



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
2008 IHC BCSD 40E
 Component
Front Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC SYN BLEND 15W40 (30 QTS)

RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06155282	TR06029637	TR05815519
Sample Date		Client Info		20 Mar 2024	12 Oct 2023	28 Mar 2023
Machine Age	mls	Client Info		185539	180254	174371
Oil Age	mls	Client Info		10079	4794	19325
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				ATTENTION	ATTENTION	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	32	21	65
Chromium	ppm	ASTM D5185m	>15	<1	<1	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	6	5
Lead	ppm	ASTM D5185m	>70	3	3	8
Copper	ppm	ASTM D5185m	>175	23	7	18
Tin	ppm	ASTM D5185m	>5	1	1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

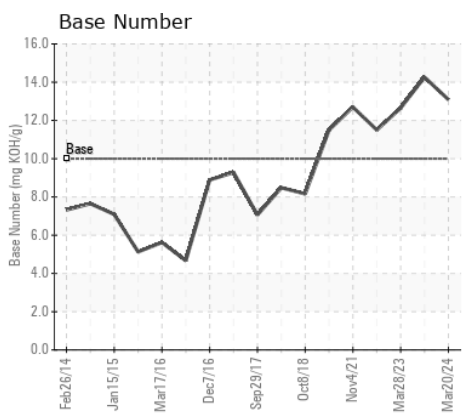
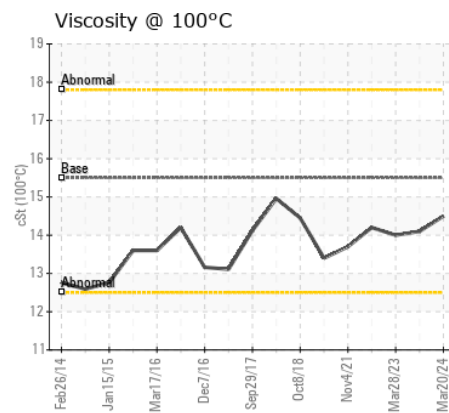
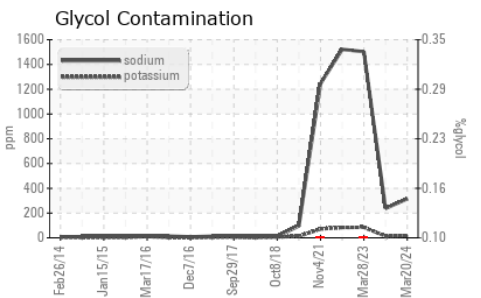
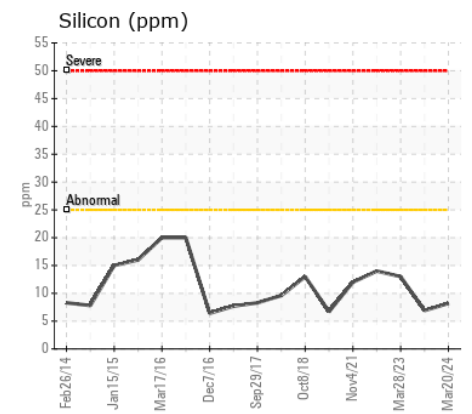
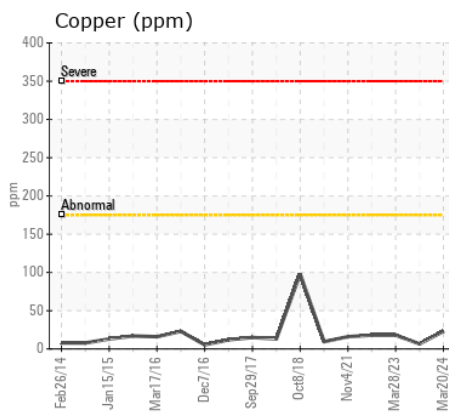
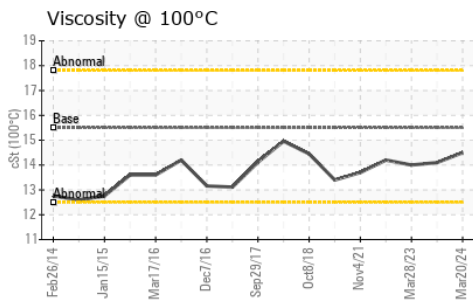
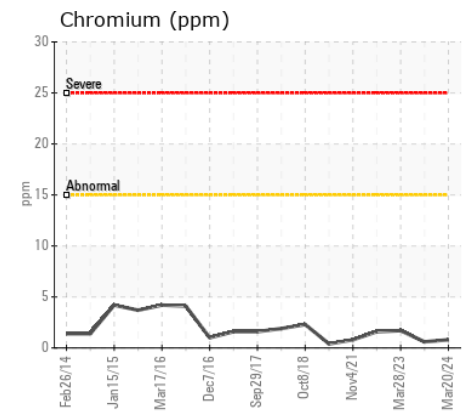
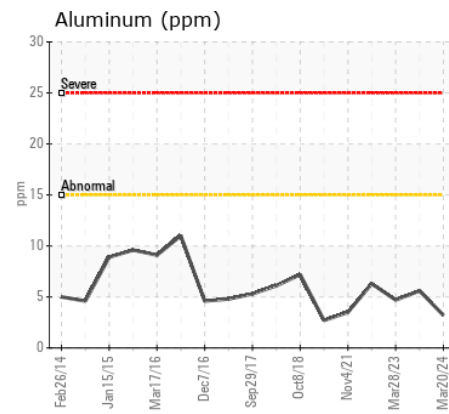
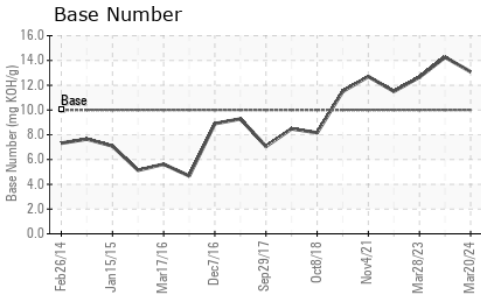
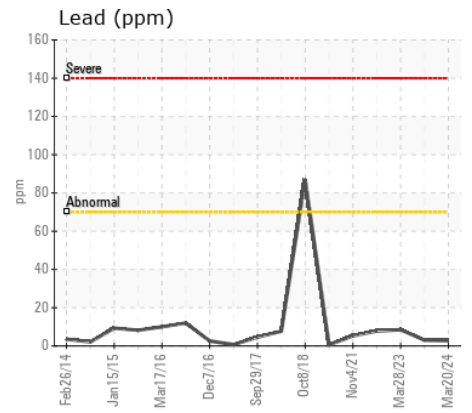
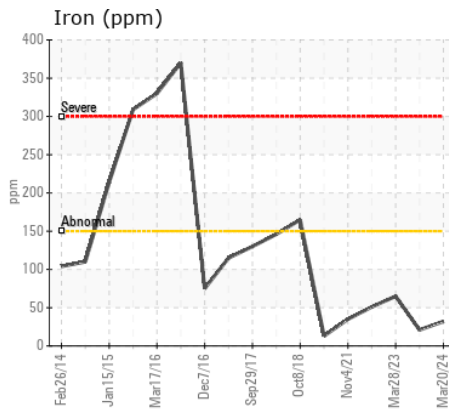
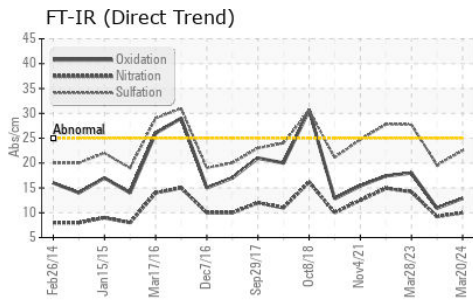
Sodium and/or potassium levels remain high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	8	7	13
Potassium	ppm	ASTM D5185m	>20	18	13	85
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	0.10
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.0	9.2	14.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	19.6	27.7
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

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		315	237	1503
Boron	ppm	ASTM D5185m		2	2	14
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		145	132	173
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		29	12	99
Calcium	ppm	ASTM D5185m	2300	4447	4269	3930
Phosphorus	ppm	ASTM D5185m		872	1016	877
Zinc	ppm	ASTM D5185m	1200	1016	1136	1017
Sulfur	ppm	ASTM D5185m		4183	4561	3850
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	10.9	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	10	13.09	14.26	12.65
Visc @ 100°C	cSt	ASTM D445	15.5	14.5	14.1	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06155282
Lab Number : 06155282
Unique Number : 10990705
Test Package : MOB 2 (Additional Tests: Glycol)

Received : 19 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Jonathan Hester

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

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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)