



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**FORD F150 V101**  
 Component  
**Gasoline Engine**  
 Fluid  
**GASOLINE ENGINE OIL SAE 5W30 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0219623</b>	JR0206760	JR0193334
Sample Date		Client Info		<b>21 Jun 2024</b>	04 Apr 2024	16 Jan 2024
Machine Age	mls	Client Info		<b>124797</b>	119627	114673
Oil Age	mls	Client Info		<b>5170</b>	4954	5490
Filter Age	mls	Client Info		<b>5170</b>	4954	5490
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>6</b>	5	3
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>40	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>155	<b>4</b>	3	3
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

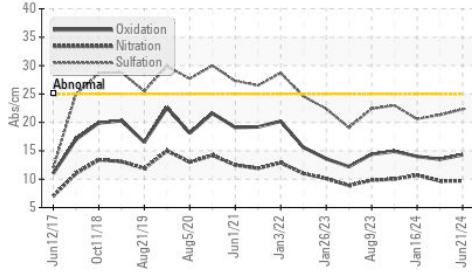
Silicon	ppm	ASTM D5185m	>30	<b>18</b>	14	11
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	0
Fuel	%	ASTM D3524	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.7</b>	9.7	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.3</b>	21.3	20.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

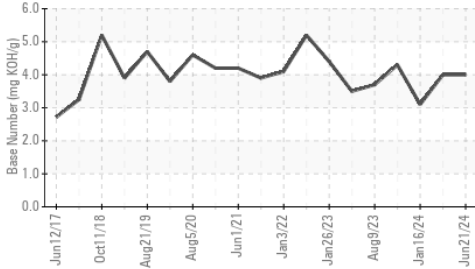
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>400	<b>18</b>	0	<1
Boron	ppm	ASTM D5185m	75	<b>29</b>	43	11
Barium	ppm	ASTM D5185m	5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>79</b>	76	63
Manganese	ppm	ASTM D5185m		<b>4</b>	2	2
Magnesium	ppm	ASTM D5185m	12	<b>504</b>	581	427
Calcium	ppm	ASTM D5185m	2100	<b>954</b>	1060	789
Phosphorus	ppm	ASTM D5185m	650	<b>635</b>	721	551
Zinc	ppm	ASTM D5185m	850	<b>748</b>	842	646
Sulfur	ppm	ASTM D5185m	2500	<b>2379</b>	3417	1724
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.3</b>	13.5	14.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>4.0</b>	4.0	3.1
Visc @ 100°C	cSt	ASTM D445	10.9	<b>8.9</b>	8.5	8.5

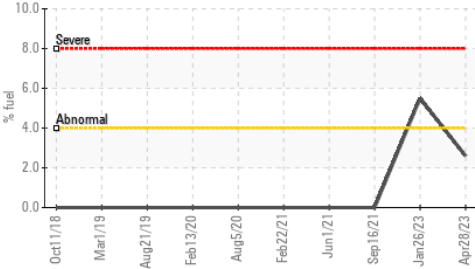
**FT-IR (Direct Trend)**



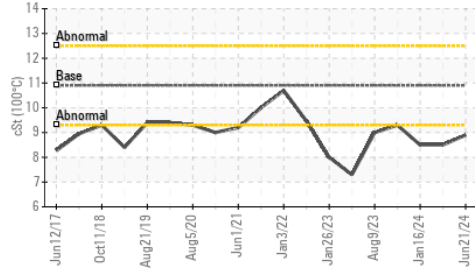
**Base Number**



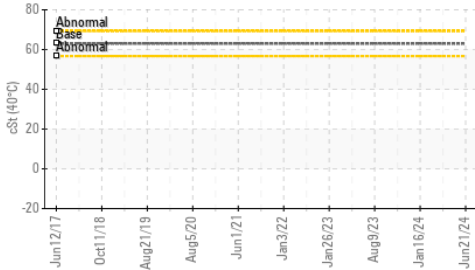
**Fuel Dilution**



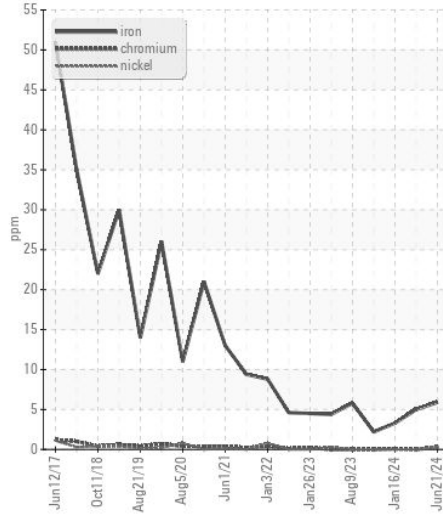
**Viscosity @ 100°C**



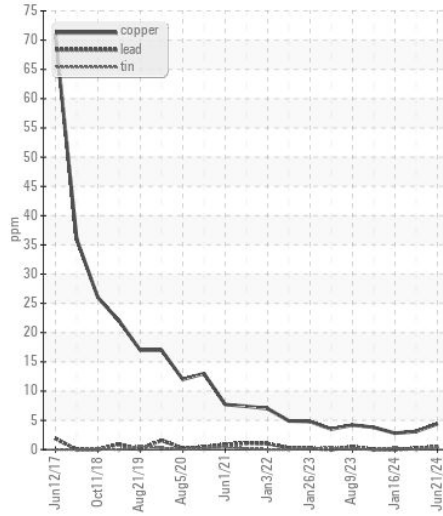
**Viscosity @ 40°C**



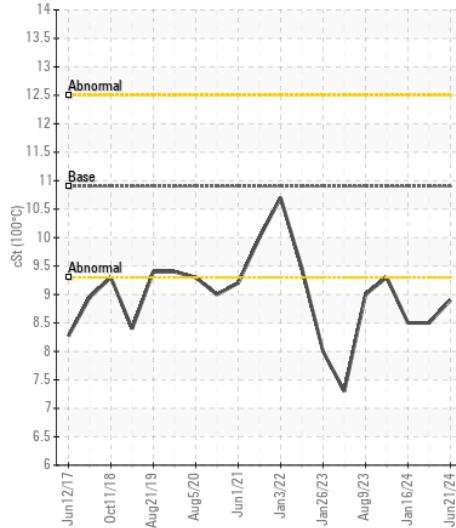
**Ferrous Alloys**



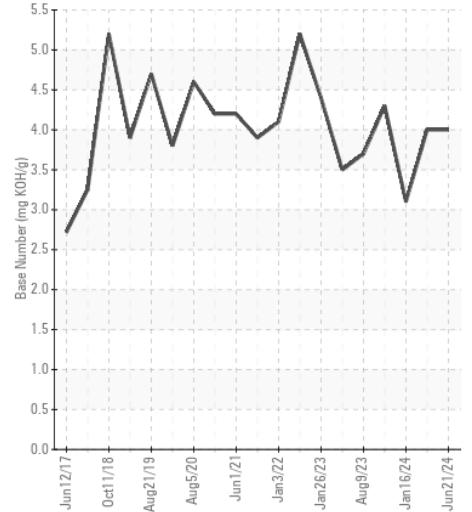
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0219623 **Received** : 02 Jul 2024  
**Lab Number** : 06225813 **Tested** : 03 Jul 2024  
**Unique Number** : 11109306 **Diagnosed** : 03 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, KV40, TBN )

**MATTHEWS CONSTRUCTION**  
 127 GRAYSON RD  
 ROCK HILL, SC  
 US 29732  
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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)