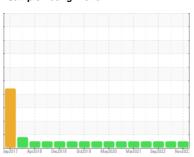


## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



NORMAL



# PETERBILT 2324

Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)** 

#### 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**

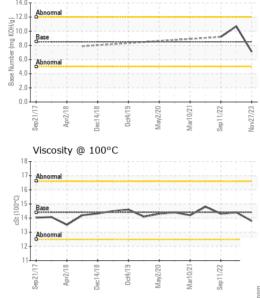
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

	3ap.2017 Apr.2018 Dec.2018 Oct.2019 May,2020 Mar.2021 Sep.2022 Nov.2022						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0871027	WC0694215	WC0694231	
Sample Date		Client Info		27 Nov 2023	21 Oct 2022	11 Sep 2022	
Machine Age	mls	Client Info		91767	74755	75202	
Oil Age	mls	Client Info		0	450	450	
Oil Changed		Client Info		Changed	N/A	N/A	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATION	1	method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<1.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	NEG	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>110	10	2	19	
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1	
Nickel	ppm	ASTM D5185m	>2	<1	0	0	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m	>2	0	0	0	
Aluminum	ppm	ASTM D5185m	>25	2	<1	1	
Lead	ppm	ASTM D5185m	>45	0	0	1	
Copper	ppm	ASTM D5185m	>85	<1	<1	2	
Tin	ppm	ASTM D5185m	>4	0	<1	<1	
Antimony	ppm	ASTM D5185m					
Vanadium	ppm	ASTM D5185m		0	<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	0	16	10	
Barium	ppm	ASTM D5185m	10	0	<1	0	
Molybdenum	ppm	ASTM D5185m	100	60	55	61	
Manganese	ppm	ASTM D5185m		0	<1	<1	
Magnesium	ppm	ASTM D5185m	450	952	822	914	
Calcium	ppm	ASTM D5185m	3000	1067	1084	1132	
Phosphorus	ppm	ASTM D5185m	1150	1080	917	1019	
Zinc	ppm	ASTM D5185m	1350		1100	1177	
			.000	1254	1109	1177	
Sulfur	ppm	ASTM D5185m		1254 3282	3078	3493	
Sulfur CONTAMINANTS		ASTM D5185m method		3282			
			4250 limit/base	3282	3078	3493	
CONTAMINANTS		method	4250 limit/base >30	3282 current	3078 history1	3493 history2	
CONTAMINANTS Silicon	ppm	method ASTM D5185m	4250 limit/base >30 >158	3282 current 2	3078 history1 3	3493 history2	
CONTAMINANTS Silicon Sodium	ppm ppm	method ASTM D5185m ASTM D5185m	4250 limit/base >30 >158	3282 current 2 0 1	3078 history1 3 0	3493 history2 6 2	
CONTAMINANTS Silicon Sodium Potassium	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	4250 limit/base >30 >158 >20	3282 current 2 0 1	3078 history1 3 0 2	3493 history2 6 2 1	
CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m method	4250 limit/base >30 >158 >20 limit/base	3282 current 2 0 1 current	3078 history1 3 0 2 history1	3493 history2 6 2 1 history2	
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	4250 limit/base >30 >158 >20 limit/base >3	3282  current 2 0 1  current 0.8	3078 history1 3 0 2 history1 0.1	3493 history2 6 2 1 history2 0.1	
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm % Abs/cm Abs/.1mm	method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	4250  limit/base >30 >158 >20  limit/base >3 >20	3282	3078 history1 3 0 2 history1 0.1 5.5	3493 history2 6 2 1 history2 0.1 6.1	
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm % Abs/cm Abs/.1mm	method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	4250  limit/base >30 >158 >20  limit/base >3 >20 >3 >20 >30	3282	3078 history1 3 0 2 history1 0.1 5.5 19.0	3493 history2 6 2 1 history2 0.1 6.1 19.8	



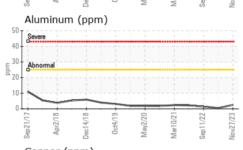
Base Number

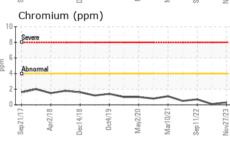
## **OIL ANALYSIS REPORT**

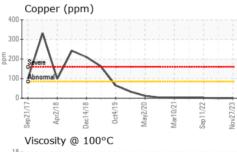


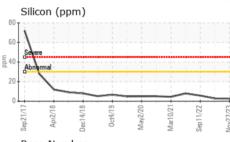
VISUAL		method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE	
Silt	ebris scalar *Visual and/Dirt scalar *Visual opearance scalar *Visual dor scalar *Visual	*Visual	NONE NONE		NONE	NONE	
Debris		*Visual	NONE	NONE	NONE	NONE	
Sand/Dirt		*Visual	NONE	NONE	NONE	NONE	
Appearance		*Visual	NORML NORML		NORML	NORML	
Odor		*Visual			NORML	NORML	
<b>Emulsified Water</b>		>0.2	NEG	NEG	NEG		
Free Water	scalar	*Visual		NEG	NEG	NEG	
ELLID DDODEDT	TEC	mathad	limit/bass	ourront.	history	hiotom/0	

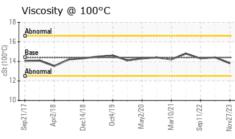
	Visc @ 100°C	cSt	ASTM D445 1	4.4	13.8	14.4	14.3
	GRAPHS						
	Iron (ppm)				Lead (ppm	1)	
2	Severe				80 - Severe		
	F.O.						

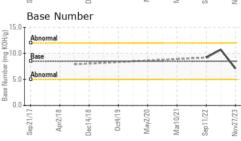














Laboratory Sample No. Lab Number **Unique Number** 

: WC0871027 : 06027289 : 10777080

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

: 07 Dec 2023 : 08 Dec 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-CHESTER** 

89 BLACK MEADOW RD CHESTER, NY US 10918

Contact: ROB CLARKE rclarke@interstatewaste.com

T:

Contact/Location: ROB CLARKE - INTCHE

F: (845)572-3301