

OIL ANALYSIS REPORT

Sample Rating Trend







Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Machine Id 3046331

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

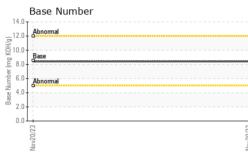
Fluid Condition

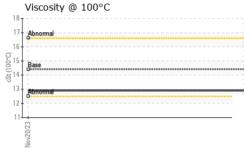
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853534		
Sample Date		Client Info		20 Nov 2023		
Machine Age	hrs	Client Info		1031		
Oil Age	hrs	Client Info		150		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	4		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>4	1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	6		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	2		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	397		
Barium	ppm	ASTM D5185m	10	0		
Molybdenum	ppm	ASTM D5185m	100	72		
Manganese	ppm	ASTM D5185m		<1		
Magnesium						
	ppm	ASTM D5185m	450	371		
Calcium	ppm ppm	ASTM D5185m ASTM D5185m	450 3000			
Calcium Phosphorus				371		
	ppm	ASTM D5185m	3000	371 1283		
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	3000 1150	371 1283 1061		
Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	371 1283 1061 1175		
Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250	371 1283 1061 1175 3265	 	
Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base	371 1283 1061 1175 3265 current	 history1	 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base >25	371 1283 1061 1175 3265 current 8	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >216	371 1283 1061 1175 3265 current 8 1 2 current	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	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	3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	371 1283 1061 1175 3265 current 8 1 2 current 0.1	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	371 1283 1061 1175 3265 current 8 1 2 current	 history1 history1	 history2 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	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	3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3	371 1283 1061 1175 3265 current 8 1 2 current 0.1	 history1 history1 	 history2 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 imit/base >25 >216 >20 imit/base >3 >20	371 1283 1061 1175 3265 current 8 1 2 current 0.1 4.6	 history1 history1 	 history2 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30	371 1283 1061 1175 3265 current 8 1 2 current 0.1 4.6 18.3	 history1 history1 history1	 history2 history2 history2



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	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
Nov20/23	Appearance	scalar	*Visual	NORML	NORML		
Novi	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	14.4	12.9		
	GRAPHS						
	Ferrous Alloys						
	10iron]						
	8 - necessaries chromium						
	u dd						
	4						
	2						
	2						
	0		**********************				
	Nov20/23			Nov20/23			
	Nov			Nov			
	Non-ferrous Meta	als					
	10 copper						
	8 - Internet in the second sec						
	6						
	4						
	2-						
	0						
	53			23			
	/0			0			
	Nov20/23			Nov20/23			
	– Viscosity @ 100°	С		~	Base Number		
	Viscosity @ 100°	С		14.0			
	Viscosity @ 100°	C		14.0	Base Number		
	Viscosity @ 100°	С		14.0	Abnormal		
	Viscosity @ 100°	C		14.0			
	Viscosity @ 100°	с		14.0	Abnormal		
	Viscosity @ 100° ¹⁸ ¹⁷ ⁴⁰ ¹⁸ ¹⁶ ¹⁶ ¹⁶ ¹⁵ ⁸ ⁸ ⁸ ⁸ ¹⁷ ⁸ ⁸ ¹⁸ ¹⁸ ¹⁰ ⁸ ¹⁰ 	C		14.0	Abnormal		
	Viscosity @ 100°	C		14.0	Abnormal		
	Viscosity @ 100° ¹⁸ ¹⁷ ^{Abnormal} ¹⁶ ¹⁶ ¹⁵ ^{Base} ³¹ ⁴ ¹⁶ ¹⁷ ⁴ ¹⁸ ¹⁷ ⁴ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁰ ¹⁸ ¹⁰ 	C		14.0 12.0 (0)(10.0 bu) 8.0 augumny 8.0 aug	Abnormal		
	Viscosity @ 100° ¹⁸ ¹⁷ ^{Abnormal} ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁷ ¹⁶ ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰	C		2 14.0 12.0 (0)(10.0 10.0	Abnormal Base Abnormal		
	Viscosity @ 100° ¹⁸ ¹⁷ ^{Abnormal} ¹⁶ ¹⁶ ¹⁵ ^{Base} ³¹ ⁴ ¹⁶ ¹⁷ ⁴ ¹⁸ ¹⁷ ⁴ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁰ ¹⁸ ¹⁰ 	C		2 14.0 12.0 (0)HOX 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Abnormal		
	Viscosity @ 100° Viscosity @ 100° 18 17 Abnormal 16 10 10 10 10 10 10 10 10 10 10			14.0 12.0 12.0 (0,100) 10,00 10,	Abnormal Base Abnormal		
Laboratory	Viscosity @ 100° ¹⁸ ¹⁷ ^{Abnormal} ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁶ ¹⁷ ^{Base} ¹⁸ ¹⁷ ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰			14.0 12.0 12.0 (0,100) 10,00 10,	Abnormal Base Abnormal	ABLE TOOL 8	
	Viscosity @ 100° Viscosity @ 100° Abnomal Base Base 13 Base 14 13 Base 14 13 14 13 14 13 14 13 14 15 16 13 14 15 16 13 14 15 16 10 10 16 16 17 18 10 10 10 10 10 10 10 10 10 10	501 Madis	d : 27 M	14.0 12.0 10,0	Abnormal Base Abnormal	ABLE TOOL & 410 BURN	& EQUIPMEN IHAM STREE
Laboratory Sample No. Lab Number Unique Number	Viscosity @ 100° Viscosity @ 100° Abnomal Abnomal Base 314 13 Base 14 13 Base 14 13 14 13 14 13 14 13 14 13 14 14 15 16 15 16 16 16 16 16 16 16 16 16 16	501 Madis Received	d : 27 M ed : 29 M	14.0 12.0 10,100 10,	Abnormal Base Abnormal	ABLE TOOL & 410 BURN SOUTH	& EQUIPMEN IHAM STREE WINDSOR, C US 0607
Laboratory Sample No. Lab Number	Viscosity @ 100° ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁶ ¹⁶ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁸ ¹⁰ ¹⁰ ¹⁸ ¹⁰ ¹⁰ ¹⁰ ¹⁰ ¹⁰ ¹¹ ¹⁰ ¹⁰ ¹¹ ¹⁰ ¹⁰ ¹¹ ¹¹ ¹⁰ ¹⁰ ¹¹	501 Madis Received Diagnose Diagnost	d : 27 f ed : 29 f iician : Jon	ry, NC 27513 Nov 2023 athan Hester	Abnormal Base Abnormal	ABLE TOOL & 410 BURN SOUTH Contact: Se	& EQUIPMEN IHAM STREE WINDSOR, (

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

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