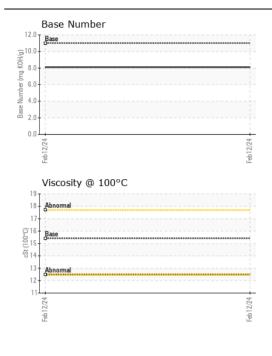
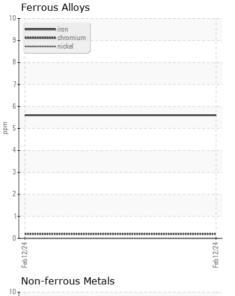
**WEAR** CONTAMINATION **FLUID CONDITION**  **NORMAL NORMAL NORMAL** 

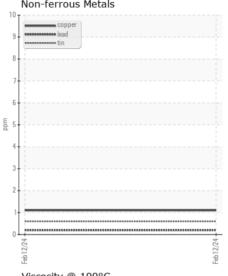
Machine Id 4582

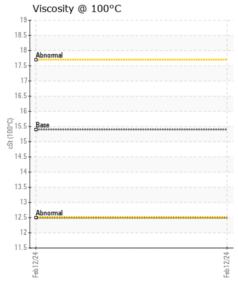
Component Diesel Engine

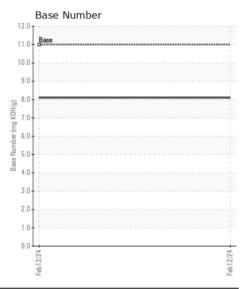
| Test   | CITGO CITGUARD 600 15W40 ( GAL)                         |                                       |        |             |            |             |          |          |
|--|---|---------------------------------------|--------|-------------|------------|-------------|----------|----------|
| Resample at the next service interval to monitor.  | RECOMMENDATION  | Test                                  | UOM    | Method      | Limit/Abn  | Current     | History1 | History2 |
| Machino Age   mis   Cilient Info   38990   |   | Sample Number                         |        | Client Info |            | WC0901410   |          |          |
| Collage  | Resample at the next service interval to monitor.       | Sample Date                           |        | Client Info |            | 12 Feb 2024 |          |          |
| Filter Age   |   | Machine Age                           | mls    | Client Info |            | 358904      |          |          |
| Oil Changed   Client Info   Changed   Client Info   Changed   Changed   Client Info   Changed   Changed  |   | Oil Age                               | mls    | Client Info |            | 15546       |          |          |
| Filter Changed Sample Status   |   | Filter Age                            | mls    | Client Info |            | 15546       |          |          |
| Nome   |   | Oil Changed                           |        | Client Info |            | Changed     |          |          |
| Iron   |   | Filter Changed                        |        | Client Info |            | Changed     |          |          |
| All component wear rates are normal.    Chromium   ppm   ASTIM Disiss   4   0  |   | Sample Status                         |        |             |            | NORMAL      |          |          |
| All component wear rates are normal.    Chromium   ppm   ASTIM Disiss   4   0  | WEAR  | Iron                                  | ppm    | ASTM D5185m | >100       | 6           |          |          |
| Nickel   ppm   ASTM D5155m   >4   0  |   |                                       |        | ASTM D5185m | >20        |             |          |          |
| Titanium   ppm   ASTM D5185m   3   0   |   |                                       |        |             |            |             |          |          |
| Silver   ppm   ASTM D5185m   >20   2   |   |                                       |        |             |            |             |          |          |
| Aluminum   ppm   ASTM D5185m   >20   2   |   |                                       |        |             | >3         |             |          |          |
| Lead   |   |                                       |        |             |            |             |          |          |
| Copper   |   |                                       |        |             |            |             |          |          |
| Time   ppm   ASTM D5185m   NONE   N |   |                                       |        |             |            |             |          |          |
| Vanadium   ppm   ASTM D5185m   NONE   NONE   White Metal   scalar   Visual   NONE   NONE   Water   Visual   NONE   NONE   Water   Wisual   NONE   NONE   Water   Wisual   None   Water   Wat |   |                                       |        |             |            |             |          |          |
| White Metal   Scalar   *Visual   NONE   NO |   |                                       |        |             |            |             |          |          |
| Silicon   ppm   ASTM D5185m   >25   5  |   | White Metal                           |        |             | NONE       | NONE        |          |          |
| Potassium   ppm   ASTM 05185m   20   1   |   |                                       | scalar | *Visual     | NONE       |             |          |          |
| Potassium   ppm   ASTM 05185m   20   1   | CONTAMINATION   | Silicon                               | nnm    | ASTM D5185m | <b>-25</b> | 5           |          |          |
| There is no indication of any contamination in the oil.    Fuel   WC Method   >0.2   NEG     NEG   NEG     NEG   NEG     NEG   NEG     NEG   NEg   NEg   NEg   NEg   NEg   NEg   NEg   NEg   NEg   Neg   | CONTAMINATION   |                                       |        |             |            |             |          |          |
| Water   WC Method   >0.2   NEG   | There is no indication of any contamination in the oil. |                                       | ррпп   |             |            |             |          |          |
| Glycol   WC Method   NEG           Soot % % 's 'ASTM D7844   >3   0.2           Nitration   Abs/.tmm 'ASTM D7844   >3   0.2           Nitration   Abs/.tmm 'ASTM D7845   >30   18.7           Sulfation   Abs/.tmm 'ASTM D7845   >30   18.7           Sulfation   Abs/.tmm 'ASTM D7845   >30   18.7           Silt   soalar 'Visual   NONE   NONE   NONE           Debris   scalar 'Visual   NONE   NONE   NONE           Appearance   scalar 'Visual   NORML   NORM   |   |                                       |        |             |            |             |          |          |
| Soot %   |   |                                       |        |             | 70.L       |             |          |          |
| Nitration  |   | •                                     | %      |             | <b>\3</b>  |             |          |          |
| Sulfation   Abs/.1mm   *ASTM D7415   >30   18.7  |   |                                       |        |             |            |             |          |          |
| Silt   scalar   *Visual   NONE   NONE   Debris   scalar   *Visual   NONE   Sand/Dirt   scalar   *Visual   NONE   NONE   Sand/Dirt   scalar   *Visual   NONE   NONE   NONE   Sand/Dirt   scalar   *Visual   NORML   N |   |                                       |        |             |            |             |          |          |
| Debris   Scalar   *Visual   NONE    |   |                                       |        |             |            |             |          |          |
| Sand/Dirt   Scalar   *Visual   NONE   NONE   Appearance   Scalar   *Visual   NORML   |   |                                       |        |             |            |             |          |          |
| Appearance   |   |                                       |        |             |            |             |          |          |
| Codor   Scalar *Visual   NORML   NOR |   |                                       |        |             |            |             |          |          |
| Emulsified Water   scalar *Visual   >0.2   NEG   |   |                                       |        |             |            |             |          |          |
| Boron   ppm   ASTM D5185m   13   6           Barium   ppm   ASTM D5185m   0   0   0           Molybdenum   ppm   ASTM D5185m   57   74           Manganese   ppm   ASTM D5185m   57   74           Magnesium   ppm   ASTM D5185m   825   485           Calcium   ppm   ASTM D5185m   1100   1651           Phosphorus   ppm   ASTM D5185m   933   1070           Sulfur   ppm   ASTM D5185m   2769   3536           Oxidation   Abs/.tmm   *ASTM D7414   >25   14.8           Base Number (BN)   mg KOH/g   ASTM D2896   11.0   8.1  |   |                                       |        | *Visual     |            |             |          |          |
| Boron   ppm   ASTM D5185m   13   6           Barium   ppm   ASTM D5185m   0   0   0           Molybdenum   ppm   ASTM D5185m   57   74           Manganese   ppm   ASTM D5185m   57   74           Magnesium   ppm   ASTM D5185m   825   485           Calcium   ppm   ASTM D5185m   1100   1651           Phosphorus   ppm   ASTM D5185m   933   1070           Sulfur   ppm   ASTM D5185m   2769   3536           Oxidation   Abs/.tmm   *ASTM D7414   >25   14.8           Base Number (BN)   mg KOH/g   ASTM D2896   11.0   8.1  | EL LUD CONDITION  | · · · · · · · · · · · · · · · · · · · |        | AOTA DE LOS |            |             |          |          |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.    Barium   ppm   ASTM D5185m   0   0         Molybdenum   ppm   ASTM D5185m   57   74         Manganese   ppm   ASTM D5185m   825   485         Magnesium   ppm   ASTM D5185m   1100   1651         Phosphorus   ppm   ASTM D5185m   933   1070         Zinc   ppm   ASTM D5185m   1089   1272         Sulfur   ppm   ASTM D5185m   2769   3536         Oxidation   Abs/.tmm *ASTM D7414   >25   14.8         Base Number (BN)   mg KOH/g   ASTM D2896   11.0   8.1   | FLUID CONDITION   |                                       |        |             | 10         |             |          |          |
| oil. The condition of the oil is suitable for further service.    Molybdenum   ppm   ASTM D5185m   57   74         Manganese   ppm   ASTM D5185m   825   485         Calcium   ppm   ASTM D5185m   1100   1651         Phosphorus   ppm   ASTM D5185m   933   1070         Zinc   ppm   ASTM D5185m   1089   1272         Sulfur   ppm   ASTM D5185m   2769   3536         Oxidation   Abs/.tnm   *ASTM D7414   >25   14.8         Base Number (BN)   mg KOH/g   ASTM D2896   11.0   8.1   |   |                                       |        |             |            |             |          |          |
| Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         825         485             Calcium         ppm         ASTM D5185m         1100         1651             Phosphorus         ppm         ASTM D5185m         933         1070             Zinc         ppm         ASTM D5185m         1089         1272             Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1   |   |                                       |        |             |            |             |          |          |
| Magnesium         ppm         ASTM D5185m         825         485             Calcium         ppm         ASTM D5185m         1100         1651             Phosphorus         ppm         ASTM D5185m         933         1070             Zinc         ppm         ASTM D5185m         1089         1272             Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   | -                                     |        |             | 57         |             |          |          |
| Calcium         ppm         ASTM D5185m         1100         1651             Phosphorus         ppm         ASTM D5185m         933         1070             Zinc         ppm         ASTM D5185m         1089         1272             Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   | _                                     |        |             | 92F        |             |          |          |
| Phosphorus         ppm         ASTM D5185m         933         1070             Zinc         ppm         ASTM D5185m         1089         1272             Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   | •                                     |        |             |            |             |          |          |
| Zinc         ppm         ASTM D5185m         1089         1272             Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   |                                       |        |             |            |             |          |          |
| Sulfur         ppm         ASTM D5185m         2769         3536             Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1   |   |                                       |        |             |            |             |          |          |
| Oxidation         Abs/.1mm         *ASTM D7414         >25         14.8             Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   |                                       |        |             |            |             |          |          |
| Base Number (BN)         mg KOH/g         ASTM D2896         11.0         8.1  |   |                                       |        |             |            |             |          |          |
|  |   |                                       |        |             |            |             |          |          |
| VISC @ 100 C CSL ASTINID445 13.4 12.5  |   | ( )                                   |        |             |            |             |          |          |
|  |   | VISC @ 100 C                          | COL    | AUTIVI D440 | 10.4       | 12.5        |          |          |













Certificate L2367

Laboratory Sample No. Lab Number : 06089299

Unique Number : 10876744

: WC0901410

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Feb 2024

: 15 Feb 2024 **Tested** Diagnosed

: 15 Feb 2024 - Wes Davis

**OMNISOURCE SE** 

1426 WEST MAIN SHOP KERNERSVILLE, NC US 27284

Contact: JEFF HENDRIX

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)

T:

F: