



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
DICK LAVY [AFTER]
 Machine Id
DICK LAVY 4966
 Component
Rear Differential
 Fluid
GEAR OIL SAE 75W90 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (after)

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | WC0853959 | WC0853958 | --- |
| Sample Date | Client Info | | 07 Oct 2023 | 06 Oct 2023 | --- |
| Machine Age | mls | Client Info | 455 | 455 | --- |
| Oil Age | mls | Client Info | 0 | 0 | --- |
| Oil Changed | Client Info | | N/A | N/A | --- |
| Sample Status | | | ATTENTION | ABNORMAL | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|----------|--------|-------------|---------|--------------|----------|-----|
| Iron | ppm | ASTM D5185m | >500 | 0 | 32 | --- |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Nickel | ppm | ASTM D5185m | >10 | 0 | <1 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | <1 | --- |
| Lead | ppm | ASTM D5185m | >25 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >100 | 0 | 0 | --- |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|-------------|---------|--------------|----------|-----|
| Boron | ppm | ASTM D5185m | 400 | 269 | 165 | --- |
| Barium | ppm | ASTM D5185m | 200 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 12 | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185m | | 0 | 1 | --- |
| Magnesium | ppm | ASTM D5185m | 12 | 0 | 1 | --- |
| Calcium | ppm | ASTM D5185m | 150 | 1 | 15 | --- |
| Phosphorus | ppm | ASTM D5185m | 1650 | 1433 | 1095 | --- |
| Zinc | ppm | ASTM D5185m | 125 | 0 | 0 | --- |
| Sulfur | ppm | ASTM D5185m | 22500 | 24210 | 24802 | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|-------------|---------|--------------|----------|-----|
| Silicon | ppm | ASTM D5185m | >75 | <1 | 12 | --- |
| Sodium | ppm | ASTM D5185m | | 0 | 2 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 2 | --- |
| Water | % | ASTM D6304 | >.2 | 0.048 | 0.040 | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | 483.8 | 404.4 | --- |

FLUID CLEANLINESS

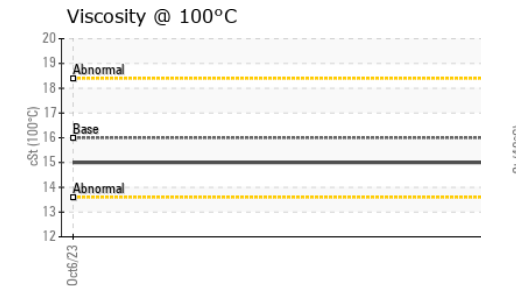
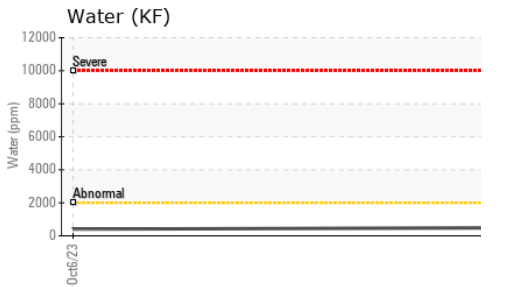
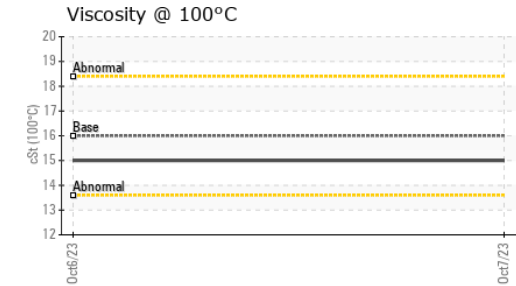
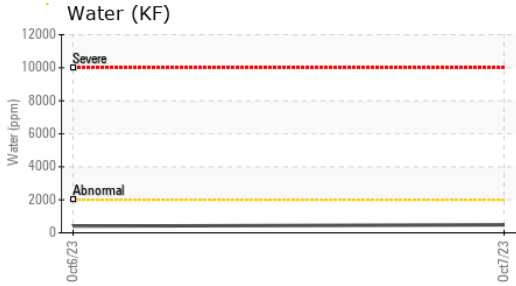
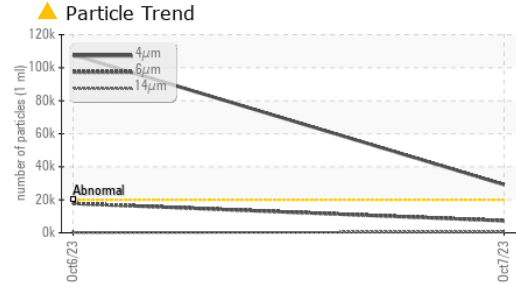
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >20000 | ▲ 29193 | ▲ 107817 | --- |
| Particles >6µm | ASTM D7647 | >5000 | ▲ 7310 | ▲ 17784 | --- |
| Particles >14µm | ASTM D7647 | >640 | 487 | 134 | --- |
| Particles >21µm | ASTM D7647 | >160 | 144 | 21 | --- |
| Particles >38µm | ASTM D7647 | >40 | 8 | 1 | --- |
| Particles >71µm | ASTM D7647 | >10 | 1 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ 22/20/16 | ▲ 24/21/14 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 | |
|------------------|----------|------------|---------|-------------|----------|-----|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 2.00 | 2.29 | 3.22 | --- |



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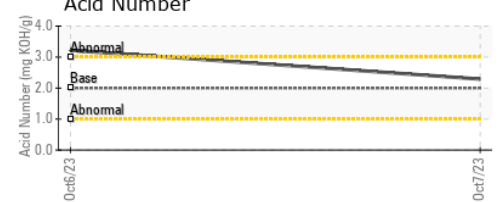
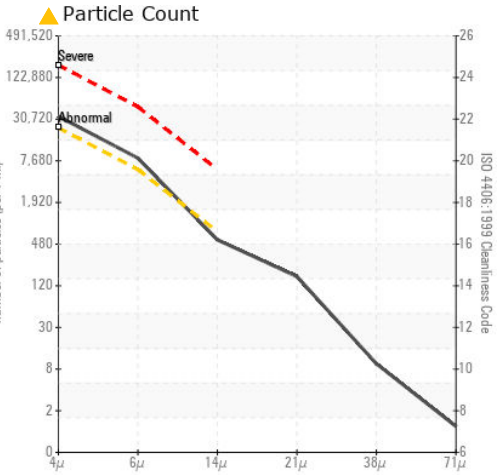
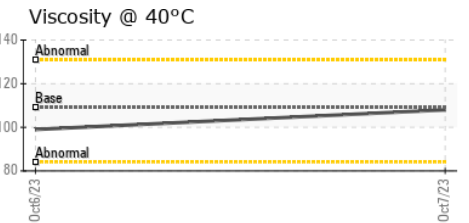
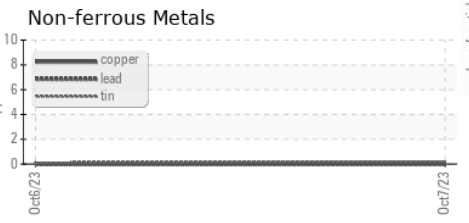
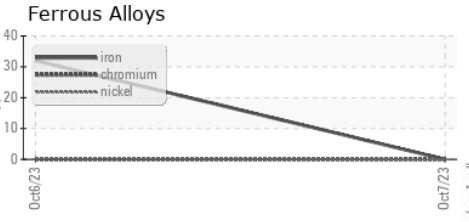
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- |
| 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 | >.2 | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 109 | 108 | 99.0 |
| Visc @ 100°C | cSt | ASTM D445 | 16.0 | 15.0 | 15.0 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 157 | 144 | 158 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0853959 **Received** : 20 Nov 2023
Lab Number : 06013267 **Diagnosed** : 24 Nov 2023
Unique Number : 10752411 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

BASF - GIANNA CREDAROLI
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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)