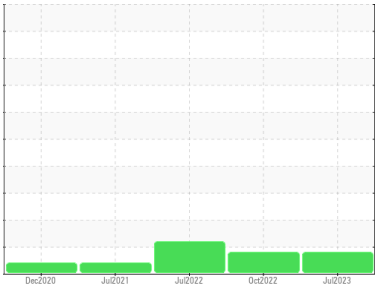
PROBLEM SUMMARY

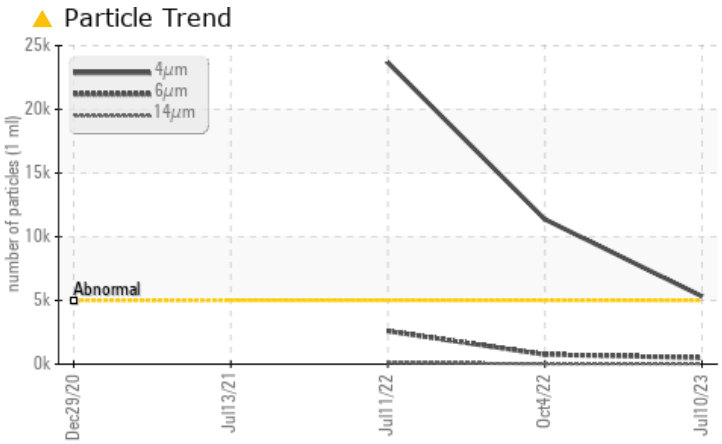
Sample Rating Trend



ISO

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. The oil filtered at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Dparnell)

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL
Particles >4µm		ASTM D7647	>5000	**5325**	11365	23668
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**20/16/12**	21/17/12	22/19/14

Customer Id: MARCAT
Sample No.: WC0769194
Lab Number: 05899896
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

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

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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

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13 Jul 2021 Diag: Doug Bogart

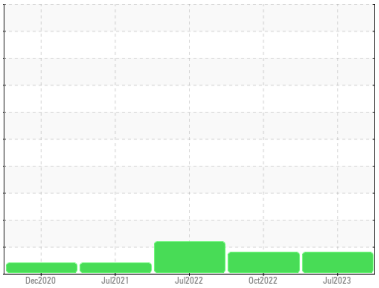
VIS DEBRIS

We recommend you service the filters on this component. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris 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



ISO

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. The oil filtered at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Dparnell)

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0769194**	WC0683322	RP0016020
Sample Date		Client Info		**10 Jul 2023**	04 Oct 2022	11 Jul 2022
Machine Age	hrs	Client Info		**0**	0	4059
Oil Age	hrs	Client Info		**11304**	6222	4717
Oil Changed		Client Info		**Filtered**	Filtered	N/A
Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**14**	8	13
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**0**	<1	<1
Lead	ppm	ASTM D5185m	>20	**0**	<1	<1
Copper	ppm	ASTM D5185m	>20	**7**	3	6
Tin	ppm	ASTM D5185m	>20	**0**	<1	1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**4**	2	6
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**2**	1	2
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	25	**5**	2	5
Calcium	ppm	ASTM D5185m	200	**140**	78	120
Phosphorus	ppm	ASTM D5185m	300	**287**	160	261
Zinc	ppm	ASTM D5185m	370	**349**	202	323
Sulfur	ppm	ASTM D5185m	2500	**1279**	783	1223

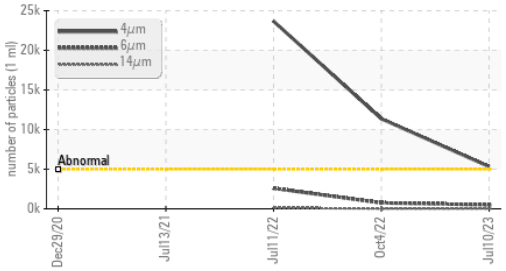
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	2	<1
Sodium	ppm	ASTM D5185m		**<1**	0	<1
Potassium	ppm	ASTM D5185m	>20	**0**	0	0
Water	%	ASTM D6304	>0.05	**0.003**	0.002	0.007
ppm Water	ppm	ASTM D6304	>500	**38.6**	24.0	72.1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **5325**	▲ 11365	▲ 23668
Particles >6µm		ASTM D7647	>1300	**490**	752	▲ 2595
Particles >14µm		ASTM D7647	>160	**30**	28	111
Particles >21µm		ASTM D7647	>40	**12**	10	27
Particles >38µm		ASTM D7647	>10	**1**	1	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/16/12**	▲ 21/17/12	▲ 22/19/14

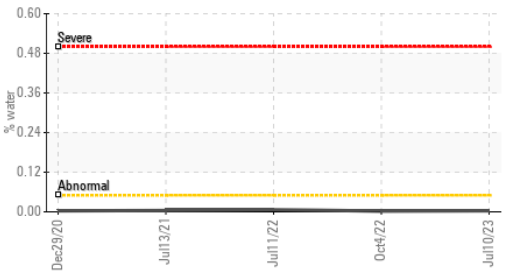
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.25**	0.25	0.24

OIL ANALYSIS REPORT

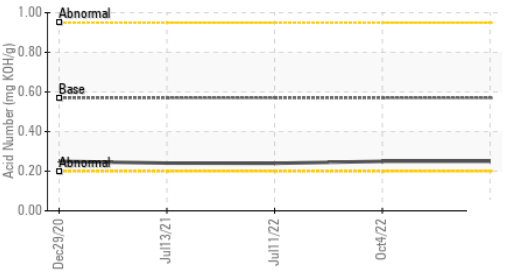
Particle Trend



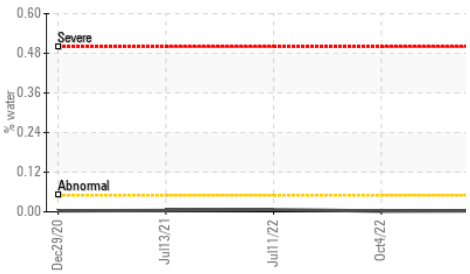
Water



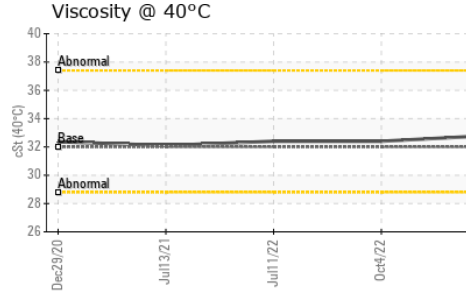
Acid Number



Water

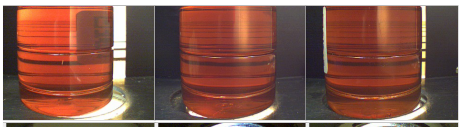
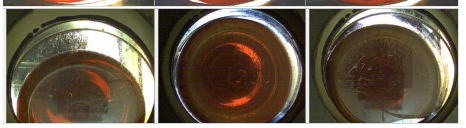


Viscosity @ 40°C



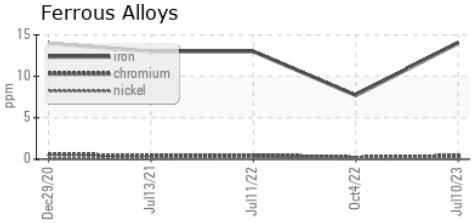
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**LIGHT**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	VLITE	VLITE
Sand/Dirt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

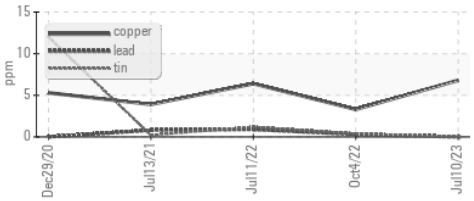
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

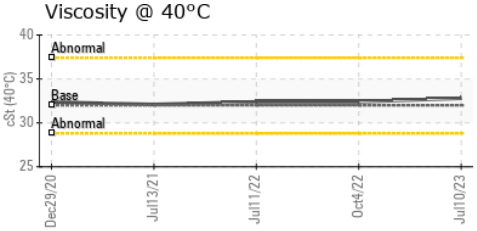
Ferrous Alloys



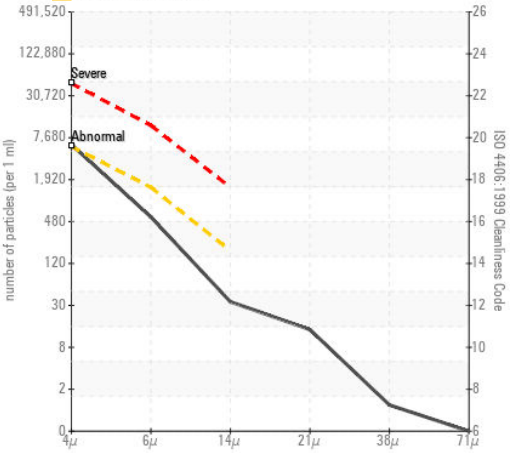
Non-ferrous Metals



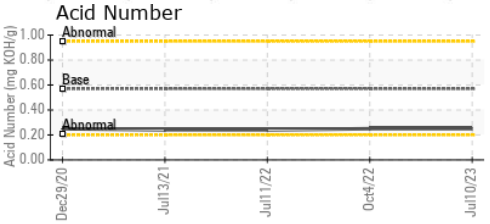
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0769194 **Received** : 17 Jul 2023
Lab Number : 05899896 **Diagnosed** : 18 Jul 2023
Unique Number : 10561252 **Diagnostician** : Don Baldridge
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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