



OIL ANALYSIS REPORT

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

Area
AAAB IRAQ

Machine Id
2000-4182

Component
Genset

Fluid
VALVOLINE PREMIUM BLUE (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0860728 | WC0860718 | WC0860711 |
| Sample Date | | Client Info | | 09 Feb 2024 | 07 Jan 2024 | 07 Dec 2023 |
| Machine Age | hrs | Client Info | | 9964 | 9714 | 9464 |
| Oil Age | hrs | Client Info | | 250 | 250 | 355 |
| Filter Age | hrs | Client Info | | 250 | 250 | 355 |
| 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 | >50 | 0 | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 2 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >17 | <1 | 2 | 2 |
| Copper | ppm | ASTM D5185m | >70 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

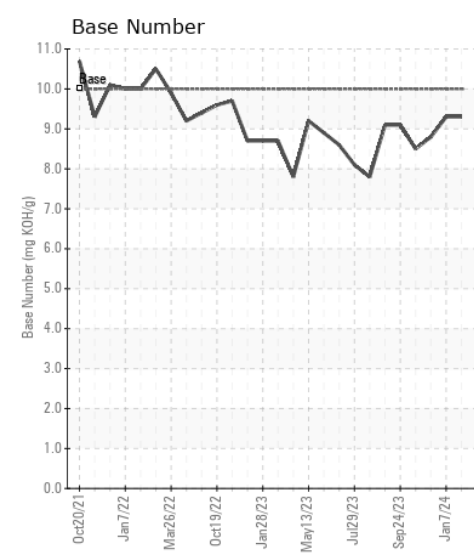
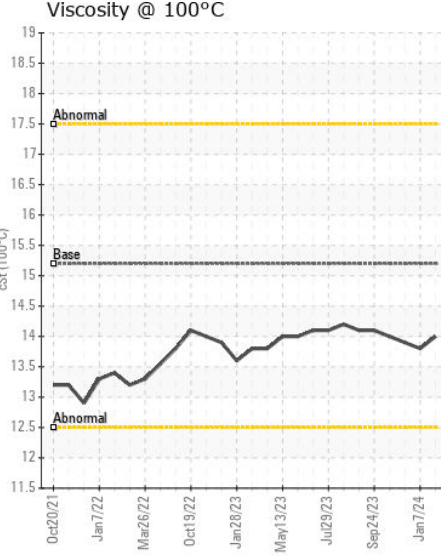
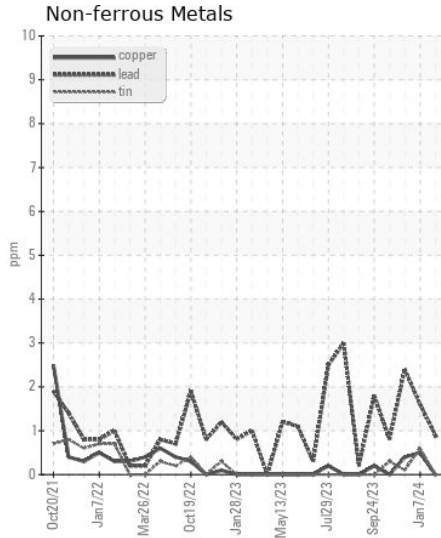
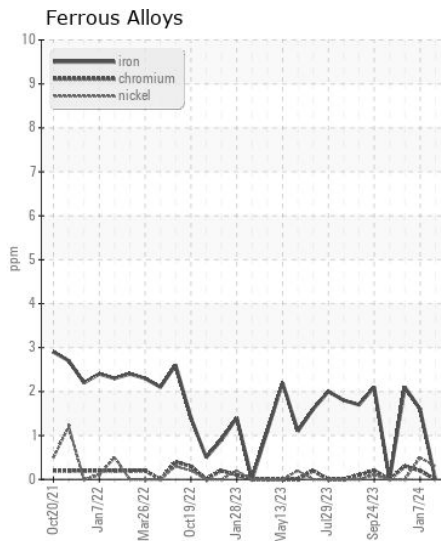
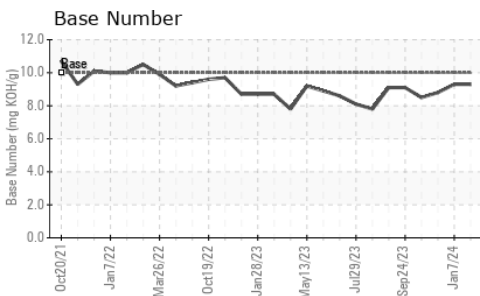
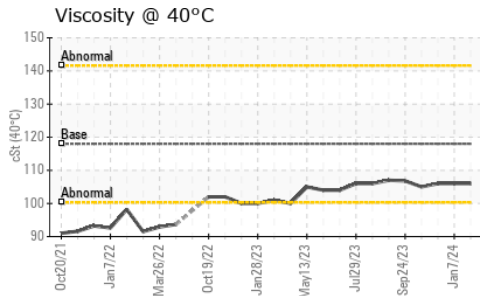
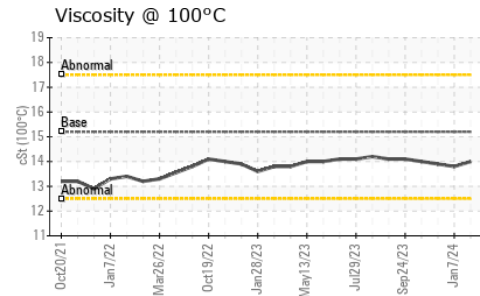
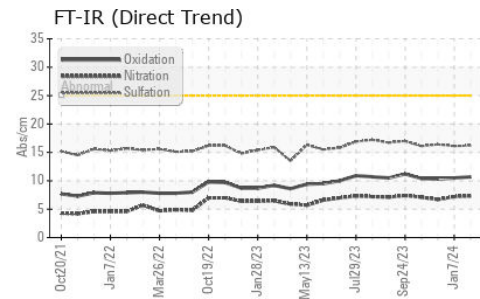
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | 2 | 2 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0 | 0.1 | 0 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.3 | 7.2 | 6.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 16.2 | 16.1 | 16.4 |
| 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 | >0.1 | 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 | 0 | 0 |
| Boron | ppm | ASTM D5185m | 2.9 | 75 | 74 | 26 |
| Barium | ppm | ASTM D5185m | 0.1 | 0 | 13 | 9 |
| Molybdenum | ppm | ASTM D5185m | 0.0 | 35 | 36 | 13 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 18 | 19 | 15 | 12 |
| Calcium | ppm | ASTM D5185m | 2936 | 3451 | 3466 | 3497 |
| Phosphorus | ppm | ASTM D5185m | 998 | 937 | 942 | 920 |
| Zinc | ppm | ASTM D5185m | 1095 | 1040 | 1014 | 1062 |
| Sulfur | ppm | ASTM D5185m | 5469 | 4622 | 4779 | 4036 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 10.7 | 10.5 | 10.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.0 | 9.3 | 9.3 | 8.8 |
| Visc @ 40°C | cSt | ASTM D445 | 118 | 106 | 106 | 106 |
| Visc @ 100°C | cSt | ASTM D445 | 15.2 | 14.0 | 13.8 | 13.9 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 134 | 133 | 130 | 131 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0860728 **Received** : 10 Apr 2024
Lab Number : 06145232 **Tested** : 11 Apr 2024
Unique Number : 10970040 **Diagnosed** : 13 Apr 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: KV40, VI)

CUMMINS - PRIME POWER & IPP STRATEGIC ACCOUNTS
 3850 N VICTORIA ST
 SHOREVIEW, MN
 US 55126
 Contact: Harsha Padigae
 hpadigae@louisberger.com
 T: (964)780-7579134
 F: x:

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)