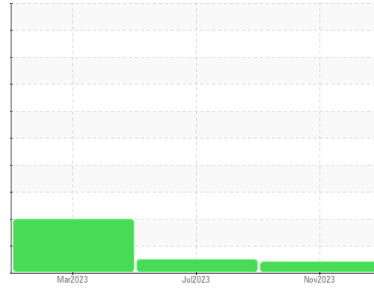




PROBLEM SUMMARY

Sample Rating Trend



VIS DEBRIS



Machine Id
LIM_MLU1 LIM_MLU1
 Component
Outboard Pump
 Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status		ABNORMAL	NORMAL	ABNORMAL
Debris	scalar *Visual	▲ MODER	LIGHT	▲ MODER

Customer Id: ENELIM
 Sample No.: RP0032522
 Lab Number: 06026549
 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

20 Jul 2023 Diag: Don Baldrige

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 oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



22 Mar 2023 Diag: Angela Borella

WATER



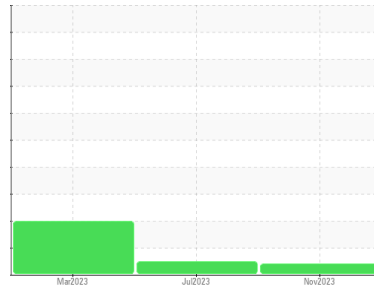
We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id
LIM_MLU1 LIM_MLU1
 Component
Outboard Pump
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

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.

Wear

All component wear rates are normal.

▲ Contamination

Moderate concentration of visible dirt/debris present in the oil. The water content is negligible.

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			RP0032522	RP0033075	RP0032771
Sample Date	Client Info			14 Nov 2023	20 Jul 2023	22 Mar 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	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	14	15	12
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>7	0	0	<1
Lead	ppm	ASTM D5185m	>12	4	5	5
Copper	ppm	ASTM D5185m	>30	22	21	20
Tin	ppm	ASTM D5185m	>9	2	2	3
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0

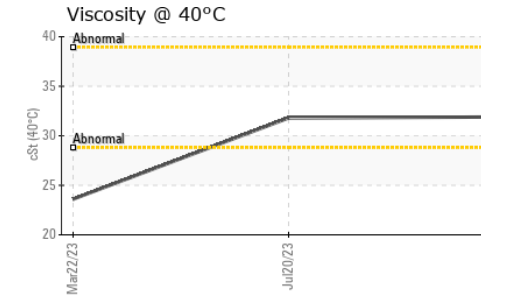
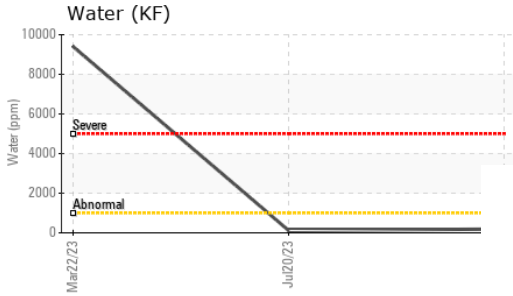
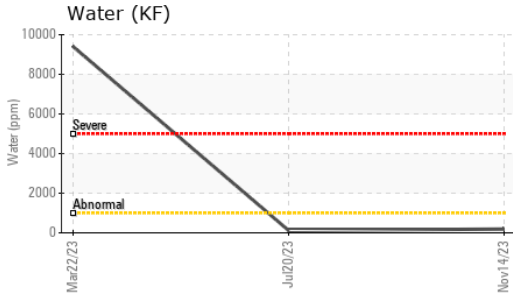
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		19	34	28
Calcium	ppm	ASTM D5185m		0	0	2
Phosphorus	ppm	ASTM D5185m		26	44	70
Zinc	ppm	ASTM D5185m		46	52	33

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	<1	<1	2
Sodium	ppm	ASTM D5185m		2	2	0
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water	%	ASTM D6304	>.1	0.019	0.011	▲ 0.940
ppm Water	ppm	ASTM D6304	>1000	191	119.7	▲ 9400

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.31	0.33	0.34

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	▲ MODER	LIGHT	▲ MODER
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	>.1	NEG	NEG	▲ 0.2%
Free Water	scalar	*Visual		NEG	NEG	NEG

OIL ANALYSIS REPORT



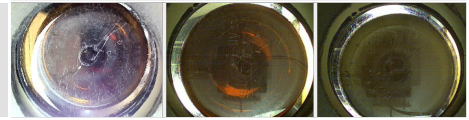
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		31.9	31.8	23.6

SAMPLE IMAGES		method	limit/base	current	history1	history2
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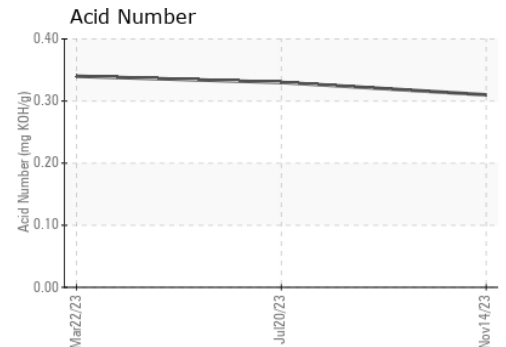
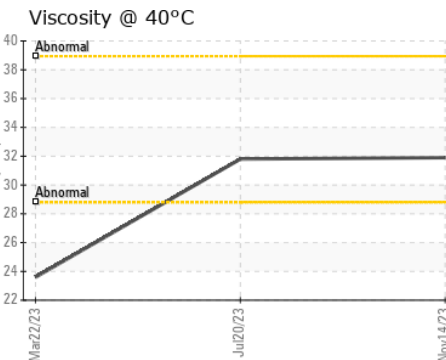
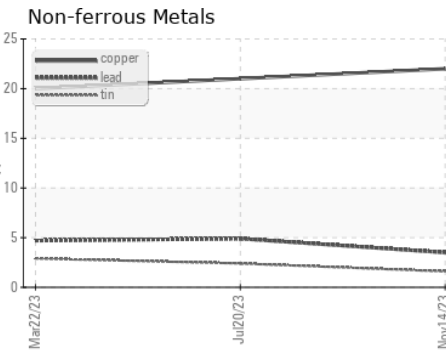
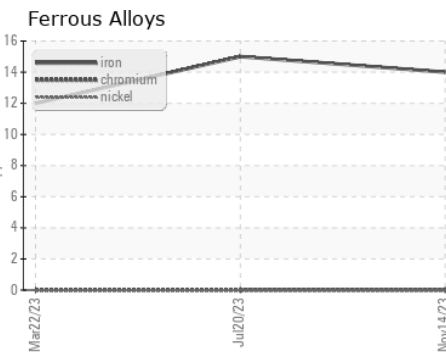
Color



Bottom



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0032522 **Received** : 06 Dec 2023
Lab Number : 06026549 **Diagnosed** : 08 Dec 2023
Unique Number : 10776340 **Diagnostician** : Jonathan Hester
Test Package : IND 2

ENERGY TRANSFER - LIMA
 1520 BUCKEYE RD
 LIMA, OH
 US 45804

Contact: ANDREW WYDERKA
 andrew.wyderka@energytransfer.com

T: (419)618-1505

F:

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)