



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
[44060311]

Machine Id
PETERBILT 857-4230 Liberty Tire

Component
Diesel Engine

Fluid
MOBIL DELVAC MX 15W40 (40 QTS)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0016473	RPL0006708	RPL0006805
Sample Date		Client Info		11 Apr 2024	06 Feb 2023	11 Oct 2022
Machine Age	mls	Client Info		544761	431509	388065
Oil Age	mls	Client Info		15324	15059	39754
Filter Age	mls	Client Info		15324	15059	39734
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>110	▲ 169	14	<1
Chromium	ppm	ASTM D5185m	>4	3	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	13	3	2
Lead	ppm	ASTM D5185m	>45	4	0	0
Copper	ppm	ASTM D5185m	>85	10	1	0
Tin	ppm	ASTM D5185m	>4	1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

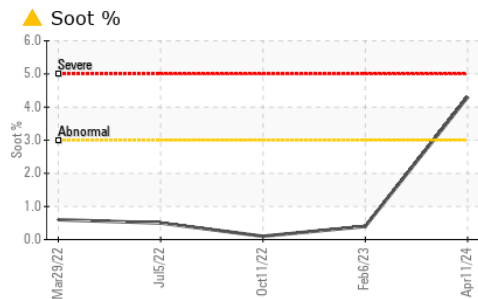
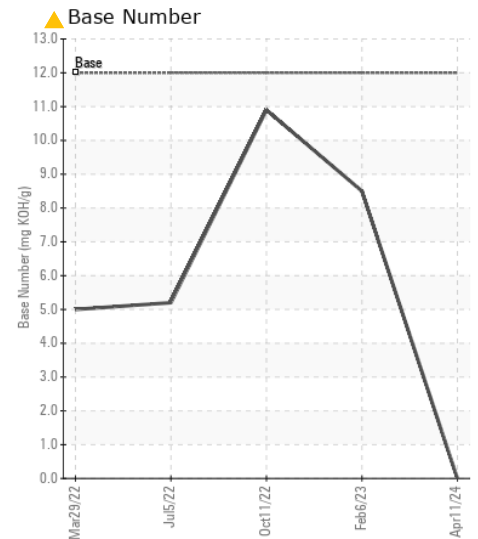
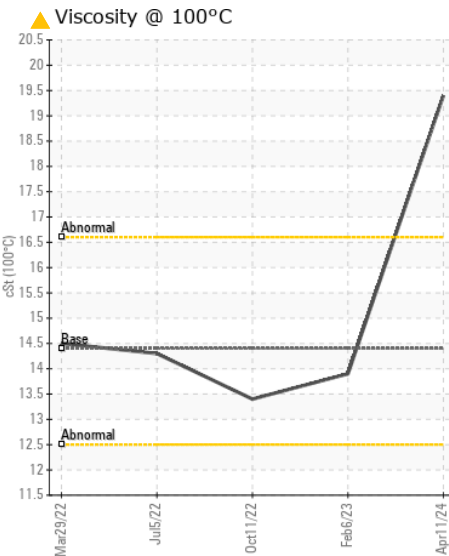
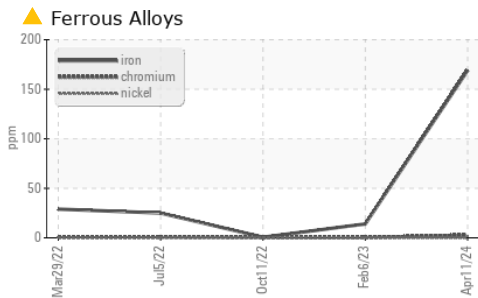
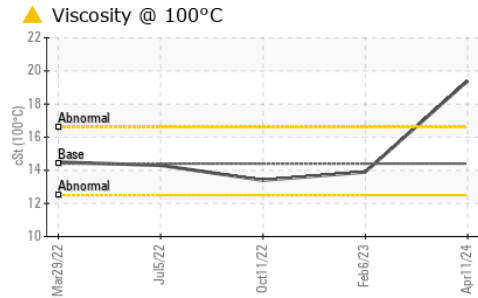
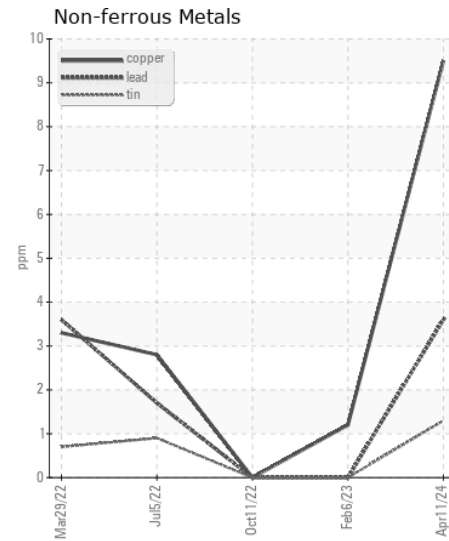
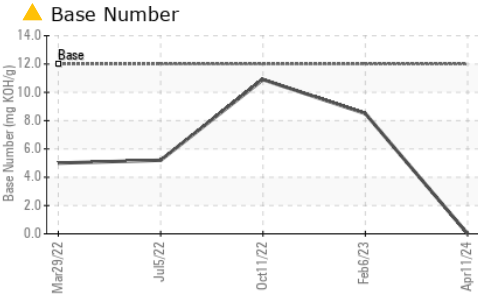
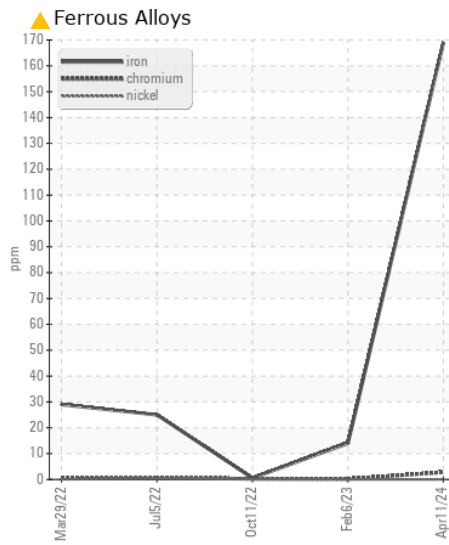
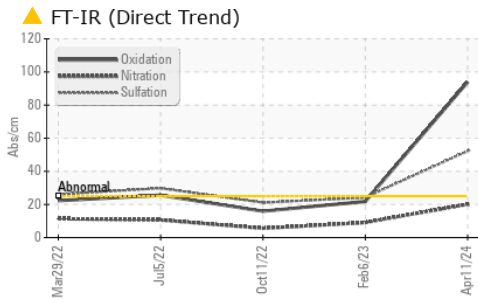
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>30	12	7	6
Potassium	ppm	ASTM D5185m	>20	11	4	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 4.3	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	20.1	9.1	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	52.2	24.2	21.1
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

FLUID CONDITION

The oil viscosity is higher than normal. The BN level is low.

Sodium	ppm	ASTM D5185m		6	2	0
Boron	ppm	ASTM D5185m		22	27	61
Barium	ppm	ASTM D5185m		1	1	0
Molybdenum	ppm	ASTM D5185m		57	45	34
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m		724	534	621
Calcium	ppm	ASTM D5185m		1908	1568	1270
Phosphorus	ppm	ASTM D5185m		1078	783	700
Zinc	ppm	ASTM D5185m		1263	959	906
Sulfur	ppm	ASTM D5185m		2740	2227	2897
Oxidation	Abs/.1mm	*ASTM D7414	>25	93.9	21.8	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	12	▲ 0.0	8.5	10.9
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 19.4	13.9	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0016473
Lab Number : 06178419
Unique Number : 11029745
Test Package : FLEET

Received : 14 May 2024
Tested : 14 May 2024
Diagnosed : 20 May 2024 - Jonathan Hester

RTL PACLEASE - 7002 - San Antonio
 8810 IH-10 Frontage Road
 Converse, TX
 US 78109

Contact: Mike Friel
 FrielM@RushEnterprises.Com

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F:

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)