

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a components first oil change.

Contamination

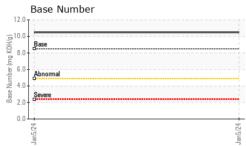
There is no indication of any contamination in the oil.

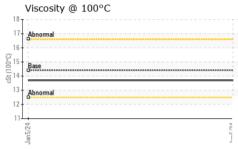
Fluid Condition

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

				Jan2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105119		
Sample Date		Client Info		05 Jan 2024		
Machine Age	hrs	Client Info		11255		
Oil Age	hrs	Client Info		11255		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0		
Water		WC Method	>0.21	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	7		
Chromium	ppm	ASTM D5185m	>11	<1		
Nickel	ppm	ASTM D5185m	>5	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>31	1		
Lead	ppm	ASTM D5185m	>26	0		
Copper	ppm	ASTM D5185m	>26	<1		
Tin	ppm	ASTM D5185m	>4	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron					history1	history2
Boron	ppm	ASTM D5185m	250	current 16 11		
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	16		
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250	16 11 62		
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10	16 11 62 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	16 11 62 0 855		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	16 11 62 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	16 11 62 0 855 1041	 	
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	250 10 100 450 3000 1150	16 11 62 0 855 1041 902	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	16 11 62 0 855 1041 902 1124	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	16 11 62 0 855 1041 902 1124 3115		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	16 11 62 0 855 1041 902 1124 3115 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	250 10 100 450 3000 1150 1350 4250 limit/base >22	16 11 62 0 855 1041 902 1124 3115 current 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158	16 11 62 0 855 1041 902 1124 3115 current 5 0	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20	16 11 62 0 855 1041 902 1124 3115 current 5 0 1	 history1 	 history2
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	250 10 100 450 3000 1150 1350 4250 Imit/base >22 >158 >20 Imit/base	16 11 62 0 855 1041 902 1124 3115 current 5 0 1 1	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3	16 11 62 0 855 1041 902 1124 3115 <i>current</i> 5 0 1 <i>current</i> 0.1	 history1 history1 history1	 history2 history2 history2
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	250 10 100 450 3000 1150 1350 4250 i mit/base >22 >158 >20 i mit/base >3 >20	16 11 62 0 855 1041 902 1124 3115 <i>current</i> 5 0 1 <i>current</i> 0.1 5.5	 history1 history1 history1	 history2 history2
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 TS ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	250 10 100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3 >20 >30	16 11 62 0 855 1041 902 1124 3115 <i>current</i> 5 0 1 <i>current</i> 0.1 5.5 17.6	 history1 history1 history1	 history2 history2 history2 history2
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	250 10 100 450 3000 1150 1350 4250 Imit/base >22 >158 >20 Imit/base >3 >20	16 11 62 0 855 1041 902 1124 3115 <u>current</u> 5 0 1 <u>current</u> 0.1 5.5 17.6	 history1 history1 history1	 history2 history2 history2









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sual NON sual NON sual NOF sual NOF sual >0.2 sual ethod lim	NE NE RML 21 nit/base	NONE NORML NORML NEG NEG	 	
sual NON sual NOF sual NOF sual >0.2 sual ethod lim	NE RML RML 21	NONE NORML NORML NEG NEG		
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sual NOF sual >0.2 sual ethod limi	RML 21 nit/base	NORML NEG NEG current		
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sual ethod limi	nit/base	NEG current		
ethod limi		current		
TM D445 14.4	4	10.7		history2
		13.7		
	100	Lead (ppm)		
	100	Severe		
	80-			
	E 60.			
	40-	Abnormal		
	20-			
Jan5/24 -	0.	Jan 5/24		Jan 5/24 +
Jan		Jan		Jan
		Chromium (ppr	n)	
	25-	Severe		·
	20-			
	¹⁵	Abnormal		1
	- 10-			
	5.	1		
Jan5/24 -	- 0-	5/24		/24
Jan5		Jan5/24		Jan5/24
		Silicon (ppm)		
	40			
	30-	Severe		
	튭 20 -	Abnormal		
	10-			
	10.			
24	- 0-	/24		24 -
Jan5/24		Jan5/24		Jan5/24
	10.0	Base Number		
1	(B) 12.0 光 10.0			1
	р 8.0-	Base		
	பு பி	Abnormal		
1	(B)H0.0 H0.0 H0.0 H0.0 H0.0 H0.0 H0.0 H0.0	Severe		
	- 2.0-			
Jan5/24 -	0.0	Jan 5/24		Jan5/24 -
Jan		Jan		Jan
e., Cary, NC 2	27513		B & B	HARVESTING
: 14 Feb	2024		2	842 LADD RD
: 16 Feb		D .	N	IODESTO, CA
	2024 - We	es Davis	Ocata - 1 O	US 95356
				ervice Manager ey@gmail.com
d : 16 Feb 2	n.			(209)545-8300
I	: 16 Feb ed : 16 Feb 237-1369. of accreditatio	: 16 Feb 2024 ed : 16 Feb 2024 - Wo 237-1369. of accreditation.	: 16 Feb 2024 ed : 16 Feb 2024 - Wes Davis 237-1369. of accreditation.	: 16 Feb 2024 M ed : 16 Feb 2024 - Wes Davis Contact: Se 237-1369. drcalvalle

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