

OIL ANALYSIS REPORT

Sample Rating Trend



Area Not In Unit List 98128

Diesel Engine Fluid AMERIGUARD 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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 INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0006579	SBP0004976	SBP0000175
Sample Date		Client Info		29 Mar 2024	21 Sep 2023	11 Oct 2021
Machine Age	mls	Client Info		65542	60831	5400
Oil Age	mls	Client Info		4711	5400	5400
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel	V	WC Method	>5	<1.0	<1.0	0.8
Water		WC Method		NEG	NEG	NEG
		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Welhou		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	15	26
Chromium	ppm	ASTM D5185m	>20	1	0	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	3	4
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	3	2	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Antimony	ppm	ASTM D5185m				<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0
	le le				÷	
ADDITIVES	le le	method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base			
		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	limit/base	current 5	history1 42	history2 29
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 5 1	history1 42 9	history2 29 0
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55	history1 42 9 15	history2 29 0 42
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1	history1 42 9 15 <1	history2 29 0 42 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1 915	history1 42 9 15 <1 784	history2 29 0 42 <1 522
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1 915 1111	history1 42 9 15 <1 784 1468	history2 29 0 42 <1 522 1687
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1 915 1111 986	history1 42 9 15 <1 784 1468 1098	history2 29 0 42 <1 522 1687 743
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 5 1 55 <1 915 1111 986 1235	history1 42 9 15 <1 784 1468 1098 1308	history2 29 0 42 <1 522 1687 743 903
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1 915 1111 986 1235 3044 current	history1 42 9 15 <1 784 1468 1098 1308 3751 history1	history2 29 0 42 <1 522 1687 743 903 2178 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m		current 5 1 55 <1 915 1111 986 1235 3044 current 35	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 102	history2 29 0 42 <1 522 1687 743 903 2178 history2 20
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 5 1 55 <1 915 1111 986 1235 3044 current	history1 42 9 15 <1 784 1468 1098 1308 3751 history1	history2 29 0 42 <1 522 1687 743 903 2178 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm of the second secon	method ASTM D5185m	limit/base >25 >20	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 ▲ 102 17 4	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 41
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 102 17 4 history1	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 <1 history2 history2 10 7 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2	history1 42 9 15 <1 784 1468 1098 3751 history1 102 17 4 0.2	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 <1 history2 0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3 >20	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2 9.9	history1 42 9 15 <1 784 1468 1098 3751 history1 102 17 4 0.2 9.3	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 41 522 1687 743 903 2178 history2 20 7 <1 history2 0.3 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >3 >20 >30	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2 9.9 22.6	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 ▲ 102 17 4 0.2 9.3 22.3	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 <1 history2 0.3 11 25.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7185M ASTM D7624 *ASTM D7415 method	limit/base >25 >20 limit/base >3 >20 >30 >30	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2 9.9 22.6 current	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 102 17 4 0.2 9.3 22.3 history1 	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 41 bistory2 20 7 <1 bistory2 0.3 11 25.3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Solfur Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	Imit/base >25 >20 Imit/base >3 >20 >30	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2 9.9 22.6 current 22.7	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 1 0.2 9.3 22.3 history1 17.9	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 <1 history2 0.3 11 25.3 history2 29.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7185M ASTM D7624 *ASTM D7415 method	limit/base >25 >20 limit/base >3 >20 >30 >30	current 5 1 55 <1 915 1111 986 1235 3044 current 35 6 2 current 0.2 9.9 22.6 current	history1 42 9 15 <1 784 1468 1098 1308 3751 history1 102 17 4 0.2 9.3 22.3 history1 17.9 6.5	history2 29 0 42 <1 522 1687 743 903 2178 history2 20 7 41 bistory2 20 7 <1 bistory2 0.3 11 25.3 history2

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Submitted By: Joshua Kenney



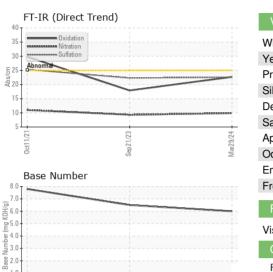
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Viscosity @ 100°C

OIL ANALYSIS REPORT



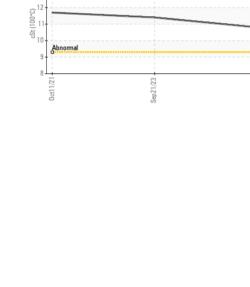
Sep21/23

VISUAL		methou	iiiiii/base	current	Thistory I	Thistory Z
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		10.8	11.4	11.7
GRAPHS						
Ferrous Alloys						
iron 25 - iron						
nickel						
20						
<u>ا</u> 15-	\checkmark					
10						
5						
0			and thinks			
	/23		1/24			
0ct11/2	Sep21/23		Mar29/24			
Non-ferrous Meta	ls					
10 copper						
8						
tin tin						
6 -						
4-						
2	~					
11/21	Sep21/23		Mar29/24			
0ct11	Sept		Mari			
Viscosity @ 100°C	2			Base Number		
			8.	and the second division of the second divisio		
13 - Abnormal			7.			
12			5/HO	0 +		
11-			(B)(H) (B)(H)(B) (M) (M) (M) (M) (M) (M) (M) (M) (M) (M	0		
153						
10			3.	0+		

ase 2.0 1.0 0.0

0ct11/21-

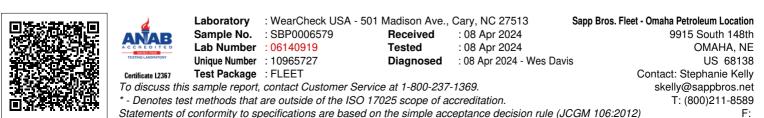
Mar29/24 -



maa

cSt (100°C)

Oct11/21-



Sep21/23

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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