



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id
CATERPILLAR 966H 966H-L06 A6D00520
 Component
Rear Differential
 Fluid
CHEVRON DELO TORQFORCE SAE 30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|---------------|----------|----------|
| Sample Number | | Client Info | | TR06196013 | --- | --- |
| Sample Date | | Client Info | | 17 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 27087 | --- | --- |
| Oil Age | hrs | Client Info | | 2178 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Not Changd | --- | --- |
| Filter Changed | | Client Info | | Not Changd | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|-----|-----|
| Iron | ppm | ASTM D5185m | >500 | 158 | --- | --- |
| Chromium | ppm | ASTM D5185m | >3 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >3 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >30 | 2 | --- | --- |
| Lead | ppm | ASTM D5185m | >13 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >103 | 11 | --- | --- |
| Tin | ppm | ASTM D5185m | >5 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | <1 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

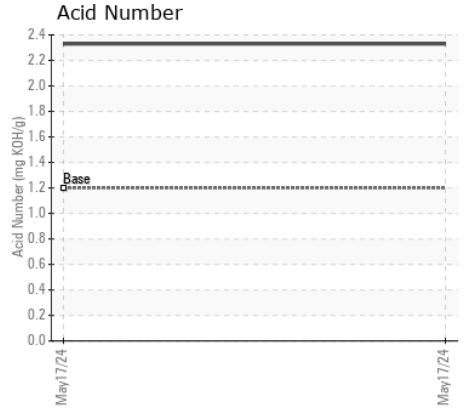
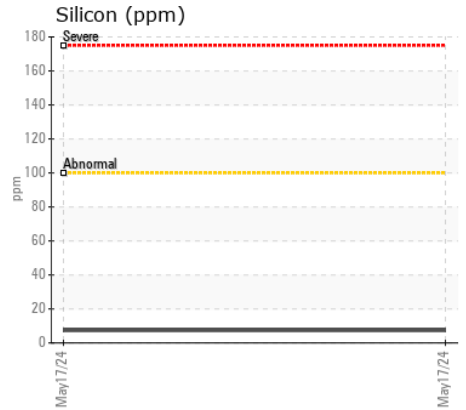
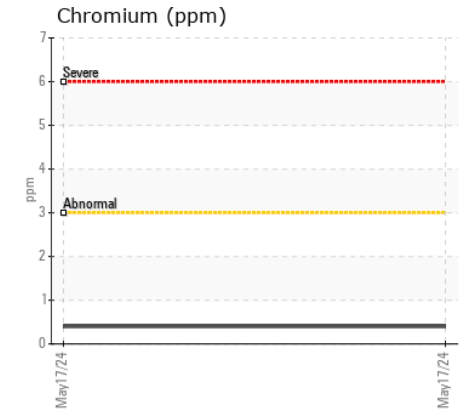
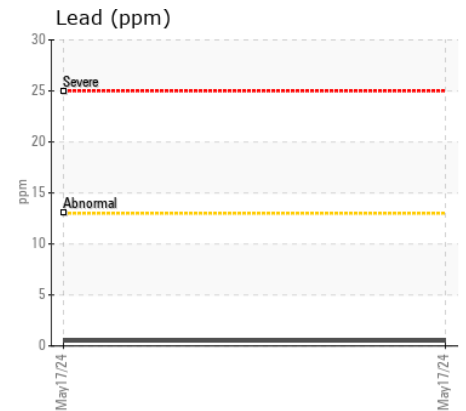
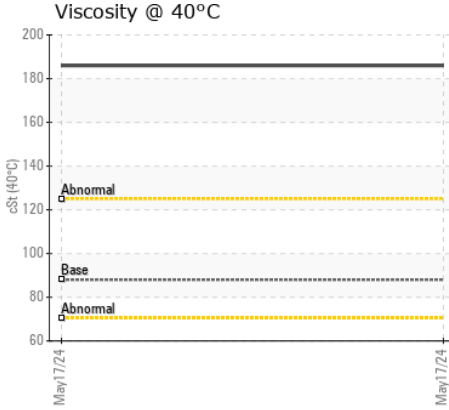
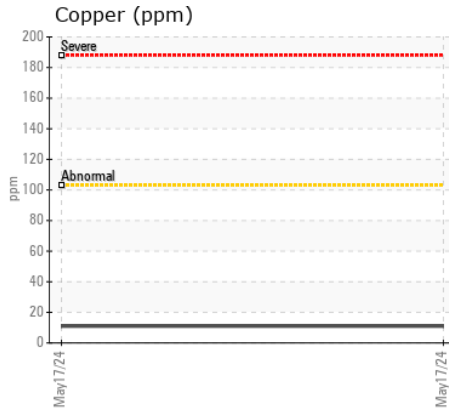
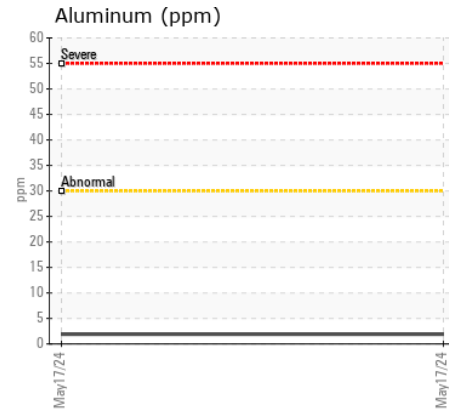
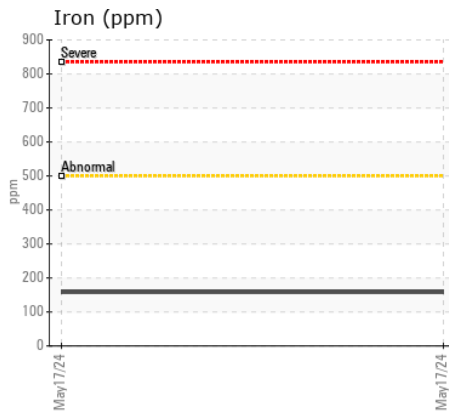
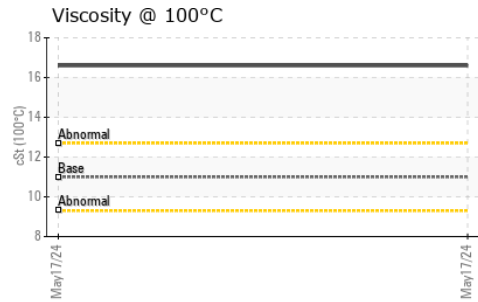
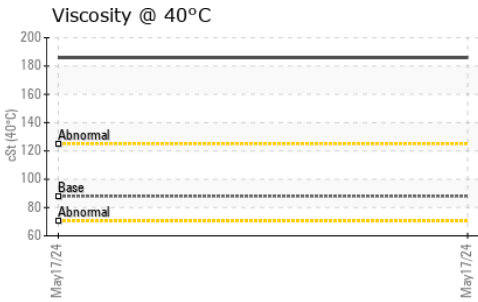
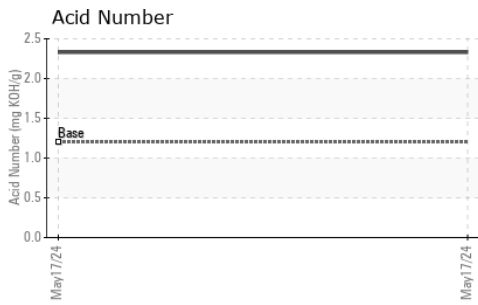
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|-------|-----|-----|
| Silicon | ppm | ASTM D5185m | >100 | 7 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | <1 | --- | --- |
| Water | | WC Method | >.2 | NEG | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >.2 | NEG | --- | --- |

FLUID CONDITION

Confirm oil type. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|----------------------|----------|-------------|------|------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 12 | --- | --- |
| Boron | ppm | ASTM D5185m | 4 | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | | <1 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 6 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 13 | 15 | --- | --- |
| Calcium | ppm | ASTM D5185m | 4000 | 2945 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 990 | 1263 | --- | --- |
| Zinc | ppm | ASTM D5185m | 1310 | 1315 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 3010 | 8600 | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.2 | 2.33 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 88 | 186 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 11 | 16.6 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | 110 | 93 | --- | --- |



Certificate L2367

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

Sample No. : TR06196013

Lab Number : 06196013

Unique Number : 11058136

Test Package : MOB 2 (Additional Tests: KV100, VI)

Received : 30 May 2024

Tested : 02 Jun 2024

Diagnosed : 02 Jun 2024 - Don Baldrige

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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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