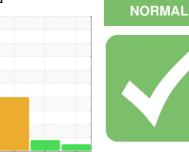


OIL ANALYSIS REPORT

Sample Rating Trend



GATE #13 Component Main Hydraulic System Fluid MOBIL VELOCITE OIL NO.10 (500 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Area ICD

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

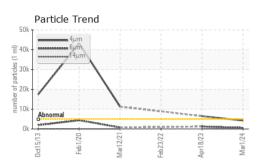
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

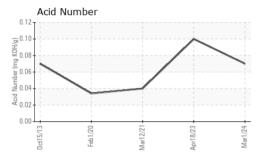
	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0827583	WC0801172	WC
Sample Date		Client Info		01 Mar 2024	18 Apr 2023	23 Feb 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ATTENTION	SEVERE
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	<1	<1	5
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<1	0	0
Lead	ppm	ASTM D5185(m)	>20	<1	<1	2
Copper	ppm	ASTM D5185(m)		<1	<1	3
Tin	ppm	ASTM D5185(m)	>20	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	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
Boron	ppm	ASTM D5185(m)		0	<1	1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	0	0
Calcium	ppm	ASTM D5185(m)				
				<1	0	1
Phosphorus		ASTM D5185(m)		<1 13	0	1 55
Phosphorus Zinc	ppm	ASTM D5185(m)				
	ppm ppm	ASTM D5185(m) ASTM D5185(m)		13 2	6 1	55
Zinc	ppm	ASTM D5185(m)		13	6	55 7
Zinc Sulfur	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	13 2 3032	6 1 2973	55 7 3293
Zinc Sulfur Lithium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	13 2 3032 <1	6 1 2973 <1	55 7 3293 <1
Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)		13 2 3032 <1 current <1	6 1 2973 <1 history1	55 7 3293 <1 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	>15	13 2 3032 <1 current	6 1 2973 <1 history1 <1	55 7 3293 <1 history2 2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>15	13 2 3032 <1 <u>current</u> <1 0	6 1 2973 <1 <u>history1</u> <1 0	55 7 3293 <1 history2 2 0
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>15 >20	13 2 3032 <1 current <1 0 2	6 1 2973 <1 history1 <1 0 0	55 7 3293 <1 history2 2 0 <1
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm	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)	>15 >20 limit/base	13 2 3032 <1 current <1 0 2 2 current	6 1 2973 <1 history1 <1 0 0 0 history1	55 7 3293 <1 history2 2 0 <1 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	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)	>15 >20 limit/base >5000	13 2 3032 <1 current <1 0 2 2 current 4268	6 1 2973 <1 history1 <1 0 0 0 history1 6469	55 7 3293 <1 history2 2 0 <1 <1 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	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 D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160	13 2 3032 <1 current <1 0 2 current 4268 562	6 1 2973 <1 history1 <1 0 0 0 history1 6469 1233	55 7 3293 <1 history2 2 0 <1 <1 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160	13 2 3032 <1 current <1 0 2 current 4268 562 20	6 1 2973 <1 history1 <1 0 0 0 history1 6469 1233 45	55 7 3293 <1 history2 2 0 <1 history2
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160 >40 >10	13 2 3032 <1 current <1 0 2 current 4268 562 20 5	6 1 2973 <1 history1 <1 0 0 0 history1 6469 1233 45 9	55 7 3293 <1 history2 2 0 <1 **** **** **** **** **** ****
Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>15 >20 limit/base >5000 >1300 >160 >40 >10	13 2 3032 <1 current <1 0 2 current 4268 562 20 5 1	6 1 2973 <1 history1 <1 0 0 0 history1 6469 1233 45 9 0	55 7 3293 <1 history2 2 0 <1 **** **** **** **** **** **** ****

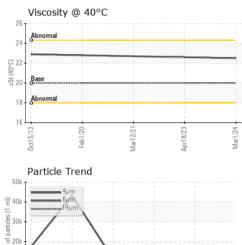


OIL ANALYSIS REPORT

FLUID DEGRADATION

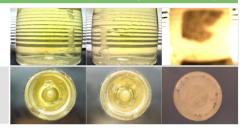




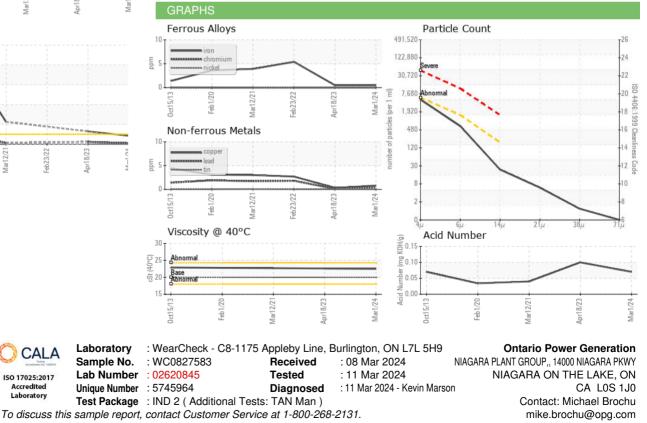


Acid Number (AN)	mg KOH/g	ASTM D974*		0.07	0.10	
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	VLITE
Appearance	scalar	Visual*	NORML	NORML	NORML	🔺 LAYRD
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	20	22.5	22.6	
SAMPLE IMAGES	3	method	limit/base	current	history1	history2

Color



Bottom



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.

T: (905)357-0322 F: (905)374-5466



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CALA

ISO 17025:2017

Apr18/23

Feb23/22

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