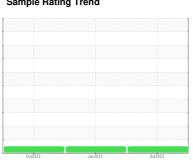


# **OIL ANALYSIS REPORT**

### Sample Rating Trend



**NORMAL** 



# PETERBILT 567 DT37

Component

**Diesel Engine** 

SHELL ROTELLA T3 15W40 (--- GAL)

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

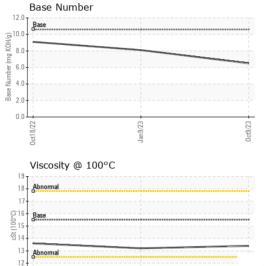
### **Fluid Condition**

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

0c2022 Jan-2023 0c2023						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PE0002262	PE0000447	PE0000449
Sample Date		Client Info		09 Oct 2023	09 Jan 2023	18 Oct 2022
Machine Age	hrs	Client Info		10785	9072	4071
Oil Age	hrs	Client Info		364	351	300
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	19	13	6
Chromium	ppm	ASTM D5185m	>20	6	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	3	2
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 46	history1	history2 96
	ppm	ASTM D5185m				
Boron		ASTM D5185m	10	46	107	96
Boron Barium	ppm	ASTM D5185m ASTM D5185m	10	46 3	107	96 0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	10	46 3 30	107 0 59	96 0 58
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10	46 3 30 <1	107 0 59 <1	96 0 58 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10	46 3 30 <1 172	107 0 59 <1 381	96 0 58 <1 357
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10 10 2600	46 3 30 <1 172 1855	107 0 59 <1 381 1773	96 0 58 <1 357 1757
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	10 0 10 10 2600 1050	46 3 30 <1 172 1855 866	107 0 59 <1 381 1773 955	96 0 58 <1 357 1757 952
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	10 0 10 10 2600 1050 1250	46 3 30 <1 172 1855 866 1045	107 0 59 <1 381 1773 955 1206	96 0 58 <1 357 1757 952 1072
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	10 0 10 10 2600 1050 1250 3900 limit/base	46 3 30 <1 172 1855 866 1045 3032	107 0 59 <1 381 1773 955 1206 3627	96 0 58 <1 357 1757 952 1072 3616
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 0 10 10 2600 1050 1250 3900 limit/base	46 3 30 <1 172 1855 866 1045 3032 current	107 0 59 <1 381 1773 955 1206 3627 history1	96 0 58 <1 357 1757 952 1072 3616 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 0 10 10 2600 1050 1250 3900 limit/base	46 3 30 <1 172 1855 866 1045 3032 current	107 0 59 <1 381 1773 955 1206 3627 history1	96 0 58 <1 357 1757 952 1072 3616 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 0 10 10 2600 1050 1250 3900 limit/base	46 3 30 <1 172 1855 866 1045 3032 current 10 2 2	107 0 59 <1 381 1773 955 1206 3627 history1 4	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 0 10 10 2600 1050 1250 3900 limit/base >25	46 3 30 <1 172 1855 866 1045 3032 current 10 2 2	107 0 59 <1 381 1773 955 1206 3627 history1 4 2	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0
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	10 0 10 10 2600 1050 1250 3900 limit/base >25	46 3 30 <1 172 1855 866 1045 3032  current 10 2 2 current	107 0 59 <1 381 1773 955 1206 3627 history1 4 2 2	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0 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	10 0 10 10 2600 1050 1250 3900 limit/base >25 >20	46 3 30 <1 172 1855 866 1045 3032  current 10 2 2 current 0.3	107 0 59 <1 381 1773 955 1206 3627 history1 4 2 2 history1 0.3	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0 history2 0.3
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	10 0 10 10 2600 1050 1250 3900 limit/base >25 >20	46 3 30 <1 172 1855 866 1045 3032 current 10 2 current 0.3 7.6	107 0 59 <1 381 1773 955 1206 3627 history1 4 2 2 history1 0.3 7.5	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0 history2 0.3 7.4
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 D76145	10 0 10 10 2600 1050 1250 3900 limit/base >25 >20 limit/base >6 >20 >30	46 3 30 <1 172 1855 866 1045 3032 current 10 2 2 current 0.3 7.6 18.7	107 0 59 <1 381 1773 955 1206 3627 history1 4 2 2 history1 0.3 7.5 19.8	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0 history2 0.3 7.4 20.8
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  METHOD  *ASTM D7844  *ASTM D7624  *ASTM D7615  *ASTM D7615  *ASTM D7615  *ASTM D7615  *ASTM D7616  *ASTM D7616	10 0 10 10 2600 1050 1250 3900 limit/base >25 >20 limit/base >6 >20 >30 limit/base	46 3 30 <1 172 1855 866 1045 3032 current 10 2 current 0.3 7.6 18.7 current	107 0 59 <1 381 1773 955 1206 3627 history1 4 2 2 history1 0.3 7.5 19.8 history1	96 0 58 <1 357 1757 952 1072 3616 history2 3 <1 0 history2 0.3 7.4 20.8 history2



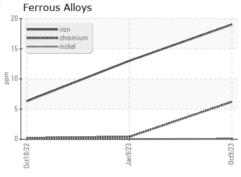
## **OIL ANALYSIS REPORT**

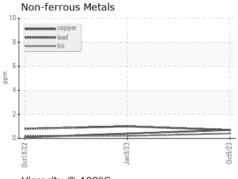


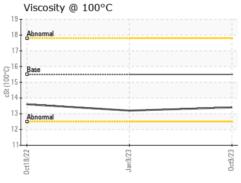
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

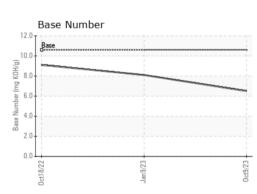
FLUID PROPERTIES		method	iimit/base		nistory i	nistory2	
	Visc @ 100°C	cSt	ASTM D445	15.5	13.4	13.2	13.6

### **GRAPHS**













Laboratory Sample No. Lab Number Unique Number : 10697495

: PE0002262 : 05980200

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

Diagnosed Diagnostician : Don Baldridge Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

: 16 Oct 2023 : 18 Oct 2023

**SCHERMER CONSTRUCTION** 299 US-101 HOQUIAM, WA US 98550

Contact: Service Manager office@schermerconstruction.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)

T:

F: