

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id

KENWORTH 3006

Diesel Engine Fluid DIESEL ENGINE OIL SAE 10W30 (40 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. 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		WC0906888	WC0906902	WC0663220
Sample Date		Client Info		20 May 2024	10 Apr 2024	31 Jan 2024
Machine Age	mls	Client Info		418634	410608	392803
Oil Age	mls	Client Info		48145	370488	22314
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	N	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	21	17	10
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	7	6	4
Lead	ppm	ASTM D5185m	>40	1	<1	0
Copper	ppm	ASTM D5185m	>330	13	24	2
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
	1.					
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES	ppm	ASTM D5185m method	limit/base	<1 current	0 history1	0 history2
	ppm ppm		limit/base 250			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m	250	current 24	history1 29	history2 28
ADDITIVES Boron	ppm	method ASTM D5185m ASTM D5185m	250 10	current 24 0	history1 29 0	history2 28 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	250 10	current 24 0 3	history1 29 0 <1	history2 28 0 <1
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	current 24 0 3 <1	history1 29 0 <1 <1	history2 28 0 <1 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	current 24 0 3 <1 735	history1 29 0 <1 <1 806	history2 28 0 <1 <1 732
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	current 24 0 3 <1 735 1469	history1 29 0 <1 <1 <1 806 1418	history2 28 0 <1 <1 <1 732 1314
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	Current 24 0 3 <1 735 1469 774	history1 29 0 <1 <1 806 1418 795	history2 28 0 <1 <1 <1 732 1314 716
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	current 24 0 3 <1 735 1469 774 828	history1 29 0 <1 <1 806 1418 795 890	history2 28 0 <1 <1 732 1314 716 820
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	Current 24 0 3 <1 735 1469 774 828 3285	history1 29 0 <1 <1 806 1418 795 890 3590	history2 28 0 <1 <1 732 1314 716 820 2902
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	current 24 0 3 <1 735 1469 774 828 3285 current	history1 29 0 <1 <1 806 1418 795 890 3590 history1	history2 28 0 <1 <1 732 1314 716 820 2902 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Chosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	current 24 0 3 <1 735 1469 774 828 3285 current 10	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	24 0 3 <1 735 1469 774 828 3285 current 10 4	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >20	current 24 0 3 <1 735 1469 774 828 3285 current 10 4 6	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4 7	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 -20 Imit/base	current 24 0 3 <1 735 1469 774 828 3285 current 10 4 6 current	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4 7 history1	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >20 Imit/base	current 24 0 3 <1 735 1469 774 828 3285 current 10 4 6 current 0.6	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4 7 history1 0.5	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2 4 history2 0.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 i mit/base >25 >20 i mit/base >3 >20	current 24 0 3 <1 735 1469 774 828 3285 current 10 4 6 current 0.6 10.6	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4 7 history1 0.5 10.5	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2 4 history2 0.3 9.9
ADDITIVES 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	method ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >25 imit/base >3 >20 >30	current 24 0 3 <1 735 1469 774 828 3285 current 10 4 6 current 0.6 10.6 25.4	history1 29 0 <1 <1 806 1418 795 890 3590 history1 11 4 7 history1 0.5 10.5 24.6	history2 28 0 <1 <1 732 1314 716 820 2902 history2 7 2 4 history2 0.3 9.9 21.8



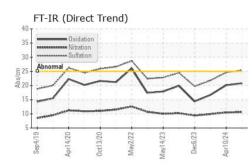
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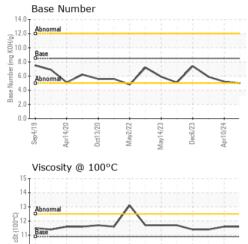
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OIL ANALYSIS REPORT





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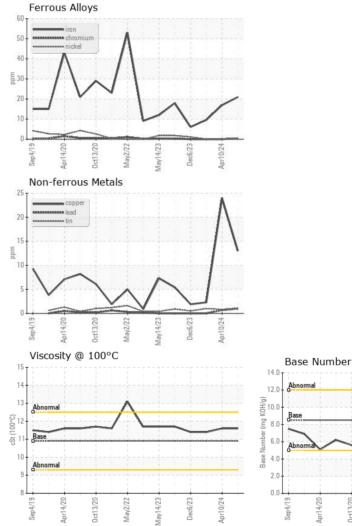
Dec6/23

Apr10/24

May14/23

VISUAL		method	limit/base	current	history1	history2
VISUAL		methou	IIIIII/base	Current	nistory i	mstoryz
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
		and a file state	11		In the second	la la tarra O
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	11.6	11.6	11.4

GRAPHS



May14/23 Dec6/23 Apr14/20 May2/22 Apr10/24

LTI/MILKY WAY - SUNNYSIDE Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0906888 Received : 29 May 2024 333 MIDVALE RD Lab Number : 06194872 Tested : 30 May 2024 SUNNYSIDE, WA Unique Number : 11056995 Diagnosed : 30 May 2024 - Wes Davis US 98944 Test Package : FLEET Contact: Barbara Kluever Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. bkluever@lynden.com T: (509)839-5844 * - 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) F: (509)839-6556

Contact/Location: Barbara Kluever - LTISUN

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