

### RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL		
Fuel	%	ASTM D3524	>6.0	<u> </u>	<b>9</b> .5	<b>9</b> .9		
Visc @ 100°C	cSt	ASTM D445	12.00	<b>8.8</b>	<b>8</b> .6	<b>8</b> .9		

Customer Id: PERBRIDE Sample No.: PCA0100539 Lab Number: 05930719 Test Package: FLEET



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Don Baldridge +1 <u>don.b505@comcast.net</u>

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	Oil and filter change at the time of sampling has been noted.			
Change Filter			?	Oil and filter change at the time of sampling has been noted.			
Resample			?	We recommend an early resample to monitor this condition.			
Check Fuel/injector System			?	We advise that you check the fuel injection system.			

### HISTORICAL DIAGNOSIS



### 02 Mar 2023 Diag: Doug Bogart

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.





### 16 Feb 2022 Diag: Don Baldridge

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.





#### 08 Oct 2021 Diag: Jonathan Hester

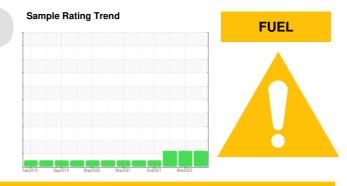
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.







## **OIL ANALYSIS REPORT**



#### Machine Id VOLVO 26425 Component

Diesel Engine Fluid

### PETRO CANADA DURON SHP 10W30 (38 QTS)

### DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil.

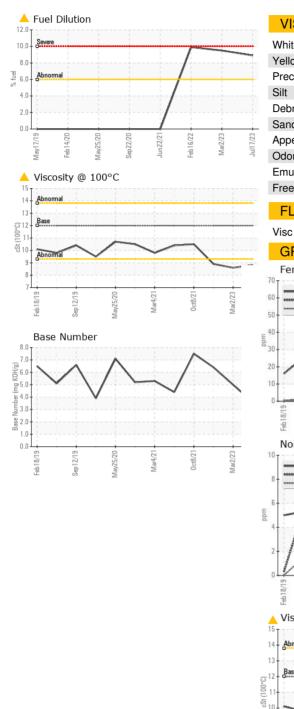
### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100539	PCA0092272	PCA0065610
Sample Date		Client Info		17 Jul 2023	02 Mar 2023	16 Feb 2022
Machine Age	mls	Client Info		401876	384444	362589
Oil Age	mls	Client Info		380021	21855	344884
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	61	34	15
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	4	4	0
Titanium	ppm	ASTM D5185m		15	14	8
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	4	4	3
Lead	ppm	ASTM D5185m	>40	3	0	1
Copper	ppm	ASTM D5185m	>330	8	7	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES		mounou		ourrent	motory	
Boron	ppm	ASTM D5185m	2	2	4	6
	ppm ppm					
Boron		ASTM D5185m	2	2	4	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 0	4	6 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 38	4 0 30	6 0 43
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 38 <1	4 0 30 <1	6 0 43 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 0 38 <1 610	4 0 30 <1 517	6 0 43 <1 681
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 0 38 <1 610 990	4 0 30 <1 517 862	6 0 43 <1 681 979
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	2 0 50 950 1050 995	2 0 38 <1 610 990 780	4 0 30 <1 517 862 658	6 0 43 <1 681 979 895
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	2 0 50 0 950 1050 995 1180	2 0 38 <1 610 990 780 979	4 0 30 <1 517 862 658 803	6 0 43 <1 681 979 895 1059
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	2 0 50 950 1050 995 1180 2600	2 0 38 <1 610 990 780 979 2389	4 0 30 <1 517 862 658 803 2541	6 0 43 <1 681 979 895 1059 1834
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 0 38 <1 610 990 780 979 2389 current	4 0 30 <1 517 862 658 803 2541 history1	6 0 43 <1 681 979 895 1059 1834 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 0 38 <1 610 990 780 979 2389 2389 current 9	4 0 30 <1 517 862 658 803 2541 history1 5	6 0 43 <1 681 979 895 1059 1834 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	2 0 38 <1 610 990 780 979 2389 2389 current 9 8	4 0 30 <1 517 862 658 803 2541 history1 5 8	6 0 43 <1 681 979 895 1059 1834 history2 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25	2 0 38 <1 610 990 780 979 2389 2389 current 9 8 4	4 0 30 <1 517 862 658 803 2541 history1 5 8 3	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25 >20 >20	2 0 38 <1 610 990 780 979 2389 2389 current 9 8 4 4 8.9	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 3 ↓ 9.5	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 5 9.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 >20 >6.0 Imit/base >3	2 0 38 <1 610 990 780 979 2389 current 9 8 4 4 8.9 2 8.9 1.1	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 3 9.5 history1 0.8	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 5 9.9 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAM Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 >20 >6.0 Imit/base >3	2 0 38 <1 610 990 780 979 2389 current 9 8 4 4 ▲ 8.9 current	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 3 ▲ 9.5 history1	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 5 ▲ 9.9 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAM Solium Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >20 5-0 <b>limit/base</b> >3 >20	2 0 38 <1 610 990 780 979 2389 current 9 8 4 8.9 current 1.1 1.1 11.2	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 2541 0.8 3 9.5 history1 0.8 10.1	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 5 9.9 history2 0.5 10.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Iimit/base</b> >25 >20 >6.0 <b>Iimit/base</b> >3 >20 >30 <b>Iimit/base</b>	2 0 38 <1 610 990 780 979 2389 current 9 8 4 4 8.9 € current 1.1 11.2 24.3 current	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 ↓ 9.5 history1 0.8 10.1 21.1 history1	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 ▲ 9.9 history2 0.5 10.3 20.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 >6.0 <b>limit/base</b> >3 >20 >3 >20	2 0 38 <1 610 990 780 979 2389 current 9 8 4 4 ▲ 8.9 current 1.1 1.1 11.2 24.3	4 0 30 <1 517 862 658 803 2541 history1 5 8 3 3 ▲ 9.5 history1 0.8 10.1 21.1	6 0 43 <1 681 979 895 1059 1834 history2 3 2 5 5 ▲ 9.9 history2 0.5 10.3 20.7

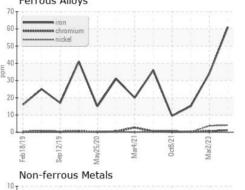


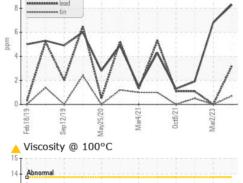
# **OIL ANALYSIS REPORT**



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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	<b>8.8</b>	▲ 8.6	▲ 8.9
GRAPHS						

Ferrous Alloys





0ct8/21.

Diagnostician : Don Baldridge

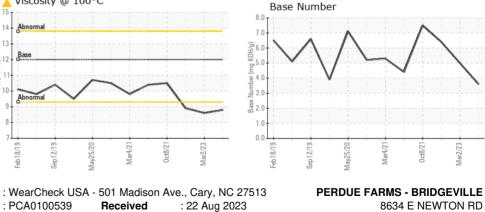
Mar2/23

: 23 Aug 2023

Mar4/21

Received

Diagnosed



Contact: GEORGE LACATES



Test Package : FLEET (Additional Tests: PercentFuel) Certificate L2367 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)

/lav/25/20

Feb18/19

Laboratory

Sample No.

Lab Number

Unique Number

Sep12/19

: PCA0100539

: 05930719

: 10615990

8634 E NEWTON RD BRIDGEVILLE, DE US 19933

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