



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

|                 |          |
|-----------------|----------|
| WEAR            | NORMAL   |
| CONTAMINATION   | ABNORMAL |
| FLUID CONDITION | ABNORMAL |

Machine Id  
**JOHN DEERE 5325 TR-123**

Component  
**Diesel Engine**

Fluid  
**TRC MOLY XL PRO-SPEC IV XP 15W40 (10 QTS)**

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current     | History1    | History2    |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number  |     | Client Info |           | TR06224697  | TR05303267  | TR05045070  |
| Sample Date    |     | Client Info |           | 26 Jun 2024 | 08 Jul 2021 | 10 Aug 2020 |
| Machine Age    | hrs | Client Info |           | 6485        | 4624        | 4200        |
| Oil Age        | hrs | Client Info |           | 500         | 500         | 500         |
| Filter Age     | hrs | Client Info |           | 500         | 500         | 500         |
| Oil Changed    |     | Client Info |           | Changed     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | Changed     | Changed     | Changed     |
| Sample Status  |     |             |           | ABNORMAL    | NORMAL      | ATTENTION   |

**WEAR**

All component wear rates are normal.

|              |        |             |      |      |      |      |
|--------------|--------|-------------|------|------|------|------|
| Iron         | ppm    | ASTM D5185m | >51  | 18   | 9    | 8    |
| Chromium     | ppm    | ASTM D5185m | >11  | <1   | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >5   | <1   | <1   | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <1   | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <1   | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >31  | 4    | 0    | 0    |
| Lead         | ppm    | ASTM D5185m | >26  | 1    | <1   | <1   |
| Copper       | ppm    | ASTM D5185m | >26  | 3    | 1    | 3    |
| Tin          | ppm    | ASTM D5185m | >4   | <1   | <1   | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <1   | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | NONE | NONE | NONE |

**CONTAMINATION**

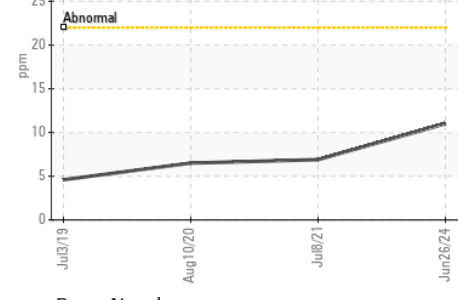
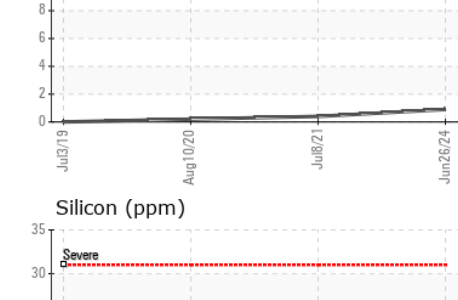
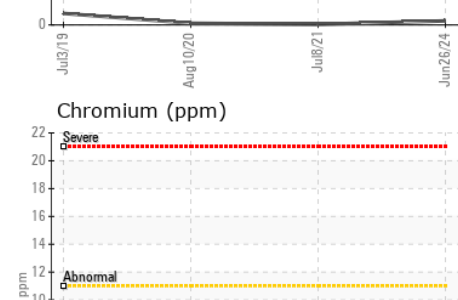
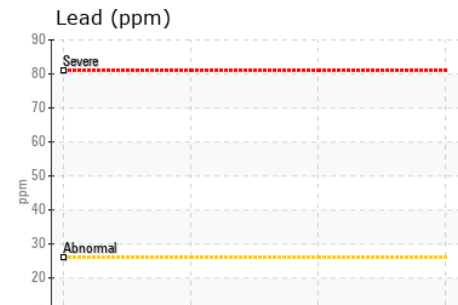
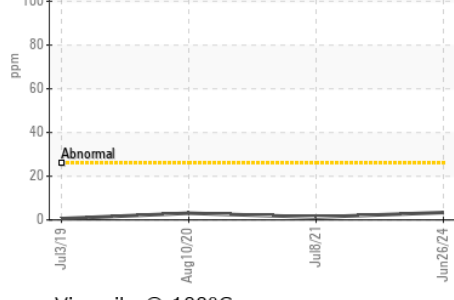
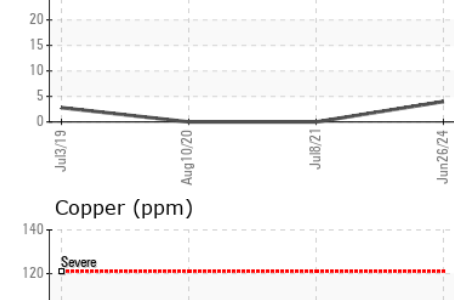
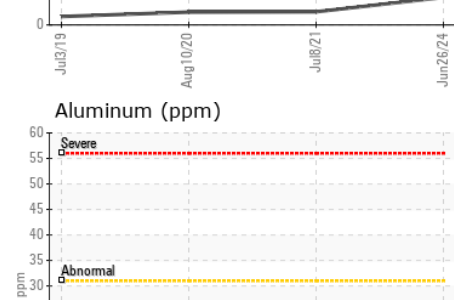
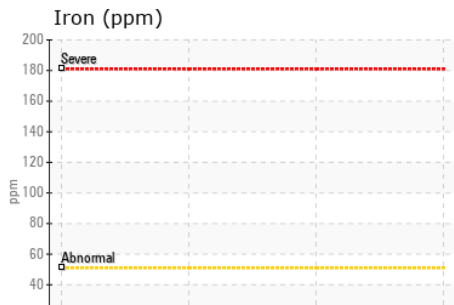
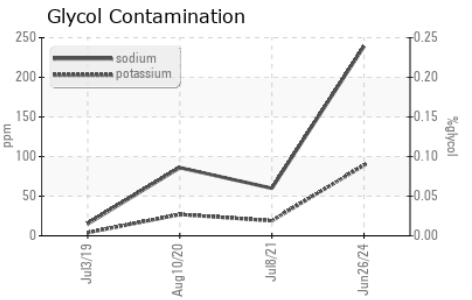
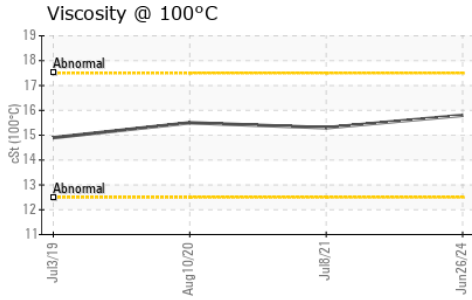
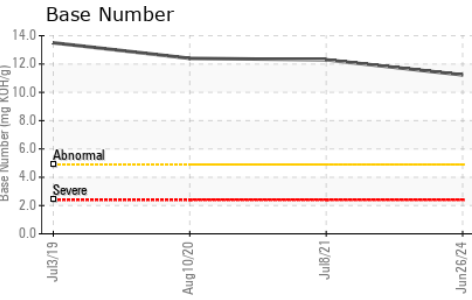
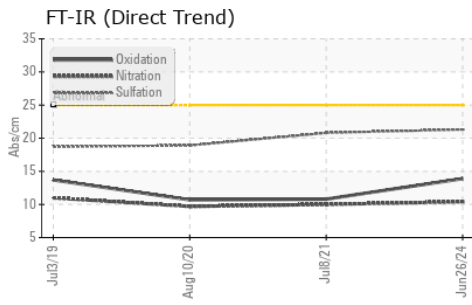
Sodium and/or potassium levels are high.

|                  |          |             |       |       |       |       |
|------------------|----------|-------------|-------|-------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >22   | 11    | 7     | 6     |
| Potassium        | ppm      | ASTM D5185m | >20   | 89    | 19    | 27    |
| Fuel             |          | WC Method   | >2.1  | <1.0  | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.21 | NEG   | NEG   | NEG   |
| Glycol           | %        | *ASTM D2982 |       | NEG   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >3    | 0.2   | 0.1   | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | 10.4  | 10    | 9.7   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | 21.3  | 20.8  | 18.9  |
| 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 |
| Emulsified Water | scalar   | *Visual     | >0.21 | NEG   | NEG   | NEG   |

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil.

|                  |          |             |     |       |      |      |
|------------------|----------|-------------|-----|-------|------|------|
| Sodium           | ppm      | ASTM D5185m | >31 | 239   | 60   | 86   |
| Boron            | ppm      | ASTM D5185m |     | 11    | 11   | 9    |
| Barium           | ppm      | ASTM D5185m |     | 0     | 0    | <1   |
| Molybdenum       | ppm      | ASTM D5185m |     | 132   | 98   | 128  |
| Manganese        | ppm      | ASTM D5185m |     | <1    | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |     | 499   | 39   | 71   |
| Calcium          | ppm      | ASTM D5185m |     | 2519  | 3858 | 4162 |
| Phosphorus       | ppm      | ASTM D5185m |     | 1012  | 824  | 886  |
| Zinc             | ppm      | ASTM D5185m |     | 1284  | 961  | 1044 |
| Sulfur           | ppm      | ASTM D5185m |     | 4243  | 3211 | 3659 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | 13.9  | 10.8 | 10.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | 11.23 | 12.3 | 12.4 |
| Visc @ 100°C     | cSt      | ASTM D445   |     | 15.8  | 15.3 | 15.5 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06224697 **Received** : 01 Jul 2024  
**Lab Number** : 06224697 **Tested** : 03 Jul 2024  
**Unique Number** : 11102894 **Diagnosed** : 03 Jul 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: Glycol )

**CHERRY HILL FARMS**  
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 US 84655  
 Contact: JOHN AAGARD

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-827-0711.  
 \* - 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: