



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
ASTEC ASTEC 205
 Component
Diesel Engine
 Fluid
TRC MOLY XL PROSPEC III 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06121755	TR05900196	TR05645623
Sample Date		Client Info		12 Mar 2024	07 Jul 2023	13 Sep 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		520	537	400
Filter Age	hrs	Client Info		520	537	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 287	▲ 167	20
Chromium	ppm	ASTM D5185m	>20	8	8	2
Nickel	ppm	ASTM D5185m	>4	1	1	0
Titanium	ppm	ASTM D5185m		1	1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	● 21	● 22	4
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	17	14	4
Tin	ppm	ASTM D5185m	>15	2	2	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

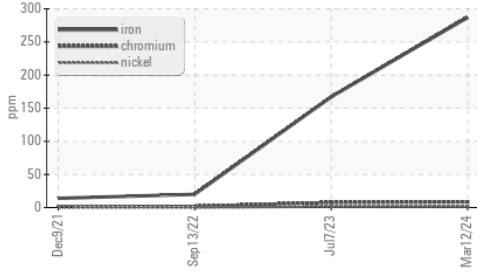
Silicon	ppm	ASTM D5185m	>25	▲ 36	▲ 38	10
Potassium	ppm	ASTM D5185m	>20	6	3	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.3	10.1	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	21.3	20.3
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

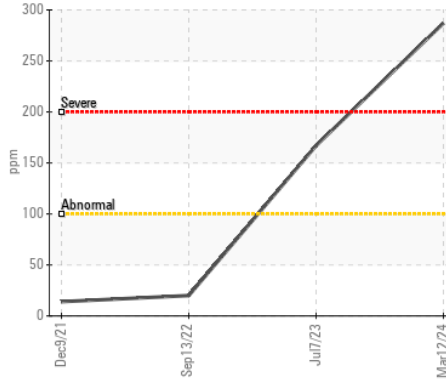
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m		11	6	5
Boron	ppm	ASTM D5185m		49	192	261
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		149	181	186
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		155	474	412
Calcium	ppm	ASTM D5185m	4500	3983	4245	3702
Phosphorus	ppm	ASTM D5185m		882	944	829
Zinc	ppm	ASTM D5185m	1400	1043	1169	1025
Sulfur	ppm	ASTM D5185m		4041	4980	3467
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	14.1	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	15	11.64	15.86	15.1
Visc @ 100°C	cSt	ASTM D445	15.5	14.3	14.0	13.9

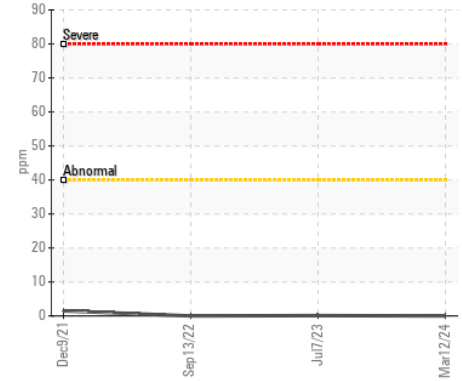
▲ Ferrous Alloys



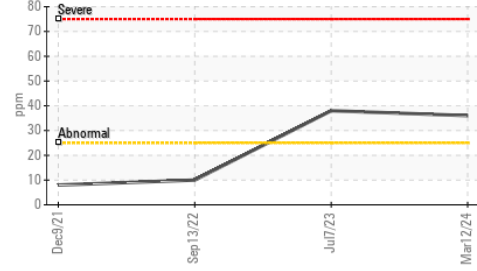
▲ Iron (ppm)



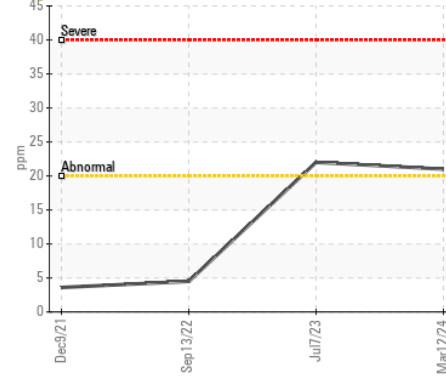
Lead (ppm)



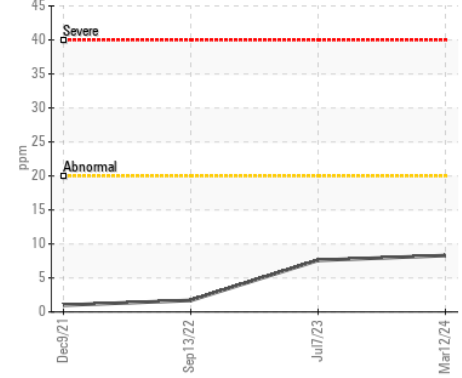
▲ Silicon (ppm)



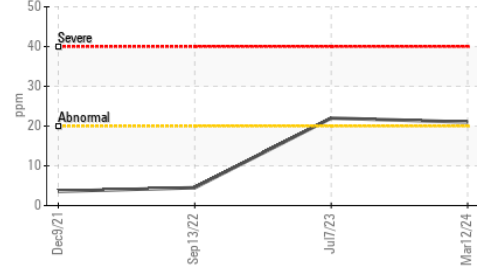
● Aluminum (ppm)



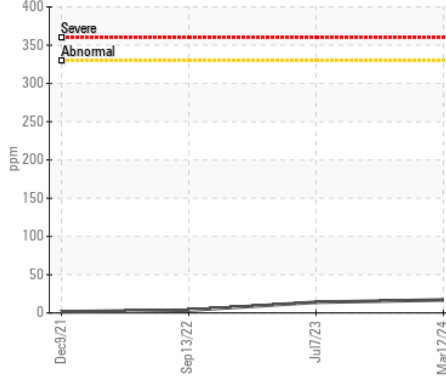
Chromium (ppm)



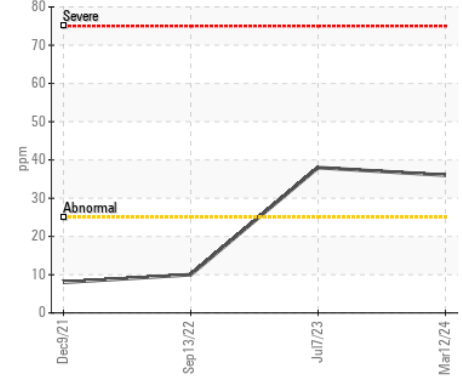
● Aluminum (ppm)



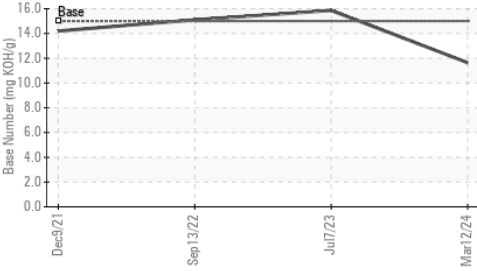
Copper (ppm)



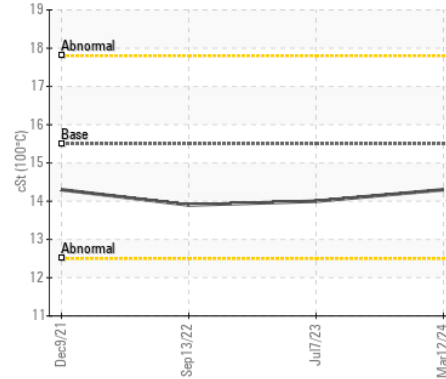
▲ Silicon (ppm)



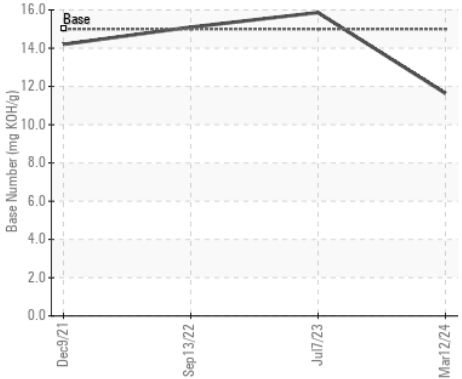
Base Number



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06121755
Lab Number : 06121755
Unique Number : 10930588
Test Package : MOB 2

NUTTER ENTERPRISES INC
 28 STONE RD
 BELMONT, NH
 US 03220
 Contact: DON PERCY

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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