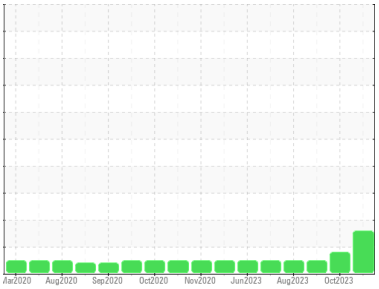
PROBLEM SUMMARY

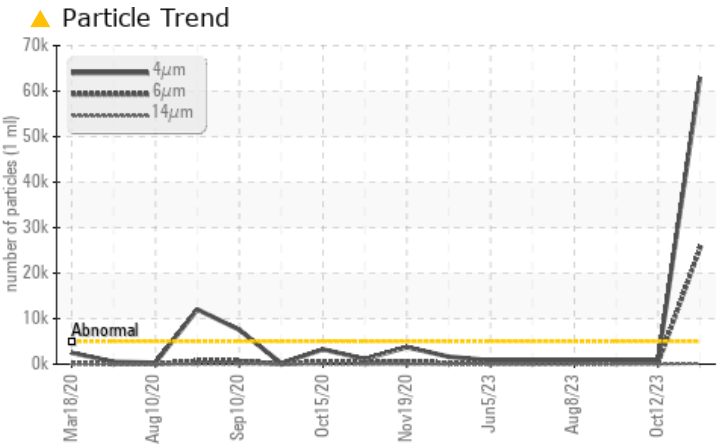
Sample Rating Trend



ISO

Machine Id
W13 (S/N 31030)
Component
Hydraulic System
Fluid
MIL-PRF-83282 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	MARGINAL	NORMAL
Particles >4µm		ASTM D7647	>5000	▲ **62988**	839	893
Particles >6µm		ASTM D7647	>1300	▲ **25461**	▲ 258	260
Particles >14µm		ASTM D7647	>160	▲ **165**	31	20
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/22/15**	▲ 17/15/12	17/15/11

Customer Id: NORPLAMA
Sample No.: WC0874934
Lab Number: 06030094
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

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

12 Oct 2023 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. Discrete particle counts [100 ml] 5-15µm = 22700, 15-25µm = 2400, 25-50µm = 700, 50-100µm = 0, >100µm = 0. There is a moderate amount of particulates present in the oil. Class 7. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Sep 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

08 Aug 2023 Diag: Wes Davis

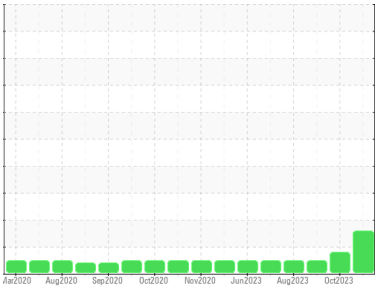
NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.All component wear rates are normal. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. The system and fluid cleanliness is acceptable. 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

Machine Id
W13 (S/N 31030)
Component
Hydraulic System
Fluid
MIL-PRF-83282 (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Discrete particle counts [100 ml] 5-15µm = 2529600, 15-25µm = 15800, 25-50µm = 600, 50-100µm = 100, >100µm = 0. There is a high amount of particulates present in the oil. Chlorine is 280 ppm.

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		**WC0874934**	WC0768905	WC0723446
Sample Date		Client Info		**10 Nov 2023**	12 Oct 2023	11 Sep 2023
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				**ABNORMAL**	MARGINAL	NORMAL

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	11	8
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	0	0
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**0**	0	0
Phosphorus	ppm	ASTM D5185m		**712**	726	655
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**43**	41	64

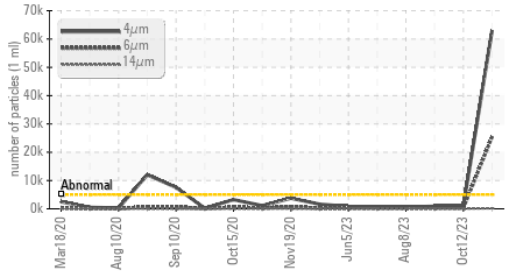
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**8**	9	8
Sodium	ppm	ASTM D5185m		**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	1	<1
Chlorine Content	ppm	ASTM D5185m		**280**	262	---
Water	%	ASTM D6304	>0.05	**0.010**	0.013	0.019
ppm Water	ppm	ASTM D6304	>500	**109**	135.1	197.9

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **62988**	839	893
Particles >6µm		ASTM D7647	>1300	▲ **25461**	▲ 258	260
Particles >14µm		ASTM D7647	>160	▲ **165**	31	20
Particles >21µm		ASTM D7647	>40	**7**	7	3
Particles >38µm		ASTM D7647	>10	**1**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **23/22/15**	▲ 17/15/12	17/15/11

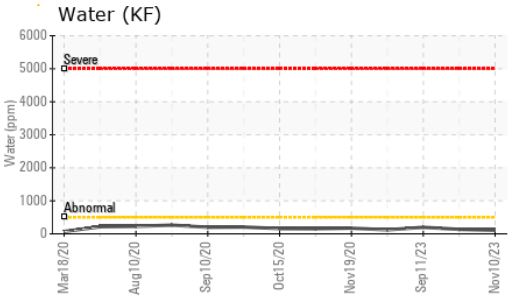
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.1	**0.091**	0.046	0.042

OIL ANALYSIS REPORT

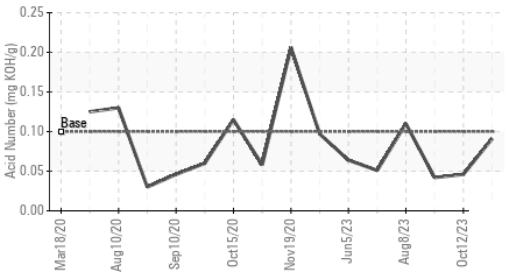
Particle Trend



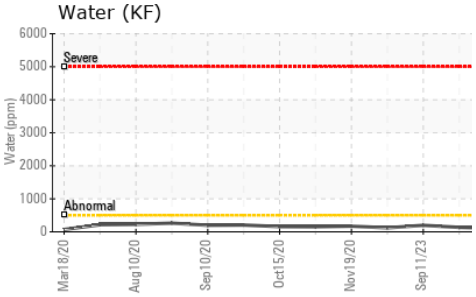
Water (KF)



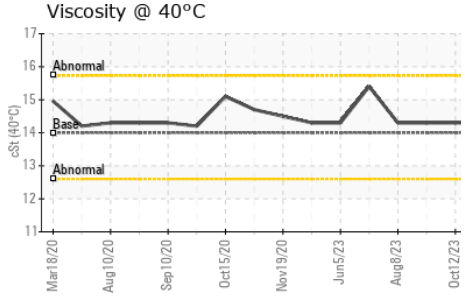
Acid Number



Water (KF)



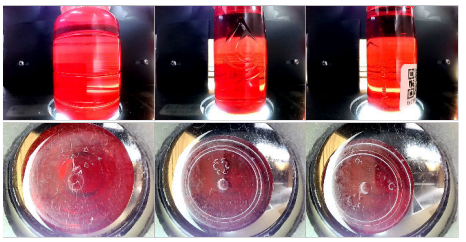
Viscosity @ 40°C



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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

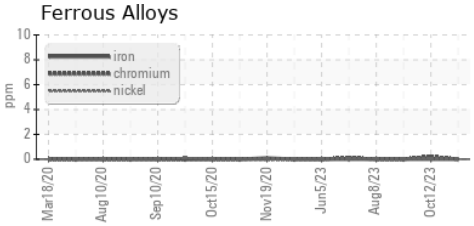
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	14.0	**14.3**	14.3	14.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

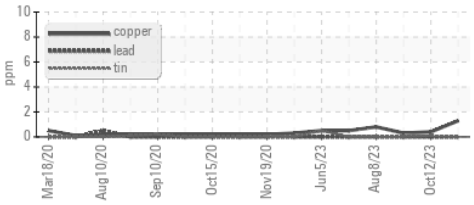


GRAPHS

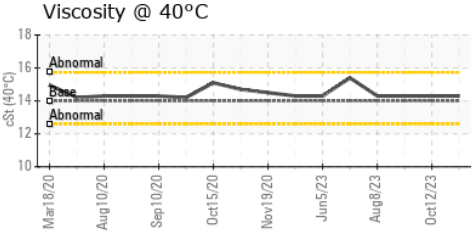
Ferrous Alloys



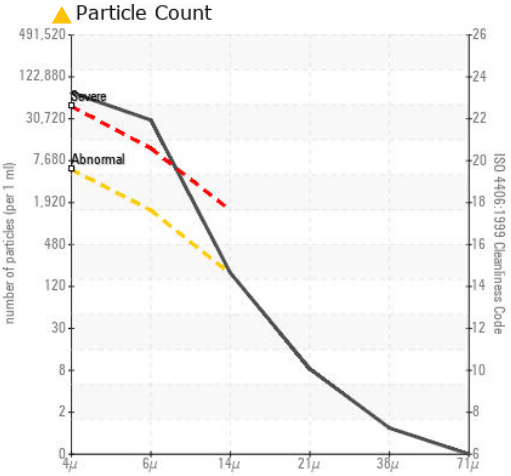
Non-ferrous Metals



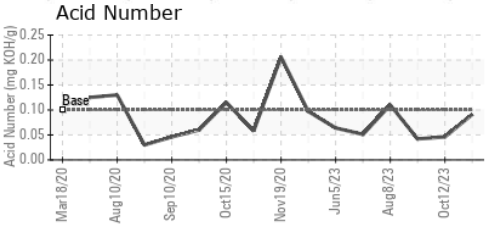
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874934 **Received** : 08 Dec 2023
Lab Number : 06030094 **Diagnosed** : 13 Dec 2023
Unique Number : 10779885 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: CHLORINEXRF, 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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