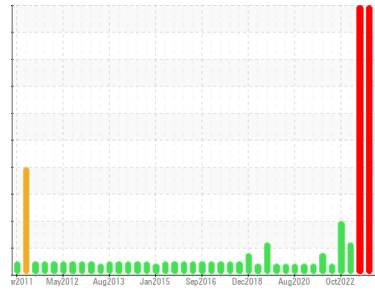




PROBLEM SUMMARY

Area
GC01
 Machine Id
GC01
 Component
Hydraulic System
 Fluid
HYDRAULIC OIL FG ISO 32 (--- GAL)

Sample Rating Trend

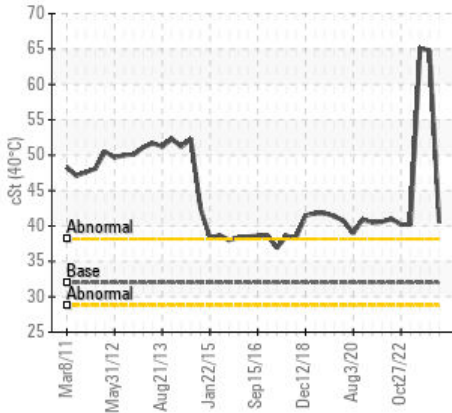


VISCOSITY

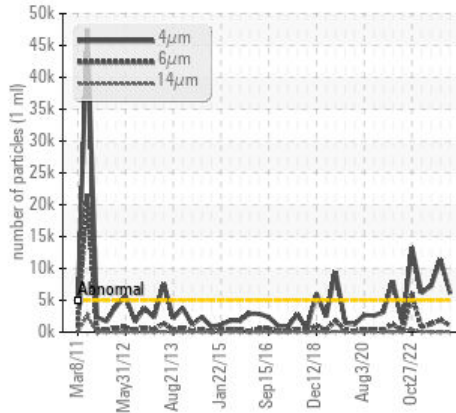


COMPONENT CONDITION SUMMARY

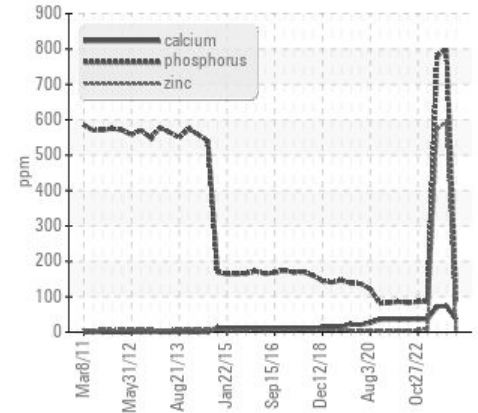
▲ Viscosity @ 40°C



▲ Particle Trend



Additives



RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. 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 brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	SEVERE	SEVERE
Particles >4µm	ASTM D7647	>5000	▲ 6089	▲ 11367	▲ 7256
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/17/13	▲ 21/18/13	▲ 20/17/12
Visc @ 40°C	cSt	ASTM D7279(m)	▲ 40.5	▲ 64.8	▲ 65.1

Customer Id: GOONAP
 Sample No.: WC0841275
 Lab Number: 02579779
 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
Change Filter	---	---	?	We recommend you service the filters on this component.
Alert	---	---	?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

25 Apr 2023 Diag: Kevin Marson

WEAR



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. 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. Copper ppm levels are severe. Iron ppm levels are abnormal. Aluminum ppm levels are noted. Oil cooler core leaching or motor piston wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a moderate 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. High amount of ingressed dirt has caused abrasive wear to the component. Viscosity of sample indicates oil is within SAE 30 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.

view report



24 Apr 2023 Diag: Kevin Marson

WEAR



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. 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. Copper ppm levels are severe. Iron ppm levels are abnormal. Aluminum ppm levels are noted. Oil cooler core leaching or motor piston wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a light 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. High amount of ingressed dirt has caused abrasive wear to the component. Viscosity of sample indicates oil is within SAE 30 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.

view report



05 Nov 2022 Diag: Kevin Marson

VISCOSITY



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. 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 brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

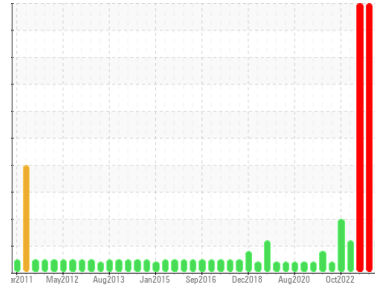
view report





OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
GC01
Machine Id
GC01
Component
Hydraulic System
Fluid
HYDRAULIC OIL FG ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. 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 brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 46 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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0841275	WC22128048	WC0299467
Sample Date	Client Info	25 Aug 2023	25 Apr 2023	24 Apr 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	SEVERE

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	<1	▲ 37	▲ 37
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>20	0	2	2
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	▲ 6	▲ 7
Lead	ppm	ASTM D5185(m)	>20	4	17	18
Copper	ppm	ASTM D5185(m)	>20	1	130	124
Tin	ppm	ASTM D5185(m)	>20	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	<1	<1
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	5	<1	<1	<1
Barium	ppm	ASTM D5185(m)	5	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	5	<1	0	0
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	5	0	▲ 35	▲ 35
Calcium	ppm	ASTM D5185(m)	12	36	▲ 74	▲ 72
Phosphorus	ppm	ASTM D5185(m)	400	86	▲ 799	▲ 782
Zinc	ppm	ASTM D5185(m)	12	8	▲ 596	▲ 573
Sulfur	ppm	ASTM D5185(m)	650	369	▲ 2362	▲ 2356
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>15	4	▲ 15	▲ 15
Sodium	ppm	ASTM D5185(m)		<1	3	3
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1

FLUID CLEANLINESS

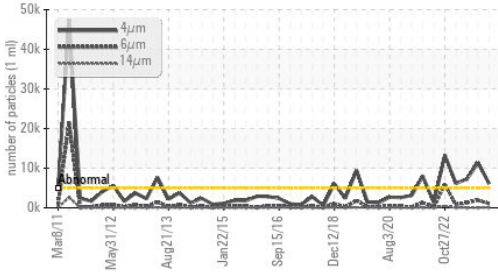
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	▲ 6089	▲ 11367	▲ 7256
Particles >6µm	ASTM D7647	>1300	1012	▲ 1942	1260
Particles >14µm	ASTM D7647	>160	45	61	39
Particles >21µm	ASTM D7647	>40	12	10	9
Particles >38µm	ASTM D7647	>10	2	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 20/17/13	▲ 21/18/13	▲ 20/17/12

FLUID DEGRADATION

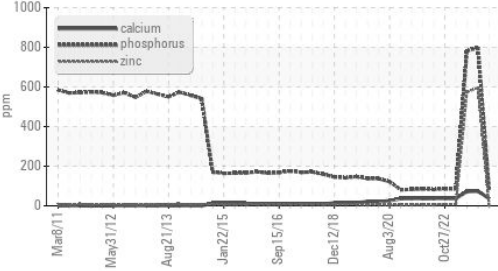
method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D974*	0.50	0.14	1.02	0.98

OIL ANALYSIS REPORT

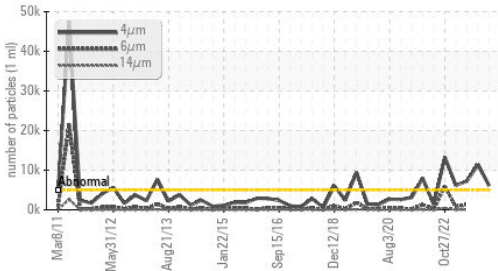
▲ Particle Trend



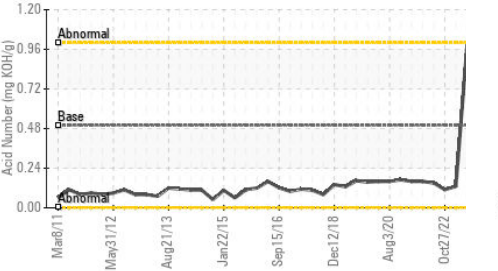
Additives



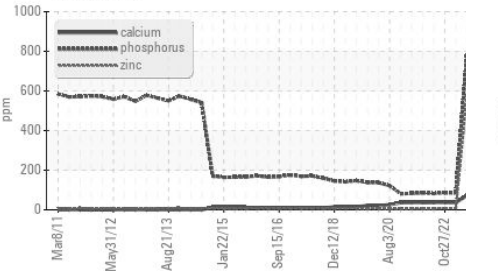
▲ Particle Trend



Acid Number



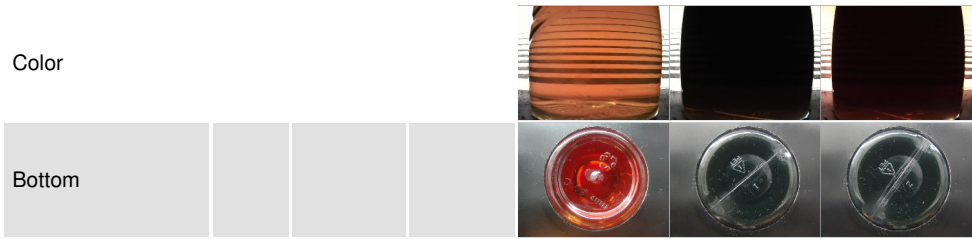
Additives



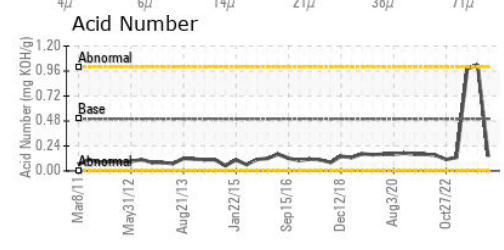
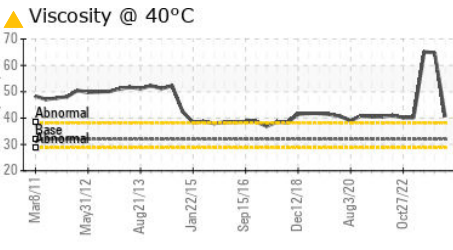
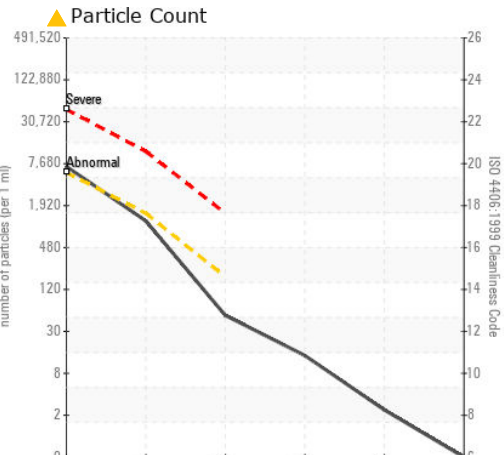
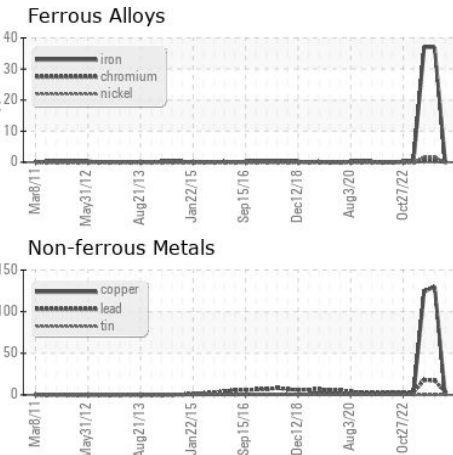
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32 ▲ 40.5	▲ 64.8	▲ 65.1

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0841275
Lab Number : 02579779
Unique Number : 5632839
Test Package : IND 2

Goodyear Napanee
 388 GOODYEAR ROAD
 NAPANEE, ON
 CA K7R 3L2
 Contact: Mohammad Waleed
 Mohammad_Waleed@goodyear.com
 T: (613)354-7709
 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.