OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
PETERBILT TDI1414
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

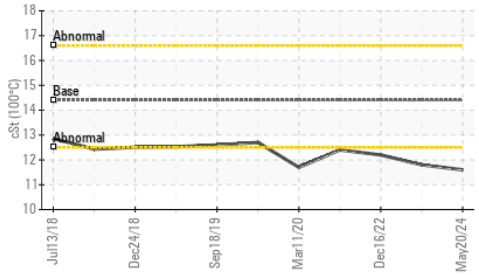
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

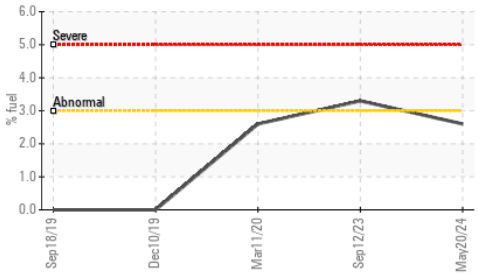
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936299	WC0828031	WC0746502
Sample Date		Client Info		20 May 2024	12 Sep 2023	16 Dec 2022
Machine Age	mls	Client Info		312751	271155	240808
Oil Age	mls	Client Info		25000	25000	25000
Filter Age	mls	Client Info		25000	25000	25000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ATTENTION
Iron	ppm	ASTM D5185m	>200	12	8	8
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	2	<1	1
Lead	ppm	ASTM D5185m	>30	2	2	4
Copper	ppm	ASTM D5185m	>30	1	0	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	6	3	3
Potassium	ppm	ASTM D5185m	>20	3	3	0
Fuel	%	ASTM D3524	>3.0	▲ 2.6	▲ 3.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.4	6.8	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	19.4	19.2
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
Sodium	ppm	ASTM D5185m	>158	<1	2	2
Boron	ppm	ASTM D5185m	250	344	6	8
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	95	60	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	395	937	898
Calcium	ppm	ASTM D5185m	3000	1501	1144	1153
Phosphorus	ppm	ASTM D5185m	1150	946	1034	963
Zinc	ppm	ASTM D5185m	1350	1242	1236	1189
Sulfur	ppm	ASTM D5185m	4250	3469	3801	3464
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	14.5	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.5	8.9	9.2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.6	▲ 11.8	● 12.2

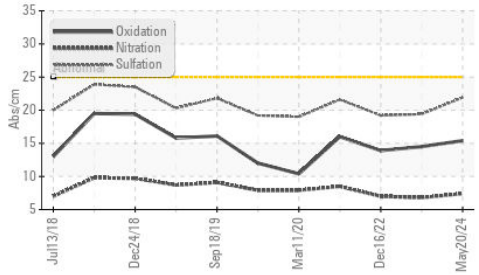
Viscosity @ 100°C



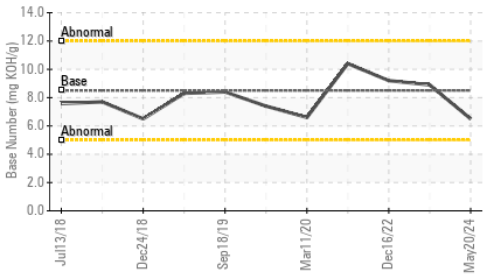
Fuel Dilution



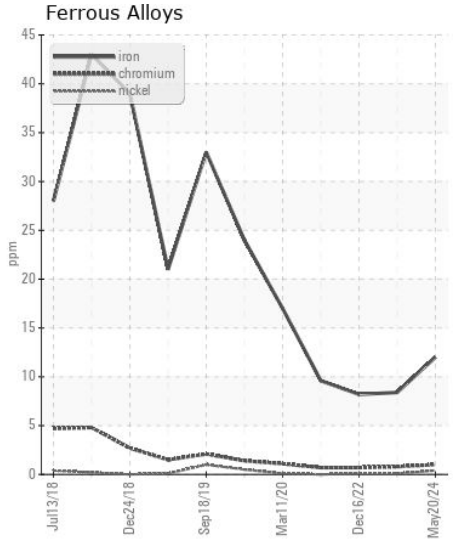
FT-IR (Direct Trend)



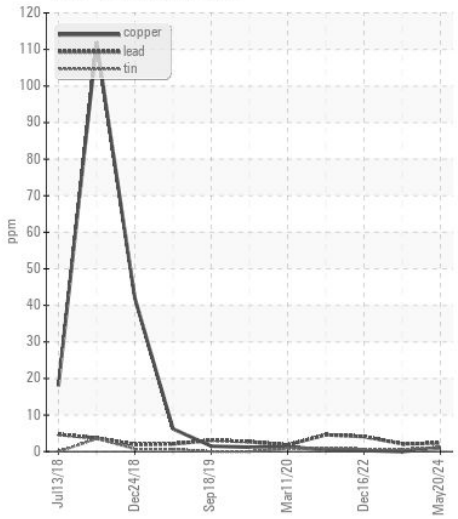
Base Number



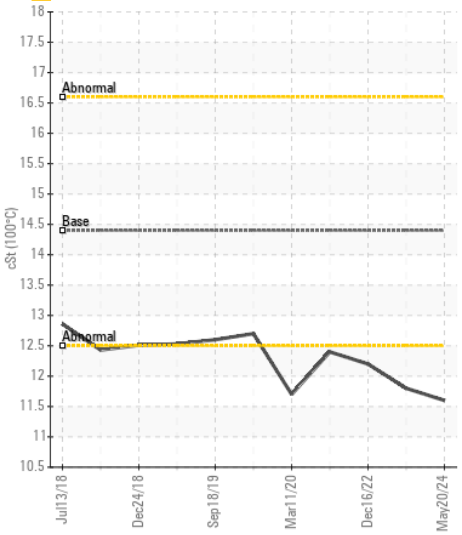
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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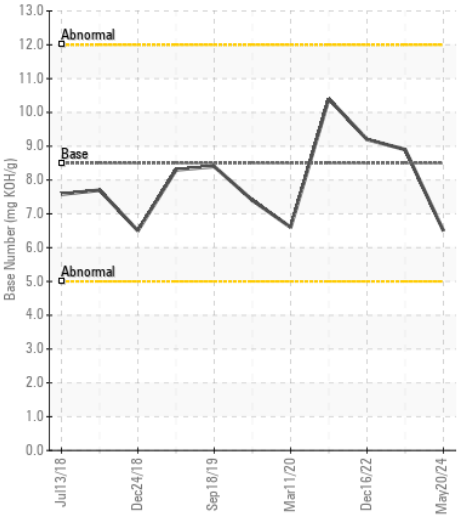

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936299
Lab Number : 06190031
Unique Number : 11046783
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Don Baldridge

Certificate L2367

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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