

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id Component Main Hydraulic System AW HYDRAULIC OIL ISO 46 (--- LTR)

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. We recommend you service the filters on this component. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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

			Feb2023	Mar2024		
SAMPLE INFORM	JATION	method	limit/base	current	history1	history2
		Client Info	in the bacco	WC0914594	WC0779628	
Sample Number		Client Info		11 Mar 2024		
Sample Date	la va				20 Feb 2023	
Machine Age	hrs	Client Info Client Info		0	0	
Dil Age	hrs			U N/A	0 N/A	
Oil Changed		Client Info		N/A ATTENTION	SEVERE	
Sample Status						
CONTAMINATIO	N	method	limit/base		history1	history2
Water		WC Method	>0.05	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>20	1	10	
Chromium	ppm	ASTM D5185(m)	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>20	0	<1	
Fitanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		0	<1	
Aluminum	ppm	ASTM D5185(m)	>20	<1	0	
_ead	ppm	ASTM D5185(m)	>20	1	4	
Copper	ppm	ASTM D5185(m)	>20	19	13	
Tin	ppm	ASTM D5185(m)	>20	0	0	
Antimony	ppm	ASTM D5185(m)	20	0	<1	
/anadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium				0	<1	
	ppm	ASTM D5185(m)				
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	0	<1	
Barium	ppm	ASTM D5185(m)		10	9	
Volybdenum	ppm	ASTM D5185(m)	5	0	0	
Manganese				0	0	
0	ppm	ASTM D5185(m)		U	0	
-	ppm ppm	ASTM D5185(m) ASTM D5185(m)	25	0	<1	
Magnesium				-		
Magnesium Calcium	ppm	ASTM D5185(m)		0	<1	
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185(m) ASTM D5185(m)	200	0 9	<1 8	
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	200 300	0 9 438	<1 8 481	
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	200 300 370	0 9 438 457	<1 8 481 474	
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	200 300 370	0 9 438 457 961	<1 8 481 474 1039	
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	200 300 370 2500	0 9 438 457 961 <1	<1 8 481 474 1039 <1	
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	200 300 370 2500 limit/base	0 9 438 457 961 <1 current	<1 8 481 474 1039 <1 history1	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	200 300 370 2500 limit/base	0 9 438 457 961 <1 current 0	<1 8 481 474 1039 <1 history1 <1	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm 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)	200 300 370 2500 limit/base >15	0 9 438 457 961 <1 current 0 0	<1 8 481 474 1039 <1 history1 <1 6	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm 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)	200 300 370 2500 limit/base >15 >20	0 9 438 457 961 <1 current 0 0 <1	<1 8 481 474 1039 <1 history1 <1 6 <1 <1 <1 <1 <1 <1	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm 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) ASTM D5185(m)	200 300 370 2500 limit/base >15 >20 limit/base	0 9 438 457 961 <1 current 0 0 <1 current	<1 8 481 474 1039 <1 history1 <1 6 <1 history1	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	200 300 370 2500 limit/base >15 >20 limit/base >5000	0 9 438 457 961 <1 current 0 0 <1 current 0 9124	<1 8 481 474 1039 <1 history1 <1 6 <1 history1 131564	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm 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) ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	0 9 438 457 961 <1 <1 0 0 <1 0 <1 0 <1 0 0 <1 0 0 <1 0 0 <1 0 51	<1 8 481 474 1039 <1 history1 <1 6 <1 history1 131564 25170 202	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	0 9 438 457 961 <1 current 0 0 <1 current 0 0 <1 0 <1 0 51 10	<1 8 481 474 1039 <1 history1 <1 6 <1 history1 131564 25170	 history2 history2
Magnesium Calcium Phosphorus 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 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) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	0 9 438 457 961 <1 current 0 0 <1 current 0 0 <1 0 51 1001 51 10 1	<1 8 481 474 1039 <1 1039 <1 1039 <1 1039 <1 1039 <1 1039 <1 1039 <1 1031 1039 <1 1031 1031 1031 1031 1031 1031 1031 1	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	0 9 438 457 961 <1 current 0 0 <1 current 0 9124 1001 51 10	<1 8 481 474 1039 <1 history1 <1 6 <1 history1 131564 25170 202 18	 history2 history2 history2



140k 120k 120k

140k -

120k 1100k 100k 100k

20k Ok

- 0.00 - 0.00 (mg KOH/d) - 0.00 kon (mg KOH/d) - 0.00 kon (mg KOH/d) - 0.00 kon (mg KOH/d)

> 52 -50 -48 -()-0+) 46 -42 -42 -40 -38 -

回災

鄙



ticle Trend	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
4μm 	Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.53	0.52	
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE	NONE	
	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
mal	Precipitate	scalar	Visual*	NONE	NONE	NONE	
-	Silt	scalar	Visual*	NONE	NONE	NONE	
Mart1	Debris	scalar	Visual*	NONE	NONE	NONE	
	Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
icle Trend	Appearance	scalar	Visual*	NORML	NORML	🔺 WGOIL	
4μm 6μm	Odor	scalar	Visual*	NORML	NORML	NORML	
14μm	Emulsified Water	scalar	Visual*	>0.05	NEG	.5%	
	Free Water	scalar	Visual*		NEG	<u> </u>	
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
mal	Visc @ 40°C	cSt	ASTM D7279(m)	46	46.2	42.8	
Mar 11/24	SAMPLE IMAGES	3	method	limit/base	current	history1	history2
≌ Number mal	Color						no image
ormal	Bottom						no image
	GRAPHS						
\$C.5	Ferrous Alloys				Particle Coun	t	1.221
6 A -	¹⁰			491,52	Ī		1 ²⁶
cosity @ 40°C	E 5-			122,88	Severe		-24
omal	4			30,72			-22
				= 7,68	Manormal		-20
3	Feb 20/23			Mar11/24 s (per 1 m		 Image: Image: Ima	10
	-a-			Mar11/24 particles (per 1 ml) 760'/	1		+20
	Non-ferrous Metal	s		offined 48		• ·	10
ormal	15 copper				•		-14
	5 10 - tin			^m 2	-		-12
	5						+10
μ. Α.	0			****	'T		TIU
	Feb 20/23			Mar11/24	2-		
				Ma	4u 6u	14µ 21µ	38µ 71µ
	Viscosity @ 40°C				Acid Number		
	Abnormal			1.0 Hoy	Abnormal		
	(0.0 0 Base 45 45 Abnormal			Ē	Base		
	Abnormal			늉 0.5	Abnormal		
	35			40,100 Acid Number 10,000 Acid N			
	Feb20/23			1/24	0/23		174
	Feb 2			Mar11/24	Feb 20/23		0011reM
Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report,	: 5746576 : IND 2	Recei Teste Diagn	ved : 12 d : 13 losed : 13	2 Mar 2024 3 Mar 2024 3 Mar 2024 - W		Mi	nia Road Eas ssissauga, ON CA L4Z 4J Sandip Pate