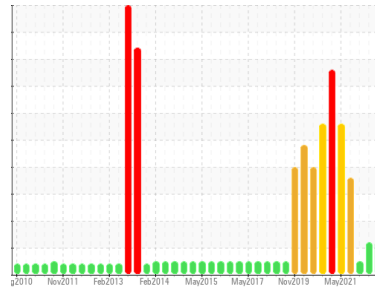




PROBLEM SUMMARY

Sample Rating Trend



WEAR

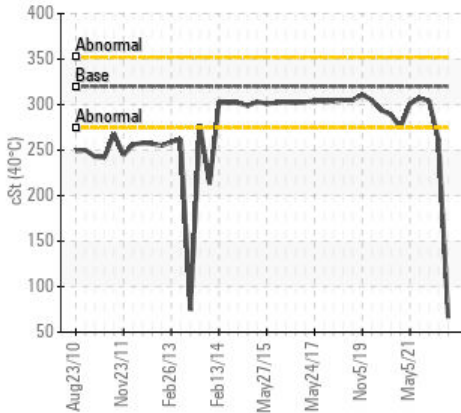


Area
TC02
Machine Id
TC02 Bottom 6 Inch

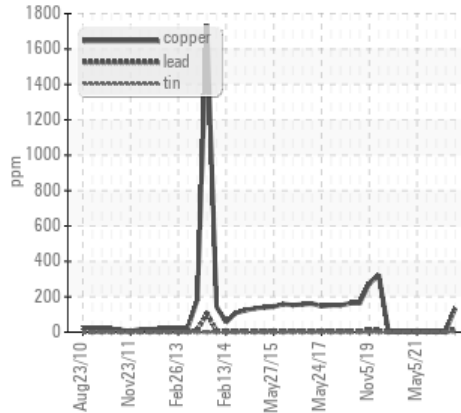
Component
Gearbox
Fluid
TRIBOL GEAROIL 1100/320 (--- LTR)

COMPONENT CONDITION SUMMARY

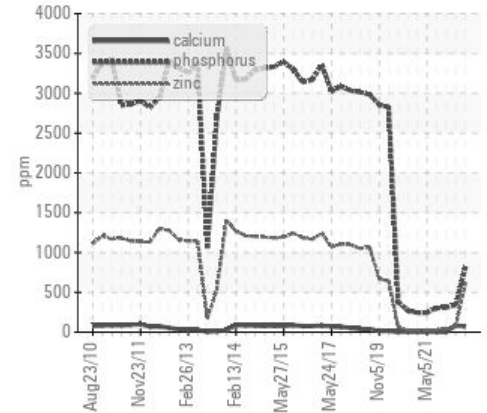
▲ Viscosity @ 40°C



▲ Non-ferrous Metals



Additives



RECOMMENDATION

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

PROBLEMATIC TEST RESULTS

Sample Status		ABNORMAL	ABNORMAL	NORMAL	
Copper	ppm ASTM D5185(m)	>200	▲ 134	4	2
Visc @ 40°C	cSt ASTM D7279(m)	320	▲ 66.2	▲ 261	304

Customer Id: GOONAP
Sample No.: WC22128061
Lab Number: 02553672
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We advise an early resample to confirm this situation.
Alert	---	---	?	NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

HISTORICAL DIAGNOSIS

05 Feb 2023 Diag: Kevin Marson

CONTAMINANT



Confirm the source of the lubricant being utilized for top-up/fill. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. Viscosity of sample indicates oil is within ISO 220 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid.

view report



05 Nov 2021 Diag: Kevin Marson

NORMAL



Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as TRIBOL GEAROIL 1100/320, however, a fluid match indicates that this fluid is ISO 320 Gear Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. 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.

view report



22 Sep 2021 Diag: Kevin Marson

WATER



We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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. We recommend either performing an oil change or oil filtration. We cannot recommend specific action as we have limited information with regards to reservoir capacity and/or lubricant type. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. The fluid was specified as TRIBOL GEAROIL 1100/320, however, a fluid match indicates that this fluid is ISO 320 Gear Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a moderate concentration of water present in the oil. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

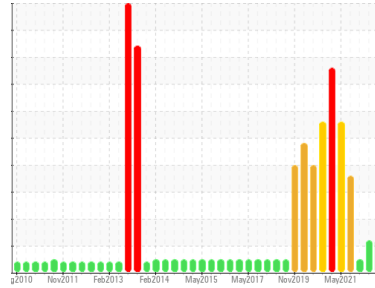
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
TC02
Machine Id
TC02 Bottom 6 Inch

Component
Gearbox
Fluid
TRIBOL GEAROIL 1100/320 (--- LTR)

DIAGNOSIS

Recommendation

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

Wear

Copper ppm levels are abnormal. Bearing and/or bushing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 68 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC22128061	WC0754410	WC0636033
Sample Date	Client Info		25 Apr 2023	05 Feb 2023	05 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			ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >200	40	44	20
Chromium	ppm	ASTM D5185(m) >15	<1	0	0
Nickel	ppm	ASTM D5185(m) >15	2	0	<1
Titanium	ppm	ASTM D5185(m)	<1	0	0
Silver	ppm	ASTM D5185(m)	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >25	9	2	2
Lead	ppm	ASTM D5185(m) >100	19	1	<1
Copper	ppm	ASTM D5185(m) >200	▲ 134	4	2
Tin	ppm	ASTM D5185(m) >25	<1	0	0
Antimony	ppm	ASTM D5185(m) >5	<1	0	0
Vanadium	ppm	ASTM D5185(m)	<1	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<1	2	<1
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	36	19
Manganese	ppm	ASTM D5185(m)	<1	1	<1
Magnesium	ppm	ASTM D5185(m)	23	2	<1
Calcium	ppm	ASTM D5185(m)	69	85	2
Phosphorus	ppm	ASTM D5185(m)	803	338	308
Zinc	ppm	ASTM D5185(m)	587	65	38
Sulfur	ppm	ASTM D5185(m)	2415	7968	8472
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

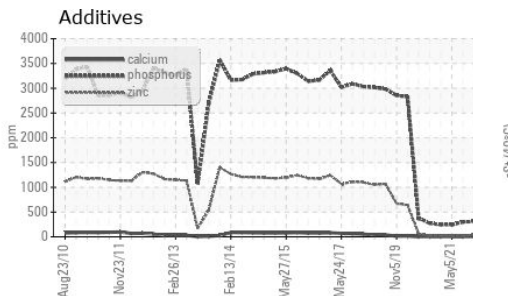
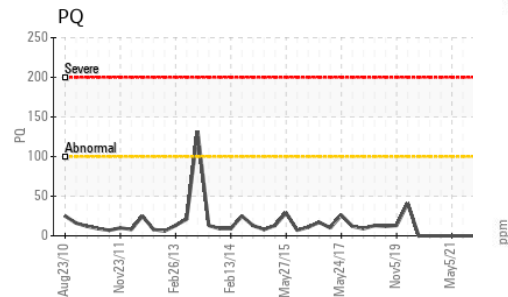
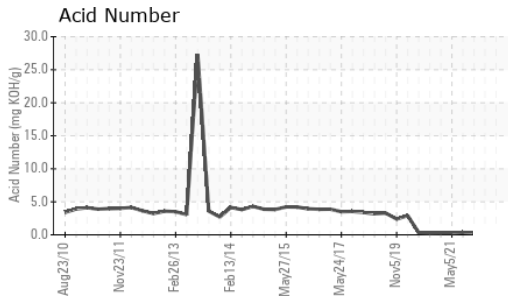
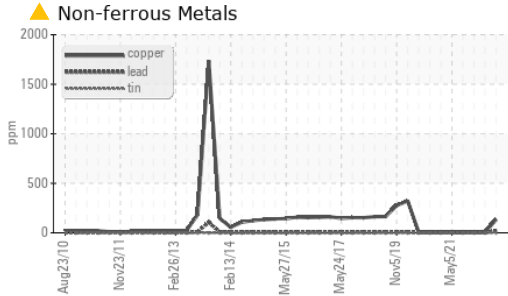
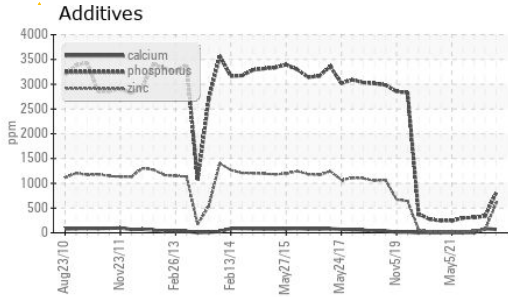
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	16	4	3
Sodium	ppm	ASTM D5185(m)	3	1	<1
Potassium	ppm	ASTM D5185(m) >20	<1	0	<1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.02	0.29	0.29



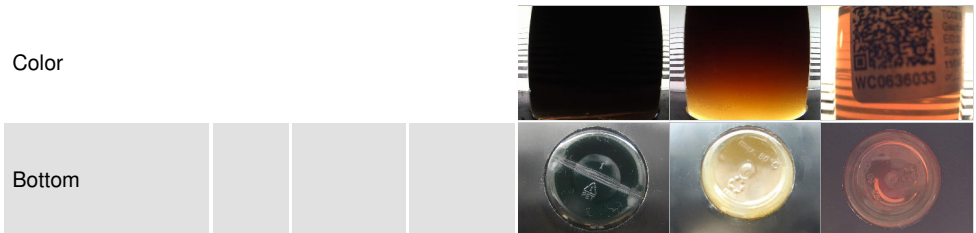
OIL ANALYSIS REPORT



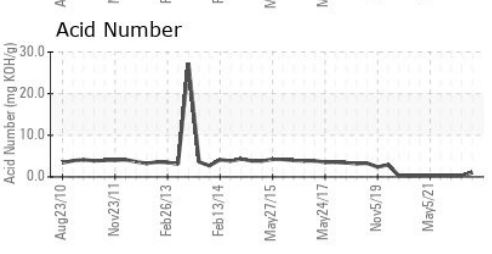
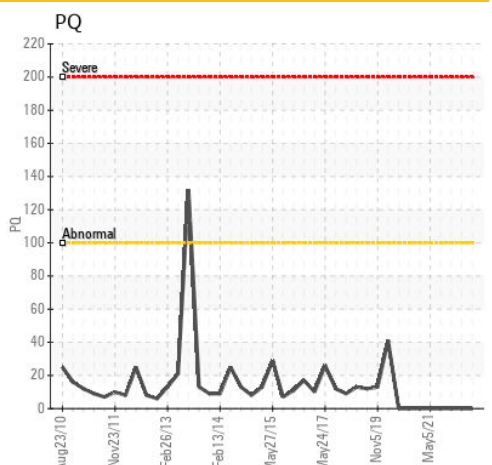
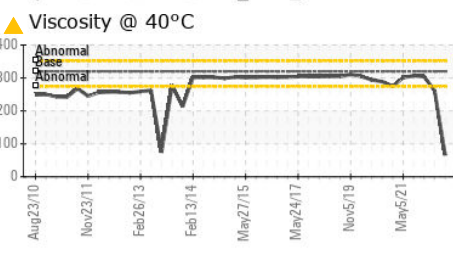
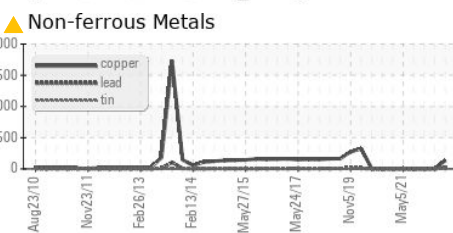
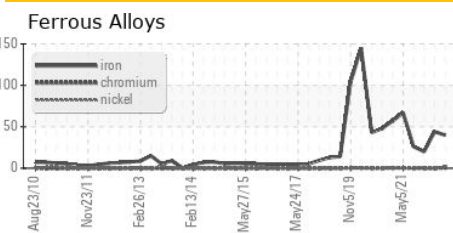
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ HAZY	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 D7279(m)	▲ 66.2	▲ 261	304

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC2128061 **Received** : 26 Apr 2023
Lab Number : 02553672 **Diagnosed** : 26 Apr 2023
Unique Number : 5566687 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: TAN Man)

Goodyear Napanee
 388 GOODYEAR ROAD
 NAPANEE, ON
 CA K7R 3L2
 Contact: Gerald Bailey
 gerald.bailey@goodyear.com
 T: (613)354-7724
 F: (613)354-9377

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.