



OIL ANALYSIS REPORT

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

Machine Id
349634-152269
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 XLE 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | RY0123431 | RY0123221 | RY0123177 |
| Sample Date | | Client Info | | 11 Jan 2024 | 09 Jan 2023 | 26 Apr 2022 |
| Machine Age | mls | Client Info | | 8000 | 0 | 0 |
| Oil Age | mls | Client Info | | 0 | 20000 | 10000 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ATTENTION | NORMAL | ATTENTION |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 10 | 71 | 18 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 20 | 10 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 2 | 2 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

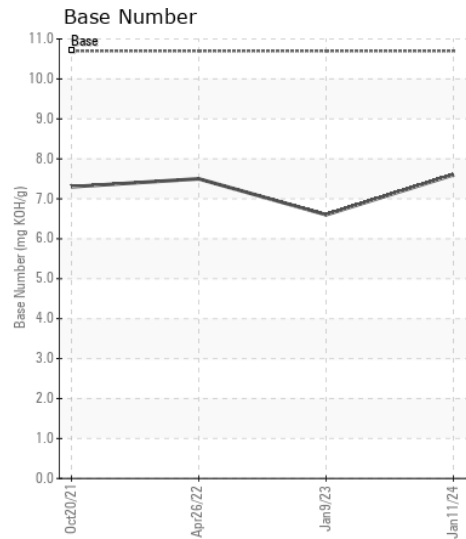
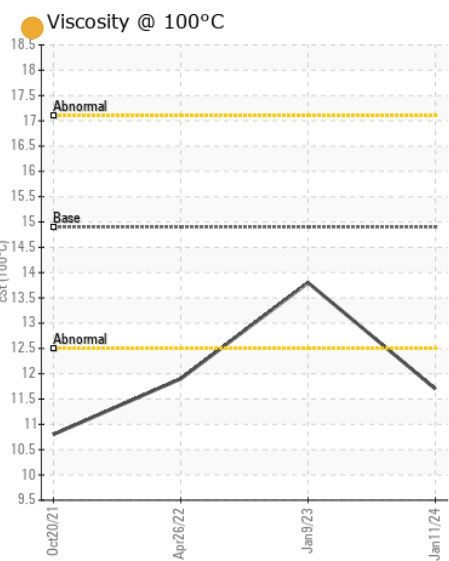
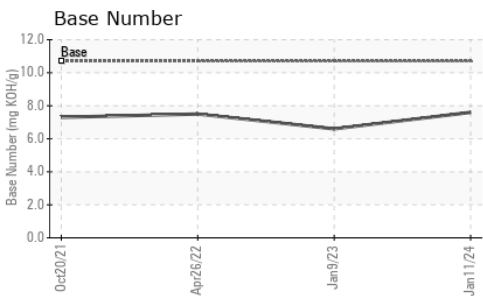
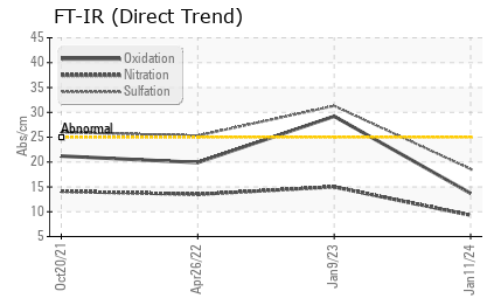
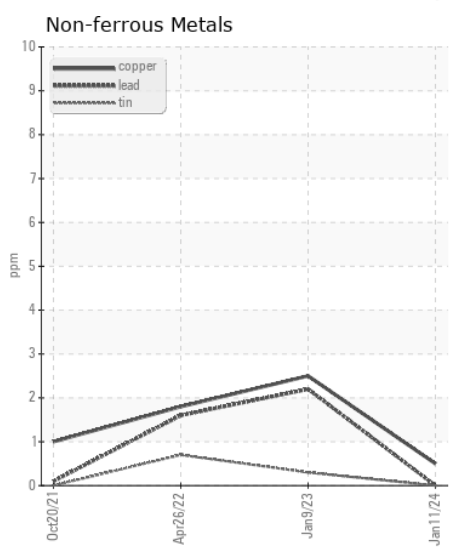
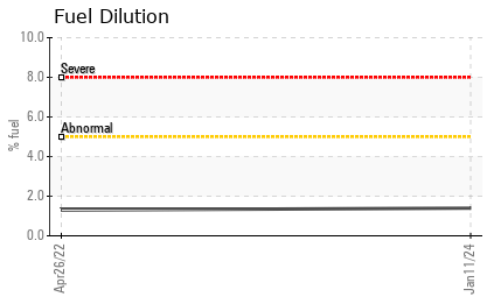
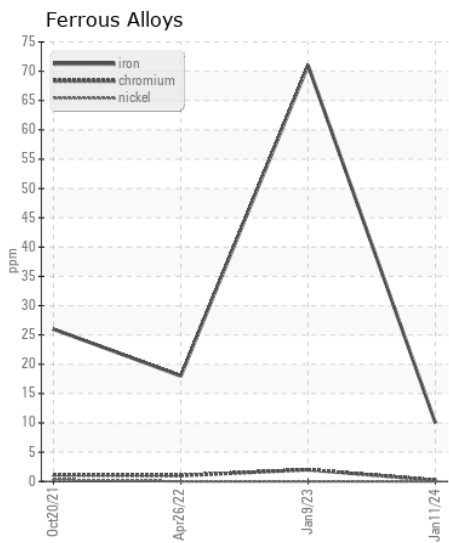
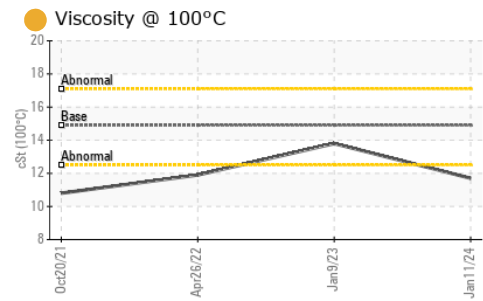
Fuel content negligible. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 13 | 9 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 35 | 12 |
| Fuel | % | ASTM D3524 | >5 | 1.4 | <1.0 | 1.3 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 1.5 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.3 | 15.0 | 13.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.6 | 31.3 | 25.3 |
| 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 2 | 4 | 5 |
| Boron | ppm | ASTM D5185m | | 103 | 54 | 35 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 19 | 92 | 27 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 650 | 514 | 656 |
| Calcium | ppm | ASTM D5185m | | 1295 | 1566 | 1342 |
| Phosphorus | ppm | ASTM D5185m | 760 | 766 | 912 | 664 |
| Zinc | ppm | ASTM D5185m | 830 | 858 | 1215 | 829 |
| Sulfur | ppm | ASTM D5185m | 2770 | 3289 | 3331 | 3121 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.7 | 29.2 | 19.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.7 | 7.6 | 6.6 | 7.5 |
| Visc @ 100°C | cSt | ASTM D445 | 14.9 | 11.7 | 13.8 | 11.9 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RY0123431 **Received** : 22 May 2024
Lab Number : 06187309 **Tested** : 28 May 2024
Unique Number : 11044061 **Diagnosed** : 28 May 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)