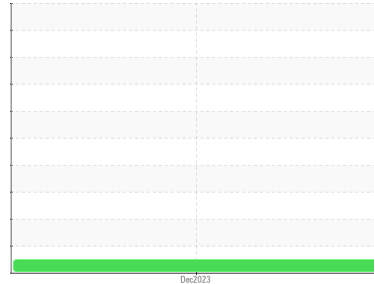




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
PRESS #1 LINE #2
 Component
Hydraulic System
 Fluid
SHELL TELLUS 32 (400 GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. 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			PP0782178	---	---
Sample Date	Client Info			13 Dec 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Oil Changed	Client Info			N/A	---	---
Sample Status				NORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	<1	---	---
Chromium	ppm	ASTM D5185(m)	>20	0	---	---
Nickel	ppm	ASTM D5185(m)	>20	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		<1	---	---
Aluminum	ppm	ASTM D5185(m)	>20	0	---	---
Lead	ppm	ASTM D5185(m)	>20	<1	---	---
Copper	ppm	ASTM D5185(m)	>20	3	---	---
Tin	ppm	ASTM D5185(m)	>20	0	---	---
Antimony	ppm	ASTM D5185(m)		<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Beryllium	ppm	ASTM D5185(m)		0	---	---
Cadmium	ppm	ASTM D5185(m)		0	---	---

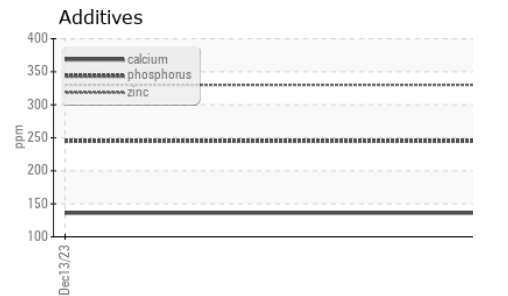
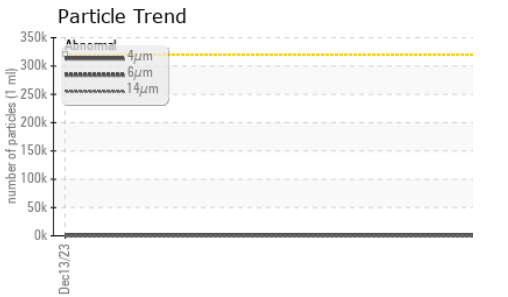
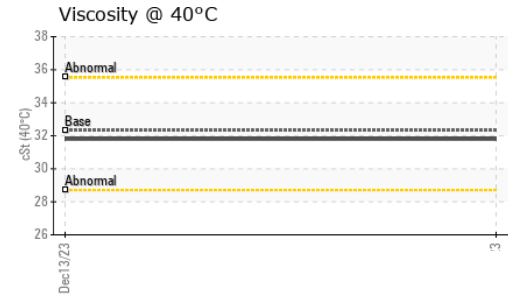
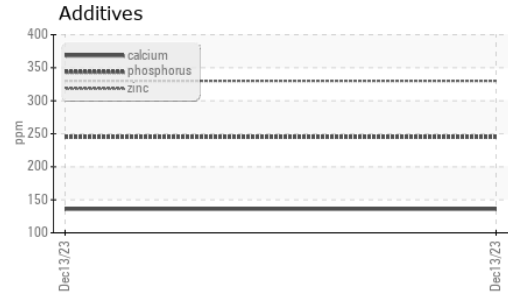
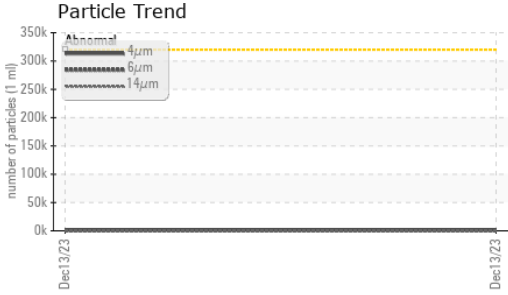
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1	---	---
Barium	ppm	ASTM D5185(m)		<1	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)	11	1	---	---
Calcium	ppm	ASTM D5185(m)	35	136	---	---
Phosphorus	ppm	ASTM D5185(m)	259	245	---	---
Zinc	ppm	ASTM D5185(m)	277	330	---	---
Sulfur	ppm	ASTM D5185(m)	1865	956	---	---
Lithium	ppm	ASTM D5185(m)		<1	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<1	---	---
Sodium	ppm	ASTM D5185(m)		0	---	---
Potassium	ppm	ASTM D5185(m)	>20	0	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>320000	1023	---	---
Particles >6µm		ASTM D7647	>80000	159	---	---
Particles >14µm		ASTM D7647	>2500	17	---	---
Particles >21µm		ASTM D7647	>640	5	---	---
Particles >38µm		ASTM D7647	>160	0	---	---
Particles >71µm		ASTM D7647	>40	0	---	---
Oil Cleanliness		ISO 4406 (c)	>25/23/18	17/14/11	---	---



OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.32	0.35	---	---

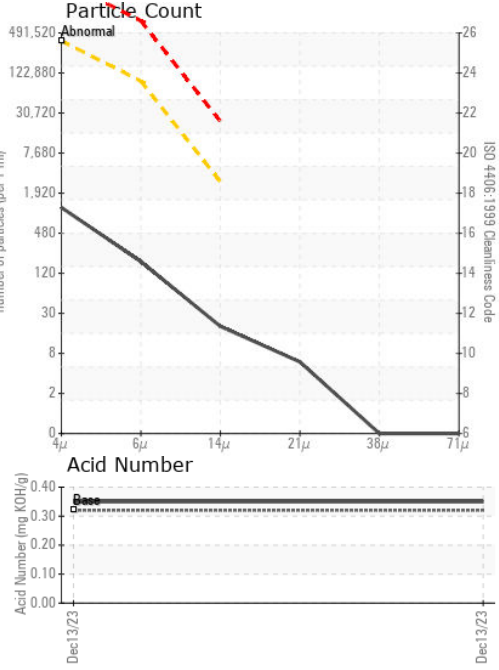
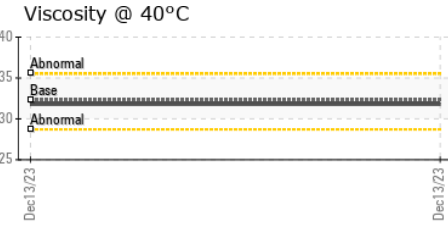
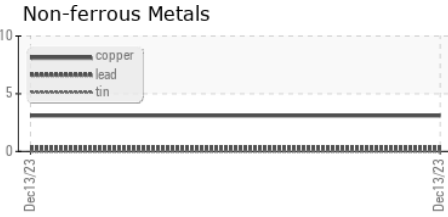
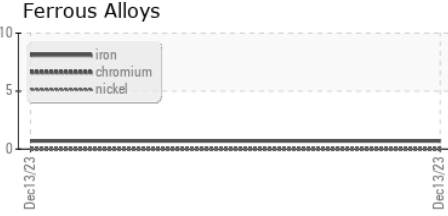
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32.32	31.8	---	---

SAMPLE IMAGES

	method	limit/base	current	history1	history2
Color				<i>no image</i>	<i>no image</i>
Bottom				<i>no image</i>	<i>no image</i>

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP0782178 **Received** : 18 Dec 2023
Lab Number : **02603785** **Diagnosed** : 19 Dec 2023
Unique Number : 5696870 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: TAN Man)

Cleveland Hydraulics
 1215 Highway 26
 Springwater, ON
 CA L9X 0G1
 Contact: Nigel Layton
 nigel@clevelandhydraulics.ca
 T: (647)332-7867
 F:

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.