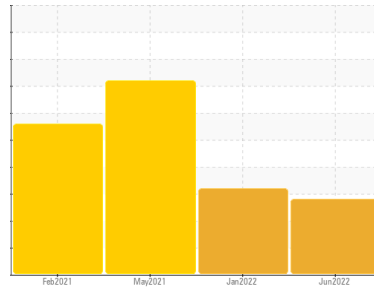


PROBLEM SUMMARY

Sample Rating Trend



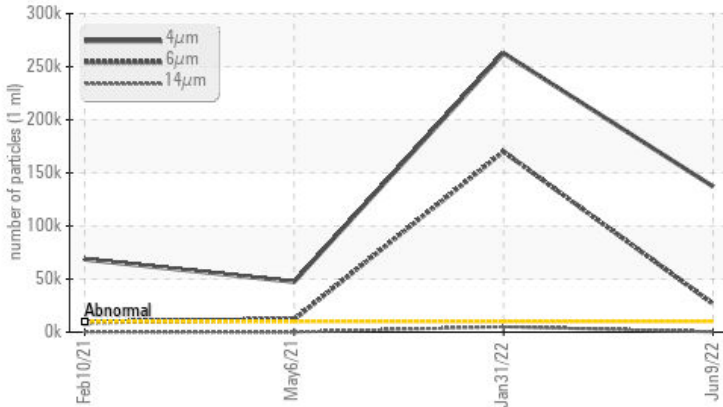
DIRT



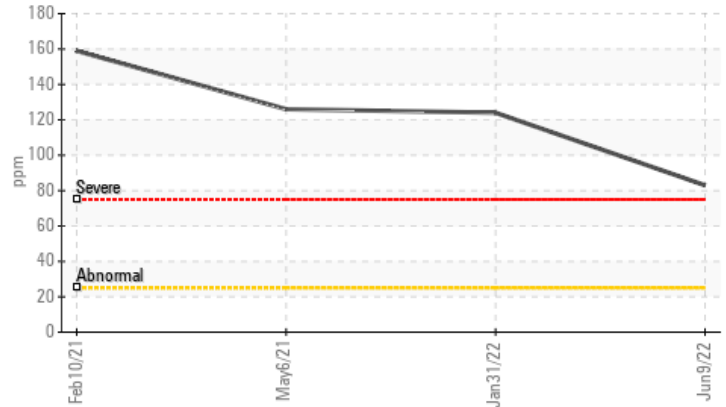
Machine Id
VILTER C
Component
Compressor
Fluid
VILTER ISO 150 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Silicon (ppm)



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	SEVERE
Silicon	ppm	ASTM D5185m >25	▲ 83	▲ 124	● 126
Particles >4µm		ASTM D7647 >10000	▲ 137229	▲ 262692	▲ 47511
Particles >6µm		ASTM D7647 >1300	▲ 26799	▲ 170047	▲ 12061
Oil Cleanliness		ISO 4406 (c) >20/17/15	▲ 24/22/15	▲ 25/25/20	▲ 23/21/14

Customer Id: MELMELTX
Sample No.: TO50000127
Lab Number: 05569214
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
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

31 Jan 2022 Diag: Doug Bogart

DIRT



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid.

view report



06 May 2021 Diag: Jonathan Hester

DIRT



We advise that you follow the water drain-off procedure for this component. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid.

view report



10 Feb 2021 Diag: Jonathan Hester

DIRT



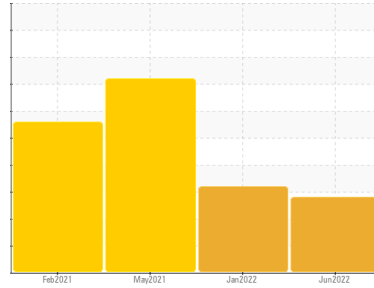
We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The AN level is acceptable for this fluid.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
VILTER C
 Component
Compressor
 Fluid
VILTER ISO 150 (--- GAL)

DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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		TO50000127	TO50000082	TO50000089
Sample Date	Client Info		09 Jun 2022	31 Jan 2022	06 May 2021
Machine Age	mths	Client Info	0	0	0
Oil Age	mths	Client Info	0	0	0
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	SEVERE

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	1	1	0
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m	0	0	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	<1	<1	0
Lead	ppm	ASTM D5185m >25	0	0	0
Copper	ppm	ASTM D5185m >50	0	0	0
Tin	ppm	ASTM D5185m >15	<1	1	0
Antimony	ppm	ASTM D5185m	---	<1	2
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

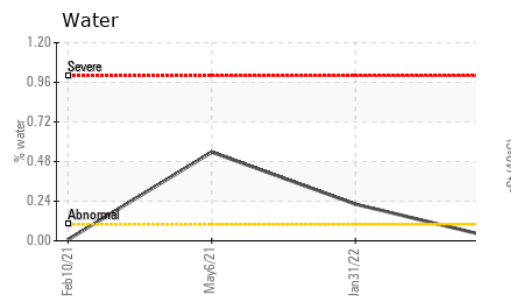
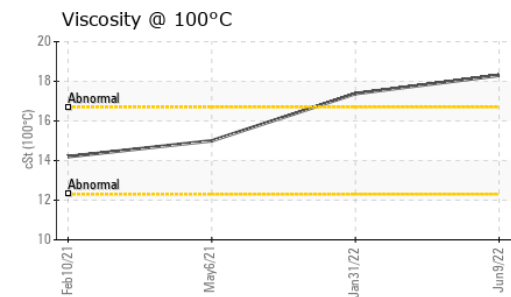
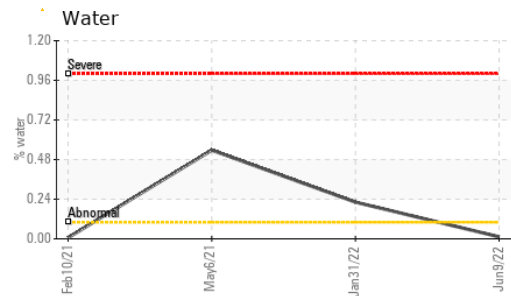
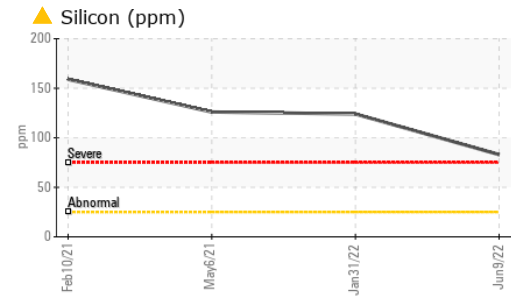
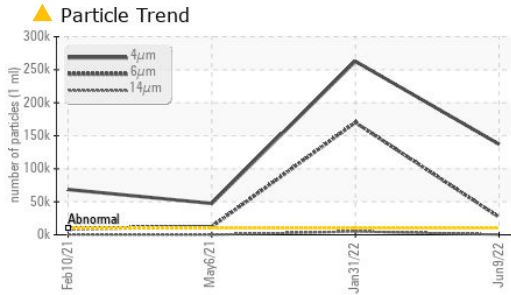
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	<1	0	0
Calcium	ppm	ASTM D5185m	0	0	0
Phosphorus	ppm	ASTM D5185m	5	8	<1
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	4448	4886	2457

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 83	▲ 124	● 126
Sodium	ppm	ASTM D5185m	<1	0	<1
Potassium	ppm	ASTM D5185m >20	0	0	0
Water	%	ASTM D6304 >0.1	0.012	0.222	▲ 0.537
ppm Water	ppm	ASTM D6304 >1000	122.7	2223.6	▲ 5370

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 137229	▲ 262692	▲ 47511
Particles >6µm	ASTM D7647	>1300	▲ 26799	▲ 170047	▲ 12061
Particles >14µm	ASTM D7647	>320	304	▲ 5045	104
Particles >21µm	ASTM D7647	>80	37	▲ 276	12
Particles >38µm	ASTM D7647	>20	0	4	0
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/17/15	▲ 24/22/15	▲ 25/25/20	▲ 23/21/14

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.115	0.157	0.835

OIL ANALYSIS REPORT



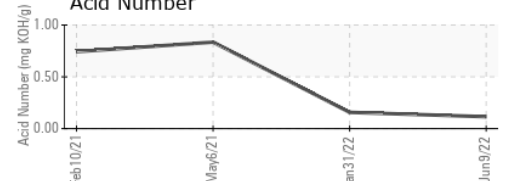
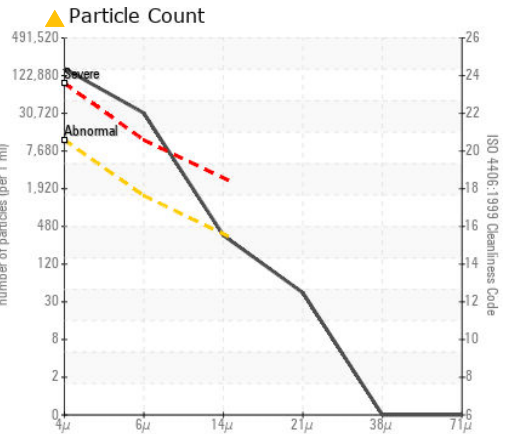
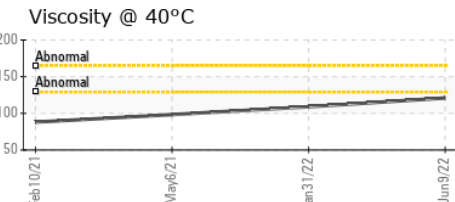
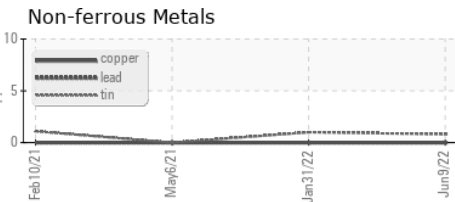
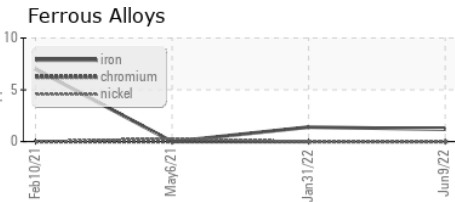
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	121	109	98.3
Visc @ 100°C	cSt	ASTM D445	18.3	17.38	15.0
Viscosity Index (VI)	Scale	ASTM D2270	169	175	160

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO50000127 **Received** : 15 Jun 2022
Lab Number : 05569214 **Diagnosed** : 20 Jun 2022
Unique Number : 10013614 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

MELISSA RENEWABLES
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 MELISSA, TX
 US 75454
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 bpalmer@morrowenergy.com
 T: (972)529-8442
 F:

Certificate L2367
 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)