



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 35
Component
Diesel Engine
Fluid
DURAMAX 10W30 (8 GAL)

RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. 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		DC0033568	DC0026427	DC0020474
Sample Date		Client Info		08 Apr 2024	29 Dec 2023	02 Mar 2023
Machine Age	mls	Client Info		679774	505000	454988
Oil Age	mls	Client Info		3764	25000	19000
Filter Age	mls	Client Info		3764	25000	19000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	24	6	6
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	2
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>330	4	1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
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.

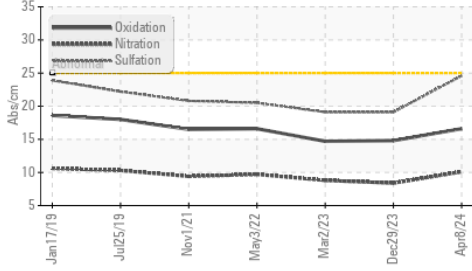
Silicon	ppm	ASTM D5185m	>25	4	4	4
Potassium	ppm	ASTM D5185m	>20	2	3	<1
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	▲ 3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.1	8.4	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	19.1	19.1
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

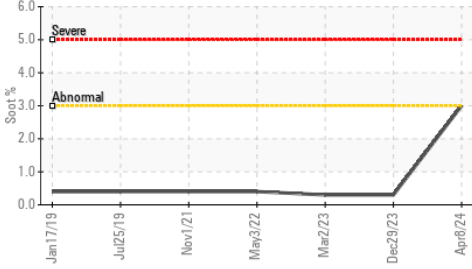
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	<1	2
Boron	ppm	ASTM D5185m		4	2	12
Barium	ppm	ASTM D5185m		2	10	0
Molybdenum	ppm	ASTM D5185m		52	58	52
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		757	885	839
Calcium	ppm	ASTM D5185m		1123	1291	1269
Phosphorus	ppm	ASTM D5185m		984	1197	972
Zinc	ppm	ASTM D5185m		1082	1247	1165
Sulfur	ppm	ASTM D5185m		3120	4169	3662
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	14.8	14.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	7.8	8.0
Visc @ 100°C	cSt	ASTM D445		12.6	11.2	11.2

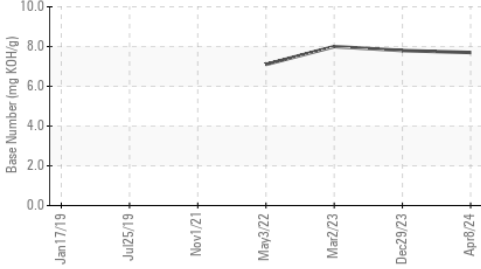
▲ FT-IR (Direct Trend)



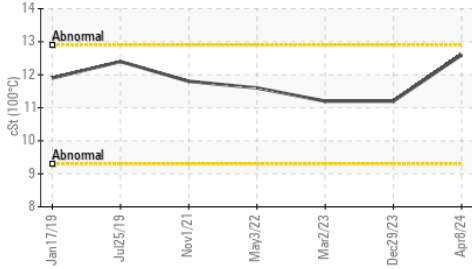
▲ Soot %



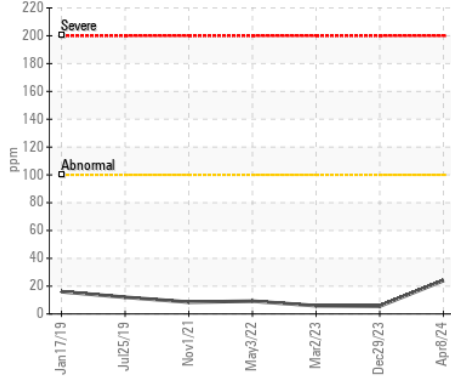
Base Number



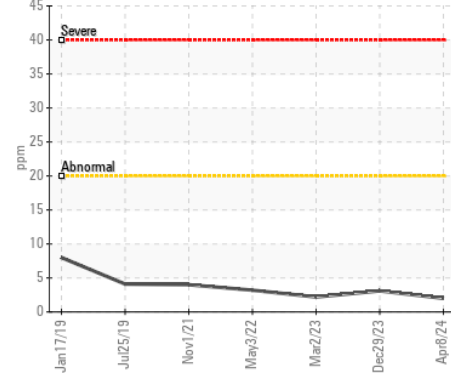
Viscosity @ 100°C



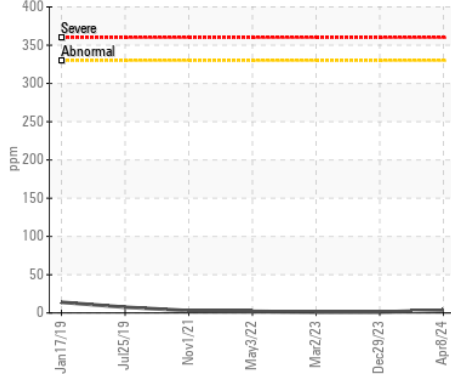
Iron (ppm)



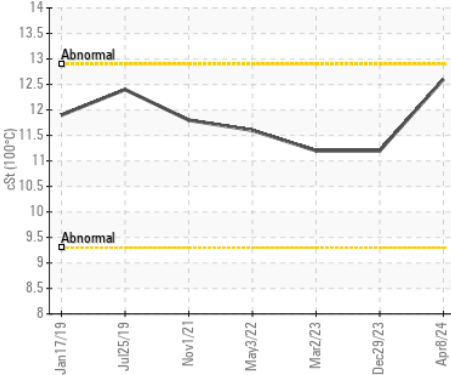
Aluminum (ppm)



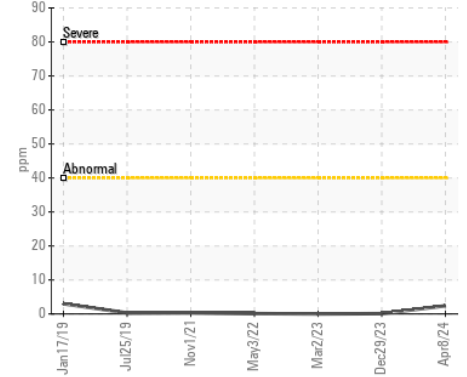
Copper (ppm)



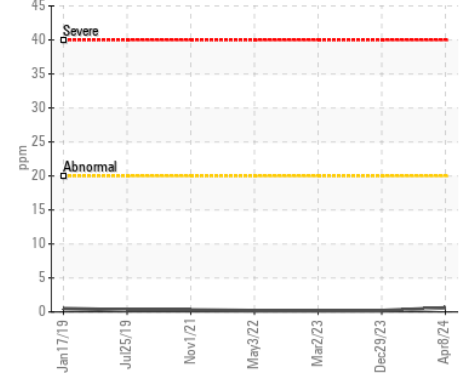
Viscosity @ 100°C



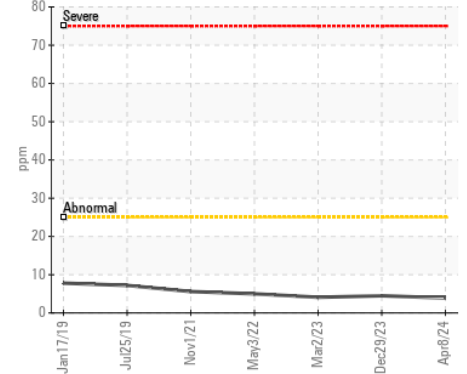
Lead (ppm)



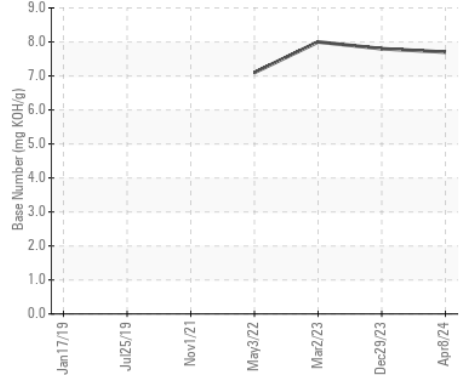
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0033568
Lab Number : 06176565
Unique Number : 11022618
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

Received : 10 May 2024
Tested : 14 May 2024
Diagnosed : 14 May 2024 - Sean Felton

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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)