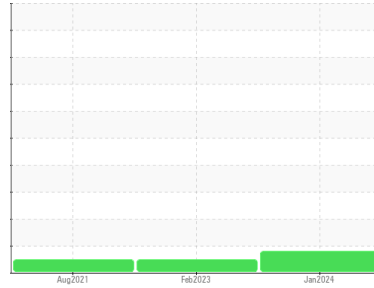




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
CURING
 Machine Id
[CURING] PRESS_031 HYDRAULIC SUMP PRESS 31
 Component
Hydraulic System
 Fluid
{not provided} (500 LTR)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0875651 | WC0752522 | WC0579023 |
| Sample Date | Client Info | | 25 Jan 2024 | 05 Feb 2023 | 30 Aug 2021 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | ABNORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | 6 | 3 | <1 |
| Chromium | ppm | ASTM D5185m >20 | 3 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >20 | 7 | 5 | 9 |
| Tin | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 1 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 93 | 105 | 96 |
| Phosphorus | ppm | ASTM D5185m | 405 | 427 | 428 |
| Zinc | ppm | ASTM D5185m | 40 | 40 | 52 |
| Sulfur | ppm | ASTM D5185m | 1702 | 2011 | 1601 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 1 | 1 | 2 |
| Sodium | ppm | ASTM D5185m | 1 | 1 | 2 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | <1 |
| Water | % | ASTM D6304 >0.05 | NEG | NEG | NEG |

FLUID CLEANLINESS

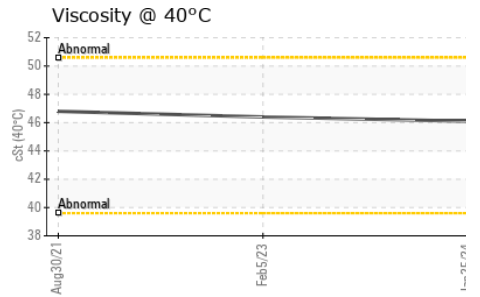
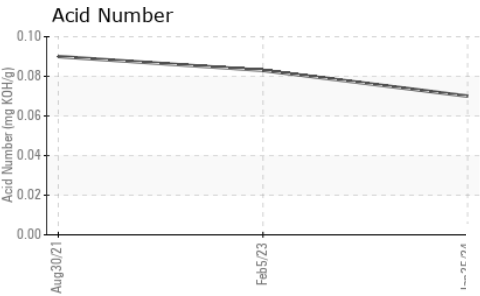
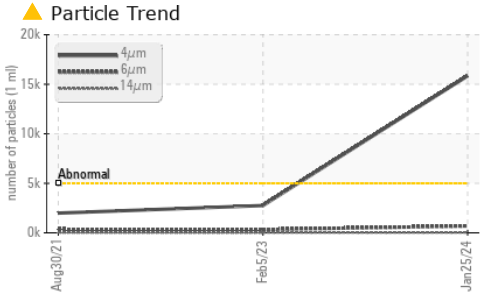
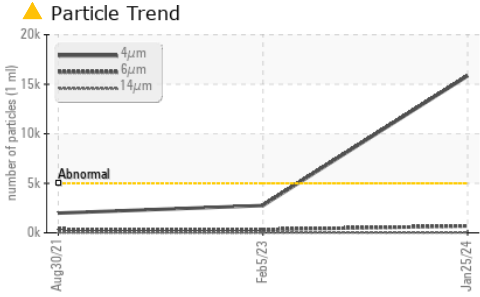
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 15845 | 2755 | 1992 |
| Particles >6µm | ASTM D7647 | >1300 | 689 | 326 | 354 |
| Particles >14µm | ASTM D7647 | >160 | 26 | 23 | 34 |
| Particles >21µm | ASTM D7647 | >40 | 4 | 5 | 6 |
| Particles >38µm | ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 21/17/12 | 19/16/12 | 18/16/12 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.07 | 0.083 | 0.09 |



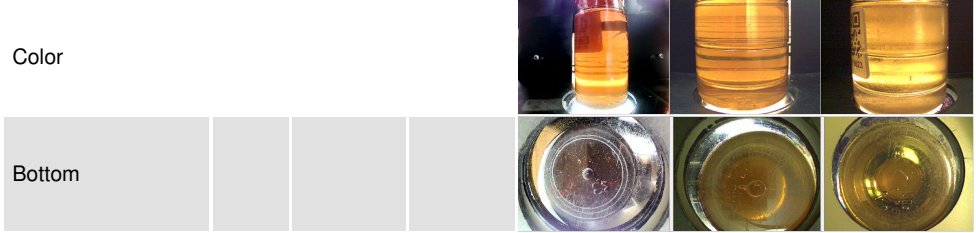
OIL ANALYSIS REPORT



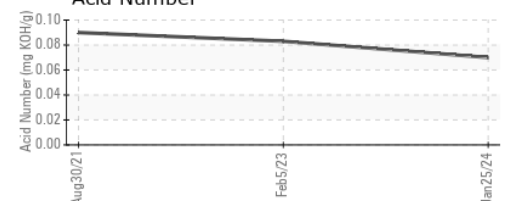
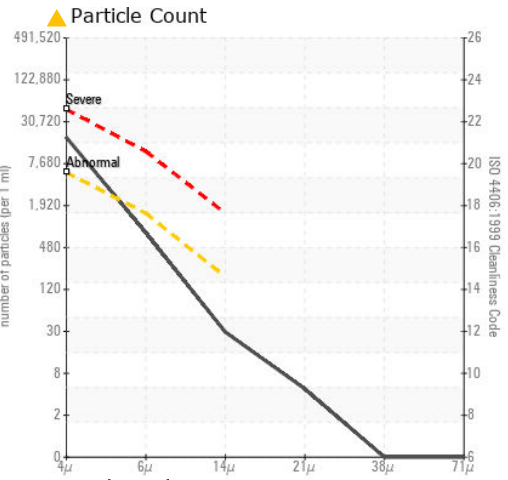
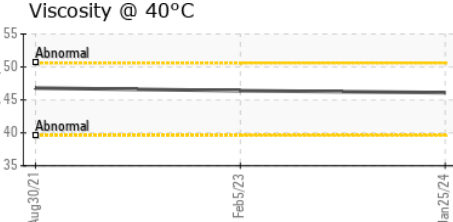
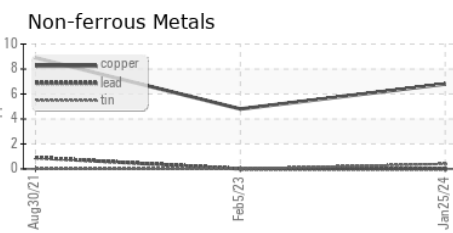
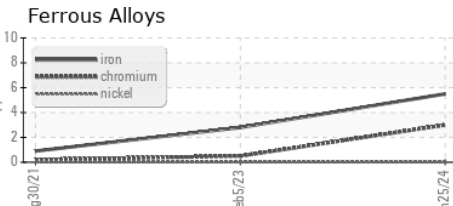
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46.1 | 46.4 | 46.8 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0875651 **Received** : 31 Jan 2024
Lab Number : 06075677 **Tested** : 01 Feb 2024
Unique Number : 10857768 **Diagnosed** : 01 Feb 2024 - Don Baldrige
Test Package : PLANT

NOKIAN TYRES US OPERATIONS LLC
 520 NOKIAN TYRES DRIVE
 DAYTON, TN
 US 37321
 Contact: Chris Randolph
 christopher.randolph@nokiantyres.com
 T: (423)457-3121
 F:

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)