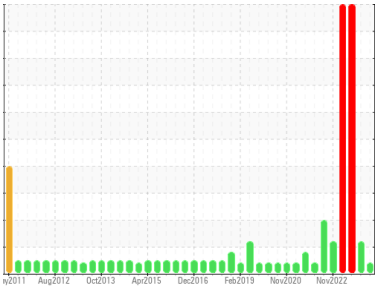
PROBLEM SUMMARY

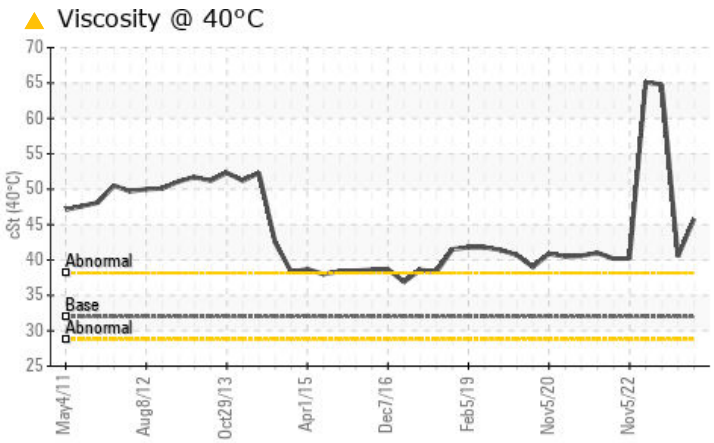
Sample Rating Trend

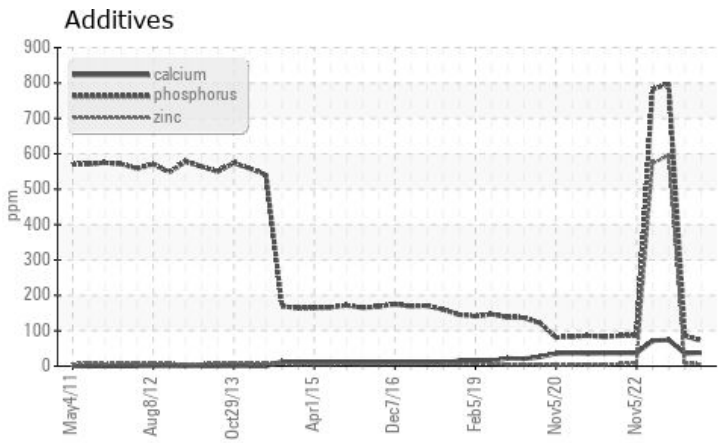


VISCOSITY

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

COMPONENT CONDITION SUMMARY





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. 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**	ABNORMAL	SEVERE
Visc @ 40°C	cSt	ASTM D7279(m)	32	▲ **45.8**	▲ 40.5	▲ 64.8

Customer Id: GOONAP
Sample No.: WC0873603
Lab Number: 02602298
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
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

VISCOSITY

25 Aug 2023 Diag: Kevin Marson

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.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. 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.

view report

WEAR

25 Apr 2023 Diag: Kevin Marson

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

WEAR

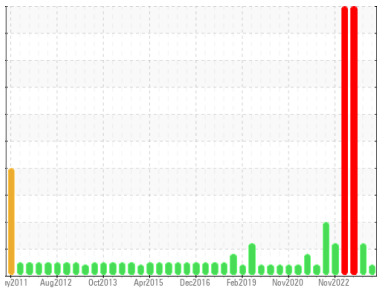
24 Apr 2023 Diag: Kevin Marson

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

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. 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

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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		**WC0873603**	WC0841275	WC22128048
Sample Date		Client Info		**05 Nov 2023**	25 Aug 2023	25 Apr 2023
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	SEVERE

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

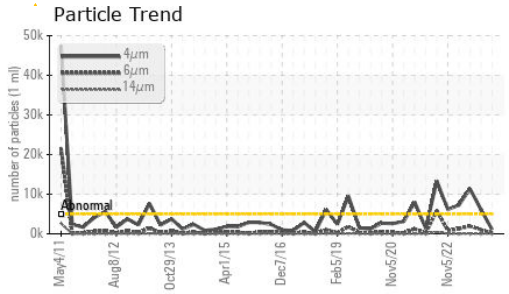
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**<1**	<1	▲ 37
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	2
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**0**	<1	▲ 6
Lead	ppm	ASTM D5185(m)	>20	**3**	4	17
Copper	ppm	ASTM D5185(m)	>20	**1**	1	⬢ 130
Tin	ppm	ASTM D5185(m)	>20	**0**	0	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	<1
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	<1

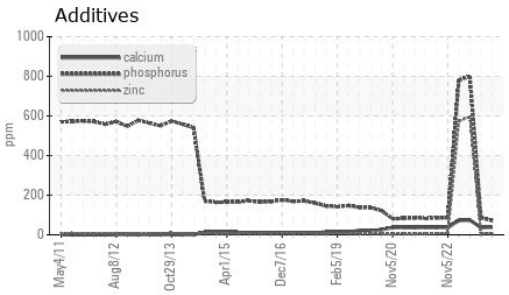
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	5	**<1**	0	<1
Molybdenum	ppm	ASTM D5185(m)	5	**0**	<1	0
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	5	**<1**	0	▲ 35
Calcium	ppm	ASTM D5185(m)	12	**38**	36	▲ 74
Phosphorus	ppm	ASTM D5185(m)	400	**72**	86	▲ 799
Zinc	ppm	ASTM D5185(m)	12	**6**	8	▲ 596
Sulfur	ppm	ASTM D5185(m)	650	**229**	369	▲ 2362
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

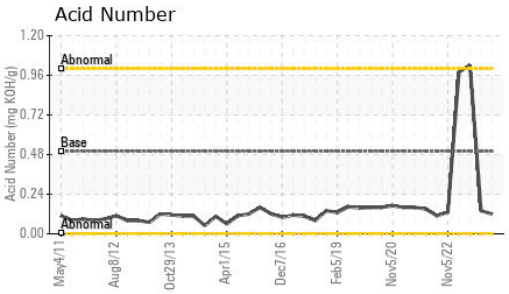
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**0**	4	▲ 15
Sodium	ppm	ASTM D5185(m)		**2**	<1	3
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	<1

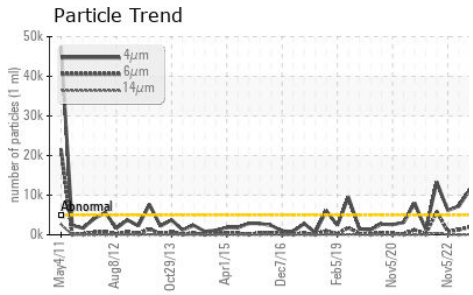
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**1077**	▲ 6089	▲ 11367
Particles >6µm		ASTM D7647	>1300	**233**	1012	▲ 1942
Particles >14µm		ASTM D7647	>160	**9**	45	61
Particles >21µm		ASTM D7647	>40	**3**	12	10
Particles >38µm		ASTM D7647	>10	**1**	2	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**17/15/10**	▲ 20/17/13	▲ 21/18/13

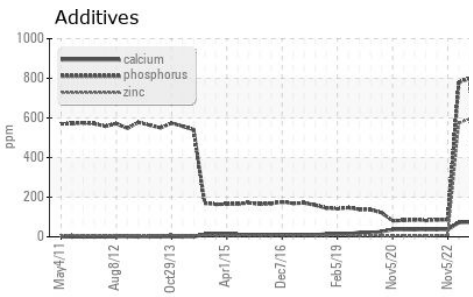
OIL ANALYSIS REPORT









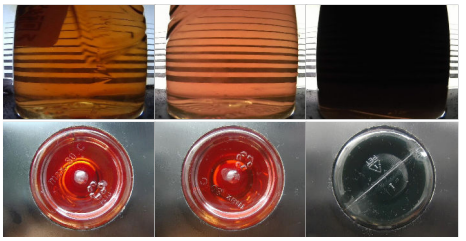


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.50	**0.12**	0.14	1.02

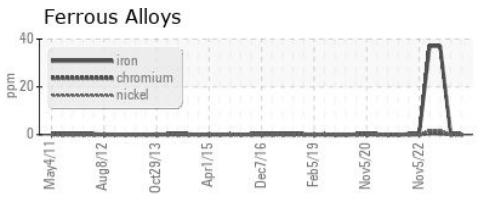
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt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

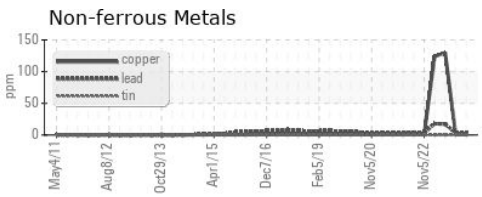
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	▲ **45.8**	▲ 40.5	▲ 64.8

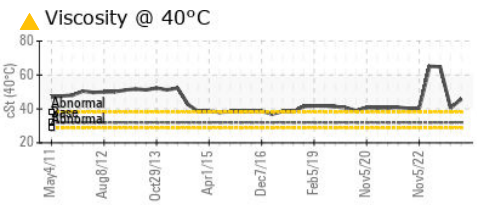
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

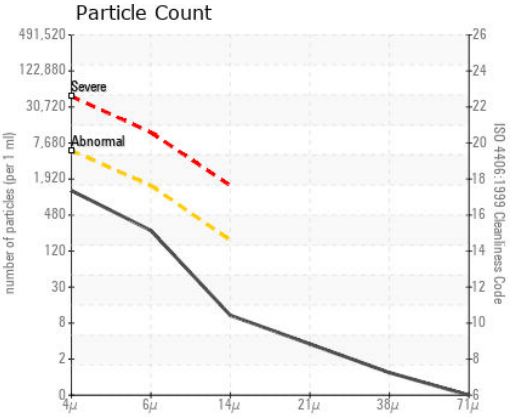


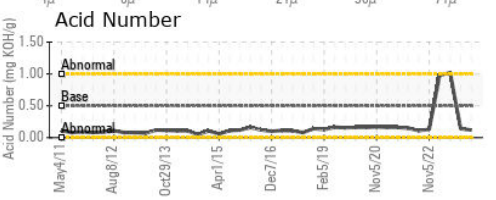
GRAPHS











ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0873603 **Received** : 11 Dec 2023
Lab Number : 02602298 **Diagnosed** : 12 Dec 2023
Unique Number : 5695383 **Diagnostician** : Kevin Marson
Test Package : IND 2

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.

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