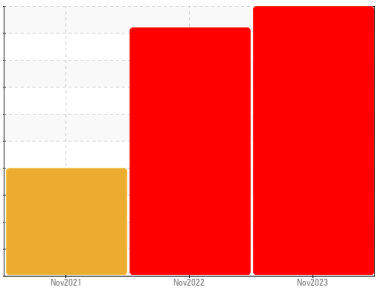
PROBLEM SUMMARY

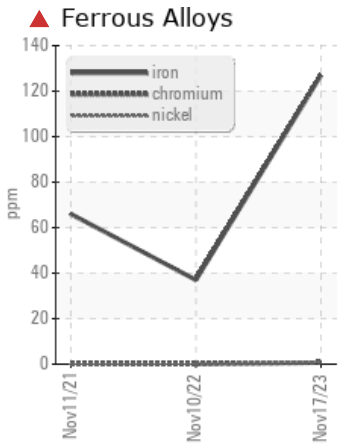
Sample Rating Trend

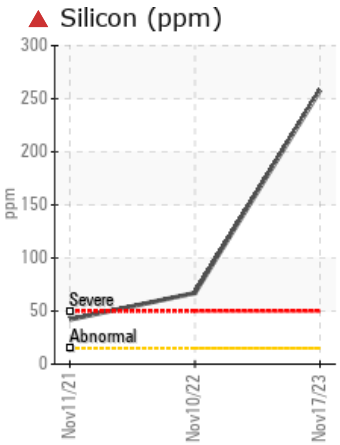


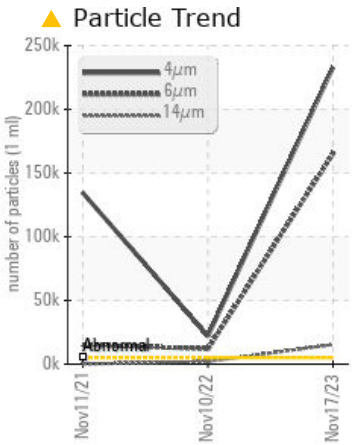
WEAR

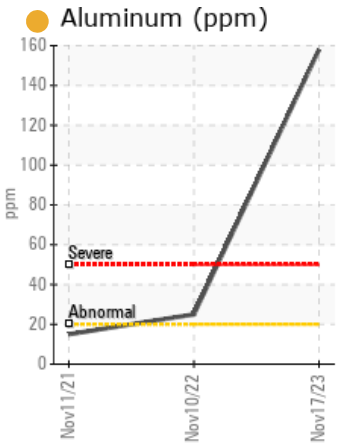
Machine Id
CU1.1
Component
Hydraulic System
Fluid
EP 220 GEAR (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>20	▲ **127**	▲ 37	▲ 66
Titanium	ppm	ASTM D5185m		▲ **11**	2	1
Silicon	ppm	ASTM D5185m	>15	▲ **258**	▲ 67	▲ 42
Particles >4µm		ASTM D7647	>5000	▲ **232952**	▲ 21965	▲ 134383
Particles >6µm		ASTM D7647	>1300	▲ **165318**	▲ 11965	▲ 15219
Particles >14µm		ASTM D7647	>160	▲ **15334**	▲ 2036	72
Particles >21µm		ASTM D7647	>40	▲ **1690**	▲ 686	14
Particles >38µm		ASTM D7647	>10	▲ **27**	▲ 106	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **25/25/21**	▲ 22/21/18	▲ 24/21/13

Customer Id: LANMOUTN
Sample No.: KFS0004113
Lab Number: 06017480
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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

10 Nov 2022 Diag: Jonathan Hester

WATER

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.The iron level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. Free water present. There is a light concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid.

view report

11 Nov 2021 Diag: Doug Bogart

DIRT

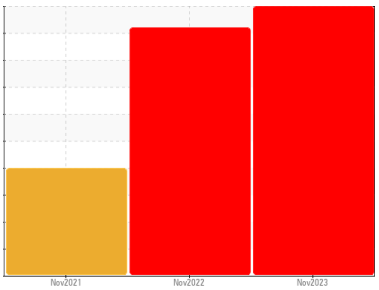
We recommend you service the filters on this component. Resample at the next service interval to monitor.The iron level is abnormal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
CU1.1
Component
Hydraulic System
Fluid
EP 220 GEAR (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

The iron level is severe.

▲ Contamination

There is a high amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KFS0004113**	KFS0002763	KFS0000372
Sample Date		Client Info		**17 Nov 2023**	10 Nov 2022	11 Nov 2021
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				**SEVERE**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	▲ **127**	▲ 37	▲ 66
Chromium	ppm	ASTM D5185m	>20	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>20	**1**	0	0
Titanium	ppm	ASTM D5185m		▲ **11**	2	1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	● **158**	● 25	● 15
Lead	ppm	ASTM D5185m	>20	**2**	0	0
Copper	ppm	ASTM D5185m	>20	**10**	1	<1
Tin	ppm	ASTM D5185m	>20	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

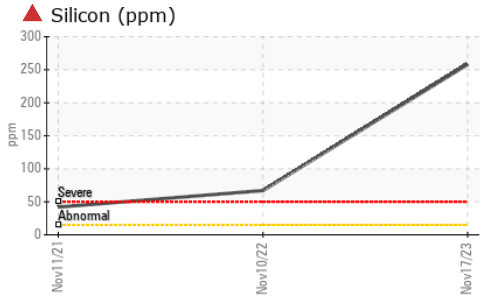
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**58**	51	53
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	0	0
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m		**6**	<1	<1
Calcium	ppm	ASTM D5185m		**7**	4	1
Phosphorus	ppm	ASTM D5185m		**285**	276	225
Zinc	ppm	ASTM D5185m		**<1**	7	0
Sulfur	ppm	ASTM D5185m		**8981**	8134	7354

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	▲ **258**	▲ 67	▲ 42
Sodium	ppm	ASTM D5185m		**12**	4	0
Potassium	ppm	ASTM D5185m	>20	**11**	<1	3

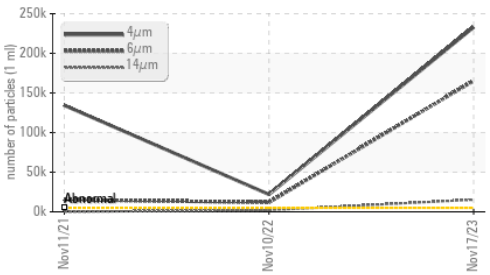
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **232952**	▲ 21965	▲ 134383
Particles >6µm		ASTM D7647	>1300	▲ **165318**	▲ 11965	▲ 15219
Particles >14µm		ASTM D7647	>160	▲ **15334**	▲ 2036	72
Particles >21µm		ASTM D7647	>40	▲ **1690**	▲ 686	14
Particles >38µm		ASTM D7647	>10	▲ **27**	▲ 106	0
Particles >71µm		ASTM D7647	>3	**1**	▲ 11	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **25/25/21**	▲ 22/21/18	▲ 24/21/13

OIL ANALYSIS REPORT

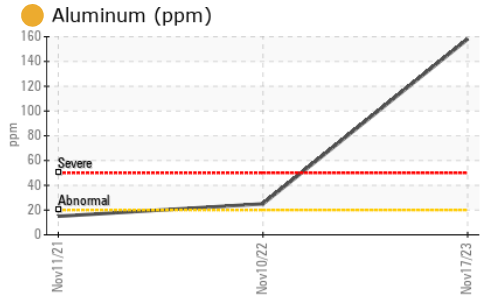
Silicon (ppm)



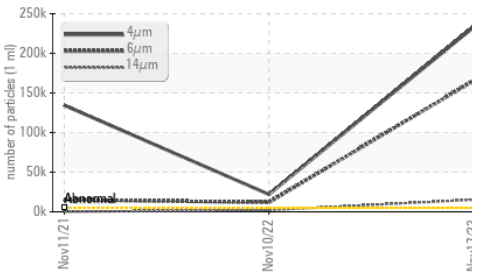
Particle Trend



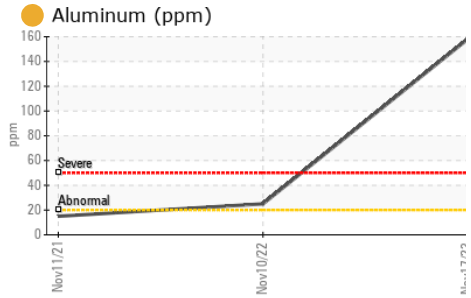
Aluminum (ppm)



Particle Trend



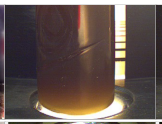
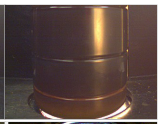
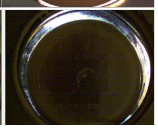
Aluminum (ppm)



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.58**	0.48	0.390

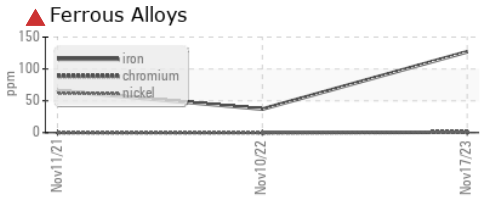
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Sand/Dirt	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**	0.2%	NEG
Free Water	scalar	*Visual		**NEG**	▲ 1.0	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**211**	223	220

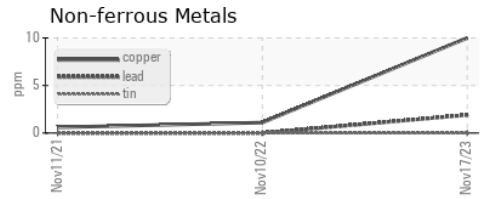
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

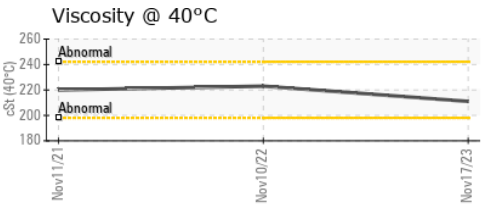
Ferrous Alloys



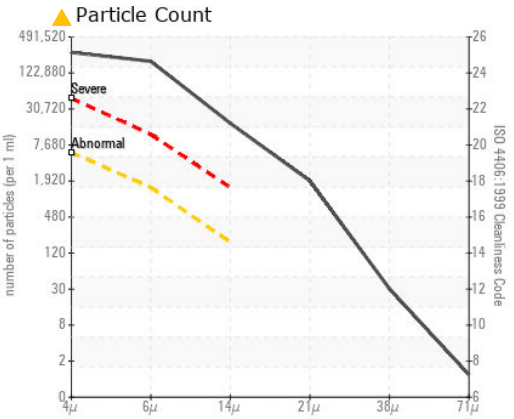
Non-ferrous Metals



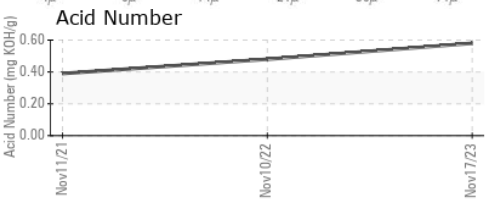
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0004113
Lab Number : 06017480
Unique Number : 10756624
Test Package : IND 2

Received : 24 Nov 2023
Tested : 01 Dec 2023
Diagnosed : 01 Dec 2023 - Jonathan Hester

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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MOUNT PLEASANT, TN
US 38474
Contact: JAMES MCEWEN
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Report Id: LANMOUTN [WUSCAR] 06017480 (Generated: 03/08/2024 14:30:05) Rev: 1

Submitted By: Jay Segadi