



OIL ANALYSIS REPORT

| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area
Store 9 - Marietta
Machine Id
518
Component
Diesel Engine
Fluid
LYDEN 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LEC0049500 | LEC0034598 | LEC0034599 |
| Sample Date | | Client Info | | 03 Apr 2024 | 09 Aug 2023 | 31 Mar 2023 |
| Machine Age | hrs | Client Info | | 2928 | 2169 | 1926 |
| Oil Age | hrs | Client Info | | 259 | 243 | 177 |
| Filter Age | hrs | Client Info | | 259 | 243 | 177 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 11 | 14 | 11 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 65 | 56 | 71 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 4 | 2 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

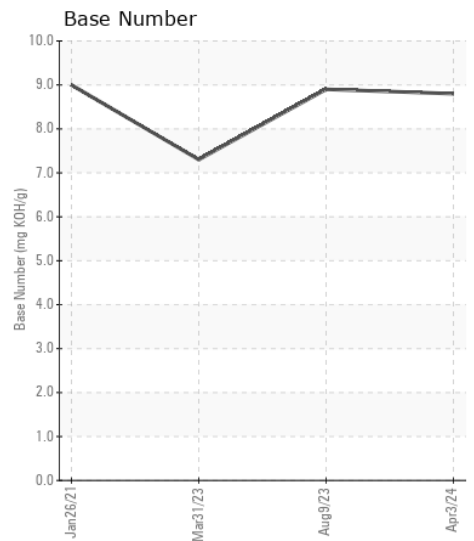
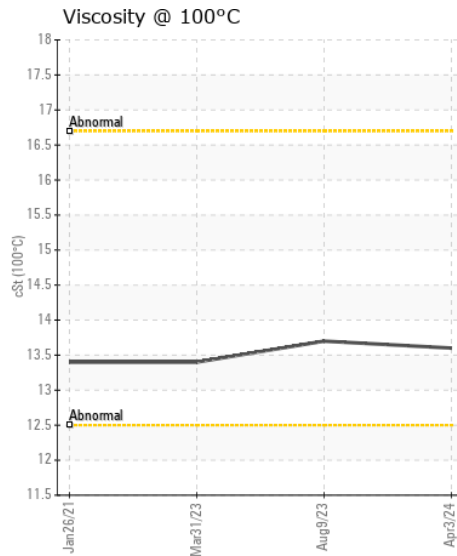
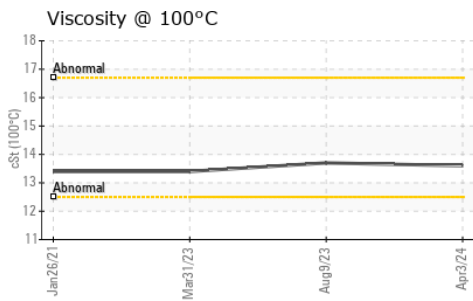
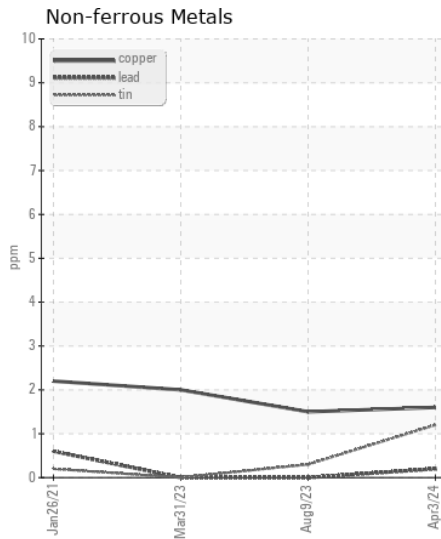
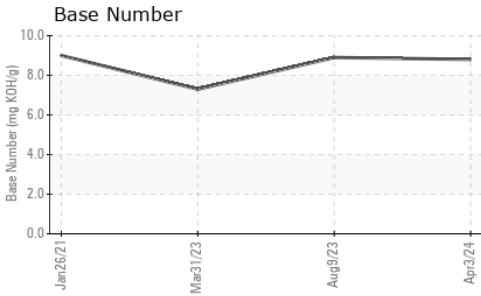
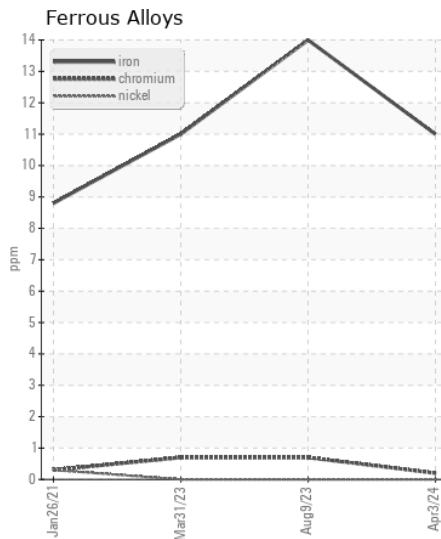
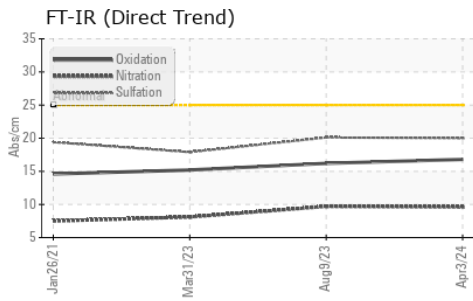
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >120 | 6 | 5 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | <1 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.2 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.6 | 9.7 | 8.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.0 | 20.1 | 17.9 |
| 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 |

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.

| | | | | | | |
|------------------|----------|-------------|-----|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 3 | 3 | <1 |
| Boron | ppm | ASTM D5185m | | 106 | 125 | 160 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 20 | 18 | 11 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 468 | 602 | 383 |
| Calcium | ppm | ASTM D5185m | | 1909 | 1965 | 1884 |
| Phosphorus | ppm | ASTM D5185m | | 924 | 1080 | 998 |
| Zinc | ppm | ASTM D5185m | | 1194 | 1360 | 1273 |
| Sulfur | ppm | ASTM D5185m | | 4151 | 4648 | 4562 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.8 | 16.2 | 15.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.8 | 8.9 | 7.3 |
| Visc @ 100°C | cSt | ASTM D445 | | 13.6 | 13.7 | 13.4 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049500 **Received** : 16 Apr 2024
Lab Number : 06150155 **Tested** : 17 Apr 2024
Unique Number : 10980233 **Diagnosed** : 18 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

LAROCHE TREE SERVICE
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 BELLAIRE, OH
 US 43906
 Contact: GLEN VARGO
 glen.vargo@larochetree.com

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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