TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 107
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (11 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

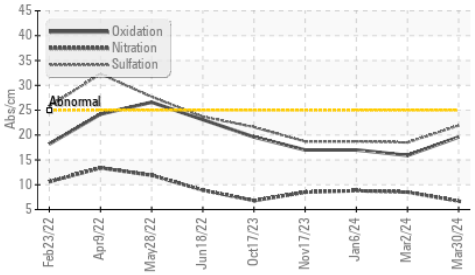
There is no indication of any contamination in the oil.

FLUID CONDITION

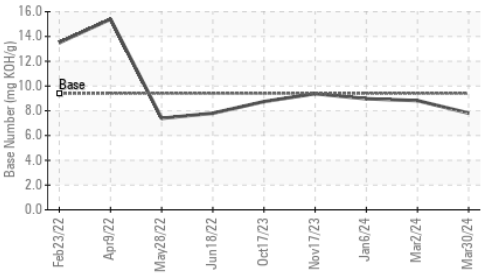
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06152665	TR06146079	TR06078518
Sample Date		Client Info		30 Mar 2024	02 Mar 2024	06 Jan 2024
Machine Age	mls	Client Info		733971	722332	706186
Oil Age	mls	Client Info		11639	11350	11768
Filter Age	mls	Client Info		11639	11350	11768
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	9	13	9
Chromium	ppm	ASTM D5185m	>20	<1	2	1
Nickel	ppm	ASTM D5185m	>2	1	2	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	4	4
Lead	ppm	ASTM D5185m	>40	<1	2	3
Copper	ppm	ASTM D5185m	>330	290	▲ 416	▲ 559
Tin	ppm	ASTM D5185m	>15	1	2	2
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	10	15	6
Potassium	ppm	ASTM D5185m	>20	3	3	4
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	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.7	8.5	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	18.5	18.7
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		3	2	4
Boron	ppm	ASTM D5185m	0	53	101	92
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	0	46	106	106
Manganese	ppm	ASTM D5185m		<1	1	2
Magnesium	ppm	ASTM D5185m	0	464	585	604
Calcium	ppm	ASTM D5185m		1410	1258	1196
Phosphorus	ppm	ASTM D5185m		699	733	666
Zinc	ppm	ASTM D5185m		782	778	774
Sulfur	ppm	ASTM D5185m		2603	3032	2752
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6	15.9	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	7.81	8.82	8.97
Visc @ 100°C	cSt	ASTM D445	14	14.7	14.9	14.6

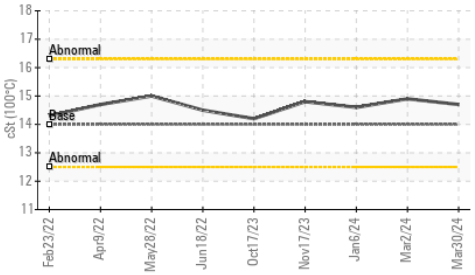
FT-IR (Direct Trend)



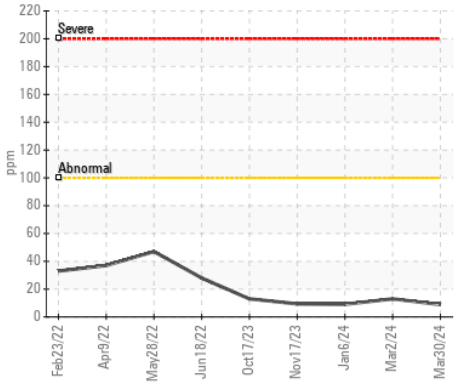
Base Number



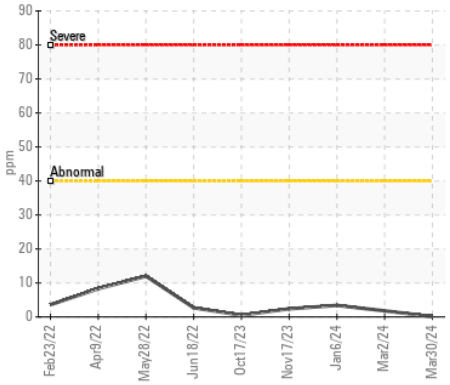
Viscosity @ 100°C



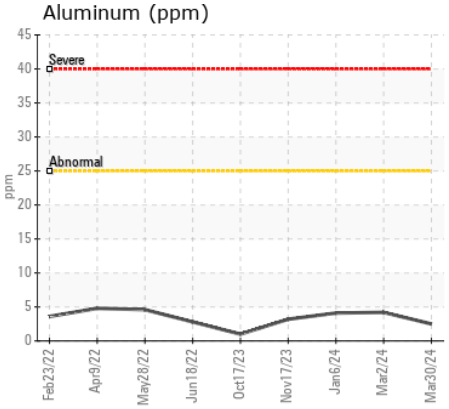
Iron (ppm)



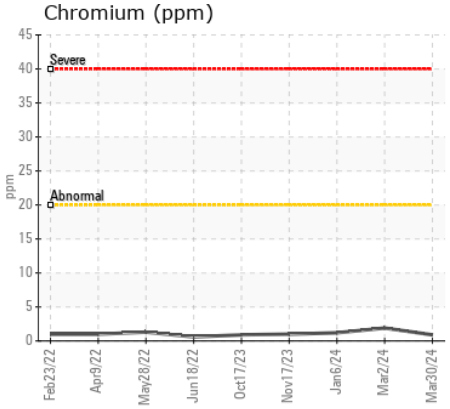
Lead (ppm)



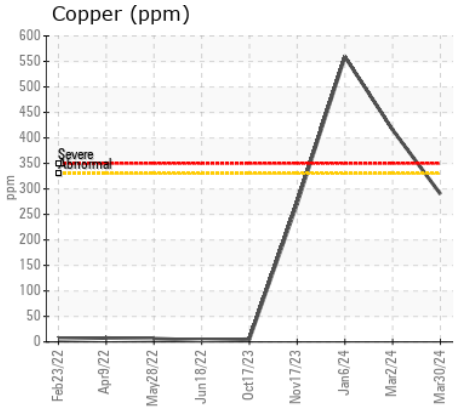
Aluminum (ppm)



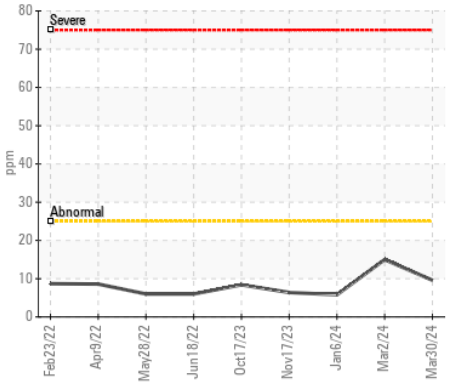
Chromium (ppm)



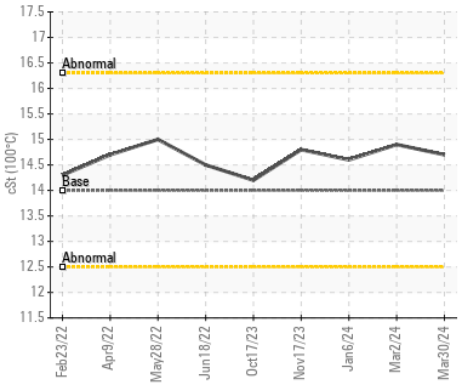
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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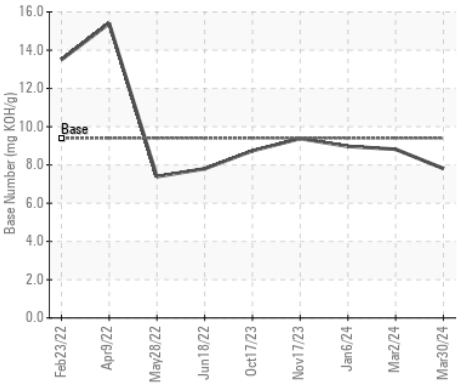

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06152665
Lab Number : 06152665
Unique Number : 10982743
Test Package : MOB 2

Received : 17 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Wes Davis

DARWIN UNRUH
19679 416TH AVE
CARPENTER, SD
US 57322
Contact: CALVIN KOEHN

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - 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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F: