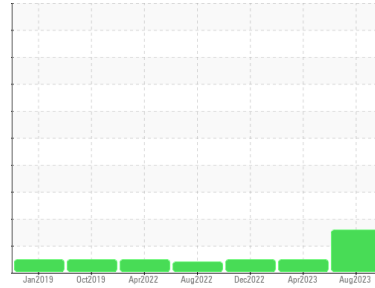


Area
KEMP QUARRIES / RIVER VALLEY ARKOMA
Machine Id
OHT102
Component
Middle Differential
Fluid
MOBIL MOBILUBE HD 80W90 (--- GAL)



DIAGNOSIS

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

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 | PCA0083932 | PCA0070405 | PCA0070468 |
| Sample Date | Client Info | 22 Aug 2023 | 20 Apr 2023 | 09 Dec 2022 |
| Machine Age | hrs | 29115 | 28531 | 27903 |
| Oil Age | hrs | 28531 | 28531 | 27510 |
| Oil Changed | Client Info | Not Chngd | Changed | Not Chngd |
| Sample Status | | ATTENTION | NORMAL | NORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | | |
|----------|------------|-------------|----------|--------------|----|----|
| Iron | ppm | ASTM D5185m | >500 | 20 | 53 | 43 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 0 | 1 |
| Lead | ppm | ASTM D5185m | >25 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >100 | 13 | 22 | 17 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | | |
|------------|------------|-------------|----------|---------------|-------|-------|
| Boron | ppm | ASTM D5185m | | ▲ 61 | 277 | 254 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 6 | 5 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 4 | 2 | 0 |
| Calcium | ppm | ASTM D5185m | | ▲ 3048 | 17 | 18 |
| Phosphorus | ppm | ASTM D5185m | | 817 | 1014 | 965 |
| Zinc | ppm | ASTM D5185m | | ▲ 939 | 13 | 12 |
| Sulfur | ppm | ASTM D5185m | | ▲ 6321 | 20438 | 23179 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | | |
|-----------|------------|-------------|----------|--------------|----|----|
| Silicon | ppm | ASTM D5185m | >75 | 13 | 5 | 5 |
| Sodium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | <1 | 0 |

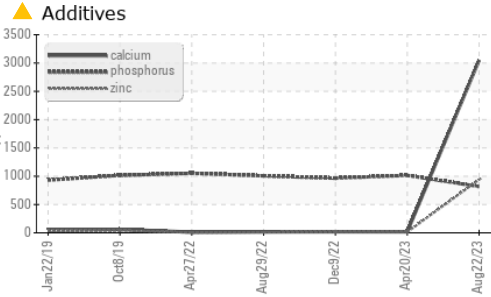
VISUAL

| method | limit/base | current | history1 | history2 | | |
|------------------|------------|---------|----------|--------------|-------|-------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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 | >.2 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

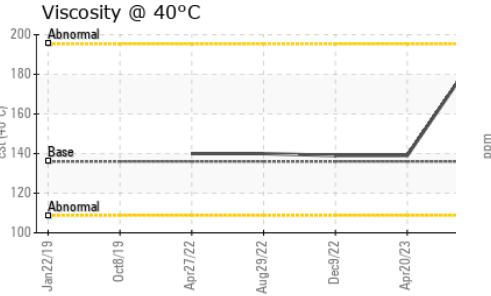
FLUID PROPERTIES

| method | limit/base | current | history1 | history2 | | |
|-------------|------------|-----------|----------|------------|-----|-----|
| Visc @ 40°C | cSt | ASTM D445 | 136 | 192 | 139 | 139 |

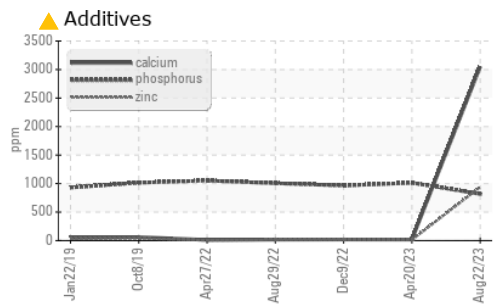
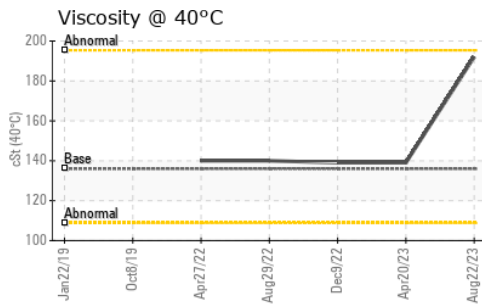
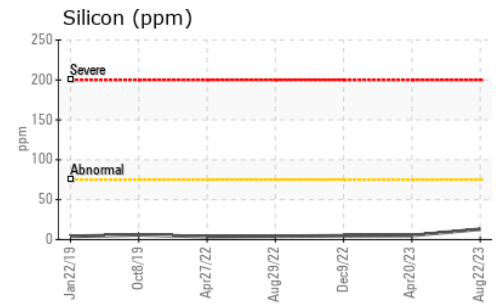
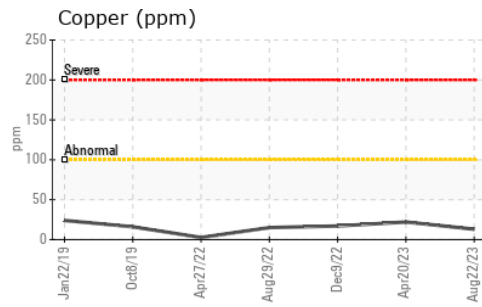
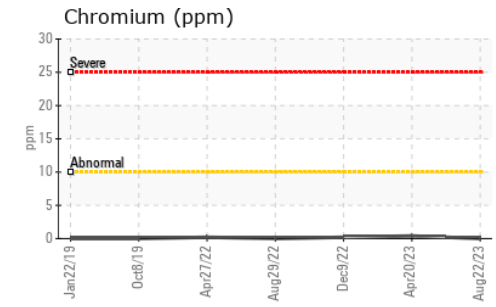
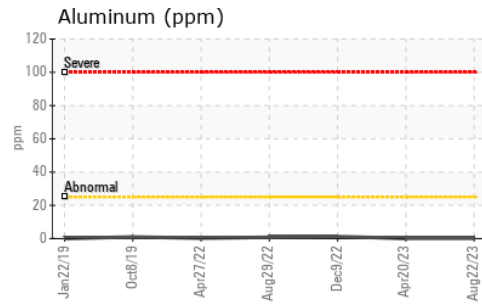
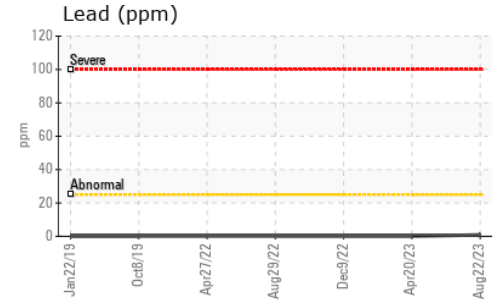
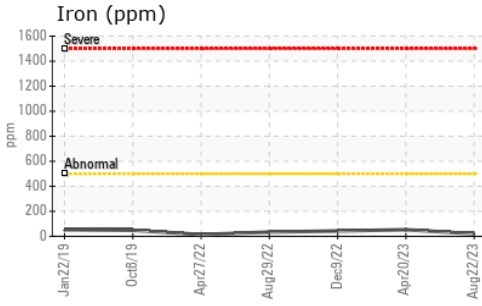
OIL ANALYSIS REPORT



| 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. : PCA0083932 **Received** : 28 Aug 2023
Lab Number : 05936838 **Diagnosed** : 29 Aug 2023
Unique Number : 10622109 **Diagnostician** : Sean Felton
Test Package : MOB 1

Kemp Quarries - River Valley - Arkoma
 12971 HWY 9a
 Shawnee, OK
 US 74804
 Contact:

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)

arkomashop@kempquarries.net

T:

F: