

LABORATORY ANALYSIS



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Department **TRANSFER ATIZAPAN**
Equipment No. **88 HYD KAUFMAN 170 (00069)**
System **Hydraulic System**
Oil Type **ENGINEERED LUBRICANTS ENLUBE 15-AW (--- GAL)**

DIAGNOSIS

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. Zinc (Zn) ppm levels are severely low. cSt Vis. @ 40C is severely high. The viscosity is very high and is no longer within acceptable limits. Viscosity of sample indicates oil is within ISO 68 range, advise investigate.

SAMPLE INFORMATION

| Lab Number | New | 2312-00040 | 2310-00456 | 2306-00778 |
|---------------------|-----------|--------------------|-------------|-------------|
| Date of Sample | (Typical) | 13 Nov 2023 | 20 Sep 2023 | 16 Jun 2023 |
| Oil Added | | UNK | UNK | UNK |
| Last Drain Date | | -- | -- | -- |
| Last Filter Service | | -- | -- | -- |
| Sample Point | | --- | --- | --- |
| Sample Status | | SEVERE | ABNORMAL | SEVERE |

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

| SSU Vis. @ 100F | SSU | 417.0 | 218.3 | 308.6 |
|-----------------|-----|-------|---------|---------|
| cSt Vis. @ 40C | cSt | 32.0 | ▲ 42.29 | ● 59.59 |

COLOR (BASED ON ASTM D1500 STANDARDS)

| Color | Scale 0-8 | RED | 1.0 | RED |
|-------|-----------|-----|-----|-----|
| | | | | |

PARTICLE COUNT (PER 1ML)

| ISO CODE | ISO 4406(c) | >19/18/14 | 21/20/16 | 20/16/11 | 20/17/12 |
|--------------------|--------------|-----------|----------|----------|----------|
| 4 Micron & Larger | particles/ml | >5000 | ▲ 19,487 | ▲ 6,053 | ▲ 8,712 |
| 6 Micron & Larger | particles/ml | >2500 | ▲ 5,182 | ■ 593 | ■ 821 |
| 14 Micron & Larger | particles/ml | >160 | ▲ 345 | ■ 13 | ■ 32 |
| 21 Micron & Larger | particles/ml | >40 | ▲ 84 | ■ 4 | ■ 9 |
| 38 Micron & Larger | particles/ml | >10 | ■ 3 | ■ 0 | ■ 1 |
| 70 Micron & Larger | particles/ml | >3 | ■ 0 | ■ 0 | ■ 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 | 11 | 55 | 54 |
| Magnesium (Mg) | ppm | <5 | <5 | <5 |
| Phosphorus(P) | ppm | 304 | 457 | 454 |
| Silicon (Si) | ppm | <5 | <5 | <5 |
| Zinc (Zn) | ppm | 668 | ■ 184 | ■ 577 |
| Sulfur (S) | ppm | 604 | 1,620 | 1,740 |

Customer Id: ENC0005J03
Sample No.: EN23120040
Lab Number: 23120040
Test Package: TEST



To manage this report scan the QR code

To discuss the diagnosis or test data:

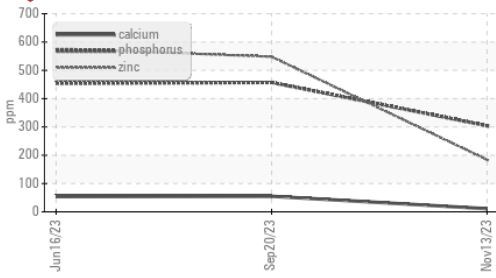
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To change component or sample information:

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OIL ANALYSIS REPORT

Additives



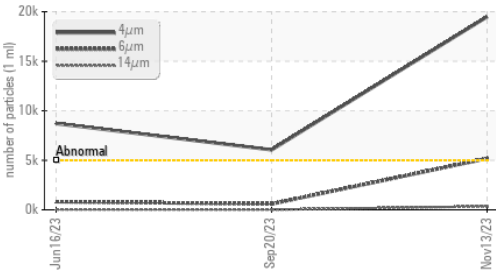
DR FERROGRAPHY READINGS

| | | | | |
|-----|---------|------|-----|-----|
| L | | 13.0 | 2.5 | 2.0 |
| S | | 2.0 | 0.9 | 1.0 |
| WPC | DL + DS | 15 | 3.4 | 3 |

CONTAMINATION

| | | | | |
|-------|-------|-----|-----|-----|
| Water | >0.05 | NEG | NEG | NEG |
|-------|-------|-----|-----|-----|

Particle Trend



Viscosity @ 40°C

