

LABORATORY ANALYSIS



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Department **SCREW MACHINE**
Equipment No. **446 HYD CNC Lathe Machine MAZAK 8 (00068)**
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. All component wear rates are normal. 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. cSt Vis. @ 40C is abnormally high. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

Lab Number	New	2312-00039	2310-00455	2306-00777
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	SEVERE	SEVERE

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

SSU Vis. @ 100F	SSU	246.0	244.4	217.1
cSt Vis. @ 40C	cSt	32.0	47.32	42.05

COLOR (BASED ON ASTM D1500 STANDARDS)

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

ISO CODE	ISO 4406(c)	>19/18/14	21/17/13	21/17/13	23/20/15
4 Micron & Larger	particles/ml	>5000	12,265	11,966	43,658
6 Micron & Larger	particles/ml	>2500	809	1,050	5,812
14 Micron & Larger	particles/ml	>160	42	70	298
21 Micron & Larger	particles/ml	>40	12	17	71
38 Micron & Larger	particles/ml	>10	1	1	4
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	31	32	29
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	275	273	236
Silicon (Si)	ppm	<5	<5	<5
Zinc (Zn)	ppm	668	324	292
Sulfur (S)	ppm	1,330	1,230	746

Customer Id: ENC0005J03
Sample No.: EN23120039
Lab Number: 23120039
Test Package: TEST



To manage this report scan the QR code

To discuss the diagnosis or test data:

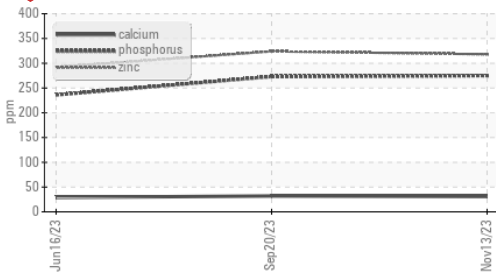
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To change component or sample information:

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OIL ANALYSIS REPORT

Additives



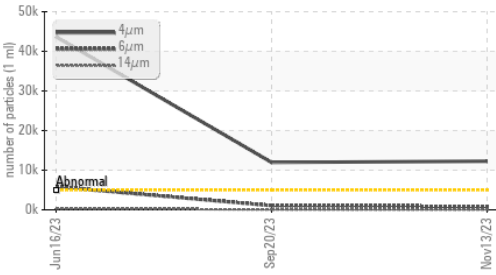
DR FERROGRAPHY READINGS

L		■ 3.7	■ 9.5	■ 14.2
S		■ 1.9	■ 0.7	■ 5.7
WPC	DL + DS	■ 5.6	■ 10.2	■ 19.9

CONTAMINATION

Water	>0.05	NEG	NEG	NEG
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▲ Particle Trend



Viscosity @ 40°C

