

## **OIL ANALYSIS REPORT**



### Machine Id 1000004744

## **Hydraulic System** AW HYDRAULIC OIL ISO 46 (2000 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		WC0839619		
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	7		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	ء <1		
Titanium	ppm	ASTM D5185(m)	20	0		
Silver		ASTM D5185(m) ASTM D5185(m)		0		
	ppm		. 20	0		
Aluminum	ppm	ASTM D5185(m)				
Lead	ppm	ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)	>20	2		
Tin	ppm	ASTM D5185(m)	>20	0		
Antimony	ppm	ASTM D5185(m)		0		
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	<1		
Barium	ppm	ASTM D5185(m)	5	0		
Molybdenum	ppm	ASTM D5185(m)	5	0		
Vanganese	ppm	ASTM D5185(m)		0		
	ppm	ASTM D5185(m)	25	5		
Vlagnesium						
0		ASTM D5185(m)	200	156		
Calcium	ppm	( )	200 300	156 297		
Calcium Phosphorus	ppm ppm	ASTM D5185(m)	300	297		
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	300 370	297 374		
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300	297 374 703		
Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370 2500	297 374 703 <1		
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	300 370 2500 limit/base	297 374 703 <1 current	   history1	   history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	300 370 2500	297 374 703 <1 current 0		   history2
Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15	297 374 703 <1 <u>current</u> 0 <1	   history1	   history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	300 370 2500 limit/base	297 374 703 <1 current 0	   history1 	   history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15	297 374 703 <1 <u>current</u> 0 <1	  history1 	  history2 
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	300 370 2500 limit/base >15 >20	297 374 703 <1 current 0 <1 <1	   history1  	  history2  
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	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 >5000	297 374 703 <1 current 0 <1 <1 <1 current	  history1   history1	  history2   history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	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	297 374 703 <1 current 0 <1 <1 <1 current 398	  history1   history1 	  history2   history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	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 >20 s5000 >1300 >160	297 374 703 <1 current 0 <1 <1 <1 current 398 102	  history1   history1 	  history2   history2  history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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 >20 s5000 >1300 >160	297 374 703 <1 current 0 <1 <1 <1 current 398 102 6	  history1   history1  	  history2  history2  history2
Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	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 <b>limit/base</b> >15 >20 <b>limit/base</b> >20 <b>s</b> 5000 >1300 >160 >40 >10	297 374 703 <1 current 0 <1 <1 <1 current 398 102 6 2	  history1   history1  history1 	  history2  history2  history2



61

ber of particles (1 ml) 3k 3k 5k

1k 0k Apr4/24

(B/H0.80 (mg KOH/g) (mg KOH/g) Ba

10 10 10 10 .20 Pciq Abno

> 0.00 Apr4/24

52 Abnorma 50 48 (0-0<del>4</del>6 tso B

42

6k

f particles (1 ml) 85 x 45 x 12 ml) to ie 2k In 1k ok Lin Apr4/24

Abnorma 40 38. Apr4/24 .

1.00 T Abnormal

# **OIL ANALYSIS REPORT**

Particle Trend	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.55		
14μm	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal		Visual*	NONE	NONE		
	Precipitate		Visual*	NONE	NONE		
24	Silt		Visual*	NONE	NONE		
April/24	Debris		Visual*	NONE	NONE		
	Sand/Dirt		Visual*	NONE	NONE		
kcid Number	Appearance		Visual*	NORML	NORML		
lbnormal	Odor		Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.05	NEG		
Base	Free Water	scalar	Visual*		NEG		
bnormal	FLUID PROPERT	IES	method	limit/base	current	history1	history2
utoma	Visc @ 40°C	cSt	ASTM D7279(m)	46	45.9		
Apr\$/24 -	SAMPLE IMAGES		method	limit/base	current	history1	history2
≤ iscosity @ 40°C bnormal	Color					no image	no image
lase	Bottom					no image	no image
	GRAPHS						
	Ferrous Alloys			491,520	Particle Count		<b>T</b> 26
article Trend	Non-ferrous Metals			400 Hold Part 480 Hold Part 4	Abnormal	μ 21μ	-24 -22 -20 9700 -18 0-000 -14 199 000 -14 199 000 -16 000 -10 0000 -10 000 -10 000 -1
	WearCheck - C8-1175 WC0839619 02628195 5761327 IND 2 contact Customer Service	Receiv Tested Diagn	ved :11 d :12 osed :12	gton, ON L7L Apr 2024 2 Apr 2024 2 Apr 2024 - We	Abnormal Abnormal 5H9 MAHLE F 10 es Davis k	Contact: evin.bindner@	PARK ROAD TILBURY, ON CA N0P 2L0 Kevin Bindnei

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.

Report Id: SIETIL [WCAMIS] 02628195 (Generated: 04/22/2024 14:13:16) Rev: 1

Contact/Location: Kevin Bindner - SIETIL

F: (519)682-5054