



OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL



Machine Id
WESTERN STAR NY3677

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- LTR)

DIAGNOSIS

▲ Recommendation

Taking the sample cold limits the accuracy of our diagnosis. We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Advise you send the oil filter for a more detailed analysis of the wear situation that is occurring in this component.

▲ Wear

Aluminum ppm levels are abnormal. Moderate concentration of visible metal present. Piston, ring and cylinder wear is indicated. Piston wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0805612	---	---
Sample Date	Client Info		04 Aug 2023	---	---
Machine Age	hrs	Client Info	483	---	---
Oil Age	hrs	Client Info	483	---	---
Oil Changed	Client Info		Not Chngd	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	123	---
Chromium	ppm	ASTM D5185(m)	>20	2	---
Nickel	ppm	ASTM D5185(m)	>4	<1	---
Titanium	ppm	ASTM D5185(m)		50	---
Silver	ppm	ASTM D5185(m)	>3	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ 84	---
Lead	ppm	ASTM D5185(m)	>40	2	---
Copper	ppm	ASTM D5185(m)	>330	108	---
Tin	ppm	ASTM D5185(m)	>15	43	---
Antimony	ppm	ASTM D5185(m)		0	---
Vanadium	ppm	ASTM D5185(m)		<1	---
Beryllium	ppm	ASTM D5185(m)		0	---
Cadmium	ppm	ASTM D5185(m)		0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	90	---
Barium	ppm	ASTM D5185(m)	10	<1	---
Molybdenum	ppm	ASTM D5185(m)	100	22	---
Manganese	ppm	ASTM D5185(m)		4	---
Magnesium	ppm	ASTM D5185(m)	450	662	---
Calcium	ppm	ASTM D5185(m)	3000	2000	---
Phosphorus	ppm	ASTM D5185(m)	1150	1098	---
Zinc	ppm	ASTM D5185(m)	1350	1232	---
Sulfur	ppm	ASTM D5185(m)	4250	3120	---
Lithium	ppm	ASTM D5185(m)		<1	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	11	---
Sodium	ppm	ASTM D5185(m)		4	---
Potassium	ppm	ASTM D5185(m)	>20	28	---
Glycol	%	ASTM D7922*		0.0	---

INFRA-RED

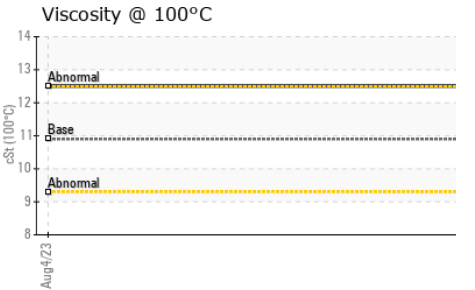
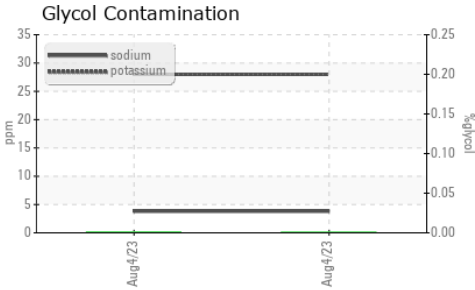
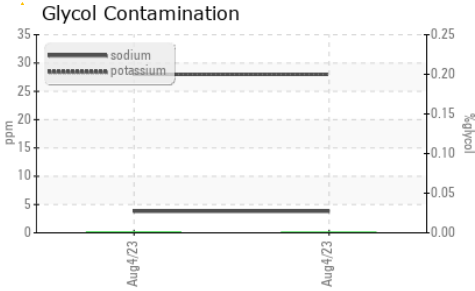
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.1	---
Nitration	Abs/cm	ASTM D7624*	>20	9.8	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.6	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.1	---



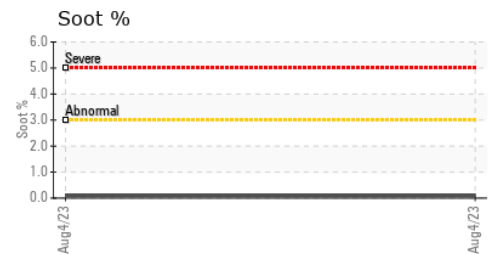
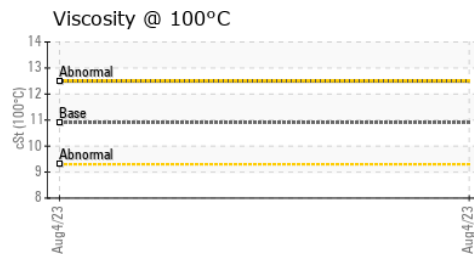
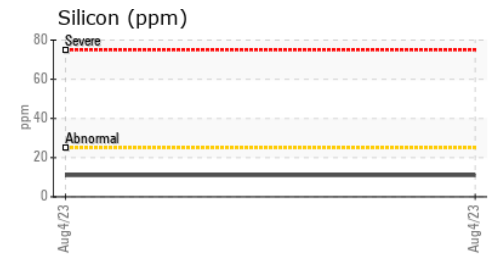
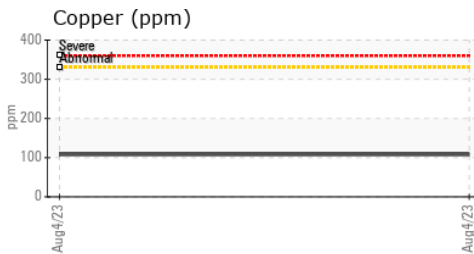
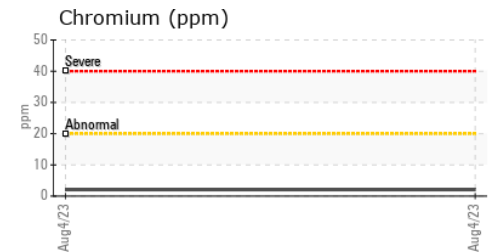
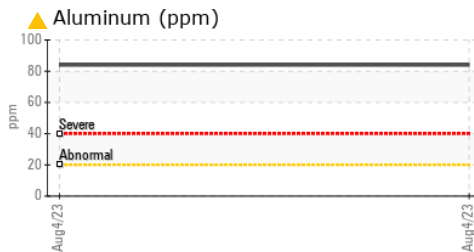
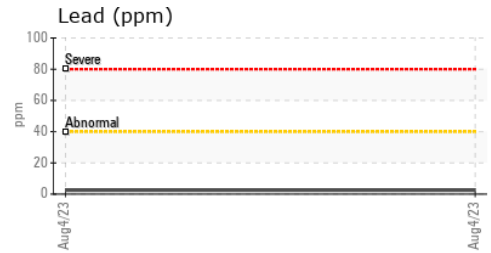
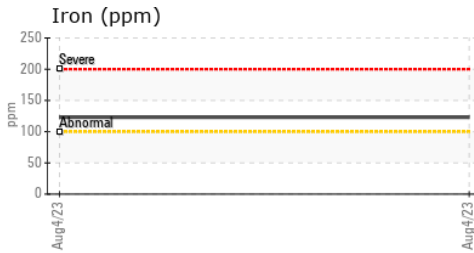
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ LTMOD	---
Yellow Metal	scalar	Visual*	NONE	VLITE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	VLITE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	12.5	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0805612 **Received** : 25 Aug 2023
Lab Number : **02578377** **Diagnosed** : 28 Aug 2023
Unique Number : 5631437 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, Glycol, Visual)

PREMIER TRUCK GROUP
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 BELLEVILLE, ON
 CA K8N 4Z5
 Contact: C. Chapman
 cchapman@premiertruck.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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F: