

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (AI) 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.

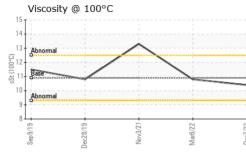
Fluid Condition

The condition of the oil is acceptable for the time in service.

		Sep2019	Dec2019	Nov2021 Mar2022	Dec2023	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853053	WC0654463	WC0624818
Sample Date		Client Info		07 Dec 2023	08 Mar 2022	03 Nov 2021
Machine Age	kms	Client Info		214748	173631	159700
Oil Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	SEVERE
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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 D5185(m)	>90	41	27	🔺 173
Chromium	ppm	ASTM D5185(m)	>20	2	2	9
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	9	8	22
Lead	ppm	ASTM D5185(m)	>40	6	5	17
Copper	ppm	ASTM D5185(m)		2	1	4
Tin	ppm	ASTM D5185(m)	>15	<1	1	3
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	33	49	45
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	72	4	8
Manganese	ppm	ASTM D5185(m)		0	<1	2
Magnesium	ppm	ASTM D5185(m)	450	98	691	717
Calcium	ppm	ASTM D5185(m)	3000	1912	1283	1338
Phosphorus	ppm	ASTM D5185(m)	1150	915	689	704
Zinc	ppm	ASTM D5185(m)	1350	1027	750	791
Sulfur	ppm	ASTM D5185(m)	4250	3003	2404	2279
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS	5	method	limit/base		history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	4	11
Sodium	ppm	ASTM D5185(m)		2	2	4
Potassium	ppm	ASTM D5185(m)	>20	12	12	32
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	0.3	0	0.9
Nitration	Abs/cm	ASTM D7624*	>20	13.0	4.8	A 27.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.0	15.0	46.1



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VISUAL method limit/base current history1 Emulsified Water scalar Visual* >0.2 NEG NEG Free Water scalar Visual* NEG NE	9.0 • 75.6	9.0	26.8	>25	ASTM D7414*	Abs/.1mm	Oxidation	
Free Water scalar Visual* NEG NEG FLUID PROPERTIES method limit/base current history1 Visc @ 100°C cSt ASTMD7278(m) 10.9 10.4 10.8 GRAPHS Lead (ppm) Gramma Lead (ppm) Gramma Method Method Imit box Lead (ppm) Gramma Gramma Method Imit box Lead (ppm) Gramma Chromium (ppm) Gramma Gramma Method Method Imit box Lead (ppm) Gramma Chromium (ppm) Gramma Gramma Gramma Gramma Method Imit box Chromium (ppm) Gramma Gramma Gramma	history1 history2	history1	current	limit/base	method		VISUAL	
$\frac{1000}{1000}$ Visc @ 100°C cSt ASTMD7279(m) 10.9 10.4 10.8 (ASTMD7279(m) 10.9 10.4 (ASTMD7279(m) 1			-	>0.2				
CRAPHS Tron (ppm)	history1 history2	history1	current	limit/base	method	ERTIES	FLUID PROPE	
Iron (ppm) John John John John John John John John	10.8 🔺 13.3	10.8	10.4	10.9	ASTM D7279(m)	cSt	Visc @ 100°C	Dec7/2
250 00 00 00 00 00 00 00 00 00								
Aluminum (ppm) Copper (ppm) Uscosity @ 100°C Uscosity @ 100°C			Lead (ppm)	100-				
Aluminum (ppm)			Severe	80 -			200 Severe	
Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Copper (ppm) Viscosity @ 100°C				60-		\wedge	150	E
Aluminum (ppm)			Abnormal	40.			100 - Abnormal	
ELIDERAL ELIDER				20	1		50-	
Aluminum (ppm) Aluminum (ppm)	Nov3/21 - Mar8/22 -	3/21+	9/19	0	8/22+	3/21+		
Silicon (ppm) Viscosity @ 100°C Viscosity @ 100°C	_			Dec	Mar		—	
Anomal An)	om)	Chromium (pp	50-		m)		
und dommal domma			Severe	40 -			40 - Severe	
20 20 10 10 10 10 10 10 10 10 10 1				30-			30-	
Copper (ppm)			Abnormal	et 20-			20 - Abnormal	
El/geas El/geas El/geas Copper (ppm) Gilleon (ppm) Copper (ppm) Co	\sim			10-			10-	
Copper (ppm) Silicon (ppm) Solicon	727	/21+-	- 61/	-0	22 -	/21+ -		
$\frac{400}{50} - \frac{5}{500} + 5$	Nov3/21 Mar8/22	Nov3	Sep9. Dec28.	Dec7	Mar8.	Nov3	Sep9. Dec28	
Sector 200 350 300 500 500 500 500 500 5			Silicon (ppm)	80-			400	
250 100 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0				70-			350 - Abnormal	
150 100 <td></td> <td></td> <td></td> <td> 50-</td> <td></td> <td></td> <td>250 -</td> <td>_</td>				50-			250 -	_
Viscosity @ 100°C			Abnormal					100
Viscosity @ 100°C								
Viscosity @ 100°C Soot % Soot % Abnormal Base Abnormal Severe Soot % Sout %	22	21-	6 6		22	21	0	
15 4 13 Abnormal 10 10 10 Abnormal 10 2.0	Nov3/21	Nov3/	Sep9/ Dec28/	Dec7//	Mar8/	Nov3/	Sep9/ Dec28/	
14 7.0 Abnormal 13 Abnormal 6.0 Abnormal 12 Base 0.0 0.0 10 Abnormal 2.0 0.0				0.0		0°C		
Abnormal Abnormal Base Base Abnormal Abno				7.0				
10 Abnormal 2.0						\wedge		ŝ
10- Abnormal				54.0- 3.0-			11 Base	
				2.0-			10 Abnormal	
8			6 6		2		8	
Sep 9/13 bec 28/19 Nav3/21 Dec 7/23 Sep 9/19 Sep 9/19	Nov3/21 Mar8/22	Nov3/2	Sep9/1 Dec28/1	Dec7/2	Mar8/2	Nav3/2	Sep 9/1	
mple No. : WC0853053 Recieved : 19 Jan 2024 7450 o Number : 02609837 Diagnosed : 19 Jan 2024 Mis que Number : 5710923 Diagnostician : Kevin Marson	Rush Truck Centre 7450 Torbram Ro Mississauga, O CA L4T 1G Contact: Serdar Oku	72 1	'L 5H9	lan 2024 Jan 2024	i :19. ed :19.	Recieved Diagnose	: WC0853053 : <mark>02609837</mark> : 5710923	mple No. o Number que Number

Accredited Laboratory Un Te To discuss this sa Test denoted (*) o Validity of results and interpretation are based on the sample and information as supplied.

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CALA

ISO 17025:2017

Contact/Location: Serdar Okur - RUSMIS