TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
FORD F350 C14 (S/N 1FD8X3BTVCEB75527)
Component
Diesel Engine
Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

CONTAMINATION

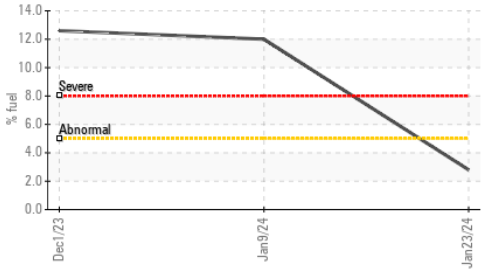
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

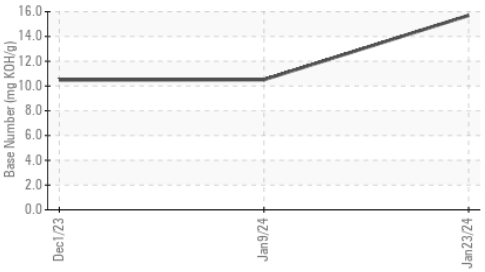
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06086732	TR06062198	TR06038756
Sample Date		Client Info		23 Jan 2024	09 Jan 2024	01 Dec 2023
Machine Age	mls	Client Info		214744	214608	214141
Oil Age	mls	Client Info		136	467	5000
Filter Age	mls	Client Info		136	467	5000
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>100	10	38	35
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	9	7
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	0	2	<1
Tin	ppm	ASTM D5185m	>15	2	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
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	1	0	0
Fuel	%	ASTM D3524	>5	▲ 2.8	⬢ 12.0	⬢ 12.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.7	10.7	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.5	21.2	21.0
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		<1	0	2
Boron	ppm	ASTM D5185m		1	3	11
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		121	103	107
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m		28	77	84
Calcium	ppm	ASTM D5185m		4098	3341	3414
Phosphorus	ppm	ASTM D5185m		874	727	690
Zinc	ppm	ASTM D5185m		1060	871	860
Sulfur	ppm	ASTM D5185m		4292	3322	3606
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.6	15.0	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		15.70	10.51	10.49
Visc @ 100°C	cSt	ASTM D445		14.9	▲ 11.2	▲ 11.0

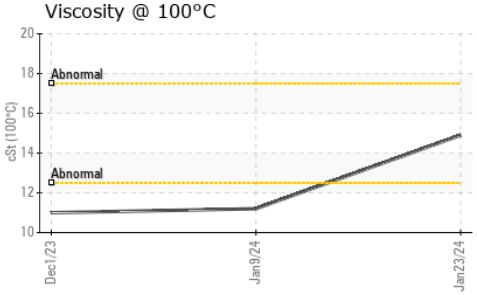
Fuel Dilution



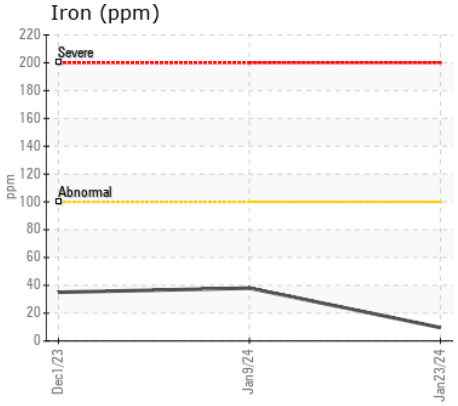
Base Number



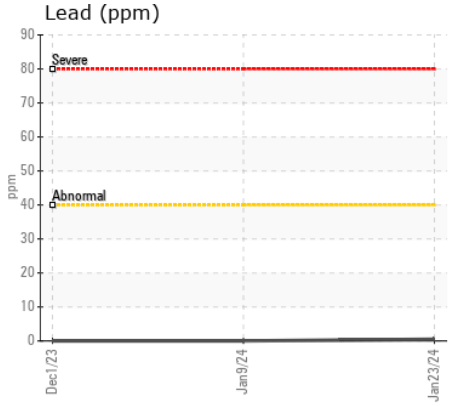
Viscosity @ 100°C



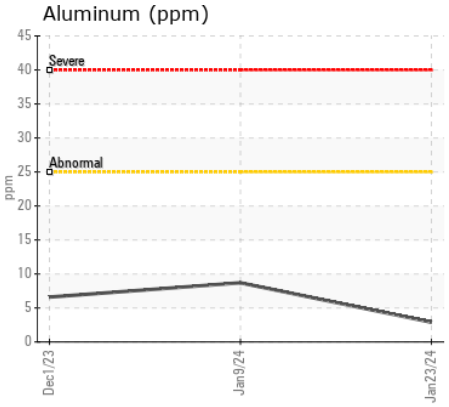
Iron (ppm)



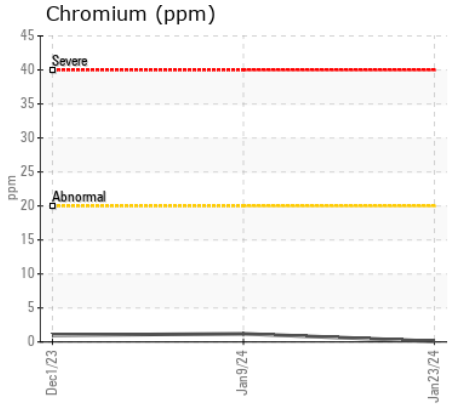
Lead (ppm)



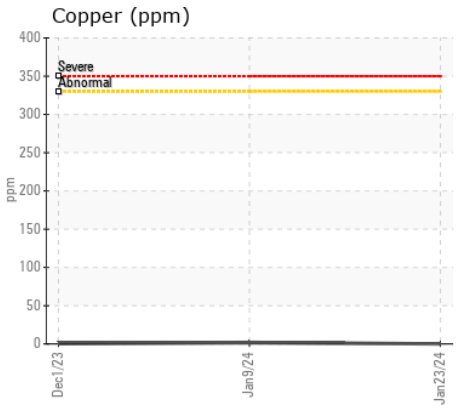
Aluminum (ppm)



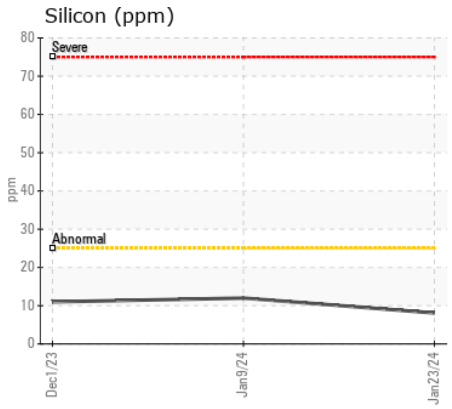
Chromium (ppm)



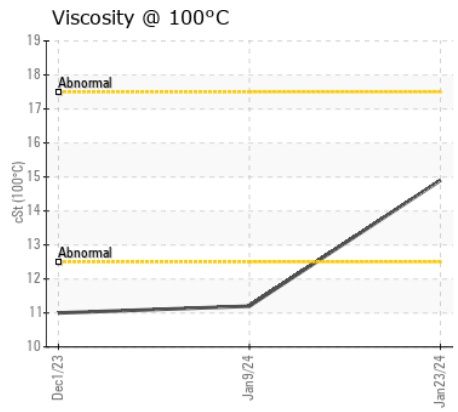
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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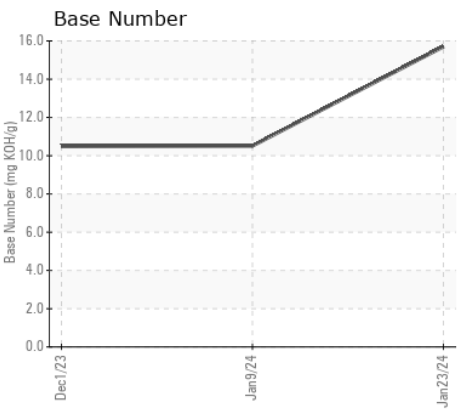

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06086732 **Received** : 12 Feb 2024
Lab Number : 06086732 **Tested** : 14 Feb 2024
Unique Number : 10874177 **Diagnosed** : 14 Feb 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: PercentFuel)

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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