

PROBLEM SUMMARY

Sample Rating Trend

FUEL

Junta23

Junta23

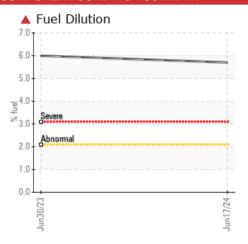
Machine Id

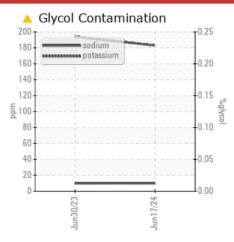
124-174
Component

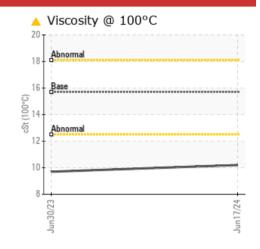
Diesel Engine

SHELL ROTELLA T 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE	SEVERE			
Potassium	ppm	ASTM D5185m	>20	183	194			
Fuel	%	ASTM D3524	>2.1	5.7	▲ 6.0			
Visc @ 100°C	cSt	ASTM D445	15.7	10.2	9.7			

Customer Id: GARSEA Sample No.: PE0003092 Lab Number: 06220570 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED A	CTIONS			
Action	Status	Date	Done By	Description
Change Fluid			?	Oil and filter change at the time of sampling has been noted.
Change Filter			?	Oil and filter change at the time of sampling has been noted.
Resample			?	We recommend an early resample to monitor this condition.
Check Fuel/injector System			?	We advise that you check the fuel injection system.
Check Glycol Access			?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

FUEL



30 Jun 2023 Diag: Doug Bogart

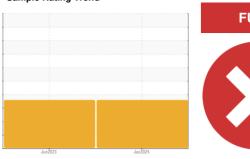
We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Metal levels are typical for a new component breaking in. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Test for glycol is negative. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.





OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

124-174
Component

Diesel Engine

SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain high. There is a high amount of fuel present in the oil.

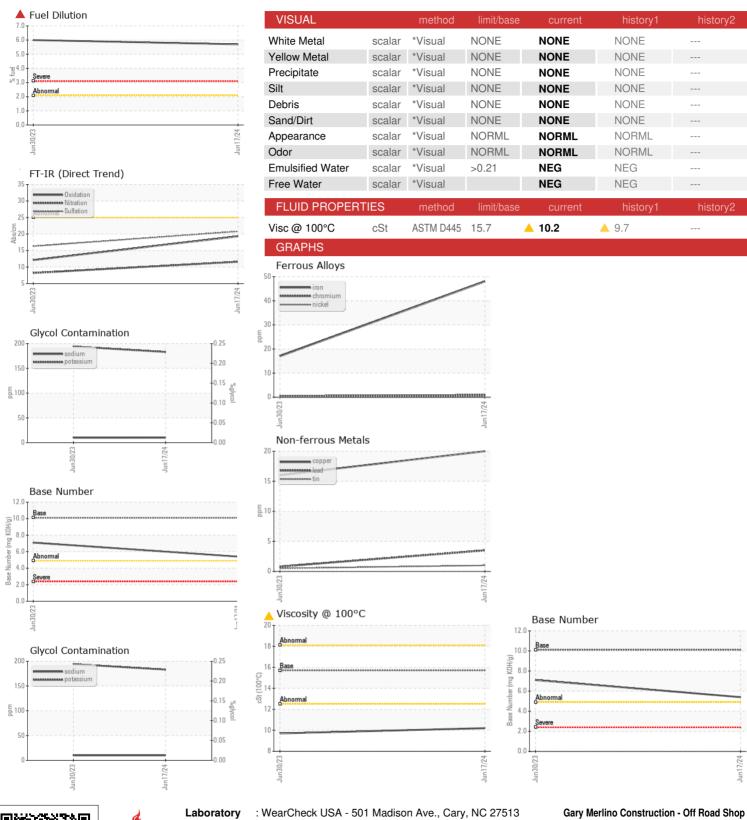
Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info PE0003092 PE0001397				Jun 2023	Jun 2024		
Sample Number Client Info PE0003092 PE0001397				SUILULU	OUNLOLI		
Sample Date Client Info 17 Jun 2024 30 Jun 2023	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 824 211	Sample Number		Client Info		PE0003092	PE0001397	
Oil Age hrs Client Info 824 211 Oil Changed Client Info Changed Not Changd Sample Status SEVERE SEVERE CONTAMINATION method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 48 17 Iron ppm ASTM D5185m >51 48 17 Iron ppm ASTM D5185m >5 0 0 Iron ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >3 0 0 Aluminum ppm ASTM D5185m >3 0 0 Silver ppm ASTM D5185m >31 5 3 Lead	Sample Date		Client Info		17 Jun 2024	30 Jun 2023	
Contament	Machine Age	hrs	Client Info		824	211	
CONTAMINATION method fimit/base current history1 history2	-	hrs	Client Info		-		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.21 NEG NEG	-		Client Info			Ü	
Water WC Method >0.2.1 NEG NEG WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >51 48 17 Chromium ppm ASTM D5185m >55 0 0 Nickel ppm ASTM D5185m >56 0 0 Silver ppm ASTM D5185m >0 0 January ASTM D5185m >26 4 <1 Aduminum ppm ASTM D5185m >31 5 3 Lead ppm ASTM D5185m >26 20 16 Copper ppm ASTM D5185m 0 0 Tin ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm	Sample Status				SEVERE	SEVERE	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 48 17 Chromium ppm ASTM D5185m >11 <1	CONTAMINATIO	N	method	limit/base	current	history1	history2
ASTM D5185m STM D5185m S	Water		WC Method	>0.21	NEG	NEG	
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>51	48	17	
Description	Chromium	ppm	ASTM D5185m	>11	<1	<1	
Silver	Nickel	ppm	ASTM D5185m	>5	0	0	
Aluminum ppm ASTM D5185m >31 5 3 Lead ppm ASTM D5185m >26 4 <1 Copper ppm ASTM D5185m >26 20 16 Fin ppm ASTM D5185m >26 20 16 ATM D5185m >26 20 16 ASTM D5185m >4 1 <1 ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0.0 8 6 Molybdenum ppm ASTM D5185m 0.0 8 6 Molybdenum ppm ASTM D5185m 1.2 157 168 Magnesium ppm ASTM D5185m 2 2 <1 Magnesium ppm ASTM D5185m 2.2 257 Magnesium ppm ASTM D5185m 2.2 257 Magnesium ppm ASTM D5185m 2.2 257 Calcium ppm ASTM D5185m 2.2 256 Sulfur ppm ASTM D5185m 1064 675 672 Collicium ppm ASTM D5185m 1160 832 810 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >22 37 39 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 183 10 10 CONTAMINANTS method limit/base current history1 history2 Sodium ppm ASTM D5185m >20 183 10 Fuel % ASTM D5185m >20 183 10 NEG NEG NEG NEG INFRA-RED method limit/base current history1 history2 Soot % 'ASTM D7844 >3 0.3 0.1 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/:mm 'ASTM D7415 >30 20.8 16.3	Titanium	ppm	ASTM D5185m		0	0	
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Nitration Abs/cm *ASTM D7624 >20 11.6 8.2 Sulfation Abs/.1mm *ASTM D7415 >30 20.8 16.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.3 12.1	INFRA-RED		method	limit/base	current	history1	history2
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Oxidation							
	Nitration	Abs/cm	*ASTM D7624	>20	11.6	8.2	
	Nitration Sulfation	Abs/cm Abs/.1mm	*ASTM D7624 *ASTM D7415	>20 >30	11.6 20.8	8.2 16.3	
	Nitration Sulfation FLUID DEGRADA	Abs/cm Abs/.1mm	*ASTM D7624 *ASTM D7415 method	>20 >30 limit/base	11.6 20.8 current	8.2 16.3 history1	history2



OIL ANALYSIS REPORT







Certificate 12367

Sample No.

: PE0003092 **Lab Number** : 06220570 Unique Number : 11098767

Received Tested

: 25 Jun 2024 : 28 Jun 2024 Diagnosed

: 28 Jun 2024 - Jonathan Hester

9125 10TH AVE SOUTH SEATTLE, WA

US 98108 Test Package : CONST (Additional Tests: FT-IR, Glycol, ICP, KV100, PercentFuel, SCREENCOMNACT: Jesse Patterson To discuss this sample report, contact Customer Service at 1-800-237-1369. oilsamples@gmccinc.com

 st - 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) T: 1(866)292-1303