



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER V1785
Component
Diesel Engine
Fluid
SHELL ROTELLA T 10W30 (44 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0827807	WC0827751	WCMFB87442
Sample Date		Client Info		05 Jan 2024	21 Sep 2023	13 Jul 2017
Machine Age	mls	Client Info		86529	57979	33492
Oil Age	mls	Client Info		0	29071	6000
Filter Age	mls	Client Info		0	29071	6000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	22	20	45
Chromium	ppm	ASTM D5185m	>10	3	<1	6
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>30	9	7	48
Lead	ppm	ASTM D5185m	>30	<1	<1	0
Copper	ppm	ASTM D5185m	>30	3	5	92
Tin	ppm	ASTM D5185m	>4	<1	<1	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

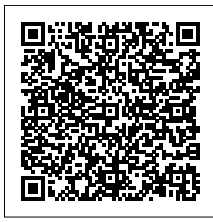
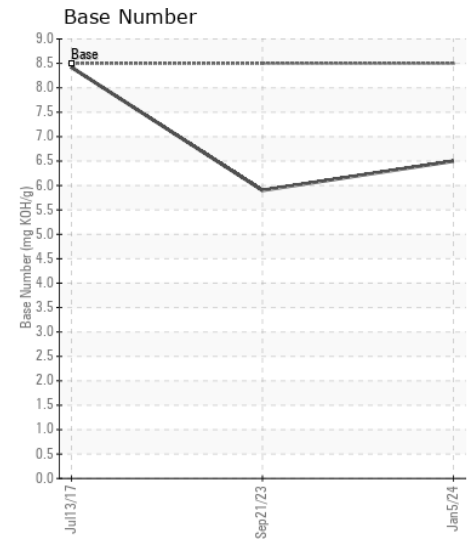
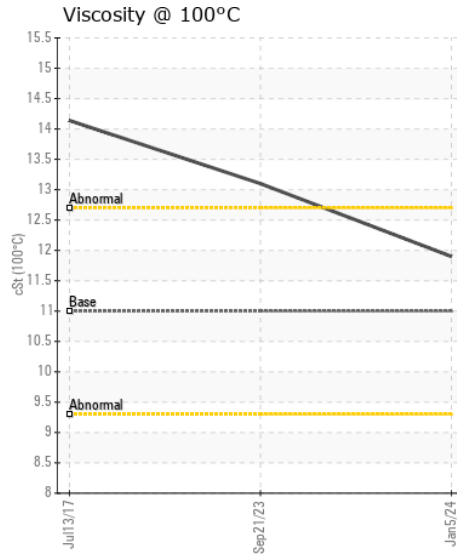
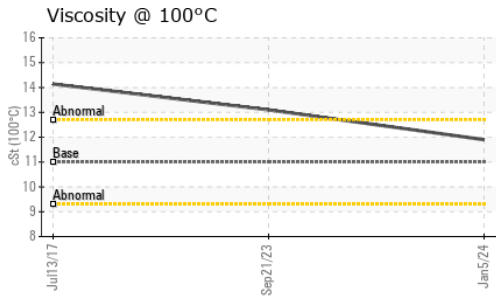
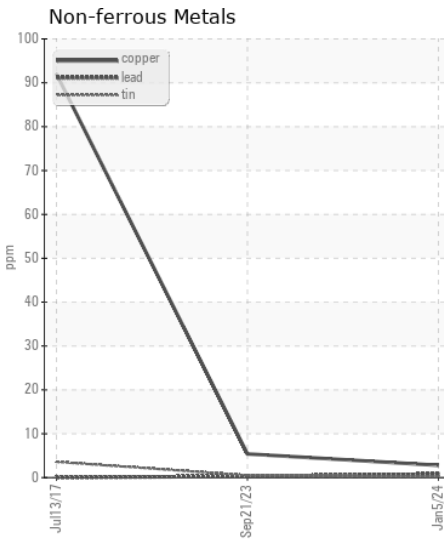
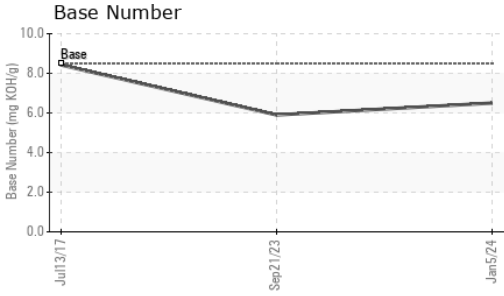
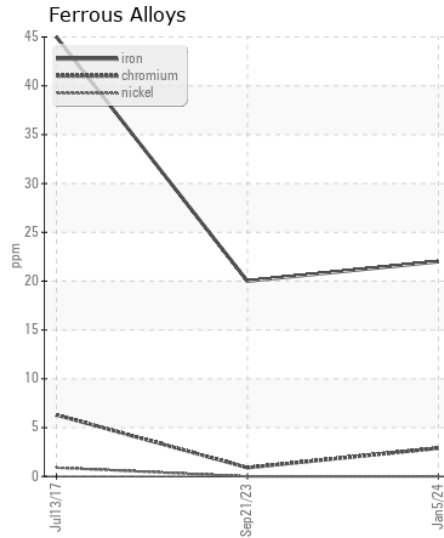
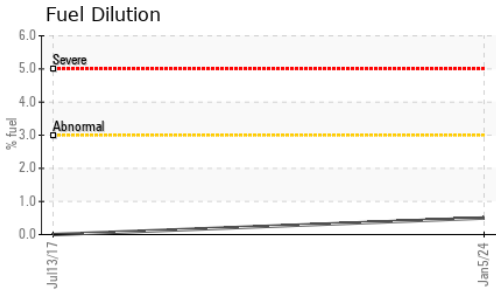
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	11	12	2
Potassium	ppm	ASTM D5185m	>20	34	50	103
Fuel	%	ASTM D3524	>3.0	0.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.6	9.0	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	21.3	18.
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		11	5	2
Boron	ppm	ASTM D5185m	269	14	21	41
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	0	61	66	61
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	20	782	444	401
Calcium	ppm	ASTM D5185m	1521	1449	1910	1735
Phosphorus	ppm	ASTM D5185m	948	1051	1046	917
Zinc	ppm	ASTM D5185m	893	1294	1326	1138
Sulfur	ppm	ASTM D5185m		3058	3385	2269
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.1	17.8	11.
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.5	5.9	8.42
Visc @ 100°C	cSt	ASTM D445	11.0	11.9	13.1	14.14



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0827807 **Received** : 12 Jan 2024
Lab Number : 06060015 **Diagnosed** : 16 Jan 2024
Unique Number : 10831397 **Diagnostician** : Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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Certificate L2367
 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)