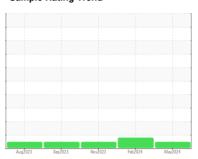


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

AMERICAN BALER

Component Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

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

		Aug2023	Sep.2023	Nov2023 Feb2024	May2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PTK0005602	PTK0005345	PTK0004674
Sample Date		Client Info		22 May 2024	05 Feb 2024	02 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	0	Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ATTENTION	NORMAL
CONTAMINATIO	Ν	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<1	0	0
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		<1	<1	0
Aluminum	ppm	ASTM D5185m	>10	0	1	2
Lead	ppm	ASTM D5185m	>10	<1	1	0
Copper	ppm	ASTM D5185m	>75	6	7	7
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
7.55125				ourront		
Boron	ppm	ASTM D5185m	5	0	0	0
	ppm					
Boron		ASTM D5185m	5	0	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	5 5	0	0	0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 5	0 0 0	0 0 <1	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 <1 <1	0 0 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25	0 0 0 <1 <1	0 0 <1 <1	0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium	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 <1 56	0 0 <1 <1 1 85	0 0 0 0 2 54
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25 200 300	0 0 0 <1 <1 56 339	0 0 <1 <1 1 85 304	0 0 0 0 2 54 300
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 5 25 200 300 370	0 0 0 <1 <1 56 339 430	0 0 <1 <1 1 85 304 435	0 0 0 0 2 54 300 432
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	5 5 5 25 200 300 370 2500	0 0 0 <1 <1 56 339 430 1625	0 0 <1 <1 1 85 304 435 1535	0 0 0 0 2 54 300 432 1517
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	5 5 5 25 200 300 370 2500 limit/base	0 0 0 <1 <1 56 339 430 1625	0 0 <1 <1 1 85 304 435 1535 history1	0 0 0 0 2 54 300 432 1517
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base	0 0 0 <1 <1 56 339 430 1625 current	0 0 <1 <1 1 85 304 435 1535 history1	0 0 0 0 2 54 300 432 1517 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20	0 0 0 <1 <1 56 339 430 1625 current	0 0 <1 <1 <1 1 85 304 435 1535 history1 <1 0	0 0 0 0 2 54 300 432 1517 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20	0 0 0 <1 <1 56 339 430 1625 current <1 1	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1	0 0 0 0 2 54 300 432 1517 history2 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20	0 0 0 <1 <1 56 339 430 1625 current <1 1	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1	0 0 0 0 2 54 300 432 1517 history2 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm	ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 limit/base >5000	0 0 0 <1 <1 56 339 430 1625 current <1 1 2	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1 history1 5338	0 0 0 0 2 54 300 432 1517 history2 0 0 1 history2 713
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm	ASTM D5185m method ASTM D5185m	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160	0 0 0 0 1 56 339 430 1625 current 1 2 current 488 178	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1 history1 5338 165	0 0 0 0 2 54 300 432 1517 history2 0 0 1 history2 713 225
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160	0 0 0 <1 <1 56 339 430 1625 current <1 1 2 current 488 178 33	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1 history1 5338 165 12	0 0 0 0 2 54 300 432 1517 history2 0 0 1 history2 713 225
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	5 5 5 25 200 300 370 2500 limit/base >20 >20 limit/base >160 >40 >10	0 0 0 0 1 56 339 430 1625 current 488 178 33 10	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1 history1 5338 165 12 4	0 0 0 0 2 54 300 432 1517 history2 0 0 1 history2 713 225 17
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m 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 >160 >40 >10	0 0 0 <1 <1 <1 56 339 430 1625 current <1 1 2 current 488 178 33 10 0	0 0 <1 <1 1 85 304 435 1535 history1 <1 0 <1 history1 5338 165 12 4 0	0 0 0 0 2 54 300 432 1517 history2 0 0 1 history2 713 225 17 4

Acid Number (AN)

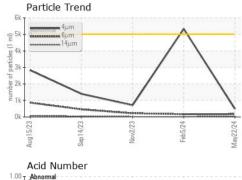
mg KOH/g ASTM D8045 0.57

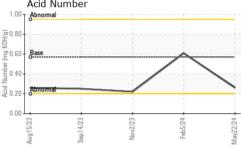
0.26

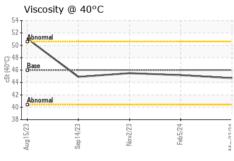
0.22 Submitted By: MIKE LEEN

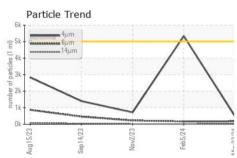


OIL ANALYSIS REPORT







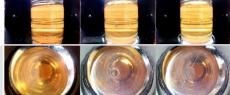


VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

Visc @ 40°C	cSt	ASTM D445	46	44.7	45.19	45.5

O/ IIII LL IIII IGLO	
Color	
Color	

Bottom



GRAPHS	S				
Ferrous A	Alloys			Particle Count	20
8 - iro	n				T ²⁶
6 - management Dig				122,880 - Severe	-24
2				30,720	-22
0 50	22		4	7,680 Abnormal	-20
Aug15/23	Sep14/23	Nov2/23	Feb5/24	May22/24 s (per 1 ml	-18
⊲ Non-ferr		ls		X 89 0 480	-16
10 T :	pper 1			May222/24 1.920 1.920 480 120	-20 -18 -16 -14
6 - lea	d				12
4-	<u> </u>				
0	-		***************************************	8	-10
Aug15/23	Sep14/23	Nov2/23	Feb5/24	May22/24	8
		2	Œ	4μ 6μ 14μ 21μ	38µ 71µ
Viscosity	@ 40°C			Acid Number	
Abnormal	••••			Q 0.80	
Base Abnormal				E 0.60 Base	
Abnormal				Abnormal (0,1,0,0)	
35 4		- 53	24+	23 4 Agr.	24
Aug15/23	Sep14/23	Nov2/23	Feb5/24	May22/24 Aug15/23 Sep14/23	Feb5/24





Certificate 12367

Laboratory

Sample No. : PTK0005602 Lab Number : 06193943 Unique Number : 11056066

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received : 29 May 2024 **Tested** : 30 May 2024

: 30 May 2024 - Wes Davis Diagnosed

Test Package : MOB 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)

GREAT NORTHERN CORP

8600 WYOMING AVE N BROOKLYN PARK, MN

US 55445 Contact: Service Manager

T:

F: