

OIL ANALYSIS REPORT

1220 Birchmount E3

Component **Hydraulic System**

AW HYDRAULIC OIL ISO 46 (--- LTR)

Sample Rating Trend



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.

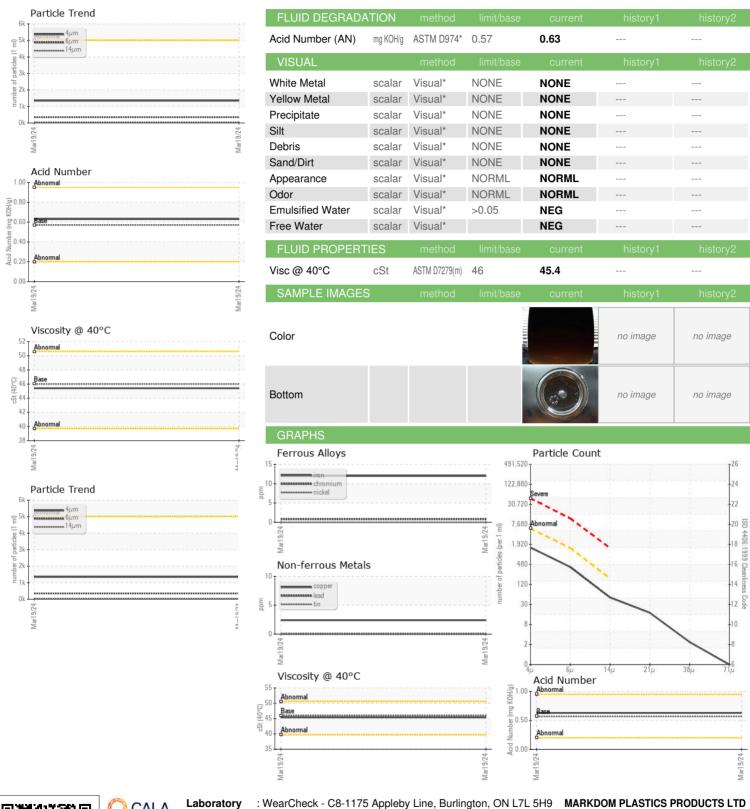
CAMPLE WEST	4 A TLOM		12			111
SAMPLE INFORM	//ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0921791		
Sample Date		Client Info		19 Mar 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	V	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	12		
Chromium	ppm	ASTM D5185(m)	>20	<1		
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	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
ADDITIVES Boron	ppm		limit/base		history1	history2
		method		current		
Boron	ppm	method ASTM D5185(m)	5	current 0		
Boron Barium	ppm	method ASTM D5185(m) ASTM D5185(m)	5 5	current 0 <1		
Boron Barium Molybdenum	ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5	current 0 <1 0		
Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 5	current 0 <1 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 5 25	current 0 <1 0 <1 0 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 5 5 25 200	current 0 <1 0 <1 7 0 0 7 0 7 0 0 0 0 0 0 0 0 0 0 0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300	current 0 <1 0 <1 70 225		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300 370	current 0 <1 0 <1 70 225 258		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300 370	current 0 <1 0 <1 70 225 258 1295		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300 370 2500	current 0 <1 0 0 <1 70 225 258 1295 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300 370 2500	current 0 <1 0 0 <1 70 225 258 1295 <1 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	5 5 5 25 200 300 370 2500	current 0 <1 0 <1 0 <1 70 225 258 1295 <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 ppm	method ASTM D5185(m)	5 5 5 25 200 300 370 2500	current 0 <1 0 0 <1 70 225 258 1295 <1 current 0 2	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 ppm	method ASTM D5185(m)	5 5 5 25 200 300 370 2500 limit/base >15	current 0 <1 0 <1 0 <1 70 225 258 1295 <1 current 0 2	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) method	5 5 5 25 200 300 370 2500 limit/base >15 >20	current 0 <1 0 0 <1 70 225 258 1295 <1 current 0 2 0 current	history1 history1	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 ppm	method ASTM D5185(m) method ASTM D5185(m)	5 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000	current 0 <1 0 0 <1 70 225 258 1295 <1 current 0 2 0 current 1351	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 ppm	method ASTM D5185(m) method 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 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300	current 0 <1 0 <1 0 <1 70 225 258 1295 <1 current 0 2 0 current 1351 352	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) method ASTM D5185(m) ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	current 0 <1 0 <1 0 <1 70 225 258 1295 <1 current 0 2 0 current 1351 352 43	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	current 0 <1 0 <1 0 <1 70 225 258 1295 <1 current 0 2 0 current 1351 352 43 15	history1 history1	history2 history2

ISO 4406 (c) >19/17/14

Oil Cleanliness



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number

: WC0921791

: 02623419 Unique Number : 5748538 Test Package : IND 2 (Additional Tests: TAN Man)

Received **Tested**

Diagnosed

: 20 Mar 2024 : 21 Mar 2024 : 21 Mar 2024 - Wes Davis

MARKDOM PLASTICS PRODUCTS LTD 1220 BIRCHMOUNT RD TORONTO, ON

CA M1P 2C6 Contact: Joseph Kovacs joseph@markdom.com T: (416)752-4290

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.

F: (416)751-6638 Validity of results and interpretation are based on the sample and information as supplied.

Contact/Location: Joseph Kovacs - MARSCA