

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id OS15 Component Main Hydraulic System {not provided} (--- LTR)

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. 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.

			Feb2023	Mar2024			
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0914599	WC0779640		
Sample Date		Client Info		11 Mar 2024	20 Feb 2023		
Machine Age	hrs	Client Info		0	0		
Oil Age	hrs	Client Info		0	0		
Oil Changed		Client Info		N/A	0 N/A		
Sample Status				ABNORMAL	NORMAL		
CONTAMINATION	J	method	limit/base	current	history1	history2	
Water			>0.05	NEG	NEG		
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	4	4		
Chromium	ppm	ASTM D5185(m)		0	0		
Nickel	ppm	ASTM D5185(m)	>20	۰ <1	<1		
Titanium	ppm	ASTM D5185(m)	200	0	0		
Silver	ppm	ASTM D5185(m)		0	0		
Aluminum	ppm	ASTM D5185(m)	>20	۰ <1	0		
Lead	ppm	ASTM D5185(m)	>20	<1	<1		
Copper	ppm	ASTM D5185(m)	>20	6	5		
Tin	ppm	ASTM D5185(m)	>20	0	0		
Antimony	ppm	ASTM D5185(m)	~	0	<1		
Vanadium	ppm	ASTM D5185(m)		0	0		
Beryllium	ppm	ASTM D5185(m)		0	0		
	ppin				U		
Cadmium	nnm	ASTM D5185(m)		0	0		
	ppm	ASTM D5185(m)	limit/booo	0	0		
ADDITIVES		method	limit/base	current	history1	 history2	
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 0	history1 <1	history2	
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 10	history1 <1 14	history2	
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 10 0	history1 <1 14 0	history2 	
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	current 0 10 0 0	history1 <1 14 0 0	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)	limit/base	Current 0 10 0 0 0	history1 <1 14 0 0 0	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)ASTM D5185(m)	limit/base	current 0 10 0 0 0 0 7	history1 <1 14 0 0 0 0 8	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	methodASTM 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	Current 0 10 0 0 0 0 7 497	history1 <1 14 0 0 0 0 8 532	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	limit/base	Current 0 10 0 0 0 0 7 497 522	history1 <1 14 0 0 0 0 8 532 534	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)	limit/base	Current 0 10 0 0 0 0 7 497 522 1220	history1 <1 14 0 0 0 0 8 532 534 1194	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)		Current 0 10 0 0 0 0 7 497 522	history1 <1 14 0 0 0 8 532 534 1194 <1	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185(m)ASTM D5185(m)	limit/base	Current 0 10 0 0 0 0 7 497 522 1220	history1 <1 14 0 0 0 0 8 532 534 1194	history2	
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)		Current 0 10 0 0 0 7 497 522 1220 <1	history1 <1 14 0 0 0 8 532 534 1194 <1	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	limit/base	Current 0 10 0 0 0 0 0 0 7 497 522 1220 <1 220 <1	history1 <1	history2	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm 1 ppm 2 ppm 2 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base	current 0 10 0 0 0 7 497 522 1220 <1 current 0	history1 <1 14 0 0 0 0 532 534 1194 <1 history1 0	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base >15	Current 0 10 0 0 0 0 7 497 522 1220 <1 220 <1 20 <1 0 0 0	history1 <1	history2	
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 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base >15 >20	current 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 2 1220 <1 0 0 1	history1 <1	history2	
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 2 ppm 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base >15 >20 limit/base	Current 0 10 0 0 0 0 7 497 522 1220 <1 0 0 0 0	history1 <1	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base >15 >20 limit/base >5000	Current 0 10 0 0 0 0 0 0 0 7 497 522 1220 <1 0 0 0 0 0 0 0 <1 current 0 14149	history1 <1	history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m)	limit/base >15 >20 limit/base >5000 >1300 >160	current 0 10 0 0 0 0 0 0 0 2 1220 <1 0 0 0 0 0 0 0 0 0 0 11 current 0 14149 >2974	history1 <1	history2 history2 history2 history2 history2 history2 history2	
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 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160	Current 0 10 0 0 0 0 7 497 522 1220 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 14149 2974 111	history1 <1	history2 history2 history2 history2 history2	
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 3 ppm 4 ppm 4 ppm 4 ppm 4	method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	Current 0 10 0 0 0 7 497 522 1220 <1 0 0 0 <1 Current 0 <1 Current <1 <2974 111 24	history1 <1	history2 history2 history2 <	

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OIL ANALYSIS REPORT

		FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
$\frac{16k}{\overline{E}} \frac{14k}{12k}$	/	Acid Number (AN)	mg KOH/g	ASTM D974*		0.49	0.47	
2 12k - 14μm		VISUAL		method	limit/base	current	history1	history2
spite pite 8k 6 k Abnormal		White Metal	scalar	Visual*	NONE	NONE	NONE	
4k - Abnormal		Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
2k -		Precipitate	scalar	Visual*	NONE	NONE	NONE	
0k		- ·	scalar	Visual*	NONE	NONE	NONE	
Feb 20/23		Silt Debris	scalar	Visual*	NONE	NONE	NONE	
		Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
A Particle Trend		Appearance	scalar	Visual*	NORML	NORML	NORML	
= 14k - 4μm 6μm		Odor	scalar	Visual*	NORML	NORML	NORML	
Ξ 12k - 14μm		Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	
95 Tok -		Free Water	scalar	Visual*		NEG	NEG	
sel lok sel lok sed for a sel to sel		FLUID PROPER	TIES	method	limit/base	current	history1	history2
ZK	*****	Visc @ 40°C	cSt	ASTM D7279(m)		43.1	42.9	
Leb 20/23 NO		SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Acid Number		Color						no image
(*************************************		Bottom						no image
0.00		GRAPHS						
Feb 20/23		Ferrous Alloys				Particle Count	1	0.230
Feb		10 iron 1			491,52	⁰		1 ²⁶
Viscosity @ 40°0	C	E 5-			122,88	0-		-24
52 Abnormal					30,72			-22
50		0			= 7,68	Abnormal		20 8
48 - 		Feb 20/23			Mar11/24 s (per 1 m)			19 4408
() 46 - t; 44		음			Marl 1/24 1761 Marl 1/24 1861 Marl 1/24		•	-20 (\$0 4406:1999 Cleanliness -18 Cleanliness -14 -14
42		Non-ferrous Meta	ls			0-		-16 Clear
40 - Abnormal		10 copper			Jo Japer 120	D-		+14 ness
38		E 5-			3	o -		-12 de
Feb 20/23						8-		10
LL.		- 0 <u></u>						
		Feb 20/23			Mar11/24	2-		
		—			Σ	0. 4μ 6μ	14µ 21µ	38µ 71µ
		Viscosity @ 40°C				Acid Number		
		e 50 - Abnormal			400.00 View Part (100 - 100 -			
		50 - Abnomal 69 45 - 83 40 - Abnomal			E U.41	U •		
		⁶³ 40 - Abnormal			1 0.20	D		
		35			Acid 44			
		Feb 20/23			Mar11/24	Feb 20/23		Mar11/24
	Accredited Unique Num Laboratory Test Packa		Recei Teste Diagr	ved : 12 d : 13 losed : 13	2 Mar 2024 3 Mar 2024 3 Mar 2024 - W		Mi Contac	lorth America nia Road East ssissauga, ON CA L4Z 4J3 t: Sandip Patel el@amcor.com

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