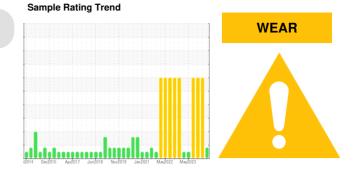


OIL ANALYSIS REPORT

Area

7-3-254 Roll Press Hyd. System Pump

ESSO NUTO H ISO32 (200 LTR)



DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Chromium ppm levels are abnormal. Ring wear is indicated.

Contamination

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

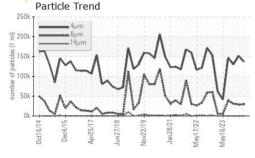
Fluid Condition

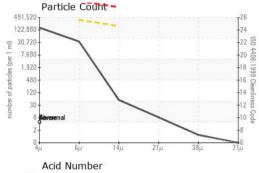
Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

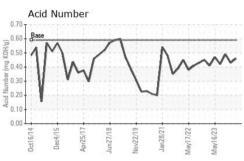
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0925367	WC0902093	WC0869910
Sample Date		Client Info		08 Apr 2024	14 Feb 2024	22 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	SEVERE
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	7	7	5
Chromium	ppm	ASTM D5185(m)	>5	<u>^</u> 24	A 30	▲ 37
Nickel	ppm	ASTM D5185(m)	>5	0	0	<1
Titanium	ppm	ASTM D5185(m)	>3	0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>7	0	<1	<1
Lead	ppm	ASTM D5185(m)	>12	0	0	<1
Copper	ppm	ASTM D5185(m)	>30	8	10	10
Tin	ppm	ASTM D5185(m)	>9	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 0.2	current	history1	history2 <1
	ppm ppm					
Boron		ASTM D5185(m)	0.2	<1	0	<1
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0.2	<1 0	0	<1 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0	<1 0 0	0 0 0	<1 <1 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0 0.0	<1 0 0 0	0 0 0	<1 <1 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0	<1 0 0 0 0 64	0 0 0 0	<1 <1 0 0 0 63
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 0.0	<1 0 0 0 0 64 9	0 0 0 0 0 61 10	<1 <1 0 0 63 10
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325	<1 0 0 0 0 64 9 256	0 0 0 0 61 10 258	<1 <1 0 0 0 63 10 258
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407	<1 0 0 0 64 9 256 287	0 0 0 0 61 10 258 277	<1 <1 0 0 63 10 258 298
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407	<1 0 0 0 64 9 256 287 681	0 0 0 0 61 10 258 277 676	<1 <1 0 0 63 10 258 298 678
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395	<1 0 0 0 64 9 256 287 681 <1	0 0 0 0 61 10 258 277 676	<1 <1 0 0 63 10 258 298 678 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395	<1 0 0 0 64 9 256 287 681 <1	0 0 0 0 61 10 258 277 676 <1	<1 <1 0 0 63 10 258 298 678 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395	<1 0 0 0 64 9 256 287 681 <1 current	0 0 0 0 61 10 258 277 676 <1 history1	<1 <1 0 0 63 10 258 298 678 <1 history2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60	<1 0 0 0 64 9 256 287 681 <1 current 0	0 0 0 0 61 10 258 277 676 <1 history1	<1 <1 0 0 63 10 258 298 678 <1 history2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60	<1 0 0 0 64 9 256 287 681 <1 current 0 0	0 0 0 0 61 10 258 277 676 <1 history1 0 0	<1 <1 0 0 63 10 258 298 678 <1 history2 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60	<1 0 0 0 64 9 256 287 681 <1 current 0 0 <1	0 0 0 0 61 10 258 277 676 <1 history1	<1 <1 0 0 63 10 258 298 678 <1 history2 <1 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) MASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60 >20 limit/base	<1 0 0 0 64 9 256 287 681 <1 current 0 0 current 136983	0 0 0 0 61 10 258 277 676 <1 history1 0 0 <1 history1	<1 <1 0 0 63 10 258 298 678 <1 history2 <1 0 history2 130060
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) MASTM D5185(m) ASTM D5185(m)	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60 >20 limit/base	<1 0 0 0 64 9 256 287 681 <1 current 0 0 current 136983 29510	0 0 0 0 61 10 258 277 676 <1 history1 0 0 <1 history1 151553 28774	<1 <1 0 0 0 63 10 258 298 678 <1 history2 <1 <1 0 history2 130060 30832
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D7647 ASTM D7647	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60 >20 limit/base >320000 >160000	<1 0 0 0 64 9 256 287 681 <1 current 0 0 current 136983 29510 47	0 0 0 0 61 10 258 277 676 <1 history1 0 0 <1 history1 151553 28774 79	<1 <1 0 0 0 63 10 258 298 678 <1 history2 <1 <1 0 history2 130060 30832 54
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0.2 0.0 0.0 0.0 0.0 43 325 407 2395 limit/base >60 >20 limit/base >320000 >160000 >40000	<1 0 0 0 64 9 256 287 681 <1 current 0 0 <1 current 136983 29510 47 7	0 0 0 0 61 10 258 277 676 <1 history1 0 0 <1 history1 151553 28774 79 6	<1 <1 0 0 0 63 10 258 298 678 <1 history2 <1 <1 0 history2 130060 30832 54 11

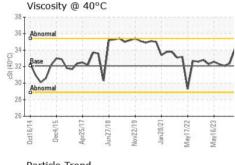


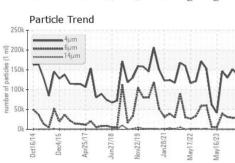
OIL ANALYSIS REPORT



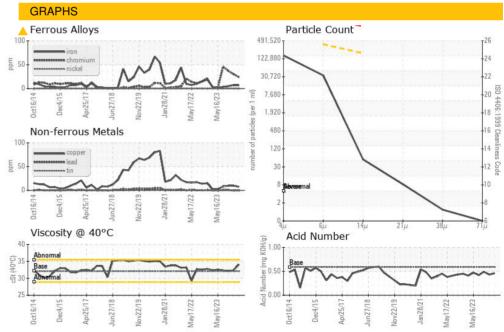
















Accredited Laboratory

Laboratory Sample No. Lab Number

Unique Number : 5762459

: WC0925367 : 02629327

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 16 Apr 2024 **Tested** : 17 Apr 2024

Diagnosed : 17 Apr 2024 - Kevin Marson

Test Package : IND 2 (Additional Tests: PrtCount, TAN Man) 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.

ST. MARYS CEMENT CO.

400 BOWMANVILLE AVENUE BOWMANVILLE, ON

CA L1C 7B5 Contact: Lou Traiforos lou.traiforos@vcimentos.com

> T: (905)440-5874 F: (905)623-4695

> > Submitted By: ?