

OIL ANALYSIS REPORT



Machine Id SE4 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

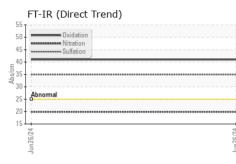
Fluid Condition

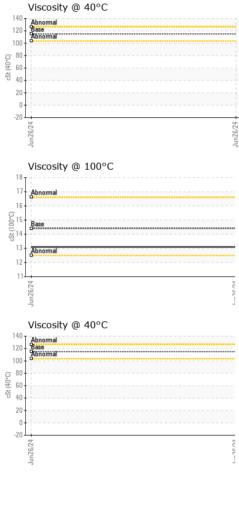
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0087878		
Sample Date		Client Info		26 Jun 2024		
Machine Age	mls	Client Info		44093		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	207		
Chromium	ppm	ASTM D5185m	>20	5		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	13		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	9		
Tin	ppm	ASTM D5185m	>15	1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250	current 23	history1	history2
	ppm ppm				· · · · ·	
Boron		ASTM D5185m	250	23		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	23 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	23 0 47		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	23 0 47 4		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	23 0 47 4 534		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	23 0 47 4 534 1606		
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	250 10 100 450 3000 1150	23 0 47 4 534 1606 727	 	
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	250 10 100 450 3000 1150 1350	23 0 47 4 534 1606 727 932		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	23 0 47 4 534 1606 727 932 2429 current 17		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	250 10 100 450 3000 1150 1350 4250	23 0 47 4 534 1606 727 932 2429 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	23 0 47 4 534 1606 727 932 2429 current 17	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	23 0 47 4 534 1606 727 932 2429 current 17 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	23 0 47 4 534 1606 727 932 2429 current 17 5 20	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 Imit/base	23 0 47 4 534 1606 727 932 2429 current 17 5 20 current	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 Imit/base >3	23 0 47 4 534 1606 727 932 2429 current 17 5 20 current 2.5	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm t ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20	23 0 47 4 534 1606 727 932 2429 current 17 5 20 current 2.5 19.9	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm t ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20	23 0 47 4 534 1606 727 932 2429 current 17 5 20 current 2.5 19.9 34.9	 history1 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7615	250 10 100 450 3000 1150 1350 4250 Iimit/base >25 >158 >20 Iimit/base >3 >20 >30	23 0 47 4 534 1606 727 932 2429 current 17 5 20 current 2.5 19.9 34.9 current	 history1 history1 history1 history1	 history2 history2 history2 history2



OIL ANALYSIS REPORT





Wh	ISUAL		method	limit/base	current	history1	histo
	ite Metal	scalar	*Visual	NONE	NONE		
Yel	low Metal	scalar	*Visual	NONE	NONE		
Pre	cipitate	scalar	*Visual	NONE	NONE		
Silt		scalar	*Visual	NONE	NONE		
Deb	oris	scalar	*Visual	NONE	NONE		
Sar	nd/Dirt	scalar	*Visual	NONE	NONE		
Apr	pearance	scalar	*Visual	NORML	NORML		
Odd		scalar	*Visual	NORML	NORML		
Em	ulsified Water	scalar	*Visual	>0.2	NEG		
Fre	e Water	scalar	*Visual		NEG		
F	LUID PROPE	RTIES	method	limit/base	current	history1	histo
Vis	c @ 100°C	cSt	ASTM D445	14.4	13.1		
G	RAPHS						
	errous Alloys						
²⁵⁰ T							
200	iron chromium						
200 -	nickel						
150 -							
mqq							
100-							
50 -							
50							
0							
Jun26/24				Jun26/24			
ղոր				Jun			
	on-ferrous Metal	S					
¹⁰ T	copper						
8-	interesting lead						
1	un						
6							
bbm							
4							
4 - 2 -							
4 2 0				24			
4 2 0				Jun26/24			
2 0 4 4 4 4 4 6 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 9 7 9 9 7 9	iscosity @ 100°C			Jun26/24	Rase Number		
4 2 0 42/97	iscosity @ 100°C			14.0	Base Number		
2 0 4 2 0 4 4 0 4 7 0 4 7 0 4 7 0 7 0 7 0 7 0 7	iscosity @ 100°C			14.0-	Base Number		
4 2 0 4 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2		;		14.0-			
4 2 0 4 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7	bnormal			14.0-			
4 2 0 4 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2		;		14.0-	Abnormal Base		
4 2 0 4 2 0 4 2 9 2 0 7 2 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 9 2 10 7 9 2 9 2 10 7 9 2 9 2 10 9 2 10 10 10 10 10 10 10 10 10 10 10 10 10	bnormal ase	:		14.0-			
4 2 4 2 4 4 4 4 4 4 4 4 4 520g2unr V V 18 16 16 (0,001) 39 4 4 13 4 4	bnormal	:		14.0 12.0- (DH 10.0- Bu) 8.0- Bu) 8.0- Buy 8.0-	Abnormal Base		
4 2 0 4 2 0 4 2 9 2 0 7 2 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 9 2 10 7 9 2 9 2 10 7 9 2 9 2 10 9 2 10 10 10 10 10 10 10 10 10 10 10 10 10	bnormal ase			14.0- 12.0- (⁰ H10.0- W) 8.0- - 	Abnormal Base		
4 2 4 0 6 7 8 7 8 17 16 16 15 16 13 4 4 13 4 2 12 11	bnormal ase			14.0 12.0 () () () () () () () () () () () () ()	Abnormal Base Abnormal		
4 2 4 0 6 7 8 7 8 17 16 16 15 16 13 4 4 13 4 2 12 11	bnormal ase			14.0 12.0 () () () () () () () () () () () () ()	Abnormal Base Abnormal		
4 2 +2/92/unr 18 17 16 (0-001) 83 14 13 12	bnormal ase			14.0- 12.0- (⁰ H10.0- W) 8.0- - 	Abnormal Base		
4 2 4 2 4 2 4 2 4 2 9 2 0 4 2 9 2 0 7 7 7 4 6 15 15 16 15 16 16 15 16 16 16 16 16 16 16 16 16 16 16 16 16	bnormal			14.0 12.0 (0)HO10.0 (0)HO1	Abnormal Base Abnormal		
4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 9 2 0 4 2 9 2 0 7 8 2 9 2 0 7 8 2 9 2 0 7 9 2 0 7 9 2 0 7 9 2 0 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9	bnormal bnormal rCheck USA - 50	1 Madiso		14.0- 12.0- (0)HO10.0-	Abnormal Base Abnormal	LUCI	
4 2 0 +2020m Vi 18 17 16 10 10 10 10 10 10 10 10 10 10	bnormal bnormal rCheck USA - 50 0087878	1 Madiso Recei	ved : 01	14.0- 12.0- (0)H10.0- (0)H	Abnormal Base Abnormal		NI BUS L 900 EL
4 2 4 2 4 2 4 2 4 2 4 2 4 2 9 2 0 4 2 9 2 0 7 8 2 9 2 0 7 8 7 9 2 0 1 7 7 8 7 9 2 0 1 7 9 2 0 1 7 9 2 0 1 7 9 2 9 2 1 1 7 9 2 9 2 1 1 7 9 2 9 2 1 1 7 9 2 9 2 1 1 7 9 2 9 1 1 9 2 9 2 1 1 7 9 2 1 1 9 2 1 1 9 2 1 1 1 1 1 1 1 1 1 1	bnormal bnormal rCheck USA - 50 0087878 25611	1 Madiso	ved : 01 d : 03	14.0- 12.0- (0)HO10.0-	Abnormal Base Abnormal		

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)

Certificate L2367

Contact/Location: Service Manager - LUCBRI Page 2 of 2

T:

F: