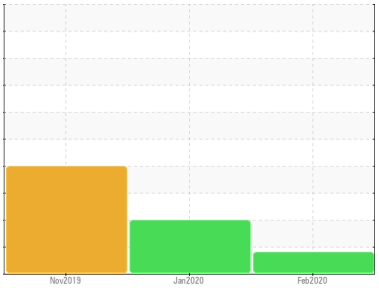
PROBLEM SUMMARY

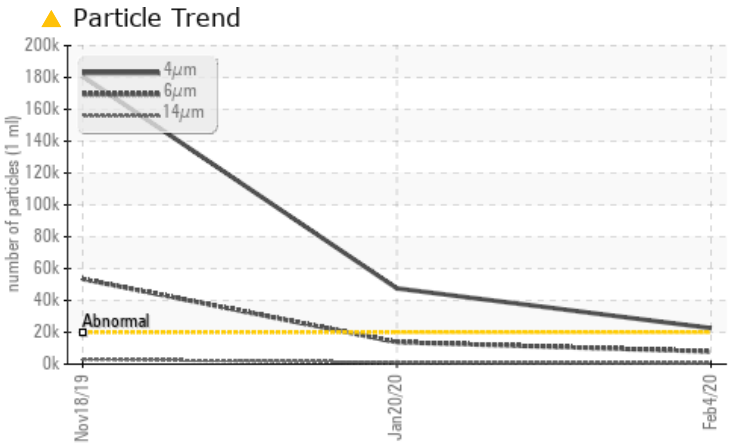
Sample Rating Trend



ISO

Machine Id
FLENDER CAMPGEAR 2
Component
Reduction Gear
Fluid
FUCHS RENOLIN CLP ISO 320 (220 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ABNORMAL	SEVERE
Particles >4µm		ASTM D7647	>20000	▲ **22624**	▲ 47589	⬢ 180772
Particles >6µm		ASTM D7647	>5000	▲ **7917**	▲ 13766	⬢ 53429
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/20/16**	▲ 23/21/17	⬢ 25/23/19

Customer Id: PET412PET
Sample No.: WC119385
Lab Number: 02337343
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:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	MISSED	Mar 03 2020	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

20 Jan 2020 Diag: Kevin Marson

VISCOSITY

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >21µm are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. Viscosity of sample indicates oil is within ISO 320 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

18 Nov 2019 Diag: Kevin Marson

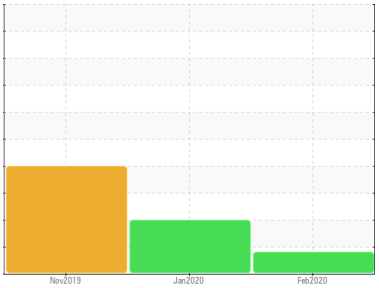
ISO

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. 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.All component wear rates are normal. Particles >6µm are severely high. Particles >4µm are severely high. Particles >14µm are abnormally high. Particles >21µm are abnormally high. Viscosity of sample indicates oil is within ISO 320 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



ISO

Machine Id
FLENDER CAMPGEAR 2
Component
Reduction Gear
Fluid
FUCHS RENOLIN CLP ISO 320 (220 LTR)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

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
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		**WC119385**	WC0423448	WC119397
Sample Date		Client Info		**04 Feb 2020**	20 Jan 2020	18 Nov 2019
Machine Age	hrs	Client Info		**191554**	195782	189711
Oil Age	hrs	Client Info		**2034**	1698	191
Oil Changed		Client Info		**Not Changd**	Filtered	Changed
Sample Status				**ATTENTION**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	**1**	2	3
Chromium	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	0	<1
Lead	ppm	ASTM D5185(m)	>100	**0**	0	0
Copper	ppm	ASTM D5185(m)	>50	**<1**	<1	1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**<1**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**6**	7	6
Barium	ppm	ASTM D5185(m)		**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)		**5**	5	4
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**7**	7	7
Calcium	ppm	ASTM D5185(m)		**<1**	<1	<1
Phosphorus	ppm	ASTM D5185(m)		**313**	314	307
Zinc	ppm	ASTM D5185(m)		**20**	20	18
Sulfur	ppm	ASTM D5185(m)		**5288**	5349	5176
Lithium	ppm	ASTM D5185(m)		**1**	1	2

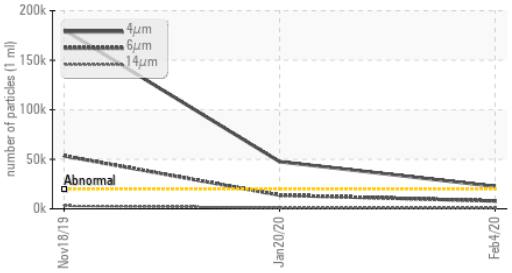
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**6**	6	3
Sodium	ppm	ASTM D5185(m)		**0**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **22624**	▲ 47589	⬢ 180772
Particles >6µm		ASTM D7647	>5000	▲ **7917**	▲ 13766	⬢ 53429
Particles >14µm		ASTM D7647	>640	**593**	▲ 1045	▲ 3012
Particles >21µm		ASTM D7647	>160	**167**	▲ 346	▲ 826
Particles >38µm		ASTM D7647	>40	**3**	14	28
Particles >71µm		ASTM D7647	>10	**0**	2	3
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/20/16**	▲ 23/21/17	⬢ 25/23/19

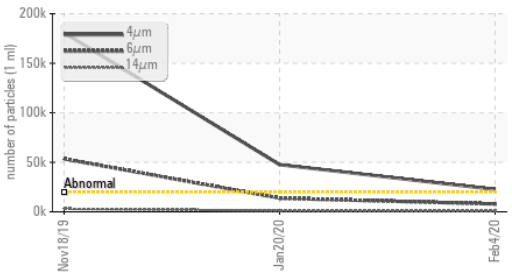
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.452**	0.510	0.498

OIL ANALYSIS REPORT

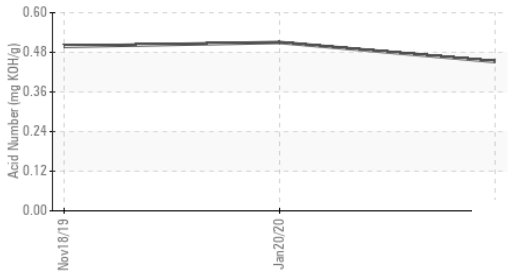
Particle Trend



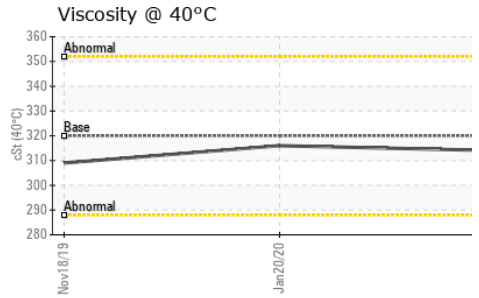
Particle Trend



Acid Number



Viscosity @ 40°C



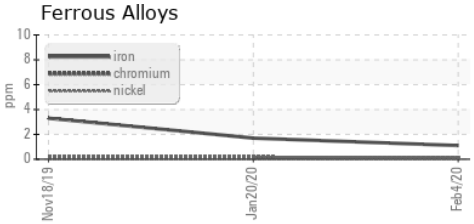
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	VLITE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**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)	320	**314**	▲ 316	▲ 309

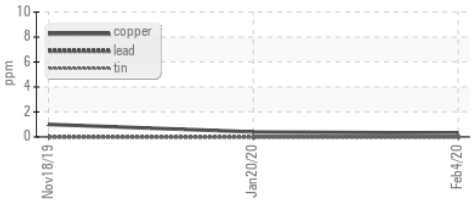
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

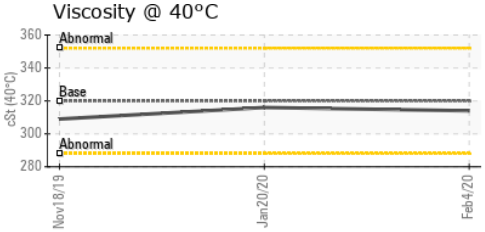
Ferrous Alloys



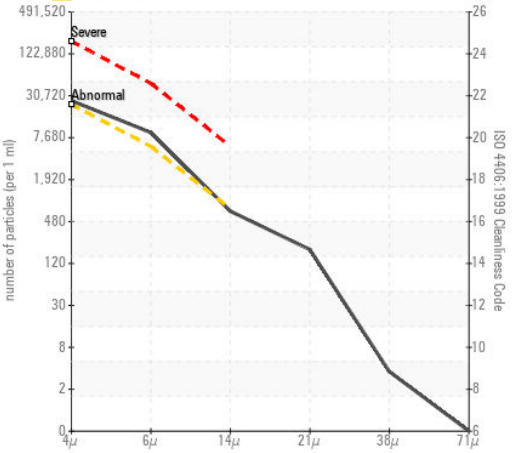
Non-ferrous Metals



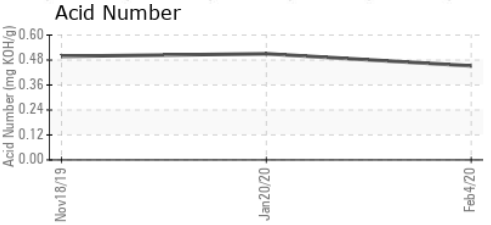
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC119385 **Received** : 11 Feb 2020
Lab Number : 02337343 **Diagnosed** : 11 Feb 2020
Unique Number : 5004762 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: TAN Man)

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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