

# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**MH-94**  
 Component  
**Hydraulic System**  
 Fluid  
**SHELL TELLUS S2 VA 46 (--- GAL)**

## 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 moderate amount of particulates 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 |             | <b>PCA0118458</b>  | ---      | ---      |
| Sample Date   | Client Info |             | <b>15 Mar 2024</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>3431</b>        | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>3431</b>        | ---      | ---      |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | ---      | ---      |
| Sample Status |             |             | <b>ATTENTION</b>   | ---      | ---      |

## CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1       | <b>NEG</b> | ---      | ---      |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >20 | <b>10</b>    | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >10 | <b>0</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >75 | <b>2</b>     | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >10 | <b>&lt;1</b> | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | ---      | ---      |

## ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>534</b>   | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>458</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>551</b>   | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>2317</b>  | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base      | current      | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>2</b>     | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b>     | ---      | ---      |

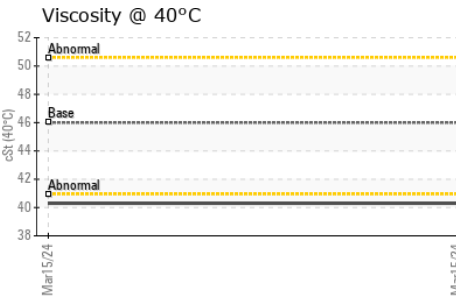
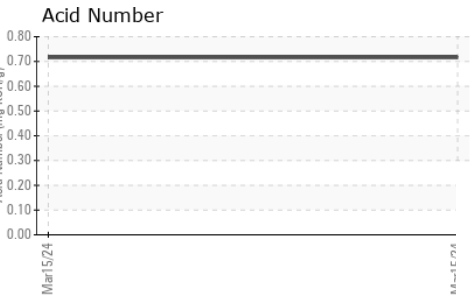
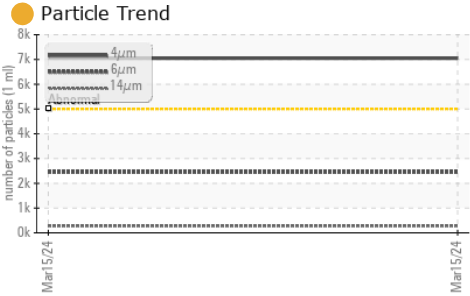
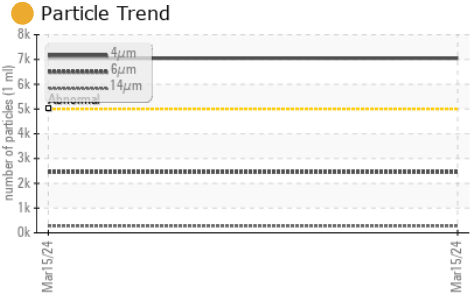
## FLUID CLEANLINESS

|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >5000      | <b>7047</b>     | ---      | ---      |
| Particles >6µm  | ASTM D7647   | >1300      | <b>2452</b>     | ---      | ---      |
| Particles >14µm | ASTM D7647   | >160       | <b>273</b>      | ---      | ---      |
| Particles >21µm | ASTM D7647   | >40        | <b>74</b>       | ---      | ---      |
| Particles >38µm | ASTM D7647   | >10        | <b>1</b>        | ---      | ---      |
| Particles >71µm | ASTM D7647   | >3         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14  | <b>20/18/15</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base | current      | history1 | history2 |
|------------------|----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.716</b> | ---      | ---      |



# OIL ANALYSIS REPORT



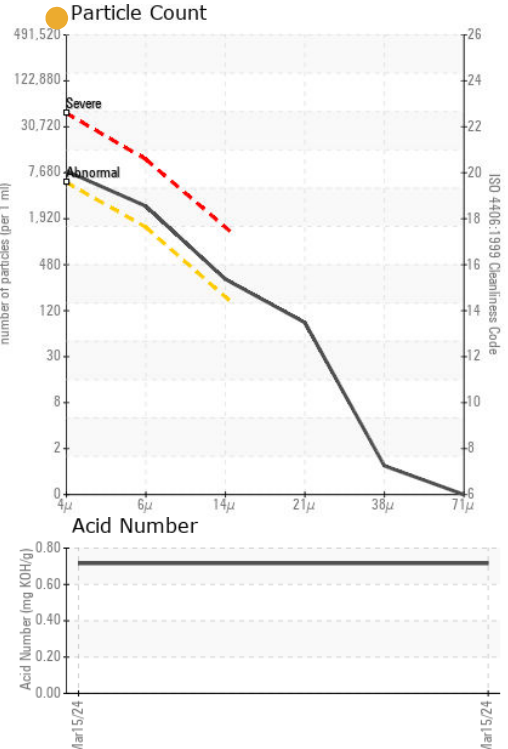
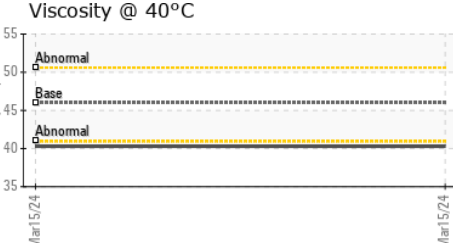
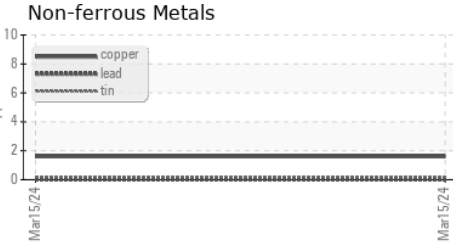
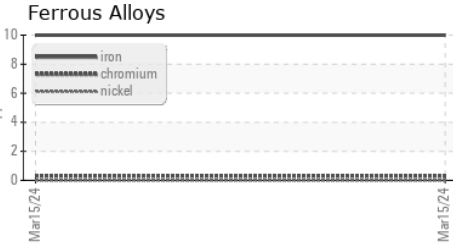
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| 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    | >0.1    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 46      | <b>40.3</b> | ---      |

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

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0118458 **Received** : 21 Mar 2024  
**Lab Number** : **06124868** **Tested** : 22 Mar 2024  
**Unique Number** : 10939019 **Diagnosed** : 24 Mar 2024 - Don Baldrige  
**Test Package** : MOB 2

**SCRAP METAL SERVICES (SMS Mill Services LLC)**  
 1500 COMMERCIAL AVE  
 MINGO JUNCTION, OH  
 US 43938  
 Contact: FRANK NALLY  
 fnally@scrapmetalservices.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)