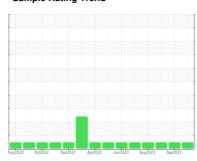


# **OIL ANALYSIS REPORT**

Sample Rating Trend







# Machine Id C-18 Component Diesel Engine

**DIESEL ENGINE OIL SAE 40 (--- QTS)** 

DI			

## Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil.

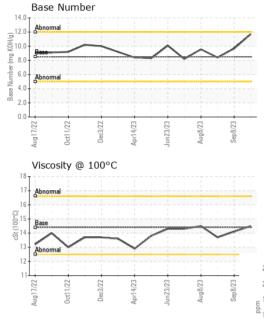
## **Fluid Condition**

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

		Aug2022 0	ct2022 Dec2022 Apr	2023 Jun2023 Aug2023	Sep2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0840539	WC0774798	WC0725582
Sample Date		Client Info		08 Oct 2023	08 Sep 2023	13 Aug 2023
Machine Age	hrs	Client Info		12050	3226	3039
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3	3	4
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	4	0
Lead	ppm	ASTM D5185m	>40	<1	<1	1
Copper	ppm	ASTM D5185m	>330	1	1	2
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVE O						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base 250	current 4	history1 5	history2 2
	ppm					
Boron		ASTM D5185m	250	4	5	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	4 0	5	2
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	4 0 58	5 0 62	2 0 58
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	4 0 58 0	5 0 62 0	2 0 58 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	4 0 58 0 920	5 0 62 0 974	2 0 58 <1 989
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	4 0 58 0 920 1181	5 0 62 0 974 1228	2 0 58 <1 989 1251
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	4 0 58 0 920 1181 1025	5 0 62 0 974 1228 1089	2 0 58 <1 989 1251 1099
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	4 0 58 0 920 1181 1025 1300	5 0 62 0 974 1228 1089 1305	2 0 58 <1 989 1251 1099
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	250 10 100 450 3000 1150 1350 4250	4 0 58 0 920 1181 1025 1300 3390	5 0 62 0 974 1228 1089 1305 3913	2 0 58 <1 989 1251 1099 1369 4039
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 >25	4 0 58 0 920 1181 1025 1300 3390 current	5 0 62 0 974 1228 1089 1305 3913	2 0 58 <1 989 1251 1099 1369 4039 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	4 0 58 0 920 1181 1025 1300 3390 current	5 0 62 0 974 1228 1089 1305 3913 history1	2 0 58 <1 989 1251 1099 1369 4039 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216	4 0 58 0 920 1181 1025 1300 3390 current 3 2	5 0 62 0 974 1228 1089 1305 3913 history1	2 0 58 <1 989 1251 1099 1369 4039 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1	5 0 62 0 974 1228 1089 1305 3913 history1 15 2	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1
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	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1	5 0 62 0 974 1228 1089 1305 3913 history1 15 2 0	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1
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	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1 current 0.2	5 0 62 0 974 1228 1089 1305 3913 history1 15 2 0 history1	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1 1 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1 current 0.2 6.1	5 0 62 0 974 1228 1089 1305 3913 history1 15 2 0 history1 0 7.4	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1 1 history2 0.1 6.8
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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844  *ASTM D7624  *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1 current 0.2 6.1 18.4	5 0 62 0 974 1228 1089 1305 3913 history1 15 2 0 history1 0 7.4 21.5 history1	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1 1 history2 0.1 6.8 18.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm	ASTM D5185m  MEthod  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30 limit/base >25	4 0 58 0 920 1181 1025 1300 3390 current 3 2 1 current 0.2 6.1 18.4 current	5 0 62 0 974 1228 1089 1305 3913 history1 15 2 0 history1 0 7.4 21.5	2 0 58 <1 989 1251 1099 1369 4039 history2 17 1 1 history2 0.1 6.8 18.6



# **OIL ANALYSIS REPORT**



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	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history2

Visc @ 100°C	cSt	ASTM D445	14.4	14.5		14.1		13.7	
GRAPHS									
Iron (ppm)  250 200 Severe 200 Abnormal 200 201 201 202 203 203 203 203 203 203 203 203 203	Apri 4/23	Aug8/23	Sep.6/23	Lead (p. 100   Severe   Severe		April 4/23	Jun23/23	Aug8/23 +	Sep 8/23
Aluminum (ppm)	Ap	Ā	Ø		 um (ppm)		ης	Ā	Ø
Severe  Severe  Abnormal				40 Severe 30 Abnormal	um (ppm)				
Copper (ppm)	Apr14/23 -	Aug8/23 -	Sep8/23	Silicon		Apr14/23	Jun23/23	Aug8/23	Sep8/23 -
300 E 200				60 - Abnormal					
Aug17/22 Oct11/22 Dec3/22	Apr14/23	Aug8/23	Sep 8/23	Aug17/22	Dec3/22	Apr14/23	Jun23/23	Aug8/23	Sep8/23
Viscosity @ 100°C	C			Base N	umber				
Abnormal Base Annormal				Abnormal  Abnormal  Abnormal			^		/
Aug17/22	Apr14/23 -	Aug8/23 +	Sep8/23	0.0 Aug17/22	Dec3/22	Apr14/23 -	Jun23/23	Aug8/23	Sep8/23



Certificate L2367

Laboratory Sample No. Lab Number

: WC0840539 : 06001132 Unique Number : 10729492 Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 07 Nov 2023 Diagnosed Diagnostician : Wes Davis

: 08 Nov 2023

**ADEN SLATE LLC** 22 MCBRIDE RD STATE HILL, NY US 10973

Contact: Service Manager SAFTETY@ADENAGGREGATE.COM

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)

Report Id: ADESLA [WUSCAR] 06001132 (Generated: 11/09/2023 13:33:26) Rev: 1

Contact/Location: Service Manager - ADESLA

T:

F: