



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**1997 MACK CH-613 T-78 (S/N 1M1AA13Y5VW078285)**  
 Component  
**Diesel Engine**  
 Fluid  
**PHILLIPS 66 15W40 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0879497</b>	WC0770256	WC0640209
Sample Date		Client Info		<b>26 Jan 2024</b>	09 Jan 2023	03 Jan 2022
Machine Age	mls	Client Info		<b>215700</b>	207805	4843
Oil Age	mls	Client Info		<b>7895</b>	1794	4843
Filter Age	mls	Client Info		<b>7879</b>	1794	4843
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>6</b>	4	7
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>84</b>	68	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

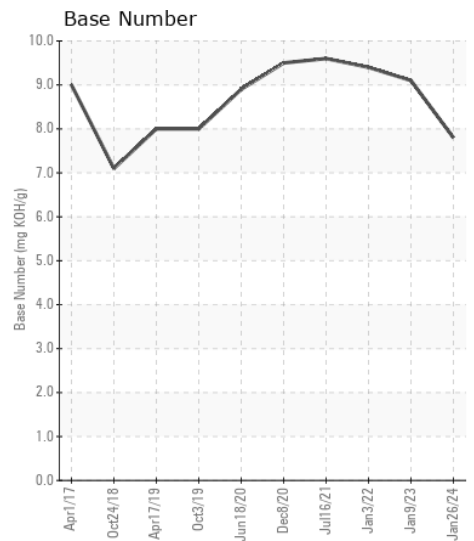
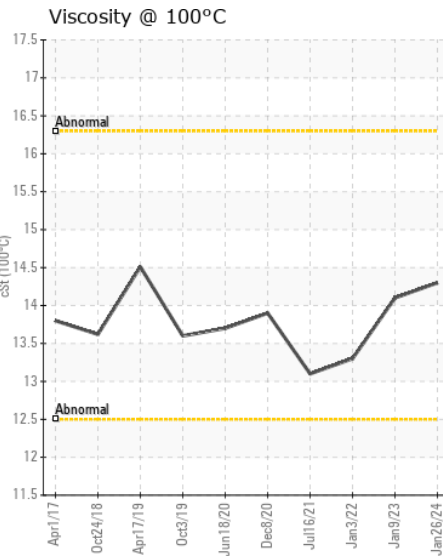
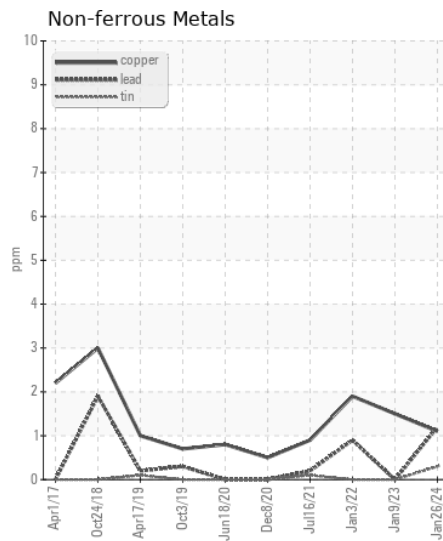
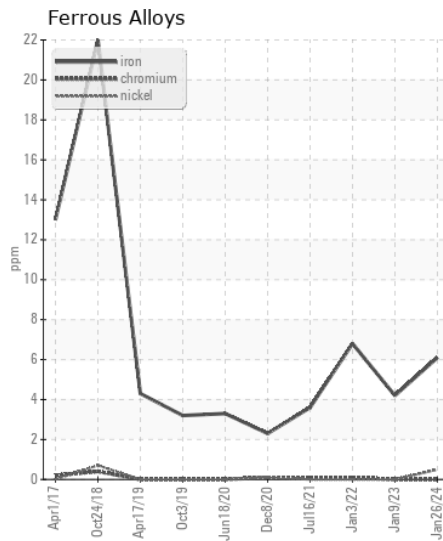
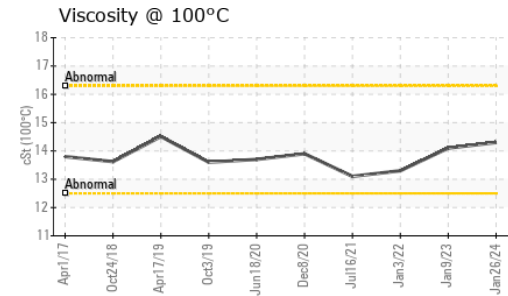
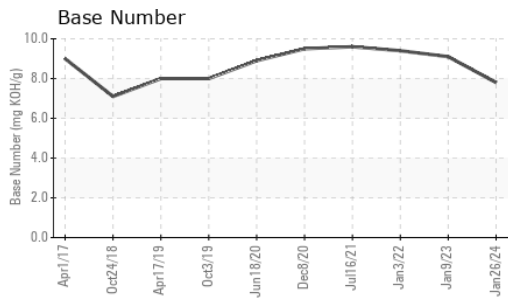
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	6.7	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	19.5	23.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>3</b>	<1	0
Boron	ppm	ASTM D5185m		<b>126</b>	202	338
Barium	ppm	ASTM D5185m		<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	34	116
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>426</b>	423	636
Calcium	ppm	ASTM D5185m		<b>1721</b>	1749	1530
Phosphorus	ppm	ASTM D5185m		<b>1051</b>	917	692
Zinc	ppm	ASTM D5185m		<b>1227</b>	1071	790
Sulfur	ppm	ASTM D5185m		<b>3925</b>	3556	2034
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	14.2	17.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.8</b>	9.1	9.4
Visc @ 100°C	cSt	ASTM D445		<b>14.3</b>	14.1	13.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0879497 **Received** : 31 Jan 2024  
**Lab Number** : 06075575 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857666 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)