



POWER SYSTEMS
SYSTÈMES DE PUISSANCE

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION

Area
FORD MOTOR COMPANY [301817]

Machine Id
528100496

Component
Diesel Engine

Fluid
CASTROL 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WA0021707	WC0021784	WA0019768
Sample Date		Client Info		31 May 2024	24 May 2024	30 May 2023
Machine Age	hrs	Client Info		966	974	881
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	8	3	5
Chromium	ppm	ASTM D5185(m)	>20	<1	0	0
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	1	1
Lead	ppm	ASTM D5185(m)	>40	5	4	<1
Copper	ppm	ASTM D5185(m)	>330	205	166	13
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

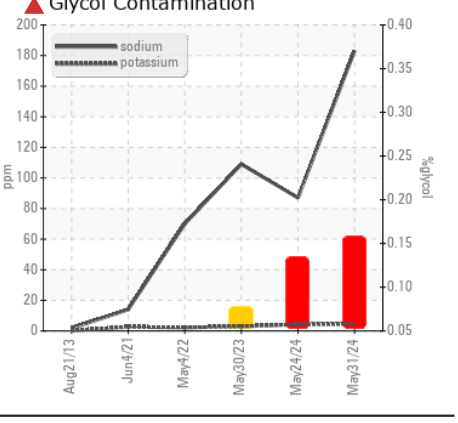
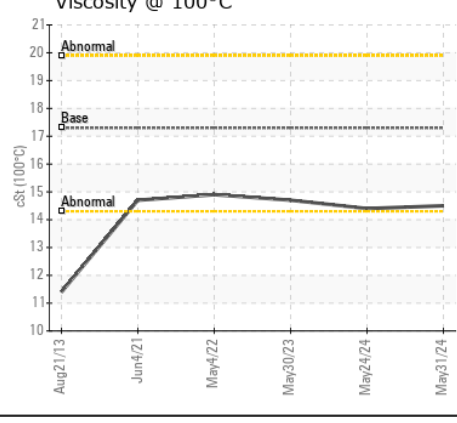
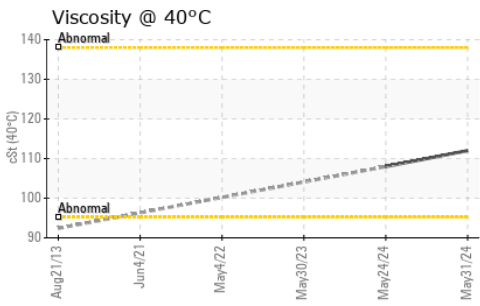
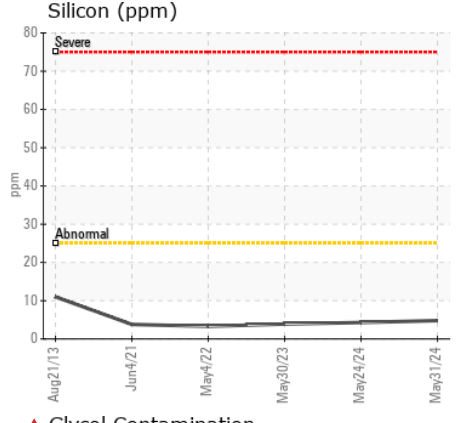
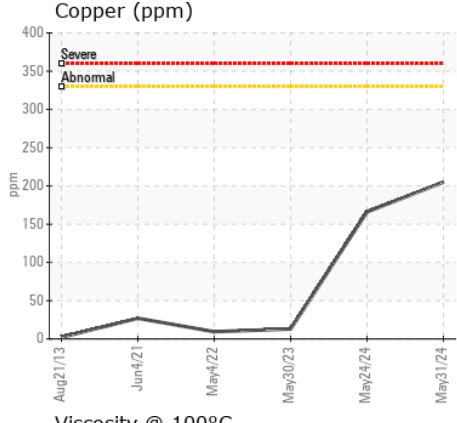
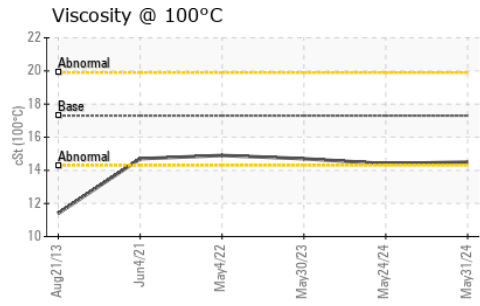
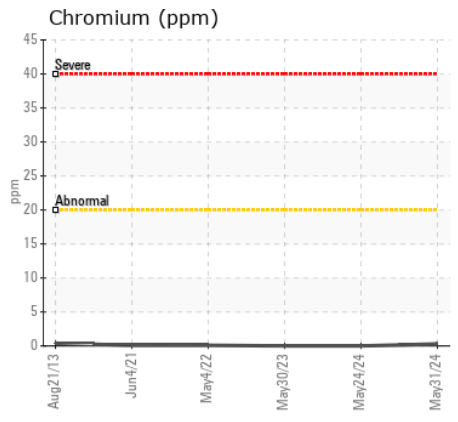
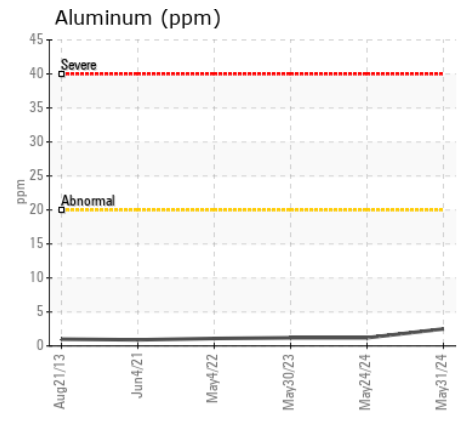
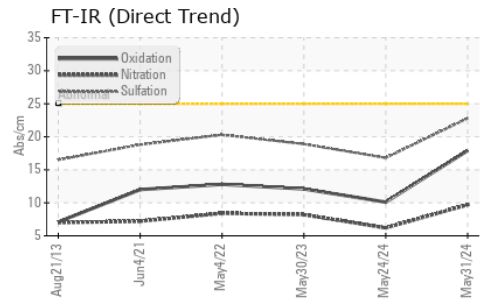
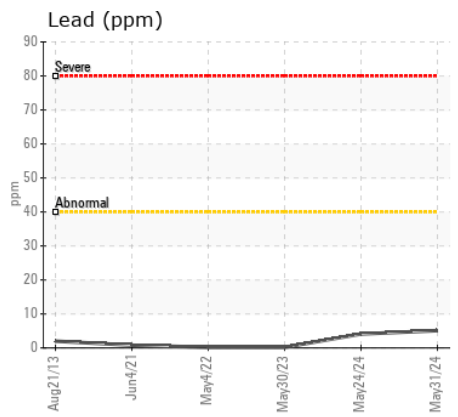
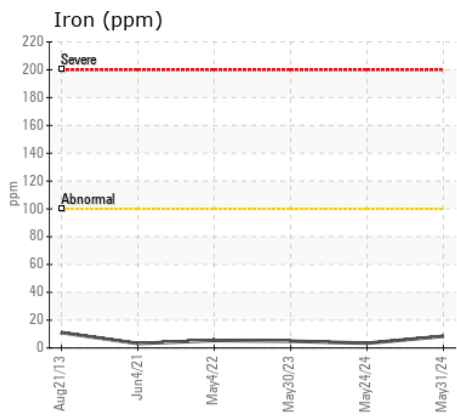
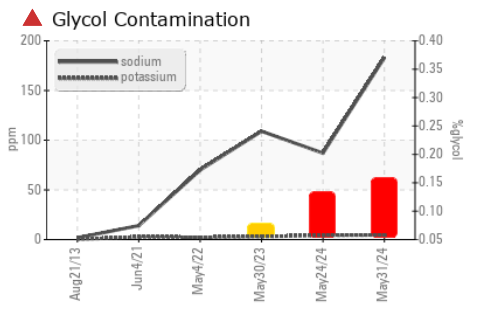
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	4	4
Potassium	ppm	ASTM D5185(m)	>20	5	4	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ 0.158	▲ 0.134	▲ 0.077
Soot %	%	ASTM D7844*	>3	0.1	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.7	6.2	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.8	16.8	18.9
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		● 183	● 87	● 109
Boron	ppm	ASTM D5185(m)		146	34	18
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		98	14	4
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		516	79	69
Calcium	ppm	ASTM D5185(m)	3200	1905	2225	2514
Phosphorus	ppm	ASTM D5185(m)	900	744	836	988
Zinc	ppm	ASTM D5185(m)	1000	932	1002	1091
Sulfur	ppm	ASTM D5185(m)		2309	2909	3136
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.9	10.1	12.1
Visc @ 40°C	cSt	ASTM D7279(m)		112	108	---
Visc @ 100°C	cSt	ASTM D7279(m)	17.3	14.5	14.4	14.7
Viscosity Index (VI)	Scale	ASTM D2270*	180	132	136	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WA0021707 **Received** : 03 Jul 2024
Lab Number : 02645159 **Tested** : 04 Jul 2024
Unique Number : 5802698 **Diagnosed** : 04 Jul 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.