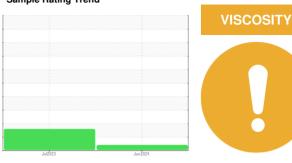


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

KENWORTH 611

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

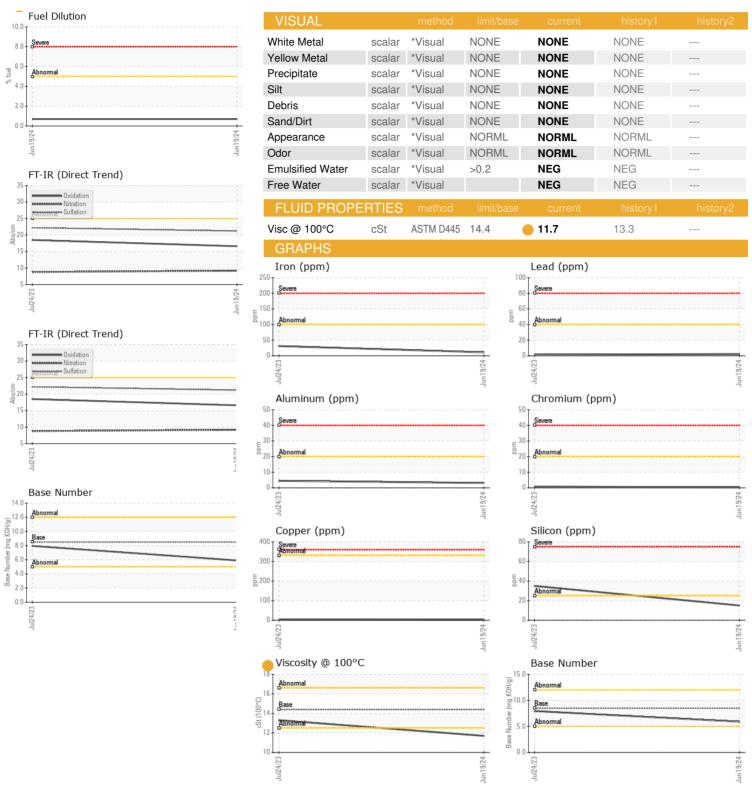
Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

			Jul2023	Jun2024		
SAMPLE INFOR	MATION	mothod	limit/base	ourrent	historya	hioton/2
	WATION		iiiiii/base	current	history1	history2
Sample Number		Client Info		PCA0127657	PCA0080999	
Sample Date		Client Info		19 Jun 2024	24 Jul 2023	
Machine Age	mls	Client Info		284754	230904	
Oil Age	mls	Client Info		50000	12000	
Oil Changed		Client Info		Changed	Changed	
Sample Status				ATTENTION	ABNORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	31	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	3	4	
Lead	ppm	ASTM D5185m	>40	2	2	
Copper	ppm	ASTM D5185m	>330	1	2	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 22	history1	history2
	ppm					
Boron		ASTM D5185m	250	22	4	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	22 0	4 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	22 0 13	4 0 78	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	22 0 13 <1	4 0 78 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	22 0 13 <1 821	4 0 78 <1 1210	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	22 0 13 <1 821 1487	4 0 78 <1 1210 1423	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	22 0 13 <1 821 1487 842	4 0 78 <1 1210 1423 1311	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	22 0 13 <1 821 1487 842 994	4 0 78 <1 1210 1423 1311 1615	
Boron Barium Molybdenum 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 ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	22 0 13 <1 821 1487 842 994 3763	4 0 78 <1 1210 1423 1311 1615 3951	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	22 0 13 <1 821 1487 842 994 3763 current	4 0 78 <1 1210 1423 1311 1615 3951 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	22 0 13 <1 821 1487 842 994 3763 current	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	22 0 13 <1 821 1487 842 994 3763 current 15 2	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	22 0 13 <1 821 1487 842 994 3763 current 15 2 7	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5 <1.0	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5 <1.0	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7 current	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5 <1.0 history1 0.3	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7 current 0.2 9.2	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5 <1.0 history1 0.3 8.8	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base >3 >20 >30 limit/base	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7 current 0.2 9.2 21.2 current	4 0 78 <1 1210 1423 1311 1615 3951 history1 △ 35 9 5 <1.0 history1 0.3 8.8 22.2 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base >3 >20 >30	22 0 13 <1 821 1487 842 994 3763 current 15 2 7 0.7 current 0.2 9.2 21.2	4 0 78 <1 1210 1423 1311 1615 3951 history1 ▲ 35 9 5 <1.0 history1 0.3 8.8 22.2	history2 history2 history2 history2



OIL ANALYSIS REPORT





Certificate 12367

Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0127657 Lab Number : 06219028

Unique Number : 11097225

Tested Diagnosed

Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

 st - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

CENTRAL VALLEY AG

5707 LANGWORTH OAKDALE, CA US 95361

Contact: S MCHENRY smchenry@cv-ag.com T: (209)630-8094

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Received

: 24 Jun 2024

: 27 Jun 2024

: 27 Jun 2024 - Don Baldridge