

OIL ANALYSIS REPORT

Closter CRANE 2676

Diesel Engine

DIESEL ENGINE OIL SAE 40 (--- GAL)

Sample Rating Trend



DIAGNOSIS
Recommendation
Resample at the next service interval to monitor.
The fluid was not specified, however, a fluid match
indicates that this fluid is (GENERIC) DIESEL
ENGINE OIL SAE 40. Please confirm.
Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

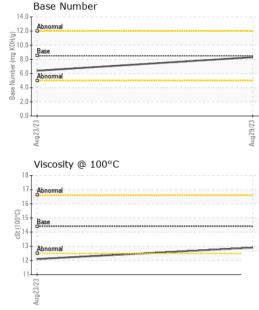
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			Aug2023	Aug2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0831045	WC0830970	
Sample Date		Client Info		29 Aug 2023	23 Aug 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL		
CONTAMINATIO	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	8	29	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	3	10	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	2	16	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2
	ppm					
Boron		ASTM D5185m	250	13	27	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	250 10	13 0	27 4	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	13 0 55	27 4 50	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	13 0 55	27 4 50 8	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	13 0 55 1 703	27 4 50 8 747	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	13 0 55 1 703 1206	27 4 50 8 747 1160	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	13 0 55 1 703 1206 941	27 4 50 8 747 1160 622	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	13 0 55 1 703 1206 941 1142	27 4 50 8 747 1160 622 857	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	13 0 55 1 703 1206 941 1142 3511	27 4 50 8 747 1160 622 857 2462	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	13 0 55 1 703 1206 941 1142 3511	27 4 50 8 747 1160 622 857 2462 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	13 0 55 1 703 1206 941 1142 3511 current	27 4 50 8 747 1160 622 857 2462 history1 20	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216	13 0 55 1 703 1206 941 1142 3511 current 5	27 4 50 8 747 1160 622 857 2462 history1 20 6	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	13 0 55 1 703 1206 941 1142 3511 current 5 1	27 4 50 8 747 1160 622 857 2462 history1 20 6 2	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	13 0 55 1 703 1206 941 1142 3511 current 5 1 1	27 4 50 8 747 1160 622 857 2462 history1 20 6 2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	13 0 55 1 703 1206 941 1142 3511 current 5 1 1	27 4 50 8 747 1160 622 857 2462 history1 20 6 2 history1 0.4	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	13 0 55 1 703 1206 941 1142 3511 current 5 1 1 current	27 4 50 8 747 1160 622 857 2462 history1 20 6 2 history1 0.4 11.1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30	13 0 55 1 703 1206 941 1142 3511 current 5 1 1 current 0.2 6.2 17.4	27 4 50 8 747 1160 622 857 2462 history1 20 6 2 history1 0.4 11.1 21.7	history2 history2



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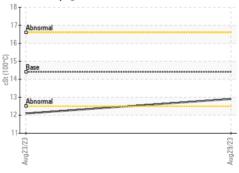
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
ELLID DDODED	TIFC	mathad	limit/bass	Olivropt.	biotomit	biotom/0

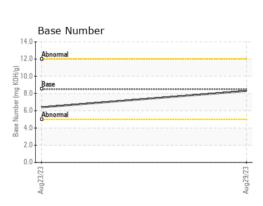
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Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.1	

GRAPHS

Ferrous Alloys

Non-ferrous Metals	
16	
14 - copper	
12 - ***********************************	
10	
E 8	
6+	
4	
2 +	
0	
Aug23/23	Aug29/23
ug2	ug2
	< <
Viscosity @ 100°C	









Laboratory Sample No. Lab Number Unique Number : 10670954 Test Package : FLEET

: WC0831045 : 05964403

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 29 Sep 2023 : 29 Sep 2023

Diagnosed Diagnostician : Wes Davis

Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

INTERSTATE WASTE-CLOSTER

77 RAILROAD AVENUE CLOSTER, NJ US 07624

Contact: Tony Gagliano

tgagliano@interstatewaste.com

T: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)