

PROBLEM SUMMARY

Sample Rating Trend

GLYCOL

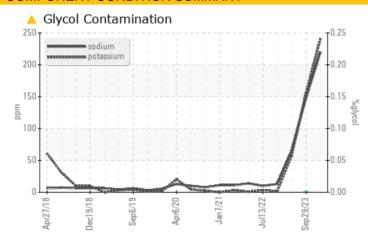
GLYCOL

Wachine Id VOLVO VNR 26607 (S/N 4V4WC9EH2JN901285)

Diesel Engine

PETRO CANADA DURON SHP 10W30 (33 QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	NORMAL	ABNORMAL		
Sodium	ppm	ASTM D5185m		^ 220	148	△ 65		
Potassium	ppm	ASTM D5185m	>20	<u> </u>	156	△ 57		

Customer Id: PERWAS Sample No.: PCA0094587 Lab Number: 06029865 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@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
Resample			?	We recommend an early resample to monitor this condition.
Check Glycol Access			?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

29 Sep 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. Test for glycol is negative. 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.



05 Apr 2023 Diag: Jonathan Hester

GLYCOL



We advise that you check for possible coolant leak. Check for low coolant level. 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. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.



07 Nov 2022 Diag: Wes Davis

NORMAL



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

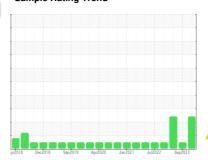
Sample Rating Trend

GLYCOL

VOLVO VNR 26607 (S/N 4V4WC9EH2JN901285)

Diesel Engine

PETRO CANADA DURON SHP 10W30 (33 QTS)





DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

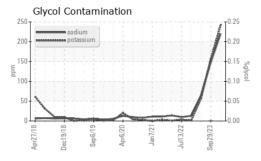
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

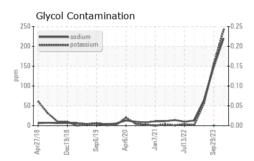
QTS)		pr2018 De	c2018 Sep2019 Ap	or2020 Jan2021 Jul2022	Sep2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0094587	PCA0094589	PCA0052354
Sample Date		Client Info		28 Nov 2023	29 Sep 2023	05 Apr 2023
Machine Age	mls	Client Info		573819	546602	499500
Oil Age	mls	Client Info		27217	46802	31359
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	25	54	29
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>25	2	1	2
Lead	ppm	ASTM D5185m	>40	0	4	<1
Copper	ppm	ASTM D5185m	>330	4	9	6
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<1	0	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	78	73	65
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	950	932	933	974
Calcium	ppm	ASTM D5185m	1050	1110	1118	1104
Phosphorus	ppm	ASTM D5185m	995	935	1021	995
Zinc	ppm	ASTM D5185m	1180	1234	1260	1248
Sulfur						
	ppm	ASTM D5185m	2600	2655	2696	3124
CONTAMINAN		ASTM D5185m method	2600 limit/base	2655 current	2696 history1	3124 history2
CONTAMINAN Silicon						
	TS	method	limit/base	current	history1	history2
Silicon	TS ppm	method ASTM D5185m	limit/base	current 6	history1	history2
Silicon Sodium	TS ppm ppm	method ASTM D5185m ASTM D5185m	limit/base >25	current 6 ^ 220	history1 9 148	history2 6 65
Silicon Sodium Potassium	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25	current 6 ▲ 220 ▲ 241	history1 9 148 156	history2 6 ▲ 65 ▲ 57
Silicon Sodium Potassium Glycol	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	limit/base >25 >20	current 6 ▲ 220 ▲ 241 NEG	history1 9 148 156 0.0	history2 6 ▲ 65 ▲ 57 NEG
Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method	limit/base	current 6 ▲ 220 ▲ 241 NEG current	history1 9 148 156 0.0 history1	history2 6 65 57 NEG history2
Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm %	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844	limit/base >25 >20 limit/base >3	current 6 ▲ 220 ▲ 241 NEG current 0.4	history1 9 148 156 0.0 history1 0.8	history2 6 ▲ 65 ▲ 57 NEG history2 0.6
Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm %	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base	current 6 ▲ 220 ▲ 241 NEG current 0.4 9.4	history1 9 148 156 0.0 history1 0.8 11.7	history2 6 ▲ 65 ▲ 57 NEG history2 0.6 10.5
Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm %	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base	current 6 ▲ 220 ▲ 241 NEG current 0.4 9.4 22.3	history1 9 148 156 0.0 history1 0.8 11.7 24.6	history2 6 ▲ 65 ▲ 57 NEG history2 0.6 10.5 23.0
Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm % % Abs/cm Abs/.1mm	method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >25 >20 limit/base >3 >20 >30 limit/base	current 6 ▲ 220 ▲ 241 NEG current 0.4 9.4 22.3 current	history1 9 148 156 0.0 history1 0.8 11.7 24.6 history1	history2 6 ▲ 65 ▲ 57 NEG history2 0.6 10.5 23.0 history2

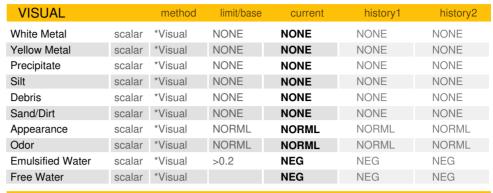


OIL ANALYSIS REPORT



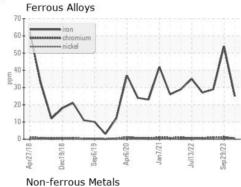
14 - Abnorma							
13							
Base				1 1			1 1
12 - Base				-	-		_
Abnorma							-
9							
Apr27/18	Jec19/18 -	Sep6/19 -	-		-	- 2	

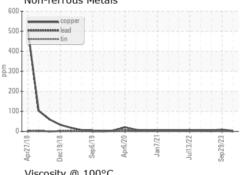


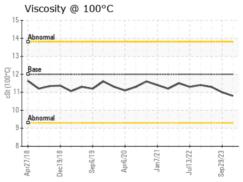


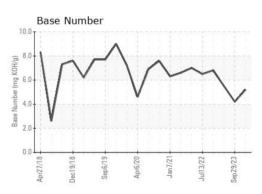
FLUID PROPI	EHIIES	method	iiiiii/base	current	riistory i	riistoryz
Visc @ 100°C	cSt	ASTM D445	12.00	10.8	11.0	11.3

GRAPHS













Laboratory Sample No. Lab Number

Unique Number

: PCA0094587 : 06029865 : 10779656

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 08 Dec 2023 Diagnosed

: 13 Dec 2023 : Jonathan Hester Diagnostician

Test Package : FLEET (Additional Tests: Glycol) 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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F: