

# **OIL ANALYSIS REPORT**

Sample Rating Trend

**NORMAL** 



# VOLVO VNL 144 (S/N 4V4NC9E

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (--- GAI

## DIAGNOSIS 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**

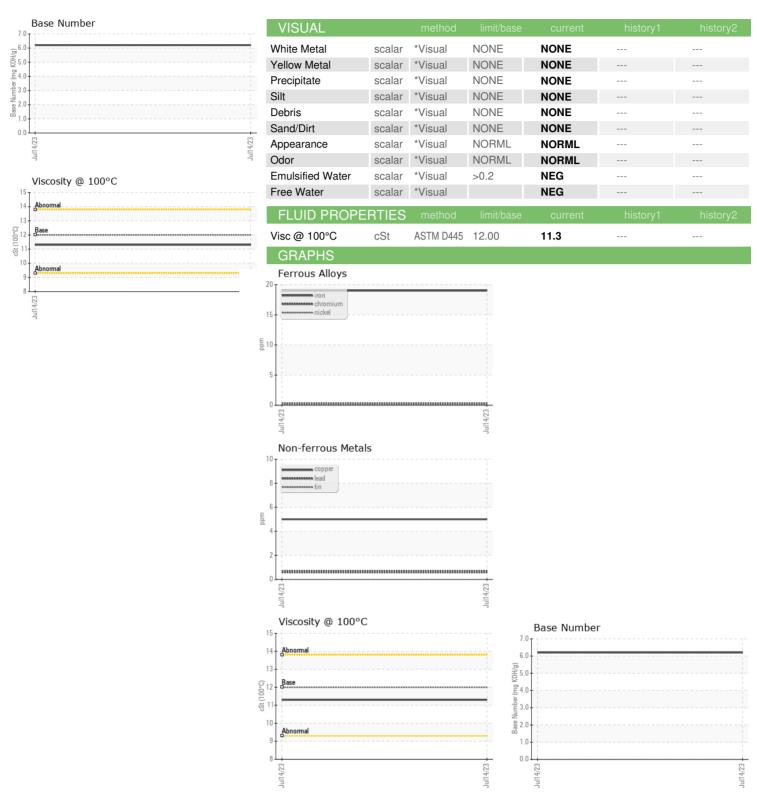
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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SAMPLE INFORMATION	method	limit/base	current	histo	ry1
ample Number	Client Info		PCA0097646		

SAMPLE INFORM	VIATION	method	ilmit/base	current	nistory i	nistory2
Sample Number		Client Info		PCA0097646		
Sample Date		Client Info		14 Jul 2023		
Machine Age	mls	Client Info		280000		
Oil Age	mls	Client Info		0		
Oil Changed	0	Client Info		Changed		
Sample Status		Olioni iiilo		NORMAL		
				NOTIMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	2		
Lead	ppm	ASTM D5185m	>40	- <1		
Copper	ppm	ASTM D5185m	>330	5		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m	7.10	<1		
Cadmium	ppm	ASTM D5185m		0		
	ррііі			<u> </u>		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm				,	,
Boron	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	2	0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2	0 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 63		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 63 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 0 63 <1 1008		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 0 63 <1 1008		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	0 0 63 <1 1008 1134 1043		
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	2 0 50 0 950 1050 995 1180 2600	0 0 63 <1 1008 1134 1043 1275 3466		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180	0 0 63 <1 1008 1134 1043		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	0 0 63 <1 1008 1134 1043 1275 3466		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	0 0 63 <1 1008 1134 1043 1275 3466	     history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	0 0 63 <1 1008 1134 1043 1275 3466 current	     history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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  *ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1	history1 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1 current 0.4 10.2	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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  *ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 ASTM D5185m  *ASTM D5185m  *ASTM D7844  *ASTM D7624  *ASTM D76185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1 current 0.4 10.2	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m  Method  ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30 limit/base	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1 current 0.4 10.2 21.5 current	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 D5185m ASTM D5185m  *ASTM D5185m  *ASTM D7844  *ASTM D7624  *ASTM D76185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	0 0 63 <1 1008 1134 1043 1275 3466 current 4 2 1 current 0.4 10.2 21.5	history1 history1 history1	history2 history2 history2



## **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number Unique Number

: PCA0097646 : 05905108 : 10566464 Test Package : FLEET

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Jul 2023 Diagnosed : 24 Jul 2023 : Wes Davis Diagnostician

**TVA REPAIR LLC** 13915 W ROUTE 30 PLAINFIELD, IL US 60544 Contact: JOSHUA HUBBARD

joshua@tvarepairllc.com T: (815)306-0330

\* - 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)

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