

LABORATORY ANALYSIS



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Department **AZUL**
Equipment No. **176 MAZAK 1 (00001)**
System **Hydraulic System**
Oil Type **ENGINEERED LUBRICANTS ENLUBE 15-AW (--- GAL)**

DIAGNOSIS

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. L, s, severity index and wpc levels are abnormal. There is a moderate amount of silt (particulates < 14 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. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

Lab Number	New	2312-00033	2310-00443	---
Date of Sample	(Typical)	13 Nov 2023	20 Sep 2023	---
Oil Added		UNK	UNK	---
Last Drain Date		--	---	---
Last Filter Service		--	---	---
Sample Point		---	---	---
Sample Status		SEVERE	SEVERE	---

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

SSU Vis. @ 100F	SSU	170.2	185.6	---
cSt Vis. @ 40C	cSt	32.0	32.91	35.93

COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	1.0	1.0	---
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PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	21/18/12	24/21/14	---
4 Micron & Larger	particles/ml	>5000	18,710	96,892	---
6 Micron & Larger	particles/ml	>2500	1,670	15,672	---
14 Micron & Larger	particles/ml	>160	28	121	---
21 Micron & Larger	particles/ml	>40	9	16	---
38 Micron & Larger	particles/ml	>10	1	1	---
70 Micron & Larger	particles/ml	>3	0	0	---

ICP - OILS (REPORTED IN PARTS PER MILLION)

Aluminum (Al)	ppm	<5	<5	---
Antimony (Sb)	ppm	<5	<5	---
Cadmium (Cd)	ppm	<5	<5	---
Chromium (Cr)	ppm	<5	<5	---
Cobalt (Co)	ppm	<5	<5	---
Copper (Cu)	ppm	6	6	---
Iron (Fe)	ppm	5	<5	---
Lead (Pb)	ppm	5	<5	---
Manganese (Mn)	ppm	<5	<5	---
Molybdenum(Mo)	ppm	<5	<5	---
Nickel (Ni)	ppm	<5	<5	---
Silver (Ag)	ppm	<5	<5	---
Tin (Sn)	ppm	<5	<5	---
Titanium (Ti)	ppm	<5	<5	---
Vanadium (V)	ppm	<5	<5	---
Barium (Ba)	ppm	<5	<5	---
Boron (B)	ppm	<5	<5	---
Calcium (Ca)	ppm	33	56	---
Magnesium (Mg)	ppm	<5	<5	---
Phosphorus(P)	ppm	242	468	---
Silicon (Si)	ppm	<5	<5	---
Zinc (Zn)	ppm	668	275	557
Sulfur (S)	ppm	10,600	1,390	---

Customer Id: ENC0005J03
Sample No.: EN23120033
Lab Number: 23120033
Test Package: TEST



To manage this report scan the QR code

To discuss the diagnosis or test data:

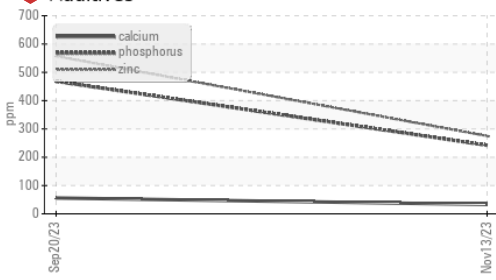
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To change component or sample information:

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OIL ANALYSIS REPORT

Additives



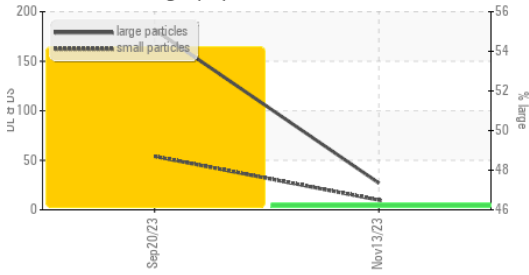
DR FERROGRAPHY READINGS

L		▲ 27.0	● 182.0	---
S		▲ 9.9	● 54.0	---
WPC	DL + DS	▲ 36.9	● 236	---

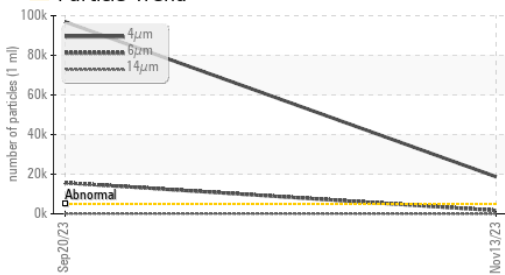
CONTAMINATION

Water	>0.05	NEG	NEG	---
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▲ DR Ferrography



▲ Particle Trend



Viscosity @ 40°C

