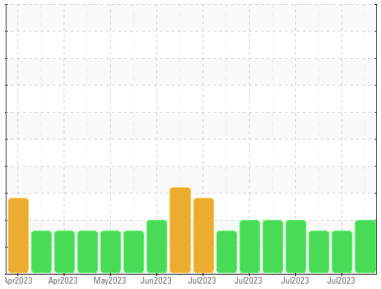
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
RIG 879
Machine Id
R879-P-01
Component
Pump Drive
Fluid
BRENNTAG COASTAL CHEMICAL HBC GEAR OIL 320 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates 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		**KL0012757**	KL0012137	KL0012134
Sample Date		Client Info		**08 Aug 2023**	24 Jul 2023	21 Jul 2023
Machine Age	days	Client Info		**45146**	45132	45128
Oil Age	days	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**15**	14	17
Chromium	ppm	ASTM D5185m	>15	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>10	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	1	2
Lead	ppm	ASTM D5185m		**0**	<1	<1
Copper	ppm	ASTM D5185m	>35	**2**	2	2
Tin	ppm	ASTM D5185m	>4	**0**	0	0
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		**2**	3	4
Barium	ppm	ASTM D5185m		**0**	4	4
Molybdenum	ppm	ASTM D5185m		**4**	4	6
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**10**	6	8
Calcium	ppm	ASTM D5185m		**79**	84	107
Phosphorus	ppm	ASTM D5185m		**97**	110	128
Zinc	ppm	ASTM D5185m		**44**	34	41
Sulfur	ppm	ASTM D5185m		**8911**	9343	10958

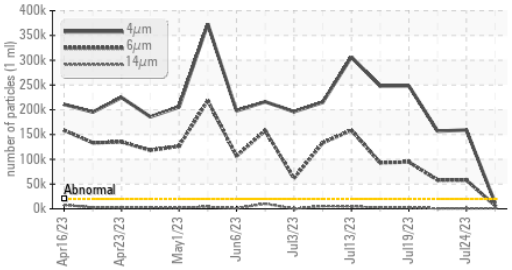
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**8**	13	16
Sodium	ppm	ASTM D5185m		**59**	68	86
Potassium	ppm	ASTM D5185m	>20	**1**	2	2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	**12084**	▲ 159181	▲ 156762
Particles >6µm		ASTM D7647	>5000	▲ **6583**	▲ 57972	▲ 58119
Particles >14µm		ASTM D7647	>640	▲ **1120**	▲ 921	▲ 815
Particles >21µm		ASTM D7647	>160	▲ **377**	107	90
Particles >38µm		ASTM D7647	>40	▲ **58**	1	1
Particles >71µm		ASTM D7647	>10	**6**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **21/20/17**	▲ 24/23/17	▲ 24/23/17

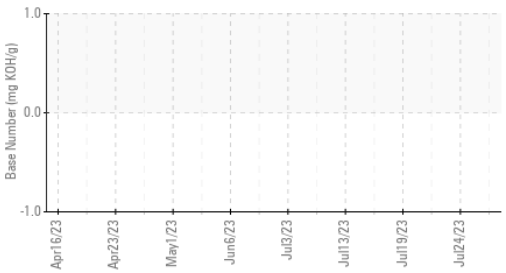
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.257**	0.21	0.19

OIL ANALYSIS REPORT

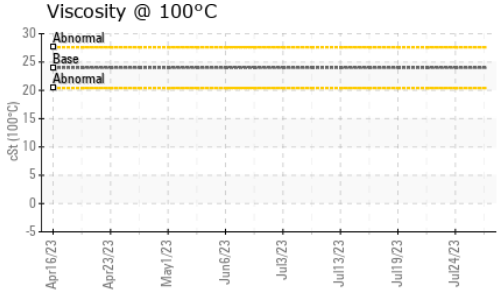
Particle Trend



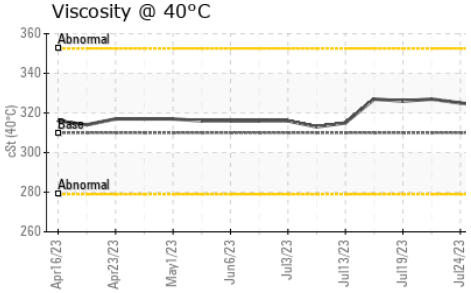
Base Number



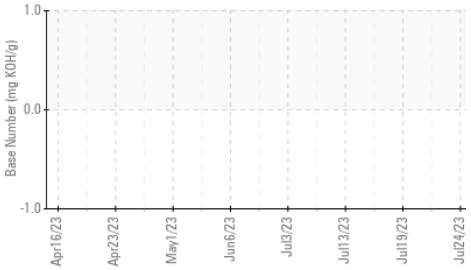
Viscosity @ 100°C



Viscosity @ 40°C



Base Number



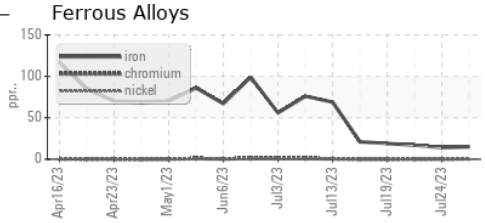
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	310	**323.7**	325	327

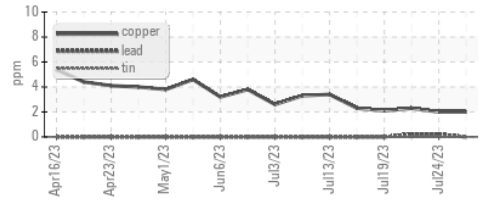
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*		
Bottom			*no image*		

GRAPHS

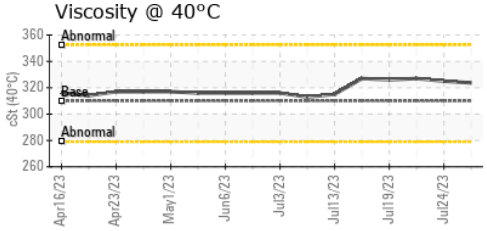
Ferrous Alloys



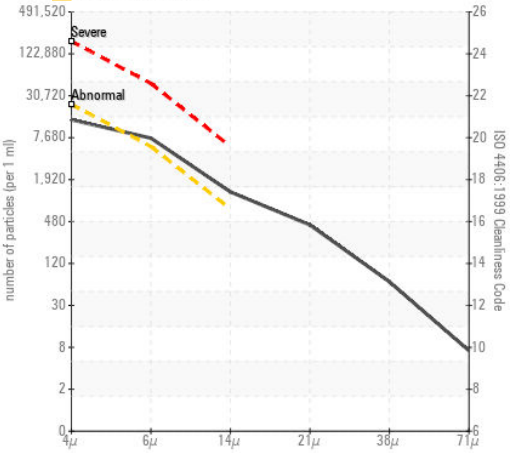
Non-ferrous Metals



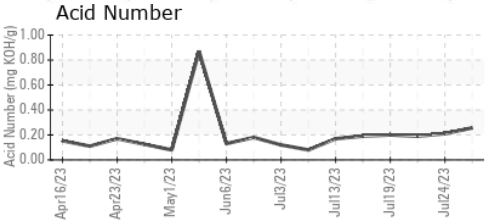
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012757 **Received** : 21 Aug 2023
Lab Number : 05929867 **Diagnosed** : 24 Aug 2023
Unique Number : 10615138 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: FT-IR, KV100, PrtCount, TBN)

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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