TRAAP
Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

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

Machine Id
## CASE IH 255
Component
## Diesel Engine
Fluid
## TRC MOLY XL PRO-SPEC IV XP 15W40 (22 QTS)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

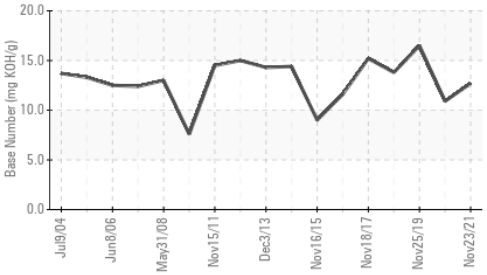
There is no indication of any contamination in the oil.

## FLUID CONDITION

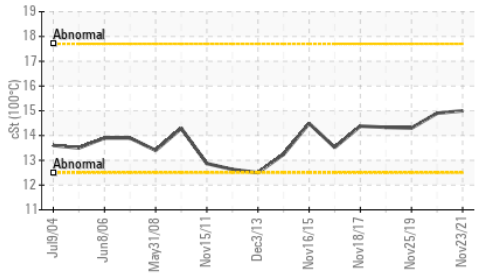
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | TR05441597 | TR05132495 | TR04871524 |
| Sample Date | | Client Info | | 23 Nov 2021 | 07 Nov 2020 | 25 Nov 2019 |
| Machine Age | hrs | Client Info | | 5282 | 5003 | 4677 |
| Oil Age | hrs | Client Info | | 279 | 326 | 270 |
| Filter Age | hrs | Client Info | | 279 | 326 | 270 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 13 | 17 | 20 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 1 | <1 | 2 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 4 | 3 | 7 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 6 | 0 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | <1 |
| 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 | 9.6 | 10.1 | 11.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20 | 20.6 | 19.5 |
| 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 | >0.2 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185m | | 5 | 7 | 5 |
| Boron | ppm | ASTM D5185m | | <1 | 4 | 3 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 143 | 144 | 157 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 29 | 242 | 871 |
| Calcium | ppm | ASTM D5185m | | 4432 | 3645 | 1686 |
| Phosphorus | ppm | ASTM D5185m | | 914 | 977 | 1015 |
| Zinc | ppm | ASTM D5185m | | 1004 | 1143 | 1284 |
| Sulfur | ppm | ASTM D5185m | | 3531 | 3678 | 3221 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 12 | 13.5 | 14.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 12.7 | 10.9 | 16.5 |
| Visc @ 100°C | cSt | ASTM D445 | | 15.0 | 14.9 | 14.3 |

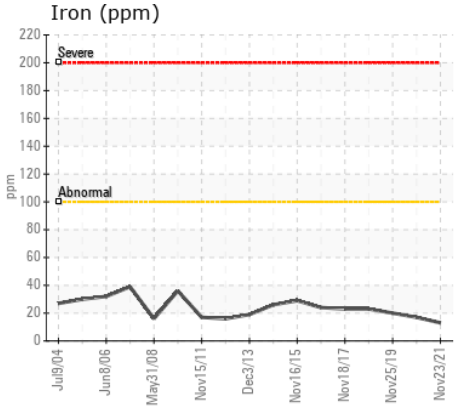
Base Number



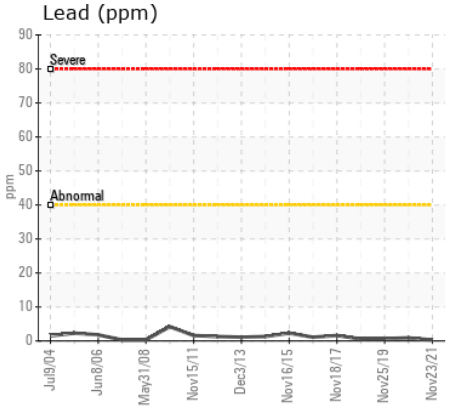

Viscosity @ 100°C



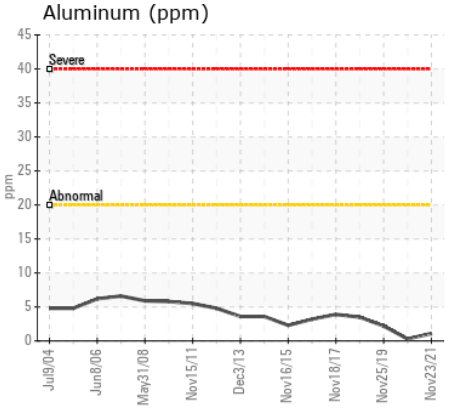

Iron (ppm)



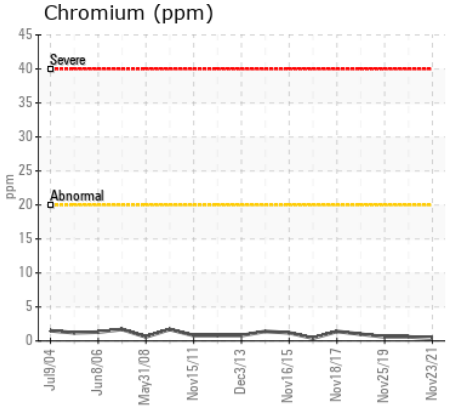

Lead (ppm)



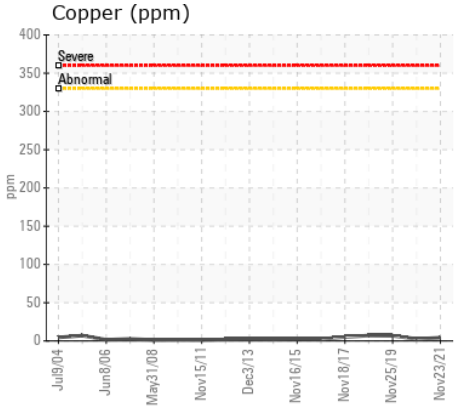

Aluminum (ppm)



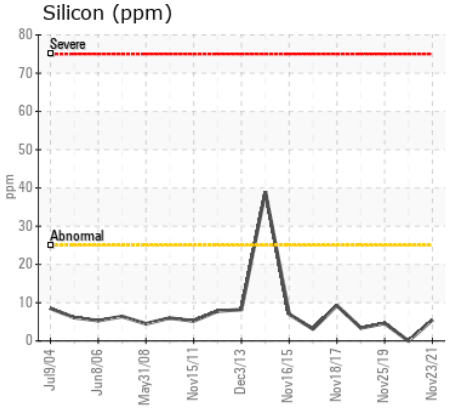

Chromium (ppm)



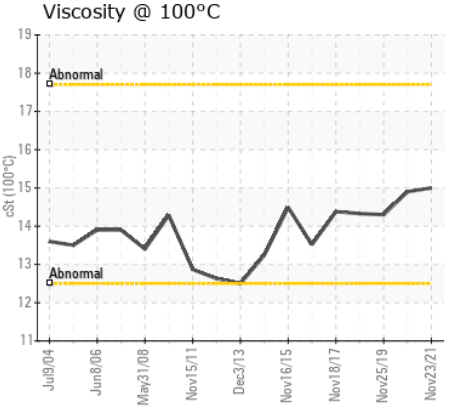

Copper (ppm)



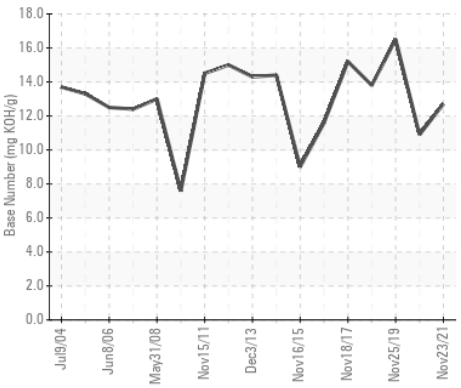

Silicon (ppm)




Viscosity @ 100°C




Base Number





**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : TR05441597
**Lab Number** : 05441597
**Unique Number** : 9805790
**Test Package** : MOB 2

**Received** : 11 Jan 2022
**Tested** : 12 Jan 2022
**Diagnosed** : 12 Jan 2022 - Wes Davis

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)*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