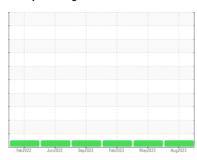


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 91087 Component Diesel Engine

AMERIGUARD 15W40 (10 GAL)

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

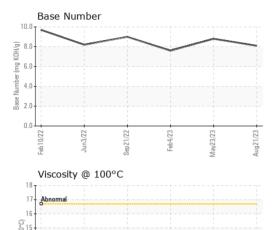
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Feb 2022	Jun2022 Sep2022	Feb2023 May2023	Aug2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0004658	SBP0001710	SBP0001695
Sample Date		Client Info		21 Aug 2023	23 May 2023	04 Feb 2023
Machine Age	mls	Client Info		296091	275800	255097
Oil Age	mls	Client Info		20291	20703	25046
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	7	9	16
Chromium	ppm	ASTM D5185m	>5	1	1	2
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	5	6
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m	>150	3	4	4
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	<1	0
				-		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base			history2
	ppm		limit/base	current	history1	
Boron		ASTM D5185m	limit/base	current	history1 <1	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	current <1	history1 <1 0	10
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current <1 0 64	history1 <1 0 64	10 2 61
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current <1 0 64 <1	history1 <1 0 64 <1	10 2 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current <1 0 64 <1 1088	history1 <1 0 64 <1 1075	10 2 61 <1 931
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current <1 0 64 <1 1088 1168	history1 <1 0 64 <1 1075 1215	10 2 61 <1 931 1123
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 ASTM D5185m	limit/base	current <1 0 64 <1 1088 1168 1177	history1 <1 0 64 <1 1075 1215 1060	10 2 61 <1 931 1123 999
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 ASTM D5185m	limit/base	current <1 0 64 <1 1088 1168 1177 1491	history1 <1 0 64 <1 1075 1215 1060 1403	10 2 61 <1 931 1123 999 1211
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		current <1 0 64 <1 1088 1168 1177 1491 3396	history1 <1 0 64 <1 1075 1215 1060 1403 3662	10 2 61 <1 931 1123 999 1211 2635
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	current <1 0 64 <1 1088 1168 1177 1491 3396 current	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1	10 2 61 <1 931 1123 999 1211 2635 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	current <1 0 64 <1 1088 1168 1177 1491 3396 current	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4	10 2 61 <1 931 1123 999 1211 2635 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4	10 2 61 <1 931 1123 999 1211 2635 history2 5 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 >20	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4 1 5	10 2 61 <1 931 1123 999 1211 2635 history2 5 8 26
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	limit/base >20 >20 limit/base >3	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1 3 current	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4 1 5	10 2 61 <1 931 1123 999 1211 2635 history2 5 8 26 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1 3 current 0.5	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4 1 5 history1 0.5	10 2 61 <1 931 1123 999 1211 2635 history2 5 8 26 history2 0.6
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1 3 current 0.5 8.7	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4 1 5 history1 0.5 9.6	10 2 61 <1 931 1123 999 1211 2635 history2 5 8 26 history2 0.6 9.8
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	ASTM D5185m Method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >20 >20 limit/base >3 >20 >3 limit/base	current <1 0 64 <1 1088 1168 1177 1491 3396 current 3 1 0.5 8.7 20.1	history1 <1 0 64 <1 1075 1215 1060 1403 3662 history1 4 1 5 history1 0.5 9.6 20.9	10 2 61 <1 931 1123 999 1211 2635 history2 5 8 26 history2 0.6 9.8 21.4



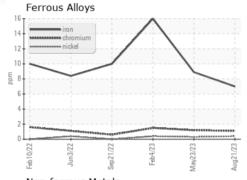
12

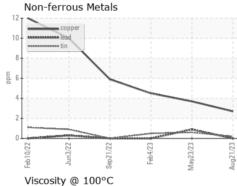
OIL ANALYSIS REPORT

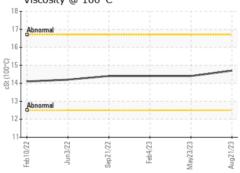


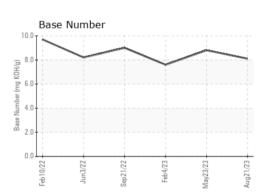
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

I LOID I HOI LI	THES	method		Thatary	HISTOLYZ
Visc @ 100°C	cSt	ASTM D445	14.7	14.4	14.4













Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : SBP0004658 : 05968604

: 10675155

Received Diagnosed Diagnostician : Wes Davis

: 04 Oct 2023 : 04 Oct 2023 Sapp Bros. Fleet - Ogallala Location

Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

US

T:

F: