

# **OIL ANALYSIS REPORT**

# Ewing Hauling Machine Id AUTOCAR 7041

Component

Diesel Engine
Fluid

GIBRALTAR 15W/40 SUPER S-3 LX (11)

# Sample Rating Trend Aug2023 0cd023



### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

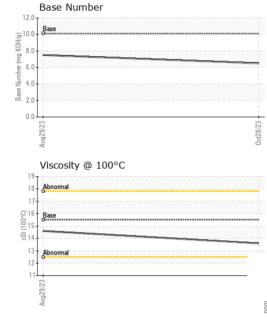
### **Fluid Condition**

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

			Aug2023	Oct2023		
SAMPLE INFORM	//ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0863208	WC0840476	
Sample Date		Client Info		28 Oct 2023	29 Aug 2023	
Machine Age	hrs	Client Info		4293	3853	
Oil Age	hrs	Client Info		450	450	
Oil Changed		Client Info		Changed	Filtered	
Sample Status				NORMAL	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	4	10	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	1	2	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	<1	<1	
Aluminum	ppm	ASTM D5185m	>20	1	0	
Lead	ppm	ASTM D5185m	>40	0	2	
Copper	ppm	ASTM D5185m	>330	19	93	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m	7.0	0	<1	
				-		
Cadmium	ppiii	ASTM D5185m		0	0	
	ppm		limit/base			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m		current 4 0	history1 7 0	history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 56	history1 7 0 61	history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66	current 4 0 56 <1	history1  7 0 61 <1	history2 
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66	current 4 0 56 <1 572	history1  7  0 61 <1 1002	history2  
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000 1050	current 4 0 56 <1 572 1444	history1  7  0 61 <1 1002 1387	history2   
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus	ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	66 1000 1050 1150	current 4 0 56 <1 572 1444 925	history1  7  0 61 <1 1002 1387 1024	history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	66 1000 1050	current  4  0  56  <1  572  1444  925  1164	history1  7  0 61 <1 1002 1387 1024 1337	history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	1000 1050 1150 1270	current  4  0  56  <1  572  1444  925  1164  2847	history1  7  0 61 <1 1002 1387 1024 1337 3652	history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	66 1000 1050 1150 1270	current  4  0  56  <1  572  1444  925  1164  2847  current	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1	history2 history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  CONTAMINANTS  Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1000 1050 1150 1270	current  4  0  56  <1  572  1444  925  1164  2847  current  3	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	66 1000 1050 1150 1270 limit/base >25	current  4  0  56  <1  572  1444  925  1164  2847  current  3  0	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4	history2 history2 history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  CONTAMINANTS  Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	66 1000 1050 1150 1270	current  4  0  56  <1  572  1444  925  1164  2847  current  3	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4	history2 history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  CONTAMINANTS  Silicon  Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	66 1000 1050 1150 1270 limit/base >25	current  4  0  56  <1  572  1444  925  1164  2847  current  3  0	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4	history2 history2 history2
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur  CONTAMINANTS  Silicon  Sodium  Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	66  1000 1050 1150 1270  limit/base >25 >20	current  4  0  56  <1  572  1444  925  1164  2847  current  3  0  <1	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4 2	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	66 1000 1050 1150 1270 limit/base >25 >20 limit/base >3	current  4 0 56 <1 572 1444 925 1164 2847 current 3 0 <1	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4 2 2 history1	history2 history2 history2 history2
ADDITIVES 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	method  ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000 1050 1150 1270 limit/base >25 >20 limit/base >3	current  4  0  56  <1  572  1444  925  1164  2847  current  3  0  <1  current  0.4	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4 2 2 history1 0.5	history2 history2 history2 history2
ADDITIVES 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	method  ASTM D5185m  method  ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	66  1000 1050 1150 1270  limit/base >25 >20  limit/base >3 >20	current  4  0  56  <1  572  1444  925  1164  2847  current  3  0  <1  current  0.4  8.5	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4 2 2 history1 0.5 7.9	history2 history2 history2 history2
ADDITIVES 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	method  ASTM D5185m  METHOD  *ASTM D5185m ASTM D7844  *ASTM D7624  *ASTM D76145	66  1000 1050 1150 1270  limit/base >25 >20 limit/base >3 >20 >30	current  4 0 56 <1 572 1444 925 1164 2847 current 3 0 <1 current 0.4 8.5 19.4	history1  7  0 61 <1 1002 1387 1024 1337 3652 history1 4 2 2 history1 0.5 7.9 19.4	history2 history2 history2 history2



## **OIL ANALYSIS REPORT**



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	
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPERT	TIEC	method	limit/base	ourrent	history	hiotom/2
FLUID PROPERI	IIEO	method	IIIIII/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	13.6	14.6	

٧	/isc @ 100°C	cSt	ASTM D445	15.5	13.6	14.6	
	GRAPHS						
250 - 200 - 150 - 100 - 50 -	Severe Abnormal			Oct28/23	Lead (p. Severe 80 Abnormal 20 20 20 20 20 20 20 20 20 20 20 20 20	ipm)	042873
50	Aluminum (ppm)				Chromi	um (ppm)	
40· 30· 20· 10·	Abnormal 67/6280			Oct28/23	Severe 20 Abnormal		0et28/23
				0ct2	Aug29/23		0ct2
400	Copper (ppm)				Silicon	(ppm)	
300	Severe Abnormal				60		 
돌 200·					Abnormal		
0.	Aug29/23 -			Oct28/23	Aug29/23		 Oct28/23
20-	Viscosity @ 100°C				Base N	umber	
18 · (100 °C) 16 · 35 14 · 12 ·	Abnormal Abnormal				(b) 10.0 Base 10.0 Ba		
10.	Aug29/23 -			Oct28/23	Aug29/23		0ct28/23 <del>-</del>





Laboratory Sample No. Lab Number Unique Number : 10749265

: WC0863208 : 06010121

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

: 16 Nov 2023 Diagnosed

: 17 Nov 2023 Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: TBN) 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. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

**INTERSTATE WASTE-EWING** 

432 STOKES AVENUE EWING TOWNSHIP, NJ US 08638

Contact: Carlos Evans

CEvans@interstatewaste.com

T: F: