



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**E-177**

Component  
**Diesel Engine**

Fluid  
**PHILLIPS 66 15W40 (--- 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
Sample Number	Client Info			<b>WC0828534</b>	---	---
Sample Date	Client Info			<b>28 Sep 2023</b>	---	---
Machine Age	hrs	Client Info		<b>2872</b>	---	---
Oil Age	hrs	Client Info		<b>257</b>	---	---
Oil Changed	Client Info			<b>Changed</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	---	---
Glycol	WC Method			<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>14</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>1</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>37</b>	---	---
Barium	ppm	ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>97</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>44</b>	---	---
Calcium	ppm	ASTM D5185m		<b>2327</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>1033</b>	---	---
Zinc	ppm	ASTM D5185m		<b>1344</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>3961</b>	---	---

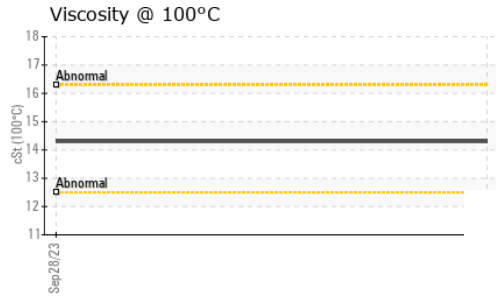
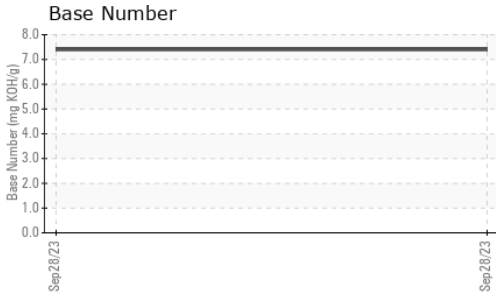
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	---	---
Sodium	ppm	ASTM D5185m		<b>2</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.4</b>	---	---



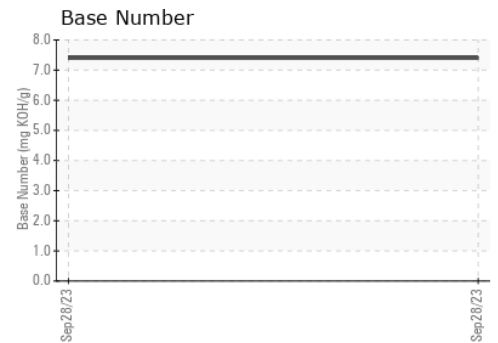
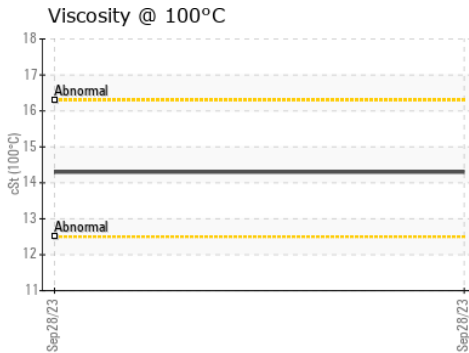
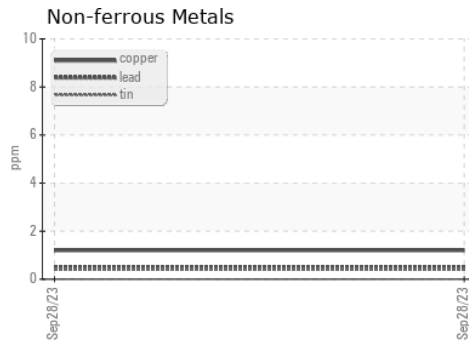
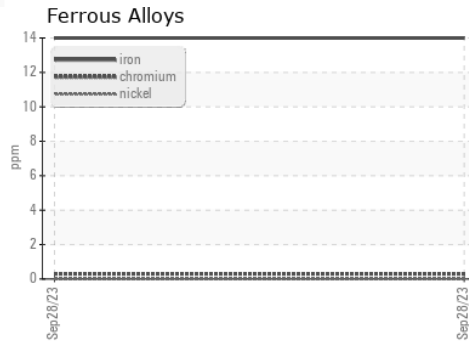
# OIL ANALYSIS REPORT



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	14.3	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0828534      **Received** : 02 Oct 2023  
**Lab Number** : 05965879      **Diagnosed** : 03 Oct 2023  
**Unique Number** : 10672430      **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**DUKE LAZZARA**  
 4201 FAYETTEVILLE RD  
 RALEIGH, NC  
 US 27603  
 Contact: NICK DIXON  
 NICK.DIXON@DUKELAZZAM.COM  
 T: (919)760-7797  
 F:

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)