

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 711007 Component Diesel Engine Fluid NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

Metal levels are typical for a components first oil change.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

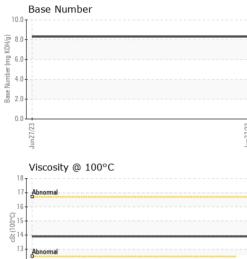
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0082653		
Sample Date		Client Info		27 Jun 2023		
Machine Age	hrs	Client Info		4546		
Oil Age	hrs	Client Info		4546		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method	20	NEG		
-						
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	7		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	<1		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 9	history 1	history 2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	9		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	9 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 75		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 75 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 75 <1 963		
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	9 0 75 <1 963 1064		
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	9 0 75 <1 963 1064 991	 	
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	9 0 75 <1 963 1064 991 1226	 	
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	limit/base	9 0 75 <1 963 1064 991 1226 3750		
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	9 0 75 <1 963 1064 991 1226 3750 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	9 0 75 <1 963 1064 991 1226 3750 current 3	 history 1	 history 2
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 method ASTM D5185m	limit/base	9 0 75 <1 963 1064 991 1226 3750 current 3 1	 history 1 	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	9 0 75 <1 963 1064 991 1226 3750 current 3 1 10	 history 1 	 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	9 0 75 <1 963 1064 991 1226 3750 current 3 1 10 current	 history 1 history 1	 history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	9 0 75 <1 963 1064 991 1226 3750 current 3 1 10 current 0.3	 history 1 history 1	 history 2 history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	9 0 75 <1 963 1064 991 1226 3750 <i>current</i> 3 1 10 <i>current</i> 0.3 6.5	 history 1 history 1 	 history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	9 0 75 <1 963 1064 991 1226 3750 current 3 1 10 current 0.3 6.5 18.8 current	 history 1 history 1 history 1	 history 2 history 2 history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >20 >3 >20 >30	9 0 75 <1 963 1064 991 1226 3750 <u>current</u> 3 1 10 <u>current</u> 0.3 6.5 18.8	 history 1 history 1 history 1 	 history 2 history 2 history 2 history 2



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OIL ANALYSIS REPORT



	VISUAL		method			history 1	history 2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
-		scalar	*Visual	NORML	NORML		
11112723	Odor		*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual	20.L	NEG		
	FLUID PROP		method	limit/base	current	history 1	history 2
	Visc @ 100°C	cSt	ASTM D445	iiiiii/base	13.9		
	GRAPHS	031	A31101 D443		13.9		
	Ferrous Alloys						
	10						
	8 - non						
	6						
	4-						
	2						

	Jun27/23			Jun27/23			
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	,			7			
	Non-ferrous Met	als		~			
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	Non-ferrous Met			L			
	Non-ferrous Met			Jun21/23	Base Number		
	Non-ferrous Met				T.		
	Non-ferrous Met			9.0 8.0]		
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	Non-ferrous Met			9.0 8.0]		
	Non-ferrous Met			52/12ung 9.0]		
	Non-ferrous Met			9.0 8.0			
	Non-ferrous Met			9.0 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (c)10 (c)10			
	Non-ferrous Met			9.0 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (b)10 8.0 (c)10 (c)10			
	Non-ferrous Met			8.0 8.0 10,0 10,0 10,0 10,0 10,0 10,0 10,0 10			
Laboratory	Non-ferrous Met	°C	son Ave Ca	9.0 8.0 (b)HOX HOX Bull HOX HOX HOX HOX HOX HOX HOX HOX HOX HOX	Jun21/23		
Laboratory Sample No.	Non-ferrous Met	°C		9.0 8.0 (b)HOX HOX Bull HOX HOX HOX HOX HOX HOX HOX HOX HOX HOX	Jun21/23		
Sample No. Lab Number	Non-ferrous Met	°C • 501 Madia Received Diagnose	d : 03 ed : 05	EZ/(Zump EZ/(Zump EZ/(Zump Bub Bub Science EZ/(Zump Science EZ/(Zump S	Jun21/23	40	005 Hwy 161 I Little Rock, A
Sample No. Lab Number Unique Numbe	Non-ferrous Met	°C • 501 Madis Received	d : 03 ed : 05	EZ/(Zump EZ/(Zump Bub Bub Bub Bub Bub Bub Bub Bub Bub Bub	Jun21/23	40	005 Hwy 161 I Little Rock, A US 7211
Sample No. Lab Number	Non-ferrous Met	°C • 501 Madia Receivec Diagnost	d : 03 ed : 05 tician : We	EZUZZUNI EZUZZUNI BU BU BU BU BU BU BU BU BU BU	Jun21/23	40	005 Hwy 161 I Little Rock, A US 7211 : Brad Manag



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Submitted By: Nicole Walls Page 2 of 2