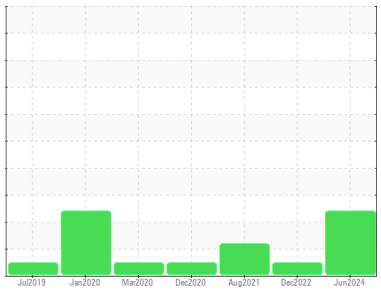
# OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Machine Id
**DT638**
Component
**Transmission (Auto)**
Fluid
**COGNIS EMGARD 2805 ATF (42 mls)**

Sample Rating Trend




**DIRT**

## DIAGNOSIS

**Recommendation**
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

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

**Contamination**
There is a moderate amount of visible silt present in the sample. Elemental level of silicon (Si) above normal.

**Fluid Condition**
The condition of the fluid is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0120544** | PCA0080469 | PCA0050634 |
| Sample Date | | Client Info | | **24 Jun 2024** | 19 Dec 2022 | 19 Aug 2021 |
| Machine Age | mls | Client Info | | **246874** | 200163 | 0 |
| Oil Age | mls | Client Info | | **129838** | 28273 | 0 |
| Oil Changed | | Client Info | | **Changed** | Not Changd | Not Changd |
| Sample Status | | | | **ABNORMAL** | NORMAL | ABNORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >220 | **163** | 70 | 165 |
| Chromium | ppm | ASTM D5185m | >2 | **<1** | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >5 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >75 | **21** | 8 | 24 |
| Lead | ppm | ASTM D5185m | >95 | **11** | 4 | 8 |
| Copper | ppm | ASTM D5185m | >60 | **25** | 13 | 16 |
| Tin | ppm | ASTM D5185m | >10 | **1** | <1 | 2 |
| Antimony | ppm | ASTM D5185m | >2 | **---** | --- | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **74** | 84 | 125 |
| Barium | ppm | ASTM D5185m | | **0** | 1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **2** | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Calcium | ppm | ASTM D5185m | | **118** | 116 | 52 |
| Phosphorus | ppm | ASTM D5185m | | **219** | 220 | 302 |
| Zinc | ppm | ASTM D5185m | | **7** | 6 | 14 |
| Sulfur | ppm | ASTM D5185m | | **1711** | 1435 | 416 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | ▲ **27** | 13 | 25 |
| Sodium | ppm | ASTM D5185m | | **5** | 0 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 1 | 0 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | ▲ MODER |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | ▲ **MODER** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | VLITE |
| 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 | >0.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

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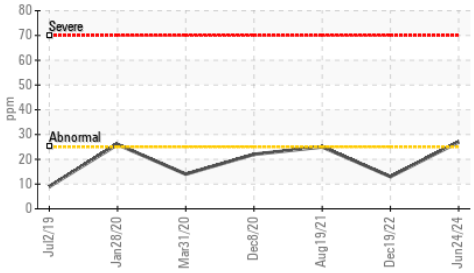
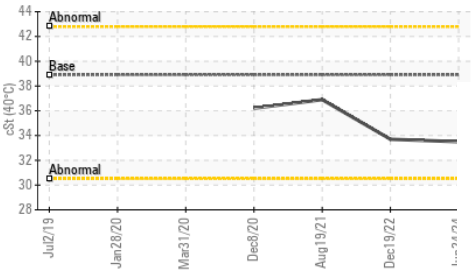
Silicon (ppm)




Viscosity @ 40°C

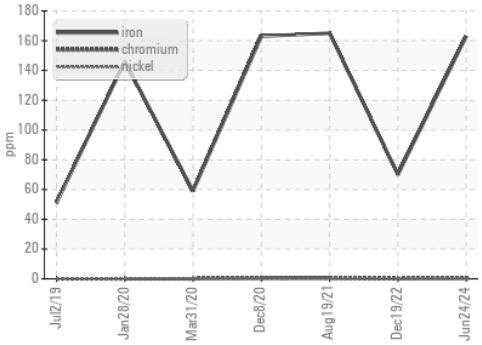



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 38.9 | **33.5** | 33.7 | 36.9 |

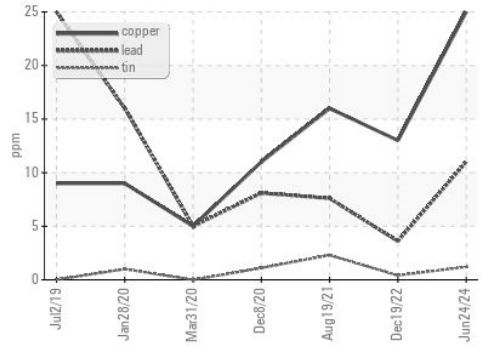
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | *no image* | *no image* | *no image* |
| Bottom | | | *no image* | *no image* | *no image* |

## GRAPHS

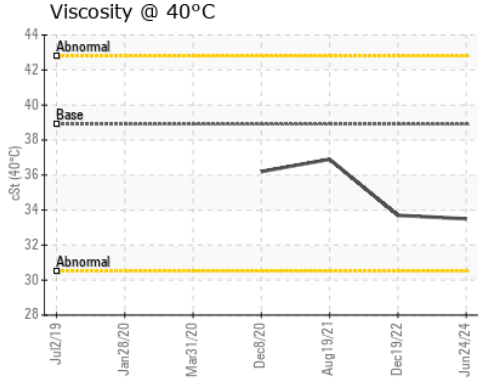
Ferrous Alloys




Non-ferrous Metals




Viscosity @ 40°C




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0120544
**Lab Number** : 06223913
**Unique Number** : 11102110
**Test Package** : FLEET

**Received** : 28 Jun 2024
**Tested** : 29 Jun 2024
**Diagnosed** : 30 Jun 2024 - Don Baldridge

*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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