TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DEUTZ 2
Component
Diesel Engine
Fluid
TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (16 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

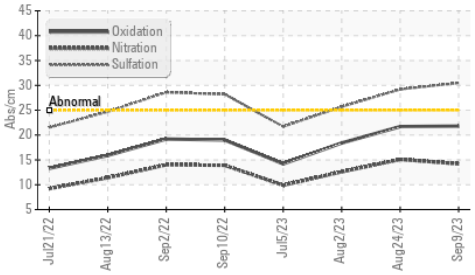
There is no indication of any contamination in the oil.

FLUID CONDITION

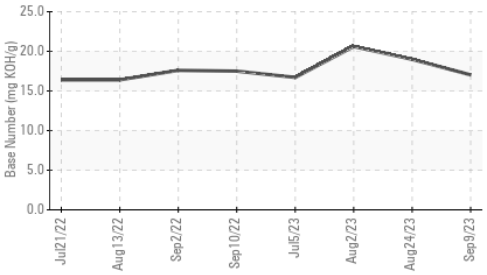
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05958234	TR05941517	TR05922922
Sample Date		Client Info		09 Sep 2023	24 Aug 2023	02 Aug 2023
Machine Age	hrs	Client Info		2700	2400	2100
Oil Age	hrs	Client Info		1200	900	600
Filter Age	hrs	Client Info		300	300	300
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>150	59	77	60
Chromium	ppm	ASTM D5185m	>20	3	4	4
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	2	2
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	16	19	14
Lead	ppm	ASTM D5185m	>40	4	6	6
Copper	ppm	ASTM D5185m	>30	4	5	5
Tin	ppm	ASTM D5185m	>15	2	3	3
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	12	11
Potassium	ppm	ASTM D5185m	>20	3	4	2
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	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	14.2	15.1	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.5	29.2	25.7
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
Sodium	ppm	ASTM D5185m		3	5	6
Boron	ppm	ASTM D5185m		2	0	5
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		<1	3	3
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		31	35	48
Calcium	ppm	ASTM D5185m		6572	8293	7592
Phosphorus	ppm	ASTM D5185m		1236	1423	1300
Zinc	ppm	ASTM D5185m		1609	1845	1654
Sulfur	ppm	ASTM D5185m		5207	6303	5865
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.8	21.7	18.4
Base Number (BN)	mg KOH/g	ASTM D2896		17.03	18.99	20.61
Visc @ 100°C	cSt	ASTM D445	15.5	17.4	17.9	17.3

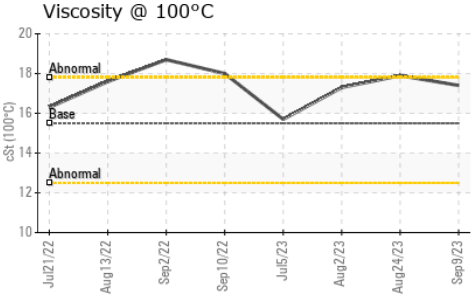
FT-IR (Direct Trend)



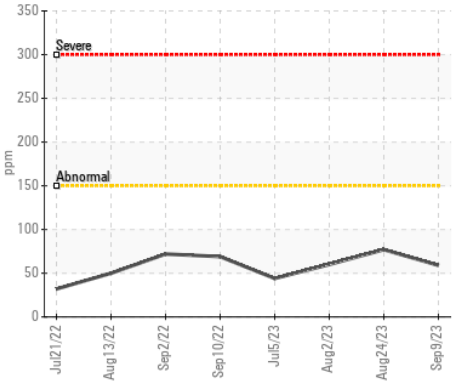
Base Number



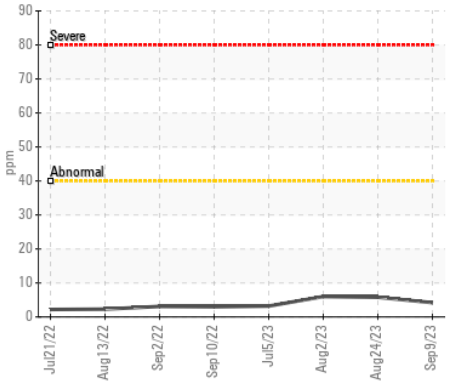
Viscosity @ 100°C



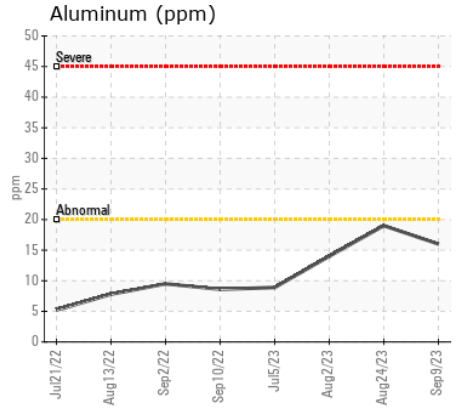
Iron (ppm)



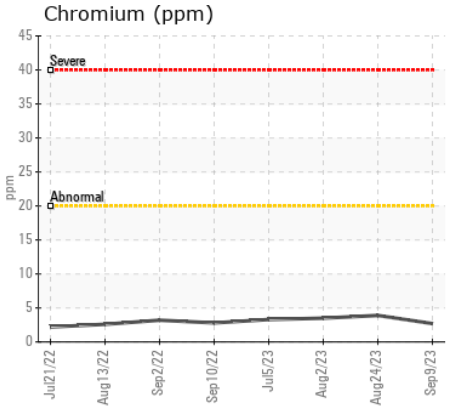
Lead (ppm)



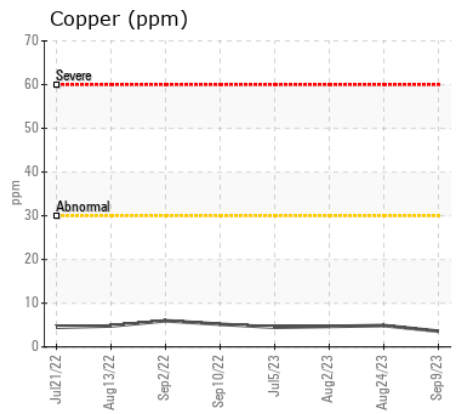
Aluminum (ppm)



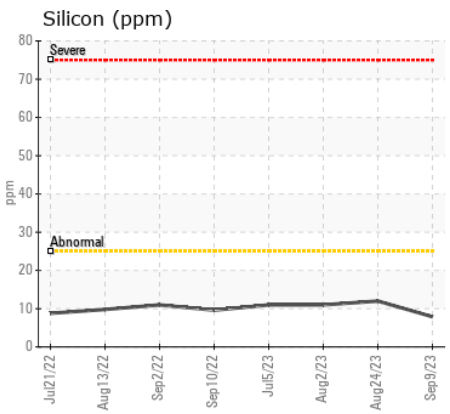
Chromium (ppm)



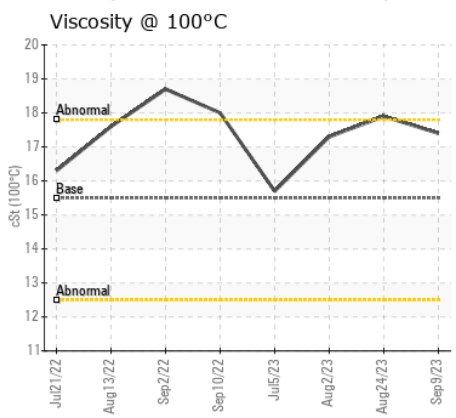
Copper (ppm)



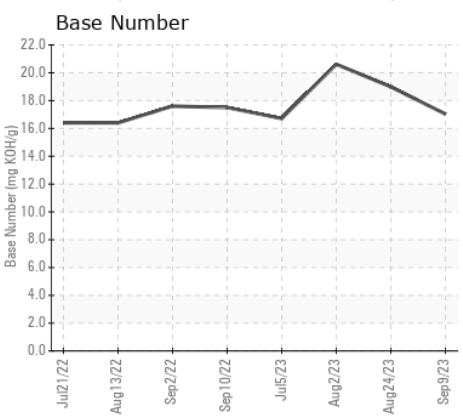
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05958234
Lab Number : 05958234
Unique Number : 10659447
Test Package : MOB 2

Received : 21 Sep 2023
Tested : 22 Sep 2023
Diagnosed : 23 Sep 2023 - Don Baldridge

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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