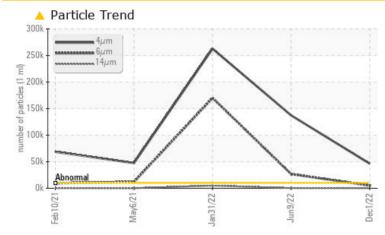


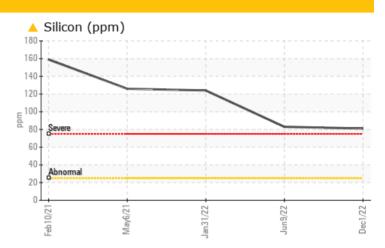
# Sample Rating Trend DIRT

#### Machine Id VILTER C Component Compressor Fluid TULCO LUBSOIL LPG WI 100 (--- GAL)

# COMPONENT CONDITION SUMMARY

TULCO WEAREN





### RECOMMENDATION

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

# PROBLEMATIC TEST RESULTS

THODELINATION	LOTINE	.00210				
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Silicon	ppm	ASTM D5185m	>25	<mark>人</mark> 81	<mark>\</mark> 83	<u> </u>
Particles >4µm		ASTM D7647	>10000	<b>46325</b>	A 137229	<u> </u>
Particles >6µm		ASTM D7647	>1300	<u> </u>	<u> </u>	▲ 170047
Oil Cleanliness		ISO 4406 (c)	>20/17/15	<b>A</b> 23/20/14	🔺 24/22/15	<u> </u>

Customer Id: MELMELTX Sample No.: TO50000124 Lab Number: 05708436 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Angela Borella +1 800-237-1369 angela.borella@wearcheckusa.com

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

#### **RECOMMENDED ACTIONS**

There are no recommended actions for this sample.

#### HISTORICAL DIAGNOSIS

#### 09 Jun 2022 Diag: Jonathan Hester

DIRT



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

#### 31 Jan 2022 Diag: Doug Bogart

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.





#### 06 May 2021 Diag: Jonathan Hester

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.



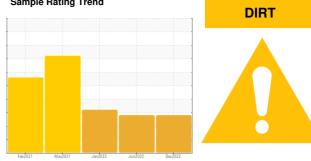




**VILTER C** 

# **OIL ANALYSIS REPORT**

SAMPLE INCODMATION



Component Compressor Fluid TULCO LUBSOIL LPG WI 100 (--- GAL)

## DIAGNOSIS

Machine Id

#### Recommendation

The 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.

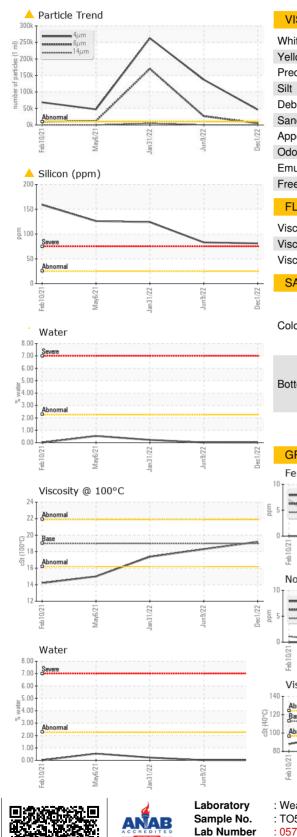
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TO50000124	TO50000127	TO5000082
Sample Date		Client Info		01 Dec 2022	09 Jun 2022	31 Jan 2022
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed		Client Info		Filtered	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	1	1	1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	<1	<1
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m	>15	۰ <1	<1	1
Antimony	ppm	ASTM D5185m	210			<1
Vanadium		ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ppm					
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	0	1	<1	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m	0	33	5	8
Zinc	ppm	ASTM D5185m	0	4	0	0
Sulfur	ppm	ASTM D5185m	0	6017	4448	4886
CONTAMINANTS	S	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<mark>/</mark> 81	<b>8</b> 3	🔺 124
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water	%	ASTM D6304	>2.26	0.007	0.012	0.222
ppm Water	ppm	ASTM D6304	>22600	74.9	122.7	2223.6
FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	<b>46325</b>	▲ 137229	▲ 262692
Particles >6µm		ASTM D7647	>1300	<u> </u>	<b>A</b> 26799	<b>1</b> 70047
Particles >14µm		ASTM D7647	>320	100	304	▲ 5045
Particles >21µm		ASTM D7647	>80	21	37	<b>A</b> 276
Particles >38µm		ASTM D7647	>20	1	0	4
Particles >71µm		ASTM D7647	>4	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/15	<b>A</b> 23/20/14	▲ 24/22/15	▲ 25/25/20
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.87	0.115	0.157
-52:10) Pov: 1	ing itoriy					

Report Id: MELMELTX [WUSCAR] 05708436 (Generated: 07/19/2023 14:52:10) Rev: 1

Contact/Location: BILL PALMER - MELMELTX



# **OIL ANALYSIS REPORT**

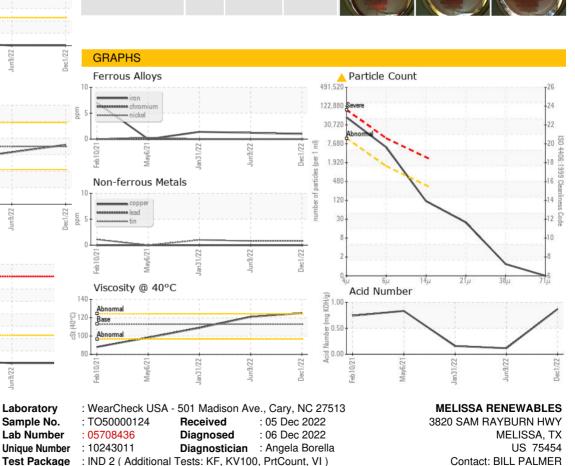


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>2.26	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	113	125	121	109
Visc @ 100°C	cSt	ASTM D445	19	19.2	18.3	17.38
Viscosity Index (VI)	Scale	ASTM D2270	189	174	169	175
SAMPLE IMAGES	6	method	limit/base	current	history1	history2

Color

Bottom

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.



Contact: BILL PALMER bpalmer@morrowenergy.com T: (972)529-8442 F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367