

# LABORATORY ANALYSIS



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Department **MAQUINADOS 1**  
Equipment No. **MA006 HYD CENTRO DE TORNEADO HORIZONTAL(MULTIPLEX 4200) (00016)**  
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 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 severely 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	2312-00059	2310-00484	2306-00803
Date of Sample	(Typical)	<b>13 Nov 2023</b>	20 Sep 2023	16 Jun 2023
Oil Added		<b>UNK</b>	UNK	UNK
Last Drain Date		--	--	--
Last Filter Service		--	--	--
Sample Point		---	---	---
Sample Status		<b>SEVERE</b>	ATTENTION	ABNORMAL

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

SSU Vis. @ 100F	SSU	283.8	168.6	172.6
cSt Vis. @ 40C	cSt	32.0	32.61	33.38

## COLOR (BASED ON ASTM D1500 STANDARDS)

Color	Scale 0-8	RED	1.0	2.5

## PARTICLE COUNT (PER 1ML)

ISO CODE	ISO 4406(c)	>19/18/14	21/18/13	20/17/12	21/18/13
4 Micron & Larger	particles/ml	>5000	<b>▲ 10,439</b>	▲ 6,937	▲ 15,329
6 Micron & Larger	particles/ml	>2500	■ 1,980	■ 893	■ 2,027
14 Micron & Larger	particles/ml	>160	■ 49	■ 24	■ 44
21 Micron & Larger	particles/ml	>40	■ 13	■ 7	■ 12
38 Micron & Larger	particles/ml	>10	■ 1	■ 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	15	<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	33	58	61
Magnesium (Mg)	ppm	<5	<5	<5
Phosphorus(P)	ppm	365	458	473
Silicon (Si)	ppm	<5	<5	<5
Zinc (Zn)	ppm	668	323	553
Sulfur (S)	ppm	1,260	2,190	2,140

Customer Id: ENC0005J03  
Sample No.: EN23120059  
Lab Number: 23120059  
Test Package: TEST



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To discuss the diagnosis or test data:

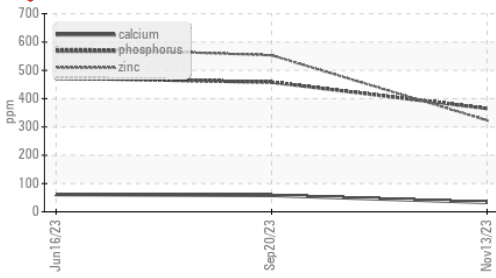
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To change component or sample information:

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# OIL ANALYSIS REPORT

### Additives



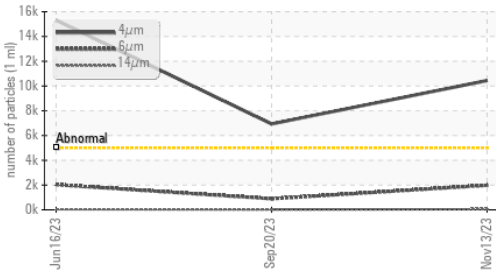
### DR FERROGRAPHY READINGS

L		■ 2.6	■ 2.7	■ 2.2
S		■ 0.8	■ 1.5	■ 1.1
WPC	DL + DS	■ 3.4	■ 4.2	■ 3.3

### CONTAMINATION

Water	>0.05	<b>NEG</b>	NEG	NEG
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### ▲ Particle Trend



### Viscosity @ 40°C

