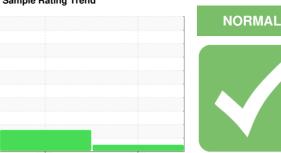


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

55 - FRONT STREET MILLWORK

Hydraulic System

AW HYDRAULIC OIL ISO 32 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

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

			Mar2022	May2024	,	
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
		Client Info			WC0640476	
Sample Number				WC0891970		
Sample Date		Client Info		19 May 2024	07 Mar 2022	
Machine Age	yrs	Client Info		0	11322	
Oil Age	yrs	Client Info		0 Nat Obassal	0	
Oil Changed		Client Info		Not Changd	N/A	
Sample Status				NORMAL	ABNORMAL	
CONTAMINATION	J	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	1	1	
Chromium	ppm	ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>10	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m		0	<1	
Aluminum	ppm	ASTM D5185m	>10	0	<1	
Lead	ppm	ASTM D5185m	>10	0	<1	
Copper	ppm	ASTM D5185m	>75	3	2	
Tin	ppm	ASTM D5185m	>10	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	OLLKKO 10‡	historyd	history2
ADDITIVES		memou	IIIIII/Dase	current	history1	HISTOLYZ
Boron	ppm	ASTM D5185m	5	0	0	
	ppm				•	,
Boron	• •	ASTM D5185m	5	0	0	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	5	0 0	0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5	0 0 0	0 0 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5	0 0 0 <1	0 0 0 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25	0 0 0 <1 0	0 0 0 <1 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25 200	0 0 0 <1 0 46	0 0 0 <1 <1 48	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25 200 300	0 0 0 <1 0 46 349	0 0 0 <1 <1 48 353	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25 200 300 370	0 0 0 <1 0 46 349 449	0 0 0 <1 <1 48 353 463	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500	0 0 0 <1 0 46 349 449 5150	0 0 0 <1 <1 48 353 463 5011	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500	0 0 0 <1 0 46 349 449 5150 current	0 0 0 <1 <1 48 353 463 5011 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20	0 0 0 <1 0 46 349 449 5150	0 0 0 <1 <1 <1 48 353 463 5011 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20	0 0 0 <1 0 46 349 449 5150 current	0 0 0 <1 <1 48 353 463 5011 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20	0 0 0 <1 0 46 349 449 5150 current 1 2 <1	0 0 0 <1 <1 48 353 463 5011 history1 1 0	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20	0 0 0 -<1 0 46 349 449 5150 current 1 2 -<1	0 0 0 <1 <1 <1 48 353 463 5011 history1 1 0 2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base	0 0 0 -<1 0 46 349 449 5150 current 1 2 -<1 current 3576	0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300	0 0 0 -<1 0 46 349 449 5150 current 1 2 -<1 current 3576 393	0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201 ▲ 3267	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >1300 >160	0 0 0 -<1 0 46 349 449 5150 current 1 2 -<1 current 3576 393 16	0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201 ▲ 3267 ▲ 193	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40	0 0 0 -<1 0 46 349 449 5150 current 1 2 -<1 current 3576 393 16 2	0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201 ▲ 3267 ▲ 193 30	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 46 349 449 5150 current 1 2 <1 current 3576 393 16 2 0	0 0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201 ▲ 3267 ▲ 193 30 1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >51µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 5 200 300 370 2500 limit/base >20 >20 limit/base >1300 >160 >40 >10 >3	0 0 0 46 349 449 5150 current 1 2 <1 current 3576 393 16 2 0 0	0 0 0 <1 <1 48 353 463 5011 history1 1 0 2 history1 ▲ 15201 ▲ 3267 ▲ 193 30 1 0	history2 history2

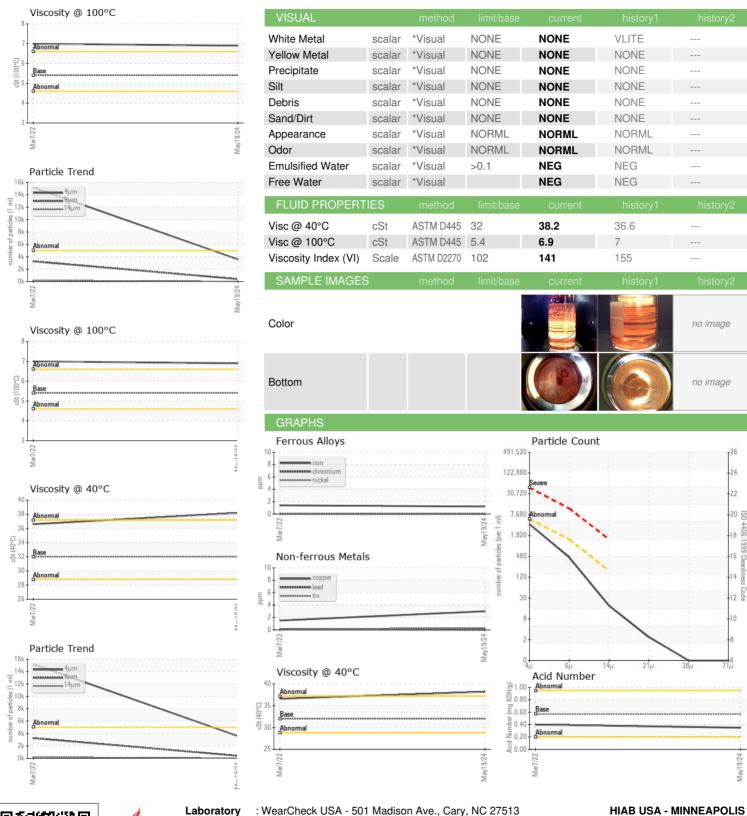
Acid Number (AN)

mg KOH/g ASTM D8045 0.57

0.40



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No. Lab Number

: WC0891970 : 06184961 Unique Number : 11036287

Received : 20 May 2024 **Tested** : 22 May 2024 Diagnosed

: 22 May 2024 - Don Baldridge Test Package : MOB 2 (Additional Tests: KV100, VI)

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. **HIAB USA - MINNEAPOLIS**

10974 CLARK RD INVER GROVE HEIGHTS, MN US 55077

Contact: MAT ENGLER MAT.ENGLER@HIAB.COM

T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: