



PROBLEM SUMMARY



Area
KANSAS/44/EG - SKID STEER
 Machine Id
53.181L [KANSAS^44^EG - SKID STEER]
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Rating Trend



FUEL

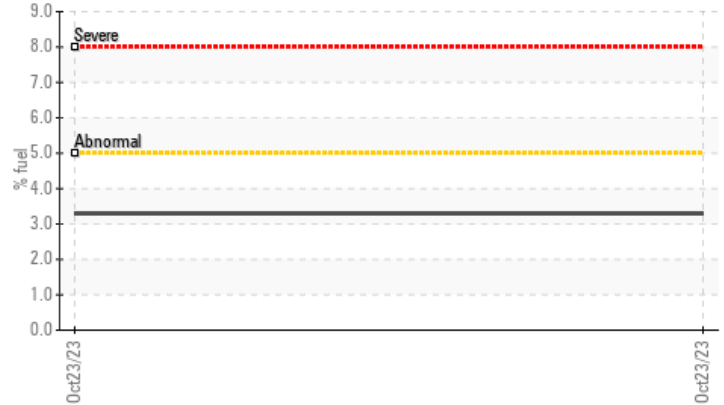


COMPONENT CONDITION SUMMARY

▲ Viscosity @ 100°C



▲ Fuel Dilution



RECOMMENDATION

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 | --- | --- |
|---------------|-----|------------|------|----------|-----|-----|
| Fuel | % | ASTM D3524 | >5 | ▲ 3.3 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | ▲ 10.5 | --- | --- |

Customer Id: SHEWIC
 Sample No.: WC0862647
 Lab Number: 05994196
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|----------------------|--------|------|---------|---|
| Information Required | --- | --- | ? | Please specify the brand, type, and viscosity of the oil on your next sample. |

HISTORICAL DIAGNOSIS



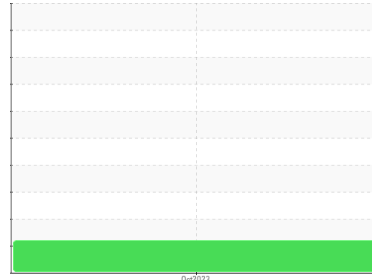
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



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DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a components first oil change.

Contamination

Light fuel dilution occurring.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info | | WC0862647 | --- | --- |
| Sample Date | Client Info | | 23 Oct 2023 | --- | --- |
| Machine Age | hrs | Client Info | 254 | --- | --- |
| Oil Age | hrs | Client Info | 254 | --- | --- |
| Oil Changed | Client Info | | Not Chngd | --- | --- |
| Sample Status | | | ABNORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|------------|----------|----------|
| Glycol | WC Method | | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | 10 | --- | --- |
| Chromium | ppm | ASTM D5185m >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m >2 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185m >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m >25 | 2 | --- | --- |
| Lead | ppm | ASTM D5185m >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m >330 | 12 | --- | --- |
| Tin | ppm | ASTM D5185m >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185m | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m 250 | 47 | --- | --- |
| Barium | ppm | ASTM D5185m 10 | 4 | --- | --- |
| Molybdenum | ppm | ASTM D5185m 100 | 34 | --- | --- |
| Manganese | ppm | ASTM D5185m | 3 | --- | --- |
| Magnesium | ppm | ASTM D5185m 450 | 441 | --- | --- |
| Calcium | ppm | ASTM D5185m 3000 | 1771 | --- | --- |
| Phosphorus | ppm | ASTM D5185m 1150 | 893 | --- | --- |
| Zinc | ppm | ASTM D5185m 1350 | 1083 | --- | --- |
| Sulfur | ppm | ASTM D5185m 4250 | 3304 | --- | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 16 | --- | --- |
| Sodium | ppm | ASTM D5185m >158 | 5 | --- | --- |
| Potassium | ppm | ASTM D5185m >20 | 2 | --- | --- |
| Fuel | % | ASTM D3524 >5 | ▲ 3.3 | --- | --- |

INFRA-RED

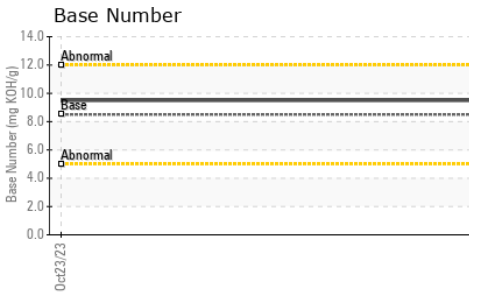
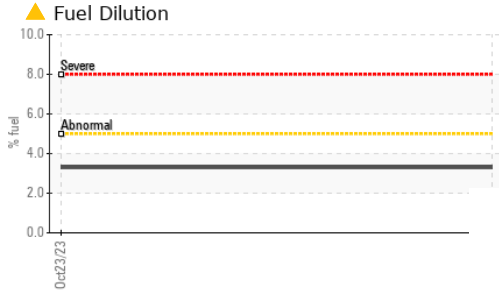
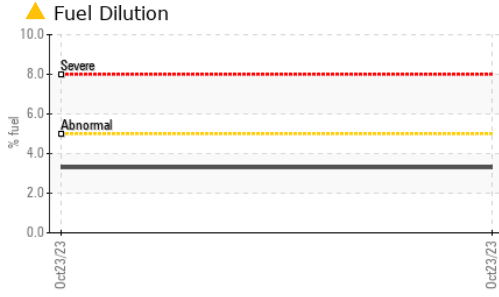
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 7.3 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 21.0 | --- | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 18.5 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 8.5 | 9.5 | --- | --- |



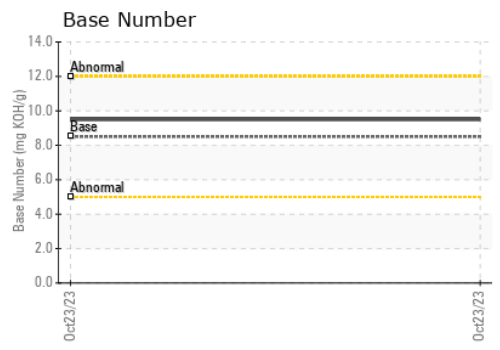
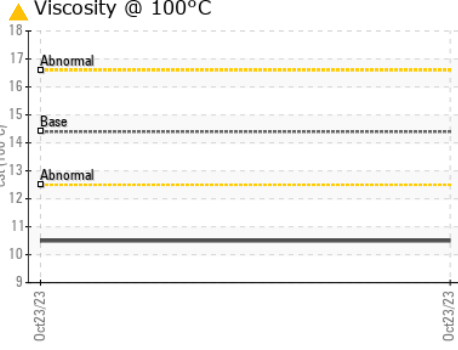
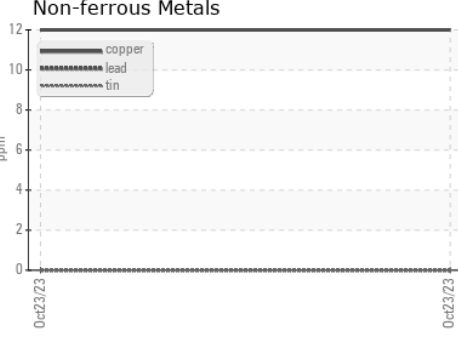
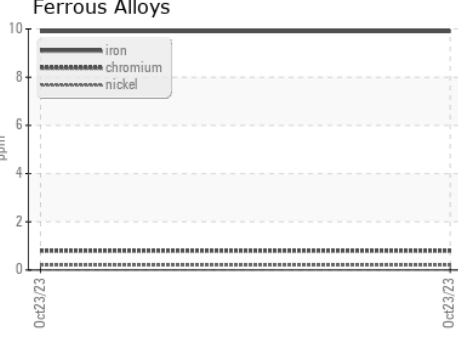
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- | --- |
| 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 | --- | --- |
| Free Water | scalar | *Visual | | NEG | --- | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | ▲ 10.5 | --- | --- |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0862647 **Received** : 31 Oct 2023
Lab Number : 05994196 **Diagnosed** : 03 Nov 2023
Unique Number : 10722556 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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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)