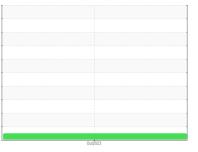


91057-1057

OIL ANALYSIS REPORT

Sample Rating Trend







Component Diesel Engine Fluid AMERIGUARD 15W40 (10 GAL)

DIAGNOSIS

Area [1057]

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.

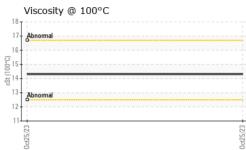
Fluid Condition

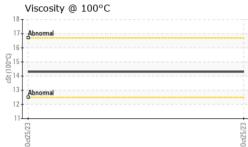
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

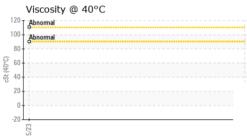
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0003682		
Sample Date		Client Info		25 Oct 2023		
Machine Age	mls	Client Info		269972		
Oil Age	mls	Client Info		9577		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	4		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	2		
Lead	ppm	ASTM D5185m	>30	0		
Copper	ppm	ASTM D5185m	>150	4		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	Method ASTM D5185m	limit/base	current 19	history1	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	19		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	19 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 54		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 54 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	19 0 54 <1 863		
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	19 0 54 <1 863 990		
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	19 0 54 <1 863 990 928	 	
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	limit/base	19 0 54 <1 863 990 928 1195		
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		19 0 54 <1 863 990 928 1195 2696		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	19 0 54 <1 863 990 928 1195 2696 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	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	limit/base	19 0 54 <1 863 990 928 1195 2696 current 3	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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	limit/base	19 0 54 <1 863 990 928 1195 2696 <u>current</u> 3 2	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	19 0 54 <1 863 990 928 1195 2696 current 3 2 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	19 0 54 <1 863 990 928 1195 2696 <u>current</u> 3 2 2 2 2	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	19 0 54 <1 863 990 928 1195 2696 current 3 2 2 2 2 current 0.2	 history1 history1 history1	 history2 history2
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	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	19 0 54 <1 863 990 928 1195 2696 current 3 2 2 2 2 current 0.2 5.6	 history1 history1 	 history2 history2
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	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3	19 0 54 <1 863 990 928 1195 2696 current 3 2 2 2 2 current 0.2 5.6 18.8	 history1 history1 history1	 history2 history2
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	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3	19 0 54 <1 863 990 928 1195 2696 current 3 2 2 2 current 0.2 5.6 18.8 current	 history1 history1 history1 history1	 history2 history2 history2 history2 history2



OIL ANALYSIS REPORT







		VISUAL		method	limit/base	current	history1	history2
		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		
	0ct25/23	Appearance	scalar	*Visual	NORML	NORML		
	Oct2	Odor	scalar	*Visual	NORML	NORML		
		Emulsified Water	scalar	*Visual	>0.2	NEG		
		Free Water	scalar	*Visual		NEG		
		FLUID PROPERT	IES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445		14.3		
		SAMPLE IMAGES	5	method	limit/base	current	history1	history2
				include	[
	0ct25/23 -	Color				no image	no image	no image
	Oct2							
		Bottom				no image	no image	no image
		GRAPHS						
		Ferrous Alloys						
		0455/23			0ct25/23			
	udd							
		Viscosity @ 40°C			0ct25/23			
	15	50 T			 10.	Base Number		
	10	Abnormal 00 - Abnormal			KOH/	0		
	cSt (40°C)	50 -			<u>в</u> 6.	0		
	Ś	0			đu 4.	0		
					(b)HoX Bul) Ja quint (b) B)HoX Bul) Ja quint (b) Bul) Ja (b) Bul)	0		
	-	50 L +			.0 B			20
		0ct25/23			0ct25/23	0ct25/23		0.425.723
ISO/ICC 17025	le No. umber	: 06010525	01 Madis Received Diagnose Diagnost	l :17 ed :05	ry, NC 2751 Nov 2023 Dec 2023 Ig Bogart	3 Sapp Br		ke City Locatio lifornia Avenue t Lake City, U ⁻ US 84104
entificate L2367 Test P discuss this sample	Package e report, co	: FLEET (Additional 1 ontact Customer Service outside of the ISO 12	Tests: FT ice at 1-8	⁻ IR, KV100, <i>00-237-136</i> 9	TBN) 9.		breorda	Bernie Reorda @sappbros.ne (801)977-3900

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