TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 02
Component
Diesel Engine
Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

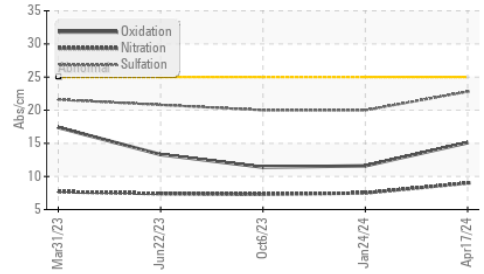
There is no indication of any contamination in the oil.

FLUID CONDITION

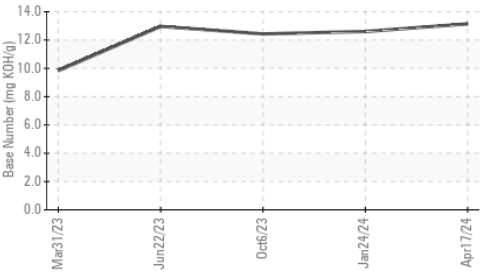
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06176278	TR06079289	TR05977787
Sample Date		Client Info		17 Apr 2024	24 Jan 2024	06 Oct 2023
Machine Age	mls	Client Info		2443878	241343	381945
Oil Age	mls	Client Info		29953	31980	30341
Filter Age	mls	Client Info		29953	31980	30341
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	64	47	60
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>2	2	4	4
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	6	3	0
Lead	ppm	ASTM D5185m	>40	4	2	1
Copper	ppm	ASTM D5185m	>330	12	6	8
Tin	ppm	ASTM D5185m	>15	2	2	2
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	9	8	10
Potassium	ppm	ASTM D5185m	>20	1	1	3
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	0.6	0.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	9.0	7.5	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	20.0	20.0
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		4	3	<1
Boron	ppm	ASTM D5185m		10	0	1
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		6	2	3
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		40	26	16
Calcium	ppm	ASTM D5185m		5020	4835	4496
Phosphorus	ppm	ASTM D5185m		933	901	825
Zinc	ppm	ASTM D5185m		1070	1033	1010
Sulfur	ppm	ASTM D5185m		4289	3577	4201
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	11.6	11.4
Base Number (BN)	mg KOH/g	ASTM D2896		13.14	12.60	12.43
Visc @ 100°C	cSt	ASTM D445	15.5	13.3	13.1	13.1

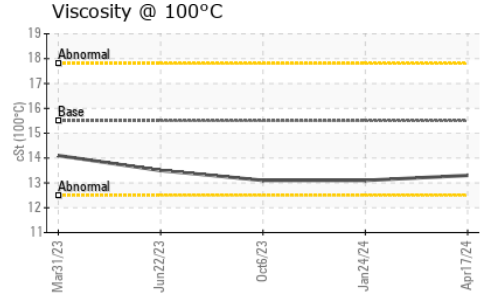
FT-IR (Direct Trend)



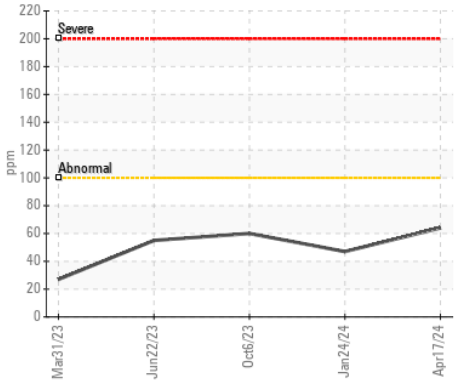
Base Number



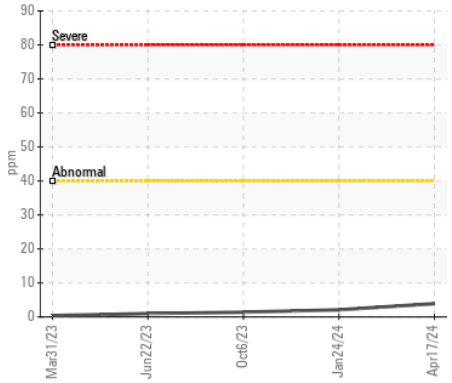
Viscosity @ 100°C



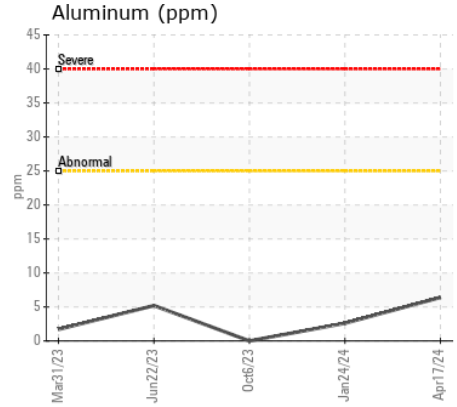
Iron (ppm)



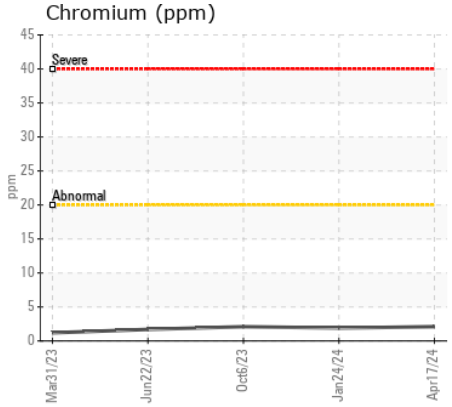
Lead (ppm)



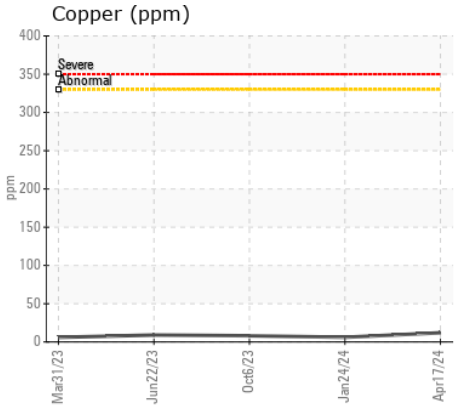
Aluminum (ppm)



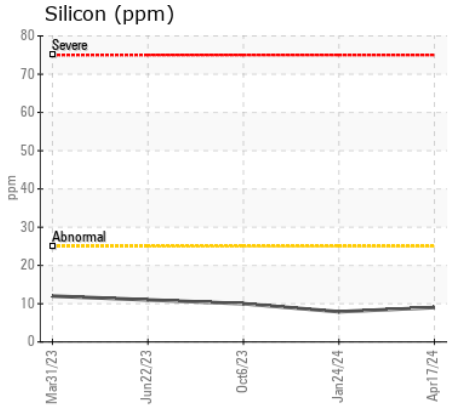
Chromium (ppm)



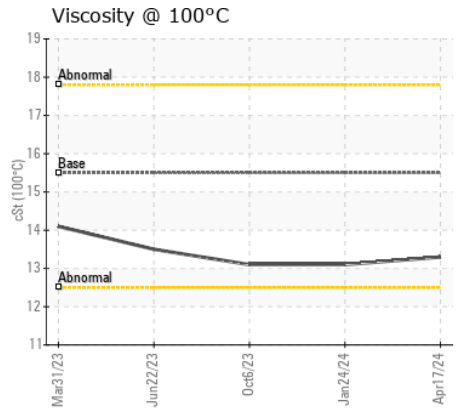
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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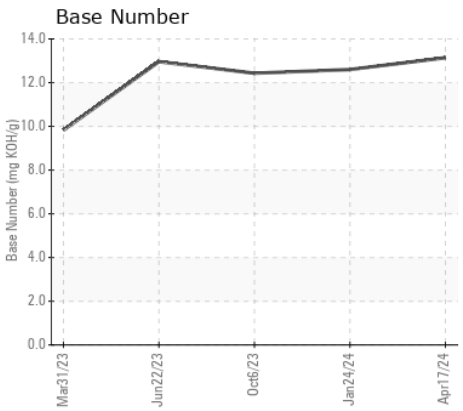

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06176278
Lab Number : 06176278
Unique Number : 11022331
Test Package : MOB 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

CIRCLE S TRANSPORTATION
1055 CUMMINS LN
TEXLINE, TX
US 79087
Contact: MIKE LEWIS

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: