

# LABORATORY ANALYSIS



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Department **1-ASSEMBLY**  
Equipment No. **R1-2639 HORIZONTAL MACHINING CENTER (00005)**  
System **Hydraulic System**  
Oil Type **ENGINEERED LUBRICANTS ENLUBE 130 INDUSTRIAL OIL (--- GAL)**

## DIAGNOSIS

## SAMPLE INFORMATION

| Lab Number          | New       | 2206-00956         | 2201-00777  | 2102-00116  |
|---------------------|-----------|--------------------|-------------|-------------|
| Date of Sample      | (Typical) | <b>22 Jun 2022</b> | 21 Jan 2022 | 28 Jan 2021 |
| Oil Added           |           | <b>UNK</b>         | UNK         | UNK         |
| Last Drain Date     |           | --                 | --          | --          |
| Last Filter Service |           | --                 | --          | --          |
| Sample Point        |           | ---                | ---         | ---         |
| Sample Status       |           | <b>ABNORMAL</b>    | SEVERE      | SEVERE      |

## VISCOSITY @ 100F OR 40C (ASTM D-445)

| SSU Vis. @ 100F | SSU | 365.1        | 365.9 | 373.9 |
|-----------------|-----|--------------|-------|-------|
| cSt Vis. @ 40C  | cSt | <b>70.32</b> | 70.48 | 71.99 |

## COLOR (BASED ON ASTM D1500 STANDARDS)

| Color | Scale 0-8 | 3.5 | 2.5 | 2.5 |
|-------|-----------|-----|-----|-----|
|       |           |     |     |     |

## PARTICLE COUNT (PER 1ML)

| ISO CODE           | ISO 4406(c)  | >19/17/14 | 21/18/12        | 23/21/16 | 23/20/16 |
|--------------------|--------------|-----------|-----------------|----------|----------|
| 4 Micron & Larger  | particles/ml | >5000     | <b>▲ 15,646</b> | ▲ 64,787 | ▲ 54885  |
| 6 Micron & Larger  | particles/ml | >1300     | <b>● 1,507</b>  | ▲ 10,878 | ▲ 8386   |
| 14 Micron & Larger | particles/ml | >160      | <b>■ 36</b>     | ▲ 519    | ▲ 391    |
| 21 Micron & Larger | particles/ml | >40       | <b>■ 10</b>     | ▲ 133    | ▲ 88     |
| 38 Micron & Larger | particles/ml | >10       | <b>■ 1</b>      | ■ 7      | ■ 7      |
| 70 Micron & Larger | particles/ml | >3        | <b>■ 0</b>      | ■ 1      | ■ 0      |

## ICP - OILS (REPORTED IN PARTS PER MILLION)

|                |     |            |       |       |
|----------------|-----|------------|-------|-------|
| Aluminum (Al)  | ppm | ■ <5       | ■ <5  | ■ <5  |
| Antimony (Sb)  | ppm | <5         | <5    | <5    |
| Cadmium (Cd)   | ppm | <5         | <5    | <5    |
| Chromium (Cr)  | ppm | ■ <5       | ■ <5  | ■ <5  |
| Cobalt (Co)    | ppm | <5         | <5    | <5    |
| Copper (Cu)    | ppm | ■ <5       | ■ <5  | ■ <5  |
| Iron (Fe)      | ppm | ■ <5       | ■ <5  | ■ <5  |
| Lead (Pb)      | ppm | ■ <5       | ■ <5  | ■ <5  |
| Manganese (Mn) | ppm | <5         | <5    | <5    |
| Molybdenum(Mo) | ppm | <5         | <5    | <5    |
| Nickel (Ni)    | ppm | ■ <5       | ■ <5  | ■ <5  |
| Silver (Ag)    | ppm | <5         | <5    | <5    |
| Tin (Sn)       | ppm | ■ <5       | ■ <5  | ■ <5  |
| Titanium (Ti)  | ppm | <5         | <5    | <5    |
| Vanadium (V)   | ppm | <5         | <5    | <5    |
| Barium (Ba)    | ppm | <5         | <5    | <5    |
| Boron (B)      | ppm | <5         | <5    | <5    |
| Calcium (Ca)   | ppm | <5         | 8     | 8     |
| Magnesium (Mg) | ppm | <5         | <5    | <5    |
| Phosphorus(P)  | ppm | <b>25</b>  | 40    | 41    |
| Silicon (Si)   | ppm | ■ <5       | ■ <5  | ■ <5  |
| Zinc (Zn)      | ppm | <b>11</b>  | 35    | 29    |
| Sulfur (S)     | ppm | <b>749</b> | 1,080 | 1,220 |

Customer Id: NIDMEN  
Sample No.: EN22060956  
Lab Number: 22060956  
Test Package: TEST



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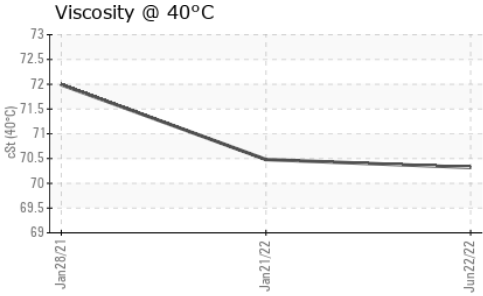
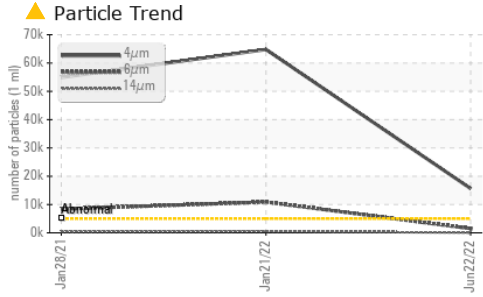
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# OIL ANALYSIS REPORT



## DR FERROGRAPHY READINGS

|     |         |       |        |        |
|-----|---------|-------|--------|--------|
| L   |         | ■ 3.9 | ■ 14.3 | ▲ 22.2 |
| S   |         | ■ 2.3 | ■ 5.5  | ■ 3.0  |
| WPC | DL + DS | ■ 6.2 | ■ 19.8 | ■ 7.4  |

## CONTAMINATION

|       |       |            |     |     |
|-------|-------|------------|-----|-----|
| Water | >0.05 | <b>NEG</b> | NEG | NEG |
|-------|-------|------------|-----|-----|