OIL ANALYSIS REPORT

Sample Rating Trend

DIRT

Machine Id
FORD 515431
Component
Gasoline Engine
Fluid
SAE 5W30 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate concentration of dirt present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0085534**	PC0085548	PC0085559
Sample Date		Client Info		**16 Apr 2024**	11 Mar 2024	02 Feb 2024
Machine Age	hrs	Client Info		**16173**	12135	8012
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

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 D5185(m)	>150	**10**	7	5
Chromium	ppm	ASTM D5185(m)	>20	**<1**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>40	**5**	4	4
Lead	ppm	ASTM D5185(m)	>50	**0**	0	<1
Copper	ppm	ASTM D5185(m)	>155	**8**	8	7
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

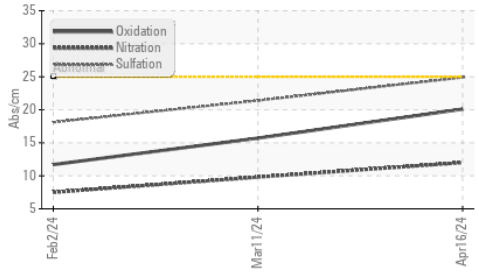
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**36**	59	109
Barium	ppm	ASTM D5185(m)		**<1**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**75**	76	76
Manganese	ppm	ASTM D5185(m)		**1**	0	<1
Magnesium	ppm	ASTM D5185(m)		**504**	510	510
Calcium	ppm	ASTM D5185(m)		**1212**	1215	1247
Phosphorus	ppm	ASTM D5185(m)		**642**	634	667
Zinc	ppm	ASTM D5185(m)		**723**	738	735
Sulfur	ppm	ASTM D5185(m)		**2199**	2236	2457
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	▲ **33**	▲ 32	▲ 30
Sodium	ppm	ASTM D5185(m)	>400	**5**	4	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

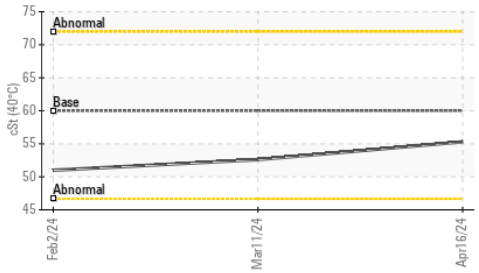
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**12.0**	9.8	7.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.9**	21.4	18.1

OIL ANALYSIS REPORT

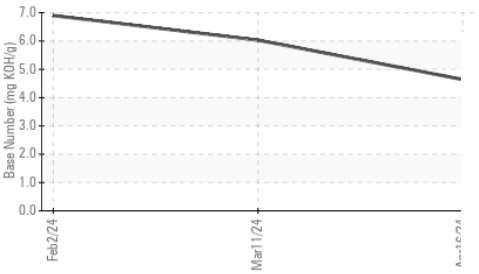
FT-IR (Direct Trend)



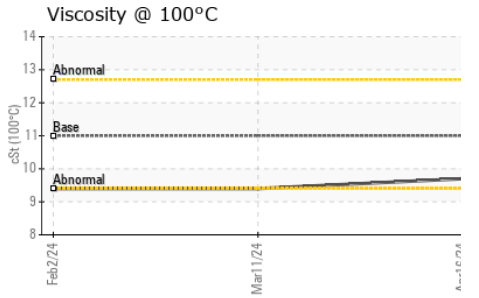
Viscosity @ 40°C



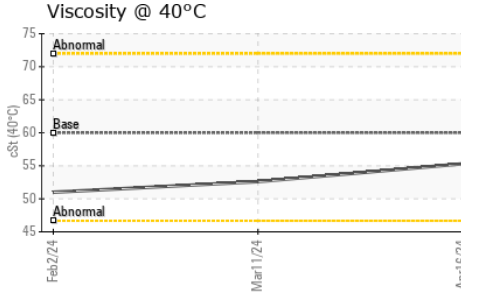
Base Number



Viscosity @ 100°C



Viscosity @ 40°C



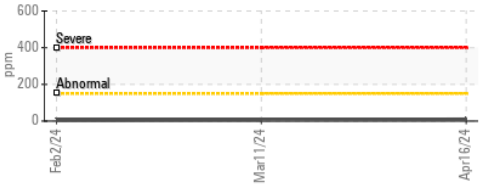
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.1**	15.7	11.7
Base Number (BN)	mg KOH/g	ASTM D2896*		**4.64**	6.03	6.90

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	---	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	---	VLITE
Silt	scalar	Visual*	NONE	**VLITE**	---	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
Free Water	scalar	Visual*		**NEG**	NEG	NEG

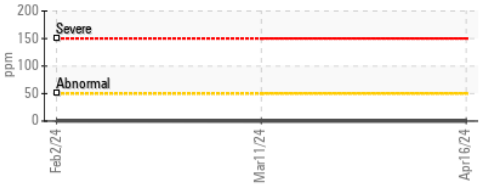
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	60.0	**55.3**	52.6	51.0
Visc @ 100°C	cSt	ASTM D7279(m)	11.0	**9.7**	9.4	9.4
Viscosity Index (VI)	Scale	ASTM D2270*	177	**161**	163	170

GRAPHS

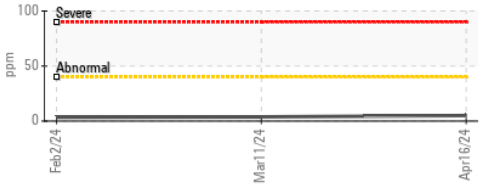
Iron (ppm)



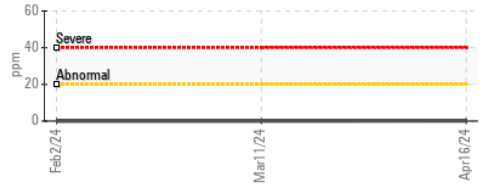
Lead (ppm)



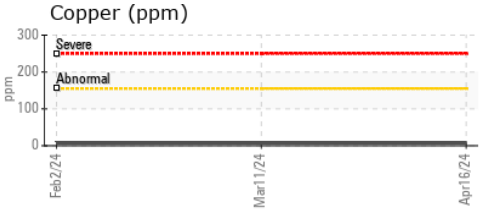
Aluminum (ppm)



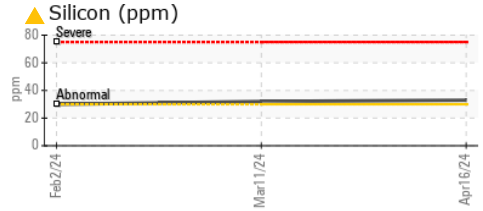
Chromium (ppm)



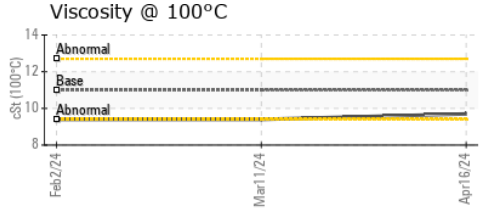
Copper (ppm)



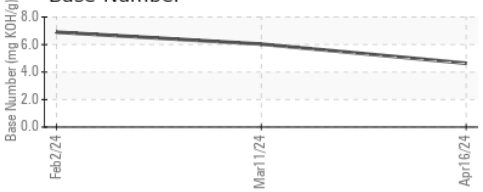
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0085534 **Received** : 01 May 2024
Lab Number : 02632527 **Tested** : 02 May 2024
Unique Number : 5773680 **Diagnosed** : 02 May 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: KV40, VI)

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.

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