



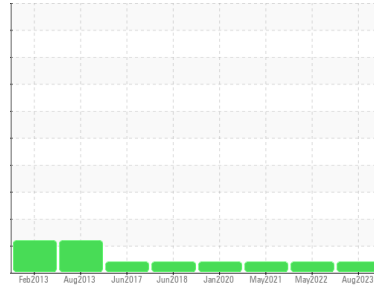
# PROBLEM SUMMARY

Sample Rating Trend

VISCOSITY

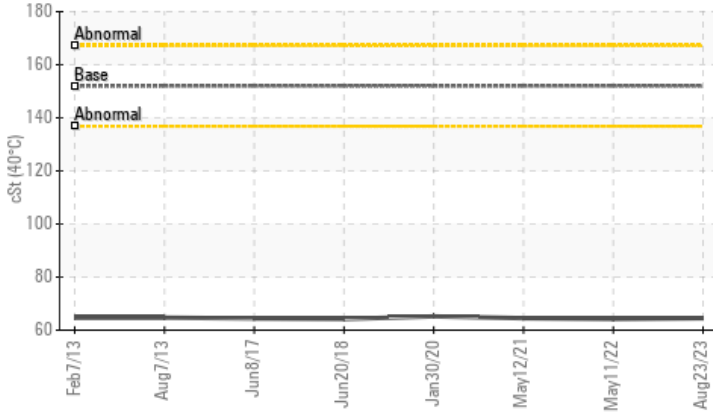


Machine Id  
**TECO WESTING HOUSE PUMP 1003**  
 Component  
**Rotary Compressor**  
 Fluid  
**SHELL MORLINA OIL 150 (13 LTR)**



## COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: Annual oil sampling test )

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
Visc @ 40°C	cSt	ASTM D7279(m)	152	▲ 64.5	▲ 64.2	▲ 64.5

Customer Id: NATOTTEV  
 Sample No.: WC0701221  
 Lab Number: 02578489  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
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To change component or sample information:  
 Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 11 May 2022 Diag: Kevin Marson

#### VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 12 May 2021 Diag: Kevin Marson

#### VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 30 Jan 2020 Diag: Kevin Marson

#### VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report





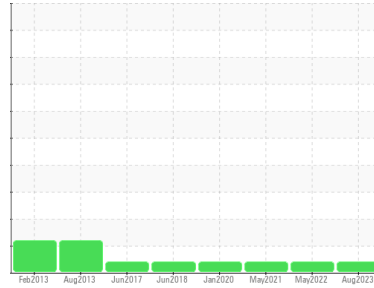
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id  
**TECO WESTING HOUSE PUMP 1003**  
 Component  
**Rotary Compressor**  
 Fluid  
**SHELL MORLINA OIL 150 (13 LTR)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Annual oil sampling test )

### Wear

All component wear rates are normal.

### Contamination

The water content is negligible. There is no indication of any contamination in the oil.

### Fluid Condition

Viscosity of sample indicates oil is within ISO 68 range, advise investigate. 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		<b>WC0701221</b>	WC0701231	WC0361082
Sample Date	Client Info		<b>23 Aug 2023</b>	11 May 2022	12 May 2021
Machine Age	yrs	Client Info	<b>20</b>	0	0
Oil Age	yrs	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
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >70	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

## ADDITIVES

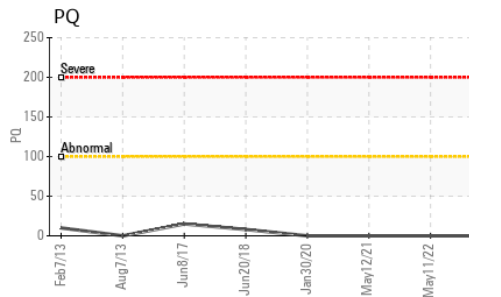
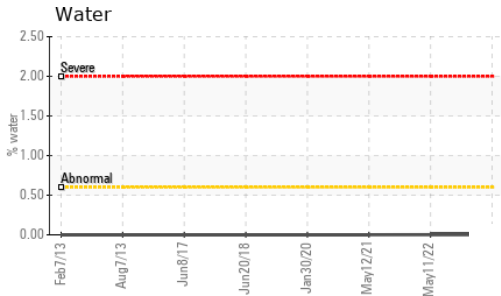
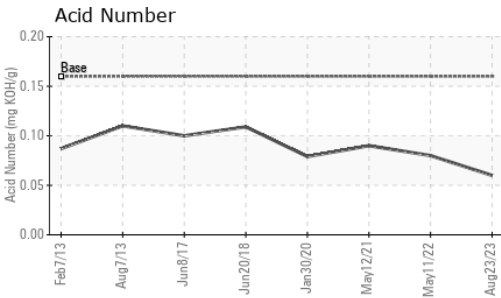
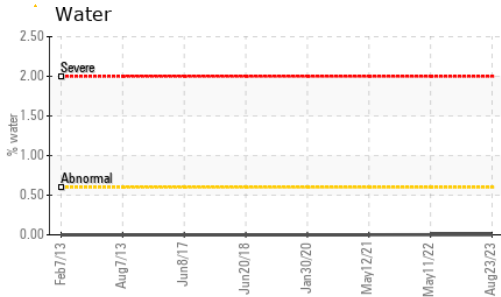
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185(m)	<b>6</b>	6	6
Phosphorus	ppm	ASTM D5185(m)	<b>67</b>	71	67
Zinc	ppm	ASTM D5185(m)	<b>67</b>	76	77
Sulfur	ppm	ASTM D5185(m)	<b>1450</b>	1590	1597
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >45	<b>0</b>	<1	<1
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	<1
Water	%	ASTM D6304* >0.6	<b>0.002</b>	0.001	---
ppm Water	ppm	ASTM D6304*	<b>17.1</b>	7.0	---

## FLUID DEGRADATION

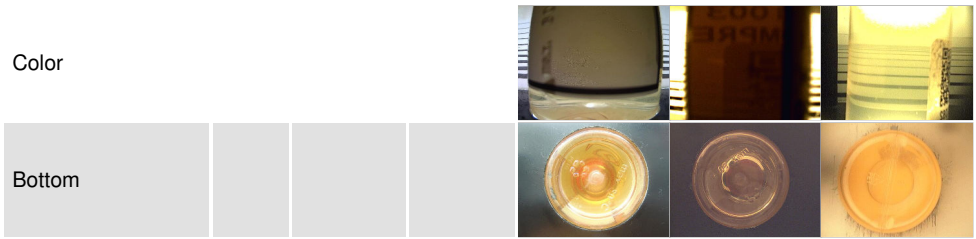
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.16	<b>0.06</b>	0.08	0.09



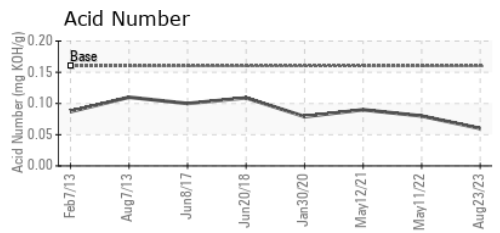
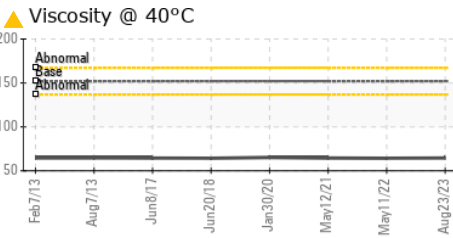
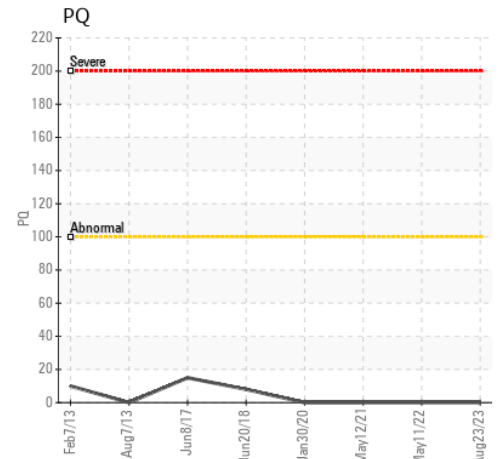
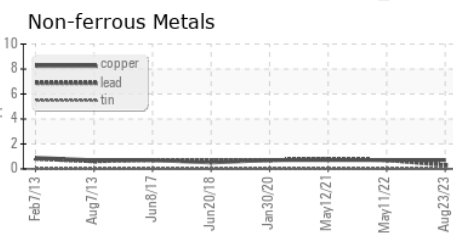
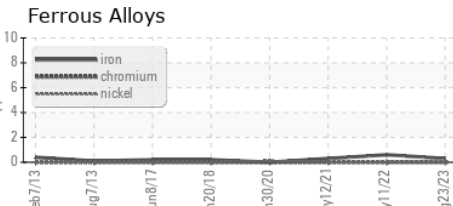
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.6	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	152 ▲ 64.5	▲ 64.2	▲ 64.5

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



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0701221  
**Lab Number** : 02578489  
**Unique Number** : 5631549  
**Test Package** : IND 2 ( Additional Tests: KF )  
**Received** : 25 Aug 2023  
**Diagnosed** : 29 Aug 2023  
**Diagnostician** : Kevin Marson

**NATIONAL RESEARCH COUNCIL**  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.