

OIL ANALYSIS REPORT



Machine Id **175HD-2551** Component Hydraulic System Fluid {not provided} (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

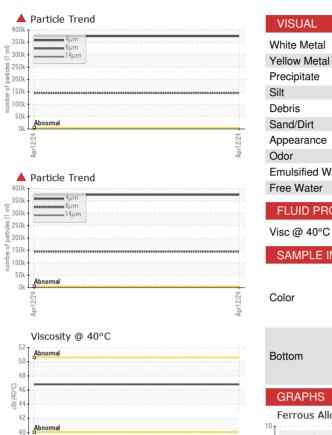
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0832208		
Sample Date		Client Info		12 Apr 2024		
Machine Age	hrs	Client Info		93		
Oil Age	hrs	Client Info		93		
Oil Changed		Client Info		Not Changd		
Sample Status				SEVERE		
CONTAMINATIO	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	6		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	<1		
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	method ASTM D5185(m)	limit/base		history1	history2
	ppm ppm	ASTM D5185(m)	limit/base	current <1 <1	history1 	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	limit/base	<1	history1 	
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m)	limit/base	<1 <1	history1	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	<1 <1 0		
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	<1 <1 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	<1 <1 0 0 2		
Boron Barium Molybdenum Manganese Magnesium	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)	limit/base	<1 <1 0 2 154	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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)	limit/base	<1 <1 0 2 154 590	 	
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)	limit/base	<1 <1 0 2 154 590 775		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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)	limit/base	<1 <1 0 2 154 590 775 1516	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm 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)		<1 <1 0 0 2 154 590 775 1516 <1 		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon	ppm 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) method ASTM D5185(m)	limit/base	<1 <1 0 2 154 590 775 1516 <1 current 0	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT	ppm 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) ASTM D5185(m)	limit/base	<1 <1 0 0 2 154 590 775 1516 <1 	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15	<1 <1 0 2 154 590 775 1516 <1 <u>current</u> 0 <1	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20	<1 <1 0 0 2 154 590 775 1516 <1 current 0 <1 <1	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base	<1 <1 <1 0 0 2 154 590 775 1516 <1 Current 0 <1 <1 <urrent< li=""> </urrent<>	 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium Sodium Potassium Potassium FLUID CLEANLI Particles >4μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base >5000	<1 <1 <1 0 0 2 154 590 775 1516 <1 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <lu> <1 <1 <lu> <1 <1 <1 <1 <1 <lu> <1 <1 <lu> <1 <1 <1 <lu> <1 <1 <lu> <1 <1 <lu> <1 <1 <lu> <lu> <1 <lu> <lu> <lu> <lu> <lu> <lu> <lu> <lu< th=""><th> history1 history1 history1</th><th> history2 history2 history2</th></lu<></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu></lu>	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium Sodium Potassium FLUID CLEANLI Particles >6μm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base >5000 >1300 >160	<1 <1 <1 0 0 2 154 590 775 1516 <1 current 0 <1 <1 current 0 374347 145237 	 history1 history1 	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium Potassium FLUID CLEANLI Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160	<1 <1 <1 0 0 2 154 590 775 1516 <1 0 <1 <1 Current 0 <1 <1 145237 2322 	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium FLUID CLEANLI Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<1 <1 0 0 2 154 590 775 1516 <1 Current 0 <1 <1 <1 Current 0 <1 <1 2 2 2 2 2 2 2 2 2 2 2 2 2	 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT Silicon Sodium Potassium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	<1 <1 0 0 2 154 590 775 1516 <1 Current 0 <1 <1 <1 Current 0 <1 <1 2 2 2 2 2 2 2 2 2 2 2 2 2	 history1 history1	 history2 history2

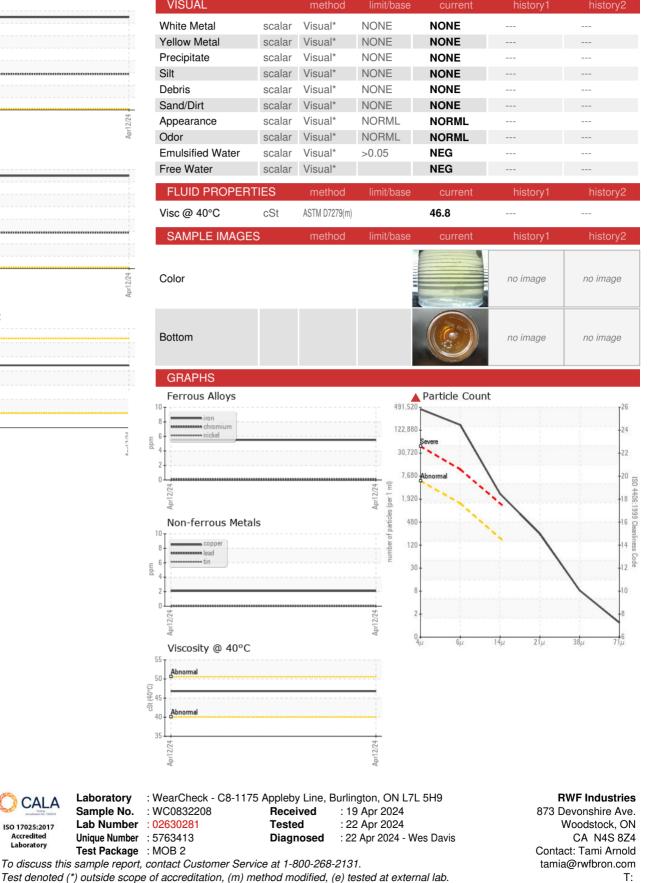


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Apr12/24

OIL ANALYSIS REPORT





Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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CALA

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Laboratory

Sample No.

Contact/Location: Tami Arnold - RWFWOO Page 2 of 2

F: (519)421-0028