



| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | SEVERE |
| FLUID CONDITION | NORMAL |

Machine Id
NOT GIVEN JR0198794 (S/N NO INFO ON SIF/BOTTLE)

Component
Diesel Engine

Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | JR0198794 | --- | --- |
| Sample Date | | Client Info | | 11 Jan 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |

WEAR

All component wear rates are normal. Increase in component wear rates noted.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >100 | 73 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >4 | 2 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >3 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 7 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | 22 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 16 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 4 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

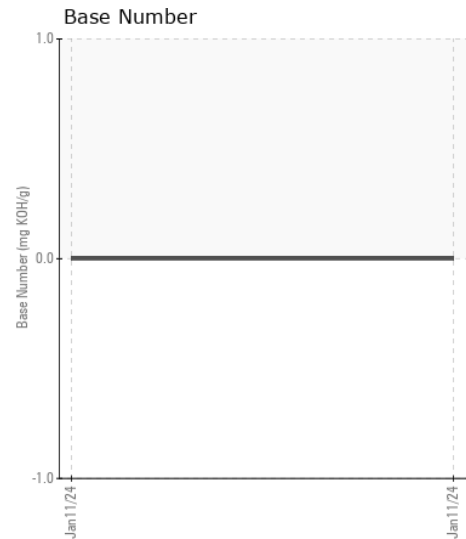
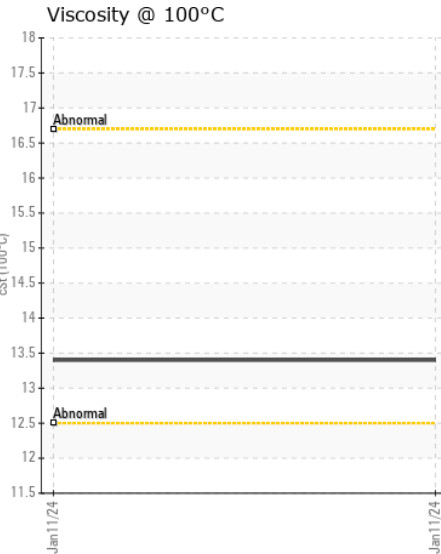
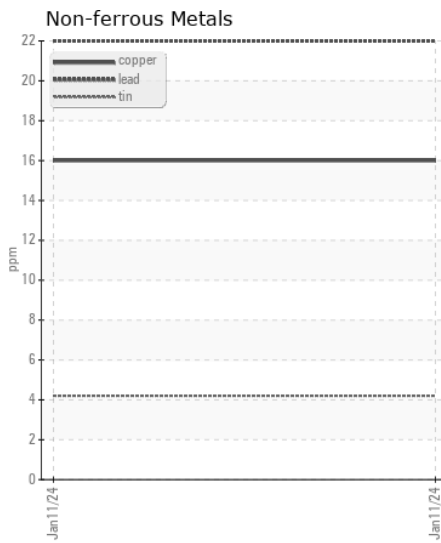
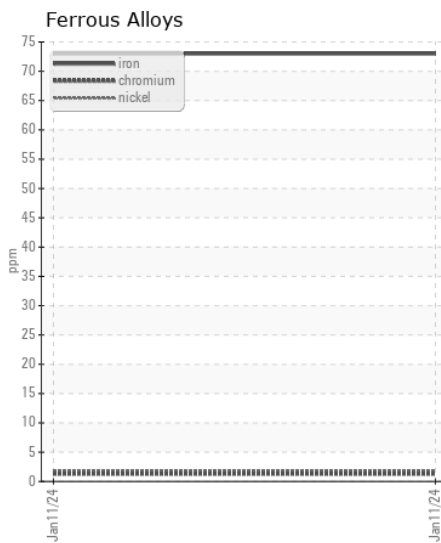
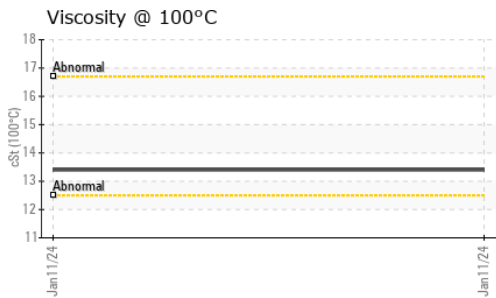
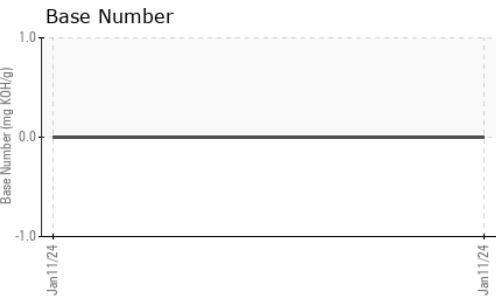
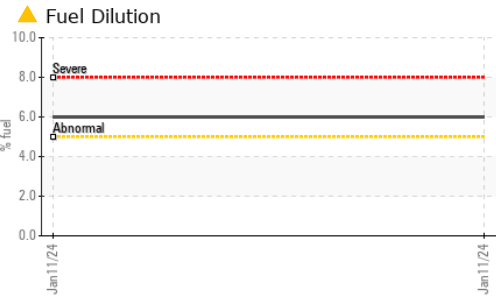
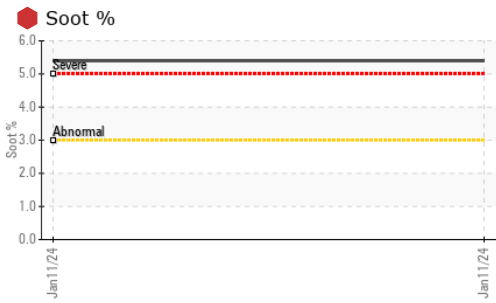
There is an abnormal amount of solids and carbon present in the oil.
 There is a moderate amount of fuel present in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | 5 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Fuel | % | ASTM D3524 | >5 | 6.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >3 | 5.4 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 15.4 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 34.9 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | --- | --- |

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|------------------|----------|-------------|-----|-------------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 5 | --- | --- |
| Boron | ppm | ASTM D5185m | | 12 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 159 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 2 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 774 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 1129 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 788 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1042 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 2683 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.4 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 0.0 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | 13.4 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198794 **Received** : 12 Jan 2024
Lab Number : 06059117 **Diagnosed** : 29 Jan 2024
Unique Number : 10830499 **Diagnostician** : Doug Bogart
Test Package : CONST (Additional Tests: FUELDILUTION, PercentFuel, TBN)

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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)