

# **OIL ANALYSIS REPORT**

(EMN615) 10621C

**Natural Gas Engine** 

**CHEVRON DELO 400 NG (8 GAL)** 

# Component

# DIAGNOSIS

Recommendation Resample at the next service interval to monitor.

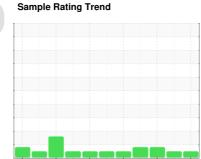
All component wear rates are normal.

### 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.

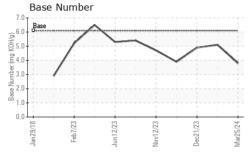


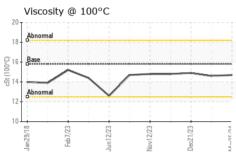


SAMPLE INFORMATION   method   limit/base   current   history1   history2			Jan2018	Feb2023 Jun2023	Nov2023 Dec2023	Mar2024	
Sample Date         Client Info         25 Mar 2024         06 Mar 2024         21 Dec 2023           Machine Age         hrs         Client Info         0         0         0         0           Oil Age         hrs         Client Info         0         0         0         0           Oil Changed         Client Info         Not Changd         Not Changd         N/A         NAMAL         ABNORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         4         5           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         4         5           Vickel         ppm         ASTM D5185m         >2         1         1         1         1         1         1         1         1 <th>SAMPLE INFOR</th> <th>MATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date         Client Info         25 Mar 2024         06 Mar 2024         21 Dec 2023           Machine Age         hrs         Client Info         0         0         0         0           Oil Age         hrs         Client Info         0         0         0         0           Oil Changed Sample Status         Client Info         Not Changd NORMAL         NoT Changd NORMAL         N/A           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ▲ 52           Chromium         ppm         ASTM D5185m         >4         <1         1         3           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Lead         ppm         ASTM D5185m         >30         2         <1	Sample Number		Client Info		GFL0111548	GFL0111544	GFL0083096
Oil Age         hrs         Client Info         Not Changd         Not Changd         N/A           Sample Status         Client Info         Not Changd         N/A         ABNORMAL         ABNORMAL         ABNORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ≥2           Chromium         ppm         ASTM D5185m         >50         23         23         ≥3         ≥2           Iron         ppm         ASTM D5185m         >50         23         23         ≥3         ≥2           Irotarium         ppm         ASTM D5185m         >2         1         <1         <1           Italianium         ppm         ASTM D5185m         >30         2         <1         3           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         <			Client Info		25 Mar 2024	06 Mar 2024	21 Dec 2023
Oil Changed Sample Status         Client Info         Not Changd NORMAL         Not Changd NORMAL         N/A ABNORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ▲ 52           Chromium         ppm         ASTM D5185m         >44         <1         1         3           Nickel         ppm         ASTM D5185m         >2         1         <1         <1         <1           Silver         ppm         ASTM D5185m         >2         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         <1         <1         <1         <1	Machine Age	hrs	Client Info		0	0	0
Sample Status         NORMAL         NORMAL         ABNORMAL           CONTAMINATION         method         limit/base         current         history1         nistory2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ▲ 52           Chromium         ppm         ASTM D5185m         >4         <1	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         52           Chromium         ppm         ASTM D5185m         >4         <1         1         3           Nickel         ppm         ASTM D5185m         >2         1         <1         <1           Nickel         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >9         3         4         5           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         ASTM D5185m         >35         1         1         1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0	Oil Changed		Client Info		Not Changd	Not Changd	N/A
Water         WC Method         >0.1         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ▲ 52           Chromium         ppm         ASTM D5185m         >2         1         1         3           Nickel         ppm         ASTM D5185m         >2         1         <1         <1           Titanium         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >30         2         <1         3           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0	Sample Status				NORMAL	NORMAL	ABNORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         23         23         ▲ 52           Chromium         ppm         ASTM D5185m         >4         <1         1         3           Nickel         ppm         ASTM D5185m         >2         1         <1         <1           Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >9         3         4         5           Lead         ppm         ASTM D5185m         >9         3         4         5           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         12         17         16	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >4         <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	23	23	<b>▲</b> 52
Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         >3         0         0         0           Aluminum         ppm         ASTM D5185m         >9         3         4         5           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         ASTM D5185m         >4         <1         <1         1           Tin         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         57         57         67           Bar	Chromium	ppm	ASTM D5185m	>4	<1	1	3
Silver	Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Aluminum         ppm         ASTM D5185m         >9         3         4         5           Lead         ppm         ASTM D5185m         >30         2         <1         3           Copper         ppm         ASTM D5185m         >35         1         1         1           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         history2           Boron         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0	Titanium	ppm	ASTM D5185m		0	0	0
Lead         ppm         ASTM D5185m         >30         2         <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper         ppm         ASTM D5185m         >35         1         1         1           Tin         ppm         ASTM D5185m         >4         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         57         57         67         67           Manganese         ppm         ASTM D5185m         518         586         665         665           Calcium         ppm         ASTM D5185m         1597         1520         1703         1703         1703         1703         1703         1704         1703         1704         1704         1704         1704         1704         1704         1704         1704         1704         1	Aluminum	ppm	ASTM D5185m	>9	3	4	5
Tin         ppm         ASTM D5185m         >4         <1	Lead	ppm	ASTM D5185m	>30	2	<1	3
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         12         17         16           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         57         57         67           Manganese         ppm         ASTM D5185m         51         0         <1	Copper	ppm	ASTM D5185m	>35	1	1	1
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         12         17         16           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         57         57         67           Manganese         ppm         ASTM D5185m         <1         0         <1           Magnesium         ppm         ASTM D5185m         618         586         665           Calcium         ppm         ASTM D5185m         1597         1520         1703           Phosphorus         ppm         ASTM D5185m         800         732         726         811           Zinc         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m	Tin	ppm	ASTM D5185m	>4	<1	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         57         57         67           Manganese         ppm         ASTM D5185m         <1         0         <1           Magnesium         ppm         ASTM D5185m         618         586         665           Calcium         ppm         ASTM D5185m         1597         1520         1703           Phosphorus         ppm         ASTM D5185m         800         732         726         811           Zinc         ppm         ASTM D5185m         880         994         965         1074           Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         >20         3         2           Potassium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         57         57         67           Manganese         ppm         ASTM D5185m         <1	ABBITTVEO					•	
Manganese         ppm         ASTM D5185m         <1		ppm			12		16
Magnesium         ppm         ASTM D5185m         618         586         665           Calcium         ppm         ASTM D5185m         1597         1520         1703           Phosphorus         ppm         ASTM D5185m         800         732         726         811           Zinc         ppm         ASTM D5185m         880         994         965         1074           Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         "ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         "ASTM D7415         >30         23.6         22.0         23.7	Boron		ASTM D5185m			17	
Calcium         ppm         ASTM D5185m         1597         1520         1703           Phosphorus         ppm         ASTM D5185m         800         732         726         811           Zinc         ppm         ASTM D5185m         880         994         965         1074           Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         >20         3         20         3           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0         0           Nitration         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1 <th>Boron Barium</th> <th>ppm</th> <th>ASTM D5185m ASTM D5185m</th> <th></th> <th>0</th> <th>17 0</th> <th>0</th>	Boron Barium	ppm	ASTM D5185m ASTM D5185m		0	17 0	0
Phosphorus         ppm         ASTM D5185m         800         732         726         811           Zinc         ppm         ASTM D5185m         880         994         965         1074           Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1	Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 57	17 0 57	0 67
Zinc         ppm         ASTM D5185m         880         994         965         1074           Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         >20         3         20         3           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0         0           Nitration         Abs/cm         *ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9	Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 57 <1	17 0 57	0 67 <1
Sulfur         ppm         ASTM D5185m         2803         2420         2714           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         >+100         4         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0         0           Nitration         Abs/cm         *ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 57 <1 618	17 0 57 0 586	0 67 <1 665
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1         2         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0         0           Nitration         Abs/cm         *ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	800	0 57 <1 618 1597	17 0 57 0 586 1520	0 67 <1 665 1703
Silicon         ppm         ASTM D5185m         >+100         4         5         5           Sodium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 57 <1 618 1597 732	17 0 57 0 586 1520 726	0 67 <1 665 1703 811
Sodium         ppm         ASTM D5185m         5         20         3           Potassium         ppm         ASTM D5185m         >20         <1	Boron 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 ASTM D5185m		0 57 <1 618 1597 732 994	17 0 57 0 586 1520 726 965	0 67 <1 665 1703 811 1074
Potassium         ppm         ASTM D5185m         >20         <1	Boron 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	880	0 57 <1 618 1597 732 994 2803	17 0 57 0 586 1520 726 965 2420	0 67 <1 665 1703 811 1074 2714
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         0.1         0         0           Nitration         Abs/cm         *ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	880 limit/base	0 57 <1 618 1597 732 994 2803	17 0 57 0 586 1520 726 965 2420 history1	0 67 <1 665 1703 811 1074 2714
Soot %         %         *ASTM D7844   >20         0.1         0         0           Nitration         Abs/cm         *ASTM D7624   >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415   >30         23.6         22.0         23.7           FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414   >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	880 limit/base	0 57 <1 618 1597 732 994 2803 current	17 0 57 0 586 1520 726 965 2420 history1	0 67 <1 665 1703 811 1074 2714 history2
Nitration         Abs/cm         *ASTM D7624         >20         11.9         10.4         12.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION method limit/base current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100	0 57 <1 618 1597 732 994 2803 current 4	17 0 57 0 586 1520 726 965 2420 history1 5	0 67 <1 665 1703 811 1074 2714 history2 5
Sulfation         Abs/.1mm         *ASTM D7415         >30         23.6         22.0         23.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.9         18.1         19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100 >20	0 57 <1 618 1597 732 994 2803 current 4 5 <1	17 0 57 0 586 1520 726 965 2420 history1 5 20 2	0 67 <1 665 1703 811 1074 2714 history2 5 3
FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 19.9 18.1 19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >+100 >20	0 57 <1 618 1597 732 994 2803 current 4 5 <1	17 0 57 0 586 1520 726 965 2420 history1 5 20 2	0 67 <1 665 1703 811 1074 2714 history2 5 3 2
Oxidation Abs/.1mm *ASTM D7414 >25 <b>19.9</b> 18.1 19.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base	0 57 <1 618 1597 732 994 2803 current 4 5 <1 current 0.1	17 0 57 0 586 1520 726 965 2420 history1 5 20 2 history1 0	0 67 <1 665 1703 811 1074 2714 history2 5 3 2 history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base >20	0 57 <1 618 1597 732 994 2803 current 4 5 <1 current 0.1 11.9	17 0 57 0 586 1520 726 965 2420 history1 5 20 2 history1 0 10.4	0 67 <1 665 1703 811 1074 2714 history2 5 3 2 history2 0 12.1
Base Number (BN) mg KOH/g ASTM D2896 6.1 3.8 5.1 4.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  method ASTM D5185m ASTM D76185m ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base	0 57 <1 618 1597 732 994 2803 current 4 5 <1 current 0.1 11.9 23.6	17 0 57 0 586 1520 726 965 2420 history1 5 20 2 history1 0 10.4 22.0	0 67 <1 665 1703 811 1074 2714 history2 5 3 2 history2 0 12.1 23.7
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  method  *ASTM D7844  *ASTM D7624  *ASTM D7615  method	880  limit/base >+100  >20  limit/base  >20  >30  limit/base	0 57 <1 618 1597 732 994 2803 current 4 5 <1 current 0.1 11.9 23.6 current	17 0 57 0 586 1520 726 965 2420 history1 5 20 2 history1 0 10.4 22.0 history1	0 67 <1 665 1703 811 1074 2714 history2 5 3 2 history2 0 12.1 23.7



# **OIL ANALYSIS REPORT**

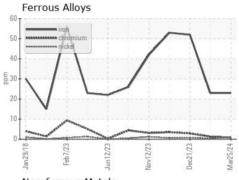


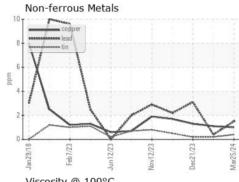


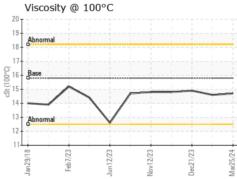
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

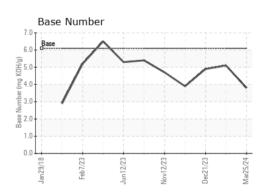
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.8	14.7	14.6	14.9

## **GRAPHS**













Certificate L2367

Laboratory Sample No.

Test Package : FLEET

: GFL0111548 Lab Number : 06132956 Unique Number : 10952421

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 Mar 2024

**Tested** : 01 Apr 2024 Diagnosed : 01 Apr 2024 - Wes Davis

GFL Environmental - 074 - Douglas - Transwaste

1219 Landfill Road Douglas, GA

US 31533 Contact: CURTIS JACOBS

CURTIS.JACOBS@GFLENV.COM T: (912)384-6001

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)