



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
BLUE BIRD NEW BUS 8
 Component
Front Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC SYN BLEND 15W40 (25 QTS)

RECOMMENDATION

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		TR06100302	TR06100305	TR05692126
Sample Date		Client Info		07 Feb 2024	04 Jan 2024	02 Nov 2022
Machine Age	mls	Client Info		105542	99986	83930
Oil Age	mls	Client Info		14295	8739	28876
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	▲ 100	▲ 91	56
Chromium	ppm	ASTM D5185m	>20	3	3	2
Nickel	ppm	ASTM D5185m	>2	2	1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	18	17	10
Lead	ppm	ASTM D5185m	>40	2	1	<1
Copper	ppm	ASTM D5185m	>330	47	45	47
Tin	ppm	ASTM D5185m	>15	1	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

There is no indication of any contamination in the oil.

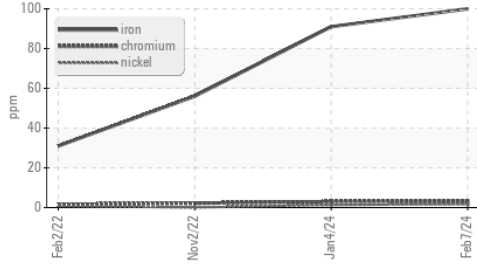
Silicon	ppm	ASTM D5185m	>25	15	14	11
Potassium	ppm	ASTM D5185m	>20	19	17	7
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	1.1	1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	16.1	15.5	13.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.9	29.0	28.4
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

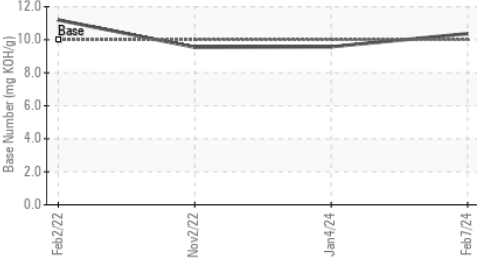
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	6	7
Boron	ppm	ASTM D5185m		6	6	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		162	162	168
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		23	23	21
Calcium	ppm	ASTM D5185m	2300	4447	4391	4680
Phosphorus	ppm	ASTM D5185m		910	929	942
Zinc	ppm	ASTM D5185m	1200	1179	1176	1131
Sulfur	ppm	ASTM D5185m		4106	4142	5316
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	22.6	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.37	9.57	9.54
Visc @ 100°C	cSt	ASTM D445	15.5	15.4	15.5	15.1

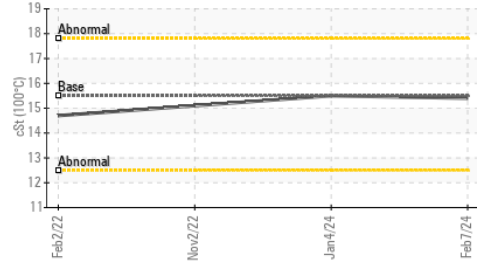
▲ Ferrous Alloys



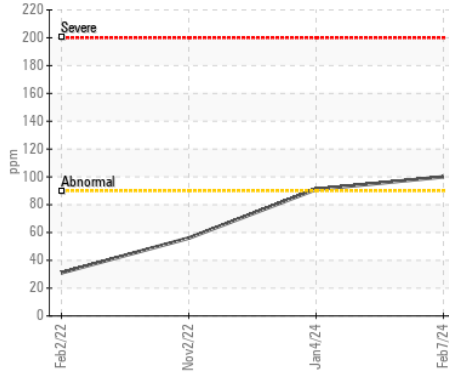
Base Number



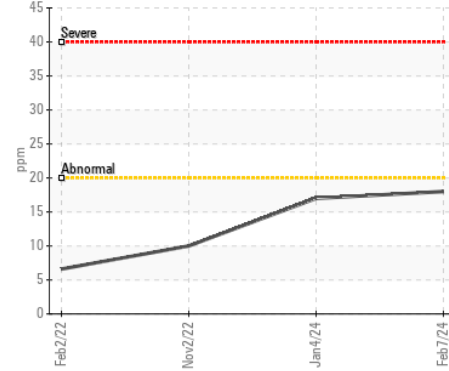
Viscosity @ 100°C



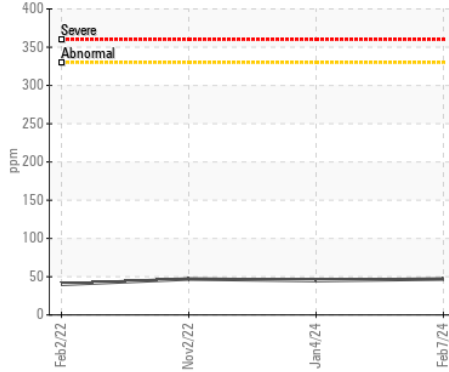
▲ Iron (ppm)



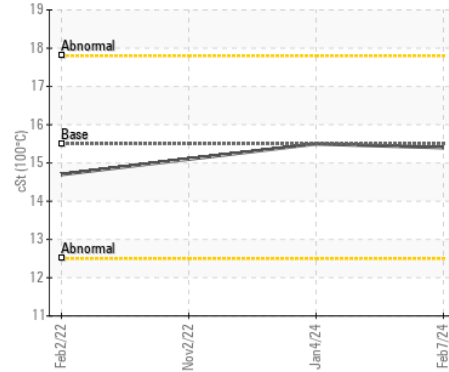
Aluminum (ppm)



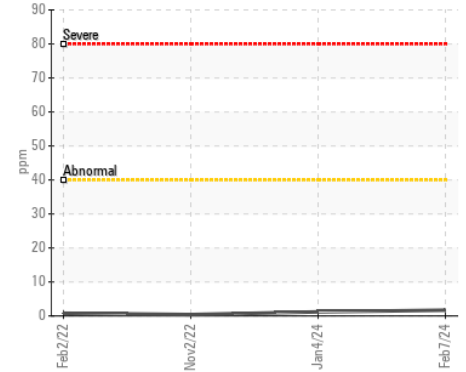
Copper (ppm)



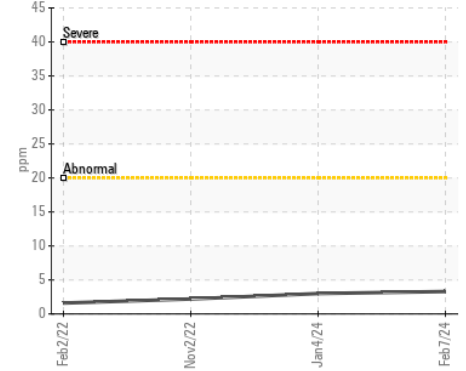
Viscosity @ 100°C



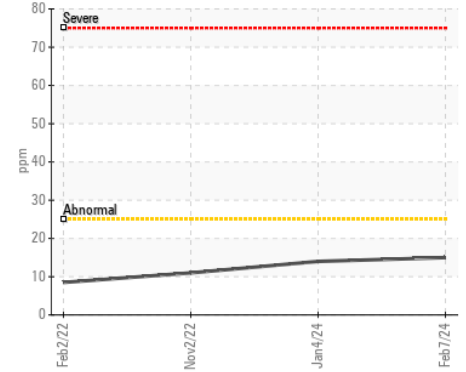
Lead (ppm)



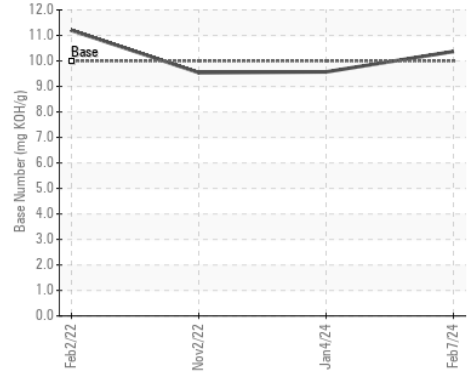
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06100302
Lab Number : 06100302
Unique Number : 10898532
Test Package : MOB 2
Received : 26 Feb 2024
Tested : 27 Feb 2024
Diagnosed : 28 Feb 2024 - Don Baldrige

COLORADO RIVER UNION HS
 2251 HWY 95
 BULLHEAD CITY, AZ
 US 86442

Contact: DENNIS SERCU
 DSERCU@CRSK12.ORG
 T: (928)788-1307
 F: (928)763-9881

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)