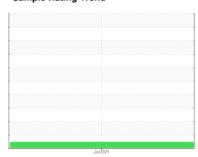


# **OIL ANALYSIS REPORT**

Sample Rating Trend



NORMAL



Machine Id
21901
Component
Diesel Engine

SHELL ROTELLA T3 15W40 (--- LTR)

### 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

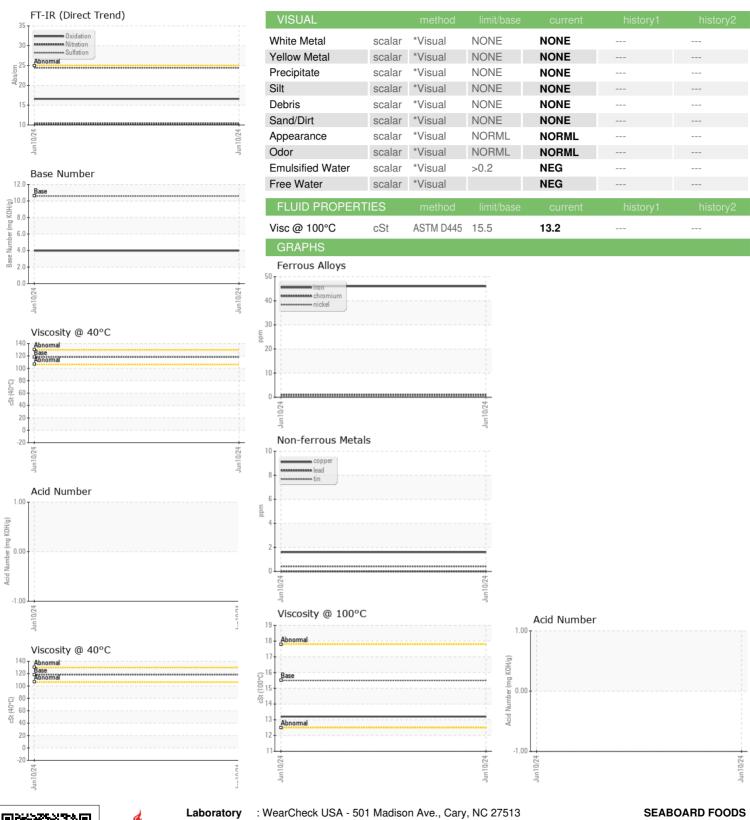
## **Fluid Condition**

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

Chromium					Jun2024		
Sample Number   Client Info   WC0952251	SAMPLE INFORM	MATION	method	limit/hase	current	history1	history2
Client Info		M/THOIN		IIIIIIIIII			
Machine Age							
Oil Age         hrs         Client Info         400		laua					
Contamped   Client Info   Changed   Client Info   NORMAL   Contamped   Conta							
CONTAMINATION   method   limit/base   current   history1   history2	-	IIIS					
Fuel			Ciletit IIIIO				
Fuel	•						
Water         WC Method         >0.2         NEG             Glycol         WC Method         Imitibase         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         46             Chromium         ppm         ASTM D5185m         >20         1             Nickel         ppm         ASTM D5185m         >4         <1             Sliver         ppm         ASTM D5185m         >4         <1             Sliver         ppm         ASTM D5185m         >40         0             Sliver         ppm         ASTM D5185m         >40         0             Aluminum         ppm         ASTM D5185m         >40         0             Copper         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         >10         2         <		N				history1	history2
WEAR METALS							
WEAR METALS				>0.2			
Iron			WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100			
Titanium		ppm		>20	1		
Silver	Nickel	ppm		>4			
Aluminum		ppm					
Lead							
Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1		ppm			-		
Tin							
Vanadium         ppm         ASTM D5185m         <1             Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         10         2             Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         10         4             Manganese         ppm         ASTM D5185m         10         39             Magnesium         ppm         ASTM D5185m         2600         21399             Calcium         ppm         ASTM D5185m         2600         21399             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         25         4         <	• •				_		
Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         10         2             Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         10         4             Manganese         ppm         ASTM D5185m         10         39             Magnesium         ppm         ASTM D5185m         10         39             Calcium         ppm         ASTM D5185m         2600         2139             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         22             Sodium         ppm         ASTM D5185m         22				>15			
ADDITIVES							
Boron	Cadmium	ppm	ASTM D5185m		<1		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         10         4             Manganese         ppm         ASTM D5185m         10         39             Magnesium         ppm         ASTM D5185m         10         39             Calcium         ppm         ASTM D5185m         2600         2139             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         22             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         2             INFRA-RED         method         limit/base         current         history1	Boron	ppm	ASTM D5185m	10	2		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         10         39             Calcium         ppm         ASTM D5185m         2600         2139             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5	Barium	ppm	ASTM D5185m	0	0		
Magnesium         ppm         ASTM D5185m         10         39             Calcium         ppm         ASTM D5185m         2600         2139             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30	Molybdenum	ppm	ASTM D5185m	10	4		
Calcium         ppm         ASTM D5185m         2600         2139             Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/.mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base <t< td=""><td>•</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>&lt;1</td><td></td><td></td></t<>	•	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         1050         778             Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base	•	ppm	ASTM D5185m				
Zinc         ppm         ASTM D5185m         1250         1021             Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         <		ppm	ASTM D5185m	2600			
Sulfur         ppm         ASTM D5185m         3900         3854             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	•	ppm					
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	-	ppm			-		
Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	Sulfur	ppm	ASTM D5185m	3900	3854		
Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         1.5             Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	Silicon	ppm		>25			
INFRA-RED	Sodium	ppm	ASTM D5185m		2		
Soot %         %         *ASTM D7844 >3         1.5             Nitration         Abs/cm         *ASTM D7624 >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415 >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         16.6	Potassium	ppm	ASTM D5185m	>20	3		
Nitration         Abs/cm         *ASTM D7624         >20         10.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         24.4             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         16.6	Soot %	%	*ASTM D7844	>3	1.5		
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.6	Nitration	Abs/cm	*ASTM D7624	>20	10.3		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4		
	FLUID DEGRADA	TION _	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6		



## **OIL ANALYSIS REPORT**





Certificate 12367

Sample No.

Lab Number : 06206760 Unique Number : 11074221

: WC0952251

Received : 11 Jun 2024 **Tested** Diagnosed

: 13 Jun 2024 : 13 Jun 2024 - Sean Felton Test Package : IND 2 ( Additional Tests: KV40, TAN Man )

2700 NE 28TH ST GUYMON, OK US 73942 Contact: RICK SAPPINGTON

rick\_sappington@seaboardfoods.com

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)

Report Id: SEAGUYOK [WUSCAR] 06206760 (Generated: 06/15/2024 08:24:02) Rev: 1

Contact/Location: RICK SAPPINGTON - SEAGUYOK

T:

F: