

# **OIL ANALYSIS REPORT**

## Area KANSAS/44 22.70L [KANSAS^44]

Main Hoist

Fluid MOBIL MOBILUBE HD PLUS 75W90 (--- 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

The condition of the oil is acceptable for the time in service.

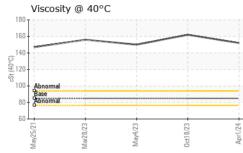


Sample Rating Trend

| Sample Number    |        | Client Info |            | WC0918144         | WC0833929   | WC0781159   |
|------------------|--------|-------------|------------|-------------------|-------------|-------------|
| Sample Date      |        | Client Info |            | 01 Apr 2024       | 18 Oct 2023 | 04 May 2023 |
| Machine Age      | hrs    | Client Info |            | 5543              | 5255        | 4810        |
| Oil Age          | hrs    | Client Info |            | 5543              | 5203        | 4764        |
| -                | 1115   | Client Info |            |                   | 5203<br>N/A | 4764<br>N/A |
| Oil Changed      |        | Client Inio |            | Changed<br>NORMAL | NORMAL      | NORMAL      |
| Sample Status    |        |             |            | -                 | -           |             |
| CONTAMINATION    |        | method      | limit/base | current           | history1    | history2    |
| Water            |        | WC Method   | >0.1       | NEG               | NEG         | NEG         |
| WEAR METALS      |        | method      | limit/base | current           | history1    | history2    |
| Iron             | ppm    | ASTM D5185m | >300       | 40                | 71          | 54          |
| Chromium         | ppm    | ASTM D5185m |            | 1                 | <1          | 0           |
| Nickel           | ppm    | ASTM D5185m | >4         | <1                | 0           | 0           |
| Titanium         | ppm    | ASTM D5185m |            | <1                | <1          | <1          |
| Silver           | ppm    | ASTM D5185m |            | 0                 | 0           | 0           |
| Aluminum         | ppm    | ASTM D5185m |            | 2                 | 2           | <1          |
| Lead             | ppm    | ASTM D5185m | >120       | <1                | 0           | 0           |
| Copper           | ppm    | ASTM D5185m |            | 2                 | 3           | 2           |
| Tin              | ppm    | ASTM D5185m | >15        | 1                 | 0           | 0           |
| 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 |            | 8                 | 15          | 11          |
| Barium           | ppm    | ASTM D5185m |            | 1                 | 0           | 0           |
| Molybdenum       | ppm    | ASTM D5185m |            | 2                 | 2           | 1           |
| Manganese        | ppm    | ASTM D5185m |            | 1                 | 2           | <1          |
| Magnesium        | ppm    | ASTM D5185m |            | 545               | 1256        | 658         |
| Calcium          | ppm    | ASTM D5185m |            | 15                | 25          | 12          |
| Phosphorus       | ppm    | ASTM D5185m |            | 866               | 1575        | 863         |
| Zinc             | ppm    | ASTM D5185m |            | 63                | 61          | 52          |
| Sulfur           | ppm    | ASTM D5185m |            | 20715             | 16100       | 20213       |
| CONTAMINANTS     |        | method      | limit/base | current           | history1    | history2    |
| Silicon          | ppm    | ASTM D5185m | >75        | 10                | 19          | 10          |
| Sodium           | ppm    | ASTM D5185m |            | <1                | 2           | <1          |
| Potassium        | ppm    | ASTM D5185m | >20        | 2                 | 0           | 0           |
| VISUAL           |        | method      | limit/base | current           | history1    | history2    |
| White Metal      | scalar | *Visual     | NONE       | NONE              | NONE        | MODER       |
| 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     | >0.1       | NEG               | NEG         | NEG         |
| Free Water       |        | *Visual     |            | NEG               | NEG         |             |



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| Visc @ 40°C                    | cSt     | ASTM D445 | 85         | 152      | 162      | 150   |
|--------------------------------|---------|-----------|------------|----------|----------|-------|
| SAMPLE IMAGE                   | ES      | method    | limit/base | current  | history1 | hist  |
|                                |         |           |            |          |          |       |
| Color                          |         |           |            | no image | no image | no in |
|                                |         |           |            |          |          |       |
| Bottom                         |         |           |            | no image | no image | no in |
| GRAPHS                         |         |           |            |          |          |       |
| Ferrous Alloys                 |         |           |            |          |          |       |
| D - iron<br>chromium<br>nickel |         | $\wedge$  |            |          |          |       |
| D -                            | /       |           |            |          |          |       |
|                                |         |           |            |          |          |       |
|                                |         |           |            |          |          |       |
| ) -                            |         |           |            |          |          |       |
| May25/21                       | May4/23 | 0ct18/23  | Apr1/24    |          |          |       |
| Non-ferrous Met                |         | Oct       | Ap         |          |          |       |
| T                              | ais     | 1         |            |          |          |       |
| 6 - copper                     |         |           |            |          |          |       |
| 7 <b>-</b>                     |         |           |            |          |          |       |
| 5                              |         |           |            |          |          |       |
| 2                              |         |           | _          |          |          |       |
| 1-                             |         |           | 1919111111 |          |          |       |
| Mar25/21                       | May4/23 | 0ct18/23  | Apr1/24 -  |          |          |       |
| ⊮<br>Viscosity @ 40°C          |         | 00        | A          |          |          |       |
|                                |         | ~         |            |          |          |       |
|                                | $\sim$  | <u> </u>  | <b>_</b>   |          |          |       |
| ) <del>-</del>                 |         |           |            |          |          |       |
| ] <b>-</b>                     |         |           |            |          |          |       |
| Abnormal                       |         |           |            |          |          |       |
| 0 - Abnormal                   |         |           |            |          |          |       |
| )                              | 4/23    | 3/23      | Apr1/24    |          |          |       |
| May25/21<br>Mar28/23           | May4/23 | 0ct18/23  | Apr        |          |          |       |
|                                |         |           |            |          |          |       |

