



WEAR CHECK

OIL ANALYSIS REPORT

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

Machine Id
2209
Component
Diesel Engine
Fluid
ROYAL PURPLE MOTOR OIL 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0719853 | WC0719858 | WC0537358 |
| Sample Date | | Client Info | | 08 Mar 2024 | 20 Oct 2023 | 06 Oct 2022 |
| Machine Age | mls | Client Info | | 0 | 222510 | 122446 |
| Oil Age | mls | Client Info | | 50000 | 50000 | 100000 |
| Filter Age | mls | Client Info | | 50000 | 50000 | 50000 |
| Oil Changed | | Client Info | | N/A | Changed | Not Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|------|
| Iron | ppm | ASTM D5185m | >100 | 54 | ▲ 104 | 69 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | 3 | 3 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 7 | 14 | 29 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 27 | 63 | 292 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 2 | 3 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

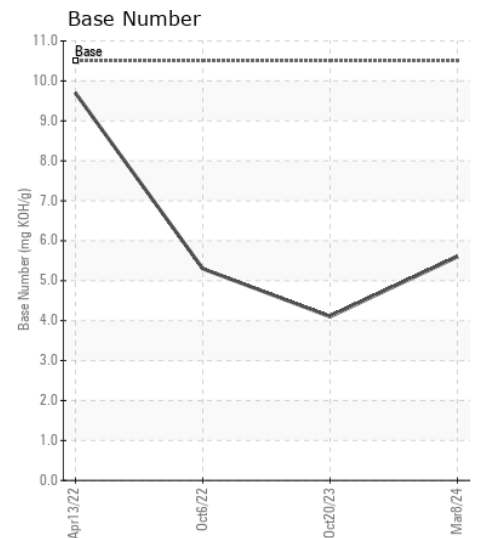
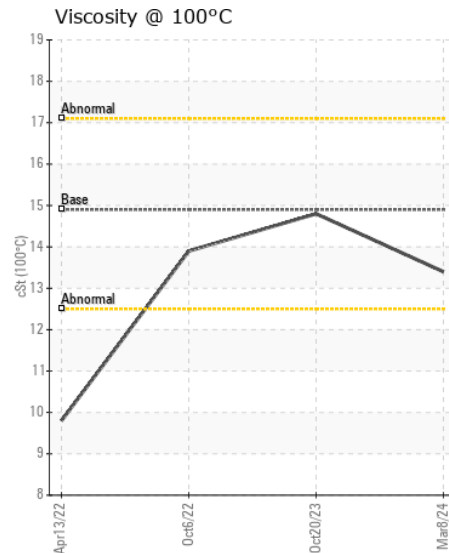
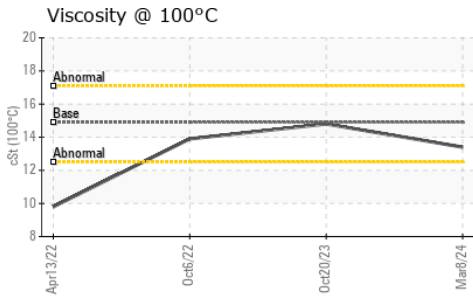
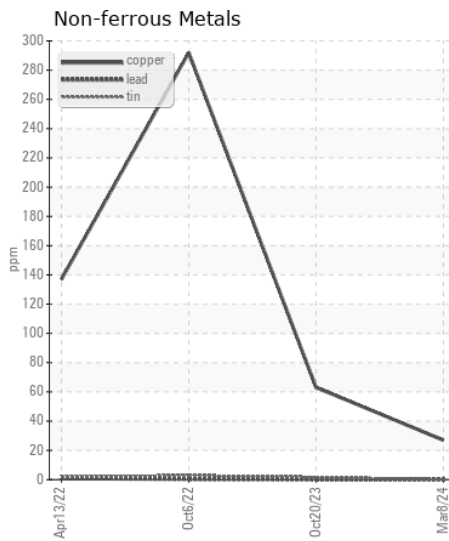
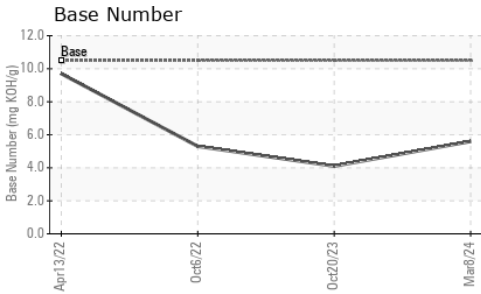
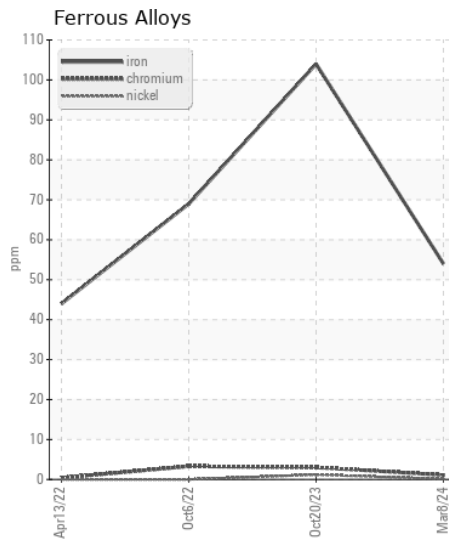
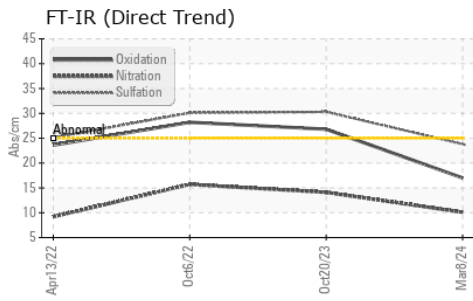
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 11 | 8 |
| Potassium | ppm | ASTM D5185m | >20 | 10 | 32 | 76 |
| 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 | 1.2 | 2 | 1.7 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.1 | 14.1 | 15.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.8 | 30.3 | 30.1 |
| 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 | | 4 | 4 | 2 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | <1 | <1 | 7 |
| Manganese | ppm | ASTM D5185m | | <1 | 2 | 2 |
| Magnesium | ppm | ASTM D5185m | 60 | 16 | 29 | 89 |
| Calcium | ppm | ASTM D5185m | 3050 | 2458 | 2583 | 2673 |
| Phosphorus | ppm | ASTM D5185m | 1050 | 837 | 935 | 897 |
| Zinc | ppm | ASTM D5185m | 1200 | 970 | 1157 | 1112 |
| Sulfur | ppm | ASTM D5185m | 12500 | 3201 | 3005 | 3138 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.0 | 26.8 | 28.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.5 | 5.6 | 4.1 | 5.3 |
| Visc @ 100°C | cSt | ASTM D445 | 14.9 | 13.4 | 14.8 | 13.9 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0719853

Lab Number : 06149463

Unique Number : 10979541

Test Package : FLEET

Received : 15 Apr 2024

Tested : 16 Apr 2024

Diagnosed : 17 Apr 2024 - Don Baldrige

DILLON TRANSPORTATION

4445 NORTH INTERSTATE WAY

KINGMAN, AZ

US 86401

Contact: T LAMOREAUX

t.lamoreaux@dillontransportation.com

T:

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)