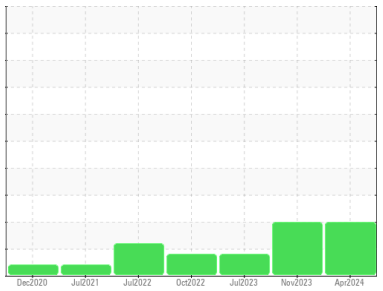
OIL ANALYSIS REPORT

Sample Rating Trend



ADDITIVES

Area
Nashville
Machine Id
[Nashville] Hydraulic - Steering
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 32 (110 GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: Dparnell)

Wear
All component wear rates are normal.

Contamination
There is a high amount of silt (particulates < 6 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		**WC0874897**	WC0805241	WC0769194
Sample Date		Client Info		**15 Apr 2024**	27 Nov 2023	10 Jul 2023
Machine Age	hrs	Client Info		**0**	117	0
Oil Age	hrs	Client Info		**2724**	117	11304
Oil Changed		Client Info		**Filtered**	Not Changd	Filtered
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**9**	0	14
Chromium	ppm	ASTM D5185m	>20	**2**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	0	0
Lead	ppm	ASTM D5185m	>20	**<1**	0	0
Copper	ppm	ASTM D5185m	>20	**5**	2	7
Tin	ppm	ASTM D5185m	>20	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**<1**	0	4
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**<1**	0	2
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m	25	**2**	<1	5
Calcium	ppm	ASTM D5185m	200	**26**	21	140
Phosphorus	ppm	ASTM D5185m	300	**58**	55	287
Zinc	ppm	ASTM D5185m	370	**82**	62	349
Sulfur	ppm	ASTM D5185m	2500	**174**	175	1279

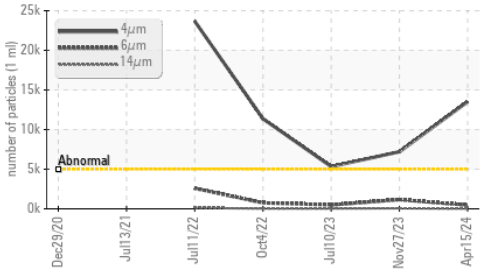
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**1**	10	<1
Sodium	ppm	ASTM D5185m		**0**	1	<1
Potassium	ppm	ASTM D5185m	>20	**1**	0	0
Water	%	ASTM D6304	>0.05	**0.003**	0.001	0.003
ppm Water	ppm	ASTM D6304	>500	**36**	14	38.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**13521**	7201	5325
Particles >6µm		ASTM D7647	>1300	**462**	1171	490
Particles >14µm		ASTM D7647	>160	**8**	65	30
Particles >21µm		ASTM D7647	>40	**2**	19	12
Particles >38µm		ASTM D7647	>10	**0**	1	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**21/16/10**	20/17/13	20/16/12

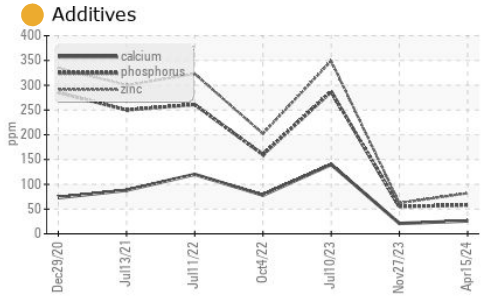
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.082**	0.108	0.25

OIL ANALYSIS REPORT

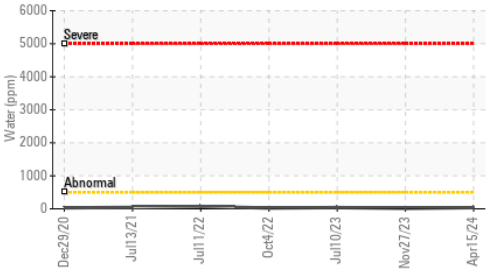
Particle Trend



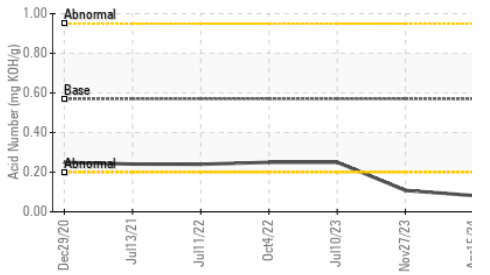
Additives



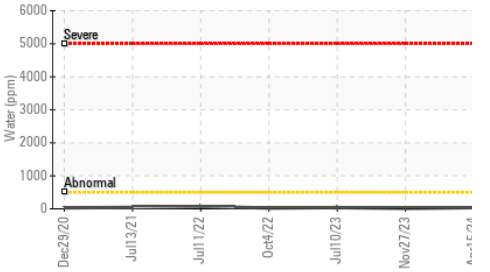
Water (KF)



Acid Number



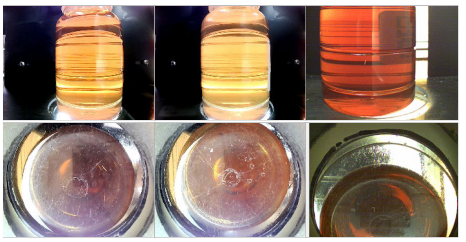
Water (KF)



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	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**	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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

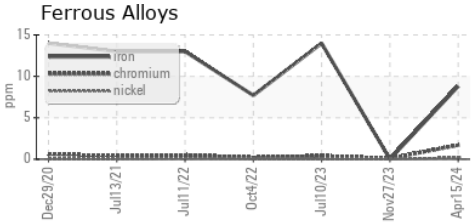
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	**32.6**	32.5	32.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

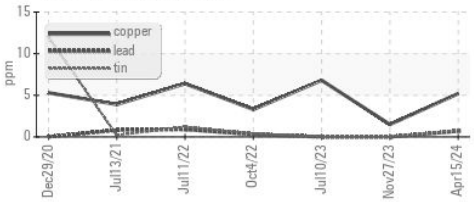


GRAPHS

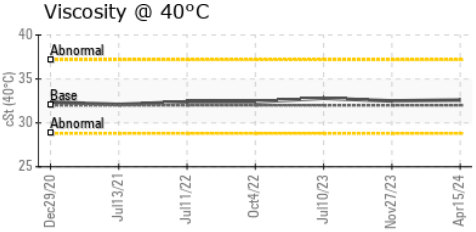
Ferrous Alloys



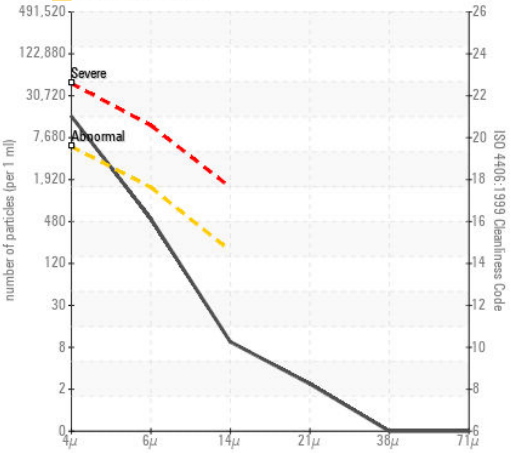
Non-ferrous Metals



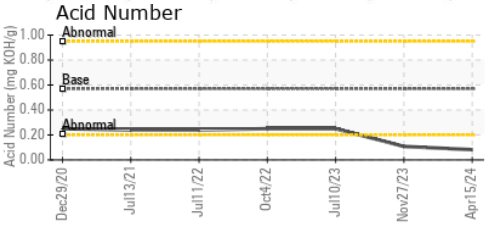
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874897 **Received** : 23 Apr 2024
Lab Number : 06157684 **Tested** : 24 Apr 2024
Unique Number : 10993107 **Diagnosed** : 25 Apr 2024 - 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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Report Id: MARCAT [WUSCAR] 06157684 (Generated: 04/25/2024 15:27:13) Rev: 1

Submitted By: M/V NASHVILLE