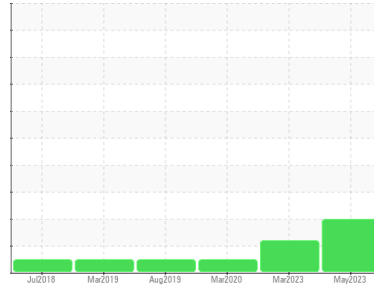




# PROBLEM SUMMARY

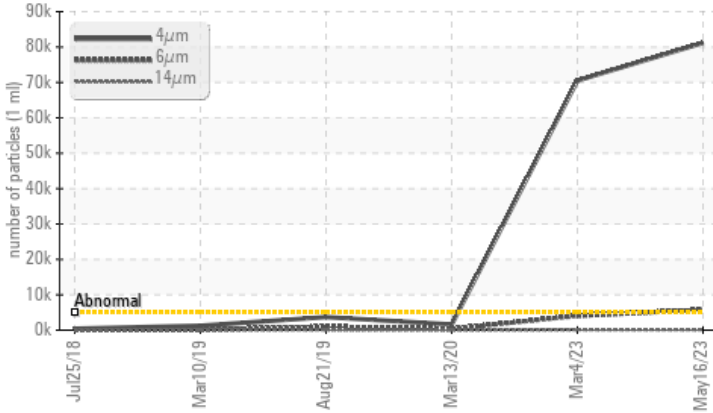
Sample Rating Trend



Area  
**FRAC [5510402]**  
 Machine Id  
**VAMECO CLV 111 P001**  
 Component  
**Hydraulic System**  
 Fluid  
**HYDRAULIC OIL FG ISO 46 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### Particle Trend



## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

## PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	ABNORMAL	NORMAL
Particles >4µm	ASTM D7647	>5000	81187	70520	1604
Particles >6µm	ASTM D7647	>1300	5740	4055	354
Oil Cleanliness	ISO 4406 (c)	>19/17/14	24/20/14	23/19/14	18/16/11

Customer Id: BAXSOC  
 Sample No.: WC0820225  
 Lab Number: 05874398  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS

### 04 Mar 2023 Diag: Jonathan Hester

ISO



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 silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 13 Mar 2020 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. 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



### 21 Aug 2019 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. 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





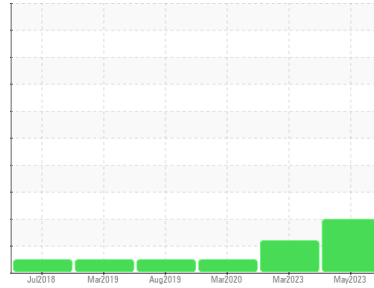
# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**FRAC [5510402]**  
 Machine Id  
**VAMECO CLV 111 P001**  
 Component  
**Hydraulic System**  
 Fluid  
**HYDRAULIC OIL FG ISO 46 (--- GAL)**



## DIAGNOSIS

### Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0820225</b>	WC0777181	WC0393940
Sample Date	Client Info		<b>16 May 2023</b>	04 Mar 2023	13 Mar 2020
Machine Age	mths	Client Info	<b>0</b>	0	0
Oil Age	mths	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	ABNORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>12</b>	5	9
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >20	<b>1</b>	0	<1
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	<b>0</b>	0	<1
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 5	<b>0</b>	5	<1
Calcium	ppm	ASTM D5185m 12	<b>&lt;1</b>	0	1
Phosphorus	ppm	ASTM D5185m 400	<b>603</b>	652	485
Zinc	ppm	ASTM D5185m 12	<b>0</b>	1	0
Sulfur	ppm	ASTM D5185m 650	<b>644</b>	319	437

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>&lt;1</b>	2	3
Sodium	ppm	ASTM D5185m	<b>2</b>	1	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	1

## FLUID CLEANLINESS

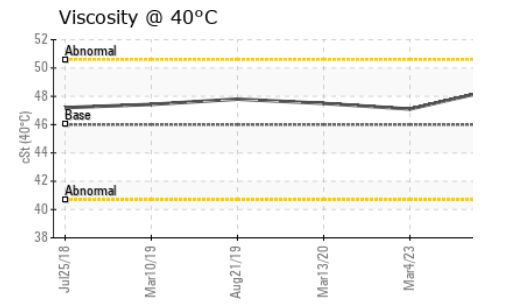
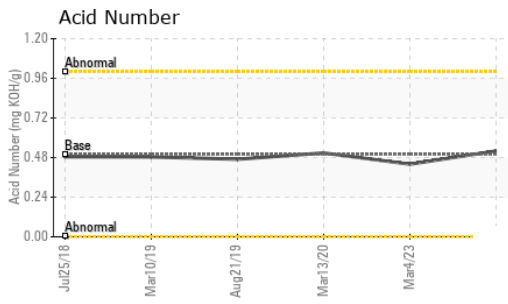
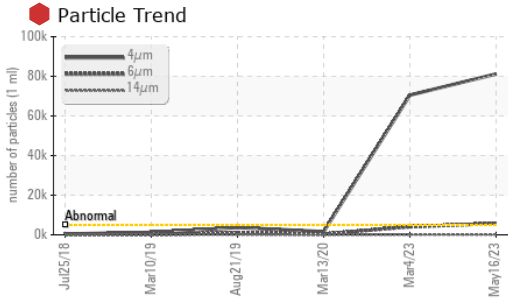
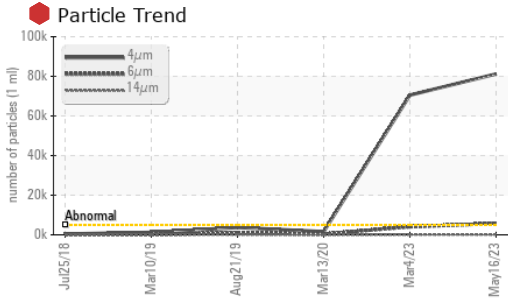
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>81187</b>	70520	1604
Particles >6µm	ASTM D7647	>1300	<b>5740</b>	4055	354
Particles >14µm	ASTM D7647	>160	<b>99</b>	102	13
Particles >21µm	ASTM D7647	>40	<b>22</b>	49	6
Particles >38µm	ASTM D7647	>10	<b>1</b>	9	3
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>24/20/14</b>	23/19/14	18/16/11

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.50	<b>0.52</b>	0.44	0.508



# OIL ANALYSIS REPORT



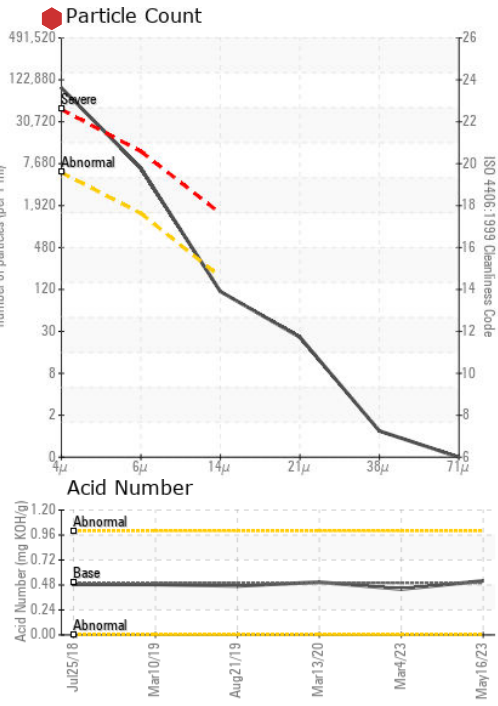
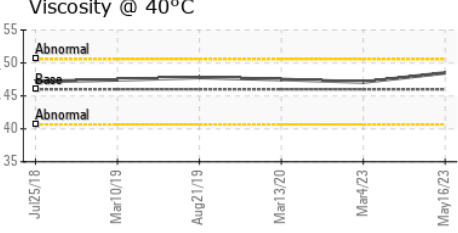
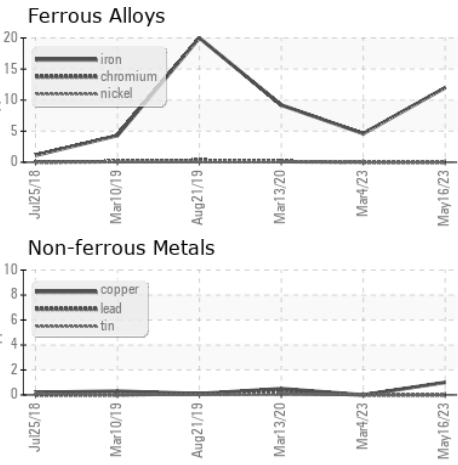
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	48.5	47.1	47.5

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0820225  
**Lab Number** : 05874398  
**Unique Number** : 10519501  
**Test Package** : IND 2

**TAKEDA**  
 305-505 BAXALTA PARKWAY  
 SOCIAL CIRCLE, GA  
 US 30025  
 Contact: BRANDON INMAN  
 BRANDON.INMAN@SHIRE.COM  
 T:  
 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)