >3 0 Copper ppm ASTM D5185m >3 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 15 Barium ppm A	history1	history2
Machine Age Oil Age hrs Instruction Client Info Oil Changed 5494 Oil Changed 5289 Oil Oil Changed 5257 Oil Changed 5257 Oil Changed 5257 Oil Changed 5257 Oil Changed Not Changd NORMAL No Changd NoRMAL No Changd NoRMAL No Changd NoRMAL No Changd NoRMAL No Changd NoRMAL	Machine Age hrs Client Info 5494 Oil Age hrs Client Info 0 Oil Changed Client Info Not Changd Sample Status NORMAL NORMAL WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Aluminum ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >3 0 Copper ppm ASTM D5185m >3 0 Tin ppm ASTM D5185m >0 15	GFL0090712	GFL0090724
Oil Age hrs Client Info Not Changd	Oil Age hrs Client Info Not Changd Sample Status NORMAL WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 <td< th=""><th>01 Oct 2023</th><th>26 Sep 2023</th></td<>	01 Oct 2023	26 Sep 2023
Oil Changed Client Info Not Changd NOT Changd NORMAL	Oil Changed Sample Status Client Info Not Changd NORMAL WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m >0 0 Cadmium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 15 Barium ppm ASTM	5289	5257
NORMAL NORMAL NORMAL	NORMAL WEAR METALS	0	0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 12 13 17 Chromium ppm ASTM D5185m >4 1 <1 1 Nickel ppm ASTM D5185m >2 <1 0 <1 Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 2 8 <1 Lead ppm ASTM D5185m >30 6 <1 7 Copper ppm ASTM D5185m >35 2 2 2 2 Tin ppm ASTM D5185m >35 2 2 2 2 Vanadium ppm ASTM D5185m 0 <1 0 0 Cadmium ppm ASTM D5185m 50 <td< th=""><th>WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Manganese ppm <</th><th>Not Changd</th><th>Not Changd</th></td<>	WEAR METALS method limit/base current Iron ppm ASTM D5185m >50 12 Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Manganese ppm <	Not Changd	Not Changd
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Chromium ppm ASTM D5185m >4 1 <1	Chromium ppm ASTM D5185m >4 1 Nickel ppm ASTM D5185m >2 <1 Titanium ppm ASTM D5185m >2 <1 Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 560 608 Calcium ppm	history1	history2
Nickel	Nickel ppm ASTM D5185m >2 <1	13	17
Titanium	Titanium ppm ASTM D5185m O Silver ppm ASTM D5185m >3 O Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 50 608 Calcium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m<	<1	1
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 2 8 <1	Silver ppm ASTM D5185m >3 0 Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Malganese ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 2040 2528 CONTAMINANTS met	0	<1
Aluminum	Aluminum ppm ASTM D5185m >9 2 Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 50 57 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 2040 2528 CONTAMINANTS	0	<1
Lead ppm ASTM D5185m >30 6 <1	Lead ppm ASTM D5185m >30 6 Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m 0 1 Vanadium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Malganese ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm	0	0
Copper ppm ASTM D5185m >35 2 2 2 2 Tin ppm ASTM D5185m >4 1 <1 1 Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 15 15 8 Barium ppm ASTM D5185m 5 0 0 0 0 Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 560 608 549 626 Calcium ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m >+100 4 16<	Copper ppm ASTM D5185m >35 2 Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m 0 0 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 50 57 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon p	8	<1
Tin ppm ASTM D5185m >4 1 <1	Tin ppm ASTM D5185m >4 1 Vanadium ppm ASTM D5185m O Cadmium ppm ASTM D5185m O ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 50 57 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 50 57 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 70 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5	<1	7
Vanadium ppm ASTM D5185m 0 <1	Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 270 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m >20 2 INFRA-RED method limit/	2	2
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 15 15 8 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 608 549 626 Calcium ppm ASTM D5185m 1510 1654 1433 1792 Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current	Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m 20 2 INFRA-RED method	<1	1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 15 15 8 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 608 549 626 Calcium ppm ASTM D5185m 1510 1654 1433 1792 Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m	ADDITIVES method limit/base current Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 70 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm	<1	0
Boron ppm ASTM D5185m 50 15 15 8 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 0 <1	Boron ppm ASTM D5185m 50 15 Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation	0	0
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 608 549 626 Calcium ppm ASTM D5185m 1510 1654 1433 1792 Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base <th>Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs</th> <th>history1</th> <th>history2</th>	Barium ppm ASTM D5185m 5 0 Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs	history1	history2
Molybdenum ppm ASTM D5185m 50 57 47 58 Manganese ppm ASTM D5185m 0 <1	Molybdenum ppm ASTM D5185m 50 57 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7844 0 Nitration Abs/cm *ASTM D7844 >20 111.7 Sulfation Abs/cm	15	8
Manganese ppm ASTM D5185m 0 <1	Manganese ppm ASTM D5185m 0 <1	0	0
Magnesium ppm ASTM D5185m 560 608 549 626 Calcium ppm ASTM D5185m 1510 1654 1433 1792 Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 <th>Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current</th> <th>47</th> <th>58</th>	Magnesium ppm ASTM D5185m 560 608 Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	47	58
Calcium ppm ASTM D5185m 1510 1654 1433 1792 Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Calcium ppm ASTM D5185m 1510 1654 Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	<1	<1
Phosphorus ppm ASTM D5185m 780 804 659 767 Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Phosphorus ppm ASTM D5185m 780 804 Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	549	626
Zinc ppm ASTM D5185m 870 1074 863 1090 Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Zinc ppm ASTM D5185m 870 1074 Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	1433	1792
Sulfur ppm ASTM D5185m 2040 2528 2199 2600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Sulfur ppm ASTM D5185m 2040 2528 CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	659	767
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	CONTAMINANTS method limit/base current Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	863	1090
Silicon ppm ASTM D5185m >+100 4 16 5 Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Silicon ppm ASTM D5185m >+100 4 Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	2199	2600
Sodium ppm ASTM D5185m 7 2 8 Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Sodium ppm ASTM D5185m 7 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	history1	history2
Potassium ppm ASTM D5185m >20 2 25 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	16	5
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	INFRA-RED method limit/base current Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	2	8
Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Soot % % *ASTM D7844 0 Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	25	1
Nitration Abs/cm *ASTM D7624 >20 11.7 9.4 11.7	Nitration Abs/cm *ASTM D7624 >20 11.7 Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	history1	history2
	Sulfation Abs/.1mm *ASTM D7415 >30 24.4 FLUID DEGRADATION method limit/base current	0	0
Sulfation	FLUID DEGRADATION method limit/base current	9.4	11.7
Sunation AUS. IIIIII AOTIVI D/110 > 50 24.4 20.2 24.0		20.2	24.6
FLUID DEGRADATION method limit/base current history1 history2	Oxidation	history1	history2
Oxidation Abs/.1mm *ASTM D7414 >25 20.2 17.7 20.8		17.7	20.8
Rasa Number (RN) mg KOU/g ASTM D2006 10.2 4.4 5.7 2.4	Base Number (BN) mg KOH/g ASTM D2896 10.2 4.1	5.7	3.4



OIL ANALYSIS REPORT

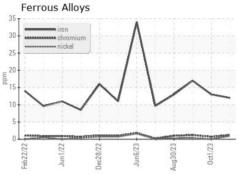


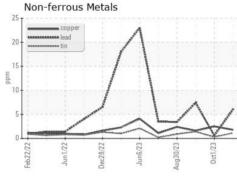


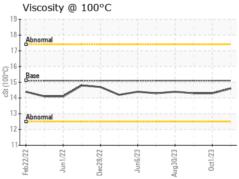
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

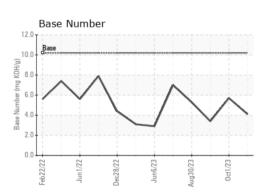
FLUID PROPE	RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.6	14.3	14.3

GRAPHS













Certificate L2367

Laboratory

Sample No. Lab Number **Unique Number**

: GFL0095180 : 06004834 : 10738596 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 10 Nov 2023 Diagnosed : 14 Nov 2023

Diagnostician : Sean Felton

GFL Environmental - 836 - Kansas City Hauling

7801 East Truman Road Kansas City, MO US 64126

Contact: Robert Hart rhart@gflenv.com T: (580)461-1509

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)