



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 2015 PETERBILT 367

Component
Diesel Engine

Fluid
TRC MOLY XL PRO-SPEC SYN BLEND 15W40 (12 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06233430	TR05421544	TR05260692
Sample Date		Client Info		04 Jul 2024	26 Nov 2021	10 May 2021
Machine Age	mls	Client Info		527074	482000	470180
Oil Age	mls	Client Info		27074	21670	9830
Filter Age	mls	Client Info		27074	21670	9830
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	MARGINAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	12	20	13
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	2	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	5	2	2
Lead	ppm	ASTM D5185m	>25	<1	2	<1
Copper	ppm	ASTM D5185m	>100	4	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Elemental level of silicon (Si) above normal.

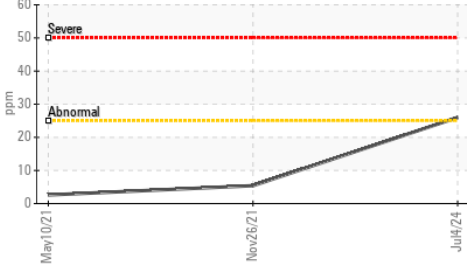
Silicon	ppm	ASTM D5185m	>25	▲ 26	5	3
Potassium	ppm	ASTM D5185m	>20	3	4	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.1	0.7	0.5
Nitration	Abs/cm	*ASTM D7624	>20	11.0	11.3	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.3	23.2	21.5
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

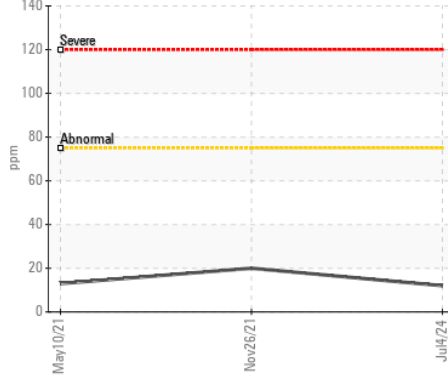
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	3	4
Boron	ppm	ASTM D5185m		6	<1	6
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		455	131	118
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		76	86	67
Calcium	ppm	ASTM D5185m	2300	3704	3759	2509
Phosphorus	ppm	ASTM D5185m		909	899	575
Zinc	ppm	ASTM D5185m	1200	1072	1022	683
Sulfur	ppm	ASTM D5185m		4183	4160	2707
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	14.4	12
Base Number (BN)	mg KOH/g	ASTM D2896	10	4.13	7.99	8.29
Visc @ 100°C	cSt	ASTM D445	15.5	17.3	▲ 19.3	▲ 19.4

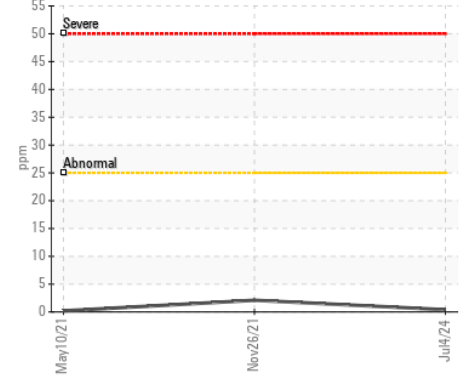
▲ Silicon (ppm)



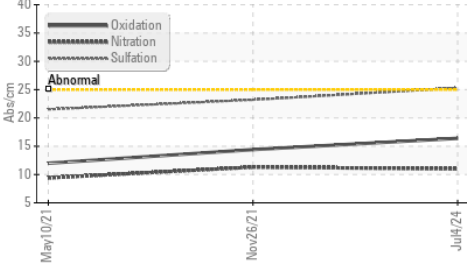
Iron (ppm)



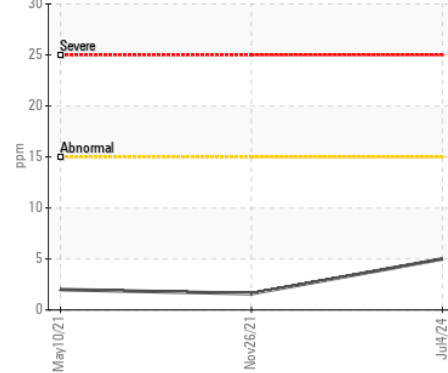
Lead (ppm)



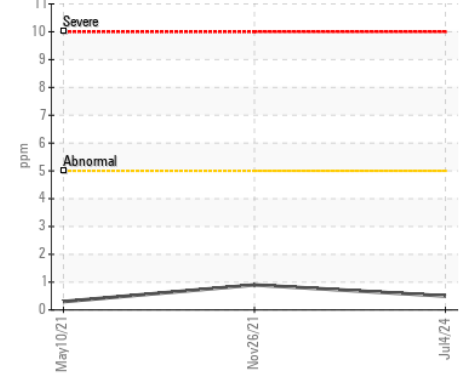
FT-IR (Direct Trend)



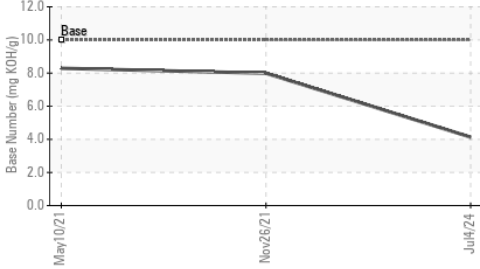
Aluminum (ppm)



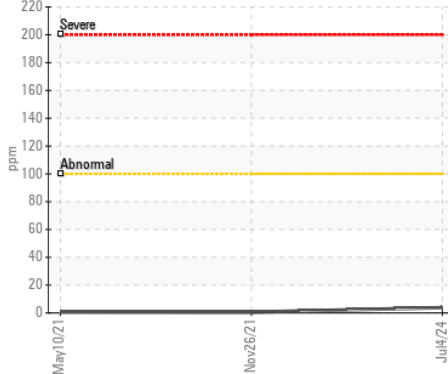
Chromium (ppm)



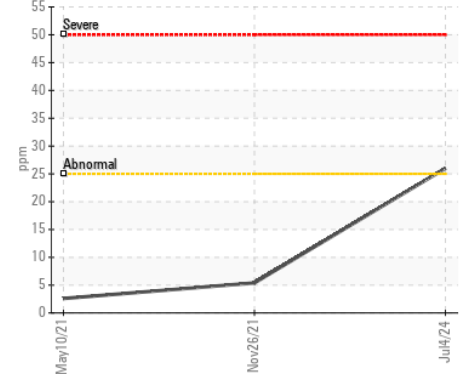
Base Number



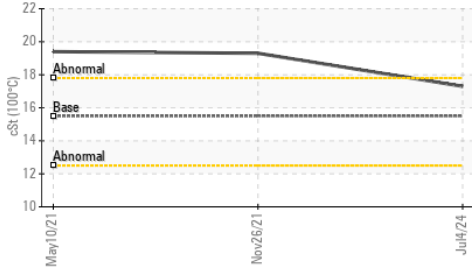
Copper (ppm)



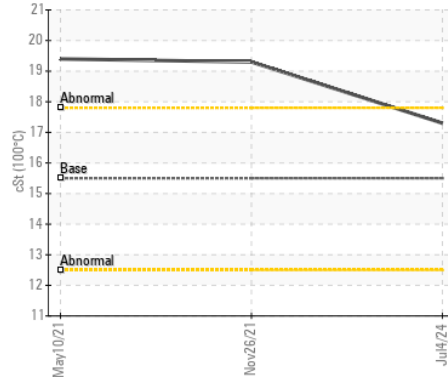
▲ Silicon (ppm)



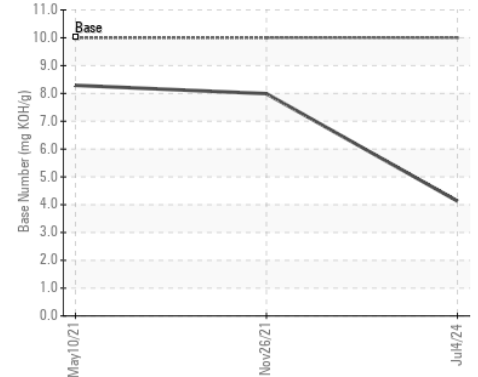
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : TR06233430

Lab Number : 06233430

Unique Number : 11116923

Test Package : MOB 2

Received : 11 Jul 2024

Tested : 12 Jul 2024

Diagnosed : 13 Jul 2024 - Don Baldrige

TRACY A TAYLOR INC

2725 BALLOWE CHURCH RD

VIENNA, IL

US 62995

Contact: SHARON HEERN

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)

T:

F: