

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **3350868** Component **Hydraulic System** Fluid **AW HYDRAULIC OIL ISO 32 (--- GAL)**

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

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.

SAMPLE INFORMA	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0911864	WC0780066	WC0648713
Sample Date		Client Info		03 Apr 2024	23 Mar 2023	01 Mar 2022
	mths	Client Info		0	0	0
-	mths	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ATTENTION	ABNORMAL
CONTAMINATION		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	8	9	9
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	2	3	3
Tin I	ppm	ASTM D5185m	>10	0	<1	0
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	<1
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	<1	<1	<1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium				-		
magnoolann	ppm	ASTM D5185m	25	4	5	5
-	ppm ppm		25 200			5 84
Calcium		ASTM D5185m		4	5	
Calcium Phosphorus	ppm	ASTM D5185m ASTM D5185m	200	4 87	5 87	84
Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	200 300	4 87 394	5 87 388	84 400
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370	4 87 394 494	5 87 388 501	84 400 514
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370 2500 limit/base	4 87 394 494 2864	5 87 388 501 2381	84 400 514 2100
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	200 300 370 2500 limit/base	4 87 394 494 2864 current	5 87 388 501 2381 history1	84 400 514 2100 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium I	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	200 300 370 2500 limit/base >20	4 87 394 494 2864 current 2	5 87 388 501 2381 history1 1	84 400 514 2100 history2 2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium I	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370 2500 limit/base >20	4 87 394 494 2864 <u>current</u> 2 <1	5 87 388 501 2381 history1 1 0	84 400 514 2100 history2 2 <1
Calcium Phosphorus I Zinc Sulfur I CONTAMINANTS Silicon Sodium Potassium I FLUID CLEANLINE	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370 2500 <i>limit/base</i> >20	4 87 394 494 2864 <u>current</u> 2 <1 0	5 87 388 501 2381 <u>history1</u> 1 0 <1	84 400 514 2100 history2 2 <1 0
Calcium Phosphorus I Zinc Sulfur I CONTAMINANTS Silicon Sodium Potassium I FLUID CLEANLINE	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	200 300 370 2500 limit/base >20 >20 limit/base	4 87 394 494 2864 <u>current</u> 2 <1 0 <u>current</u>	5 87 388 501 2381 history1 1 0 <1 history1	84 400 514 2100 history2 2 <1 0 history2
Calcium Phosphorus I Zinc I Sulfur CONTAMINANTS Silicon Sodium Potassium I FLUID CLEANLINE Particles >4µm	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 D5185m	200 300 370 2500 limit/base >20 limit/base >5000	4 87 394 494 2864 <u>current</u> 2 <1 0 <u>current</u> 4412	5 87 388 501 2381 <u>history1</u> 1 0 <1 <u>history1</u> 97967	84 400 514 2100 history2 2 <1 0 history2 history2 ▲ 10767
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647	200 300 370 2500 limit/base >20 limit/base >20 limit/base >5000 >1300	4 87 394 494 2864 <i>current</i> 2 <1 0 <i>current</i> 4412 244	5 87 388 501 2381 history1 1 0 <1 istory1 history1 97967 654	84 400 514 2100 history2 2 <1 0 0 history2 ∧ 10767 553
Calcium Phosphorus I Zinc I Sulfur I CONTAMINANTS Silicon Sodium I Potassium I FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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	200 300 370 2500 imit/base >20 >20 imit/base >20 imit/base >20 >20 imit/base >20 >20	4 87 394 494 2864 <u>current</u> 2 <1 0 <u>current</u> 4412 244 9	5 87 388 501 2381 history1 1 0 <1 history1 0 5967 654 20	84 400 514 2100 history2 2 <1 0 history2 history2 ▲ 10767 553 38
Calcium Phosphorus I Zinc I Sulfur I CONTAMINANTS Silicon I Sodium Potassium I FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm	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	200 300 370 2500 Imit/base >20 Imit/base >20 Imit/base >5000 >1300 >160 >40 >10	4 87 394 494 2864 <u>current</u> 2 <1 0 <u>current</u> 4412 244 9 2	5 87 388 501 2381 history1 1 0 <1 * history1 • 7967 654 20 3	 84 400 514 2100 history2 2 <1 0 history2 10767 553 38 8

ISO 4406 (c) >19/17/14

19/15/10

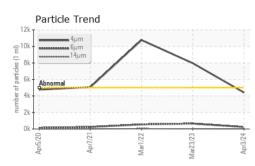
Oil Cleanliness

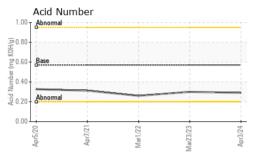
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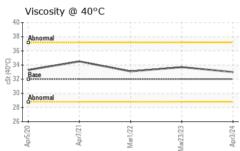
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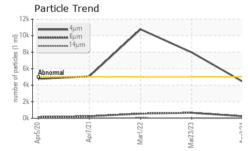


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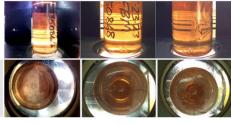




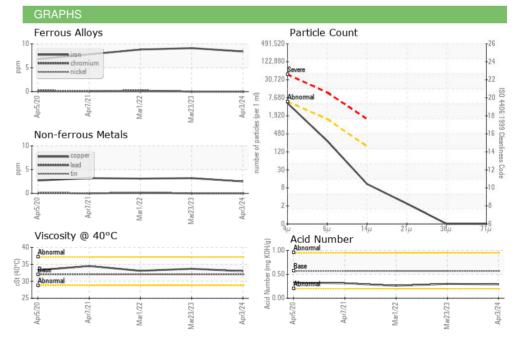


FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.29	0.30	0.26
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	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
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	33.0	33.7	33.1
SAMPLE IMAGES	5	method	limit/base	current	history1	history2

Color



Bottom



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **PALFINGER - BRANCH 400** : WC0911864 Sample No. Received : 20 May 2024 4151 W ST RT 18 Lab Number : 06184244 Tested : 21 May 2024 TIFFIN, OH US 44883 Unique Number : 11035570 Diagnosed : 21 May 2024 - Wes Davis Test Package : CONST Contact: ERIC HILL Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. e.hill@palfinger.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (419)448-8156 F:

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

Report Id: PALTIF [WUSCAR] 06184244 (Generated: 05/21/2024 13:50:14) Rev: 1

Contact/Location: ERIC HILL - PALTIF