



OIL ANALYSIS REPORT

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

Machine Id
D-235
 Component
Diesel Engine
 Fluid
PHILLIPS 66 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0703738 | WC0828499 | WC0828459 |
| Sample Date | | Client Info | | 29 Jan 2024 | 15 Nov 2023 | 07 Sep 2023 |
| Machine Age | hrs | Client Info | | 1415 | 1140 | 852 |
| Oil Age | hrs | Client Info | | 275 | 288 | 308 |
| Filter Age | hrs | Client Info | | 275 | 288 | 308 |
| 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 | 6 | 6 | 7 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 2 | 2 | 1 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 2 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 3 | 3 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 1 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

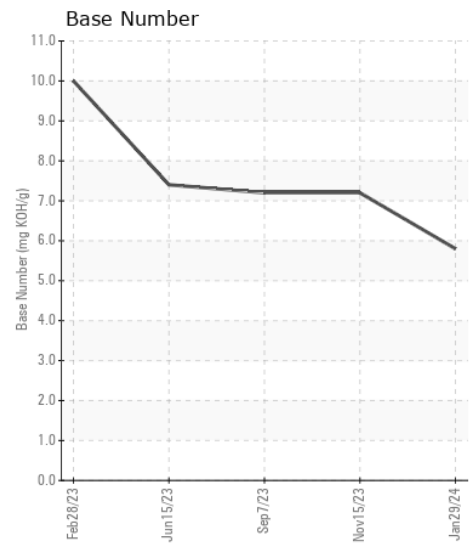
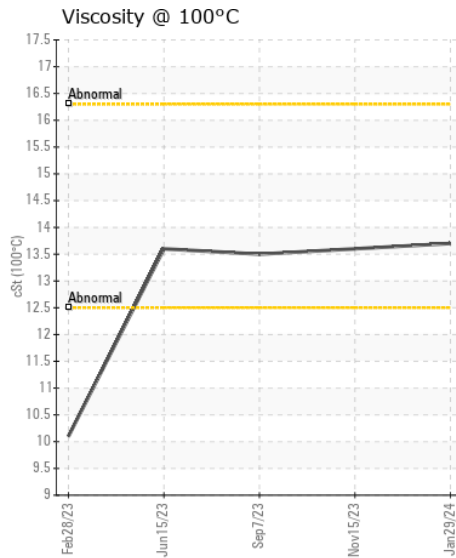
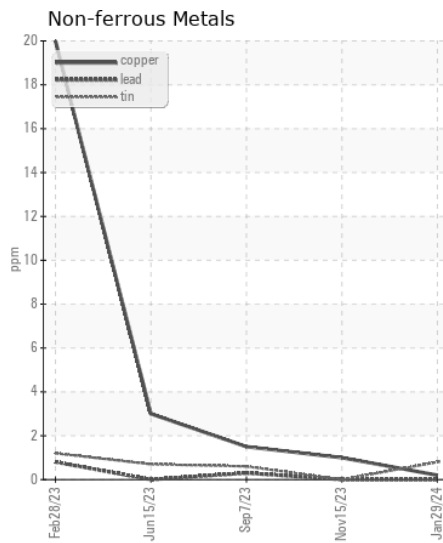
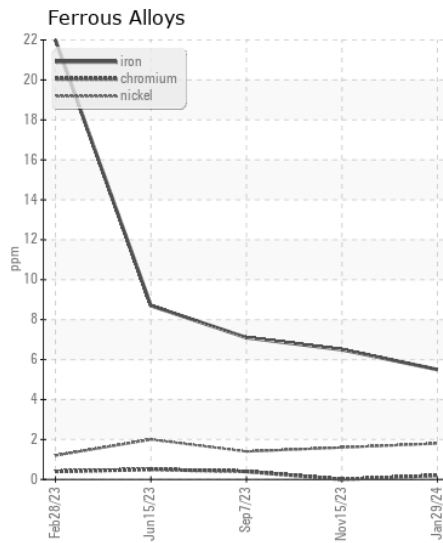
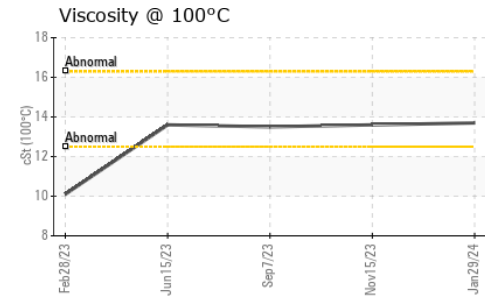
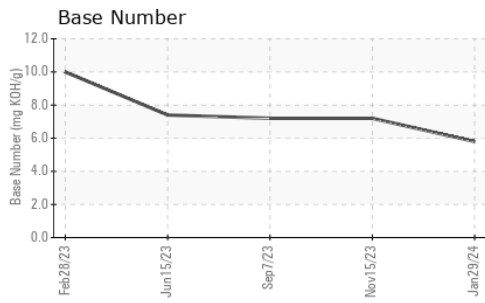
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 2 |
| 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 | 0.2 | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.0 | 9.0 | 8.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.0 | 18.5 | 17.8 |
| 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 | | 2 | 4 | 2 |
| Boron | ppm | ASTM D5185m | | 65 | 59 | 62 |
| Barium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 94 | 94 | 93 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 55 | 44 | 42 |
| Calcium | ppm | ASTM D5185m | | 2162 | 2246 | 2443 |
| Phosphorus | ppm | ASTM D5185m | | 1065 | 1055 | 1106 |
| Zinc | ppm | ASTM D5185m | | 1275 | 1314 | 1399 |
| Sulfur | ppm | ASTM D5185m | | 3742 | 3873 | 5035 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.0 | 14.5 | 13.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 5.8 | 7.2 | 7.2 |
| Visc @ 100°C | cSt | ASTM D445 | | 13.7 | 13.6 | 13.5 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0703738 **Received** : 09 Feb 2024
Lab Number : 06084451 **Tested** : 09 Feb 2024
Unique Number : 10871896 **Diagnosed** : 09 Feb 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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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)

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