TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 4033
Component
Diesel Engine
Fluid
TRC PRO-SPEC IV 15W40 (11 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

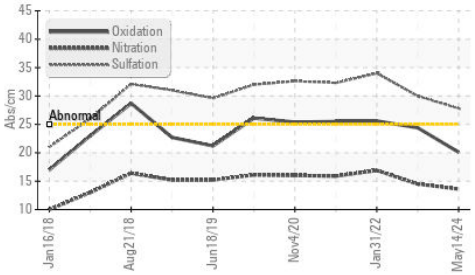
There is no indication of any contamination in the oil.

FLUID CONDITION

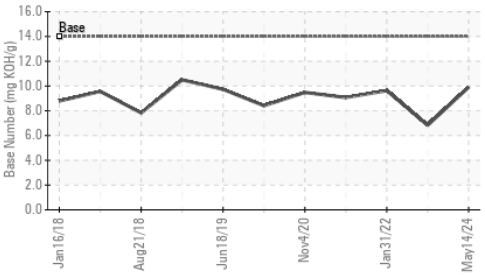
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06191243	TR05562790	TR05456321
Sample Date		Client Info		14 May 2024	04 May 2022	31 Jan 2022
Machine Age	mls	Client Info		545526	392657	362980
Oil Age	mls	Client Info		29307	0	0
Filter Age	mls	Client Info		29307	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	33	43	31
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	13	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	4	4
Lead	ppm	ASTM D5185m	>40	6	7	9
Copper	ppm	ASTM D5185m	>330	2	1	2
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
Silicon	ppm	ASTM D5185m	>25	7	6	6
Potassium	ppm	ASTM D5185m	>20	16	15	2
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.2	1.4	1
Nitration	Abs/cm	*ASTM D7624	>20	13.6	14.5	16.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.8	30.0	34.0
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
Sodium	ppm	ASTM D5185m		6	4	0
Boron	ppm	ASTM D5185m		0	25	1
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		4	31	32
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		27	556	20
Calcium	ppm	ASTM D5185m	2300	5261	2110	4943
Phosphorus	ppm	ASTM D5185m		1221	762	1050
Zinc	ppm	ASTM D5185m	1200	1313	924	1114
Sulfur	ppm	ASTM D5185m		5687	3188	3847
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	24.4	25.6
Base Number (BN)	mg KOH/g	ASTM D2896	14	9.90	6.83	9.63
Visc @ 100°C	cSt	ASTM D445	15.5	15.7	15.1	16.7

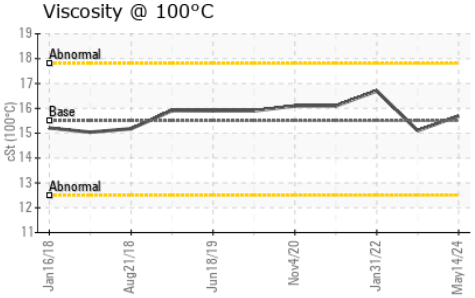
FT-IR (Direct Trend)



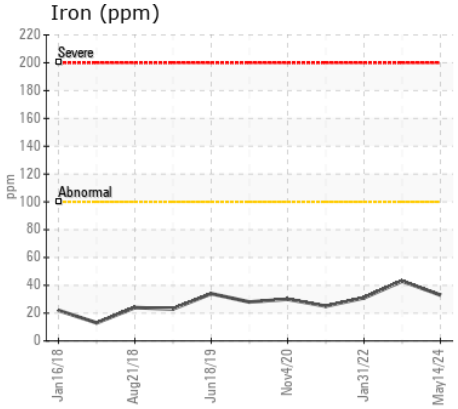
Base Number



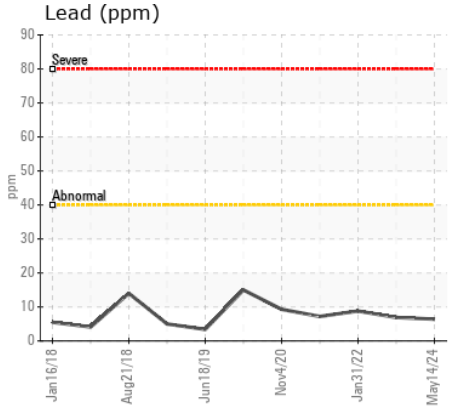
Viscosity @ 100°C



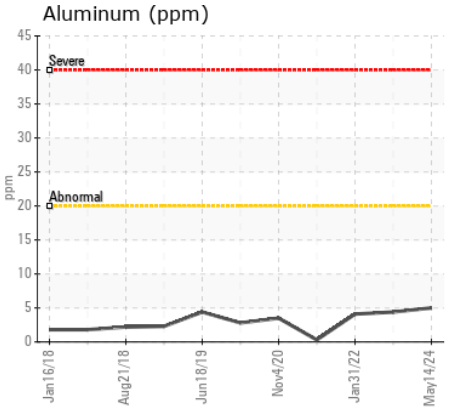
Iron (ppm)



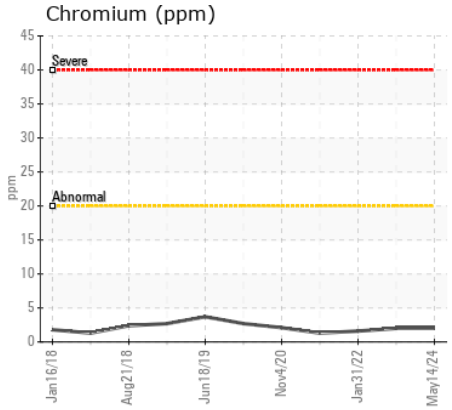
Lead (ppm)



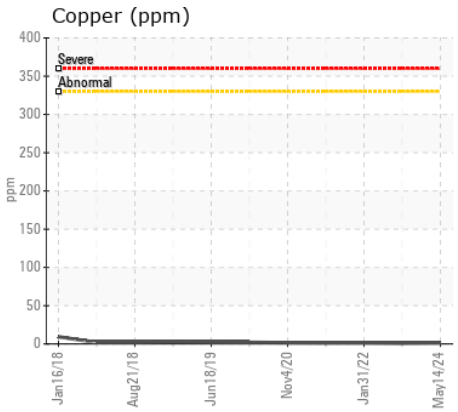
Aluminum (ppm)



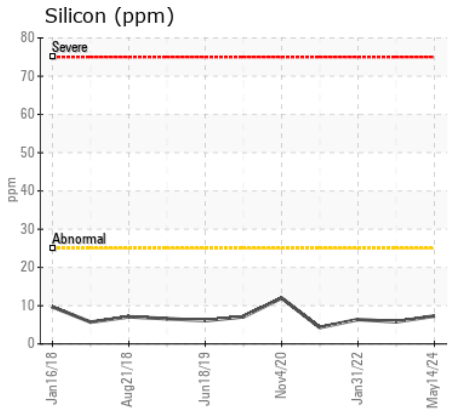
Chromium (ppm)



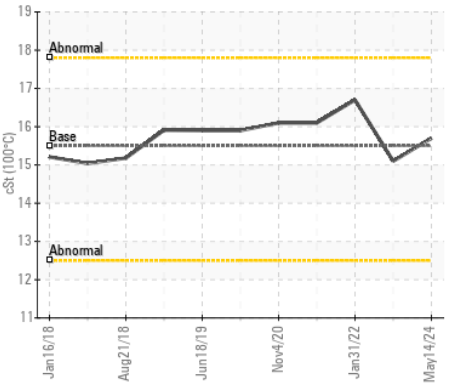
Copper (ppm)



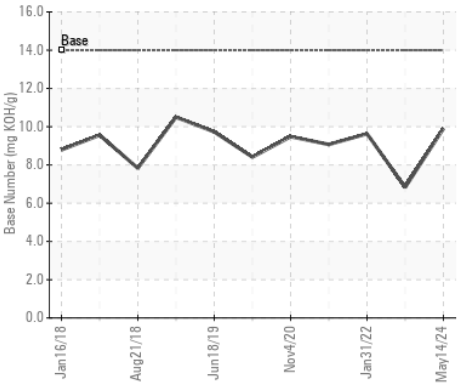
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06191243
Lab Number : 06191243
Unique Number : 11047995
Test Package : MOB 2

Received : 24 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - Wes Davis

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)

CHRISTENSEN FARMS
24710 US HWY 14
SLEEPY EYE, MN
US 56085
Contact: MATT
truckshop@christensenfarms.com
T:
F: (507)794-5597