

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **G89** Component **Diesel Engine**

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

DIAGNOSIS

Recommendation

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

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition

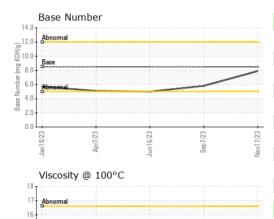
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Machine Age mls Client Info 701130 6843 6154 Oil Age mls Client Info 0 788 554 Oil Changed Client Info Changed N/A N/A	SAE 15W40 (GAL) Judges April 223 Jun 1023 Sup 2023 Novi 1023						
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 701130 6843 6154 Oil Age mls Client Info 0 788 554 Oil Changed Client Info Changed N/A N/A Sample Status NCMeland NCRMAL NCRMAL NCRMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >12.0 11 11 10 Chromium ppm ASTM D5185m >2.2 1 <1 <1 Chromium ppm ASTM D5185m >2.2 <1 0 0 Chromium ppm ASTM D5185m >2.2 <1 0 0 Silver ppm	Sample Number		Client Info		WC0874365	WC0784010	WC0758892
Oil Age mls Client Info Changed N/A	Sample Date		Client Info		17 Nov 2023	07 Sep 2023	16 Jun 2023
Contained Client Info Changed N/A N/A NORMAL NORMAL	Machine Age	mls	Client Info		701130	6843	6154
CONTAMINATION method limit/base current history1 history2	Oil Age	mls	Client Info		0	788	554
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit Masse NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 11 11 10 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >5 1 1 2 <1 <1 1 2 <1 <1 <1 1 1 <1 <1 1 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Oil Changed		Client Info		Changed	N/A	N/A
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 11 11 10 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 4 3 3 Lead ppm ASTM D5185m >40 <1 1 1 Copper ppm ASTM D5185m >15 <1 <1 <1 <1 Vanadium ppm ASTM D5185m >15 <1 <1 <1 <1 <1 <1 <1 <1 <1	CONTAMINATION	J	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 11 11 10 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
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Nickel	Iron	ppm	ASTM D5185m	>120	11	11	10
Titanium ppm ASTM D5185m >2 <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 4 3 3 Lead ppm ASTM D5185m >40 <1 1 1 Copper ppm ASTM D5185m >330 1 <1 <1 <1 Tin ppm ASTM D5185m >15 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 </th <th>Nickel</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>5</th> <th>1</th> <th>1</th> <th>2</th>	Nickel	ppm	ASTM D5185m	>5	1	1	2
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Lead ppm ASTM D5185m >40 <1	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 1 <1	Aluminum	ppm	ASTM D5185m	>20	4	3	3
Tin	Lead	ppm	ASTM D5185m	>40		1	
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 7 13 30 Barium ppm ASTM D5185m 10 9 0 0 Molybdenum ppm ASTM D5185m 100 60 78 92 Manganese ppm ASTM D5185m 100 60 78 92 Magnesium ppm ASTM D5185m 450 743 204 111 Calcium ppm ASTM D5185m 3000 1194 2089 2193 Phosphorus ppm ASTM D5185m 1350 1120 1286 1289 Sulfur ppm ASTM D5185m 4250 2869 4090 3822 CONTAMINANTS method limit/base current history1 <th>Copper</th> <td>ppm</td> <td>ASTM D5185m</td> <td>>330</td> <th>1</th> <td><1</td> <td>1</td>	Copper	ppm	ASTM D5185m	>330	1	<1	1
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Boron	Cadmium	ppm	ASTM D5185m		<1	0	0
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INFRA-RED		ppm					
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Nitration Abs/cm *ASTM D7624 >20 8.0 9.5 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 21.5 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 16.4 16.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.5 21.5 21.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 16.4 16.8							
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Oxidation Abs/.1mm *ASTM D7414 >25 14.4 16.4 16.8	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	21.5	21.2
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.5 7.9 5.8 5.0	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	16.4	16.8
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9	5.8	5.0



12

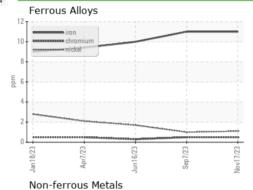
OIL ANALYSIS REPORT

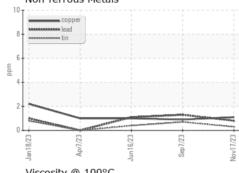


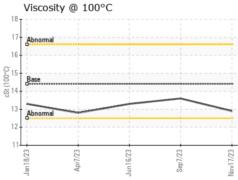
Sep7/23

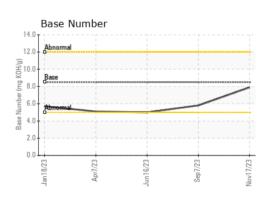
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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

FLUID PROPERI	IES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.6	13.3











Laboratory Sample No. Lab Number **Unique Number**

: WC0874365 : 06013645 : 10752789

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

Diagnostician : Wes Davis Test Package : CONST (Additional Tests: TBN)

: 21 Nov 2023

: 21 Nov 2023

Egg Harbor Township, NJ

Contact: Service Manager

Apple Valley Waste - EHT Location

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)

6626 Delilah Road

US 08234

T:

F: