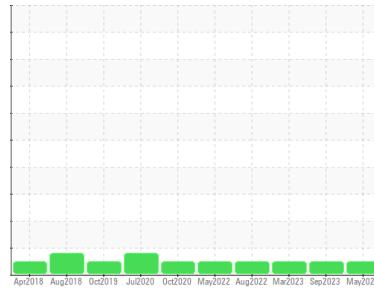




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
CONSTRUCTORS, INC

Machine Id
141849

Component
Diesel Engine

Fluid
MOBIL DELVAC 1300 SUPER 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 | | SBP0007157 | SBP0004577 | SBP0001309 |
| Sample Date | Client Info | | 09 May 2024 | 15 Sep 2023 | 15 Mar 2023 |
| Machine Age | hrs | Client Info | 5233 | 4867 | 4569 |
| Oil Age | hrs | Client Info | 366 | 298 | 405 |
| 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 |
| 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 | 26 | 23 | 17 |
| Chromium | ppm | ASTM D5185m >20 | 2 | 2 | 1 |
| Nickel | ppm | ASTM D5185m >4 | <1 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 10 | 8 | 8 |
| Lead | ppm | ASTM D5185m >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m >330 | 4 | 1 | <1 |
| Tin | ppm | ASTM D5185m >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | <1 | <1 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m | 18 | 40 | 28 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 66 | 39 | 57 |
| Manganese | ppm | ASTM D5185m | 1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 890 | 496 | 835 |
| Calcium | ppm | ASTM D5185m | 1373 | 1527 | 1480 |
| Phosphorus | ppm | ASTM D5185m | 961 | 672 | 961 |
| Zinc | ppm | ASTM D5185m | 1214 | 863 | 1177 |
| Sulfur | ppm | ASTM D5185m | 3103 | 2284 | 2986 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 12 | 10 | 7 |
| Sodium | ppm | ASTM D5185m | 1 | 4 | 1 |
| Potassium | ppm | ASTM D5185m >20 | 3 | <1 | 1 |

INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.2 | 0 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 >20 | 9.1 | 10.0 | 7.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 21.7 | 26.5 | 20.8 |

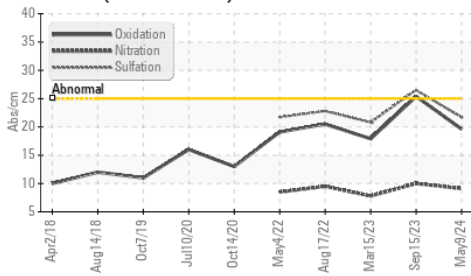
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 19.6 | 25.4 | 17.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 10.5 | 9.0 | 10.8 | 9.9 |

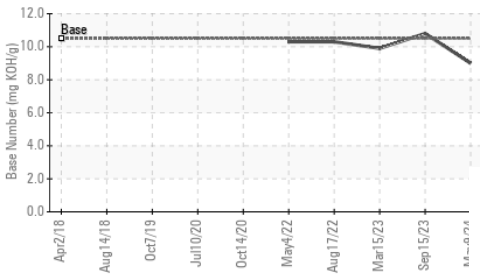


OIL ANALYSIS REPORT

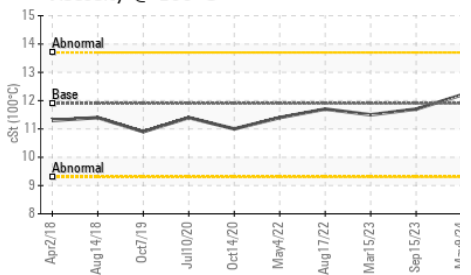
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

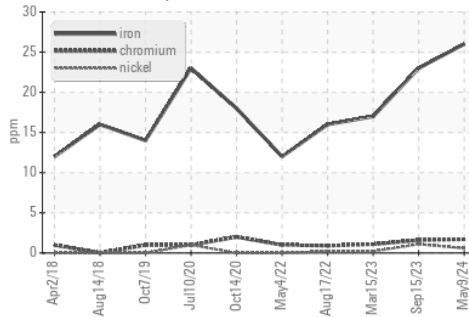


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

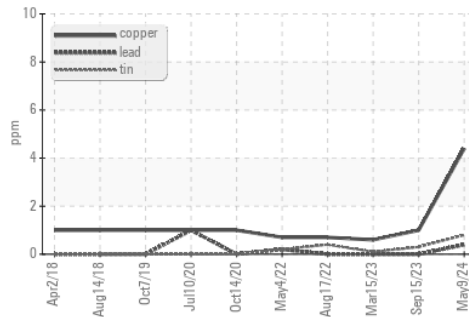
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 11.9 | 12.2 | 11.7 |

GRAPHS

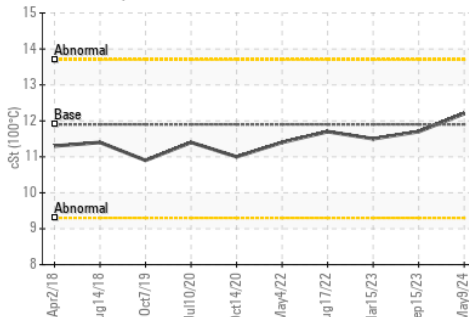
Ferrous Alloys



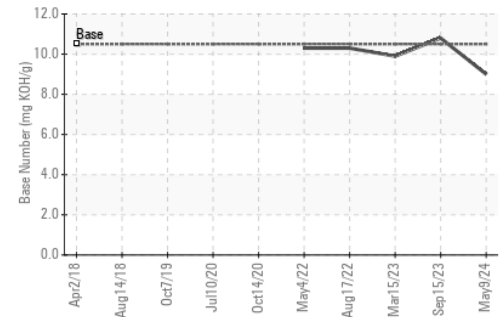
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0007157 **Received** : 13 May 2024
Lab Number : 06178078 **Tested** : 14 May 2024
Unique Number : 11029404 **Diagnosed** : 14 May 2024 - Wes Davis
Test Package : FLEET

Constructors Inc. - 603659
 1815 Y Street
 Lincoln, NE
 US 68508
 Contact: Loren Michael
 LorenM@constructorslincoln.com
 T: (402)434-2157
 F:

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)