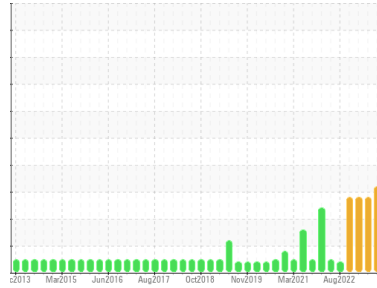




# PROBLEM SUMMARY

Area  
**LFC-1030-CM-01-CM005 [1786984]**  
 Machine Id  
**CM05ST06-1030 - STARTER VAT 6**  
 Component  
**Gearbox**  
 Fluid  
**LE 4220 (3 GAL)**

Sample Rating Trend

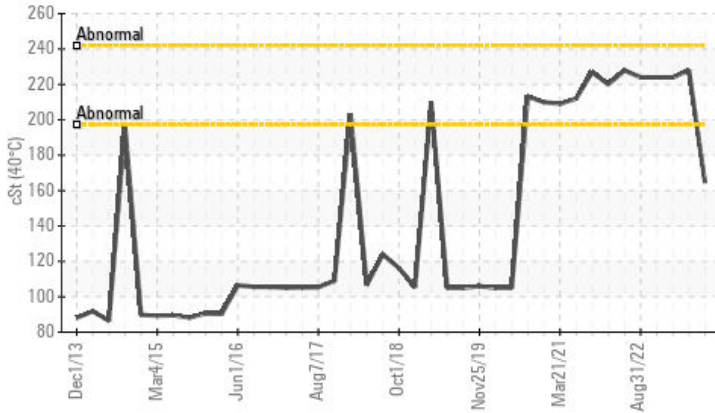


**WATER**



## COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



## RECOMMENDATION

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
Debris	scalar	*Visual	NONE	▲ <b>MODER</b>	▲ MODER	▲ MODER
Appearance	scalar	*Visual	NORML	▲ <b>HAZY</b>	▲ HAZY	▲ HAZY
Free Water	scalar	*Visual		▲ <b>1.0</b>	▲ 10.0	▲ 10.0
Visc @ 40°C	cSt	ASTM D445		▲ <b>164.6</b>	228	224

Customer Id: LEPALL  
 Sample No.: WC0823790  
 Lab Number: 05922357  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

## HISTORICAL DIAGNOSIS

### 12 May 2023 Diag: Don Baldrige

#### WATER



We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. Excessive free water present. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



### 16 Feb 2023 Diag: Angela Borella

#### WATER



We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. Excessive free water present. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)



### 22 Nov 2022 Diag: Jonathan Hester

#### WATER



We suspect abnormal contamination may be due to sampling method. No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Appearance is hazy. There is a trace of moisture present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

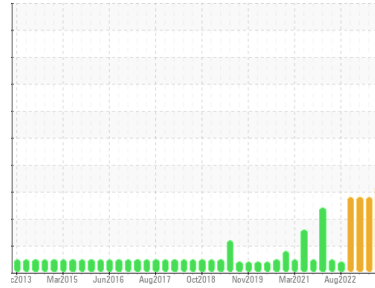
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Area  
**LFC-1030-CM-01-CM005 [1786984]**  
 Machine Id  
**CM05ST06-1030 - STARTER VAT 6**  
 Component  
**Gearbox**  
 Fluid  
**LE 4220 (3 GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Free water present. Moderate concentration of visible dirt/debris present in the oil.

### Fluid Condition

The oil viscosity is lower than normal. The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0823790</b>	WC0819634	WC0767402
Sample Date	Client Info		<b>03 Aug 2023</b>	12 May 2023	16 Feb 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>55</b>	16	16
Chromium	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	0	0
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>1</b>	1	<1
Calcium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Phosphorus	ppm	ASTM D5185m	<b>200</b>	131	129
Zinc	ppm	ASTM D5185m	<b>0</b>	0	1
Sulfur	ppm	ASTM D5185m	<b>2331</b>	2184	1661

## CONTAMINANTS

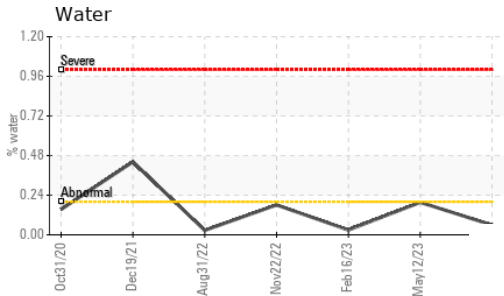
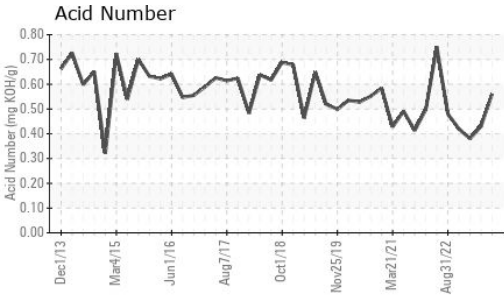
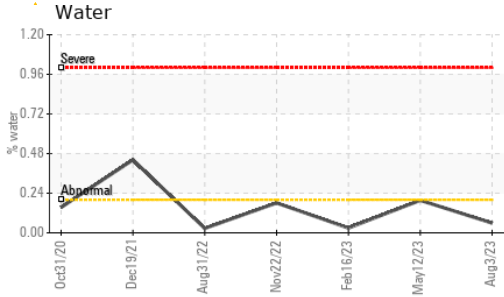
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>1</b>	1	2
Sodium	ppm	ASTM D5185m	<b>1</b>	<1	2
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	<1
Water	%	ASTM D6304 >0.2	<b>0.059</b>	0.197	0.029
ppm Water	ppm	ASTM D6304 >2000	<b>590</b>	1970	290

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.56</b>	0.43	0.38



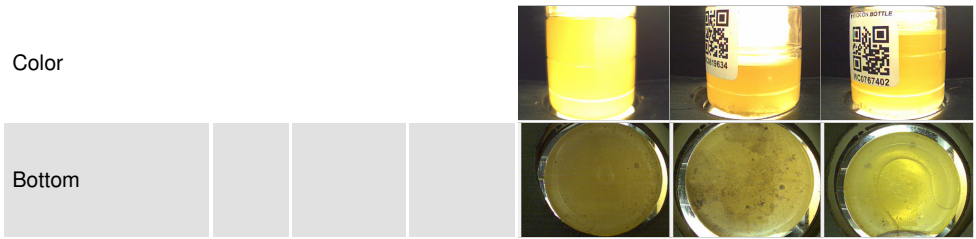
# OIL ANALYSIS REPORT



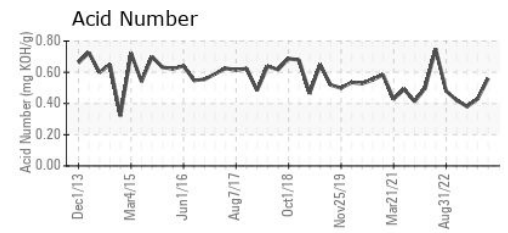
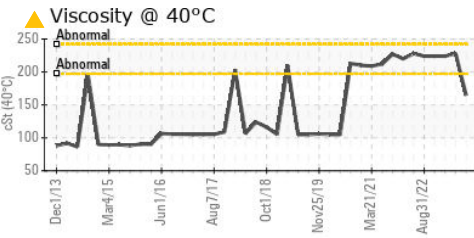
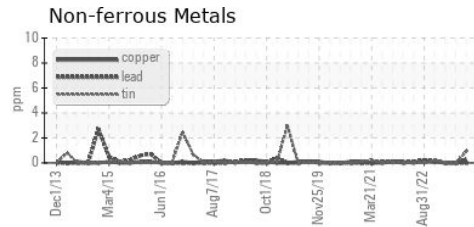
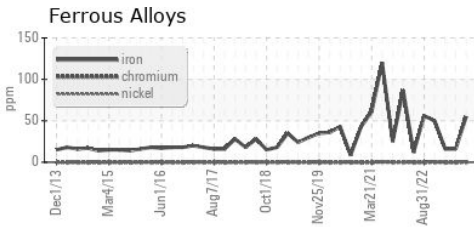
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	MODER	NONE
Debris	scalar	*Visual	▲ MODER	▲ MODER	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	▲ HAZY	▲ HAZY	▲ HAZY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	▲ 0.2%
Free Water	scalar	*Visual		▲ 10.0	▲ 10.0

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	▲ 164.6	228	224

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0823790 **Received** : 11 Aug 2023  
**Lab Number** : 05922357 **Diagnosed** : 16 Aug 2023  
**Unique Number** : 10602304 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: KF )

**LEPRINO FOODS - ALLENDALE**  
 4700 RICH STREET  
 ALLENDALE, MI  
 US 49401  
 Contact: BILL FERRIER  
 BFERRIER@LEPRINOFOODS.COM

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)