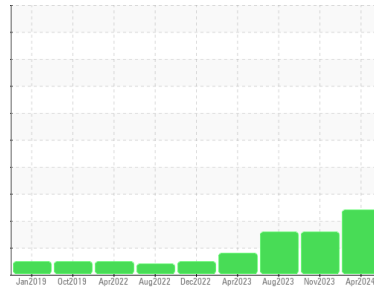


# OIL ANALYSIS REPORT

Area  
**KEMP QUARRIES / RIVER VALLEY ARKOMA**  
 Machine Id  
**OHT102**  
 Component  
**Middle Left Final Drive**  
 Fluid  
**MOBIL MOBILUBE HD 80W90 (--- GAL)**

Sample Rating Trend



## DIAGNOSIS

- Recommendation**  
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**  
The copper level is abnormal. All other component wear rates are normal.
- Contamination**  
There is no indication of any contamination in the oil.
- Fluid Condition**  
Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION |             | method      | limit/base | current            | history1    | history2    |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number      | Client Info |             |            | <b>PCA0034667</b>  | PCA0084214  | PCA0084285  |
| Sample Date        | Client Info |             |            | <b>03 Apr 2024</b> | 06 Nov 2023 | 22 Aug 2023 |
| Machine Age        | hrs         | Client Info |            | <b>29902</b>       | 29340       | 29115       |
| Oil Age            | hrs         | Client Info |            | <b>29115</b>       | 29115       | 28531       |
| Oil Changed        | Client Info |             |            | <b>Not Chngd</b>   | Not Chngd   | Changed     |
| Sample Status      |             |             |            | <b>ABNORMAL</b>    | ATTENTION   | ATTENTION   |

| CONTAMINATION |           | method | limit/base | current    | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water         | WC Method |        | >0.2       | <b>NEG</b> | NEG      | NEG      |

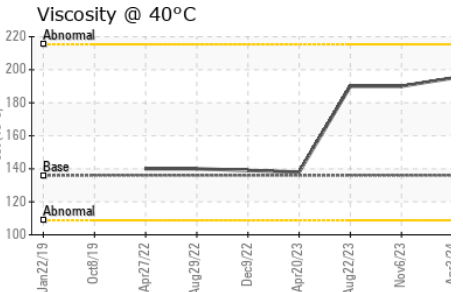
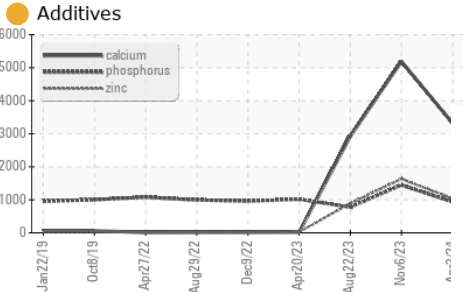
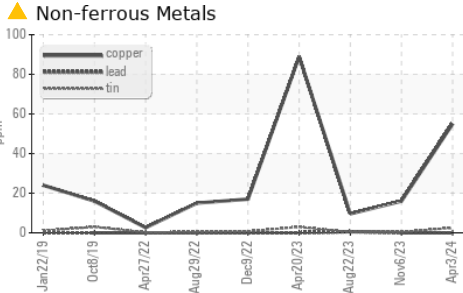
| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >500       | <b>25</b>    | 15       | 10       |
| Chromium    | ppm | ASTM D5185m | >10        | <b>0</b>     | <1       | 0        |
| Nickel      | ppm | ASTM D5185m | >10        | <b>0</b>     | <1       | 0        |
| Titanium    | ppm | ASTM D5185m |            | <b>0</b>     | <1       | <1       |
| Silver      | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 0        |
| Aluminum    | ppm | ASTM D5185m | >25        | <b>&lt;1</b> | 2        | <1       |
| Lead        | ppm | ASTM D5185m | >25        | <b>0</b>     | 0        | <1       |
| Copper      | ppm | ASTM D5185m | >50        | <b>55</b>    | 16       | 10       |
| Tin         | ppm | ASTM D5185m | >10        | <b>2</b>     | <1       | <1       |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | <1       | <1       |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | <1       | <1       |

| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m |            | <b>51</b>    | 86       | 54       |
| Barium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m |            | <b>&lt;1</b> | 2        | <1       |
| Manganese  | ppm | ASTM D5185m |            | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm | ASTM D5185m |            | <b>10</b>    | 16       | 2        |
| Calcium    | ppm | ASTM D5185m |            | <b>3316</b>  | 5191     | 2920     |
| Phosphorus | ppm | ASTM D5185m |            | <b>937</b>   | 1449     | 776      |
| Zinc       | ppm | ASTM D5185m |            | <b>1037</b>  | 1632     | 890      |
| Sulfur     | ppm | ASTM D5185m |            | <b>5728</b>  | 8332     | 5557     |

| CONTAMINANTS |     | method      | limit/base | current   | history1 | history2 |
|--------------|-----|-------------|------------|-----------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >75        | <b>16</b> | 23       | 17       |
| Sodium       | ppm | ASTM D5185m |            | <b>1</b>  | 0        | <1       |
| Potassium    | ppm | ASTM D5185m | >20        | <b>0</b>  | 4        | 1        |

| VISUAL           |        | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Precipitate      | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Silt             | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Debris           | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | LIGHT    |
| Sand/Dirt        | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Appearance       | scalar | *Visual | NORML      | <b>NORML</b> | NORML    | NORML    |
| Odor             | scalar | *Visual | NORML      | <b>NORML</b> | NORML    | NORML    |
| Emulsified Water | scalar | *Visual | >0.2       | <b>NEG</b>   | NEG      | NEG      |
| Free Water       | scalar | *Visual |            | <b>NEG</b>   | NEG      | NEG      |

# OIL ANALYSIS REPORT

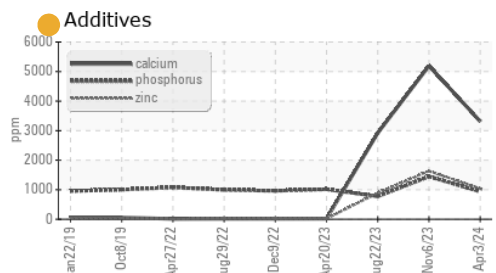
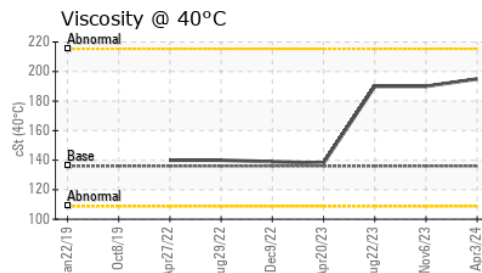
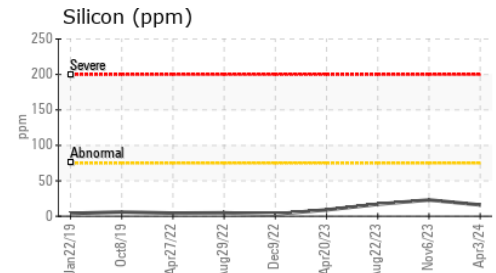
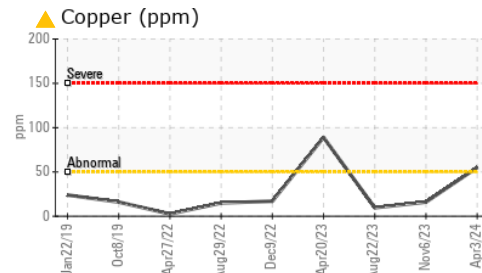
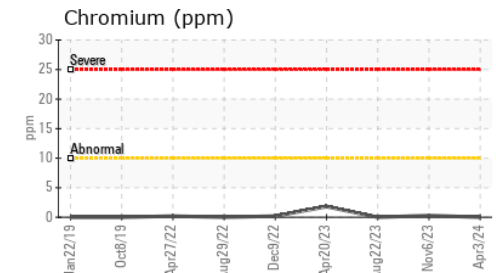
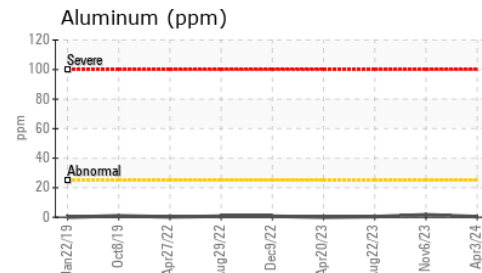
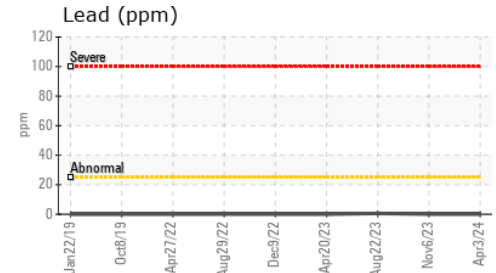
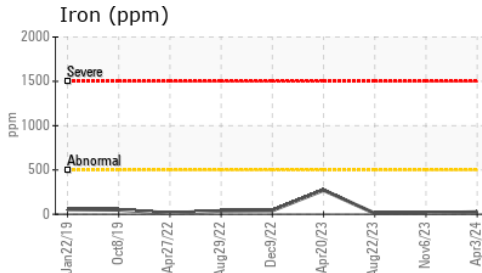


| FLUID PROPERTIES |     | method    | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt | ASTM D445 | 136        | 195     | 190      | 190      |

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

|        |          |          |          |
|--------|----------|----------|----------|
| Color  | no image | no image | no image |
| Bottom | no image | no image | no image |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0034667  
**Lab Number** : 06142545  
**Unique Number** : 10967353  
**Test Package** : MOB 1

**Received** : 08 Apr 2024  
**Tested** : 09 Apr 2024  
**Diagnosed** : 11 Apr 2024 - Don Baldrige

**Kemp Quarries - River Valley - Arkoma**  
 12971 HWY 9a  
 Shawnee, OK  
 US 74804  
 Contact:  
 arkomashop@kempquarries.net

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)