



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id
WESTERN STAR 004

Component
Transmission

Fluid
TRC PRO-TAC IV SAE 50 (7 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | TR05967169 | --- | --- |
| Sample Date | | Client Info | | 28 Sep 2023 | --- | --- |
| Machine Age | mls | Client Info | | 610383 | --- | --- |
| Oil Age | mls | Client Info | | 57365 | --- | --- |
| Filter Age | mls | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|-----|-----|
| Iron | ppm | ASTM D5185m | >200 | 37 | --- | --- |
| Chromium | ppm | ASTM D5185m | >10 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185m | | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >50 | 6 | --- | --- |
| Lead | ppm | ASTM D5185m | >50 | 1 | --- | --- |
| Copper | ppm | ASTM D5185m | >200 | 4 | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

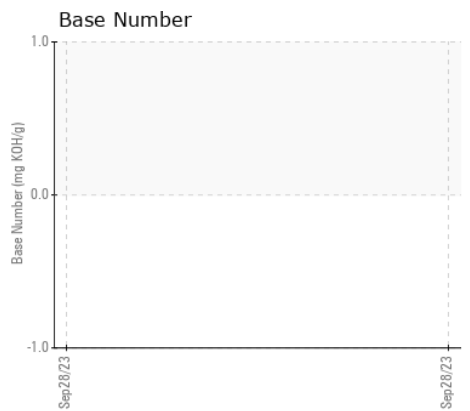
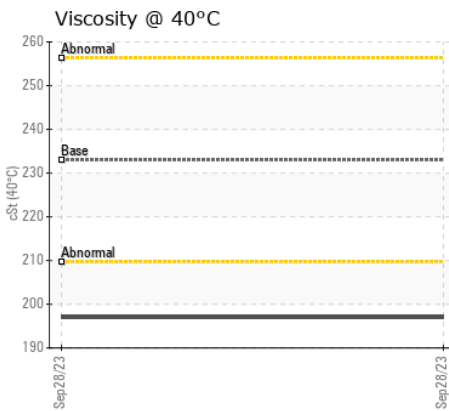
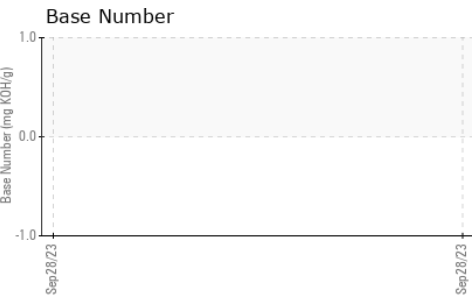
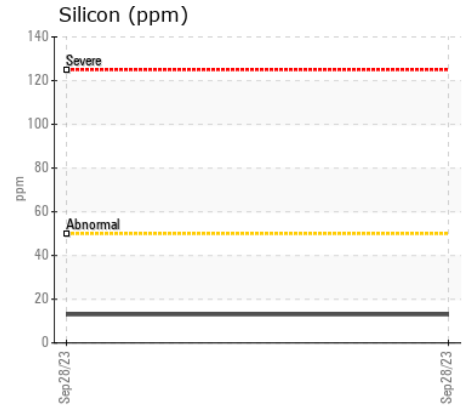
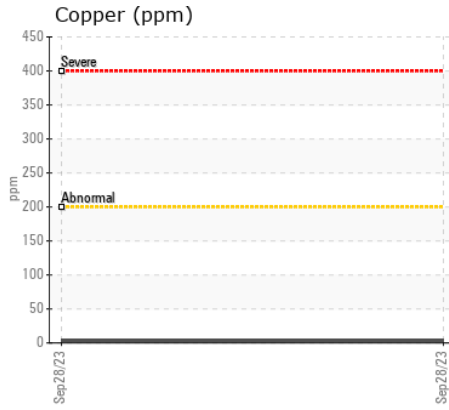
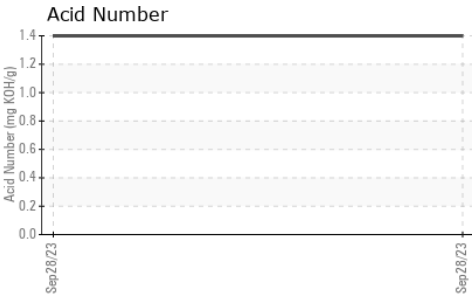
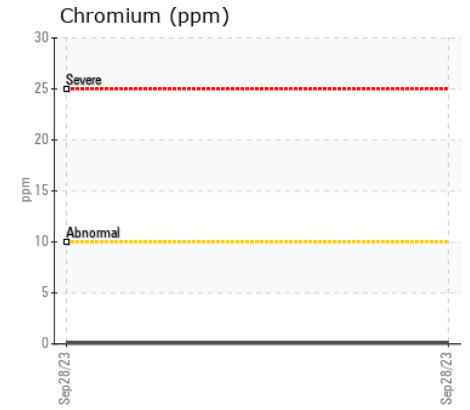
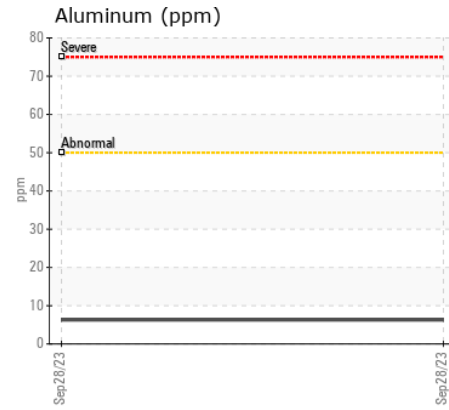
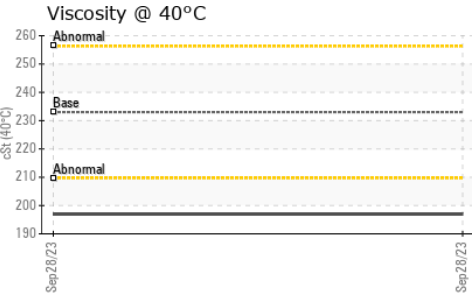
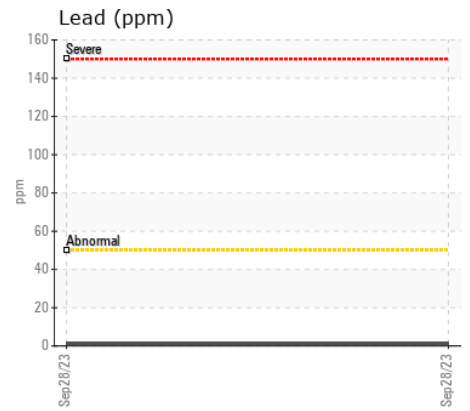
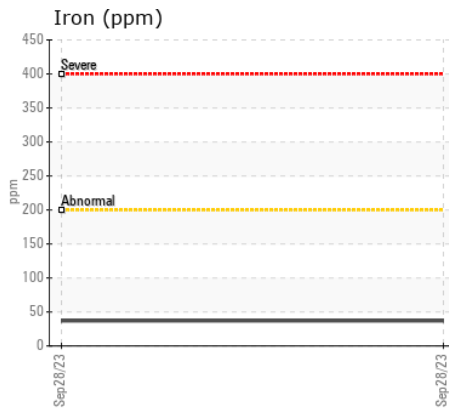
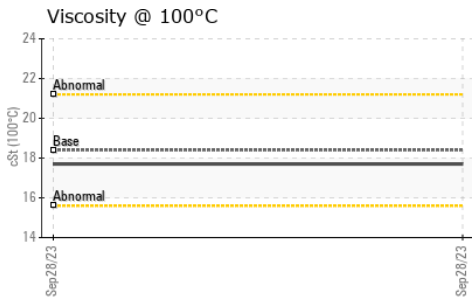
There is no indication of any contamination in the fluid.

| | | | | | | |
|------------------|--------|-------------|-------|-------|-----|-----|
| Silicon | ppm | ASTM D5185m | >50 | 13 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Water | | WC Method | >0.1 | 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 | >0.1 | NEG | --- | --- |

FLUID CONDITION

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

| | | | | | | |
|----------------------|----------|-------------|------|------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 0 | --- | --- |
| Boron | ppm | ASTM D5185m | | 52 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | <1 | --- | --- |
| Manganese | ppm | ASTM D5185m | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 8 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 2687 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 1084 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 1089 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 6085 | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.40 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 233 | 197 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 18.4 | 17.7 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | | 97 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05967169
Lab Number : 05967169
Unique Number : 10673720
Test Package : MOB 2 (Additional Tests: FT-IR, KV100, TBN, VI)

Received : 02 Oct 2023
Tested : 03 Oct 2023
Diagnosed : 03 Oct 2023 - Doug Bogart

DALE ALLEN TRUCKING
 3410 RAILROAD AVE
 CRESCENT CITY, CA
 US 95531
 Contact: JEFFREY WARREN

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)

T:
F: