



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

Area
LES GRIMM
Machine Id
[LES GRIMM] 007 569145-7
Component
Port Genset
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0058582 | MW0058533 | MW0058535 |
| Sample Date | | Client Info | | 07 May 2024 | 08 Apr 2024 | 05 Mar 2024 |
| Machine Age | hrs | Client Info | | 4922 | 4550 | 4124 |
| Oil Age | hrs | Client Info | | 388 | 417 | 400 |
| Filter Age | hrs | Client Info | | 388 | 417 | 400 |
| 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 | 6 | 6 | 8 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 15 | 14 | 15 |
| Silver | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >12 | 1 | <1 | <1 |
| Lead | ppm | ASTM D5185m | >17 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >70 | 0 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

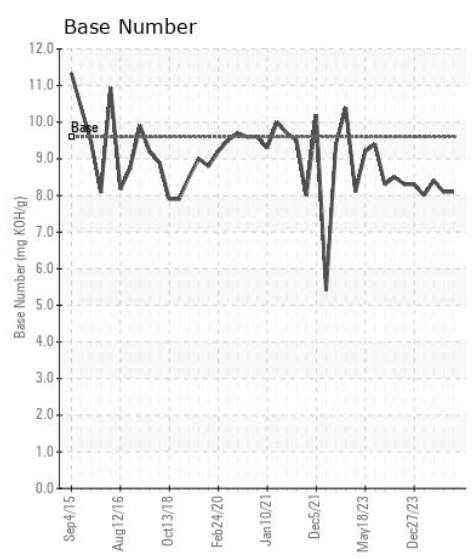
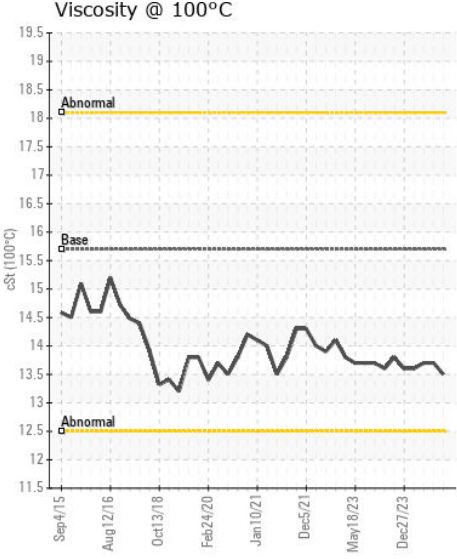
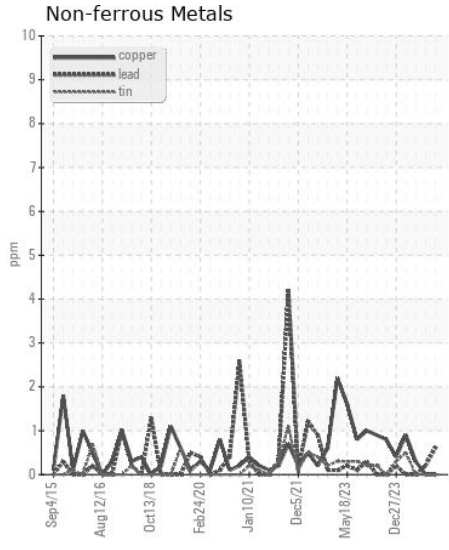
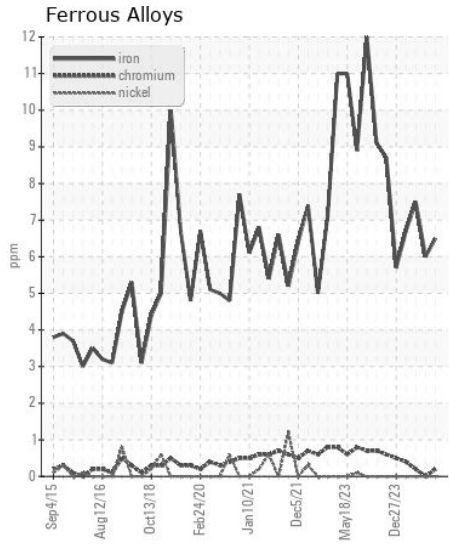
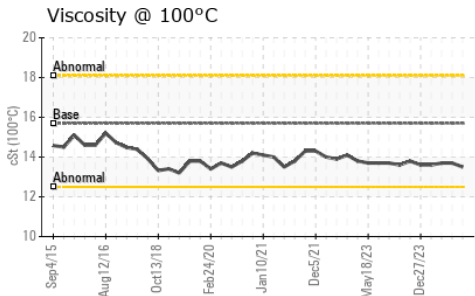
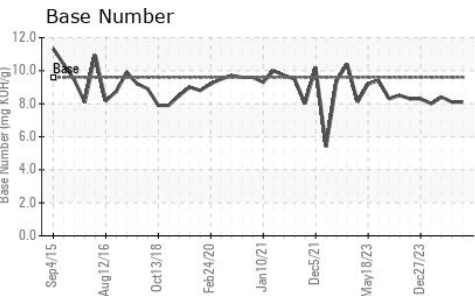
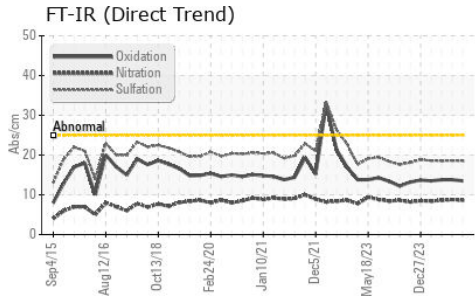
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 3 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 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 | | 0.2 | 0.2 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.6 | 8.8 | 8.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.5 | 18.6 | 18.5 |
| 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 | | 8 | 2 | 2 |
| Boron | ppm | ASTM D5185m | | 81 | 86 | 92 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 33 | 32 | 33 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | 822 | 792 | 778 |
| Calcium | ppm | ASTM D5185m | | 1795 | 1809 | 1661 |
| Phosphorus | ppm | ASTM D5185m | 1200 | 835 | 805 | 749 |
| Zinc | ppm | ASTM D5185m | 1300 | 986 | 973 | 873 |
| Sulfur | ppm | ASTM D5185m | 3200 | 4021 | 3934 | 3729 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.5 | 13.8 | 13.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.6 | 8.1 | 8.1 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.7 | 13.5 | 13.7 | 13.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0058582
Lab Number : 06193262
Unique Number : 11050014
Test Package : MAR 2
Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003

Contact: DALE MORIE
 dale.morie@ingrambarga.com
 T: (270)415-4467
 F: (615)695-3697

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)