LEAHY·WOLF
Lubricating specialists since 1946

# OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | ATTENTION |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |

Area
## K5 CONSTRUCTION CORPORATION - HODGKINS IL
Machine Id
## 1116
Component
## Diesel Engine
Fluid
## LEAHY WOLF PREMIUM 15W40 (3 hrs)

## RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

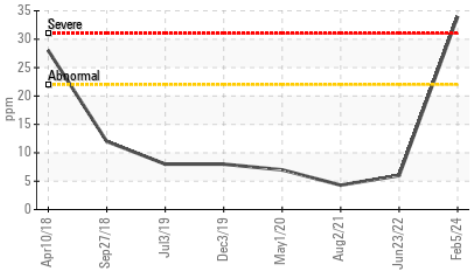
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

## FLUID CONDITION

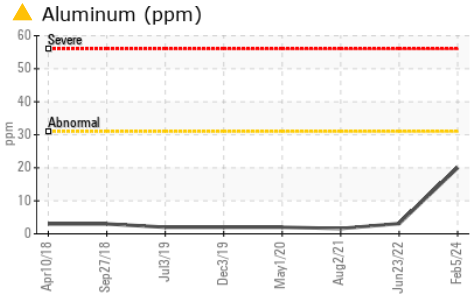
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | LW0008537 | LW0004989 | LW0002979 |
| Sample Date | | Client Info | | 05 Feb 2024 | 23 Jun 2022 | 02 Aug 2021 |
| Machine Age | hrs | Client Info | | 2540 | 1724 | 1475 |
| Oil Age | hrs | Client Info | | 816 | 249 | 245 |
| Filter Age | hrs | Client Info | | 816 | 249 | 245 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >51 | 47 | 7 | 8 |
| Chromium | ppm | ASTM D5185m | >11 | 3 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >31 | ▲ 20 | 3 | 2 |
| Lead | ppm | ASTM D5185m | >26 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >26 | 3 | <1 | 1 |
| Tin | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >22 | ▲ 34 | 6 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 5 | 1 | 0 |
| Fuel | | WC Method | >2.1 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.21 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 0.2 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.1 | 7.0 | 7.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.0 | 18.9 | 19.4 |
| 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 | >0.21 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | >31 | 0 | <1 | <1 |
| Boron | ppm | ASTM D5185m | | 0 | 5 | 6 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 53 | 57 | 54 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 828 | 838 | 853 |
| Calcium | ppm | ASTM D5185m | | 1224 | 1114 | 970 |
| Phosphorus | ppm | ASTM D5185m | | 934 | 1020 | 935 |
| Zinc | ppm | ASTM D5185m | | 1199 | 1230 | 1151 |
| Sulfur | ppm | ASTM D5185m | | 2888 | 3009 | 2389 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.8 | 16.2 | 16.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.5 | 8.7 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.6 | 13.8 | 13.4 | 13.4 |

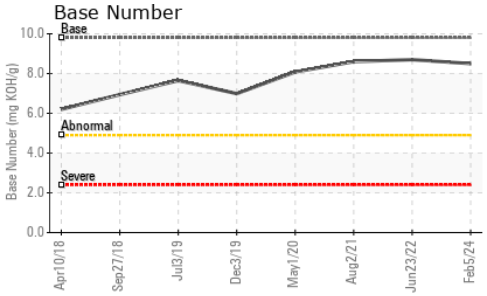
Silicon (ppm)



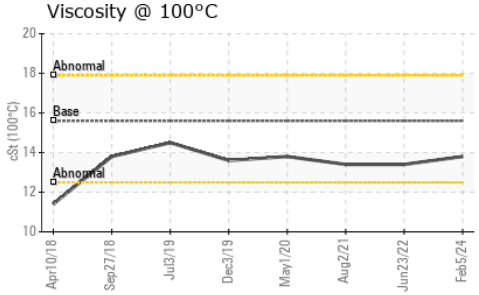

Aluminum (ppm)



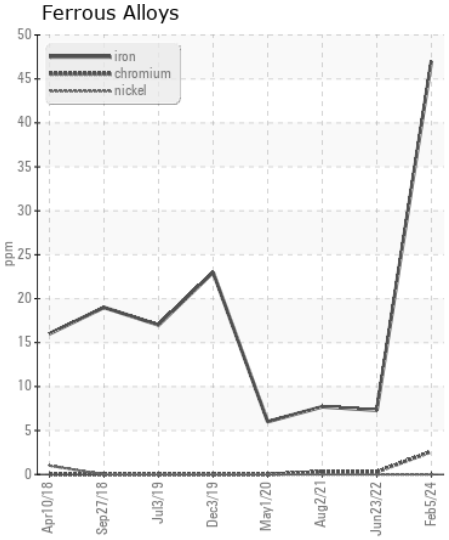

Base Number



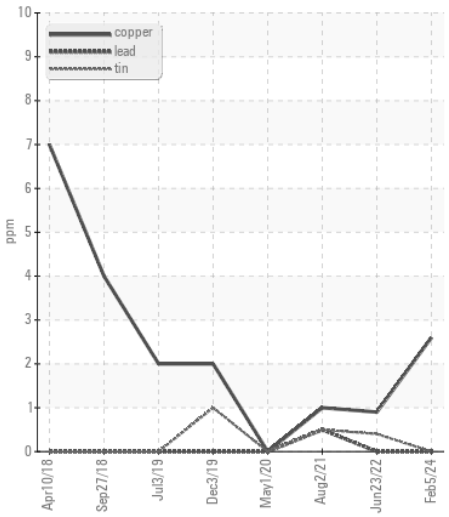

Viscosity @ 100°C



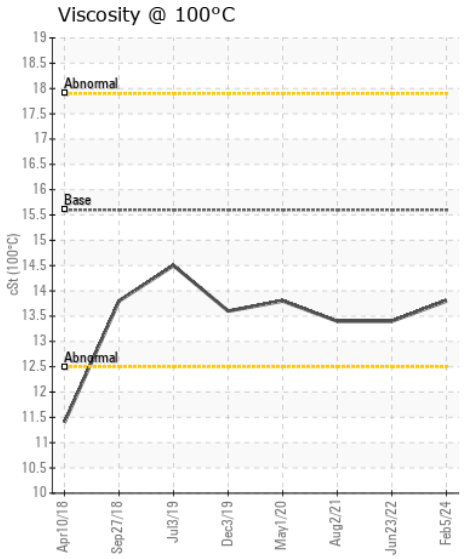

Ferrous Alloys



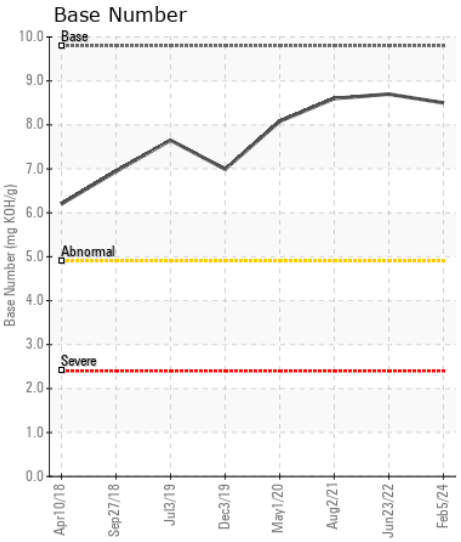

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : LW0008537
**Lab Number** : 06087037
**Unique Number** : 10874482
**Test Package** : FLEET

**Received** : 13 Feb 2024
**Tested** : 14 Feb 2024
**Diagnosed** : 14 Feb 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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