

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 2126982 Component Rear Differential Fluid VOLVO (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

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SAMPLE INFORI	VIATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		PCA0113311	PCA0113313		
Sample Date		Client Info		04 Dec 2023	04 Dec 2023		
Machine Age	mls	Client Info		80325	80325		
Oil Age	mls	Client Info		0	0		
Oil Changed		Client Info		N/A	N/A		
Sample Status				NORMAL			
CONTAMINAT	ION	method	limit/base	current	history1	history2	
Water		WC Method	>.2	NEG	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>500	244	0		
Chromium	ppm	ASTM D5185m	>10	3	<1		
Nickel	ppm	ASTM D5185m	>10	7	0		
Titanium	ppm	ASTM D5185m		<1	<1		
Silver	ppm	ASTM D5185m		0	0		
Aluminum	ppm	ASTM D5185m	>25	1	1		
Lead	ppm	ASTM D5185m	>25	0	0		
Copper	ppm	ASTM D5185m	>100	1	<1		
Tin	ppm	ASTM D5185m	>10	<1	<1		
Vanadium	ppm	ASTM D5185m		0	0		
Cadmium	ppm	ASTM D5185m		0	0		
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		163	0		
				•	10		
Barium	ppm	ASTM D5185m		0	10		
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		0	<1		
				-			
Molybdenum	ppm	ASTM D5185m		0	<1		
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		0 17	<1 0		
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 17 1	<1 0 0		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 17 1 18	<1 0 0 <1		
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 17 1 18 1109	<1 0 0 <1 12		
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	limit/base	0 17 1 18 1109 15	<1 0 0 <1 12 0	 	
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		0 17 1 18 1109 15 27651	<1 0 <1 12 0 0	 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	>75	0 17 1 18 1109 15 27651 current	<1 0 0 <1 12 0 0 0 history1	 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	>75	0 17 1 18 1109 15 27651 current 55	<1 0 0 <1 12 0 0 0 history1 0	 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>75	0 17 1 18 1109 15 27651 27651 current 55 3	<1 0 0 <1 12 0 0 0 history1 0 4	 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>75 >20	0 17 1 18 1109 15 27651 27651 current 55 3 4	<1 0 0 <1 12 0 0 0 history1 0 4 13	 history2 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	>75 >20 limit/base	0 17 1 18 1109 15 27651 current 55 3 4 current	<1 0 0 <1 12 0 0 0 history1 0 4 13 history1	 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	>75 >20 limit/base NONE	0 17 1 18 1109 15 27651 current 55 3 4 current NONE	<1 0 0 <1 12 0 0 0 <u>history1</u> 0 4 13 <u>history1</u> NONE	 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m method *Visual	>75 >20 limit/base NONE NONE	0 17 1 18 1109 15 27651 current 55 3 4 current NONE NONE	<1 0 0 <1 12 0 0 0 <u>history1</u> 0 4 13 <u>history1</u> NONE NONE	 history2 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Yuisual *Visual	>75 >20 limit/base NONE NONE NONE	0 17 1 18 1109 15 27651 27651 55 3 4 <u>current</u> NONE NONE NONE NONE	<1 0 0 4 12 0 0 0 4 13 NONE NONE NONE NONE	 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE	0 17 1 18 1109 15 27651 <i>current</i> 55 3 4 <i>current</i> NONE NONE NONE NONE	<1 0 0 12 0 <1 12 0 0 0 12 0 0 12 0 13 0 4 13 13 13 13 10 NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE	0 17 1 18 109 15 27651 <i>current</i> 55 3 4 <i>current</i> NONE NONE NONE NONE NONE LIGHT	<1 0 0 4 12 0 0 4 13 NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2 history2 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE	0 17 1 18 109 15 27651 current 55 3 4 current NONE NONE NONE NONE NONE NONE LIGHT NONE	<1 0 0 12 0 <1 12 0 0 0 12 0 0 0 12 0 0 13 0 4 13 13 13 10 NONE NONE NONE NONE NONE NONE NONE NON	 history2 history2 history2 	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	0 17 1 18 109 15 27651 current 55 3 4 current NONE NONE NONE NONE LIGHT NONE LIGHT NONE NONE	<1 0 0 12 0 4 12 0 0 0 12 0 0 12 0 12 0 1	 history2 history2 history2	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL Vhite Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>75 >20 Iimit/base NONE NONE NONE NONE NONE NONE NONE NON	0 17 1 18 109 15 27651 <i>current</i> 55 3 4 <i>current</i> NONE NONE NONE NONE LIGHT NONE LIGHT NONE NORML	<1 0 0 12 0 <1 12 0 0 0 12 0 0 12 0 0 13 0 4 13 0 13 0 13 0 13 0 10 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0	history2 history2	



OIL ANALYSIS REPORT

FLUID PROPERTIES method limit/base



		FLUID PROP	ERHES	method	limit/base	current	history1	history2
		Visc @ 40°C	cSt	ASTM D445		95.3		
		SAMPLE IMA	GES	method	limit/base	current	history1	history2
					[
		Color				no image	no image	no image
		000				no image	nomage	no image
	Dec4/23 -							
	De							
		Bottom				no image	no image	no image
		GRAPHS						
	2	Ferrous Alloys						
	2	iron						
	2	00 - nickel						
	1	50						
	mqq							
	1	00						
		50						
		0 1			123			
		Dec4/23			Dec4/23			
		Non-ferrous Met	als					
		s copper						
		8 - tin						
		7-						
	mqq	5						
	<u>.</u>	4						
		3						
		1						
					53			
		Dec4/23			Dec4/23			
		Viscosity @ 40°	0					
		25 T						
		20 Abnormal						
		10						
	(40°C)	05						
		95						
		90 -						
		85						
		80 Abnormal						
		Dec4/23			Dec4/23 -			
		De			De			
Laborator	rv	: WearCheck USA	- 501 Madi	son Ave Car	y, NC 2751:	3 PERDI	JE FARMS - PRI	NCE GEORGE
ANAR Sample N	o .	: PCA0113311	Recieve	d : 13 D	ec 2023		6012 H	ARDWARE DR
Lab Numl Unique Nur		: 06033868 : 10789097	Diagnos Diagnos		ec 2023 athan Hester	r	PRINCE	GEORGE, VA US 23875
Certificate L2367 Test Pack	age	: FLEET	-					CHAEL DAVIS
To discuss this sample rep						MICH	AELP.DAVIS@	
* - Denotes test methods t Statements of conformity to						JCGM 106:2012	<u>?)</u>	T: F:
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