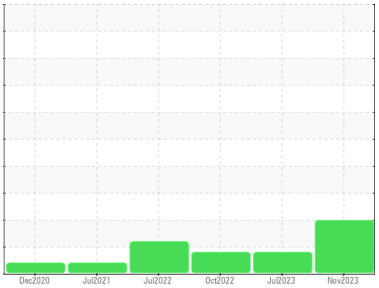
PROBLEM SUMMARY

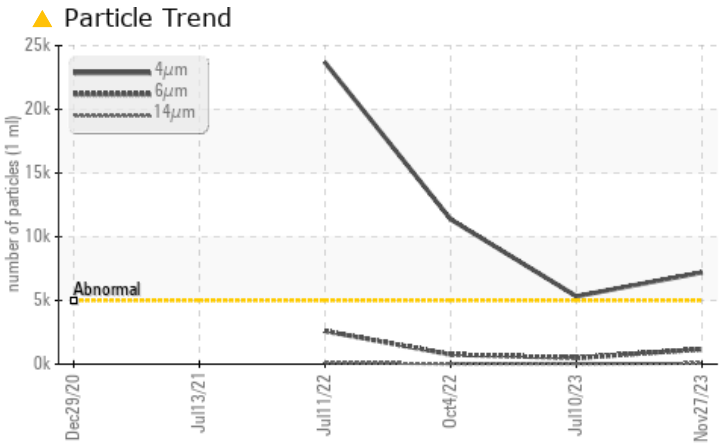
Sample Rating Trend

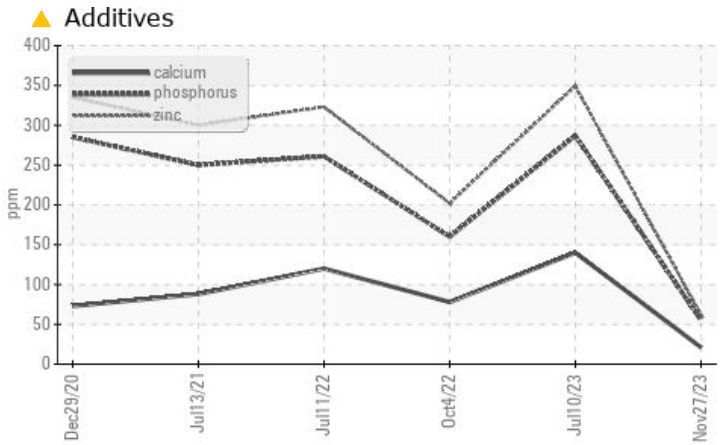


ADDITIVES

Area
Nashville
Machine Id
[Nashville] Hydraulic - Steering
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (35 GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: tanks cleaned and new added)

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	ATTENTION	ABNORMAL
Phosphorus	ppm	ASTM D5185m	300	▲ **55**	287	160
Zinc	ppm	ASTM D5185m	370	▲ **62**	349	202
Sulfur	ppm	ASTM D5185m	2500	▲ **175**	1279	783
Particles >4µm		ASTM D7647	>5000	▲ **7201**	▲ 5325	▲ 11365
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/17/13**	▲ 20/16/12	▲ 21/17/12

Customer Id: MARCAT
Sample No.: WC0805241
Lab Number: 06026384
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

10 Jul 2023 Diag: Don Baldridge

ISO

No corrective action is recommended at this time. The oil filtered at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

04 Oct 2022 Diag: Don Baldridge

ISO

No corrective action is recommended at this time. The oil filtered at the time of sampling has been noted. 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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Jul 2022 Diag: Doug Bogart

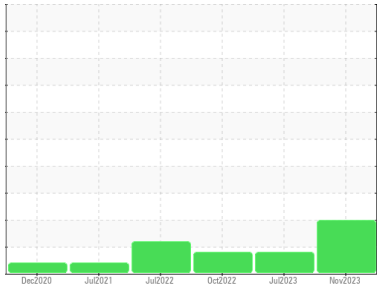
ISO

No corrective action is recommended at this time. 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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ADDITIVES

Area
Nashville
Machine Id
[Nashville] Hydraulic - Steering
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (35 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: tanks cleaned and new added)

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

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0805241**	WC0769194	WC0683322
Sample Date		Client Info		**27 Nov 2023**	10 Jul 2023	04 Oct 2022
Machine Age	hrs	Client Info		**117**	0	0
Oil Age	hrs	Client Info		**117**	11304	6222
Oil Changed		Client Info		**Not Changd**	Filtered	Filtered
Sample Status				**ATTENTION**	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**0**	14	8
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	<1
Lead	ppm	ASTM D5185m	>20	**0**	0	<1
Copper	ppm	ASTM D5185m	>20	**2**	7	3
Tin	ppm	ASTM D5185m	>20	**0**	0	<1
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**	4	2
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**0**	2	1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	25	**<1**	5	2
Calcium	ppm	ASTM D5185m	200	**21**	140	78
Phosphorus	ppm	ASTM D5185m	300	▲ **55**	287	160
Zinc	ppm	ASTM D5185m	370	▲ **62**	349	202
Sulfur	ppm	ASTM D5185m	2500	▲ **175**	1279	783

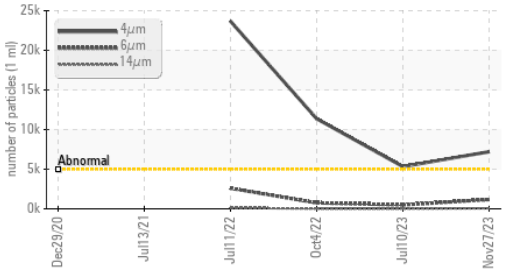
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**10**	<1	2
Sodium	ppm	ASTM D5185m		**1**	<1	0
Potassium	ppm	ASTM D5185m	>20	**0**	0	0
Water	%	ASTM D6304	>0.05	**0.001**	0.003	0.002
ppm Water	ppm	ASTM D6304	>500	**14**	38.6	24.0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **7201**	▲ 5325	▲ 11365
Particles >6µm		ASTM D7647	>1300	**1171**	490	752
Particles >14µm		ASTM D7647	>160	**65**	30	28
Particles >21µm		ASTM D7647	>40	**19**	12	10
Particles >38µm		ASTM D7647	>10	**1**	1	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/17/13**	▲ 20/16/12	▲ 21/17/12

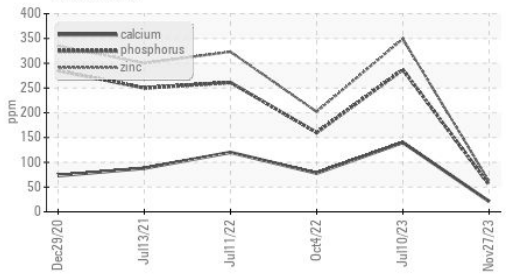
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.108**	0.25	0.25

OIL ANALYSIS REPORT

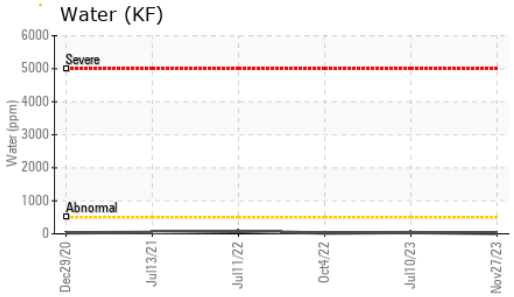
Particle Trend



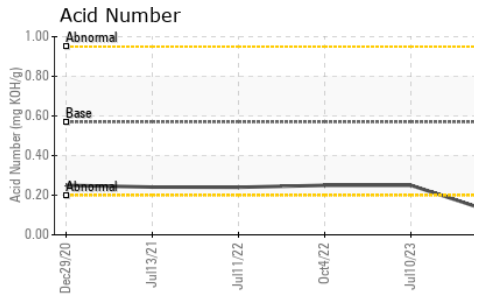
Additives



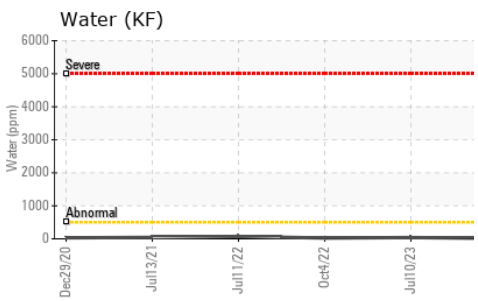
Water (KF)



Acid Number

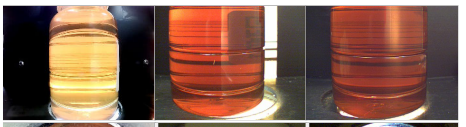


Water (KF)



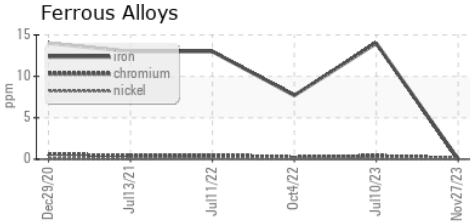
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	VLITE
Sand/Dirt	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 D445	32	**32.5**	32.8	32.4

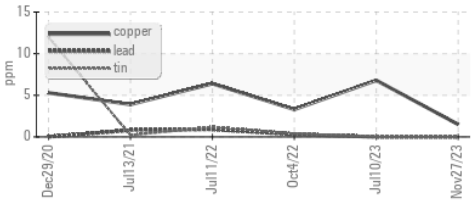
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

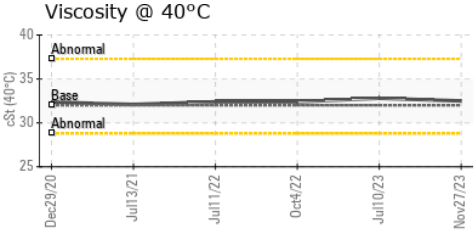
Ferrous Alloys



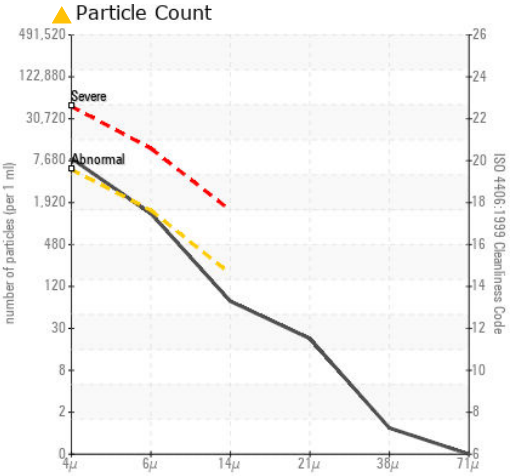
Non-ferrous Metals



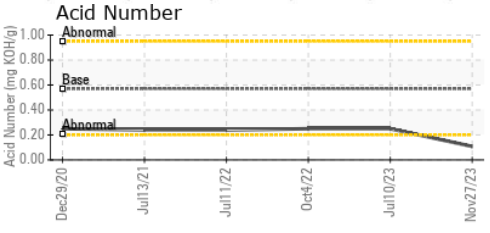
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0805241 **Received** : 06 Dec 2023
Lab Number : 06026384 **Diagnosed** : 12 Dec 2023
Unique Number : 10776175 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

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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