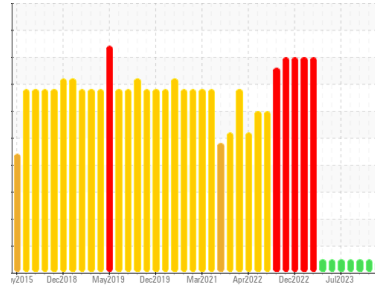




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Area  
**BOF/VESSELS**  
Machine Id  
**A - 7 Vessel Drive Lube System**  
Component  
**Drive End Gearbox**  
Fluid  
**ESSO SPARTAN EP 320 (710 GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

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

#### Fluid Condition

Viscosity of sample indicates oil is within ISO 220 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>WC0901972</b>	WC0890381	WC0871201
Sample Date	Client Info		<b>22 Jan 2024</b>	15 Dec 2023	16 Oct 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>5	<b>NEG</b>	NEG	NEG

### WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>99999	<b>66</b>	44	41
Iron	ppm	ASTM D5185(m)	>200	<b>69</b>	56
Chromium	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1
Nickel	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>1</b>	<1
Lead	ppm	ASTM D5185(m)	>100	<b>&lt;1</b>	<1
Copper	ppm	ASTM D5185(m)	>200	<b>&lt;1</b>	<1
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	0
Antimony	ppm	ASTM D5185(m)	>5	<b>0</b>	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	.4	<b>1</b>	1
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>4</b>	4
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>1</b>	1
Calcium	ppm	ASTM D5185(m)	0	<b>5</b>	7
Phosphorus	ppm	ASTM D5185(m)	250	<b>298</b>	296
Zinc	ppm	ASTM D5185(m)	0	<b>25</b>	27
Sulfur	ppm	ASTM D5185(m)		<b>9198</b>	8593
Lithium	ppm	ASTM D5185(m)		<b>4</b>	5

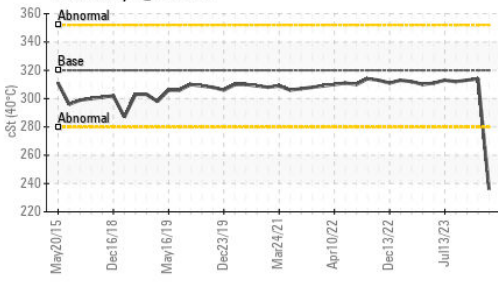
### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	<b>3</b>	2
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0

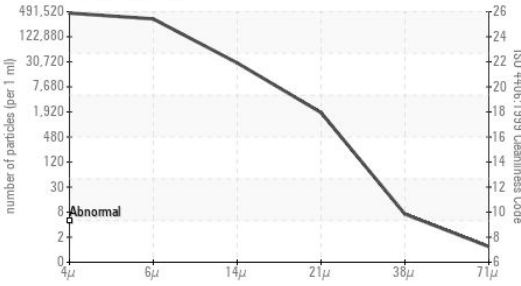


# OIL ANALYSIS REPORT

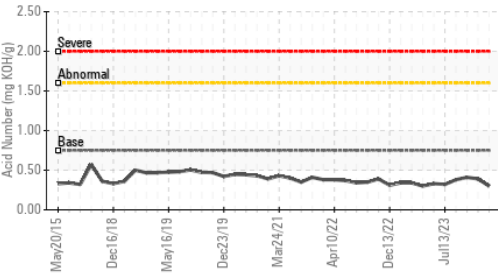
▲ Viscosity @ 40°C



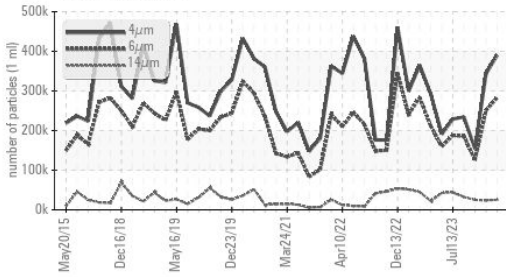
Particle Count



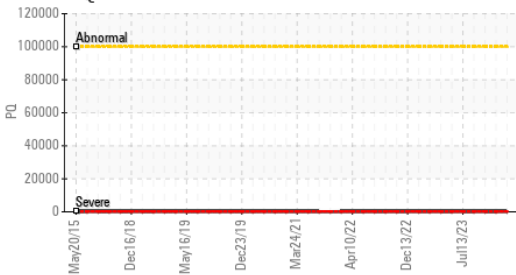
Acid Number



Particle Trend



PQ



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>390072</b>	343443	154603
Particles >6µm	ASTM D7647	>10240000	<b>282773</b>	250416	125580
Particles >14µm	ASTM D7647	>10240000	<b>25069</b>	23968	25029
Particles >21µm	ASTM D7647	>2560000	<b>1617</b>	2382	3041
Particles >38µm	ASTM D7647	>640000	<b>6</b>	54	72
Particles >71µm	ASTM D7647	>160000	<b>1</b>	1	6
Oil Cleanliness	ISO 4406 (c)	>--/30/30	<b>26/25/22</b>	26/25/22	24/24/22

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.75	<b>0.30</b>	0.39	0.41

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>5	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	320	<b>▲ 236</b>	314	313

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color



Bottom



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **STELCO - BOSC - Basic Oxygen Slab Caster**  
**Sample No.** : WC0901972 **Received** : 23 Jan 2024  
**Lab Number** : **02610758** **Diagnosed** : 26 Jan 2024  
**Unique Number** : 5711844 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: PQ )

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.

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