

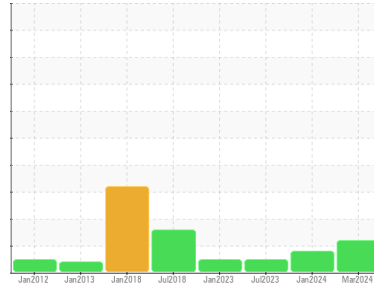


# OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area  
**31 WOODROOM**  
 Machine Id  
**DEBARKER DISCHARGE GATE HPU PUMP (S/N 312128)**  
 Component  
**Hydraulic System**  
 Fluid  
**ESSO NUTO H ISO 32 (250 LTR)**



## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

### Contamination

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

### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| SAMPLE INFORMATION | method      | limit/base  | current            | history1    | history2    |
|--------------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number      | Client Info |             | <b>WC</b>          | WC          | WC          |
| Sample Date        | Client Info |             | <b>11 Mar 2024</b> | 15 Jan 2024 | 05 Jul 2023 |
| Machine Age        | days        | Client Info | <b>0</b>           | 0           | 0           |
| Oil Age            | days        | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             | <b>N/A</b>         | N/A         | N/A         |
| Sample Status      |             |             | <b>ABNORMAL</b>    | ATTENTION   | NORMAL      |

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

| WEAR METALS | method | limit/base    | current | history1     | history2 |    |
|-------------|--------|---------------|---------|--------------|----------|----|
| Iron        | ppm    | ASTM D5185(m) | >20     | <b>5</b>     | 4        | 4  |
| Chromium    | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | <1 |
| Nickel      | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | <1 |
| Titanium    | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Silver      | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | <1 |
| Aluminum    | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | 0  |
| Lead        | ppm    | ASTM D5185(m) | >10     | <b>2</b>     | 2        | 1  |
| Copper      | ppm    | ASTM D5185(m) | >75     | <b>22</b>    | 20       | 18 |
| Tin         | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | <1       | <1 |
| Antimony    | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Vanadium    | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Beryllium   | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Cadmium     | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |

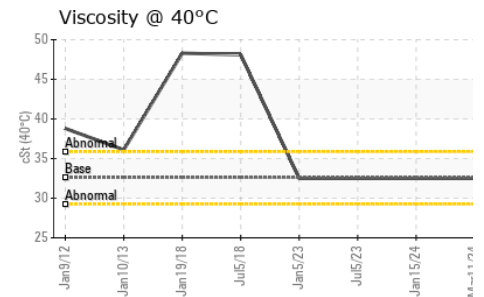
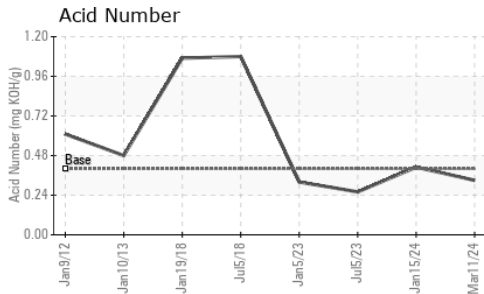
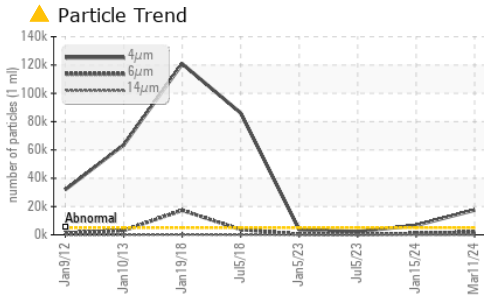
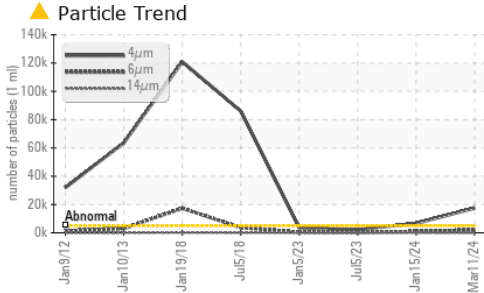
| ADDITIVES  | method | limit/base    | current | history1     | history2 |      |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron      | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | <1   |
| Barium     | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | 0    |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0    |
| Magnesium  | ppm    | ASTM D5185(m) | 5       | <b>&lt;1</b> | <1       | <1   |
| Calcium    | ppm    | ASTM D5185(m) | 50      | <b>164</b>   | 166      | 170  |
| Phosphorus | ppm    | ASTM D5185(m) | 330     | <b>389</b>   | 387      | 414  |
| Zinc       | ppm    | ASTM D5185(m) | 420     | <b>369</b>   | 369      | 398  |
| Sulfur     | ppm    | ASTM D5185(m) | 2700    | <b>4100</b>  | 4052     | 3848 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

| CONTAMINANTS | method | limit/base    | current | history1     | history2 |    |
|--------------|--------|---------------|---------|--------------|----------|----|
| Silicon      | ppm    | ASTM D5185(m) | >20     | <b>0</b>     | 0        | <1 |
| Sodium       | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | 0        | <1 |
| Potassium    | ppm    | ASTM D5185(m) | >20     | <b>11</b>    | 1        | <1 |

| FLUID CLEANLINESS | method       | limit/base | current           | history1   | history2 |
|-------------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm    | ASTM D7647   | >5000      | <b>▲ 17461</b>    | ● 6647     | 2310     |
| Particles >6µm    | ASTM D7647   | >1300      | <b>● 2014</b>     | 913        | 229      |
| Particles >14µm   | ASTM D7647   | >160       | <b>34</b>         | 54         | 28       |
| Particles >21µm   | ASTM D7647   | >40        | <b>5</b>          | 13         | 13       |
| Particles >38µm   | ASTM D7647   | >10        | <b>1</b>          | 1          | 2        |
| Particles >71µm   | ASTM D7647   | >3         | <b>0</b>          | 0          | 0        |
| Oil Cleanliness   | ISO 4406 (c) | >19/17/14  | <b>▲ 21/18/12</b> | ● 20/17/13 | 18/15/12 |



# OIL ANALYSIS REPORT

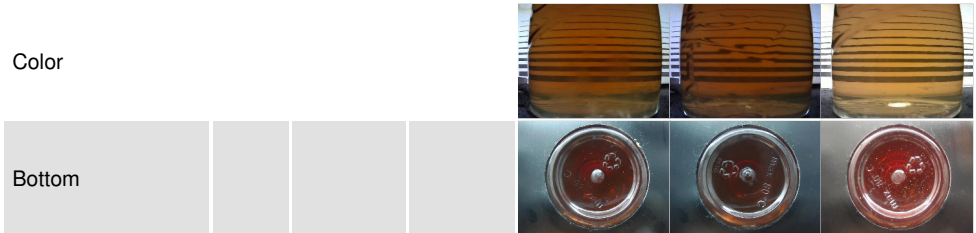


| FLUID DEGRADATION | method   | limit/base | current | history1    | history2 |      |
|-------------------|----------|------------|---------|-------------|----------|------|
| Acid Number (AN)  | mg KOH/g | ASTM D974* | .40     | <b>0.33</b> | 0.41     | 0.26 |

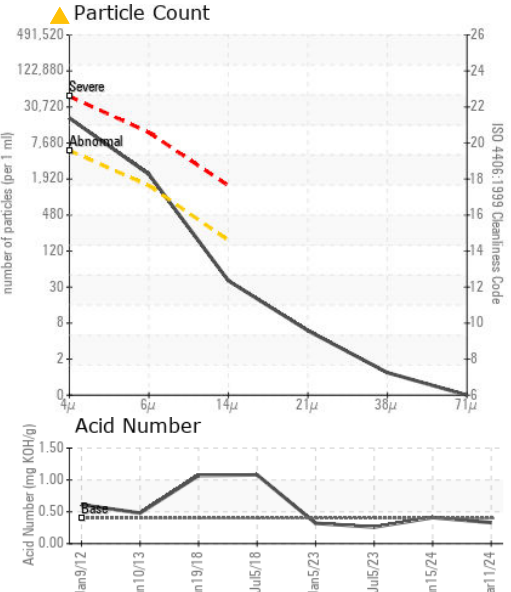
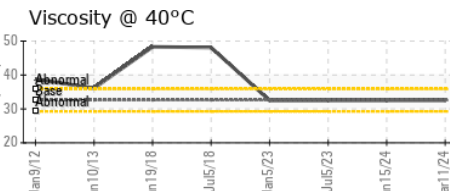
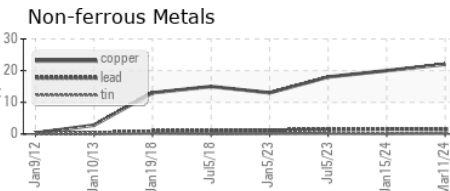
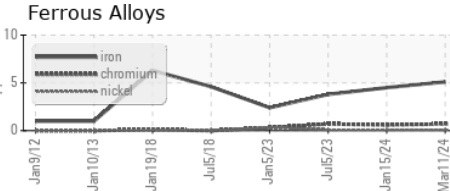
| VISUAL           | method | limit/base | current | history1     | history2 |       |
|------------------|--------|------------|---------|--------------|----------|-------|
| White Metal      | scalar | Visual*    | NONE    | <b>NONE</b>  | NONE     | NONE  |
| Yellow Metal     | scalar | Visual*  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

| FLUID PROPERTIES | method | limit/base    | current | history1    | history2 |      |
|------------------|--------|---------------|---------|-------------|----------|------|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 32.6    | <b>32.5</b> | 32.5     | 32.5 |

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



## GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : WC  
 Lab Number : 02622323  
 Unique Number : 5747442  
 Test Package : IND 2

Received : 15 Mar 2024  
 Tested : 15 Mar 2024  
 Diagnosed : 15 Mar 2024 - Wes Davis

AV GROUP NB INC.  
 103 PINDER ROAD,, NACKAWIC MILL  
 NACKAWIC, NB  
 CA E6G 1W4  
 Contact: Alan Vanwagener  
 alan.vanwagener@adityabirla.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.