

# **OIL ANALYSIS REPORT**

## Sample Rating Trend







Machine Id W-1 W-1 Component Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (--- GAL)

#### DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

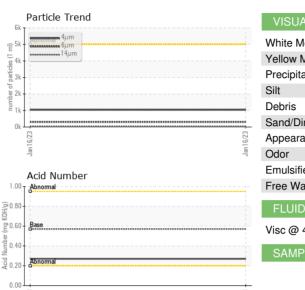
# Fluid Condition

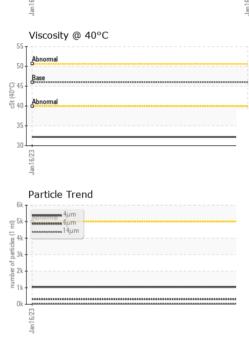
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	NOITAN	method	limit/base	current	history1	history2
Sample Number		Client Info		TLC0001004		
Sample Date		Client Info		16 Jan 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METALS		method	limit/base	current	history1	history2
			>20			
Iron	ppm			<1 0		
Chromium Nickel	ppm	ASTM D5185m	>20	0		
	ppm	ASTM D5185m ASTM D5185m	>20	0		
Titanium Silver	ppm					
	ppm	ASTM D5185m	00	0		
Aluminum	ppm	ASTM D5185m	>20	0		
Lead	ppm	ASTM D5185m	>20	0		
Copper	ppm	ASTM D5185m	>20	0		
Tin	ppm	ASTM D5185m	>20	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0		
Barium	ppm	ASTM D5185m	5	0		
Molybdenum	ppm	ASTM D5185m	5	0		
Manganese	ppm	ASTM D5185m		0		
Magnesium	ppm	ASTM D5185m	25	51		
Calcium	ppm	ASTM D5185m	200	10		
Phosphorus	ppm	ASTM D5185m	300	246		
Zinc	ppm	ASTM D5185m	370	287		
Sulfur	ppm	ASTM D5185m	2500	975		
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1		
Sodium	ppm	ASTM D5185m	-	1		
Potassium	ppm		>20	0		
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	1040		
Particles >6µm		ASTM D7647	>1300	309		
Particles >14µm		ASTM D7647	>160	21		
Particles >21µm		ASTM D7647		4		
Particles >38µm		ASTM D7647	>10	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/12		
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.27		
	ing NOTing	7.0 FW D0040	0.01	0.27		



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\*Visual NONE White Metal NONE scalar Yellow Metal \*Visual NONE NONE scalar NONE Precipitate scalar \*Visua NONE scalar \*Visual NONE NONE \*Visual NONE NONE scalar Sand/Dirt NONE NONE scalar \*Visual NORML Appearance scalar \*Visual NORML \*Visual NORML NORML scalar **Emulsified Water** scalar \*Visual >0.05 NEG Free Water scalar \*Visual NEG FLUID PROPERTIES 32.2 Visc @ 40°C cSt ASTM D445 46 SAMPLE IMAGES Color no image no image Bottom no image no image GRAPHS Ferrous Alloys Particle Count 491,52 122,88 30.72 7.68 Jan 16/23 (per 1 ml 4406 1.92 , LE :1999 Cle Non-ferrous Metals 480 120 14 31 lan 16/73 14 214 Viscosity @ 40°C Acid Number 1.00 (B/H0) 0.80 K0H/0 Abr Abnorma 50 () 0-0+ Ē 0.60 Ba ŝ 40 - <sup>20</sup> 0.40 35 Acid Ni 0.20 30 0.00 Jan 16/23 Jan 1 la lan Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 TESLA Sample No. Received : 14 Aug 2023 1 Tesla Road, BIW E58 : TLC0001004 Lab Number : 15 Aug 2023 Austin, TX : 05924194 Diagnosed Unique Number : Doug Bogart US 78725 : 10604141 Diagnostician Test Package : PLANT Contact: Dave Mitchell To discuss this sample report, contact Customer Service at 1-800-237-1369. davmitchell@tesla.com T: (260)226-1968

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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