



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area  
**GM RENTON DUMP TRUCK SHOP**  
 Machine Id  
**[GM RENTON DUMP TRUCK SHOP] 16-763**  
 Component  
**Auxiliary Engine**  
 Fluid  
**CASTROL CRB Multi 15W-40 CK-4 (--- GAL)**

**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		<b>PE0002337</b>	PE0001847	---
Sample Date		Client Info		<b>04 Dec 2023</b>	01 Mar 2023	---
Machine Age	hrs	Client Info		<b>1138</b>	520	---
Oil Age	hrs	Client Info		<b>618</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ATTENTION</b>	NORMAL	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>12</b>	11	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	---
Lead	ppm	ASTM D5185m	>40	<b>4</b>	<1	---
Copper	ppm	ASTM D5185m	>330	<b>178</b>	16	---
Tin	ppm	ASTM D5185m	>15	<b>2</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

Fuel content negligible. There is no indication of any contamination in the oil.

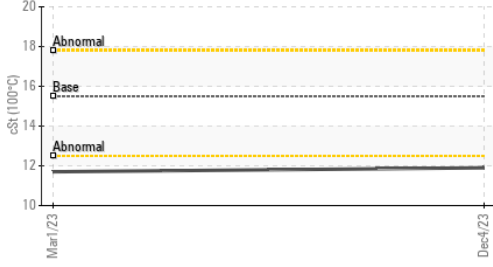
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	---
Fuel	%	ASTM D3524	>4.0	<b>0.5</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	7.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	21.7	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---

**FLUID CONDITION**

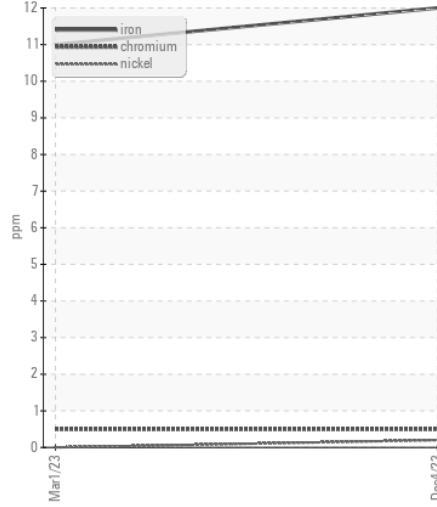
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	---
Boron	ppm	ASTM D5185m		<b>20</b>	66	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>18</b>	48	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>193</b>	457	---
Calcium	ppm	ASTM D5185m		<b>1960</b>	1676	---
Phosphorus	ppm	ASTM D5185m		<b>965</b>	879	---
Zinc	ppm	ASTM D5185m		<b>1121</b>	1125	---
Sulfur	ppm	ASTM D5185m		<b>3221</b>	3209	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.7</b>	19.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>5.9</b>	9.5	---
Visc @ 100°C	cSt	ASTM D445	15.5	<b>▲ 11.9</b>	11.7	---

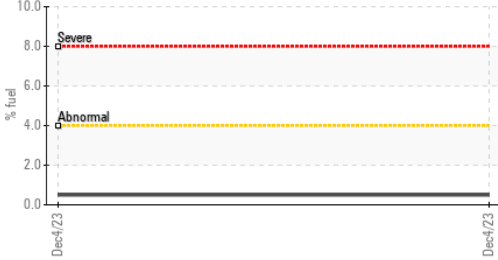
▲ Viscosity @ 100°C



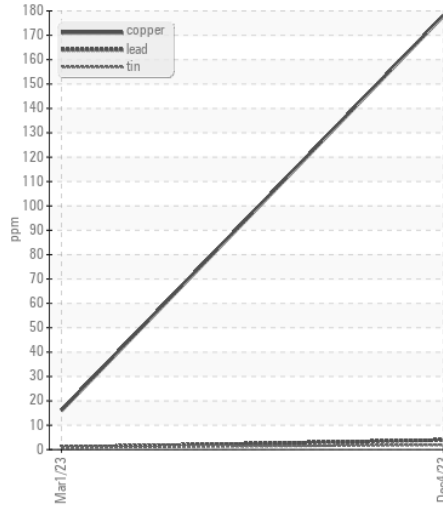
Ferrous Alloys



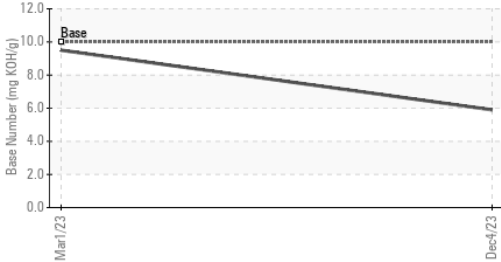
Fuel Dilution



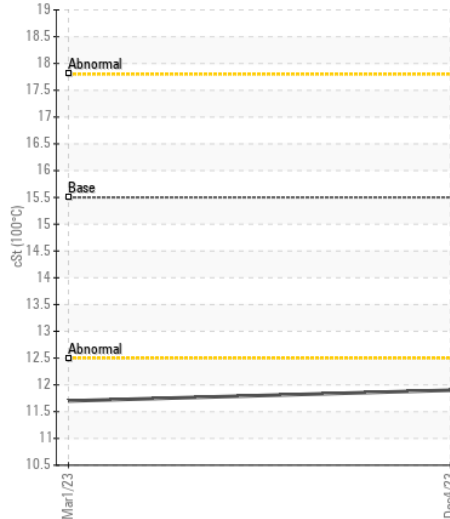
Non-ferrous Metals



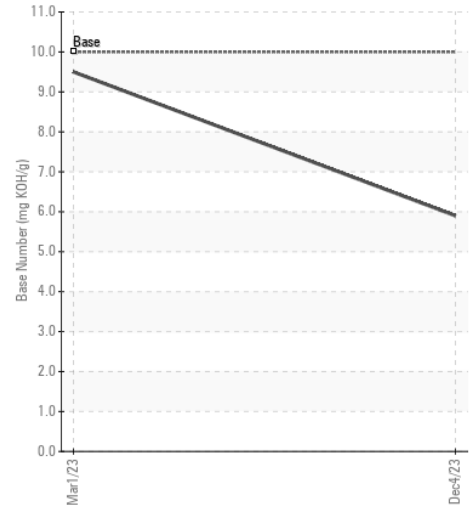
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0002337 **Received** : 12 Jan 2024  
**Lab Number** : 06060122 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831504 **Diagnostician** : Doug Bogart

**Gary Merlino Construction - Off Road Shop**  
 9125 10TH AVE SOUTH  
 SEATTLE, WA  
 US 98108

**Test Package** : CONST ( Additional Tests: FT-IR, FuelDilution, ICP, KV100, PercentFuel, SCREEN, TBN )  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.

Contact: Jesse Patterson  
 oilsamples@gmccinc.com

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T: 1(866)292-1303

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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