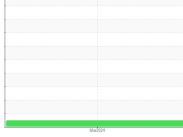


## **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id ES015 Component Auxiliary Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (--- GAL)

### 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. 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

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.

				Mar2024		
SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0914608		
Sample Date		Client Info		11 Mar 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATIO	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	<1		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>20	14		
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
	maa				history1	history2
Boron	ppm	ASTM D5185(m)	5	<1		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	5 5	<1 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5	<1 0 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 5	<1 0 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 25	<1 0 0 0 3		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 25 200	<1 0 0 3 25		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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)	5 5 25 200 300	<1 0 0 3 25 316	  	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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)	5 5 5 25 200 300 370	<1 0 0 3 25 316 355	  	  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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)	5 5 25 200 300	<1 0 0 3 25 316 355 793	  	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm 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)	5 5 25 200 300 370 2500	<1 0 0 3 25 316 355 793 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm 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)	5 5 25 200 300 370 2500	<1 0 0 3 25 316 355 793 <1 current	  	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm 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) <b>method</b> ASTM D5185(m)	5 5 25 200 300 370 2500	<1 0 0 3 25 316 355 793 <1 current 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm 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) <b>method</b> ASTM D5185(m) ASTM D5185(m)	5 5 25 200 300 370 2500	<1 0 0 3 25 316 355 793 <1 <i>current</i> 0 <1	       history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm 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) <b>method</b> ASTM D5185(m)	5 5 25 200 300 370 2500	<1 0 0 3 25 316 355 793 <1 current 0	      history1 	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm 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) <b>method</b> ASTM D5185(m) ASTM D5185(m)	5 5 5 25 200 300 370 2500 <b>limit/base</b> >15	<1 0 0 3 25 316 355 793 <1 <i>current</i> 0 <1	       history1	       history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 5 200 300 370 2500 2500 <b>limit/base</b> >15	<1 0 0 3 25 316 355 793 <1 <i>current</i> 0 <1 1	       history1  	      history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 5 200 300 370 2500 2500 <b>imit/base</b> >20	<1 0 0 3 25 316 355 793 <1 <i>current</i> 0 <1 1 <i>current</i>	      history1   history1	       history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 5 200 300 370 2500 2500 binit/base >20 binit/base >5000	<1 0 0 3 25 316 355 793 <1 <i>current</i> 0 <1 1 <i>current</i> 1 870	      history1  history1  history1	      history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 5 5 200 300 370 2500 2500 <b>imit/base</b> >15 >20 <b>imit/base</b> >5000 >1300	<1 0 0 25 316 355 793 <1 <u>current</u> 0 <1 1 <u>current</u> 1870 569	       history1   history1  history1	      history2  history2  history2
Boron Barium Molybdenum Manganese 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 ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 200 300 370 2500 2500 binit/base >15 20 binit/base >5000 >1300 >160	<1 0 0 25 316 355 793 <1 <i>current</i> 0 <1 1 <i>current</i> 1870 569 38	       history1  history1	       history2  history2
Boron Barium Molybdenum Manganese 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 ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 2500 <b>limit/base</b> >15 >20 <b>limit/base</b> >5000 >1300 >160 >40	<1 0 0 3 25 316 355 793 <1 Current 0 <1 1 Current 1870 569 38 7	       history1  history1	        history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 2500 binit/base >15 >20 binit/base >5000 >1300 >160 >40 >10	<1 0 0 3 25 316 355 793 <1 Current 0 <1 1 Current 1870 569 38 7 1		         history2  history2  history2

Report Id: AMCMIS [WCAMIS] 02621450 (Generated: 03/13/2024 09:33:38) Rev: 1



# **OIL ANALYSIS REPORT**

Particle Trend			FLUID DEGRADA	TION	method	limit/base	current	history1	history2
k - <del>Αυτοπται</del> 4μm 14μm			Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.37		
k			VISUAL		method	limit/base	current	history1	history2
k			White Metal	scalar	Visual*	NONE	NONE		
k -			Yellow Metal	scalar	Visual*	NONE	NONE		
k			Precipitate	scalar	Visual*	NONE	NONE		
Mar11/24		Mar11/24	Silt	scalar	Visual*	NONE	NONE		
Mar		Mar	Debris	scalar	Visual*	NONE	NONE		
Acid Number			Sand/Dirt Appearance	scalar scalar	Visual* Visual*	NONE NORML	NONE NORML		
Abnormal			Odor	scalar	Visual*	NORML	NORML		
			Emulsified Water	scalar	Visual*	>0.05	NEG		
Base			Free Water	scalar	Visual*		NEG		
Abnormal			FLUID PROPERT	IES	method	limit/base	current	history1	history2
		-	Visc @ 40°C	cSt	ASTM D7279(m)	46	42.6		
		Mar11/24 -	SAMPLE IMAGES	6	method	limit/base	current	history1	history2
cosity @ 40° mmal	°C	W	Color					no image	no image
921			Bottom					no image	no image
Abnormal			GRAPHS			_			
		104	Ferrous Alloys				Particle Count		
17 / 1		1 U -	10 iron			491,520			T <sup>26</sup>
Particle Trend			E 5-			122,880	Severe		-24
4μm						30,720			-22
14μm			0			1 ml 7,680	Abnormal		-20 ISO 4406:1999 Cleanfiness
			Mar11/24			s (per 1 ml) 1/24.	~ ```	<b>`</b>	-18 .6.
			Non-ferrous Metal	S		Mar11/24 1950 1981 1980 1980 1980 1980 1980 1980 198	1.		-16 CE
			15 copper			ja 120			+14 mess
		2	E lo minimum tin			BE 30	-		-12 G
		1	5-			8	-		-10
			<sup>24</sup> 0			124			-8
			Mar11/24			Mar11/24			6
			Viscosity @ 40°C				<sup>6µ</sup> Acid Number	14μ 21μ	38µ 71µ
			55 50			1.00 Mumber 1 Number	Abnormal		
			0 0 0 Base			Ĕ 50.50	Base		
			40 Abnormal			Aumbe	Abnormal		
			35			💆 0.00	L.		4
			Marl 1/24			Mar11/24	Mar11/24		Mar11/24
	Iso 17025:2017 Accredited Laboratory To discuss this Test denoted	Sample No. Lab Number Unique Number Test Package	: 5746569 : IND 2 contact Customer Serve	Recei Teste Diagr	ived : 12 id : 13 nosed : 13 800-268-213	2 Mar 2024 9 Mar 2024 Mar 2024 - W 9	'es Davis	M Contac	North America nnia Road East lississauga, ON CA L4Z 4J3 ct: Sandip Patel el@amcor.com