



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**47289**  
Component  
**Hydraulic System**  
Fluid  
**ESSO NUTO H ISO 46 (475 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0577205</b>	WC0577198	WC0376760
Sample Date		Client Info		<b>28 Apr 2023</b>	06 May 2022	07 Jul 2021
Machine Age	hrs	Client Info		<b>48353</b>	46483	44967
Oil Age	hrs	Client Info		<b>26977</b>	25107	23591
Filter Age	hrs	Client Info		<b>1871</b>	1516	1091
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Lead	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	0
Copper	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

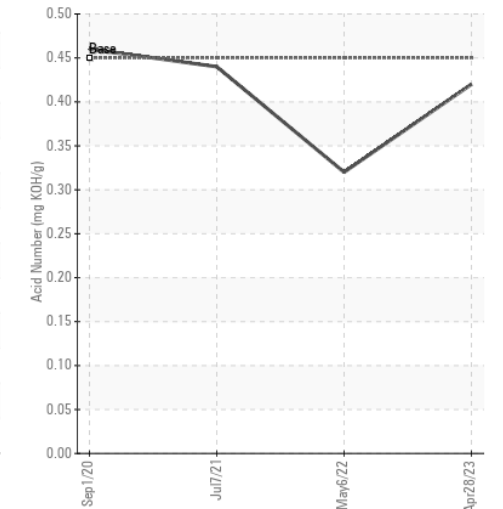
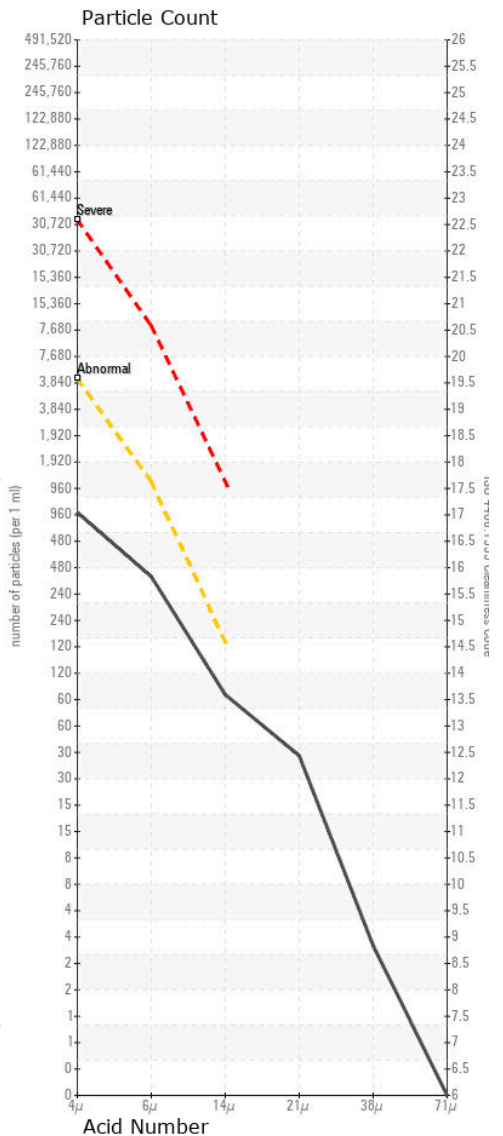
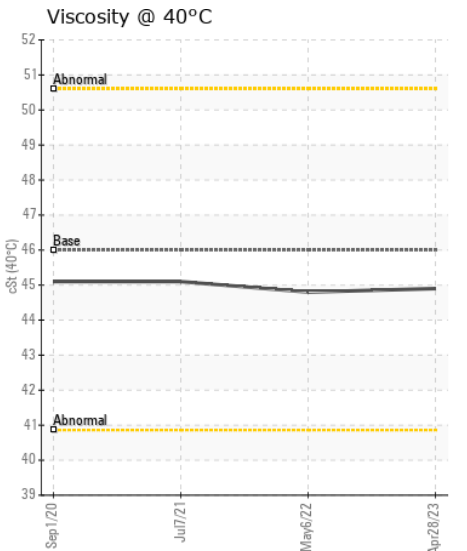
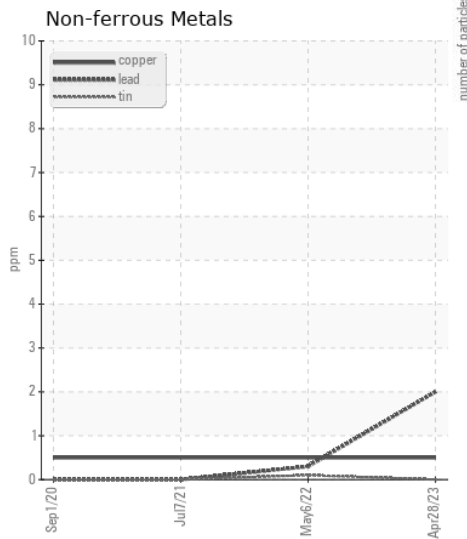
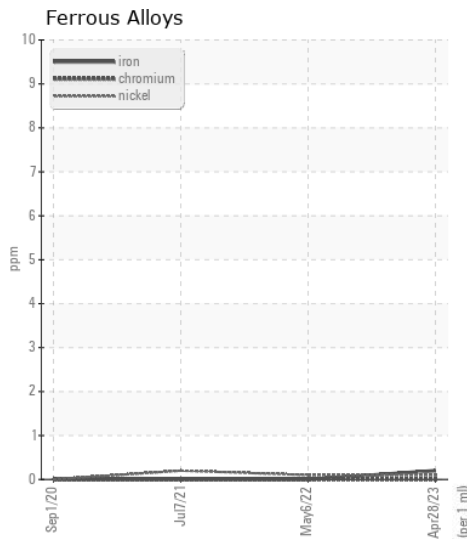
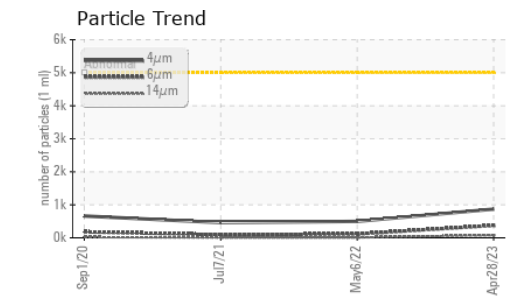
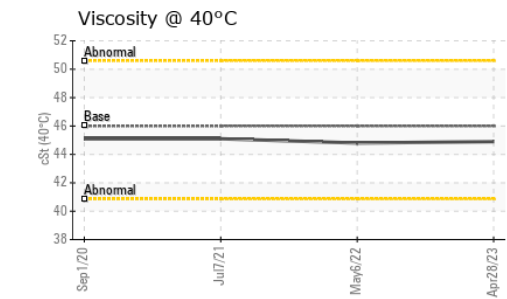
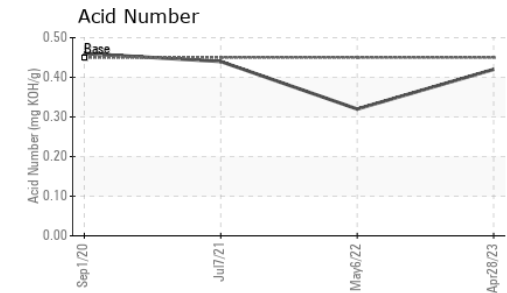
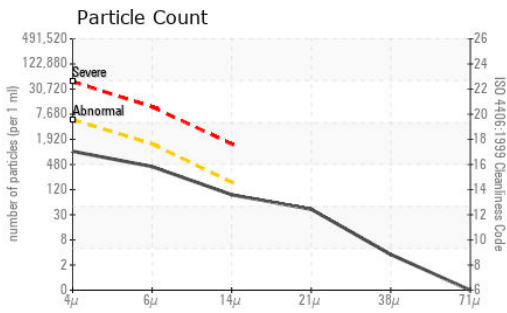
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Water		WC Method	>0.05	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>870</b>	498	460
Particles >6µm		ASTM D7647	>1300	<b>375</b>	116	90
Particles >14µm		ASTM D7647	>160	<b>80</b>	9	9
Particles >21µm		ASTM D7647	>40	<b>36</b>	3	3
Particles >38µm		ASTM D7647	>10	<b>3</b>	0	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>17/16/13</b>	16/14/10	16/14/10
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m)	50	<b>43</b>	43	42
Phosphorus	ppm	ASTM D5185(m)	330	<b>364</b>	349	358
Zinc	ppm	ASTM D5185(m)	410	<b>433</b>	440	448
Sulfur	ppm	ASTM D5185(m)	2700	<b>3618</b>	3520	3391
Acid Number (AN)	mg KOH/g	ASTM D974*	0.45	<b>0.42</b>	0.32	0.44
Visc @ 40°C	cSt	ASTM D7279(m)	46	<b>44.9</b>	44.8	45.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0577205 **Received** : 05 May 2023  
**Lab Number** : 02555735 **Tested** : 08 May 2023  
**Unique Number** : 5568750 **Diagnosed** : 08 May 2023 - Wes Davis  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Waldale Manufacturing Ltd.**  
 17 Tantramar  
 Amherst, NS  
 CA B4H 4J6  
 Contact: Jean Bourque  
 jean@waldale.com  
 T: (902)660-3414  
 F: (902)667-2049

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.