



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
937796
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 XLE 10W30 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RY0123392	---	---
Sample Date		Client Info		30 Nov 2023	---	---
Machine Age	mls	Client Info		0	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

The aluminum level is abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185m	>100	39	---	---
Chromium	ppm	ASTM D5185m	>20	3	---	---
Nickel	ppm	ASTM D5185m	>4	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	▲ 73	---	---
Lead	ppm	ASTM D5185m	>40	1	---	---
Copper	ppm	ASTM D5185m	>330	3	---	---
Tin	ppm	ASTM D5185m	>15	1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

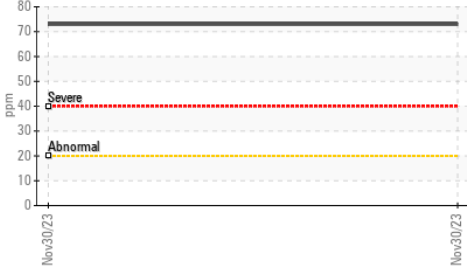
Silicon	ppm	ASTM D5185m	>25	8	---	---
Potassium	ppm	ASTM D5185m	>20	21	---	---
Fuel	%	ASTM D3524	>5	1.2	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.9	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	---	---
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	---	---

FLUID CONDITION

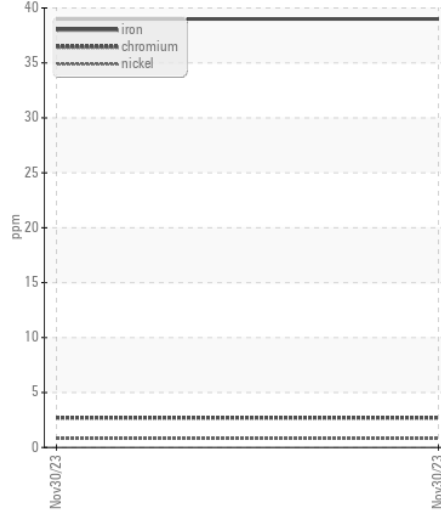
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		16	---	---
Boron	ppm	ASTM D5185m		209	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		49	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		538	---	---
Calcium	ppm	ASTM D5185m	2900	1357	---	---
Phosphorus	ppm	ASTM D5185m	1100	887	---	---
Zinc	ppm	ASTM D5185m	1200	995	---	---
Sulfur	ppm	ASTM D5185m	4000	3573	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	7.9	---	---
Visc @ 100°C	cSt	ASTM D445	11.9	11.4	---	---

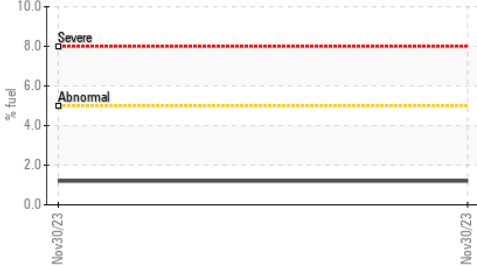
▲ Aluminum (ppm)



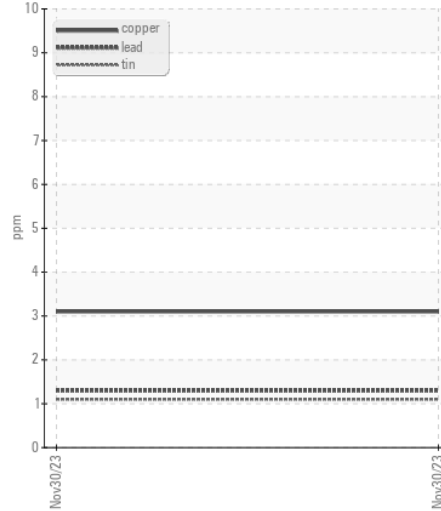
Ferrous Alloys



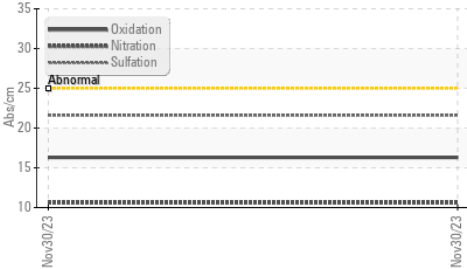
Fuel Dilution



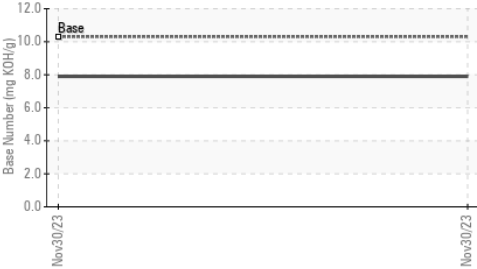
Non-ferrous Metals



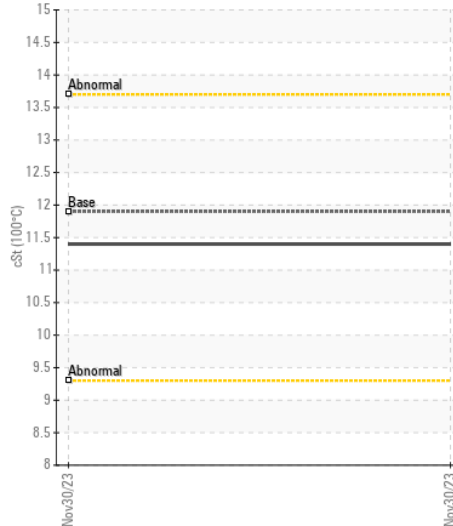
FT-IR (Direct Trend)



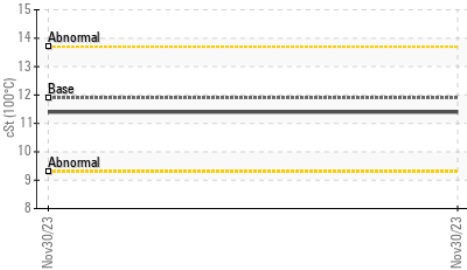
Base Number



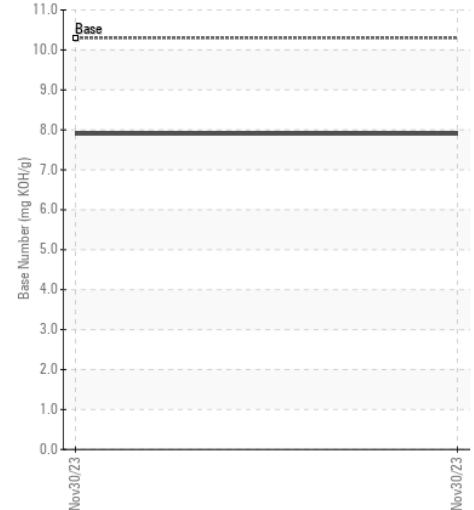
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RY0123392

Lab Number : 06187323

Unique Number : 11044075

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 22 May 2024

Tested : 28 May 2024

Diagnosed : 28 May 2024 - Jonathan Hester

Ryder Transportation Services

240 NE 71 ST

MIAMI, FL

US 33138

Contact: ANTHONY INGRAM

anthonyingram@creamoland.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)

T:

F: