

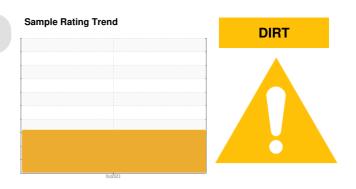
PROBLEM SUMMARY

Area **FLEET**

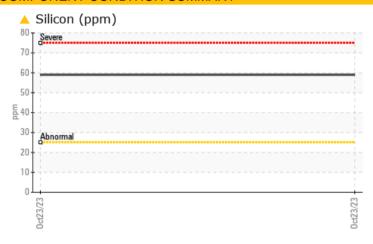
Volvo. Perdue. Dillon (S/N N643768)

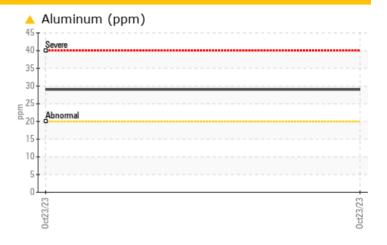
Bottom Diesel Engine

NOT GIVEN (--- GAL)



COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS Sample Status **ABNORMAL** Silver ASTM D5185m >3 20 ppm Aluminum ppm ASTM D5185m >20 29 Silicon

ppm ASTM D5185m >25

59

Customer Id: PERDILSC Sample No.: PCA0108156 Lab Number: 06001398 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

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			?	We recommend that you drain the oil and perform a filter service on this component if not already done.			
Change Filter			?	We recommend that you drain the oil and perform a filter service on this component if not already done.			
Resample			?	We recommend an early resample to monitor this condition.			
Information Required			?	Please specify the brand, type, and viscosity of the oil on your next sample.			
Check Dirt Access			?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.			

HISTORICAL DIAGNOSIS



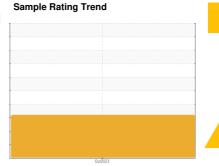
OIL ANALYSIS REPORT



Volvo. Perdue. Dillon (S/N N643768)

Bottom Diesel Engine

NOT GIVEN (--- GAL)





DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Please specify the brand, type, and viscosity of the oil on your next sample.

The silver level is abnormal. All other component wear rates are normal.

Contamination

Fuel content negligible. Elemental levels of silicon (Si) and aluminum (AI) indicate alumina-silicate (coarse dirt) ingress.

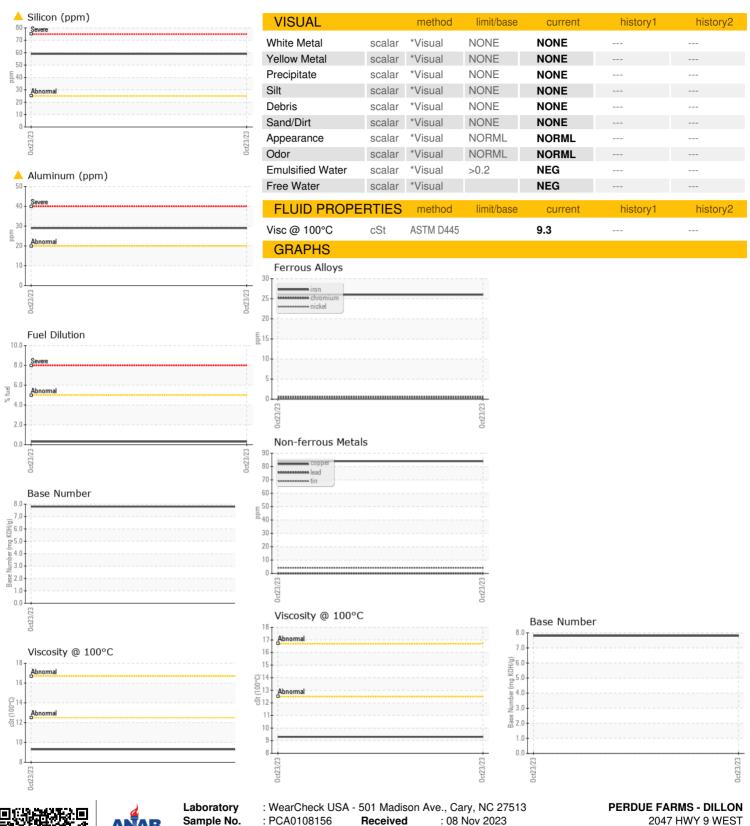
Fluid Condition

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.

				Oct2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0108156		
Sample Date		Client Info		23 Oct 2023		
Machine Age	hrs	Client Info		18843		
Oil Age	hrs	Client Info		18843		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTAMINATI	ION	method	limit/base	current	history1	history2
Glycol		WC Method		NEG		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	26		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<u>^</u> 20		
Aluminum	ppm	ASTM D5185m	>20	<u> </u>		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	84		
Tin	ppm	ASTM D5185m	>15	4		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
		710 1111 20 100111		U		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES	ppm		limit/base		history1	history2
ADDITIVES Boron		method	limit/base	current	Í	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m	limit/base	current 216		
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 216 0		
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 216 0 113		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	216 0 113 3		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 216 0 113 3 636		
	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 216 0 113 3 636 1361		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 216 0 113 3 636 1361 550		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 216 0 113 3 636 1361 550 794		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 216 0 113 3 636 1361 550 794 2195		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 216 0 113 3 636 1361 550 794 2195 current		
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 216 0 113 3 636 1361 550 794 2195 current		 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4		 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75		history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 >5	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75 0.3		history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 >5 limit/base	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75 0.3 current 0.2		history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 >5 limit/base >3	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75 0.3 current	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	limit/base >25 >20 >5 limit/base >3 >20	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75 0.3 current 0.2 9.2		history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	limit/base >25	current 216 0 113 3 636 1361 550 794 2195 current ▲ 59 4 75 0.3 current 0.2 9.2 24.8		history2 history2



OIL ANALYSIS REPORT





Sample No. Lab Number **Unique Number**

: 06001398

: PCA0108156 : 10729758

Received Diagnosed

: 18 Nov 2023 Diagnostician : Doug Bogart

Test Package: FLEET (Additional Tests: FuelDilution, 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)

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