

PROBLEM SUMMARY

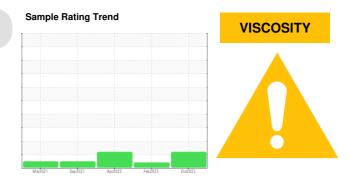
INTERSTITIAL - PUMP ROOM

B64246 - 5A (S/N 083012-1015943-002-24146-000)

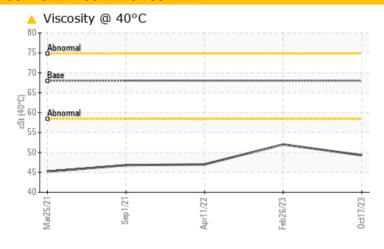
Component

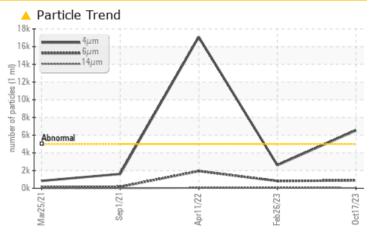
Hydraulic Power Pack

AW HYDRAULIC OIL ISO 68 (--- GAL)



COMPONENT CONDITION SUMMARY





RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS										
Sample Status				ATTENTION	ATTENTION	ABNORMAL				
Particles >4µm		ASTM D7647	>5000	△ 6532	2602	<u> </u>				
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<u> </u>	19/17/13	<u>\$\lambda\$\$ 21/18/13</u>				
Visc @ 40°C	cSt	ASTM D445	68	49.3	<u>▲</u> 52.0	△ 47.0				

Customer Id: HORMCC Sample No.: WC0850236 Lab Number: 05997914 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

26 Feb 2023 Diag: Don Baldridge

VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.



11 Apr 2022 Diag: Don Baldridge

VISCOSITY



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.



01 Sep 2021 Diag: Angela Borella

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





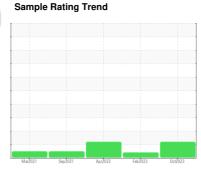
OIL ANALYSIS REPORT

INTERSTITIAL - PUMP ROOM

B64246 - 5A (S/N 083012-1015943-002-24146-000)

Hydraulic Power Pack

AW HYDRAULIC OIL ISO 68 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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 oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

		Mar2021	Sep2021	Apr2022 Feb2023	Oct2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0850236	WC0781558	WC0623270
Sample Date		Client Info		17 Oct 2023	26 Feb 2023	11 Apr 2022
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				ATTENTION	ATTENTION	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	1	2
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>20	0	<1	<1
Lead	ppm	ASTM D5185m	>20	<1	0	0
Copper	ppm	ASTM D5185m	>20	4	0	<1
Tin	ppm	ASTM D5185m	>20	0	0	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		ASTM D5185m	5	^	0	0
DOTOTI	ppm	HICOLCA INLOW	5	0	0	U
Barium	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	5	0	0	0
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5	0 0 0	0 0 <1	0 0 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25	0 0 0 <1	0 0 <1 0	0 0 <1 0
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200	0 0 0 <1 5	0 0 <1 0	0 0 <1 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300	0 0 0 <1 5 399	0 0 <1 0 86 451	0 0 <1 0 102 517
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	5 5 25 200 300 370	0 0 0 <1 5 399 32	0 0 <1 0 86 451 411	0 0 <1 0 102 517 533
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	5 5 25 200 300 370 2500	0 0 0 <1 5 399 32 778	0 0 <1 0 86 451 411 4460	0 0 <1 0 102 517 533 4620
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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 25 200 300 370 2500 limit/base	0 0 0 <1 5 399 32 778	0 0 <1 0 86 451 411 4460 history1	0 0 <1 0 102 517 533 4620 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 5 25 200 300 370 2500 limit/base	0 0 0 <1 5 399 32 778 current	0 0 <1 0 86 451 411 4460 history1	0 0 <1 0 102 517 533 4620 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15	0 0 0 <1 5 399 32 778 current 3 <1	0 0 <1 0 86 451 411 4460 history1 2	0 0 0 <1 0 102 517 533 4620 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20	0 0 0 <1 5 399 32 778 current 3 <1	0 0 0 <1 0 86 451 411 4460 history1 2 2	0 0 0 102 517 533 4620 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20	0 0 0 <1 5 399 32 778 current 3 <1 0	0 0 0 <1 0 86 451 411 4460 history1 2 0	0 0 -<1 0 102 517 533 4620 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm	ASTM D5185m method ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000	0 0 0 <1 5 399 32 778 current 3 <1 0	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602	0 0 0 <1 0 102 517 533 4620 history2 1 4 0 history2 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 <1 5 399 32 778 current 3 <1 0 current	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602 822	0 0 102 517 533 4620 history2 1 4 0 history2 17096 1937
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 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 <1 5 399 32 778 current 3 <1 0 current ▲ 6532 884 40	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602 822 56	0 0 0 102 517 533 4620 history2 1 4 0 history2 △ 17096 △ 1937 48
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 ASTM D7647	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40	0 0 0 <1 5 399 32 778 current 3 <1 0 current ▲ 6532 884 40 10	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602 822 56 13	0 0 102 517 533 4620 history2 1 4 0 history2 ▲ 17096 ▲ 1937 48 11
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 D7647 ASTM D7647 ASTM D7647 ASTM D7647	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 <1 5 399 32 778 current 3 <1 0 current ▲ 6532 884 40 10 0	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602 822 56 13	0 0 102 517 533 4620 history2 1 4 0 history2 ▲ 17096 ▲ 1937 48 11 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >5µm Particles >21µm Particles >38µm Particles >71µm	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 ASTM D7647	5 5 25 200 300 370 2500 limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10 >3	0 0 0 0 <1 5 399 32 778 current 3 <1 0 current ▲ 6532 884 40 10 0 0	0 0 0 86 451 411 4460 history1 2 2 0 history1 2602 822 56 13 1	0 0 0 102 517 533 4620 history2 1 4 0 history2 ▲ 17096 ▲ 1937 48 11 0



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No.

Lab Number

Unique Number

: 05997914 : 10726274

Test Package : IND 2

: WC0850236

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 03 Nov 2023 Received Diagnosed : 06 Nov 2023

Diagnostician

: Don Baldridge

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)

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