



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

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

Machine Id

73

Component

Drum Gearbox

Fluid

TRC MOLY ULTRA-TEC GEAR OIL 85W140 (--- 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 | | TR0001305 | TR0001250 | TR0000824 |
| Sample Date | | Client Info | | 09 Jan 2024 | 03 Oct 2023 | 16 May 2023 |
| Machine Age | hrs | Client Info | | 19809 | 19660 | 19124 |
| Oil Age | hrs | Client Info | | 19809 | 19660 | 0 |
| Filter Age | hrs | Client Info | | 0 | 19660 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | N/A | Not Changd | Not Changd |
| Sample Status | | | | ABNORMAL | ABNORMAL | NORMAL |

WEAR

Gear wear is indicated. All other component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|-------|
| Iron | ppm | ASTM D5185m | >200 | ▲ 228 | ▲ 215 | 120 |
| Chromium | ppm | ASTM D5185m | >10 | 2 | 2 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 1 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | | 5 | 7 | 3 |
| Lead | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | | 3 | 4 | 2 |
| Tin | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

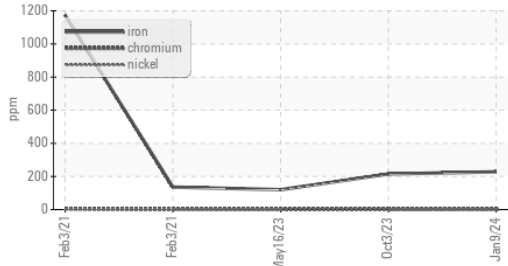
| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | | 52 | 53 | 30 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 3 | 1 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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

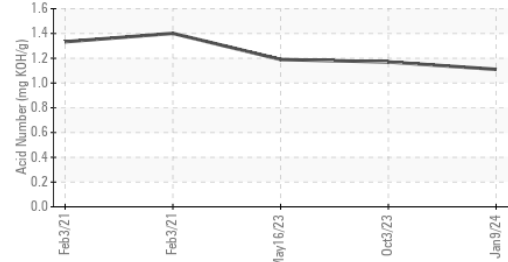
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|----------------------|----------|-------------|-----|--------------|-------|-------|
| Sodium | ppm | ASTM D5185m | | 2 | 2 | 2 |
| Boron | ppm | ASTM D5185m | | 225 | 219 | 212 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 33 | 34 | 24 |
| Manganese | ppm | ASTM D5185m | | 2 | 1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 1 | 3 | 3 |
| Calcium | ppm | ASTM D5185m | | 73 | 70 | 57 |
| Phosphorus | ppm | ASTM D5185m | | 919 | 813 | 813 |
| Zinc | ppm | ASTM D5185m | | 24 | 27 | 18 |
| Sulfur | ppm | ASTM D5185m | | 17931 | 19532 | 20173 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.11 | 1.17 | 1.19 |
| Visc @ 40°C | cSt | ASTM D445 | | 345 | 340 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 30 | 27.4 | 27.5 | 27.6 |
| Viscosity Index (VI) | Scale | ASTM D2270 | 105 | 106 | 108 | --- |

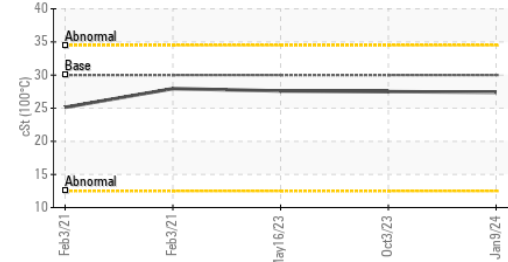
▲ Ferrous Alloys



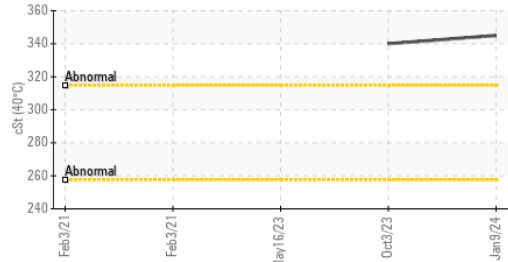
Acid Number



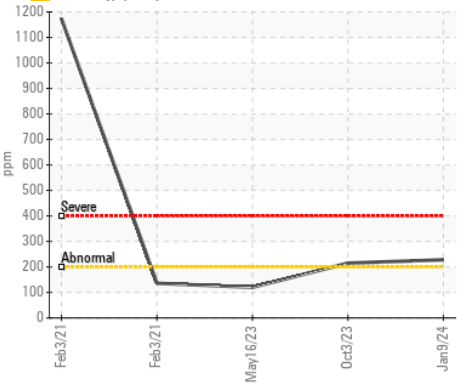
Viscosity @ 100°C



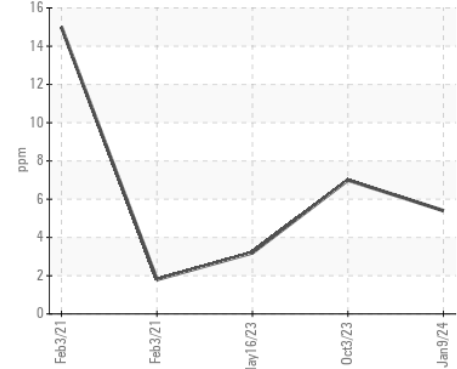
Viscosity @ 40°C



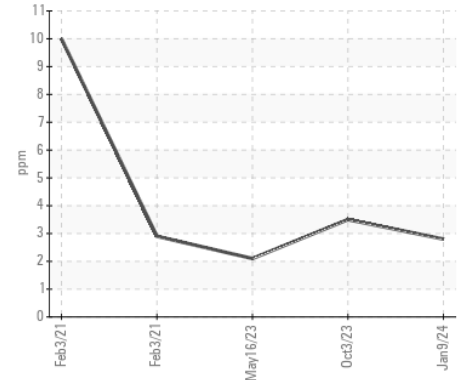
▲ Iron (ppm)



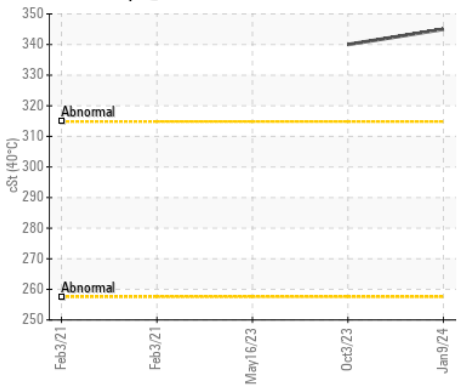
Aluminum (ppm)



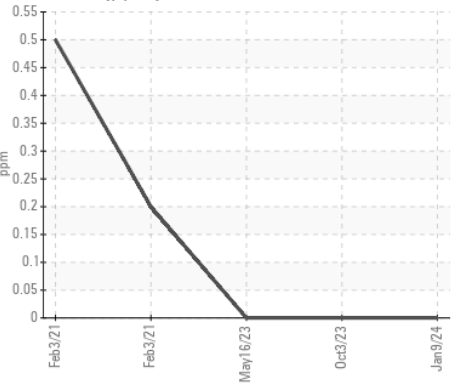
Copper (ppm)



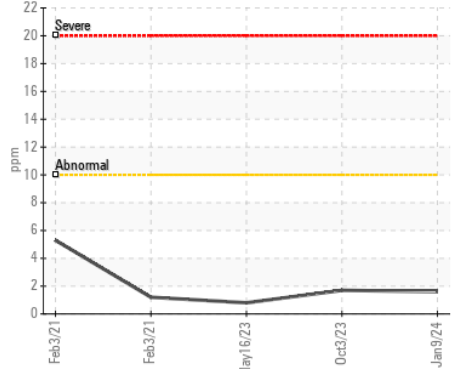
Viscosity @ 40°C



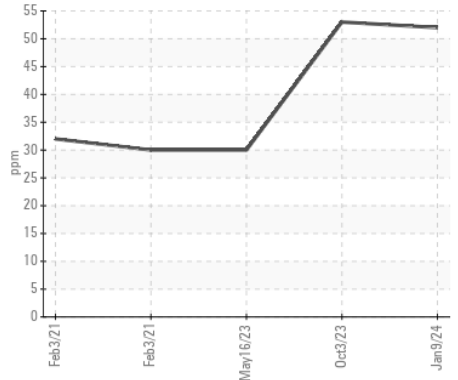
Lead (ppm)



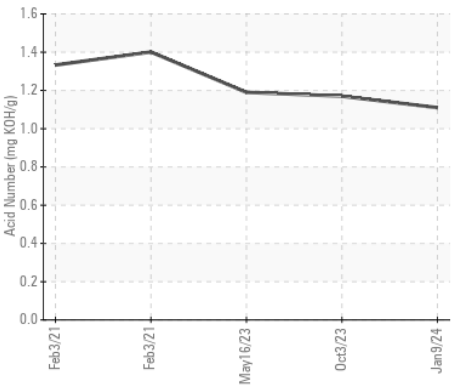
Chromium (ppm)



Silicon (ppm)



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR0001305 **Received** : 12 Jan 2024
Lab Number : 06060380 **Diagnosed** : 16 Jan 2024
Unique Number : 10831762 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: KV100, VI)

S S CONCRETE MATERIALS LLC
 P.O. BOX 23283
 BULLHEAD CITY, AZ
 US 86439
 Contact: MARK OPHEIM

Certificate L2367
 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:
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