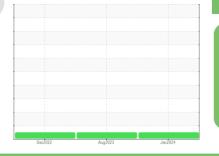


OIL ANALYSIS REPORT

Sample Rating Trend







Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Machine Id

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

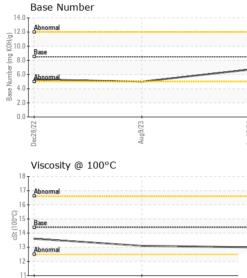
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0874370	WC0783975	WC0758905
Sample Date		Client Info		15 Jan 2024	09 Aug 2023	28 Dec 2022
Machine Age	hrs	Client Info		10389	9847	9292
Oil Age	hrs	Client Info		542	522	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	9	13	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	3	6
Lead	ppm	ASTM D5185m	>40	<1	1	0
Copper	ppm	ASTM D5185m	>330	2	6	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	13	12	14
Barium	ppm	ASTM D5185m	10	0	0	1
Molybdenum	ppm	ASTM D5185m	100	65	49	54
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	853	100	104
Calcium	ppm	ASTM D5185m	3000	1228	2102	2135
Phosphorus	ppm	ASTM D5185m	1150	1043	863	880
Zinc	ppm	ASTM D5185m	1350	1210	1135	1073
Sulfur	ppm	ASTM D5185m	4250	2879	3715	3170
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	8	6
Sodium	ppm	ASTM D5185m	>158	6	4	3
Potassium	ppm	ASTM D5185m	>20	5	8	12
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.5	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	19.6	20.7
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.0	13.0	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	5.0	5.3
、						



Dec28/22

OIL ANALYSIS REPORT



		VIS			method	limit/base	current	history1	history2
		White	Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		Yello	w Metal	scalar	*Visual	NONE	NONE	NONE	NONE
		Preci	pitate	scalar	*Visual	NONE	NONE	NONE	NONE
		Silt		scalar	*Visual	NONE	NONE	NONE	NONE
		Debri	s	scalar	*Visual	NONE	NONE	NONE	NONE
		Sand	/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Aug9/23	Jan 15/24	Appe	arance	scalar	*Visual	NORML	NORML	NORML	NORML
Au	Jan	Odor		scalar	*Visual	NORML	NORML	NORML	NORML
		Emul	sified Water	r scalar	*Visual	>0.2	NEG	NEG	NEG
		Free	Water	scalar	*Visual		NEG	NEG	NEG
		FLU	JID PROPE	ERTIES	method	limit/base	current	history1	history2
			@ 100°C	cSt	ASTM D445	14.4	13.0	13.1	13.6
		GR	APHS						
		Feri	rous Alloys						
23		12	iron						
Aug9/23			chromium nickel						
4		10-							
		8 dd							
		6							
		4							
		2							
		0	LiMassesser Contraction						
		8/22 -		Aug9/23 -		5/24 -			
		Dec28/22		Aug		Jan 15/24			
		Nor	n-ferrous M	etals					
		¹⁰ T							
			copper						
			read						
		8-	tin						
		6	mmmm tin						
		6 -	www.win	\wedge					
		6	unnan tin	\wedge					
		6	tin			/			
		6 -	tin			/			
		6	tin						
					*****	5/24			
		6	contraction fin	Ez/60nv		Jan 15/24			
		6 4 2 0 0 2 7 0 8 2 9 0 Viso	cosity @ 10			Jan15/24	Base Numbe	r	
		6 4 2 0 7 2 7 2 7 2 7 2 7 2 7 9 0 7 2 7 9 0 7 9 0 7 9 0 7 9 0 7 9 10 9 10 9 1				14.0	T	r	
		6 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				14.0	Base Numbe	r	
		C2222200 Visc 18 17 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				14.0	Abnormal	r	
		C2222200 Visc 18 17 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				14.0	T	r	
		6 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				14.0	Abnormal Base	r	
		Visc 18 17 16 16 16 12 12 12 12 12 12 12 12 12 12	ormal			14.0	Abnormal	r	
		Visc 18 17 4 2 Visc 18 17 4 4 4 4 4 4 4 4 4 4 4 4 4	ormal			14.0 12.0 HOX 10.0 0 HOX 0 9 HOX 0 9 HOX 0 8.0 9 HOX 0 8.0 1 HOX 0 HOX 0	Abnormal Base	r	
		Visc 18 17 4 16 16 13 13 4 4 4 4 4 4 4 4 4 4 4 4 4	ormal			14.0 12.0 (P)10.0 (P)1	Abnormal Base	r	
		Visc Visc 16 16 12 12 11 12	ormal	0°C		14.0- 12.0 (0) 10.0 (0) 10.0 (Abnormal Base Abnormal		
		Visc Visc 16 16 12 12 11 12	ormal	0°C		14.0- 12.0 (0) 10.0 (0) 10.0 (Abnormal Base Abnormal		
	Laboratory Sample No.	Visc 10 10 10 10 10 10 10 10 10 10	rCheck USA 874370	0°C	d :16.	14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 12.0 10.0	Abnormal Base Abnormal	E Valley Waste	
		Visc 18 17 16 16 13 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2	rCheck USA 874370	0°C	d :16.	14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 12.0 10.0	Abnormal Base Abnormal	e Valley Waste 663	26 Delilah Ro or Township,
	Sample No.	Visc Visc	rCheck USA 874370 0546 1928	0°C	d::16. ed::16. tician::Wes	14.0 12.0 12.0 14.0 12.0 14.0 12.0 14.0 12.0 10.0	Abnormal Base Abnormal	e Valley Waste 66 Egg Harbo	- EHT Locati 26 Delilah Ro or Township, US 082 Service Manag

* - 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)

Contact/Location: Service Manager - AVWEHT