



# PROBLEM SUMMARY

Sample Rating Trend



FUEL



Machine Id

**27**

Component

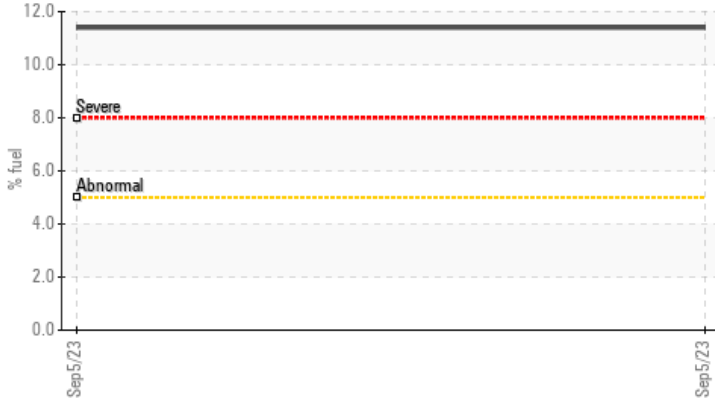
**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 40 (--- QTS)**

## COMPONENT CONDITION SUMMARY

### Fuel Dilution



### Viscosity @ 100°C



## RECOMMENDATION

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.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>SEVERE</b>	---	---
Fuel	%	ASTM D3524	>5	<b>11.4</b>	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>10.5</b>	---	---

Customer Id: BENNORMN  
 Sample No.: PCA0069399  
 Lab Number: 06042895  
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
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To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

## HISTORICAL DIAGNOSIS



Machine Id  
**27**  
Component  
**Diesel Engine**  
Fluid  
 **DIESEL ENGINE OIL SAE 40 (--- QTS)**



## DIAGNOSIS

**Recommendation**  
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.

**Wear**  
All component wear rates are normal.

**Contamination**  
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 oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0069399</b>	---	---
Sample Date	Client Info	<b>05 Sep 2023</b>	---	---
Machine Age	hrs Client Info	<b>0</b>	---	---
Oil Age	hrs Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>SEVERE</b>	---	---

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	<b>NEG</b>	---	---
Glycol	WC Method	<b>NEG</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>32</b>	---	---
Chromium	ppm ASTM D5185m >20	<b>1</b>	---	---
Nickel	ppm ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm ASTM D5185m	<b>0</b>	---	---
Silver	ppm ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >20	<b>3</b>	---	---
Lead	ppm ASTM D5185m >40	<b>0</b>	---	---
Copper	ppm ASTM D5185m >330	<b>1</b>	---	---
Tin	ppm ASTM D5185m >15	<b>0</b>	---	---
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	<b>2</b>	---	---
Barium	ppm ASTM D5185m 10	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m 100	<b>51</b>	---	---
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm ASTM D5185m 450	<b>762</b>	---	---
Calcium	ppm ASTM D5185m 3000	<b>870</b>	---	---
Phosphorus	ppm ASTM D5185m 1150	<b>813</b>	---	---
Zinc	ppm ASTM D5185m 1350	<b>1046</b>	---	---
Sulfur	ppm ASTM D5185m 4250	<b>2582</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>2</b>	---	---
Sodium	ppm ASTM D5185m >216	<b>1</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>0</b>	---	---
Fuel	% ASTM D3524 >5	<b>11.4</b>	---	---

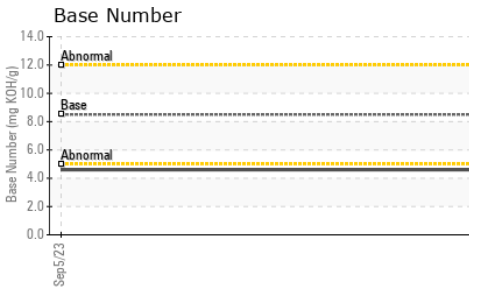
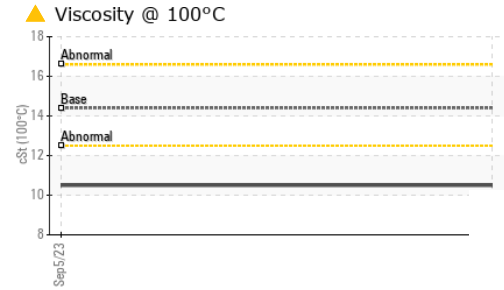
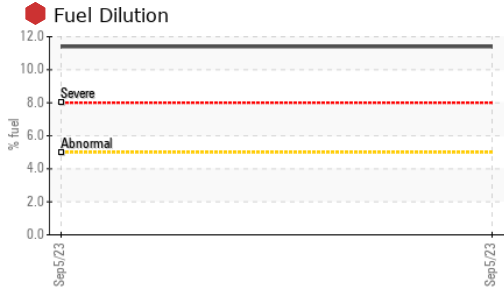
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>12.6</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>28.1</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>35.4</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896 8.5	<b>4.6</b>	---	---

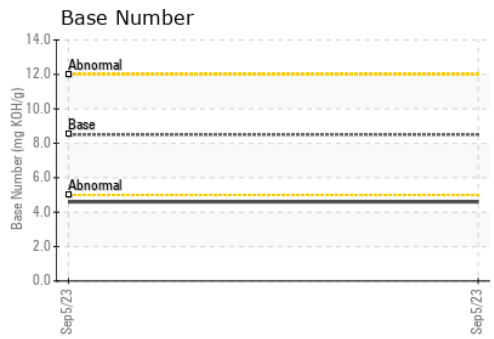
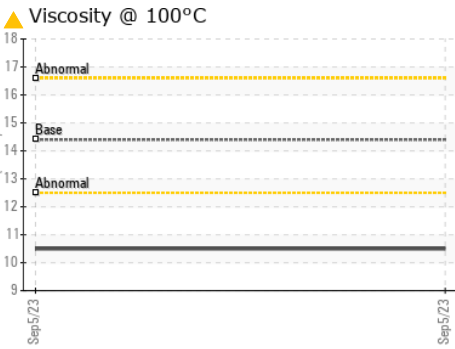
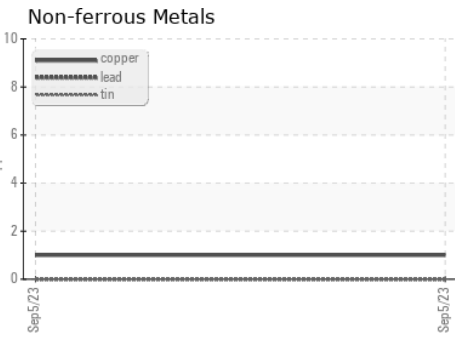
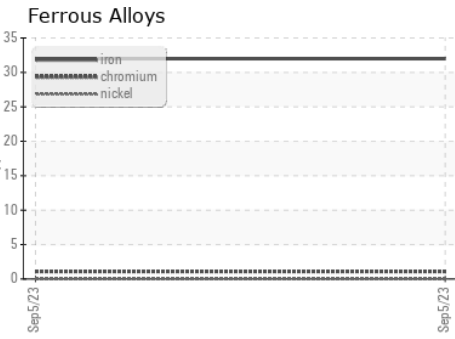
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	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 PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 10.5	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0069399 **Received** : 22 Dec 2023  
**Lab Number** : 06042895 **Diagnosed** : 28 Dec 2023  
**Unique Number** : 10803503 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

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)

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