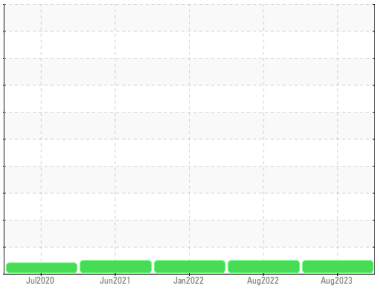
OIL DIAGNOSTICS

# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**(T495133) 600HP**
Machine Id
**531033 [600HP]**
Component
**Diesel Engine**
Fluid
**MOBIL 1 SAE 10W30 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**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 | | **PCA0101248** | PCA0067701 | PCA0055726 |
| Sample Date | | Client Info | | **31 Aug 2023** | 24 Aug 2022 | 03 Jan 2022 |
| Machine Age | hrs | Client Info | | **35397** | 32359 | 29278 |
| Oil Age | hrs | Client Info | | **3000** | 3400 | 3000 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >100 | **13** | 24 | 26 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | **0** | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | **2** | 3 | 4 |
| Lead | ppm | ASTM D5185m | >40 | **0** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | **2** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | 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 | | **20** | 8 | 2 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **36** | 65 | 68 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **526** | 886 | 1056 |
| Calcium | ppm | ASTM D5185m | | **2230** | 1174 | 1173 |
| Phosphorus | ppm | ASTM D5185m | | **1096** | 1055 | 1130 |
| Zinc | ppm | ASTM D5185m | | **1373** | 1308 | 1384 |
| Sulfur | ppm | ASTM D5185m | | **4503** | 2828 | 2641 |

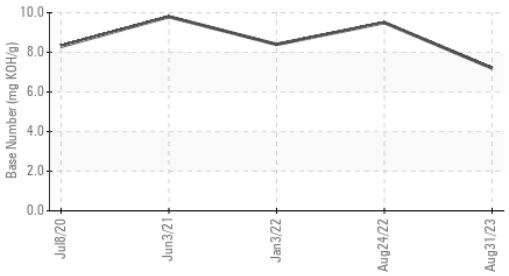
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **5** | 5 | 4 |
| Sodium | ppm | ASTM D5185m | | **4** | 3 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **3** | 2 | 1 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | >3 | **0.3** | 1.2 | 1.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **8.4** | 13.2 | 12.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **20.1** | 26.2 | 25.5 |

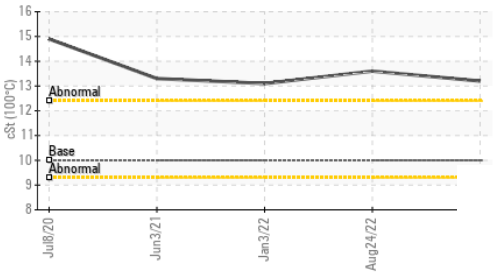
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **15.8** | 25.9 | 26.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **7.2** | 9.5 | 8.4 |

# OIL ANALYSIS REPORT

Base Number




Viscosity @ 100°C

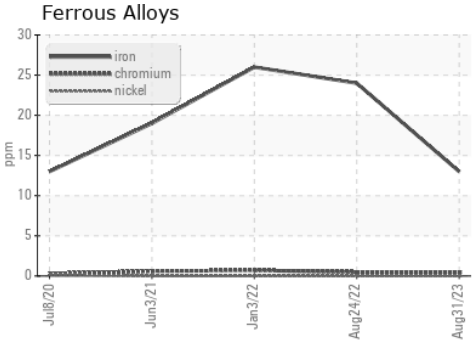



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

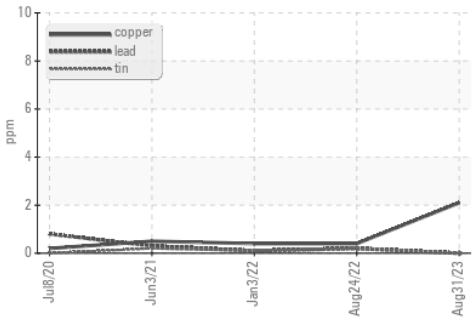
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | 10 | **13.2** | 13.6 | 13.1 |

## GRAPHS

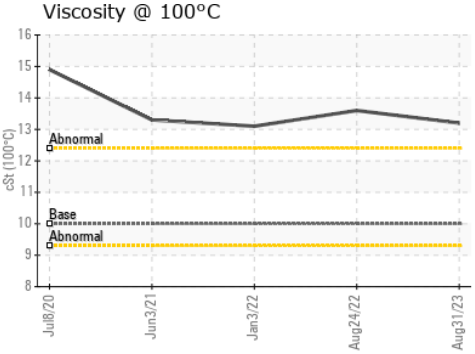
Ferrous Alloys



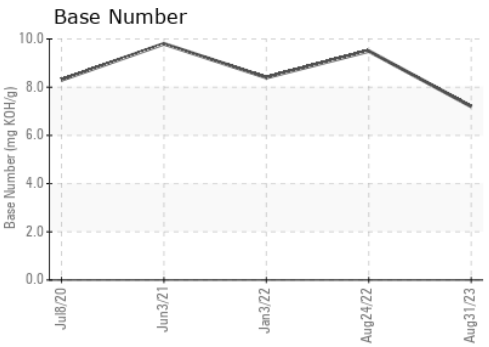

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0101248 **Received** : 08 Sep 2023
**Lab Number** : 05946316 **Diagnosed** : 12 Sep 2023
**Unique Number** : 10642275 **Diagnostician** : Don Baldridge
**Test Package** : FLEET

*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)*

**McLane Company - High Plains - 600HP**
1717 East Loop 289
LUBBOCK, TX
US 79403
Contact: RITA GARCIA
rita.garcia@mclaneco.com
T: (806)766-2902
F: