



OIL ANALYSIS REPORT

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

Machine Id
15279
Component
Diesel Engine
Fluid
EXXON 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0885604 | WC0858245 | WC0840119 |
| Sample Date | | Client Info | | 18 Dec 2023 | 05 Oct 2023 | 27 Jul 2023 |
| Machine Age | mls | Client Info | | 85975 | 76767 | 68381 |
| Oil Age | mls | Client Info | | 9208 | 8386 | 8846 |
| Filter Age | mls | Client Info | | 9208 | 8386 | 8846 |
| 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 | 19 | 13 | 13 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 3 | <1 |
| Lead | ppm | ASTM D5185m | >40 | 1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | 3 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

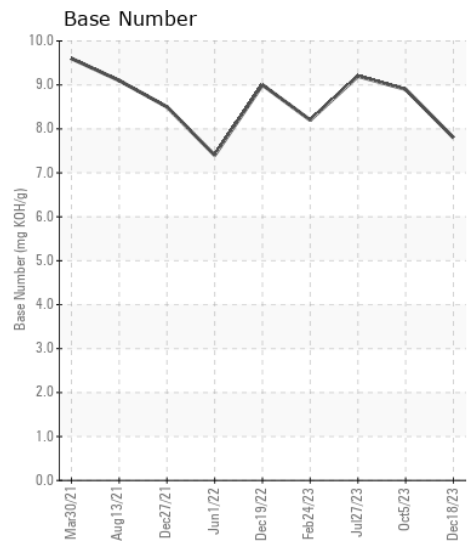
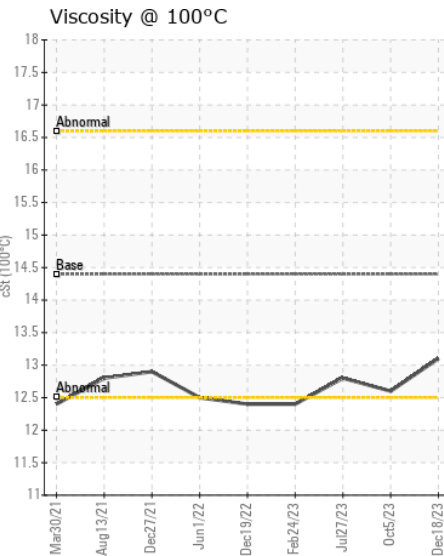
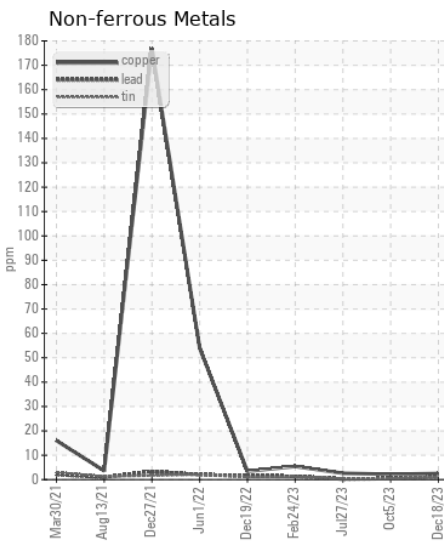
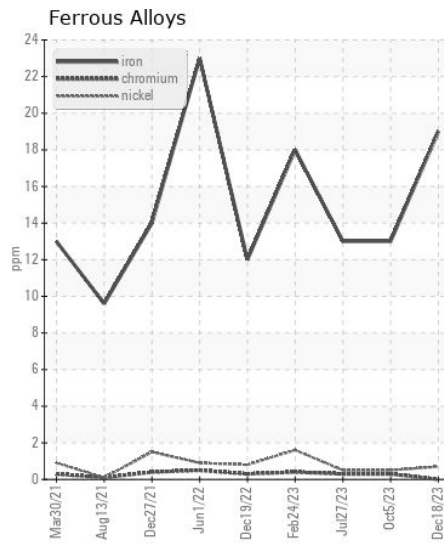
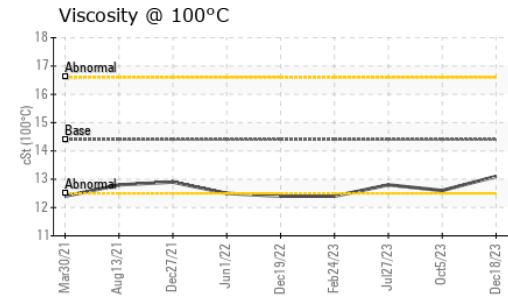
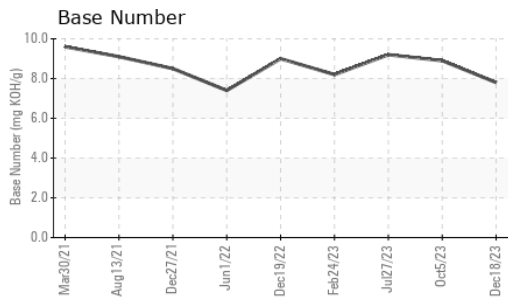
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 6 | 12 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 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 | 0.3 | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.0 | 6.6 | 7.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.6 | 18.6 | 19.3 |
| 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 | | 1 | <1 | 1 |
| Boron | ppm | ASTM D5185m | | 282 | 7 | 4 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 79 | 68 | 64 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 550 | 888 | 940 |
| Calcium | ppm | ASTM D5185m | | 1355 | 1089 | 1108 |
| Phosphorus | ppm | ASTM D5185m | | 1190 | 1041 | 977 |
| Zinc | ppm | ASTM D5185m | | 1399 | 1199 | 1200 |
| Sulfur | ppm | ASTM D5185m | | 3647 | 3556 | 3758 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.9 | 13.9 | 14.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 7.8 | 8.9 | 9.2 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.1 | 12.6 | 12.8 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0885604 **Received** : 08 Jan 2024
Lab Number : 06054599 **Diagnosed** : 10 Jan 2024
Unique Number : 10820548 **Diagnostician** : Sean Felton
Test Package : FLEET

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Certificate L2367
 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)