



# OIL ANALYSIS REPORT

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

Machine Id  
**PIERCE M00253**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (40 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0036419</b>	DC0028290	DC0024122
Sample Date		Client Info		<b>20 May 2024</b>	28 Aug 2023	13 Jan 2023
Machine Age	mls	Client Info		<b>70223</b>	61178	51163
Oil Age	mls	Client Info		<b>0</b>	0	4332
Filter Age	mls	Client Info		<b>0</b>	0	4332
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

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>65	<b>14</b>	18	12
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>5	<b>2</b>	1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>35	<b>8</b>	10	5
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>180	<b>16</b>	23	15
Tin	ppm	ASTM D5185m	>8	<b>2</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

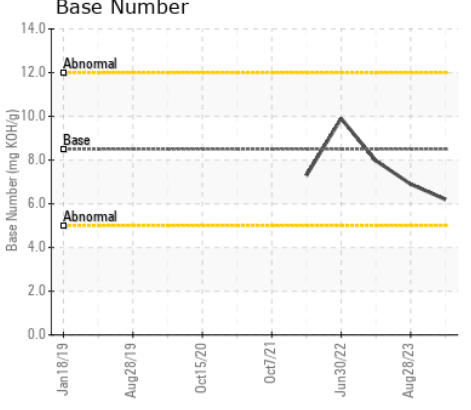
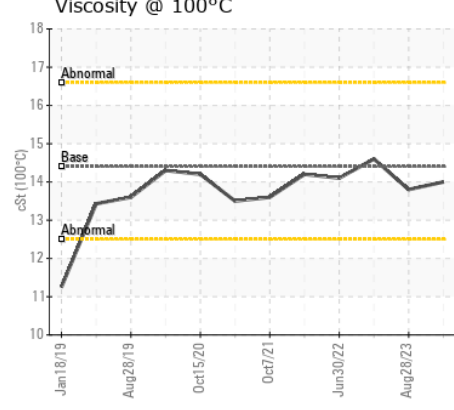
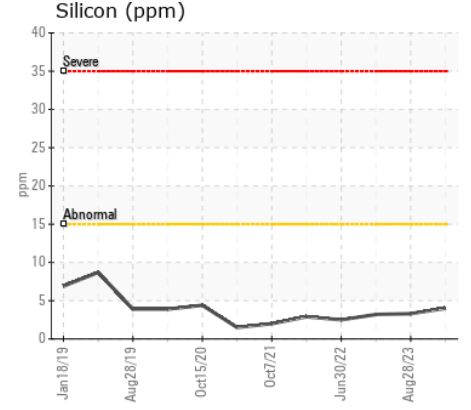
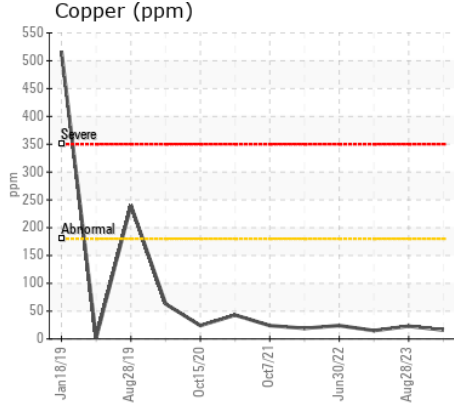
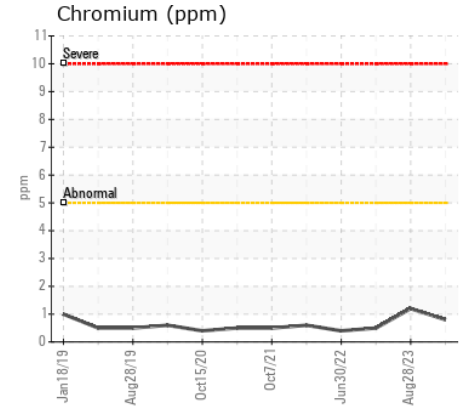
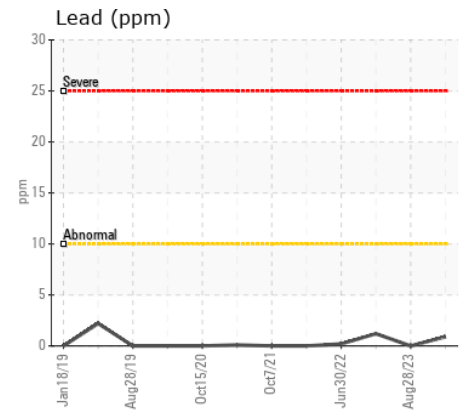
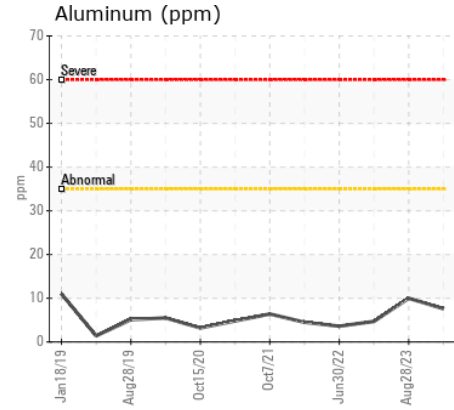
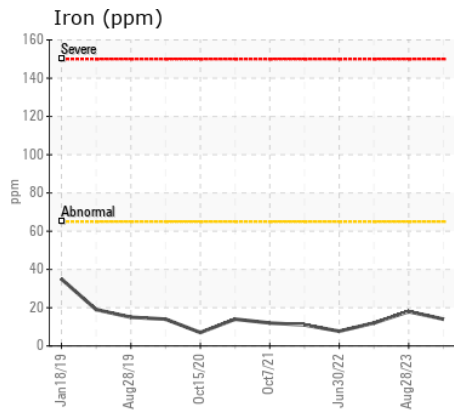
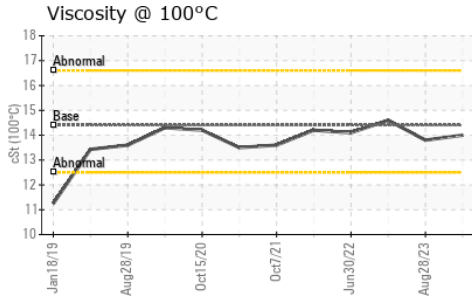
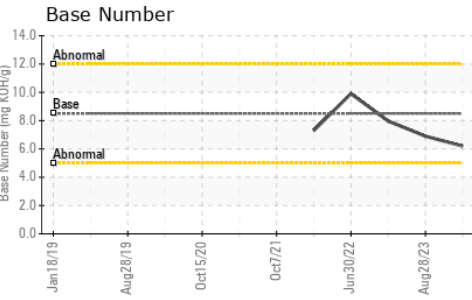
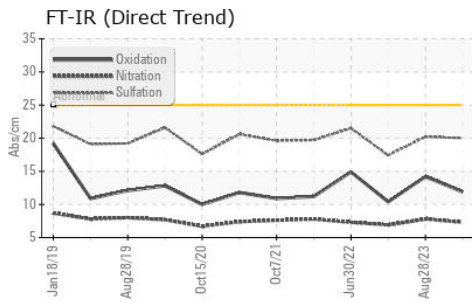
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>4</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>12</b>	13	10
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	>3	<b>0.4</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.8	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.0</b>	20.2	17.4
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	>158	<b>4</b>	7	4
Boron	ppm	ASTM D5185m	250	<b>1</b>	1	<1
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>9</b>	45	10
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>148</b>	791	160
Calcium	ppm	ASTM D5185m	3000	<b>2283</b>	1486	2241
Phosphorus	ppm	ASTM D5185m	1150	<b>922</b>	974	895
Zinc	ppm	ASTM D5185m	1350	<b>1083</b>	1259	1120
Sulfur	ppm	ASTM D5185m	4250	<b>3711</b>	3330	4216
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.9</b>	14.2	10.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.2</b>	6.9	7.97
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	13.8	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0036419 **Received** : 29 May 2024  
**Lab Number** : 06194814 **Tested** : 30 May 2024  
**Unique Number** : 11056937 **Diagnosed** : 30 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**M&M FLEET**  
 5046 BUCHANAN ST.  
 HYATTSVILLE, MD  
 US 20781  
 Contact: June McClosky  
 office@mmfleet.net  
 T: (301)779-4545  
 F: x:

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)