

OIL ANALYSIS REPORT



Machine Id 1000004789

Hydraulic System AW HYDRAULIC OIL ISO 68 (2500 LTR)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

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

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0905455		
Sample Date		Client Info		04 Apr 2024		
Machine Age		Client Info		0		
Oil Age		Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	<1		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	0		
Titanium	ppm	ASTM D5185(m)	-	0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	0		
Lead	ppm	ASTM D5185(m)	>20	0		
Copper		ASTM D5185(m)	>20	ں <1		
Tin	ppm	ASTM D5185(m)	>20	0		
	ppm		>20	0		
Antimony	ppm	ASTM D5185(m)		-		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	3		
Barium	ppm	ASTM D5185(m)	5	0		
Volybdenum	ppm	ASTM D5185(m)	5	0		
Vanganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	25	7		
Calcium	ppm	ASTM D5185(m)	200			
Phoophorup			200	140		
riosphorus	ppm	ASTM D5185(m)	300	140 339		
	ppm ppm	()		-		
Zinc	ppm	ASTM D5185(m)	300	339		
Zinc Sulfur	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370	339 434		
Zinc Sulfur	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	300 370	339 434 741		
	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	300 370 2500 limit/base	339 434 741 <1 current	 history1	 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	300 370 2500	339 434 741 <1 current 0	 history1 	 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15	339 434 741 <1 current 0 <1	 history1 	 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15 >20	339 434 741 <1 current 0 <1 0	 history1 	 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15 >20 limit/base	339 434 741 <1 current 0 <1 0 current	 history1 history1	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15 >20 limit/base >5000	339 434 741 <1 current 0 <1 0 current 4025	 history1 history1 	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300	339 434 741 <1 current 0 <1 0 current 4025 727	 history1 history1 	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	339 434 741 <1 current 0 <1 0 current 4025 727 62	 history1 history1 	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 Iimit/base >15 >20 Iimit/base >5000 >1300 >160 >40	339 434 741 <1 current 0 <1 0 current 4025 727 62 17	 history1 history1 history1	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 Imit/base >15 >20 Imit/base >5000 >1300 >160 >40 >10	339 434 741 <1 current 0 <1 0 current 4025 727 62 17 2	 history1 history1 	 history2 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	300 370 2500 Imit/base >15 >20 Imit/base >5000 >1300 >160 >40 >10	339 434 741 <1 current 0 <1 0 current 4025 727 62 17	 history1 history1 history1	 history2 history2 history2



6 Ê 5

5 4k loitic) 3k 5 2 11 0 Apr4/24

1.00

(⁸.0) (⁸/H0) ₽0.60 Base

a 2 0.4 Pio 0.20 A

0.00

80 75 (40°C)

₹3 65 6

> 55 nr4/74

61

particles (1 ml) 84 k 38

2 2 1

Ωk

OIL ANALYSIS REPORT

Partio	cle Trend	FLUID DEGRADA		method	limit/ba	ase current
k T	4μm					
	ran πατα 6μm - πατα 14μm	Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.41
		VISUAL		method	limit/ba	ase current
k		White Metal	scalar	Visual*	NONE	NONE
k -		Yellow Metal	scalar	Visual*	NONE	NONE
_k Linnen		Precipitate	scalar	Visual*	NONE	NONE
Apr4/24	Apr4/24	Silt	scalar	Visual*	NONE	NONE
A	A	Debris Sand/Dirt	scalar	Visual* Visual*	NONE NONE	NONE VLITE
	Number	Appearance	scalar scalar	Visual*	NORML	
Abnorm	la	Odor	scalar	Visual*	NORML	-
0-		Emulsified Water	scalar	Visual*	>0.05	NEG
0 - Base		Free Water	scalar	Visual*		NEG
0-		FLUID PROPER	TIES	method	limit/ba	ase current
0 - Abnorm	al	Visc @ 40°C	cSt	ASTM D7279(m)	68	60.8
24 Lo		_				
Apr4/24	Apr4/24	SAMPLE IMAGE	5	method	limit/ba	ase current
Visco	sity @ 40°C	Color				
5 - Abnorm	ıal					
0 Base 5 - 0 Abnorm	al	Bottom				
5		GRAPHS				
Apr4/24	ţ	Ferrous Alloys				Particle Count
	د cle Trend 	E 5			1	91,520 22,880 Severe 30,720
	ian anana 6μm anana 14μm				4 ()	7,680 Abnormal
k -		Apr4/24			Apr4/24 . (per 1 ml)	1,920
K		Non-ferrous Meta	c		ticles (480
		10 ₁	3		Apr4/24	120-
		copper lead			number	
Apr4/24		5. 5.				30-
4	ج ج	0				8-
		Apr4/24			Apr4/24	2-
		Viscosity @ 40°C				0 4μ 6μ 14
		80 т				Acid Number
		75 Abnormal				Oy Base
		G 70 - Base ♂ 65 -				a 0.50
		60 - Abnormal				ACId NUMDer
		8 Apr4/24			Apr4/24	Ac Apr4/24
		Ap			Ap	Ap

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 MAHLE FILTER SYSTEMS CANADA 16 INDUSTRIAL PARK ROAD TILBURY, ON : 12 Apr 2024 - Wes Davis CA NOP 2L0 Contact: Kevin Bindner kevin.bindner@ca.mahle.com T: (519)682-0444 F: (519)682-5054

CALA ISO 17025:2017 Accredited Laboratory

Test Package : IND 2 To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

: 11 Apr 2024

: 12 Apr 2024

Received

Diagnosed

Tested

: WC0905455

Report Id: SIETIL [WCAMIS] 02628203 (Generated: 04/22/2024 14:14:15) Rev: 1

Laboratory

Sample No.

Lab Number : 02628203

Unique Number : 5761335

Contact/Location: Kevin Bindner - SIETIL Page 2 of 2

20 8 18 1999 Cle 14 12 Cod 14. 21µ 38µ

no image

no image

no image

no image

Apr4/24