



OIL ANALYSIS REPORT

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

Machine Id
BLUE BIRD 240
Component
Front Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | RW0005664 | RW0004492 | RW0004214 |
| Sample Date | | Client Info | | 13 May 2024 | 12 Jan 2024 | 10 May 2023 |
| Machine Age | mls | Client Info | | 96000 | 85500 | 72000 |
| Oil Age | mls | Client Info | | 12000 | 12000 | 12000 |
| Filter Age | mls | Client Info | | 12000 | 12000 | 12000 |
| 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 | 23 | 18 | 18 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 4 | 8 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 3 | 1 | 6 |
| Tin | ppm | ASTM D5185m | >15 | 1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

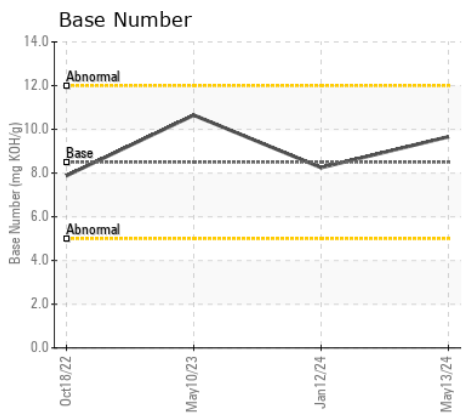
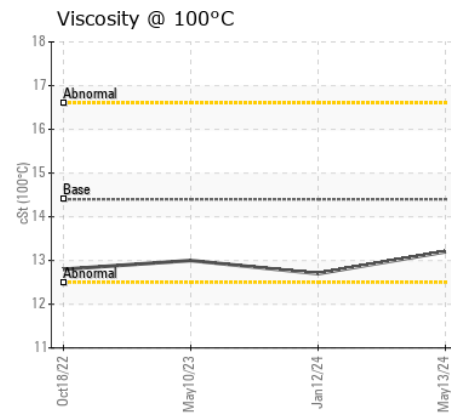
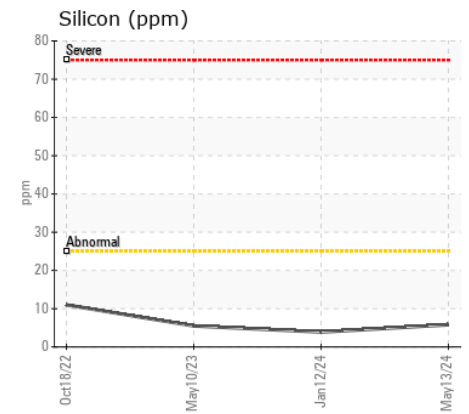
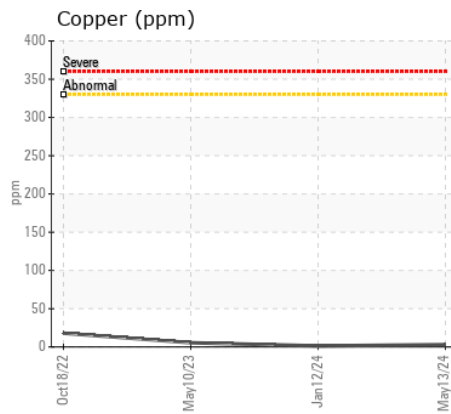
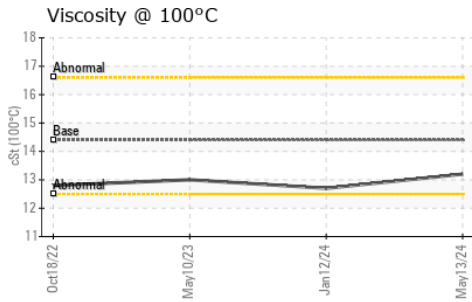
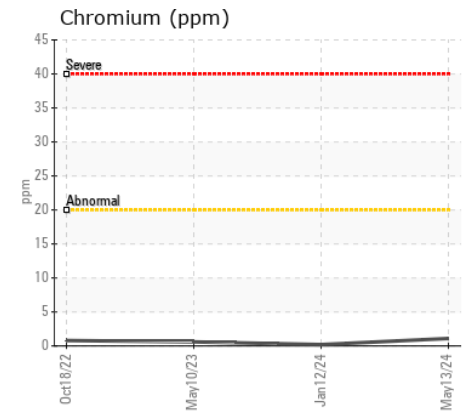
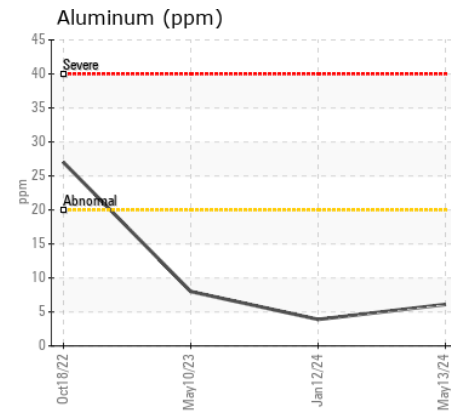
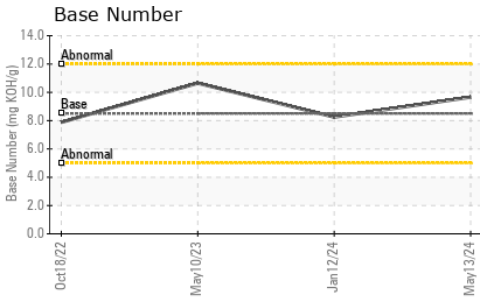
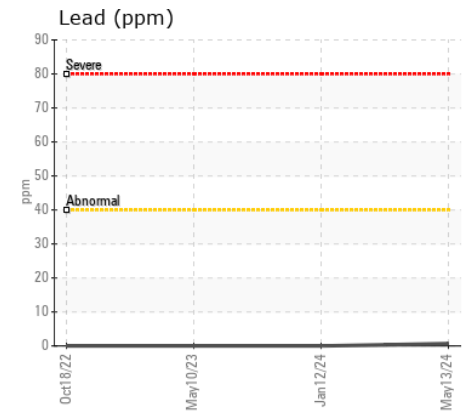
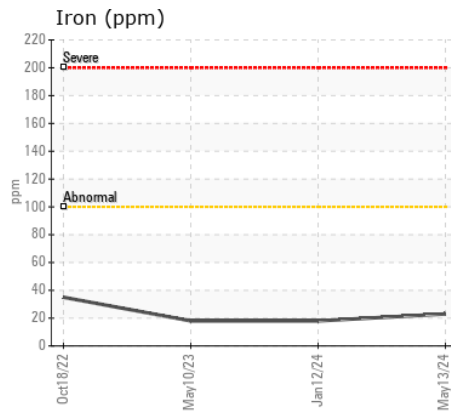
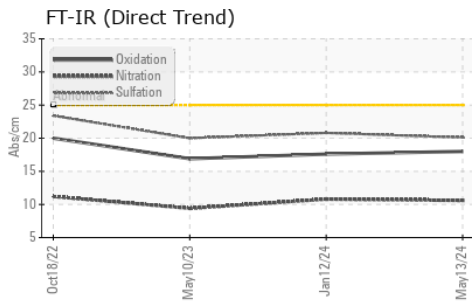
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 6 | 4 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 7 | 7 | 11 |
| 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 | 0.4 | 0.4 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.6 | 10.8 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.1 | 20.8 | 20.0 |
| 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 | >158 | 1 | <1 | 1 |
| Boron | ppm | ASTM D5185m | 250 | 6 | 5 | 10 |
| Barium | ppm | ASTM D5185m | 10 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 63 | 49 | 57 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 946 | 729 | 934 |
| Calcium | ppm | ASTM D5185m | 3000 | 1181 | 921 | 1190 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1087 | 820 | 1042 |
| Zinc | ppm | ASTM D5185m | 1350 | 1286 | 1018 | 1329 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3560 | 2413 | 3652 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.0 | 17.6 | 16.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 9.66 | 8.25 | 10.65 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.2 | 12.7 | 13.0 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005664
Lab Number : 06186896
Unique Number : 11043648
Test Package : MOB 2
Received : 21 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

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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)