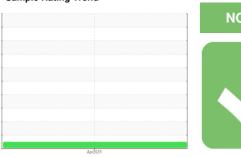


# **OIL ANALYSIS REPORT**

Sample Rating Trend







130 Component Diesel Engine

Machine Id

SHELL ROTELLA T4 10W30 (--- GAL)

#### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil.

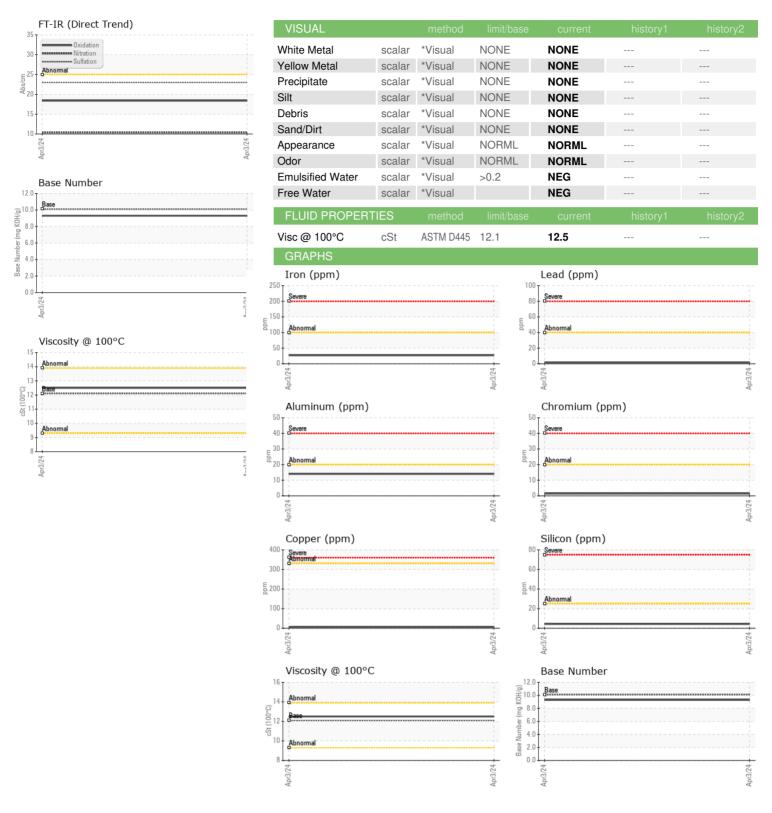
## **Fluid Condition**

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

SAMPLE INFORMATION   method   limit/base   current   history1   history2					Apr2024		
Sample Number   Client Info   RW0004969					Aprzuz4		
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Client Info	Sample Number		Client Info		RW0004969		
Machine Age   mls   Client Info   0   0   0   0   0   0   0   0   0			Client Info		03 Apr 2024		
Oil Age         mls         Client Info         0	•	mls	Client Info		-		
CONTAMINATION   method   limit/base   current   history1   history2		mls	Client Info		0		
CONTAMINATION   method   limit/base   current   history1   history2	Oil Changed		Client Info		Changed		
Fuel	Sample Status				NORMAL		
Water Glycol         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         27             Chromium         ppm         ASTM D5185m         >20         1             Nickel         ppm         ASTM D5185m         >4         <1             Silver         ppm         ASTM D5185m         >4         <1             Silver         ppm         ASTM D5185m         >4         1             Silver         ppm         ASTM D5185m         >20         14             Silver         ppm         ASTM D5185m         >40         1             Aluminum         ppm         ASTM D5185m         >40         1             Copper         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         0	CONTAMINATION	1	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS	Water		WC Method	>0.2	NEG		
Irron	Glycol		WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	lron	ppm	ASTM D5185m	>100	27		
STIME	Chromium	ppm	ASTM D5185m	>20	1		
Silver	Nickel	ppm	ASTM D5185m	>4	<1		
Aluminum	Titanium	ppm	ASTM D5185m		<1		
Lead	Silver	ppm	ASTM D5185m	>3	0		
Copper         ppm         ASTM D5185m         >330         7             Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>20	14		
Tin	Lead	ppm	ASTM D5185m	>40	1		
Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         37             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         58             Manganese         ppm         ASTM D5185m         524             Magnesium         ppm         ASTM D5185m         2278             Calcium         ppm         ASTM D5185m         1240             Phosphorus         ppm         ASTM D5185m         1604             Zinc         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Sodium         ppm         ASTM D5185m         >20         0 </td <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;330</td> <th>7</th> <td></td> <td></td>	Copper	ppm	ASTM D5185m	>330	7		
ADDITIVES	Tin	ppm	ASTM D5185m	>15			
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1		
Boron	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         58             Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         524             Calcium         ppm         ASTM D5185m         2278             Phosphorus         ppm         ASTM D5185m         1240             Zinc         ppm         ASTM D5185m         1604             Sulfur         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         0             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D784	Boron	ppm	ASTM D5185m		37		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         524             Calcium         ppm         ASTM D5185m         2278             Phosphorus         ppm         ASTM D5185m         1240             Zinc         ppm         ASTM D5185m         1604             Sulfur         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         0             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration	Barium	ppm	ASTM D5185m		0		
Magnesium         ppm         ASTM D5185m         524             Calcium         ppm         ASTM D5185m         2278             Phosphorus         ppm         ASTM D5185m         1240             Zinc         ppm         ASTM D5185m         1604             Sulfur         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         0             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0	Molybdenum	ppm	ASTM D5185m		58		
Calcium         ppm         ASTM D5185m         2278             Phosphorus         ppm         ASTM D5185m         1240             Zinc         ppm         ASTM D5185m         1604             Sulfur         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         0             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/:nm         *ASTM D7624         >20         10.4             Sulfation         Abs/:nm         *ASTM D7415         >30         23.0 <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>&lt;1</th> <td></td> <td></td>	Manganese	ppm	ASTM D5185m		<1		
Phosphorus	Magnesium	ppm	ASTM D5185m		524		
Table   Tabl	Calcium	ppm	ASTM D5185m		2278		
Sulfur         ppm         ASTM D5185m         4627             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         <1             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/.1mm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.4	Phosphorus	ppm	ASTM D5185m		1240		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         <1	Zinc	ppm	ASTM D5185m		1604		
Silicon   ppm   ASTM D5185m   >25   4	Sulfur	ppm	ASTM D5185m		4627		
Sodium         ppm         ASTM D5185m         <1             Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.4	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         0             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.1             Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.4	Silicon	ppm	ASTM D5185m	>25	4		
INFRA-RED	Sodium	ppm	ASTM D5185m		<1		
Soot %         %         *ASTM D7844 >3         1.1             Nitration         Abs/cm         *ASTM D7624 >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415 >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         18.4	Potassium	ppm	ASTM D5185m	>20	0		
Nitration         Abs/cm         *ASTM D7624         >20         10.4             Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         23.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.4	Soot %	%	*ASTM D7844	>3	1.1		
FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 18.4	Nitration	Abs/cm	*ASTM D7624	>20	10.4		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896   10.1 9.30	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4		
	Base Number (BN)	mg KOH/g	ASTM D2896	10.1	9.30		



## **OIL ANALYSIS REPORT**





Certificate 12367

Laboratory Sample No.

Lab Number : 06146731 Unique Number : 10976809

: RW0004969 Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Apr 2024 **Tested** 

Diagnosed

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

: 15 Apr 2024 : 15 Apr 2024 - Wes Davis

US 48706 Contact: SERVICE MANAGER mechanics@dobsonindustrial.com T: (989)684-7131

Contact/Location: SERVICE MANAGER - DOBBAY

**DOBSON INDUSTRIAL** 

3660 N EUCLID AVE

BAY CITY, MI

\* - 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)