

## **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id 8317559 Component **Diesel Engine DIESEL ENGINE OIL SAE 30 (--- QTS)** 

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm. Please specify the component make and model with your next sample.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

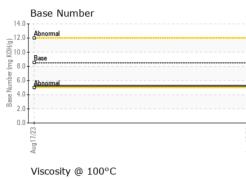
#### Fluid Condition

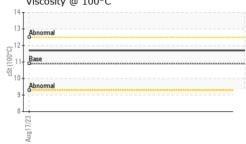
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		IL05967531		
Sample Date		Client Info		17 Aug 2023		
Machine Age	mls	Client Info		39887		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	90		
Chromium	ppm	ASTM D5185m	>20	3		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	16		
Lead	ppm	ASTM D5185m	>40	12		
Copper	ppm	ASTM D5185m	>330	18		
Tin	ppm	ASTM D5185m	>15	5		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	20		
Barium	ppm	ASTM D5185m	10	0		
Molybdenum	ppm	ASTM D5185m	100	64		
Manganese	ppm	ASTM D5185m		6		
Magnesium	ppm	ASTM D5185m	450	456		
Calcium	ppm	ASTM D5185m	3000	1761		
Phosphorus	ppm	ASTM D5185m	1150	938		
Zinc	ppm	ASTM D5185m	1350	1238		
Sulfur	ppm	ASTM D5185m	4250	2748		
CONTAMINANTS	;	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	42		
Sodium	ppm	ASTM D5185m	>75	4		
Potassium	ppm	ASTM D5185m	>20	53		
Fuel	%	ASTM D3524	>5	<1.0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5		
Nitration	Abs/cm	*ASTM D7624	>20	11.3		
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.5		
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.2		



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	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		
/23 +	Appearance	scalar	*Visual	NORML	NORML		
Aug17/23	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual	20.L	NEG		
					NEG		
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	10.9	11.7		
	GRAPHS						
	Ferrous Alloys						
	80 - iron						
	70 - nickel						
	60						
E	50 - 40 -						
	20						
	10						
	0						
	7/23			Aug17/23			
	Aug 17/23			Aug1			
	Non-ferrous Metal	s					
	<sup>18</sup> L			-			
	16 - copper						
	14 tin						
	12 -						
	10			1			
E	10						
	10						
uuq	10 8 6 4						
	10						
uud	6						
				17/23			
	6			Aug17/23			
	Viscosity @ 100°C			Aug17/23	Base Number		
uug	6 4 2 0 EZ[[1] <sup>Bm</sup> Viscosity @ 100°C			14.0			
U	Viscosity @ 100°C			14.0			
	6 4 2 4 2 4 5 2 4 5 2 4 4 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5			14.0			
	6 4 2 4 2 4 5 2 4 5 2 4 4 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5			14.0			
(1-001) 15: 10: 10: 10: 10: 10: 10: 10: 10: 10: 10	6 4 2 4 2 4 5 2 4 5 2 4 4 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 2 4 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5			14.0	Abnormal Base		
	Viscosity @ 100°C			14.0			
	Viscosity @ 100°C			14.0 12.0 (B/HO) 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Abnormal Base		
	6 4 2 4 2 4 4 2 4 4 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4			14.0- 12.0- (0)110.0- WOX Bu 8.0- 9 4.0- 9 4.0- 2.0-	Abnormal Base		
	6 4 2 4 2 4 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4			14.0 12.0 (0)H110.0 (0)H100.0 (0)H10	Abnormal Base Abnormal		
	6 4 2 4 2 4 4 2 4 4 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4			14.0- 12.0- 12.0- 10.0-1	Abnormal Base		

\* - Denotes test metho Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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