



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 972H L10 A7D01072

Component
Diesel Engine

Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06101166	TR06055068	TR06018433
Sample Date		Client Info		21 Feb 2024	04 Jan 2024	17 Nov 2023
Machine Age	hrs	Client Info		11532	11282	11021
Oil Age	hrs	Client Info		2071	1821	1560
Filter Age	hrs	Client Info		2071	1821	1560
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	91	96	72
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	3	3
Lead	ppm	ASTM D5185m	>40	8	7	4
Copper	ppm	ASTM D5185m	>330	11	13	10
Tin	ppm	ASTM D5185m	>15	<1	2	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

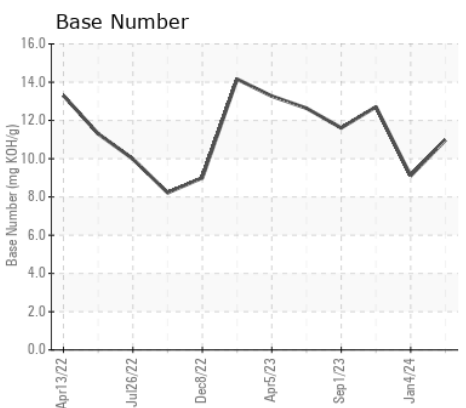
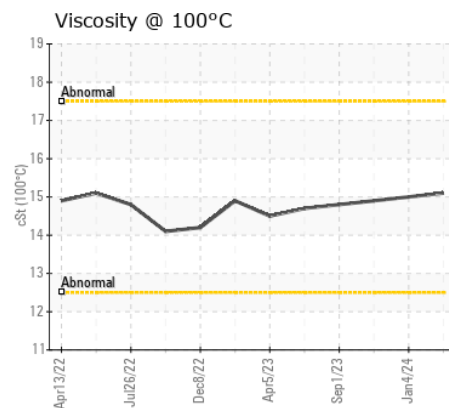
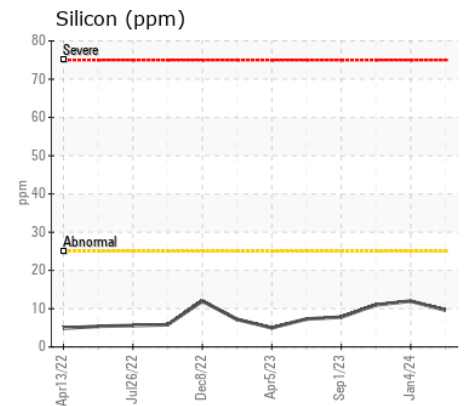
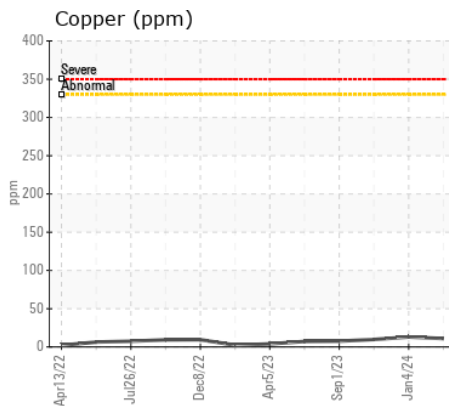
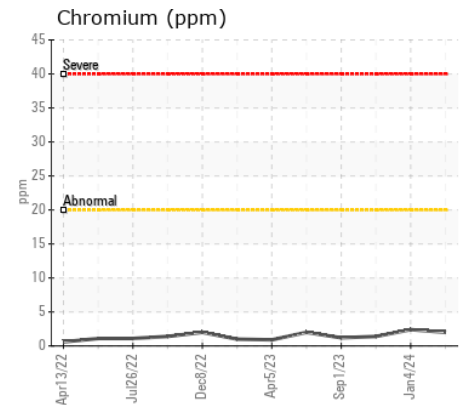
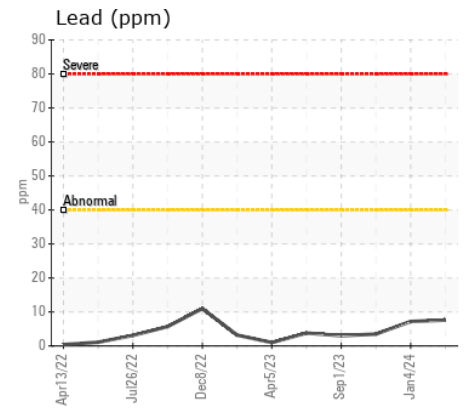
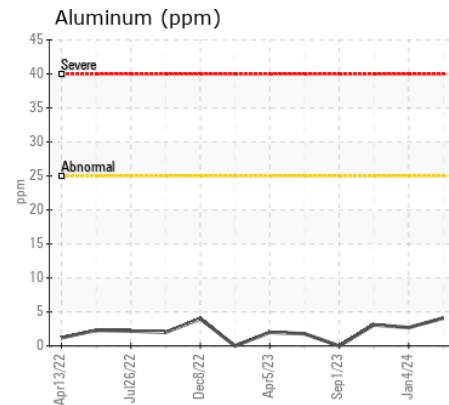
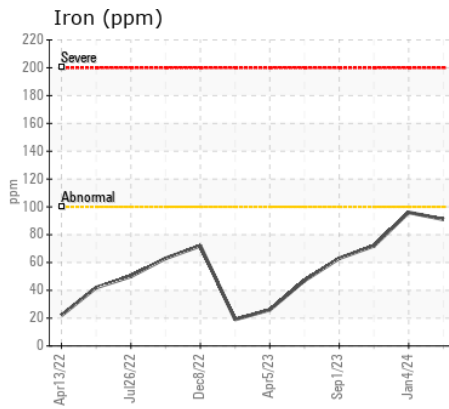
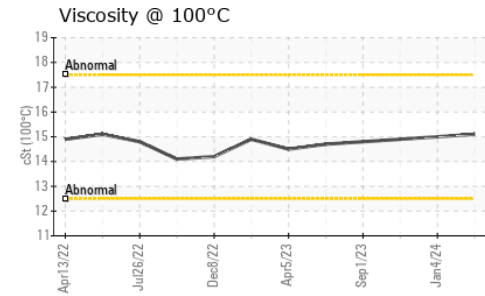
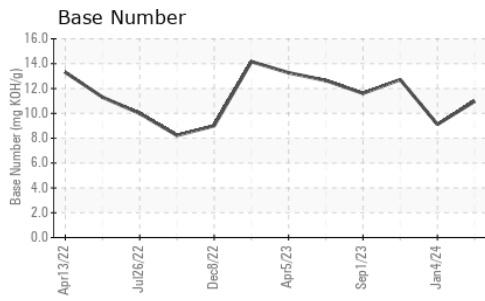
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	12	11
Potassium	ppm	ASTM D5185m	>20	0	4	<1
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	2.2	2.1	1.8
Nitration	Abs/cm	*ASTM D7624	>20	14.8	14.0	12.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.7	28.5	26.6
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		0	<1	5
Boron	ppm	ASTM D5185m		2	6	6
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		128	132	131
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		67	68	66
Calcium	ppm	ASTM D5185m		3920	4199	4086
Phosphorus	ppm	ASTM D5185m		844	835	958
Zinc	ppm	ASTM D5185m		1090	1092	1060
Sulfur	ppm	ASTM D5185m		4006	4640	4121
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.7	18.6	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		10.97	9.11	12.71
Visc @ 100°C	cSt	ASTM D445		15.1	15.0	14.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06101166 **Received** : 26 Feb 2024
Lab Number : 06101166 **Tested** : 28 Feb 2024
Unique Number : 10899396 **Diagnosed** : 28 Feb 2024 - Wes Davis
Test Package : MOB 2

BARR-TECH COMPOSTING
 9117 KALLENBERGER RD N
 SPRAGUE, WA
 US 99032
 Contact: RON GROGAN

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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