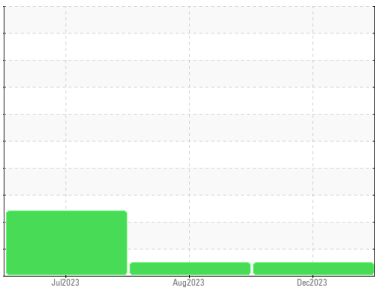
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**L4700**
Component
**Diesel Engine**
Fluid
**DPLX 21C (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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

**Contamination**
There is no indication of any contamination in the oil.

**Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0885678** | WC0758978 | WC0758984 |
| Sample Date | | Client Info | | **02 Dec 2023** | 18 Aug 2023 | 27 Jul 2023 |
| Machine Age | hrs | Client Info | | **3369** | 2888 | 2851 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | Changed | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | SEVERE |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | >5 | **<1.0** | 0.9 | 8.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **21** | 6 | 23 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **4** | 2 | 4 |
| Lead | ppm | ASTM D5185m | >40 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | **2** | 1 | 2 |
| Tin | ppm | ASTM D5185m | >15 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **5** | 10 | 16 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **69** | 65 | 60 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | **814** | 761 | 342 |
| Calcium | ppm | ASTM D5185m | | **1233** | 1239 | 1878 |
| Phosphorus | ppm | ASTM D5185m | | **973** | 967 | 949 |
| Zinc | ppm | ASTM D5185m | | **1233** | 1151 | 1248 |
| Sulfur | ppm | ASTM D5185m | | **2802** | 3239 | 4366 |

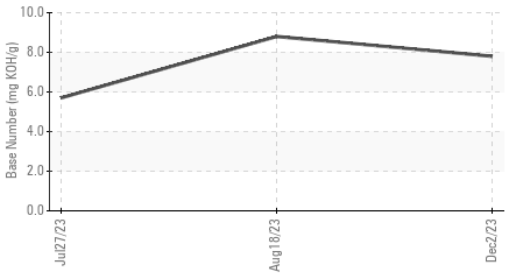
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **7** | <1 | 8 |
| Sodium | ppm | ASTM D5185m | | **3** | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **3** | 2 | 3 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.5** | 0.1 | 0.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.9** | 5.3 | 9.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.7** | 17.4 | 19.7 |

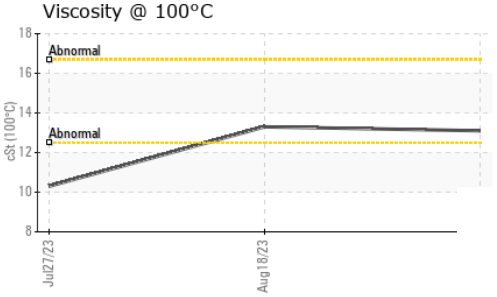
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **16.3** | 12.9 | 13.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **7.8** | 8.8 | 5.7 |

# OIL ANALYSIS REPORT

Base Number




Viscosity @ 100°C

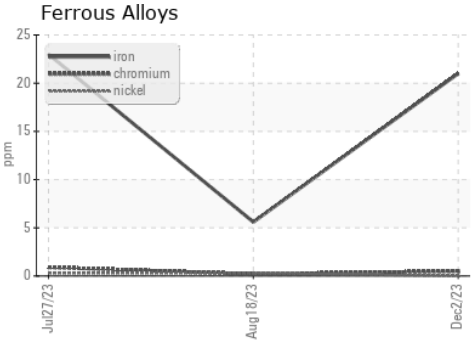



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

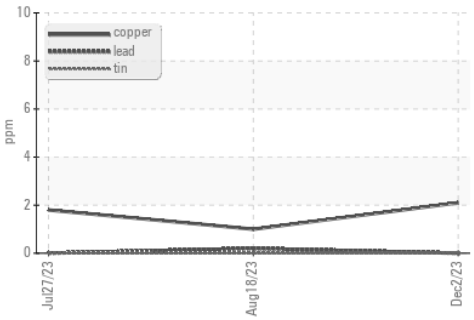
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | | **13.1** | 13.3 | ▲ 10.3 |

## GRAPHS

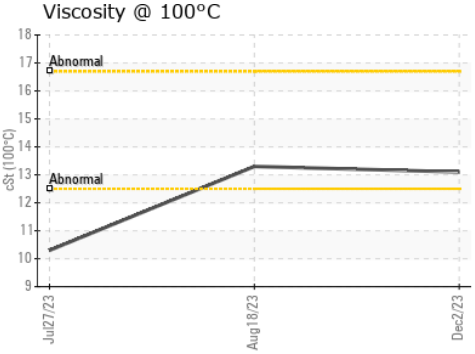
Ferrous Alloys



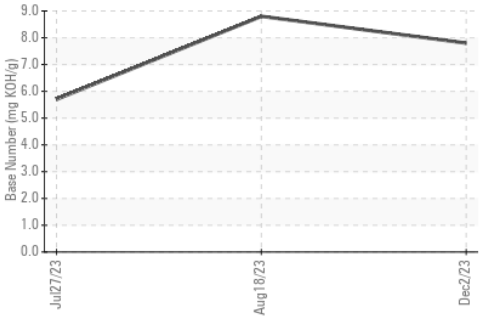

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0885678 **Received** : 08 Dec 2023
**Lab Number** : 06029866 **Diagnosed** : 12 Dec 2023
**Unique Number** : 10779657 **Diagnostician** : Wes Davis
**Test Package** : CONST ( Additional Tests: TBN )

*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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