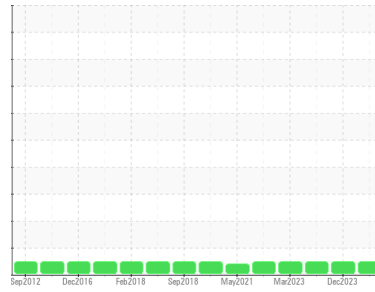




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

FORD 661

Component

Gasoline Engine

Fluid

GASOLINE ENGINE OIL SAE 5W30 (7 QTS)

DIAGNOSIS

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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RW0004745	RW0004804	RW0004360
Sample Date	Client Info		10 Apr 2024	11 Dec 2023	01 Aug 2023
Machine Age	mls	Client Info	78354	73719	67512
Oil Age	mls	Client Info	0	6207	4932
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	9	7	5
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	<1	<1	1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >40	3	3	3
Lead	ppm	ASTM D5185m >50	0	0	<1
Copper	ppm	ASTM D5185m >155	<1	<1	<1
Tin	ppm	ASTM D5185m >10	0	0	0
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 75	20	19	24
Barium	ppm	ASTM D5185m 5	0	0	0
Molybdenum	ppm	ASTM D5185m 100	67	56	72
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m 12	396	427	490
Calcium	ppm	ASTM D5185m 2100	1222	924	1019
Phosphorus	ppm	ASTM D5185m 650	725	655	702
Zinc	ppm	ASTM D5185m 850	802	744	841
Sulfur	ppm	ASTM D5185m 2500	2588	2413	2752

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	17	19	22
Sodium	ppm	ASTM D5185m >400	14	16	35
Potassium	ppm	ASTM D5185m >20	2	0	1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	12.0	12.8	10.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.7	23.5	22.4

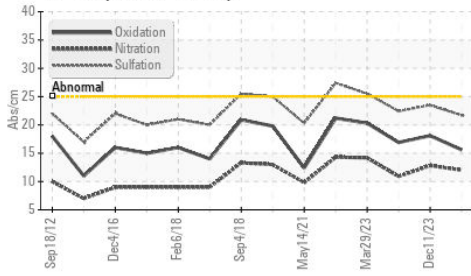
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.6	18.1	16.9
Acid Number (AN)	mg KOH/g	ASTM D8045	1.55	---	---

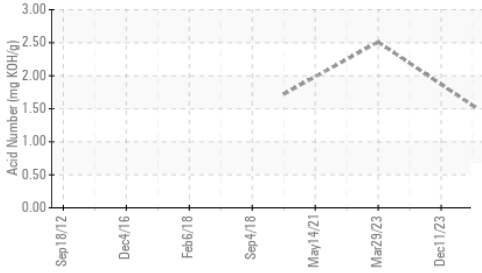


OIL ANALYSIS REPORT

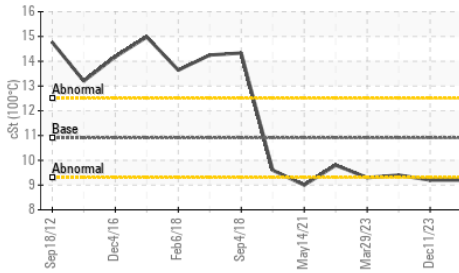
FT-IR (Direct Trend)



Acid Number



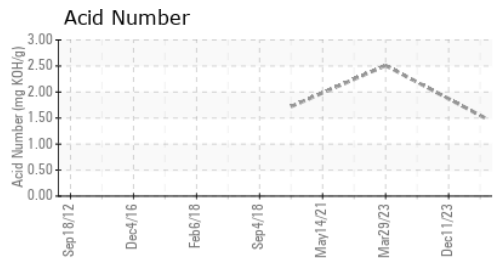
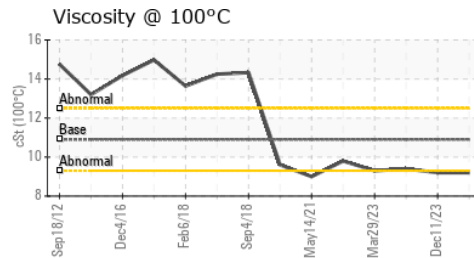
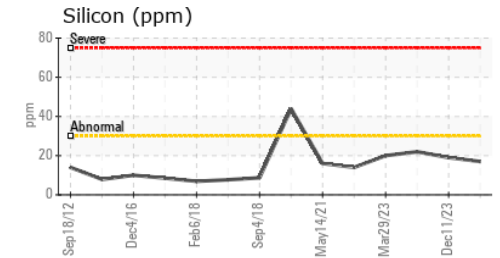
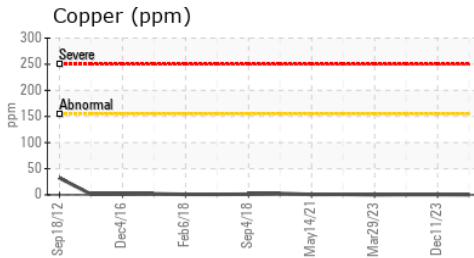
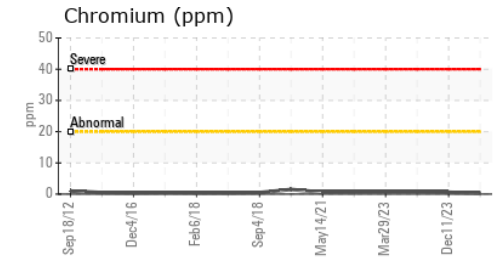
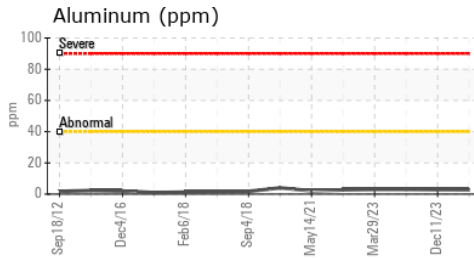
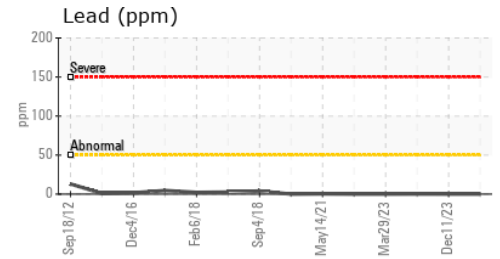
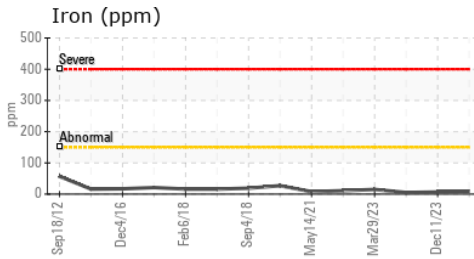
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	9.2	9.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0004745
Lab Number : 06151288
Unique Number : 10981366
Test Package : MOB 2

Received : 16 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Wes Davis

CITY OF FARMINGTON HILLS
 27245 HALSTED RD
 FARMINGTON HILLS, MI
 US 48331

Contact: JERRY BROCK
 jbrock@fhgov.com
 T: (248)871-2850

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)