



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
MACK 191 (S/N 210605641)
Component
Diesel Engine
Fluid
UNITED OIL DURALENE (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0027586	DC0016269	DC0016264
Sample Date		Client Info		05 Sep 2023	14 Nov 2022	21 Jul 2022
Machine Age	hrs	Client Info		7416	5964	4861
Oil Age	hrs	Client Info		330	5964	4861
Filter Age	hrs	Client Info		330	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	8	8	10
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	1	2	2
Lead	ppm	ASTM D5185m	>40	2	2	1
Copper	ppm	ASTM D5185m	>330	1	4	14
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

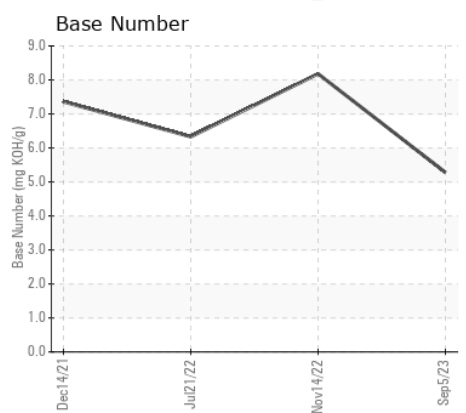
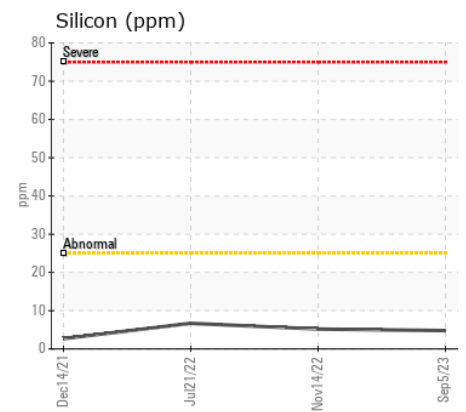
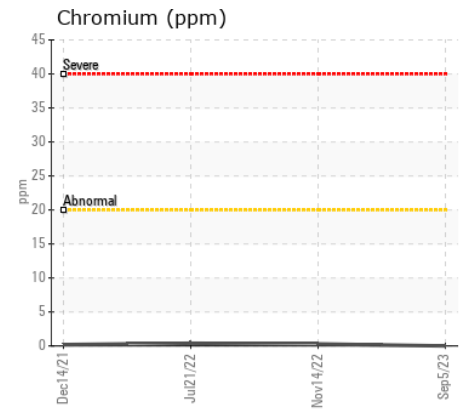
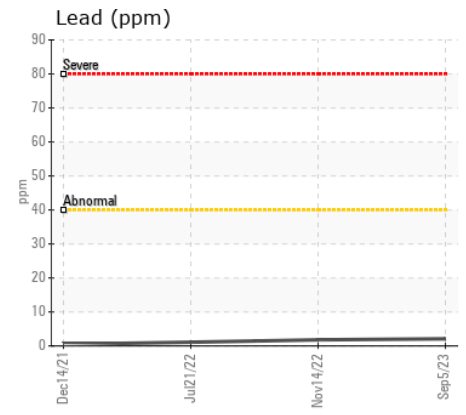
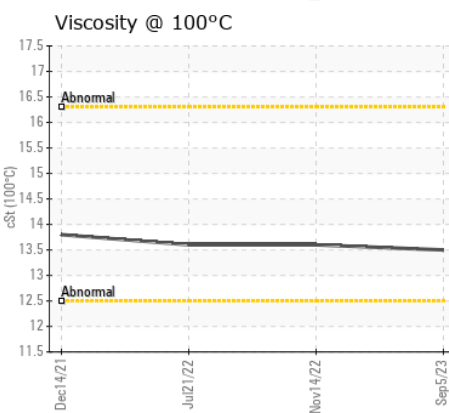
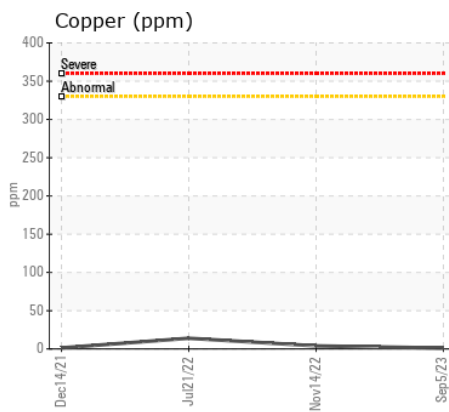
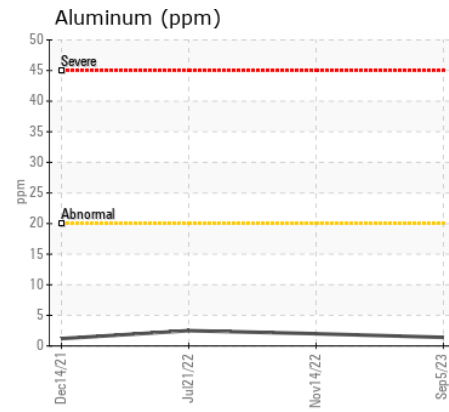
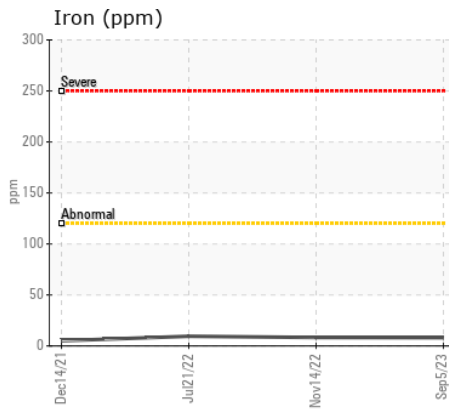
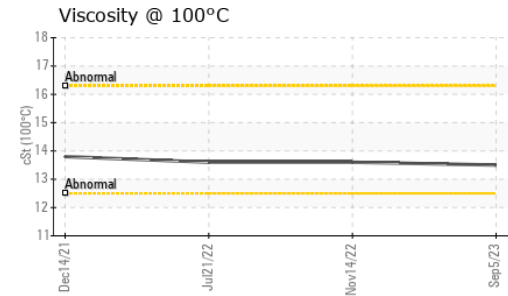
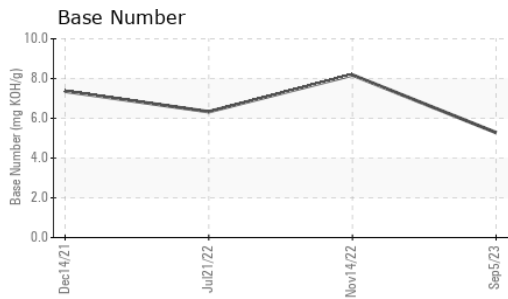
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	5	7
Potassium	ppm	ASTM D5185m	>20	3	1	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.0	9	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	23.4	23.0
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	2	2
Boron	ppm	ASTM D5185m		0	10	6
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	7	2
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		43	88	47
Calcium	ppm	ASTM D5185m		2231	2394	2770
Phosphorus	ppm	ASTM D5185m		821	886	1034
Zinc	ppm	ASTM D5185m		1146	1065	1220
Sulfur	ppm	ASTM D5185m		3519	4126	5115
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	14	13.2
Base Number (BN)	mg KOH/g	ASTM D2896		5.28	8.18	6.33
Visc @ 100°C	cSt	ASTM D445		13.5	13.6	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0027586 **Received** : 11 Jan 2024
Lab Number : 06058312 **Diagnosed** : 12 Jan 2024
Unique Number : 10829694 **Diagnostician** : Sean Felton
Test Package : MOB 2

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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)