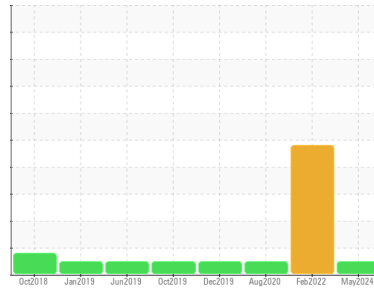




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

GM Renton Dump Truck Shop

Machine Id

[GM Renton Dump Truck Shop] s14-304

Component

Diesel Engine

Fluid

SHELL ROTELLA T 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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		PE0003126	PE12290226	PE12290367
Sample Date	Client Info		06 May 2024	01 Feb 2022	14 Aug 2020
Machine Age	hrs	Client Info	1241	241	3821
Oil Age	hrs	Client Info	1000	1075	1806
Oil Changed	Client Info		Not Chngd	Changed	Changed
Sample Status			NORMAL	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	20	27	35
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	3	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	4	4	5
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	7	11	26
Tin	ppm	ASTM D5185m	>15	<1	0	0
Antimony	ppm	ASTM D5185m		---	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	316	14	44	24
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	35	66	75
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	24	508	1129	1144
Calcium	ppm	ASTM D5185m	2292	1851	1142	1159
Phosphorus	ppm	ASTM D5185m	1064	944	1079	1079
Zinc	ppm	ASTM D5185m	1160	1155	1319	1358
Sulfur	ppm	ASTM D5185m	4996	3831	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	20	▲ 27	6
Sodium	ppm	ASTM D5185m		1	3	5
Potassium	ppm	ASTM D5185m	>20	5	8	10

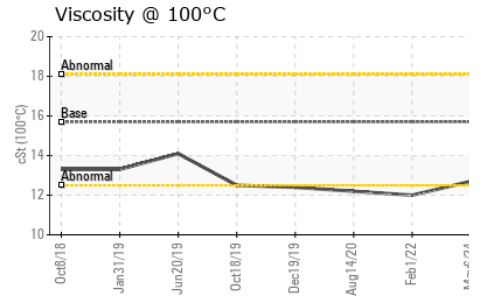
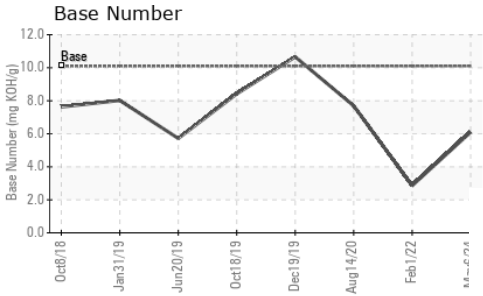
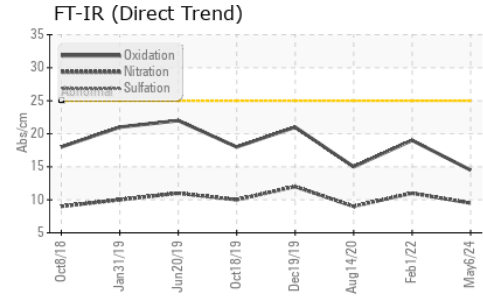
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.5	11	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	19	15
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.1	▲ 2.86	7.69

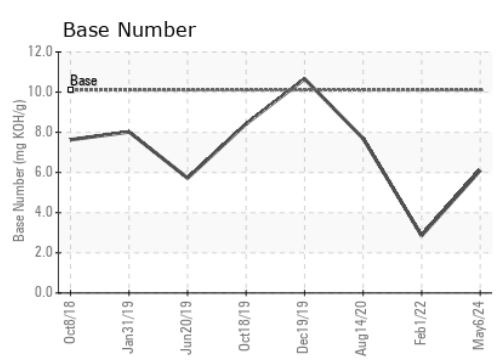
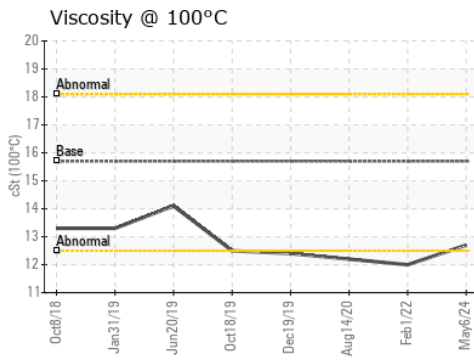
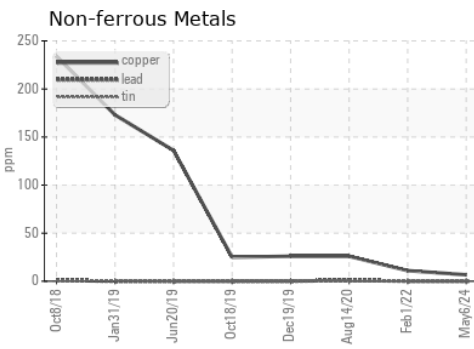
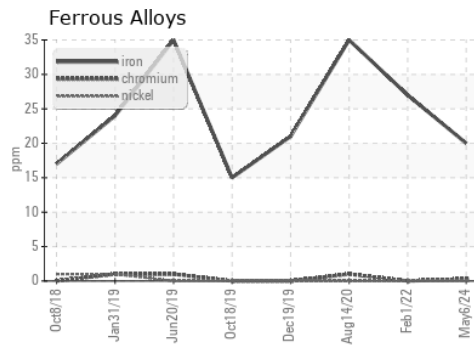
OIL ANALYSIS REPORT



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	15.7	12.7	12.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0003126 **Received** : 14 Jun 2024
Lab Number : **06211076** **Tested** : 18 Jun 2024
Unique Number : 11083940 **Diagnosed** : 18 Jun 2024 - Angela Borella
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Gary Merlino Construction - Off Road Shop
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 SEATTLE, WA
 US 98108
 Contact: Zack
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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)