



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**PIERCE 258/E-12**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0868238</b>	WC0699201	WC0768934
Sample Date		Client Info		<b>16 May 2024</b>	07 Dec 2023	10 May 2023
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Filter Age	mths	Client Info		<b>0</b>	0	0
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	>100	<b>5</b>	8	3
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	6	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>14</b>	18	11
Tin	ppm	ASTM D5185m	>15	<b>1</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

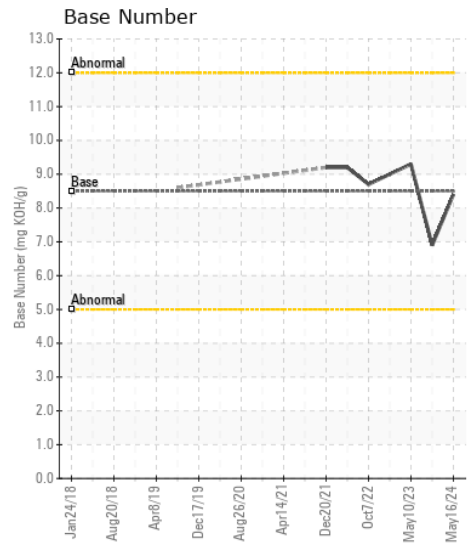
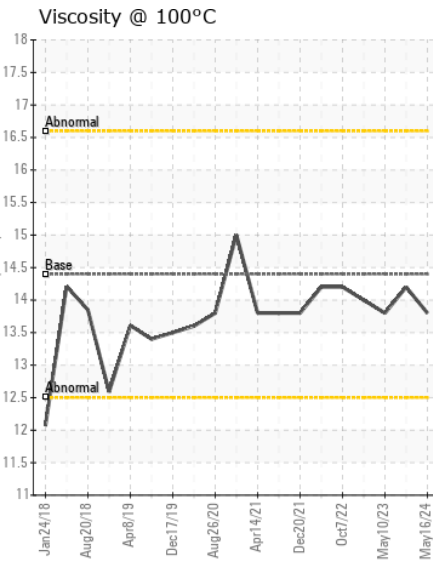
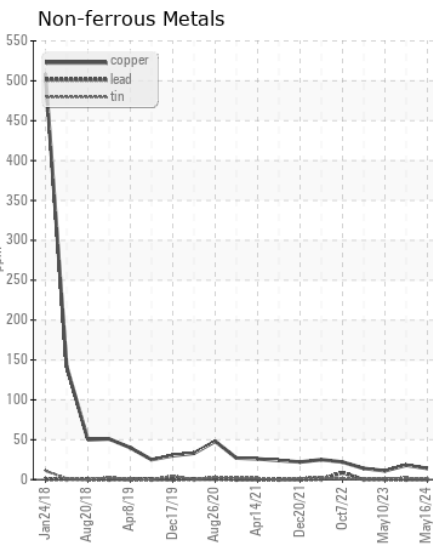
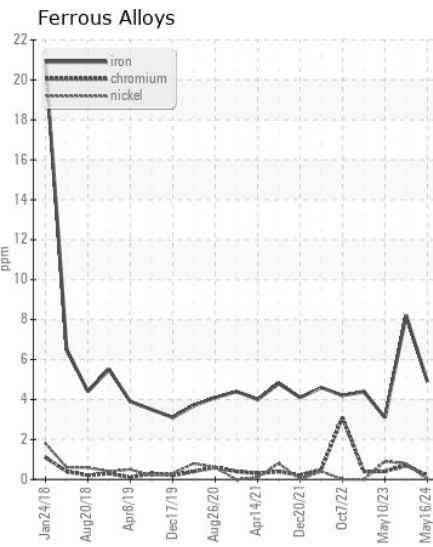
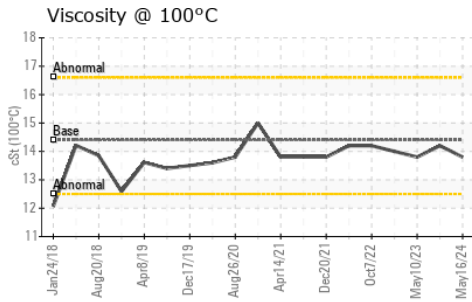
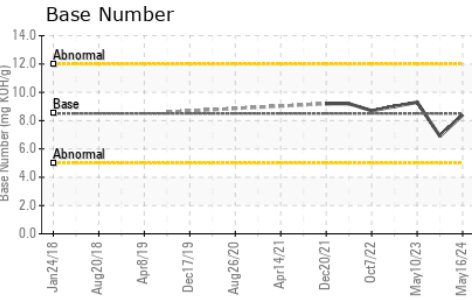
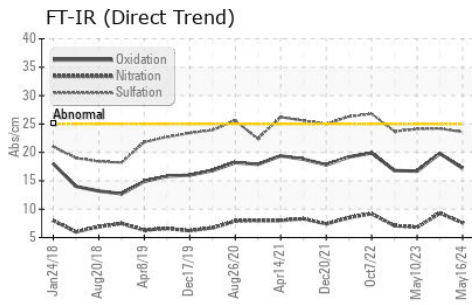
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	4	2
Fuel		WC Method	>5	<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>0.3</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	9.3	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.6</b>	24.2	24.1
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>&lt;1</b>	0	3
Boron	ppm	ASTM D5185m	250	<b>318</b>	230	308
Barium	ppm	ASTM D5185m	10	<b>0</b>	11	0
Molybdenum	ppm	ASTM D5185m	100	<b>133</b>	129	117
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>683</b>	653	715
Calcium	ppm	ASTM D5185m	3000	<b>1706</b>	1537	1537
Phosphorus	ppm	ASTM D5185m	1150	<b>741</b>	638	717
Zinc	ppm	ASTM D5185m	1350	<b>875</b>	848	882
Sulfur	ppm	ASTM D5185m	4250	<b>2832</b>	2737	3065
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.2</b>	19.8	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.4</b>	6.9	9.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	14.2	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0868238  
**Lab Number** : 06188824  
**Unique Number** : 11045576  
**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 23 May 2024  
**Tested** : 24 May 2024  
**Diagnosed** : 24 May 2024 - Wes Davis

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)

**CYFAIR FIRE DEPARTMENT**  
 10710 TELGE RD  
 HOUSTON, TX  
 US 77095  
 Contact: JEFF DAVIDSON  
 jeff.davidson@cyfairfd.org  
 T: (281)656-3440  
 F: (281)807-1853