

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

STACKER

Component Hydraulic System AW HYDRAULIC OIL ISO 46 (150 GAL)

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

A Wear

The copper level is abnormal. All other component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

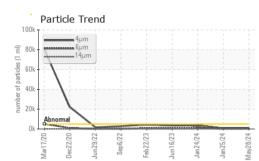
	SAMPLE INFORMATION		limit/base	current	history1	history2
Sample Number		Client Info		WC0873110	WC0819721	WC0873109
Sample Date		Client Info		28 May 2024	25 Jan 2024	24 Jan 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	ATTENTION
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	10	8	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>20	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	3
Lead	ppm	ASTM D5185m	>20	1	<1	<1
Copper	ppm	ASTM D5185m	>20	4 37	18	18
Tin	ppm	ASTM D5185m	>20	3	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	<1	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	2	<1	<1
-	ppm ppm		5	2 <1	<1 0	<1 0
Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 25			
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	25	<1 12	0	0 12
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	25 200	<1 12 54	0 12 62	0 12 62
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300	<1 12 54 373	0 12 62 361	0 12 62 361
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300	<1 12 54	0 12 62	0 12 62
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370	<1 12 54 373 470	0 12 62 361 471	0 12 62 361 461
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base	<1 12 54 373 470 2065	0 12 62 361 471 1806	0 12 62 361 461 1790
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	25 200 300 370 2500 limit/base	<1 12 54 373 470 2065 current	0 12 62 361 471 1806 history1	0 12 62 361 461 1790 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	25 200 300 370 2500 limit/base >15	<1 12 54 373 470 2065 current 2	0 12 62 361 471 1806 history1 <1	0 12 62 361 461 1790 history2 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >15	<1 12 54 373 470 2065 <u>current</u> 2 <1	0 12 62 361 471 1806 history1 <1 0	0 12 62 361 461 1790 history2 <1 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >15 >20	<1 12 54 373 470 2065 <u>current</u> 2 <1 <1	0 12 62 361 471 1806 history1 <1 0 <1	0 12 62 361 461 1790 history2 <1 0 <1
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >20 limit/base >5000	<1 12 54 373 470 2065 current 2 <1 <1 <1	0 12 62 361 471 1806 history1 <1 0 <1 history1	0 12 62 361 461 1790 history2 <1 0 <1 history2
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 ASTM D5185m	25 200 300 370 2500 limit/base >20 limit/base >5000	<1 12 54 373 470 2065 current 2 <1 <1 current 1151	0 12 62 361 471 1806 history1 <1 0 <1 0 <1 history1 716	0 12 62 361 461 1790 history2 <1 0 <1 history2 3710
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 ASTM D7647	25 200 300 2500 limit/base >15 >20 limit/base >5000 >1300 >160	<1 12 54 373 470 2065 current 2 <1 <1 current 1151 283	0 12 62 361 471 1806 history1 <1 0 <1 0 <1 history1 716 167	0 12 62 361 461 1790 history2 <1 0 <1 istory2 3710 1379
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	<1 12 54 373 470 2065 current 2 <1 <1 <1 1151 283 16	0 12 62 361 471 1806 history1 <1 0 <1 *1 0 <1 *1 716 167 19	0 12 62 361 461 1790 history2 <1 0 <1 *1 history2 3710 1379 131
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<1 12 54 373 470 2065 current 2 <1 <1 <1 current 1151 283 16 2	0 12 62 361 471 1806 history1 <1 0 <1 *1 716 167 19 7	0 12 62 361 461 1790 history2 <1 0 <1 * 10 <1 * 10 * 1379 131 30
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<1 12 54 373 470 2065 current 2 <1 <1 <1 1151 283 16 2 0	0 12 62 361 471 1806 history1 <1 0 <1 *1 716 167 19 7 0	0 12 62 361 461 1790 history2 <1 0 <1 *1 history2 3710 1379 131 30 0
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<1 12 54 373 470 2065 current 2 <1 <1 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2	0 12 62 361 471 1806 history1 <1 0 <1 *1 716 167 19 7 0 0 0	0 12 62 361 461 1790 history2 <1 0 <1 *1 history2 3710 1379 131 30 0 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness	ppm ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 Iimit/base >15 >20 Iimit/base >20 Iimit/base >5000 >1300 >160 >1300 >160 >10 >10 >3 >19/17/14	<1 12 54 373 470 2065 current 2 <1 <1 <1 2 <1 2 <1 2 <1 2 <1 2 <1 2	0 12 62 361 471 1806 history1 <1 0 <1 history1 716 167 19 7 0 0 0 17/15/11	0 12 62 361 461 1790 history2 <1 0 <1 history2 3710 1379 131 30 0 0 0 19/18/14

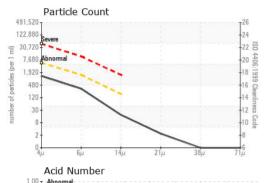
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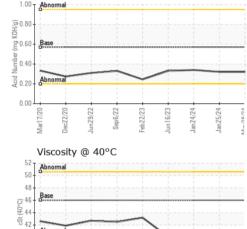
Contact/Location: Jeraid Caldwell BLUDAN

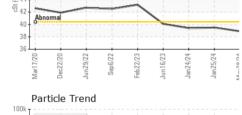


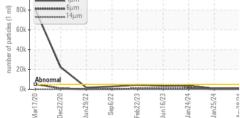
OIL ANALYSIS REPORT



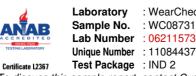












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White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	38.9	39.5	39.4
SAMPLE IMAGES		method	limit/base	current	history1	history2
					((P. 1843))	

method limit/base current

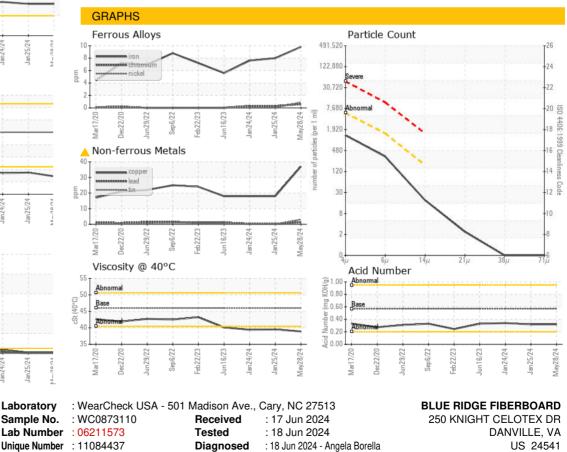
Color

VISUAL



history1 history2

Bottom



Test Package : IND 2

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.

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

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Contact/Location: Jerald Caldwell - BLUDAN

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Contact: Jerald Caldwell