

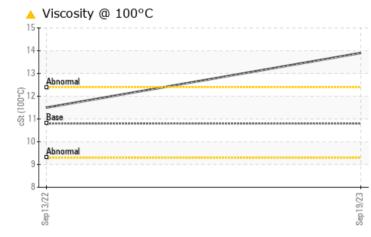
CHECK

Machine Id 711039

Component Diesel Engine

Fluid MOTORCRAFT SUPER PREMIUM SAE 10W30 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION	PROBLEMATIC TEST RESULTS							
Resample at the next service interval to monitor.	Sample Status			ATTENTION	ABNORMAL			
1	Visc @ 100°C	cSt	ASTM D445 10.8	13.9	11.5			

Customer Id: GFL465 Sample No.: GFL0046384 Lab Number: 05958353 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 <u>don.b505@comcast.net</u>

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u> There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

13 Sep 2022 Diag: Jonathan Hester

DEGRADATION



The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN level is low. The condition of the oil is acceptable for the time in service.





OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 711039

Component

Diesel Engine

MOTORCRAFT SUPER PREMIUM SAE 10W30 (--- GAL)

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 oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

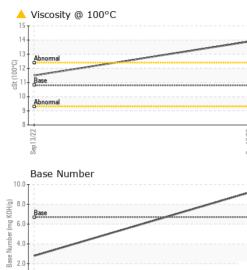
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0046384	GFL0057007	
Sample Date		Client Info		19 Sep 2023	13 Sep 2022	
Machine Age	hrs	Client Info		0	2113	
Oil Age	hrs	Client Info		0	600	
Oil Changed		Client Info		Not Changd	Changed	
Sample Status				ATTENTION	ABNORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	4	74	
Chromium	ppm	ASTM D5185m	>20	4	3	
Nickel		ASTM D5185m	>2	0	1	
Titanium	ppm ppm	ASTM D5185m	>2	0	<1	
Silver		ASTM D5185m	>2	0	<1	
Aluminum	ppm ppm	ASTM D5185m	>25	1	4	
Lead		ASTM D5185m	>25	0	4 <1	
	ppm	ASTM D5185m	>330	14	5	
Copper Tin	ppm	ASTM D5185m	>330	0	5 1	
Vanadium	ppm		>10	-		
	ppm	ASTM D5185m		0	<1 0	
Cadmium	ppm	ASTM D5185m		U	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 3	5	history2
	ppm ppm		limit/base	3 0	5 0	
Boron		ASTM D5185m	limit/base	3 0 54	5	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	3 0 54 0	5 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54	5 0 53 1 771	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0	5 0 53 1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910	5 0 53 1 771	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910 1042	5 0 53 1 771 1109	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910 1042 981	5 0 53 1 771 1109 877	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910 1042 981 1212	5 0 53 1 771 1109 877 1115	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910 1042 981 1212 3685	5 0 53 1 771 1109 877 1115 2960	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	3 0 54 0 910 1042 981 1212 3685 current	5 0 53 1 771 1109 877 1115 2960 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >25	3 0 54 0 910 1042 981 1212 3685 current 3	5 0 53 1 771 1109 877 1115 2960 history1 7	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	limit/base >25	3 0 54 0 910 1042 981 1212 3685 <u>current</u> 3 10	5 0 53 1 771 1109 877 1115 2960 history1 7 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20	3 0 54 0 910 1042 981 1212 3685 <u>current</u> 3 10 4	5 0 53 1 771 1109 877 1115 2960 history1 7 2 2 0	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	3 0 54 0 910 1042 981 1212 3685 current 3 10 4	5 0 53 1 771 1109 877 1115 2960 history1 7 2 2 0 0	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	3 0 54 0 910 1042 981 1212 3685 current 3 10 4 current 0.2	5 0 53 1 771 1109 877 1115 2960 history1 7 2 0 history1 0.6	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	3 0 54 0 910 1042 981 1212 3685 current 3 10 4 current 0.2 5.4	5 0 53 1 771 1109 877 1115 2960 history1 7 2 0 history1 0.6 12.7	history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >3 >20	3 0 54 0 910 1042 981 1212 3685 current 3 10 4 current 0.2 5.4 17.9 current	5 0 53 1 771 1109 877 1115 2960 history1 7 2 2 0 history1 0.6 12.7 35.2	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 limit/base >25	3 0 54 0 910 1042 981 1212 3685 current 3 10 4 current 0.2 5.4 17.9	5 0 53 1 771 1109 877 1115 2960 history1 7 2 2 0 history1 0.6 12.7 35.2 history1	 history2 history2 history2 history2



Base

0.0 Sep13/22

OIL ANALYSIS REPORT



°C		VISUAL		method	limit/base	(current	history1	history2
		White Metal	scalar	*Visual	NONE	N	ONE	NONE	
	•	Yellow Metal	scalar	*Visual	NONE	N	ONE	NONE	
		Precipitate	scalar	*Visual	NONE	N	ONE	NONE	
		Silt	scalar	*Visual	NONE	N	ONE	NONE	
		Debris	scalar	*Visual	NONE	N	ONE	NONE	
		Sand/Dirt	scalar	*Visual	NONE	N	ONE	NONE	
	Sep19/23	Appearance	scalar	*Visual	NORML		ORML	NORML	
		Odor	scalar		NORML		ORML	NORML	
		Emulsified Water	scalar	*Visual	>0.2	NE		NEG	
		Free Water	scalar	*Visual		NE	:G	NEG	
		FLUID PROPI	ERTIES	method	limit/base	(current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	10.8	1 3	.9	11.5	
		GRAPHS							
		Ferrous Alloys							
	80	imp							
	70	essesses chromium							
	50								
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	10)-							
	0	2	and the second		23				
		Sep 13/22			Sep 19/23				
		∞ Non-ferrous Meta	als		63				
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	12	copper							
	10)							
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	4								
	2	2							
	(
		13/22			Sep 19/23				
		Sep 1	_		Sep				
	15	Viscosity @ 100°	С				e Number		
	14				10				_
	13				(ja 8	.0-			
		Abnormal			Base Number (mg KOH/g)	Base			
	(D=001) ts: 1				er (mg	.0+	_		
	tg 1	Base			quint 4	.0			
	10	Abnormal			Base	.0			
	ç]			2				
	8				0				
		Sep 13/22			Sep 19/23	Sep13/22			Sep19/23
		ŏ			S	Se			ŝ
		WearCheck USA -	501 Madi			3	GFL Er	nvironmental	- 465 - Pontiac
ANAR Sam	nple No.	GFL0046384	Received	d : 22 \$	Sep 2023				888 Baldwin
190/100 17020		05958353 10659566	Diagnos		Sep 2023 1 Baldridge				Pontiac, MI US 48340
		FLEET	Diagnost		i baiunuye			Contact:	Ricky Matthews
To discuss this samp	ole report, cor	ntact Customer Ser						rickymathe	ws@gflenv.com
* - Denotes test met						(10-			(586)825-9514
Statements of conforr	mity to specific	ations are based on	the simple	acceptance of	aecision rule	(JCGN	1 106:2012)		F:

Submitted By: Ricky Matthews

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