

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 0371-6 Component Hydraulic System Fluid AW HYDRAULIC OIL ISO 46 (--- LTR)

DIAGNOSIS

A 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. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. 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 moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0378086	WC986391	WC895985
Sample Date		Client Info		28 Jun 2024	13 Jun 2018	18 Dec 2013
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	NORMAL
CONTAMINATION	١	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 D5185(m)	>20	9	6	3
Chromium	ppm	ASTM D5185(m)	>20	1	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>20	5	1	<1
Copper	ppm	ASTM D5185(m)	>20	17	11	8
Tin	ppm	ASTM D5185(m)	>20	5	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 1	<mark>history1</mark> 1	history2 <1
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	limit/base 5 5	current 1 <1	<mark>history1</mark> 1 0	history2 <1 <1
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 5 5 5	current 1 <1 0	history1 1 0 <1	history2 <1 <1 0
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 5 5 5	current 1 <1 0 <1	history1 1 0 <1 <1	history2 <1 <1 0 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 5 5 5 25	current 1 <1 0 <1 35	history1 1 0 <1 <1 16	history2 <1 <1 0 <1 20
ADDITIVES 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)	limit/base 5 5 5 2 2 5 2 0 0	current 1 <1 0 <1 35 82	history1 1 0 <1 <1 16 73	history2 <1 <1 0 <1 20 70
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 5 5 5 5 2 2 5 200 300	current 1 <1 0 <1 35 82 417	history1 1 0 <1 <1 1 1 6 73 410	history2 <1 <1 0 <1 20 70 380
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 5 5 5 2 2 2 5 200 300 3 70	Current 1 <1 <1 <1 35 82 417 464 	history1 1 0 <1 <1 16 73 410 426	history2 <1 <1 0 <1 20 70 380 460
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	limit/base 5 5 5 2 2 5 2 0 0 3 0 0 3 0 0 3 7 0 2 5 0 0	current 1 <1 0 <1 35 82 417 464 1327	history1 1 0 <1 <1 <1 <1 <16 <73 <410 <426 <1283	<1 <1 0 <1 0 <1 20 70 380 460 1240
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	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)	limit/base 5 5 25 200 300 370 2500	current 1 <1 0 <1 35 82 417 464 1327 <1	history1 1 0 <1 <1 <1 16 73 410 426 1283 0	history2 <1 <1 0 <1 20 70 380 460 1240 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	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)	limit/base 5 5 2 2 2 0 0 3 0 0 3 7 0 2 5 0 0 2 5 0 0 2 5 0 0 2 5 0 0 2 5 0 0 2 0 0 2 0 0 2 0 0 0 2 0 0 0 0	current 1 <1 0 <1 35 82 417 464 1327 <1 current	history1 1 0 <1 <1 16 73 410 426 1283 0 history1	<1 <1 0 <1 20 70 380 460 1240 0 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 3 ppm 4 ppm 4	method ASTM D5185(m)	limit/base 5 5 5 25 200 300 370 2500 2500 limit/base >15	current 1 <1 0 <1 35 82 417 464 1327 <1 current	history1 1 0 <1 <1 16 73 410 426 1283 0 history1	<1 <1 0 <1 20 70 380 460 1240 0 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	limit/base 5 5 25 200 300 370 2500 2500 limit/base >15	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 444	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5	<1 <1 0 <1 0 <1 20 70 380 460 1240 0 history2 1 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 2 ppm 1 ppm 1 ppm 1	method ASTM D5185(m)	limit/base 5 5 2 2 5 2 0 0 3 0 0 3 0 0 3 7 0 2 5 0 0 0 1 5 0 0 0 1 0 0 0 0 0 0 0 0 0 0	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 464 464 464 4327 <1 44 43	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 5	<1 <1 0 <1 0 <1 20 70 380 460 1240 0 history2 1 0 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4 ppm 4 ppm 2 ppm 4 ppm 4	method ASTM D5185(m)	limit/base 5 5 25 200 300 370 2500 2500 limit/base >15 >20	current 1 <1 35 82 417 464 1327 <1 current <1 44 4 4	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 history1	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 4 ppm 4	method ASTM D5185(m)	limit/base 5 5 25 200 300 370 2500 2500 limit/base >20 limit/base >5000	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 464 1327 <1 current <1 4 9804	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 5 history1 276	<1 <1 0 <1 0 <10 380 460 1240 0 history2 1 0 2 history2 1234
ADDITIVES 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)	limit/base 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 44 0 <1 4 9804 ▲3452	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 5 history1 276 55	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 2 11 1240 1240 1240 1240 1240 1240 344
ADDITIVES 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)	limit/base 5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 <404 1327 <1 current <1 4 4 4 207	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 5 history1 276 55 7	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 2 history2 1 0 2 history2 1234 32
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium 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 ppm	method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base 5 5 25 200 300 370 2500 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	current 1 <1 0 <1 35 82 417 464 1327 <1 current <1 <urrent< td=""> <1 <urrent< td=""> <1 44 0 <1 4 4 207 25</urrent<></urrent<>	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 5 history1 276 55 7 2	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 2 history2 1240 344 32 9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base 5 5 25 200 300 370 2500 370 2500 370 2500 15 >20 limit/base >5000 >1300 >160 >40 >10	current 1 <1 35 82 417 464 1327 <1 current <1 464 357 <207 25 1	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 history1 276 55 7 2 0	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 11 0 1240 0 history2 1 0 2 history2 1234 344 32 9 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base 5 5 25 200 2500 370 2500 2500 limit/base >15 >20 limit/base >5000 >160 >160 >10 >3	current 1 <1 35 82 417 464 1327 <1 2 <1 464 1327 <1 464 35 9804 3452 207 25 1 0	history1 1 0 <1 <1 16 73 410 426 1283 0 history1 1 5 history1 276 55 7 2 0 0	<1 <1 0 <1 20 70 380 460 1240 0 history2 1 0 history2 1 2 history2 344 32 9 0 0



OIL ANALYSIS REPORT

	10k -	Particle Trend	FL
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	01		Prec
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_	01.	4µm	Odo
s (1 m	0К-	14µm	Emu
article	6k -	Abnormal	Free
r of p	41		
- 63	TK		
numbe	2k -		FL FL
numbe	2k ·		FL Visc
numbe	2k · Ok ·		FL Visc



Dec18/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	0.55	0.522	0.62
VISUAL		method	limit/base	current	history1	history2
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	VLITE
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 PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	44.8	44.5	44.6
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						

Bottom



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : WC0378086 Received : 02 Jul 2024 Lab Number : 02644847 Tested : 03 Jul 2024 ISO 17025:2017 Accredited Laboratory : 03 Jul 2024 - Wes Davis Unique Number : 5802386 Diagnosed Test Package : IND 2 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. Validity of results and interpretation are based on the sample and information as supplied.

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