

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
LAKE CALUMET
 Machine Id
TAYLOR TXH350L 435-04 (S/N S GH 36633)
 Component
Diesel Engine
 Fluid
NAPA Motor Oil 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

No evidence of coolant present in the oil. 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.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | PCA0123868 | PCA0092985 | --- |
| Sample Date | Client Info | | 28 Jun 2024 | 09 Aug 2023 | --- |
| Machine Age | hrs | Client Info | 13589 | 0 | --- |
| Oil Age | hrs | Client Info | 500 | 0 | --- |
| Oil Changed | Client Info | | N/A | Changed | --- |
| Sample Status | | | NORMAL | SEVERE | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | 0.2 | --- |
| Water | WC Method | >0.2 | NEG | NEG | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >100 | 2 | 97 | --- |
| Chromium | ppm | ASTM D5185m >20 | <1 | 2 | --- |
| Nickel | ppm | ASTM D5185m >4 | 0 | <1 | --- |
| Titanium | ppm | ASTM D5185m | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m >3 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m >20 | <1 | 3 | --- |
| Lead | ppm | ASTM D5185m >40 | 0 | 3 | --- |
| Copper | ppm | ASTM D5185m >330 | 1 | 12 | --- |
| Tin | ppm | ASTM D5185m >15 | 0 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | <1 | <1 | --- |
| Cadmium | ppm | ASTM D5185m | 0 | <1 | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 9 | 0 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 55 | 84 | --- |
| Manganese | ppm | ASTM D5185m | <1 | 1 | --- |
| Magnesium | ppm | ASTM D5185m | 899 | 655 | --- |
| Calcium | ppm | ASTM D5185m | 1184 | 834 | --- |
| Phosphorus | ppm | ASTM D5185m | 978 | 684 | --- |
| Zinc | ppm | ASTM D5185m | 1133 | 902 | --- |
| Sulfur | ppm | ASTM D5185m | 3276 | 2674 | --- |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 3 | 12 | --- |
| Sodium | ppm | ASTM D5185m | 3 | 308 | --- |
| Potassium | ppm | ASTM D5185m >20 | 0 | 734 | --- |
| Glycol | % | *ASTM D2982 | NEG | 0.10 | --- |

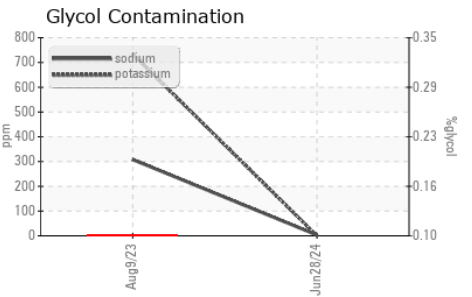
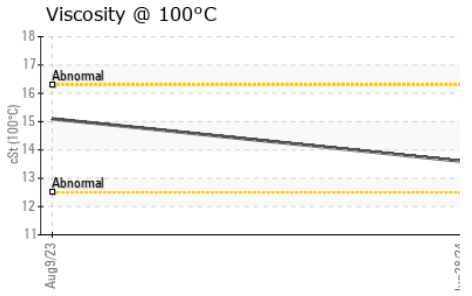
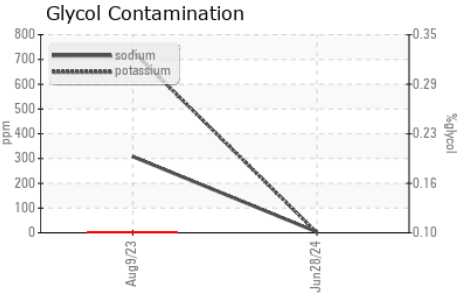
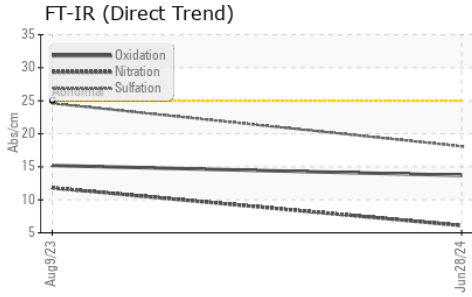
INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 >3 | 0.1 | 3.1 | --- |
| Nitration | Abs/cm | *ASTM D7624 >20 | 6.1 | 11.8 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 18.1 | 24.6 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 13.7 | 15.2 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | 8.2 | --- |

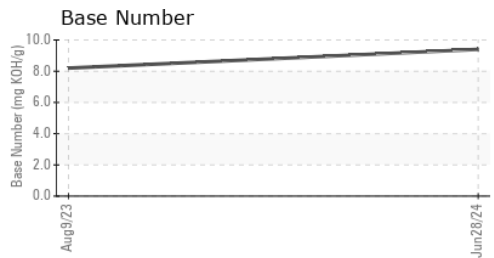
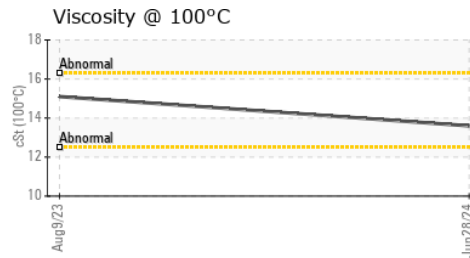
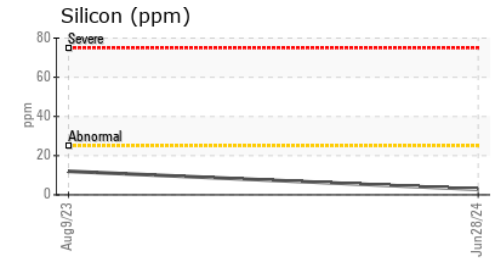
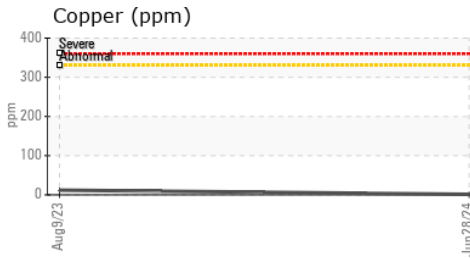
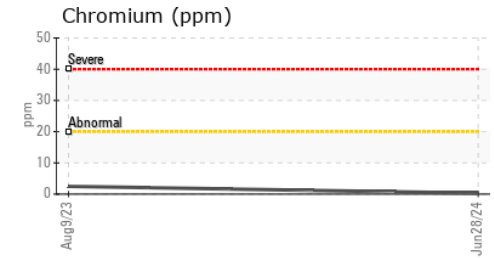
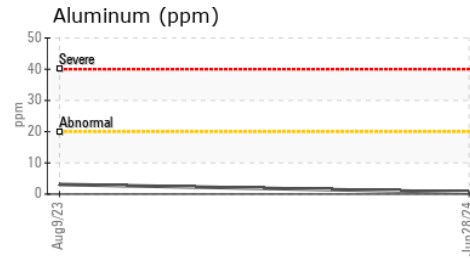
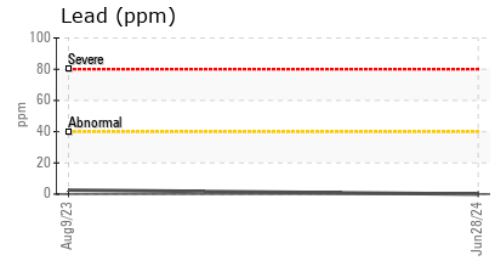
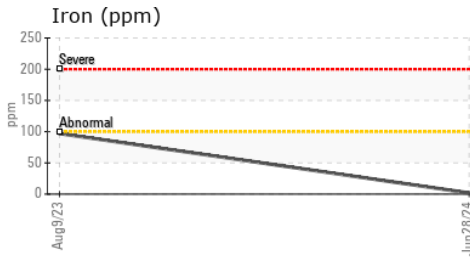
OIL ANALYSIS REPORT



| PARAMETER | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- |
| 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 | >0.2 | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- |

| PARAMETER | method | limit/base | current | history1 | history2 |
|--------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 13.6 | 15.1 | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123868
Lab Number : 06228371
Unique Number : 11111864
Test Package : MOB 1 (Additional Tests: TBN)

NORTH AMERICAN STEVEDORING CO
 9301 S KREITER AVE
 CHICAGO, IL
 US 60617
 Contact: PACO MARTINEZ
 paco.martinez@qsl.com

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)

T:
F: