

## **OIL ANALYSIS REPORT**

Sample Rating Trend

## GLYCOL

Machine Id

# PETERBILT 123

Component Diesel Engine

Fluid CHEVRON DELO 400 XLE 15W40 (38 LTR)

## DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## 🔺 Wear

The aluminum level is abnormal. Bearing and/or gear wear is indicated. All other component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

### Fluid Condition

The condition of the oil is acceptable for the time in service.  $\label{eq:condition}$ 

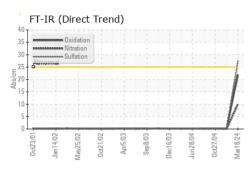
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0733172	WCM2056357	WCM2039363
Sample Date		Client Info		18 Mar 2024	28 Feb 2005	27 Oct 2004
Machine Age	mls	Client Info		141211	749802	720056
Oil Age	mls	Client Info		40000	20000	20000
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>65	21	12	32
Chromium	ppm	ASTM D5185m	>10	0	2	1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	71	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	<u> </u>	2	2
Lead	ppm	ASTM D5185m	>30	0	1	14
Copper	ppm	ASTM D5185m	>30	3	9	3
Tin	ppm	ASTM D5185m	>4	0	0	0
Antimony	ppm	ASTM D5185m			1	3
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		22	100	<1
Parium				•	0	0
Dallulli	ppm	ASTM D5185m		0	0	0
	ppm ppm	ASTM D5185m ASTM D5185m		0 12	82	2
Molybdenum				-		
Molybdenum Manganese	ppm	ASTM D5185m		12	82	2
Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m		12 <1	82 <1	2 <1
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	760	12 <1 443	82 <1 8	2 <1 10
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 830	12 <1 443 1854	82 <1 8 2644	2 <1 10 3133
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		12 <1 443 1854 1001	82 <1 8 2644 1108	2 <1 10 3133 1091
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830	12 <1 443 1854 1001 1208	82 <1 8 2644 1108 1232	2 <1 10 3133 1091 1269
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770	12 <1 443 1854 1001 1208 4070	82 <1 8 2644 1108 1232 3698	2 <1 10 3133 1091 1269 4138
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	830 2770 limit/base	12 <1 443 1854 1001 1208 4070 current	82 <1 8 2644 1108 1232 3698 history1	2 <1 10 3133 1091 1269 4138 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	830 2770 limit/base	12 <1 443 1854 1001 1208 4070 current 7	82 <1 8 2644 1108 1232 3698 history1 8	2 <1 10 3133 1091 1269 4138 history2 5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	830 2770 limit/base >20	12 <1 443 1854 1001 1208 4070 current 7 68	82 <1 8 2644 1108 1232 3698 history1 8 2	2 <1 10 3133 1091 1269 4138 history2 5 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >20	12 <1 443 1854 1001 1208 4070 <u>current</u> 7 ▲ 68 ▲ 47	82 <1 8 2644 1108 1232 3698 history1 8 2 0	2 <1 10 3133 1091 1269 4138 history2 5 2 8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >20 >20	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 ▲ 47 NEG	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D2982 method *ASTM D7844	830 27770 limit/base >20 >20 limit/base >6	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 47 NEG current 0.4	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG history1 0.4	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG NEG history2 0.8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	830 2770 limit/base >20 >20 limit/base	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 ▲ 47 NEG current	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG history1	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG NEG history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	830 27770 limit/base >20 >20 limit/base >6 >20	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 ▲ 47 NEG 0.4 10.1	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG NEG history1 0.4 0.03	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG NEG history2 0.8 0.08
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844	830 27770 limit/base >20 >20 limit/base >6 >20 >20 >30	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 ▲ 47 NEG current 0.4 10.1 27.3 current	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG NEG history1 0.4 0.03 0.04	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG 5 2 8 NEG 0.8 0.08 0.08 0.08 0.11 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7624 *ASTM D7624	830 27770 limit/base >20 >20 20 limit/base >20 >30 limit/base	12 <1 443 1854 1001 1208 4070 current 7 ▲ 68 ▲ 47 NEG current 0.4 10.1 27.3	82 <1 8 2644 1108 1232 3698 history1 8 2 0 NEG NEG history1 0.4 0.03 0.04 history1	2 <1 10 3133 1091 1269 4138 history2 5 2 8 NEG NEG history2 0.8 0.08 0.08 0.11

Report Id: LYNSPR [WUSCAR] 06140117 (Generated: 04/10/2024 08:36:07) Rev: 1

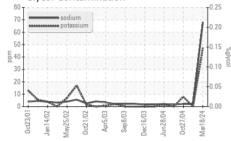
Contact/Location: Mathieu Carby - LYNSPR

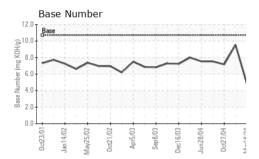


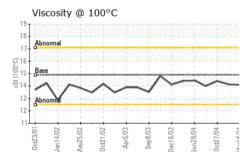
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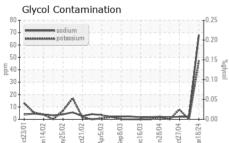


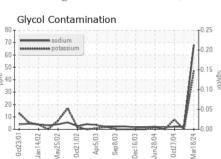




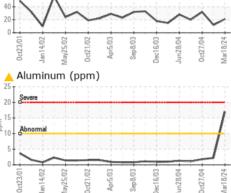


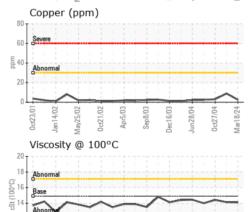






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	TIES	method	limit/base	current	history1	history
/isc @ 100°C	cSt	ASTM D445	14.9	14.1	14.14	14.4
GRAPHS						
Iron (ppm)				Lead (ppm)		
Severe			8	<sup>0</sup> T		



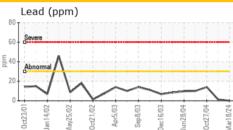


Apr5/03 ten8/03

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

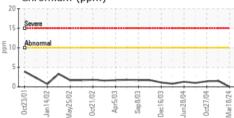
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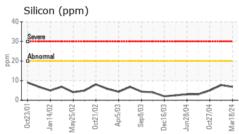
Dec16/03



Chromium (ppm)

an



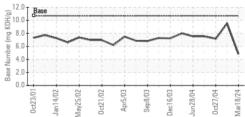


## Base Number

Mar18/24 -

: 05 Apr 2024

0ct27/04





Lab Number : 06140117 Tested : 10 Apr 2024 Diagnosed Unique Number : 10964925 : 10 Apr 2024 - Jonathan Hester Test Package : MOB 2 (Additional Tests: Glycol) Certificate 12367 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)

12

10

Laboratory

Sample No.

Jan 14/02 Mav25/02 0ct21/02

: WC0733172

Report Id: LYNSPR [WUSCAR] 06140117 (Generated: 04/10/2024 08:36:08) Rev: 1

Contact/Location: Mathieu Carby - LYNSPR

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