



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD 2015 FORD EXPEDITION
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI VISC 5W30 (6 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06219932	TR06075023	TR05897603
Sample Date		Client Info		09 Jun 2024	14 Jan 2024	12 Jul 2023
Machine Age	mls	Client Info		196334	188632	178699
Oil Age	mls	Client Info		7702	9933	7539
Filter Age	mls	Client Info		7702	9933	7539
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	12	17	13
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	4	2	3
Lead	ppm	ASTM D5185m	>50	0	0	<1
Copper	ppm	ASTM D5185m	>155	11	15	13
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
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.

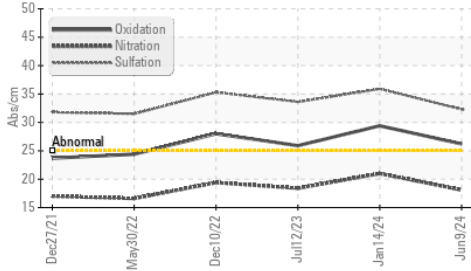
Silicon	ppm	ASTM D5185m	>30	12	18	14
Potassium	ppm	ASTM D5185m	>20	3	4	4
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	18.1	21.0	18.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.3	35.9	33.6
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

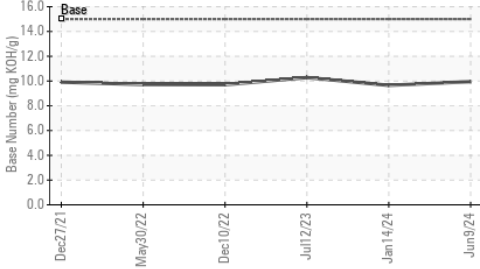
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	7	2	5
Boron	ppm	ASTM D5185m		1	0	3
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		0	<1	4
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m		25	20	31
Calcium	ppm	ASTM D5185m	4200	4998	4635	4854
Phosphorus	ppm	ASTM D5185m	800	1099	1075	1117
Zinc	ppm	ASTM D5185m	800	1335	1283	1400
Sulfur	ppm	ASTM D5185m		5246	4815	5565
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.2	29.4	25.9
Base Number (BN)	mg KOH/g	ASTM D2896	15	9.95	9.65	10.28
Visc @ 100°C	cSt	ASTM D445	9.98	12.3	12.0	12.2

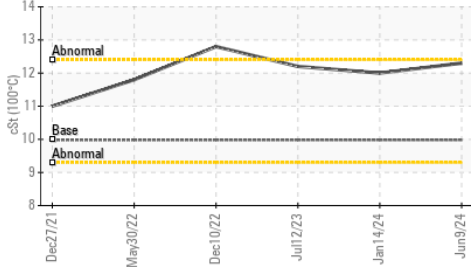
FT-IR (Direct Trend)



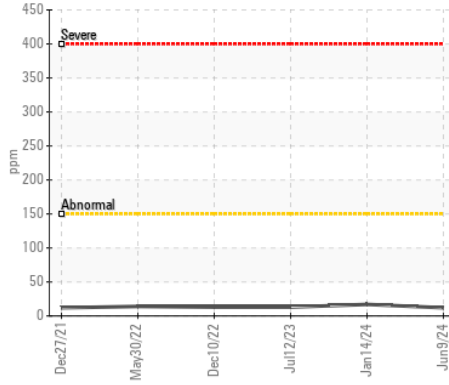
Base Number



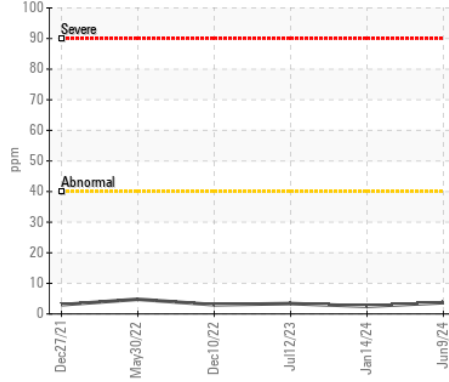
Viscosity @ 100°C



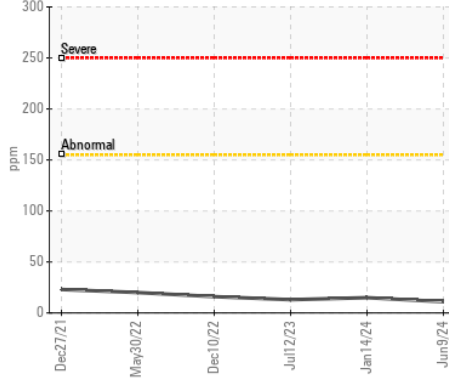
Iron (ppm)



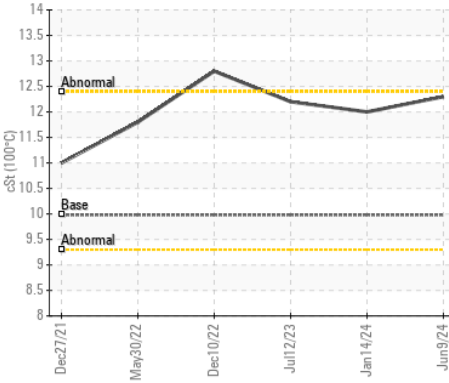
Aluminum (ppm)



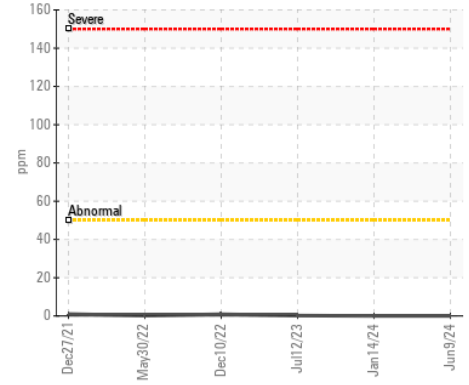
Copper (ppm)



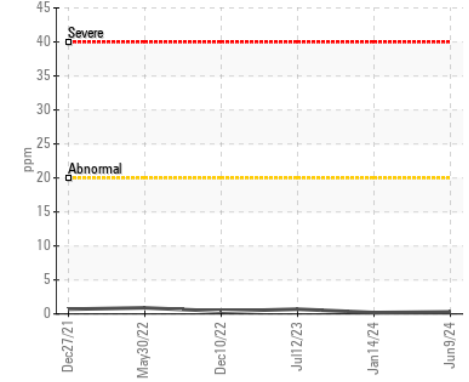
Viscosity @ 100°C



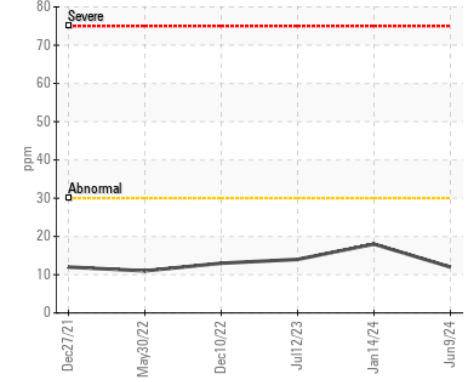
Lead (ppm)



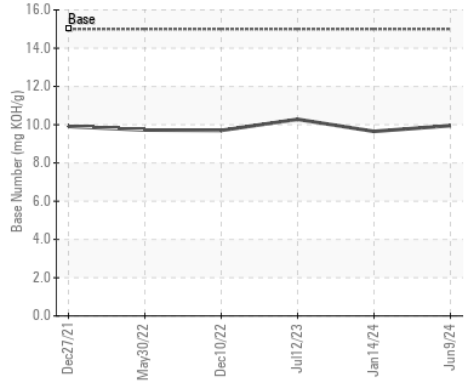
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06219932
Lab Number : 06219932
Unique Number : 11098129
Test Package : MOB 2
Received : 25 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 26 Jun 2024 - Sean Felton

LONDON GHEER
 PO BOX 1042
 CANYON, TX
 US 79015
 Contact: MIKE LEWIS

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)

T:
F: