

OIL ANALYSIS REPORT

No Info On Sample [No Info On Sample] NOT GIVEN PCA0112888 Component

Diesel Engine NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

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.



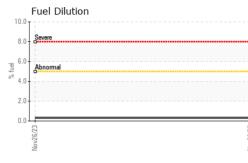
Sample Rating Trend

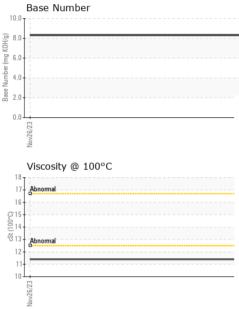


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0112888		
Sample Date		Client Info		26 Nov 2023		
Machine Age	mls	Client Info		0		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
			11 11 11			
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	7		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	5		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	1		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	4		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	4 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 55		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 55 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 55 <1 899		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 55 <1 899 1059	 	
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	limit/base	4 0 55 <1 899 1059 1080	 	
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	limit/base	4 0 55 <1 899 1059 1080 1232	 	
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	limit/base	4 0 55 <1 899 1059 1080 1232 3020		
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 ASTM D5185m	limit/base	4 0 55 <1 899 1059 1080 1232 3020 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	4 0 55 <1 899 1059 1080 1232 3020 current 3	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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	limit/base >25 >20	4 0 55 <1 899 1059 1080 1232 3020 current 3 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20	4 0 55 <1 899 1059 1080 1232 3020 <u>current</u> 3 2 5	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base >3	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current 0.3	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current 0.3 7.3	 history1 history1 	 history2 history2
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	limit/base >25 >20 >20 >5 limit/base >3 >20 >30	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current 0.3 7.3 19.6	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current 0.3 7.3 19.6	 history1 history1 history1	history2
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	limit/base >25 >20 >5 limit/base >3 >20 >3	4 0 55 <1 899 1059 1080 1232 3020 current 3 2 5 0.3 current 0.3 7.3 19.6	 history1 history1 history1	 history2 history2 history2



OIL ANALYSIS REPORT





C29200V	VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	scalar scalar scalar scalar scalar	method *Visual *Visual *Visual *Visual	limit/base NONE NONE NONE	Current NONE NONE NONE	history1 	history2
Nov2823	Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	scalar scalar scalar scalar	*Visual *Visual	NONE	NONE		
E2182voM	Precipitate Silt Debris Sand/Dirt Appearance	scalar scalar scalar	*Visual		-		
C2/92/voy	Silt Debris Sand/Dirt Appearance	scalar scalar		NONE			
Nov2B/23	Debris Sand/Dirt Appearance	scalar	visuai	NONE			
Nov26/23	Sand/Dirt Appearance		*) /! 1	NONE	NONE		
Nov26/23	Appearance		*Visual	NONE	NONE		
		scalar	*Visual	NONE	NONE		
Z	Odor	scalar	*Visual *Visual	NORML			
	Emulsified Water	scalar scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual	>0.2	NEG		
			VISUAI		NEG		
	FLUID PROPE		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445		11.4		
	GRAPHS						
	Ferrous Alloys						
	iron						
	8 - nickel						
	6 -						
	E d						
	4-						
	2-						
	0						
	Nov26/23			Nov26/23			
		_		N			
	Non-ferrous Metals	>					
	copper						
	8 - sesses tin						
	6-						
	udd						
	4						
	2-						
	3						
	Nov26/23			Nov26/23			
	Z Viscosity @ 100°C			2			
	¹⁸				Base Number		
	17- Abnormal			8.0			
	16-			<u></u> 7.0			
Ç.	p ¹⁵			(6,7.0- (6,0-) (6,0-) (6,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0-) (7,0- (0,- (0,- (0,- (0,- (0,- (0,- (0,- (
	D-001 14 3 13			Ē 5.0-			
Č	Abnormal			1.0 - 2 3 0			
	12			e 2.0			
	11-			1.0			
	10			0.0	53		<u>r</u>
	Nov26/23			Nov26/23	Nov26/23		56/36/W
Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, c * - Denotes test methods that an	: 06017703 E : 10756847 E : FLEET (Additional T contact Customer Servic	Received Diagnose Diagnost Tests: Fu Ce at 1-8	l : 27 f ed : 29 f ician : Sea elDilution, Po 00-237-1369	ry, NC 27513 Nov 2023 Nov 2023 In Felton ercentFuel) 9.		Conta ewhite@tr	