



PROBLEM SUMMARY

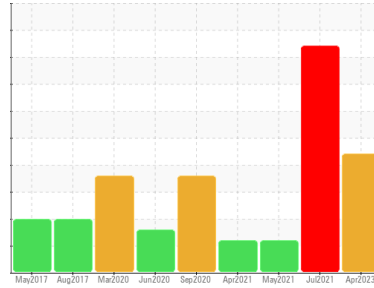
Sample Rating Trend

ISO



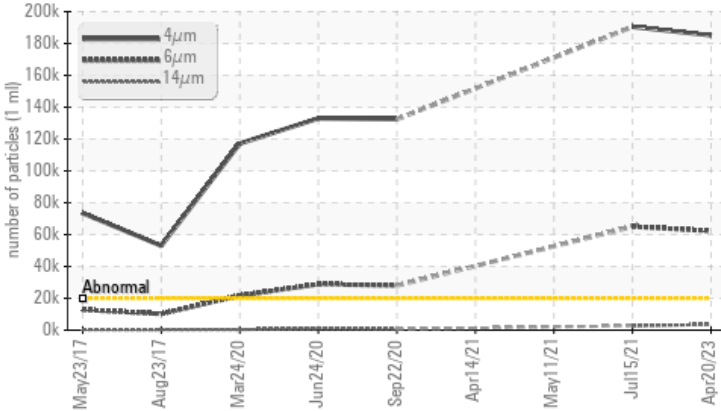
Area
PRESS
Machine Id
0809SB01

Component
Rear Gearbox
Fluid
KLUBER Klübersynth GH 6 ISO 320 (--- LTR)



COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	SEVERE	SEVERE	ABNORMAL
Particles >4µm	>20000	185107	190491	---
Particles >6µm	>5000	62276	65016	---
Particles >14µm	>640	3578	2694	---
Particles >21µm	>160	778	485	---
Oil Cleanliness	ISO 4406 (c)	25/23/19	25/23/19	---

Customer Id: FLAMONNC
 Sample No.: WC0730479
 Lab Number: 05844408
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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	MISSED	Aug 23 2023	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	MISSED	Aug 23 2023	?	Resample in 30-45 days to monitor this situation.
Information Required	MISSED	Aug 23 2023	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	MISSED	Aug 23 2023	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	MISSED	Aug 23 2023	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	MISSED	Aug 23 2023	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

15 Jul 2021 Diag: Doug Bogart

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is at the top-end of the recommended limit.

view report



11 May 2021 Diag: Don Baldrige

VISUAL METAL



No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample. Moderate concentration of visible metal present. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



14 Apr 2021 Diag: Jonathan Hester

VISUAL METAL



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample. Moderate concentration of visible metal present. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

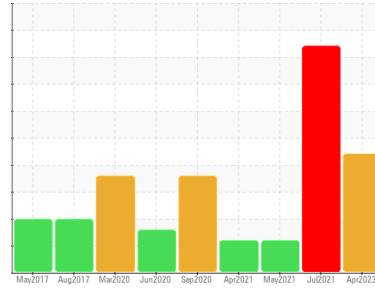
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
PRESS
Machine Id
0809SB01

Component
Rear Gearbox
Fluid
KLUBER Klübersynth GH 6 ISO 320 (--- LTR)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0730479	WC0541860	WC0541837
Sample Date	Client Info		20 Apr 2023	15 Jul 2021	11 May 2021
Machine Age	hrs	Client Info	0	80000	80000
Oil Age	hrs	Client Info	0	8000	8000
Oil Changed	Client Info		Not Changed	N/A	Changed
Sample Status			SEVERE	SEVERE	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	15	8	5
Chromium	ppm	ASTM D5185m >15	<1	<1	<1
Nickel	ppm	ASTM D5185m >15	<1	<1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	<1	<1
Aluminum	ppm	ASTM D5185m >25	0	0	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	2	<1	<1
Tin	ppm	ASTM D5185m >25	0	<1	<1
Antimony	ppm	ASTM D5185m >5	---	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	9	9
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	<1	<1	0
Calcium	ppm	ASTM D5185m	<1	2	0
Phosphorus	ppm	ASTM D5185m 2450	2089	1634	1537
Zinc	ppm	ASTM D5185m	18	23	13
Sulfur	ppm	ASTM D5185m	0	0	76

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	38	21	20
Sodium	ppm	ASTM D5185m	3	5	3
Potassium	ppm	ASTM D5185m >20	0	<1	0

FLUID CLEANLINESS

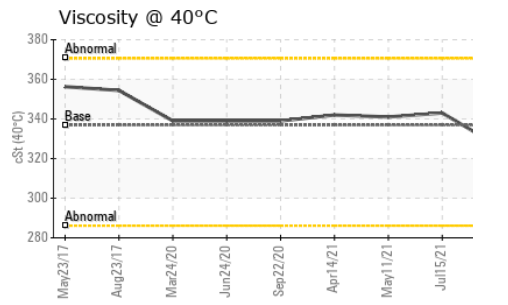
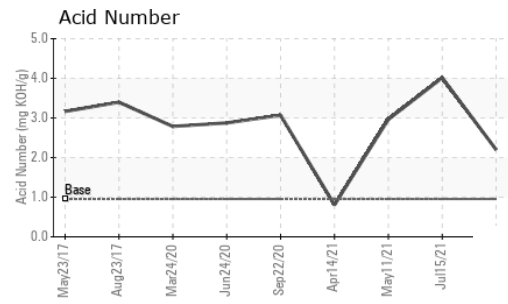
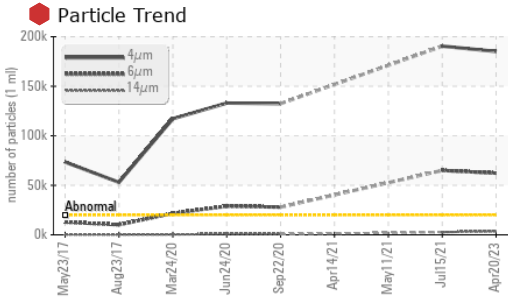
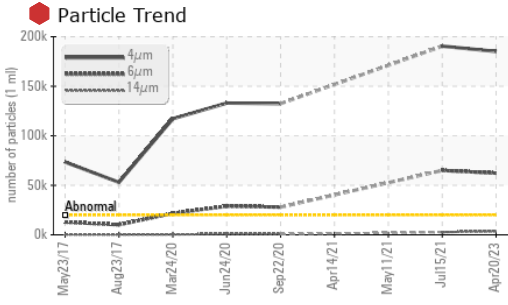
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	185107	190491	---
Particles >6µm	ASTM D7647	>5000	62276	65016	---
Particles >14µm	ASTM D7647	>640	3578	2694	---
Particles >21µm	ASTM D7647	>160	778	485	---
Particles >38µm	ASTM D7647	>40	21	8	---
Particles >71µm	ASTM D7647	>10	0	0	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	25/23/19	25/23/19	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.955	2.20	4.014	2.963



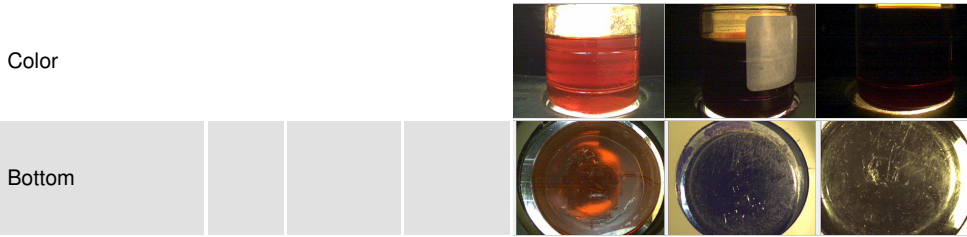
OIL ANALYSIS REPORT



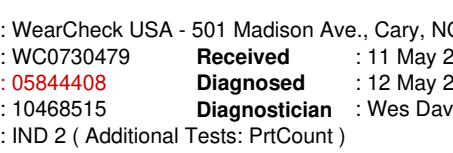
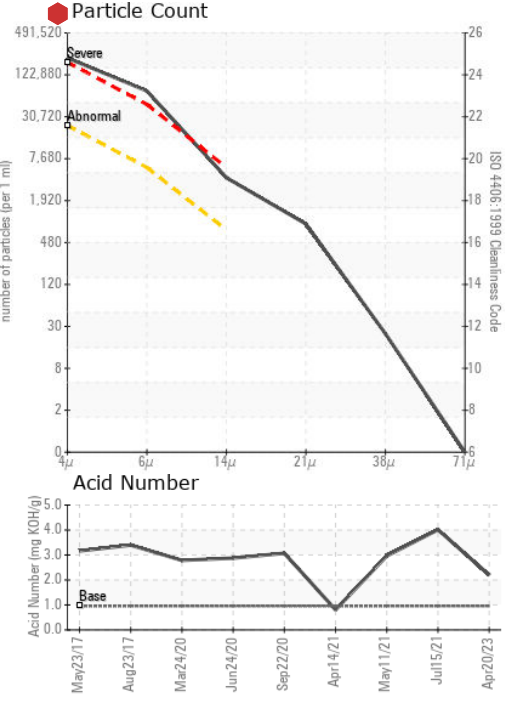
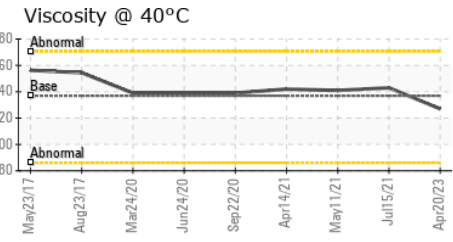
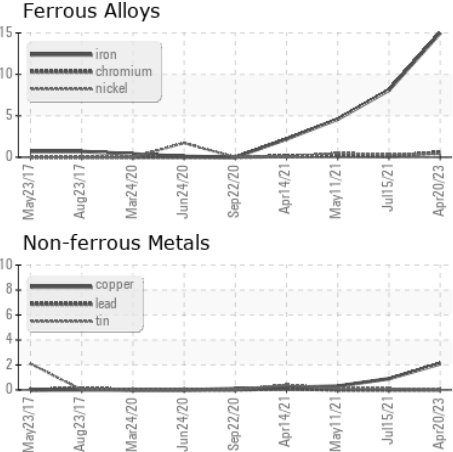
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT ▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	336.9	327	343

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0730479 **Received** : 11 May 2023
Lab Number : 05844408 **Diagnosed** : 12 May 2023
Unique Number : 10468515 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: PrtCount)

ARAUCO FLAKEBOARD - MDF
 985 CORINTH RD
 MONCURE, NC
 US
 Contact: JAMES WALTON
 james.walton@arauco.com
 T: (919)642-6696
 F:

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)