

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Machine Id KENWORTH 19

Diesel Engine Fluid PURUS SYNTHETIC BLEND 15W40 (--- GAL)

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

🔺 Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

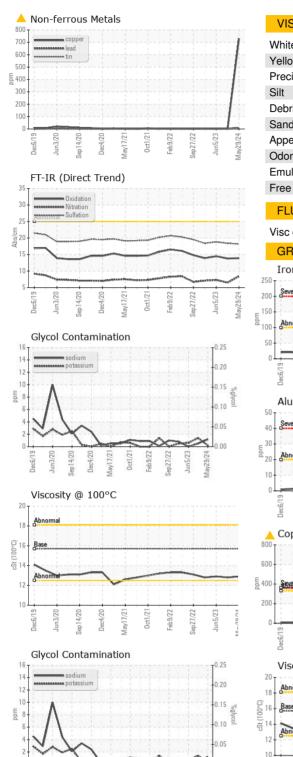
Fluid Condition

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

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SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RW0005304	RW0004557	RW0004103
Sample Date		Client Info		29 May 2024	13 Sep 2023	05 Jun 2023
Machine Age	mls	Client Info		339271	311354	297587
Oil Age	mls	Client Info		16000	16000	16000
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	۷	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	8	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	3	<1
Lead	ppm	ASTM D5185m	>40	8	2	2
Copper	ppm	ASTM D5185m	>330	A 730	3	2
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		6	7	4
Barium	ppm	ASTM D5185m		0	7	0
Molybdenum	ppm	ASTM D5185m		53	61	60
Molybdenum Manganese		ASTM D5185m ASTM D5185m		53 <1	61 0	60 0
-	ppm					
Manganese	ppm ppm	ASTM D5185m		<1	0	0
Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m		<1 649	0 849	0 860
Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		<1 649 1537	0 849 1085	0 860 1077
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 649 1537 1007	0 849 1085 1072	0 860 1077 959
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 649 1537 1007 1206	0 849 1085 1072 1182	0 860 1077 959 1133
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base >25	<1 649 1537 1007 1206 3498	0 849 1085 1072 1182 3182	0 860 1077 959 1133 2806
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		<1 649 1537 1007 1206 3498 current	0 849 1085 1072 1182 3182 history1	0 860 1077 959 1133 2806 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m		<1 649 1537 1007 1206 3498 current 3	0 849 1085 1072 1182 3182 history1 3	0 860 1077 959 1133 2806 history2 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25	<1 649 1537 1007 1206 3498 current 3 1	0 849 1085 1072 1182 3182 history1 3 <1	0 860 1077 959 1133 2806 history2 2 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm 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	>25	<1 649 1537 1007 1206 3498 <u>current</u> 3 1 <1	0 849 1085 1072 1182 3182 history1 3 <1 1	0 860 1077 959 1133 2806 history2 2 0 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol	ppm 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 D2982	>25 >20	<1 649 1537 1007 1206 3498 <u>current</u> 3 1 <1 <1 NEG	0 849 1085 1072 1182 3182 history1 3 <1 1 NEG	0 860 1077 959 1133 2806 history2 2 0 <1 NEG
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm 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 D2982 Method	>25 >20 limit/base >3	<1 649 1537 1007 1206 3498 current 3 1 <1 ×1 NEG current	0 849 1085 1072 1182 3182 history1 3 <1 1 NEG history1	0 860 1077 959 1133 2806 history2 2 0 <1 NEG history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm 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 D2982 method *ASTM D7844	>25 >20 limit/base >3 >20	<1 649 1537 1007 1206 3498 current 3 1 <1 <1 NEG current 0.3	0 849 1085 1072 1182 3182 history1 3 <1 1 NEG history1 0.2	0 860 1077 959 1133 2806 history2 2 0 <1 NEG history2 0.2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm 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 D2982 method *ASTM D7844 *ASTM D7844	>25 >20 limit/base >3 >20	<1 649 1537 1007 1206 3498 current 3 1 <1 <1 NEG current 0.3 8.4	0 849 1085 1072 1182 3182 history1 3 <1 1 NEG history1 0.2 6.5	0 860 1077 959 1133 2806 history2 2 0 <1 NEG history2 0.2 7.3
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm 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 D2982 *ASTM D2982 *ASTM D7844 *ASTM D7624	>25 >20 limit/base >3 >20 >30	<1 649 1537 1007 1206 3498 current 3 1 <1 <1 NEG current 0.3 8.4 18.2	0 849 1085 1072 1182 3182 history1 3 <1 1 NEG history1 0.2 6.5 18.4	0 860 1077 959 1133 2806 history2 2 0 <1 NEG history2 0.2 7.3 18.8



OIL ANALYSIS REPORT



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					Yellow Metal	scalar	*Visual	NONE		NONE		NON	IE		NO	NE			
					Precipitate	scalar	*Visual	NONE		NONE		NON	ΙE		NO	NE			
					Silt	scalar	*Visual	NONE		NONE		NON	IE		NO	NE			
					Debris	scalar	*Visual	NONE		NONE		NON	IE		NO	NE			
					Sand/Dirt	scalar	*Visual	NONE		NONE		NON	IE		NO	NE			
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May17/21	00	Feb	Sep2	Jun	Appearance Odor	scalar	*Visual	NORML		NORML	-	NOR	RML		NO	RML			
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inu)					Free Water	scalar	*Visual			NEG		NEG	à		NEC	3			
					FLUID PROP	PERTIES	method	limit/ba	ise	currer	nt	his	tory1		hi	story	2		
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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: BURELKMI [WUSCAR] 06202961 (Generated: 06/11/2024 16:07:20) Rev: 1

Sep 14/20 lec4/20

GITING

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Contact/Location: roger WILSON - BURELKMI