

# **PROBLEM SUMMARY**

Sample Rating Trend

DIRT

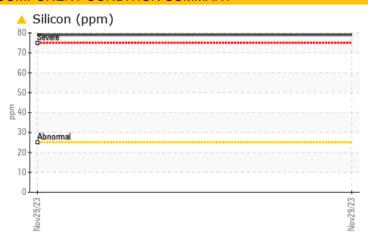


Machine Id **814023** 

Component **Diesel Engine** 

**NOT GIVEN (--- GAL)** 

## **COMPONENT CONDITION SUMMARY**



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

## PROBLEMATIC TEST RESULTS

| Sample Status |     |             |     | ABNORMAL    | <br> |
|---------------|-----|-------------|-----|-------------|------|
| Silicon       | ppm | ASTM D5185m | >25 | <b>^</b> 79 | <br> |

Customer Id: GFL814 Sample No.: GFL0103032 Lab Number: 06027034 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

| RECOMMENDED ACTIONS  |        |      |         |   |  |
|----------------------|--------|------|---------|---|--|
| Action               | Status | Date | Done By | Description   |  |
| Change Fluid         |        |      | ?       | Oil and filter change at the time of sampling has been noted.                 |  |
| Change Filter        |        |      | ?       | Oil and filter change at the time of sampling has been noted.                 |  |
| Information Required |        |      | ?       | Please specify the brand, type, and viscosity of the oil on your next sample. |  |

# HISTORICAL DIAGNOSIS



# **OIL ANALYSIS REPORT**







Machine Id 814023

Component **Diesel Engine** 

**NOT GIVEN (--- GAL)** 

### **DIAGNOSIS**

#### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Metal levels are typical for a new component breaking in.

#### Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

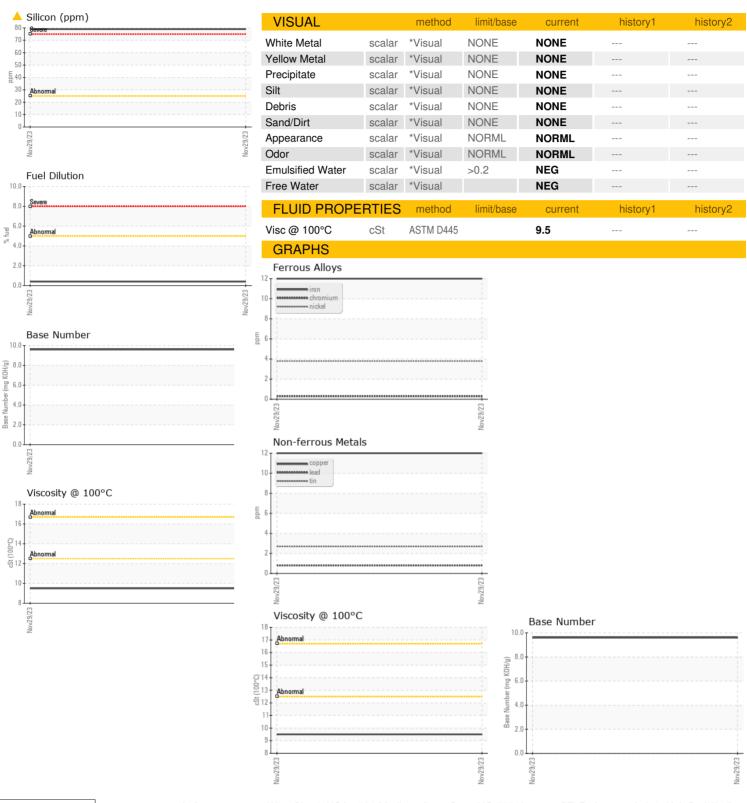
#### **Fluid Condition**

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  |   |  |  |  | Nov2023   |                                     |                   |
| Sample Date  | SAMPLE INFORI   | MATION   | method   | limit/base   | current   | history1                            | history2          |
| Sample Date  | Sample Number   |  | Client Info  |  | GFL0103032  |                                     |                   |
| Machine Age         hrs         Client Info         141            Oil Age         hrs         Client Info         141            Oil Changed         Client Info         Changed            Sample Status         BRORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             Iron         ppm         ASTM D5185m         >20         <1   | ·   |  |  |  |   |                                     |                   |
| Oil Age         hrs         Client Info         141  | •   | hrs  |  |  | 141   |                                     |                   |
| Oil Changed Sample Status         Client Info         Changed ABNORMAL   |   |  |  |  | 141   |                                     |                   |
| CONTAMINATION  | •   |  | Client Info  |  | Changed   |                                     |                   |
| Water         WC Method         >0.2         NEG             Glycol         WC Method         Imitivase         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         12             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         4             Sliver         ppm         ASTM D5185m         >4         4             Sliver         ppm         ASTM D5185m         >20         4             Sliver         ppm         ASTM D5185m         >40         <1             Lead         ppm         ASTM D5185m         >30         12             Copper         ppm         ASTM D5185m         >13             Vanadium         ppm         ASTM D5185m         374 <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>   | -   |  |  |  |   |                                     |                   |
| WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         12             Nickel         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         4             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >30         0             Aluminum         ppm         ASTM D5185m         >30         12             Lead         ppm         ASTM D5185m         >30         12             Copper         ppm         ASTM D5185m         >15         3             Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         103  | CONTAMINAT  | ION  | method   | limit/base   | current   | history1                            | history2          |
| WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         12             Nickel         ppm         ASTM D5185m         >20         <1   | Water   |  | WC Method  | >0.2   | NEG   |                                     |                   |
| Iron   |   |  |  |  |   |                                     |                   |
| Iron   | MEAD METAL  | C  | mothod   | limit/baco   | ourront   | history1                            | history2          |
| Chromium   |   | S  |  |  |   | HISTORY                             | HIStoryZ          |
| Nickel         ppm         ASTM D5185m         >4         4             Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         <1  | -   |  |  |  |   |                                     |                   |
| Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         <1  |   |  |  |  |   |                                     |                   |
| Silver         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         <1             Copper         ppm         ASTM D5185m         >330         12             Tin         ppm         ASTM D5185m         >15         3             Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             Boron         ppm         ASTM D5185m         103             Magnesium  |   |  |  | >4   | -   |                                     |                   |
| Aluminum         ppm         ASTM D5185m         >20         4             Copper         ppm         ASTM D5185m         >40         <1   |   |  |  |  | -   |                                     |                   |
| Lead         ppm         ASTM D5185m         >40         <1             Copper         ppm         ASTM D5185m         >330         12             Tin         ppm         ASTM D5185m         >15         3             Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         41             Molybdenum         ppm         ASTM D5185m         103             Magnese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         1371             Zinc         ppm         ASTM D5185m <t< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td></t<>  |   |  |  |  | -   |                                     |                   |
| Copper         ppm         ASTM D5185m         >330         12             Tin         ppm         ASTM D5185m         >15         3             Vanadium         ppm         ASTM D5185m         <1   |   |  |  |  | -   |                                     |                   |
| Tin         ppm         ASTM D5185m         >15         3             Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             Boron         ppm         ASTM D5185m         <1   |   |  |  |  |   |                                     |                   |
| Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         <1             Molybdenum         ppm         ASTM D5185m         103             Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         644             Phosphorus         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         22             CONTAMINANTS         method         limit/base         current         history1   | • •   |  |  |  |   |                                     |                   |
| Cadmium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         <1             Molybdenum         ppm         ASTM D5185m         103             Magnese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         1371             Phosphorus         ppm         ASTM D5185m         644             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         22             Sodium         ppm         ASTM D5185m         20         4  |   |  |  | >15  | -   |                                     |                   |
| ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         <1  |   |  |  |  |   |                                     |                   |
| Boron         ppm         ASTM D5185m         374             Barium         ppm         ASTM D5185m         <1             Molybdenum         ppm         ASTM D5185m         103             Manganese         ppm         ASTM D5185m         648             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         644             Phosphorus         ppm         ASTM D5185m         766             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         25         79             Sodium         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D5185m         >20         4             INFRA-RED         method         limit/base  | Cadmium   | ppm  | ASTM D5185m  |  | U   |                                     |                   |
| Barium         ppm         ASTM D5185m         <1  |   |  |  |  |   |                                     |                   |
| Molybdenum         ppm         ASTM D5185m         103             Manganese         ppm         ASTM D5185m         648             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         1371             Phosphorus         ppm         ASTM D5185m         644             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         25         79             Sodium         ppm         ASTM D5185m         2              Potassium         ppm         ASTM D5185m         20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method  | ADDITIVES   |  | method   | limit/base   | current   | history1                            | history2          |
| Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         1371             Phosphorus         ppm         ASTM D5185m         644             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624  |   | ppm  |  | limit/base   |   |                                     |                   |
| Magnesium         ppm         ASTM D5185m         648             Calcium         ppm         ASTM D5185m         1371             Phosphorus         ppm         ASTM D5185m         644             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         6.5             Sulfation <td< td=""><td>Boron</td><td>• • • • • • • • • • • • • • • • • • • •</td><td>ASTM D5185m</td><td>limit/base</td><td>374</td><td></td><td></td></td<>   | Boron   | •              | ASTM D5185m  | limit/base   | 374   |                                     |                   |
| Calcium         ppm         ASTM D5185m         1371             Phosphorus         ppm         ASTM D5185m         644             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         20         4             Fuel         %         ASTM D5185m         >20         4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7415         >30         25.8             FLU  | Boron<br>Barium   | ppm  | ASTM D5185m<br>ASTM D5185m   | limit/base   | 374<br><1   |                                     |                   |
| Phosphorus         ppm         ASTM D5185m         6444             Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7644         >3         0.1             Nitration         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1 <td>Boron<br/>Barium<br/>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m<br/>ASTM D5185m<br/>ASTM D5185m</td> <td>limit/base</td> <td>374<br/>&lt;1<br/>103</td> <td></td> <td></td>  | Boron<br>Barium<br>Molybdenum   | ppm  | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base   | 374<br><1<br>103  |                                     |                   |
| Zinc         ppm         ASTM D5185m         766             Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1 <td>Boron Barium Molybdenum Manganese Magnesium</td> <td>ppm<br/>ppm<br/>ppm</td> <td>ASTM D5185m<br/>ASTM D5185m<br/>ASTM D5185m<br/>ASTM D5185m</td> <td>limit/base</td> <td>374<br/>&lt;1<br/>103<br/>3</td> <td></td> <td></td> | Boron Barium Molybdenum Manganese Magnesium   | ppm<br>ppm<br>ppm                                    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | limit/base   | 374<br><1<br>103<br>3   |                                     |                   |
| Sulfur         ppm         ASTM D5185m         1963             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.  | Boron Barium Molybdenum Manganese Magnesium   | ppm<br>ppm<br>ppm                                    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base   | 374<br><1<br>103<br>3<br>648  |                                     |                   |
| CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         ↑ 79             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus  | ppm<br>ppm<br>ppm<br>ppm                             | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base   | 374<br><1<br>103<br>3<br>648<br>1371<br>644   |                                     |                   |
| Silicon         ppm         ASTM D5185m         >25         79             Sodium         ppm         ASTM D5185m         2              Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc   | ppm<br>ppm<br>ppm<br>ppm<br>ppm                      | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base   | 374<br><1<br>103<br>3<br>648<br>1371<br>644<br>766                                  |                                     |                   |
| Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | limit/base   | 374<br><1<br>103<br>3<br>648<br>1371<br>644<br>766                                  |                                     |                   |
| Potassium         ppm         ASTM D5185m         >20         4             Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm        | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  |  | 374<br><1<br>103<br>3<br>648<br>1371<br>644<br>766<br>1963                          | <br><br><br>                        |                   |
| Fuel         %         ASTM D3524         >5         0.4             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN   | ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm<br>ppm | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | limit/base   | 374 <1 103 3 648 1371 644 766 1963  current   | <br><br><br><br><br><br>history1    |                   |
| INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon   | ppm              | ASTM D5185m  | limit/base   | 374 <1 103 3 648 1371 644 766 1963  current  79                                     | <br><br><br><br><br>history1        | history2          |
| Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION method limit/base current history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium  | ppm              | ASTM D5185m  | limit/base >25   | 374 <1 103 3 648 1371 644 766 1963  current  79 2                                   | <br><br><br><br>history1            | history2          |
| Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium  | ppm              | ASTM D5185m  | limit/base >25 >20                                     | 374 <1 103 3 648 1371 644 766 1963  current  79 2 4                                 | history1                            | history2          |
| Nitration         Abs/cm         *ASTM D7624         >20         6.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5   | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel   | ppm              | ASTM D5185m  | limit/base >25 >20 >5                                  | 374 <1 103 3 648 1371 644 766 1963  current  79 2 4 0.4                             | history1                            | history2          |
| Sulfation         Abs/.1mm         *ASTM D7415         >30         25.8             FLUID DEGRADATION method limit/base current history1 history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         20.5  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED   | ppm              | ASTM D5185m  | limit/base >25 >20 >5 limit/base                       | 374 <1 103 3 648 1371 644 766 1963  | history1 history1                   | history2 history2 |
| Oxidation  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %                                  | ppm              | ASTM D5185m  | limit/base >25 >20 >5 limit/base >3                    | 374 <1 103 3 648 1371 644 766 1963 current  79 2 4 0.4 current 0.1                  | history1 history1                   | history2 history2 |
|  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration                        | ppm              | ASTM D5185m ASTM D7844 *ASTM D7844   | limit/base >25 >20 >5 limit/base >3 >20                | 374 <1 103 3 648 1371 644 766 1963  | history1 history1                   | history2 history2 |
|  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation              | ppm              | ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145                                | limit/base >25   | 374 <1 103 3 648 1371 644 766 1963  | history1 history1                   | history2 history2 |
| Date Harmon (Dir) my norm place  | Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE | ppm              | ASTM D5185m ASTM D78185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415 method | limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base | 374 <1 103 3 648 1371 644 766 1963 current  79 2 4 0.4 current 0.1 6.5 25.8 current | history1 history1 history1 history1 | history2 history2 |



## **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number Unique Number

: GFL0103032 : 06027034 : 10776825

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

Received Diagnosed

: 06 Dec 2023 : 14 Dec 2023

Diagnostician : Jonathan Hester **Test Package**: FLEET (Additional Tests: FuelDilution, PercentFuel)

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) 4005 Hwy 161 N. Little Rock, AR US 72117

Contact: Brad Manager

T: F: