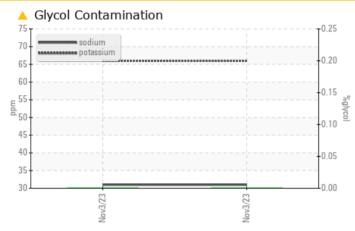


Sample Rating Trend GLYCOL

Machine Id **26591** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)** 

OIL DIAGNOSTICS

### COMPONENT CONDITION SUMMARY



#### RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

| PROBLEMATIC   | C TEST | Γ RESULT    | S   |          |      |
|---------------|--------|-------------|-----|----------|------|
| Sample Status |        |             |     | ABNORMAL | <br> |
| Potassium     | ppm    | ASTM D5185m | >20 | <u> </u> | <br> |

Customer Id: PERCANNC Sample No.: PCA0068356 Lab Number: 06010036 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 <u>customerservice@wearcheck.com</u>

| RECOMMENDED | ACTIONS |      |         |   |  |  |
|-------------|---------|------|---------|---|--|--|
| Action      | Status  | Date | Done By | Description   |  |  |
| Resample    |         |      | ?       | We recommend an early resample to monitor this condition. |  |  |

## HISTORICAL DIAGNOSIS



## **OIL ANALYSIS REPORT**



Machine Id 26591

#### Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

#### DIAGNOSIS

#### A Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

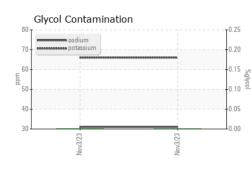
#### Fluid Condition

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

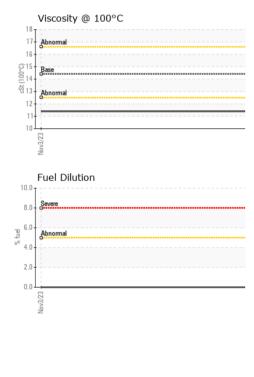
| SAMPLE INFORM  | MATION  | method  | limit/base   | current  | history1   | history2   |
|--|---|---|--|--|--|--|
| Sample Number  |   | Client Info   |  | PCA0068356   |  |  |
| Sample Date  |   | Client Info   |  | 03 Nov 2023  |  |  |
| Machine Age  | mls   | Client Info   |  | 710852   |  |  |
| Oil Age  | mls   | Client Info   |  | 30000  |  |  |
| Oil Changed  |   | Client Info   |  | N/A  |  |  |
| Sample Status  |   |   |  | ABNORMAL   |  |  |
| CONTAMINATI  |   | method  | limit/base   | current  | historyd   | history2   |
| Water  |   | WC Method   |  | NEG  | history1   | TIIStOF y2   |
|  | <u> </u>  |   | >0.2   | -  |  |  |
| WEAR METALS  | 5   | method  | limit/base   | current  | history1   | history2   |
| Iron   | ppm   | ASTM D5185m   | >100   | 36   |  |  |
| Chromium   | ppm   | ASTM D5185m   | >20  | <1   |  |  |
| Nickel   | ppm   | ASTM D5185m   | >4   | 0  |  |  |
| Titanium   | ppm   | ASTM D5185m   |  | 0  |  |  |
| Silver   | ppm   | ASTM D5185m   | >3   | <1   |  |  |
| Aluminum   | ppm   | ASTM D5185m   | >20  | 17   |  |  |
| Lead   | ppm   | ASTM D5185m   | >40  | 0  |  |  |
| Copper   | ppm   | ASTM D5185m   | >330   | 3  |  |  |
| Tin  | ppm   | ASTM D5185m   | >15  | <1   |  |  |
| Vanadium   | ppm   | ASTM D5185m   |  | 0  |  |  |
| Cadmium  | ppm   | ASTM D5185m   |  | 0  |  |  |
| ADDITIVES  |   | method  | limit/base   | current  | history1   | history2   |
| Boron  | ppm   | ASTM D5185m   | 250  | 0  |  |  |
| Barium   | ppm   | ASTM D5185m   | 10   | 0  |  |  |
| Molybdenum   | ppm   | ASTM D5185m   | 100  | 62   |  |  |
| Manganese  | ppm   | ASTM D5185m   |  | <1   |  |  |
| Magnesium  |   |   | 4 = 0  |  |  |  |
| -  | ppm   | ASTM D5185m   | 450  | 936  |  |  |
| 0  | ppm<br>ppm  | ASTM D5185m<br>ASTM D5185m  | 450<br>3000  | 936<br>1071  |  |  |
| Calcium  |   |   |  |  |  |  |
| Calcium<br>Phosphorus  | ppm   | ASTM D5185m   | 3000   | 1071   |  |  |
| Calcium<br>Phosphorus<br>Zinc  | ppm<br>ppm  | ASTM D5185m<br>ASTM D5185m  | 3000<br>1150   | 1071<br>988  |  |  |
| Calcium<br>Phosphorus<br>Zinc  | ppm<br>ppm<br>ppm<br>ppm                                    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 3000<br>1150<br>1350   | 1071<br>988<br>1227  |  |  |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN  | ppm<br>ppm<br>ppm<br>ppm                                    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | 3000<br>1150<br>1350<br>4250<br>limit/base   | 1071<br>988<br>1227<br>2487  |  | <br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon   | ppm<br>ppm<br>ppm<br>ppm<br>TS                              | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>method  | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25  | 1071<br>988<br>1227<br>2487<br>current   |  | <br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium   | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm                       | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25<br>>158  | 1071<br>988<br>1227<br>2487<br>current<br>9  |  | <br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium  | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm                | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m  | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25<br>>158<br>>20   | 1071<br>988<br>1227<br>2487<br><u>current</u><br>9<br>31                               |  | <br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel  | ppm<br>ppm<br>ppm<br>ppm<br>TS<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   | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25<br>>158<br>>20   | 1071<br>988<br>1227<br>2487<br><u>current</u><br>9<br>31<br>▲ 66                       | <br><br>history1<br><br>                                     | <br><br>history2<br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel  | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>ppm<br>%    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m   | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25<br>>158<br>>20   | 1071<br>988<br>1227<br>2487<br>current<br>9<br>31<br>▲ 66<br><1.0                      | <br><br>history1<br><br>                                     | <br><br>history2<br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel<br>Glycol<br>INFRA-RED                                     | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>ppm<br>%    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D3524<br>*ASTM D2982                                | 3000<br>1150<br>1350<br>4250<br><b>limit/base</b><br>>25<br>>158<br>>20<br>>5  | 1071<br>988<br>1227<br>2487<br><u>current</u><br>9<br>31<br>▲ 66<br><1.0<br>0.0        | <br><br>history1<br><br><br>                                 | <br><br>history2<br><br><br><br>   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel<br>Glycol<br>INFRA-RED<br>Soot %                           | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>ppm<br>%    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D3524<br>*ASTM D2982<br>method                                     | 3000<br>1150<br>1350<br>4250<br>limit/base<br>>25<br>>158<br>>20<br>>5<br>limit/base<br>>3   | 1071<br>988<br>1227<br>2487<br>0<br>9<br>31<br>▲ 66<br><1.0<br>0.0<br>Current          | <br><br>history1<br><br><br><br>history1                     | <br><br>history2<br><br><br><br>history2   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel<br>Glycol  | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>ppm<br>%    | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D3524<br>*ASTM D2982<br>method<br>*ASTM D7844                      | 3000<br>1150<br>1350<br>4250<br><b>limit/base</b><br>>25<br>>158<br>>20<br>>5<br><b>limit/base</b><br>>3<br>>20                                    | 1071<br>988<br>1227<br>2487<br>9<br>31<br>▲ 66<br><1.0<br>0.0<br>current<br>0.8        | <br><br>history1<br><br><br><br>history1<br>                 | <br><br>history2<br><br><br><br><br>history2   |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel<br>Glycol<br>INFRA-RED<br>Soot %<br>Nitration              | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>%<br>%<br>% | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D3524<br>*ASTM D2982<br>method<br>*ASTM D7844       | 3000<br>1150<br>1350<br>4250<br><b>limit/base</b><br>>25<br>>158<br>>20<br>>5<br><b>limit/base</b><br>>3<br>>20                                    | 1071<br>988<br>1227<br>2487<br>0<br>31<br>▲ 66<br><1.0<br>0.0<br>current<br>0.8<br>9.9 | <br><br>history1<br><br><br><br><br>history1                 | <ul> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li>history2</li> </ul> |
| Calcium<br>Phosphorus<br>Zinc<br>Sulfur<br>CONTAMINAN<br>Silicon<br>Sodium<br>Potassium<br>Fuel<br>Glycol<br>INFRA-RED<br>Soot %<br>Nitration<br>Sulfation | ppm<br>ppm<br>ppm<br>ppm<br>TS<br>ppm<br>ppm<br>%<br>%<br>% | ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*ASTM D2982<br>*ASTM D2982<br>*ASTM D7844<br>*ASTM D7844 | 3000<br>1150<br>1350<br>4250<br><b>Imit/base</b><br>>25<br>>158<br>>20<br>>5<br>S<br><b>Imit/base</b><br>>3<br>>20<br>>3<br>30<br><b>Imit/base</b> | 1071<br>988<br>1227<br>2487  | <br><br>history1<br><br><br><br><br>history1<br><br>history1 | <br><br>history2<br><br><br><br>history2<br><br>history2   |

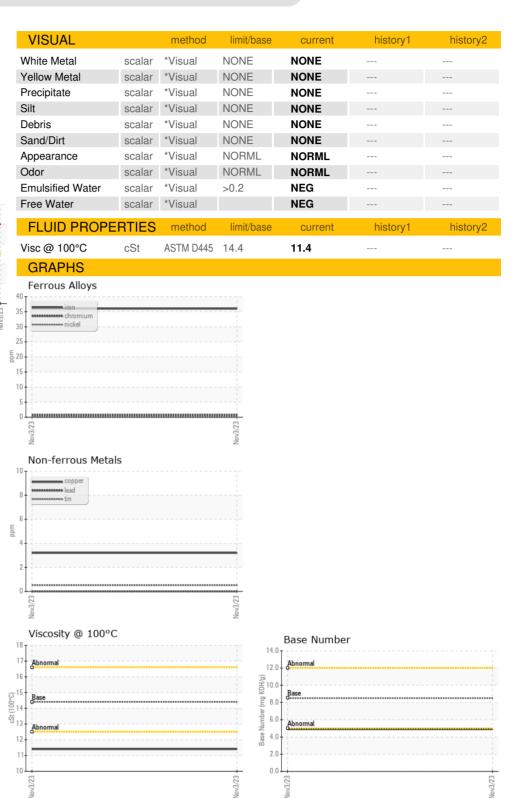


# **OIL ANALYSIS REPORT**











Lab Number :06010036 Diagnosed : 01 Dec 2023 CANDOR, NC Unique Number : 10749180 Diagnostician : Jonathan Hester Test Package : FLEET (Additional Tests: FuelDilution, Glycol) Contact: Service Manager Certificate L2367 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)

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

: 16 Nov 2023

Received

Laboratory

Sample No.

: PCA0068356

**PERDUE FARMS INC - GARAGE** 

**189 PERDUE WAY** 

US 27229

T:

F: