

OIL ANALYSIS REPORT



Machine Id 373048S

Component Diesel Engine Fluid SHELL ROTELLA T 15W40 (--- QTS)

DIAGNOSIS

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.

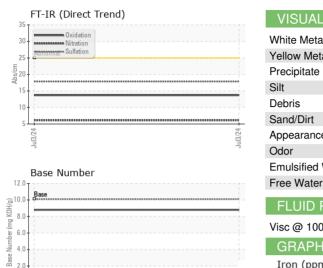
Fluid Condition

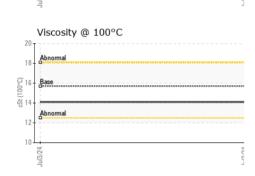
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0028979		
Sample Date		Client Info		03 Jul 2024		
Machine Age	mls	Client Info		695		
Oil Age	mls	Client Info		12		
Oil Changed		Client Info		Changed		
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	8		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>20	2		
Titanium	ppm	ASTM D5185m	~	2		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	4		
Tin	ppm	ASTM D5185m	>15	۰ ۱		
Vanadium	ppm	ASTM D5185m	210	<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	nom	ASTM D5185m	316	15		
Barium	ppm	ASTM D5185m	0.0	0		
Molybdenum	ppm	ASTM D5185m	1.2	66		
Manganese	ppm ppm	ASTM D5185m	1.2	<1		
Magnesium		ASTM D5185m	24	789		
Calcium	ppm ppm	ASTM D5185m	2292	1329		
Phosphorus	ppm	ASTM D5185m	1064	1055		
Zinc	ppm	ASTM D5185m	1160	1273		
Sulfur	ppm	ASTM D5185m	4996	3350		
CONTAMINAN		method	limit/base	current	history1	history2
	10	monou				motoryz
0''''			05	-		
Silicon	ppm	ASTM D5185m	>25	5		
Sodium	ppm	ASTM D5185m		2		
Sodium Potassium		ASTM D5185m ASTM D5185m	>20	2 2		
Sodium Potassium INFRA-RED	ppm ppm	ASTM D5185m ASTM D5185m method	>20 limit/base	2 2 current		
Sodium Potassium INFRA-RED Soot %	ppm ppm	ASTM D5185m ASTM D5185m method *ASTM D7844	>20 limit/base >3	2 2 current 0.1		
Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm % Abs/cm	ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624	>20 limit/base >3 >20	2 2 current 0.1 6.1	 history1	 history2
Sodium Potassium INFRA-RED Soot %	ppm ppm	ASTM D5185m ASTM D5185m method *ASTM D7844	>20 limit/base >3	2 2 current 0.1	 history1	 history2
Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624	>20 limit/base >3 >20	2 2 current 0.1 6.1	 history1 	 history2
Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>20 limit/base >3 >20 >30	2 2 current 0.1 6.1 17.8	 history1 	 history2

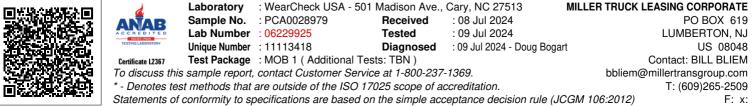


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VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.1		
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
50 Severe			100	Severe		
			00			
0 - Abnormal			e 40	Abnormal		
0			20			
Jul3/24			Jul3/24	Jul3/24		
⊰ Aluminum (ppm)			۲ ۲	ے Chromium (pj	om)	
Severe			50	TC		
10 Severe			40	Severe		
0 Abnormal			³⁰ 20	Abnormal		
0-			10			
04			0	42		
Jul3/24			Jul3/24 .	Jul3/24		
Copper (ppm)			80	Silicon (ppm)		
Abnormal				Severe		
0			60			
0			톱 40	Abnormal		
0-			20			
0			0			
Jul3/24			Jul3/24	Jul3/24		
っ Viscosity @ 100°C			7	⊸ Base Number		
			12.0	т		
			(8) HOX 10.0 B (8) J (8) B (8)			
6 - Base			E 6.0			
4 - Abnormal			4.0			
2			巖 2.0			
Jul3/24 0			Jul3/24	Jul3/24		
2			23	[]		



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Contact/Location: BILL BLIEM - MILLUM