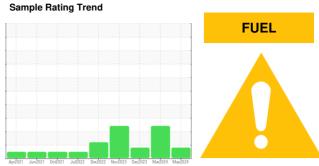


OIL ANALYSIS REPORT





DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil.

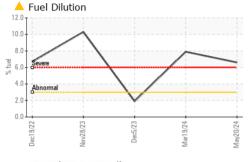
Fluid Condition

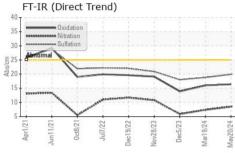
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

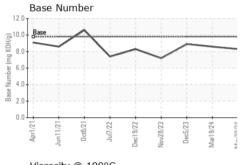
SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info GFL0123370 GFL0108878 GFL0101461 Sample Date Client Info 20 May 2024 19 Mar 2024 05 Dec 2023 Machine Age hrs Client Info 21073 21073 21073 Oil Changed Client Info Changed Not Changed NA ABNORMAL SEVERE MARGINAL CONTAMINATION method Imilitabse current history1 history2 Water WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 9 14 6 Chromium ppm ASTM D5185m >20 1 0 <1 Nicorea NEG	N SHP 15W40 (
Sample Date Client Info 20 May 2024 19 Mar 2024 05 Dec 2023 Machine Age hrs Client Info 22113 21838 21130 Oil Age hrs Client Info 21073 21073 21073 21073 Oil Changed Client Info Changed Not Changed N/A MARGINAL Sample Status WC Method Imitibase current history1 Marginal Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imitibase current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 <1	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 22113 21838 21130 Oil Age hrs Client Info 21073 21073 21073 Oil Changed Client Info Changed Not Changd NAC Mandod Sample Status WC Method Imitibase current history1 MARGINAL CONTAMINATION method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 9 14 6 Chromium ppm ASTM D5185m >20 1 0 <1	Sample Number		Client Info		GFL0122370	GFL0108878	GFL0101461
Oil Age hrs Client Info 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21073 21072 220 22 4 4 4 4 4 4 4 4 4 4 6 4 6 7 4 6 6 7 4 6 6 7 4 6 6 7 4 6 7 4 6 7 7 1 6 7 1 6 6 7 1 6 7 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 <td>Sample Date</td> <td></td> <td>Client Info</td> <td></td> <th>20 May 2024</th> <td>19 Mar 2024</td> <td>05 Dec 2023</td>	Sample Date		Client Info		20 May 2024	19 Mar 2024	05 Dec 2023
Coli	Machine Age	hrs	Client Info		22113	21838	21130
ABNORMAL SEVERE MARGINAL	Oil Age	hrs	Client Info		21073	21073	21073
CONTAMINATION method limit/base current history1 history2 Water WC Method NEG NEG NEG NEG Glycol WC Method Image: NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 9 14 6 Chromium ppm ASTM D5185m >20 1 0 <1	Oil Changed		Client Info		Changed	Not Changd	N/A
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 9 14 6 Chromium ppm ASTM D5185m >20 1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >20 3 <1 0 0 Silver ppm ASTM D5185m >40 <1 0 0 <1 Copper ppm ASTM D5185m >330 1 0 <1 0 Calcadium ppm ASTM D5185m <1	Sample Status				ABNORMAL	SEVERE	MARGINAL
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 9 14 6 Chromium ppm ASTM D5185m >20 1 0 -1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Aluminum ppm ASTM D5185m >2 <1 0 0 Lead ppm ASTM D5185m >20 3 <1 4 Lead ppm ASTM D5185m >20 1 0 0 Capper ppm ASTM D5185m >15 1 0 0 0 Vanadium ppm ASTM D5185m <1 0 0 0 <t< th=""><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 1 0 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>90	9	14	6
Titanium	Chromium	ppm	ASTM D5185m	>20	1	0	<1
Silver	Nickel	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	Titanium	ppm	ASTM D5185m	>2	<1	0	0
Lead ppm ASTM D5185m >40 <1 0 0 Copper ppm ASTM D5185m >330 1 0 <1 Tin ppm ASTM D5185m >15 1 0 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 1 10 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 54 51 57 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113	Silver	ppm	ASTM D5185m	>2	<1	0	0
Copper ppm ASTM D5185m >330 1 0 <1 Tin ppm ASTM D5185m >15 1 0 0 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>20	3	<1	4
Tin	Lead	ppm	ASTM D5185m	>40	<1	0	0
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 1 10 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 225	Copper	ppm	ASTM D5185m	>330	1	0	<1
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 1 10 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 54 51 57 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	1	0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 54 51 57 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 54 51 57 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 INFRA-RED method							
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>0</th> <td>1</td> <td>10</td>	Boron	ppm	ASTM D5185m	0	0	1	10
Magnesium ppm ASTM D5185m 1010 883 867 893 Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6<							
Calcium ppm ASTM D5185m 1070 1008 976 1113 Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Soliicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 INFRA-RED method limit/base	Barium	ppm	ASTM D5185m	0	0	0	0
Phosphorus ppm ASTM D5185m 1150 1042 972 980 Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 Fuel % ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 6.6 7.9 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 <td>Barium Molybdenum</td> <td>ppm ppm</td> <td>ASTM D5185m ASTM D5185m</td> <td>0 60</td> <th>0 54</th> <td>0 51</td> <td>0 57</td>	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 60	0 54	0 51	0 57
Zinc ppm ASTM D5185m 1270 1171 1163 1207 Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m 3 2 3 Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 6.6 ^7.9 ^1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base	Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 54 <1	0 51 0	0 57 <1
Sulfur ppm ASTM D5185m 2060 3496 3303 2952 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m 3 2 3 Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 ▲ 6.6 ▲ 7.9 ▲ 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25	Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 54 <1 883	0 51 0 867	0 57 <1 893
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m 3 2 3 Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 ▲ 6.6 ▲ 7.9 ▲ 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 54 <1 883 1008	0 51 0 867 976	0 57 <1 893 1113
Silicon ppm ASTM D5185m >25 5 2 4 Sodium ppm ASTM D5185m 3 2 3 Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 6.6 ▲ 7.9 ▲ 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 54 <1 883 1008 1042	0 51 0 867 976 972	0 57 <1 893 1113 980
Sodium ppm ASTM D5185m 3 2 3 Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 ▲ 6.6 ▲ 7.9 ▲ 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	0 54 <1 883 1008 1042 1171	0 51 0 867 976 972 1163	0 57 <1 893 1113 980 1207
Potassium ppm ASTM D5185m >20 2 0 9 Fuel % ASTM D3524 >3.0 ▲ 6.6 ▲ 7.9 ▲ 1.9 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303	0 57 <1 893 1113 980 1207 2952
Fuel	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303 history1	0 57 <1 893 1113 980 1207 2952 history2
INFRA-RED	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 54 <1 883 1008 1042 1171 3496 current	0 51 0 867 976 972 1163 3303 history1	0 57 <1 893 1113 980 1207 2952 history2
Soot % % *ASTM D7844 >6 0.6 0.4 0.2 Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 54 <1 883 1008 1042 1171 3496 current 5	0 51 0 867 976 972 1163 3303 history1 2	0 57 <1 893 1113 980 1207 2952 history2 4
Nitration Abs/cm *ASTM D7624 >20 8.5 7.4 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 54 <1 883 1008 1042 1171 3496 current 5 3	0 51 0 867 976 972 1163 3303 history1 2 2	0 57 <1 893 1113 980 1207 2952 history2 4 3
Sulfation Abs/.1mm *ASTM D7415 >30 19.9 18.8 18.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	0 54 <1 883 1008 1042 1171 3496 current 5 3 2 ▲ 6.6	0 51 0 867 976 972 1163 3303 history1 2 2 0	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303 history1 2 2 0 ▲ 7.9	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9 history2
Oxidation Abs/.1mm *ASTM D7414 >25 16.4 16.0 13.9	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303 history1 2 2 0 ▲ 7.9 history1 0.4	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9 history2 0.2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303 history1 2 2 0 ▲ 7.9 history1 0.4 7.4	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9 history2 0.2 5.9
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30	0 54 <1 883 1008 1042 1171 3496	0 51 0 867 976 972 1163 3303 history1 2 2 0 ▲ 7.9 history1 0.4 7.4 18.8	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9 history2 0.2 5.9 18.0
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method ASTM D5185m ASTM D7624 *ASTM D7624 *ASTM D7615 Method	0 60 0 1010 11070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >6 >20 >30 limit/base	0 54 <1 883 1008 1042 1171 3496 current 5 3 2 ▲ 6.6 current 0.6 8.5 19.9 current	0 51 0 867 976 972 1163 3303 history1 2 2 0 ▲ 7.9 history1 0.4 7.4 18.8 history1	0 57 <1 893 1113 980 1207 2952 history2 4 3 9 ▲ 1.9 history2 0.2 5.9 18.0 history2

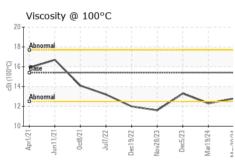


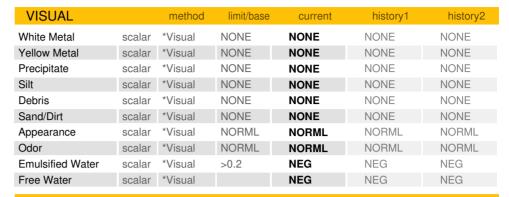
OIL ANALYSIS REPORT





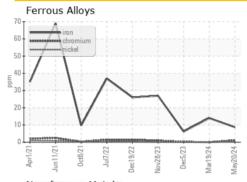


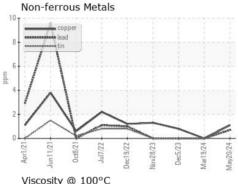


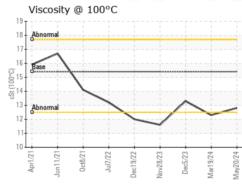


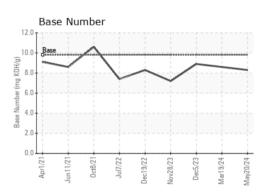
FLUID PROP	ERITES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	12.3	13.3

GRAPHS













Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0122370 Lab Number : 06187371 Unique Number : 11044123

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received **Tested**

: 22 May 2024 : 28 May 2024 Diagnosed

: 28 May 2024 - Jonathan Hester Test Package : FLEET (Additional Tests: PercentFuel)

Sterling Heights, MI US 48313 Contact: Frank Wolak fwolak@gflenv.com T: (586)825-9514

 st - 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)

GFL Environmental - 415 - Michigan East

6200 Elmridge