OIL DIAGNOSTICS

PROBLEM SUMMARY

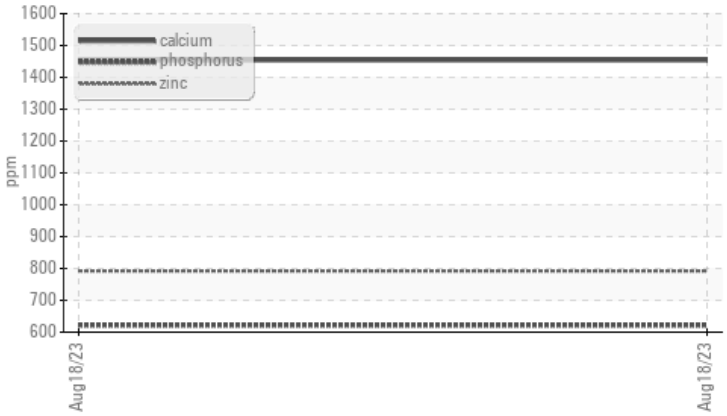
Sample Rating Trend

FUEL

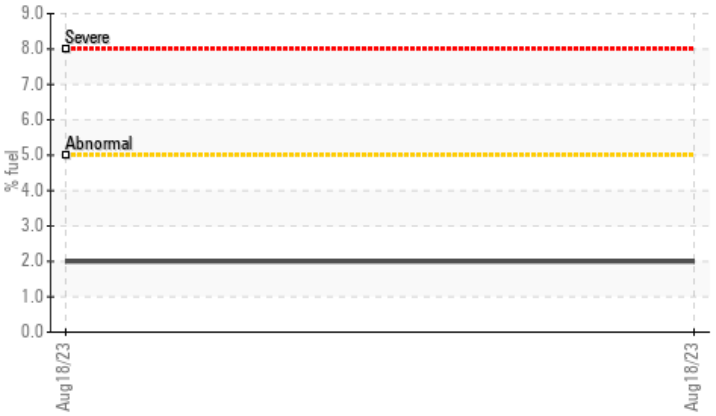
Machine Id
2319
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Additives



Fuel Dilution



RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	---	---
Phosphorus	ppm	ASTM D5185m	1064	▲ **622**	---	---
Zinc	ppm	ASTM D5185m	1160	▲ **792**	---	---
Sulfur	ppm	ASTM D5185m	4996	▲ **2224**	---	---
Fuel	%	ASTM D3524	>5	▲ **2.0**	---	---

Customer Id: ERGMAR605
Sample No.: PCA0076238
Lab Number: 05976365
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Information Required	---	---	?	Please specify the component make and model with your next sample.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Sample Rating Trend

FUEL

Machine Id
2319
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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		**PCA0076238**	---	---
Sample Date		Client Info		**18 Aug 2023**	---	---
Machine Age	mls	Client Info		**37000**	---	---
Oil Age	mls	Client Info		**18000**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**ATTENTION**	---	---

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**26**	---	---
Chromium	ppm	ASTM D5185m	>20	**3**	---	---
Nickel	ppm	ASTM D5185m	>4	**0**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m	>3	**0**	---	---
Aluminum	ppm	ASTM D5185m	>20	**25**	---	---
Lead	ppm	ASTM D5185m	>40	**2**	---	---
Copper	ppm	ASTM D5185m	>330	**6**	---	---
Tin	ppm	ASTM D5185m	>15	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	**99**	---	---
Barium	ppm	ASTM D5185m	0.0	**0**	---	---
Molybdenum	ppm	ASTM D5185m	1.2	**120**	---	---
Manganese	ppm	ASTM D5185m		**2**	---	---
Magnesium	ppm	ASTM D5185m	24	**623**	---	---
Calcium	ppm	ASTM D5185m	2292	**1454**	---	---
Phosphorus	ppm	ASTM D5185m	1064	▲ **622**	---	---
Zinc	ppm	ASTM D5185m	1160	▲ **792**	---	---
Sulfur	ppm	ASTM D5185m	4996	▲ **2224**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	---	---
Sodium	ppm	ASTM D5185m		**2**	---	---
Potassium	ppm	ASTM D5185m	>20	**75**	---	---
Fuel	%	ASTM D3524	>5	▲ **2.0**	---	---

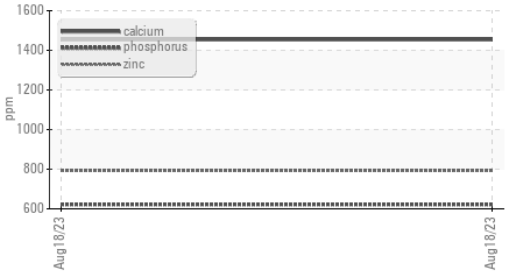
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	---	---
Nitration	Abs/cm	*ASTM D7624	>20	**10.2**	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.4**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.7**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**6.2**	---	---

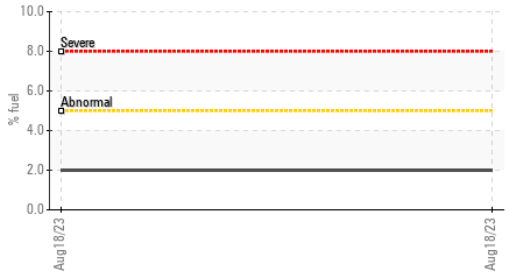
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

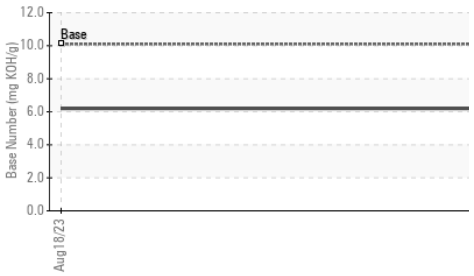
Additives



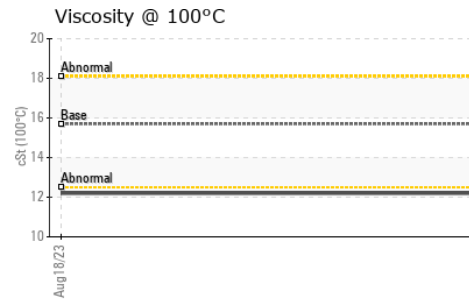
Fuel Dilution



Base Number



Viscosity @ 100°C

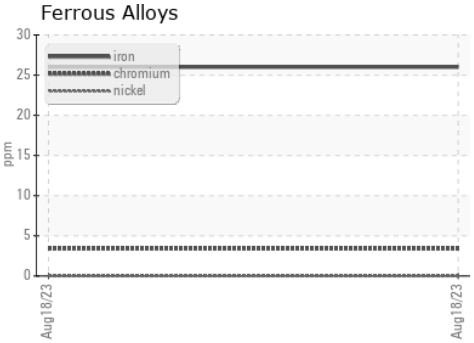


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*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**	---	---

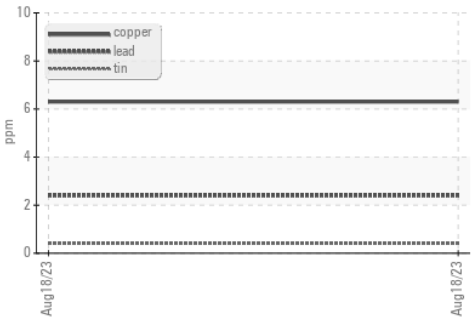
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	**12.2**	---	---

GRAPHS

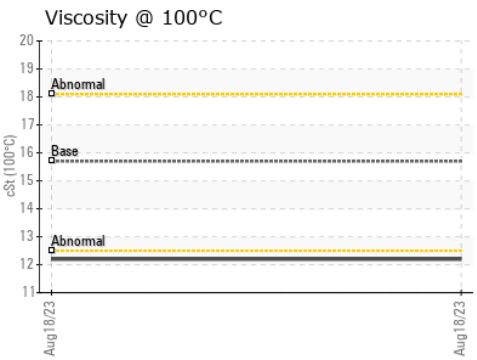
Ferrous Alloys



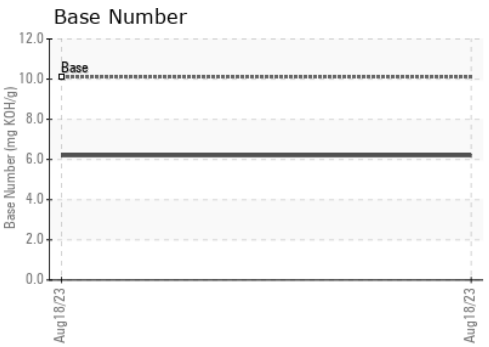
Non-ferrous Metals



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0076238 **Received** : 11 Oct 2023
Lab Number : 05976365 **Diagnosed** : 16 Oct 2023
Unique Number : 10688315 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Ergon Trucking Inc. - MAR605
35020 State Route 7
Marietta, OH
US 45768-5236
Contact: JASON JULIAN

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)

T:
F: