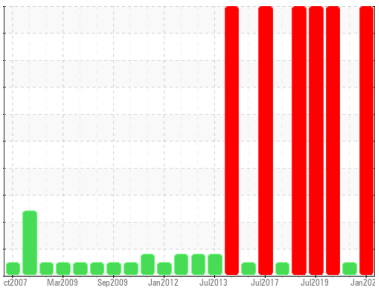
PROBLEM SUMMARY

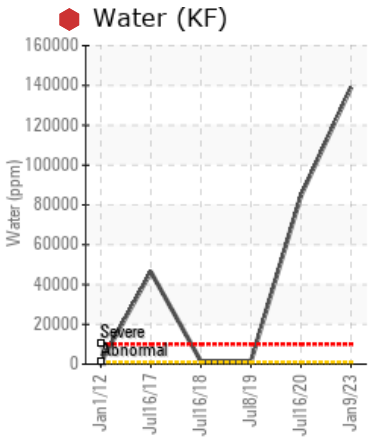
Sample Rating Trend

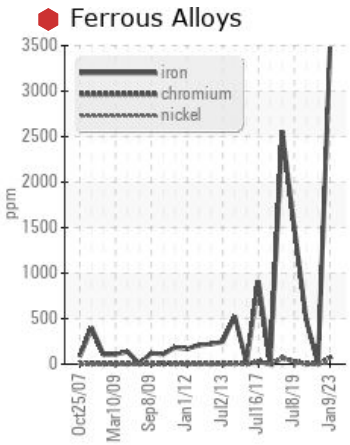


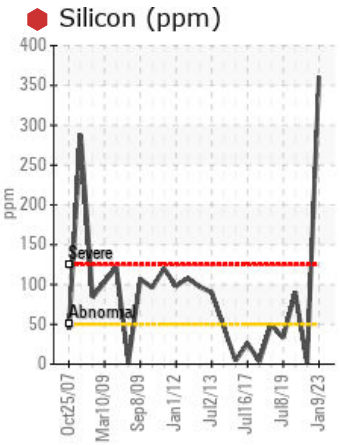
WEAR

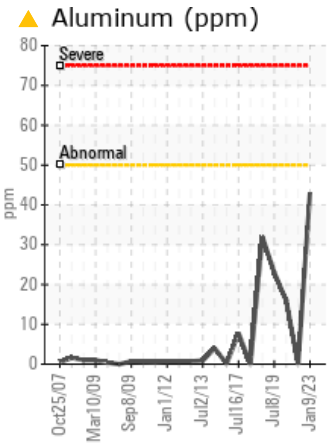
Area
LFC-1030-CM-01-CM023
Machine Id
AB01PP02-1030 - PUMP TRANSMISSION
Component
Transmission
Fluid
LE 4220 (--- GAL)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We recommend that you drain the fluid and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that there was too much water present in the fluid to perform a viscosity test.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	SEVERE
Iron	ppm	ASTM D5185m	>200	**3481**	3	490
Chromium	ppm	ASTM D5185m	>10	**73**	0	5
Nickel	ppm	ASTM D5185m		**16**	<1	<1
Aluminum	ppm	ASTM D5185m	>50	**43**	0	16
Silicon	ppm	ASTM D5185m	>50	**361**	2	90
Water	%	ASTM D6304	>0.1	**13.9**	---	8.47
ppm Water	ppm	ASTM D6304	>1000	**139000**	---	84700
Emulsified Water	scalar	*Visual	>0.1	**0.2%**	NEG	0.2%

Customer Id: LEPALL
Sample No.: WC0757543
Lab Number: 05738471
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the fluid and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the fluid and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	Please note that there was too much water present in the fluid to perform a viscosity test.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

25 Jan 2021 Diag: Don Baldridge

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report

16 Jul 2020 Diag: Don Baldridge

WEAR

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We recommend that you drain the fluid and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.The iron level is severe. Gear wear is indicated. There is a high concentration of water present in the fluid. There is a moderate amount of visible silt present in the sample. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Viscosity of sample indicates oil is within ISO 320 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid. The fluid is no longer serviceable as a result of the abnormal and/or severe wear.

view report

08 Jul 2019 Diag: Doug Bogart

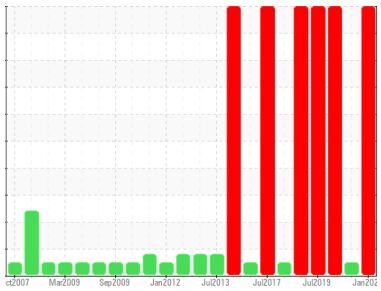
WEAR

We recommend that you drain the fluid and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Moderate concentration of visible metal present. Gear wear is indicated. There is a light concentration of water present in the fluid. The fluid viscosity is higher than normal. The AN level is acceptable for this fluid. The fluid is no longer serviceable as a result of the abnormal and/or severe wear.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
LFC-1030-CM-01-CM023
Machine Id
AB01PP02-1030 - PUMP TRANSMISSION
Component
Transmission
Fluid
LE 4220 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We recommend that you drain the fluid and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that there was too much water present in the fluid to perform a viscosity test.

Wear
Gear wear is indicated.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the fluid.

Fluid Condition
The AN level is acceptable for this fluid. The fluid is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0757543**	WC0532249	WC0464315
Sample Date		Client Info		**09 Jan 2023**	25 Jan 2021	16 Jul 2020
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				**SEVERE**	NORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	● **3481**	3	● 490
Chromium	ppm	ASTM D5185m	>10	● **73**	0	5
Nickel	ppm	ASTM D5185m		▲ **16**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m		**<1**	<1	<1
Aluminum	ppm	ASTM D5185m	>50	▲ **43**	0	▲ 16
Lead	ppm	ASTM D5185m	>50	**22**	<1	<1
Copper	ppm	ASTM D5185m	>200	**85**	<1	<1
Tin	ppm	ASTM D5185m	>10	**4**	<1	0
Antimony	ppm	ASTM D5185m		**---**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

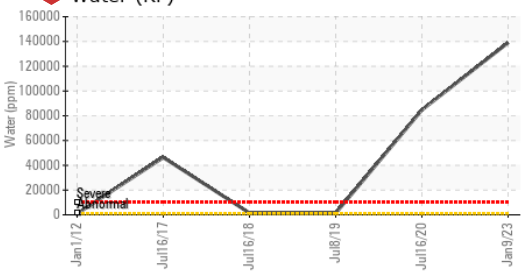
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**29**	3	20
Barium	ppm	ASTM D5185m		**0**	0	4
Molybdenum	ppm	ASTM D5185m		**4**	0	0
Manganese	ppm	ASTM D5185m		**23**	0	5
Magnesium	ppm	ASTM D5185m		**32**	0	16
Calcium	ppm	ASTM D5185m		**31**	4	52
Phosphorus	ppm	ASTM D5185m		**360**	312	225
Zinc	ppm	ASTM D5185m		**508**	40	133
Sulfur	ppm	ASTM D5185m		**4561**	1241	2963

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	● **361**	2	▲ 90
Sodium	ppm	ASTM D5185m		**214**	0	9
Potassium	ppm	ASTM D5185m	>20	**6**	0	10
Water	%	ASTM D6304	>0.1	● **13.9**	---	● 8.47
ppm Water	ppm	ASTM D6304	>1000	● **139000**	---	● 84700

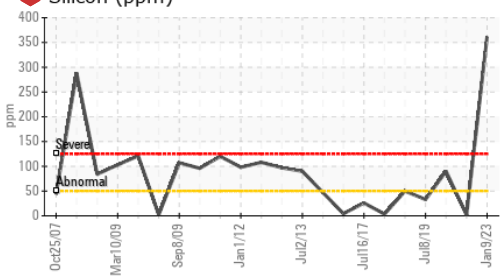
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.77**	0.565	0.452

OIL ANALYSIS REPORT

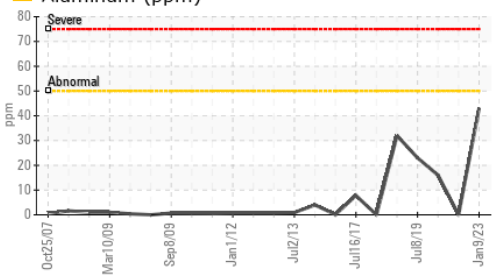
Water (KF)



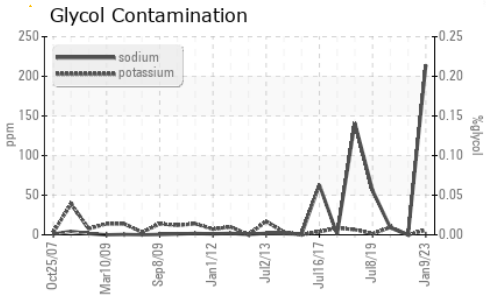
Silicon (ppm)



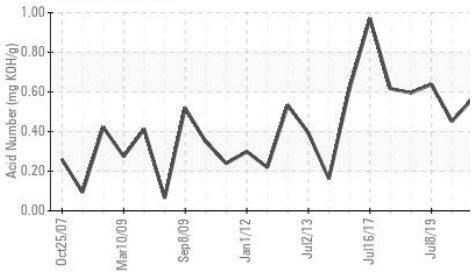
Aluminum (ppm)



Glycol Contamination



Acid Number



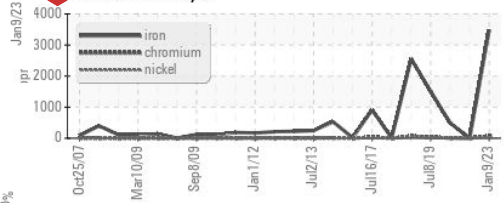
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**LIGHT**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Debris	scalar	*Visual	NONE	**LIGHT**	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	▲ MILKY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	⬢ **0.2%**	NEG	⬢ 0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**---**	221	▲ 325

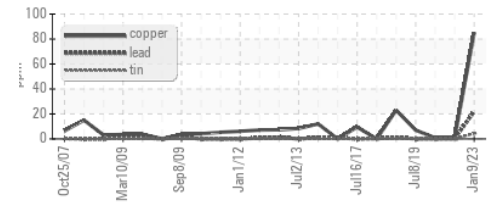
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

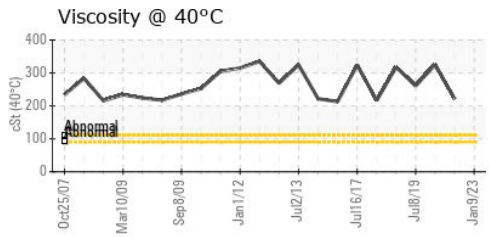
Ferrous Alloys



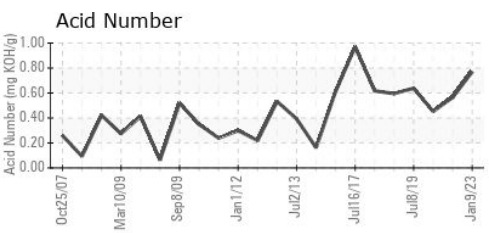
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0757543 **Received** : 13 Jan 2023
Lab Number : 05738471 **Diagnosed** : 16 Jan 2023
Unique Number : 10293070 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: Glycol, KF)

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)

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