# OIL ANALYSIS REPORT

Sample Rating Trend


**DEGRADATION**

Area
**DICK LAVY**
Machine Id
**DICK LAVY 4957**
Component
**Rear Differential**
Fluid
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

**Recommendation**
The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**
The AN level is at the top-end of the recommended limit.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0843215** | --- | --- |
| Sample Date | | Client Info | | **08 Aug 2023** | --- | --- |
| Machine Age | mls | Client Info | | **57** | --- | --- |
| Oil Age | mls | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >500 | **20** | --- | --- |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **3** | --- | --- |
| Lead | ppm | ASTM D5185m | >25 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >100 | **0** | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **193** | --- | --- |
| Barium | ppm | ASTM D5185m | | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | **0** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **1** | --- | --- |
| Magnesium | ppm | ASTM D5185m | | **1** | --- | --- |
| Calcium | ppm | ASTM D5185m | | **18** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | **1094** | --- | --- |
| Zinc | ppm | ASTM D5185m | | **0** | --- | --- |
| Sulfur | ppm | ASTM D5185m | | **29417** | --- | --- |

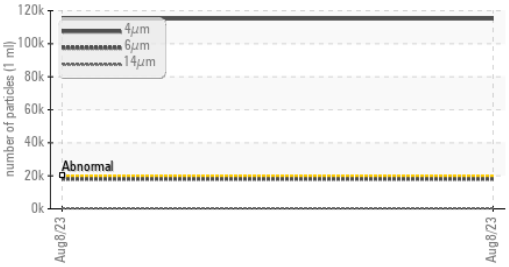
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >75 | **12** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **6** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | --- | --- |
| Water | % | ASTM D6304 | >.2 | **0.063** | --- | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | **637.0** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **115116** | --- | --- |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ **18113** | --- | --- |
| Particles >14µm | | ASTM D7647 | >640 | **329** | --- | --- |
| Particles >21µm | | ASTM D7647 | >160 | **62** | --- | --- |
| Particles >38µm | | ASTM D7647 | >40 | **4** | --- | --- |
| Particles >71µm | | ASTM D7647 | >10 | **1** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **24/21/16** | --- | --- |

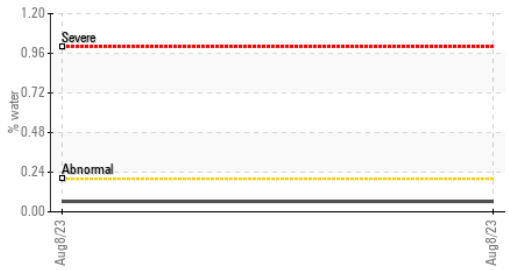
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | ▲ **3.55** | --- | --- |

# OIL ANALYSIS REPORT

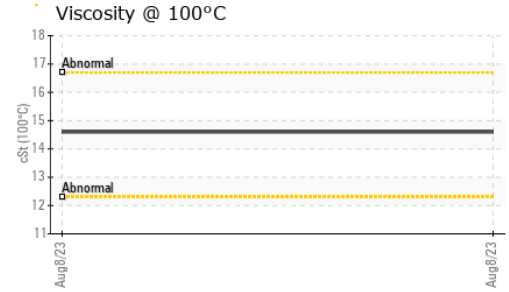
Particle Trend



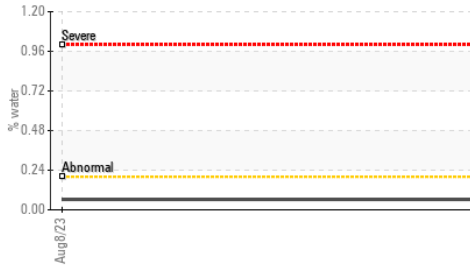

Water



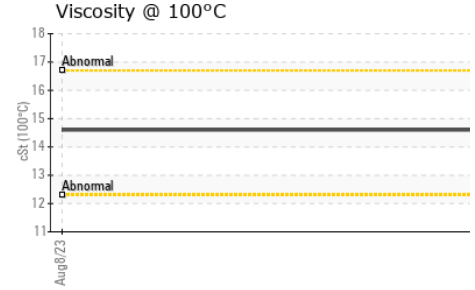

Viscosity @ 100°C




Water




Viscosity @ 100°C




| 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 | **LIGHT** | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | --- | --- |
| Odor | scalar | *Visual | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | *Visual | >.2 | **NEG** | --- | --- |
| Free Water | scalar | *Visual | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **98.4** | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | **14.6** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | | **153** | --- | --- |

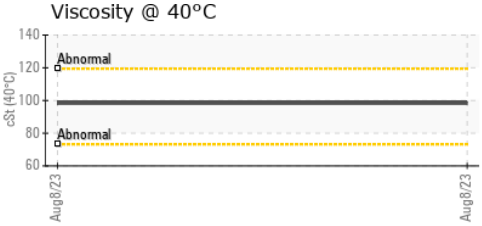
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

GRAPHS

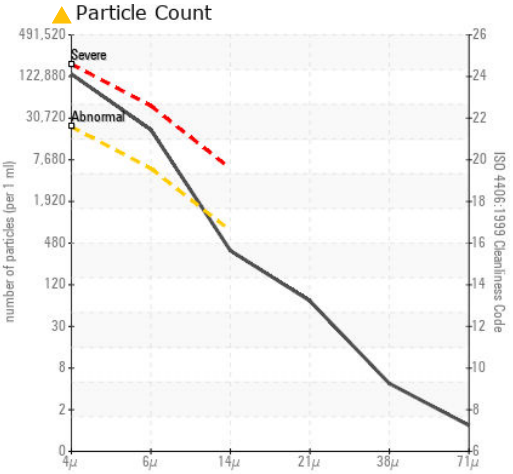
Ferrous Alloys


Non-ferrous Metals


Viscosity @ 40°C




Particle Count




Acid Number


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0843215 **Received** : 29 Aug 2023
**Lab Number** : 05937859 **Diagnosed** : 14 Sep 2023
**Unique Number** : 10628471 **Diagnostician** : Doug Bogart
**Test Package** : MOB 2 ( Additional Tests: KF, KV100, PrtCount, VI )

*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)*

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