



# OIL ANALYSIS REPORT

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

Machine Id  
**PIERCE 2589**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 XLE 15W40 (35 QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0879838</b>	WC0771944	WC0708749
Sample Date		Client Info		<b>02 Nov 2023</b>	27 Mar 2023	12 Jul 2022
Machine Age	hrs	Client Info		<b>7840</b>	7672	7227
Oil Age	hrs	Client Info		<b>168</b>	395	255
Filter Age	hrs	Client Info		<b>168</b>	395	255
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>MARGINAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	<b>32</b>	29	18
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	2	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>16</b>	10	11
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>30	<b>15</b>	14	8
Lead	ppm	ASTM D5185m	>30	<b>0</b>	1	1
Copper	ppm	ASTM D5185m	>30	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
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

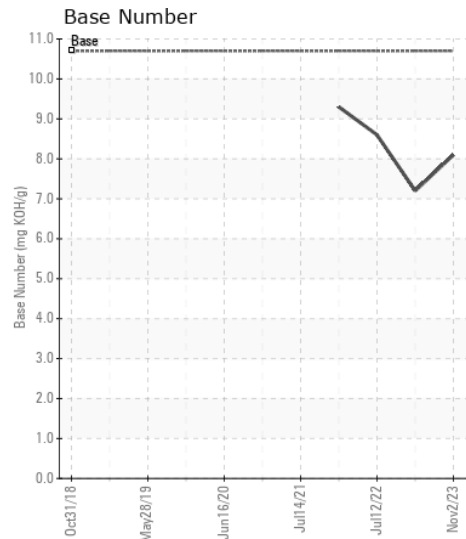
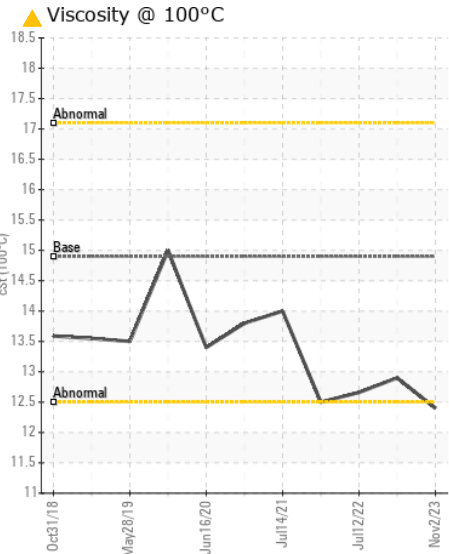
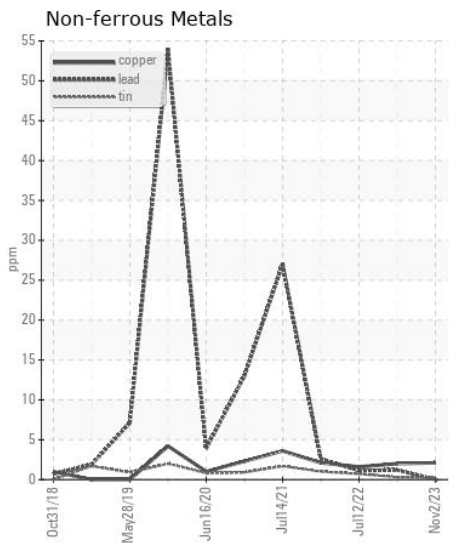
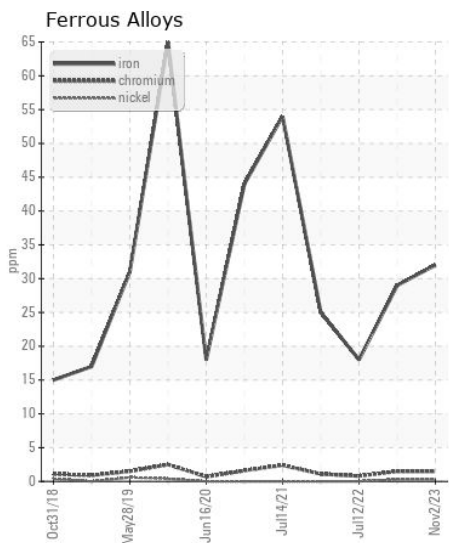
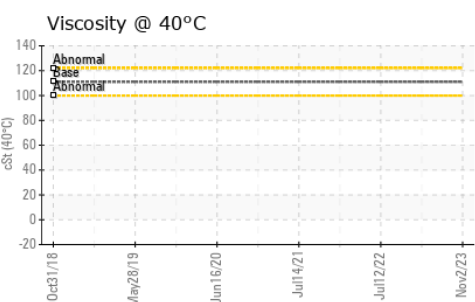
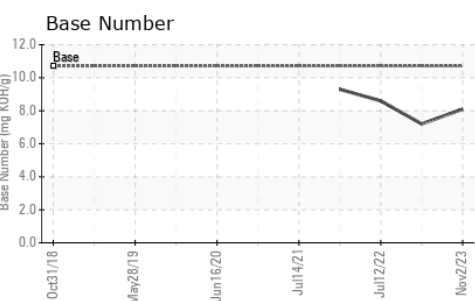
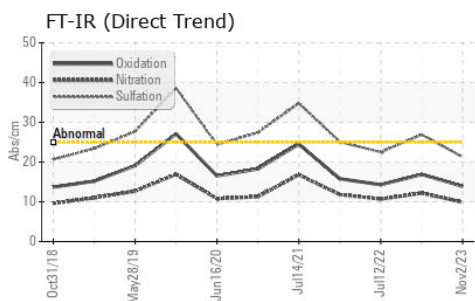
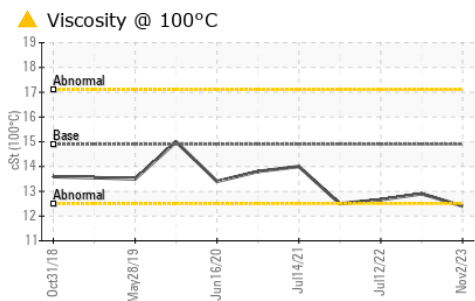
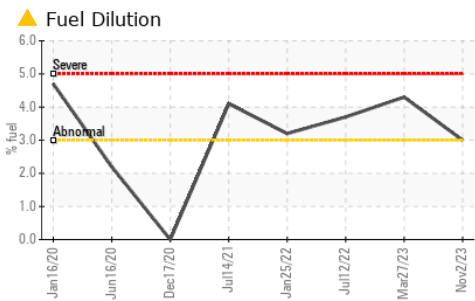
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>30	<b>15</b>	33	5
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	8	3
Fuel	%	ASTM D3524	>3.0	<b>3.0</b>	4.3	3.7
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.5</b>	2.9	1.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	12.2	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	26.9	22.5
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>9</b>	9	6
Boron	ppm	ASTM D5185m		<b>128</b>	78	73
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>64</b>	44	42
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>926</b>	665	639
Calcium	ppm	ASTM D5185m		<b>1902</b>	1427	1408
Phosphorus	ppm	ASTM D5185m	760	<b>1002</b>	766	685
Zinc	ppm	ASTM D5185m	830	<b>1147</b>	923	796
Sulfur	ppm	ASTM D5185m	2770	<b>4137</b>	3776	3427
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	16.9	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.1</b>	7.2	8.6
Visc @ 100°C	cSt	ASTM D445	14.9	<b>12.4</b>	12.9	12.66



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0879838 **Received** : 20 Nov 2023  
**Lab Number** : 06012003 **Tested** : 29 Nov 2023  
**Unique Number** : 10751147 **Diagnosed** : 29 Nov 2023 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, KV40, PercentFuel, TBN )  
 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)

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