



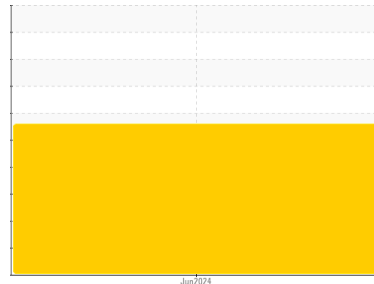
# PROBLEM SUMMARY

Sample Rating Trend

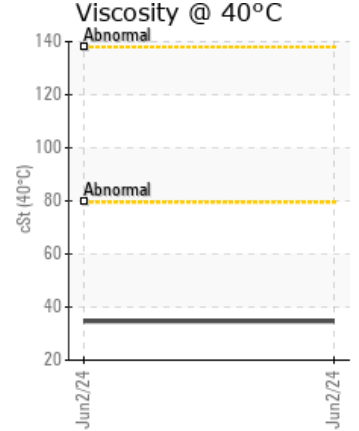
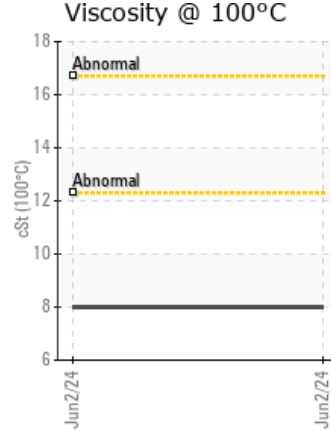
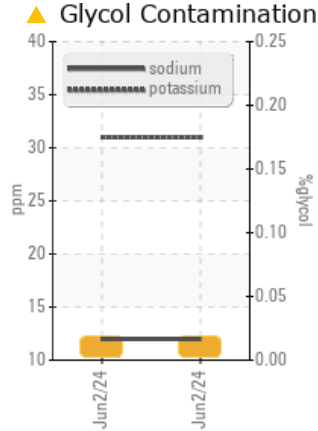
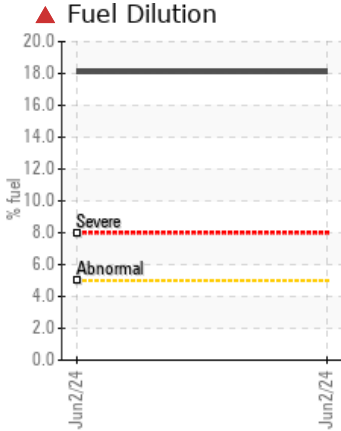
GLYCOL



Machine Id  
**MERCEDES-BENZ WD3BE8DC3E5894576**  
 Component  
**Front Diesel Engine**  
 Fluid  
 {not provided} (12 LTR)



## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Potassium	ppm	ASTM D5185(m)	>20	▲ 31	---	---
Fuel	%	ASTM D7593*	>5	▲ 18.1	---	---
Glycol	%	ASTM D7922*		▲ 0.018	---	---

Customer Id: MER268MIS  
 Sample No.: WC486645  
 Lab Number: 02641580  
 Test Package: INS



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

To change component or sample information:  
 Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

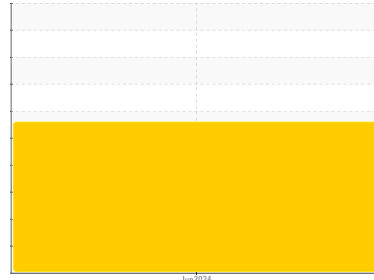
Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Flush System	---	---	?	We advise that you flush the component thoroughly before re-filling with oil.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id

## MERCEDES-BENZ WD3BE8DC3E5894576

Component

Front Diesel Engine

Fluid

{not provided} (12 LTR)

### DIAGNOSIS

#### ▲ Recommendation

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear Particles

The filter contained no appreciable wear particles. All filter wear levels are normal. The wear metal levels do not reflect the reported failure.

#### ▲ Contaminants

Test for glycol is positive. There is a high amount of fuel present in the oil. There is a light concentration of glycol present in the oil. Tests confirm the presence of fuel in the oil.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC486645</b>	---	---
Sample Date	Client Info		<b>02 Jun 2024</b>	---	---
Machine Age	kms	Client Info	<b>164402</b>	---	---
Oil Age	kms	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	---	---

### WEAR METALS

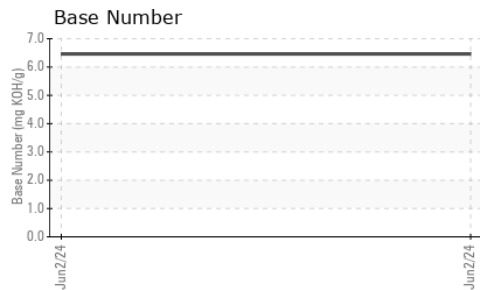
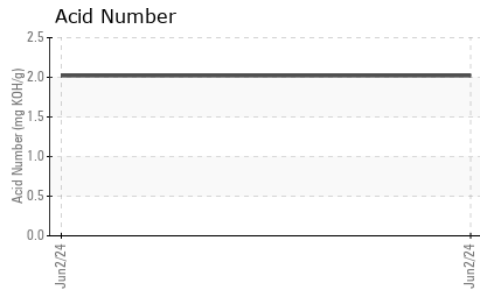
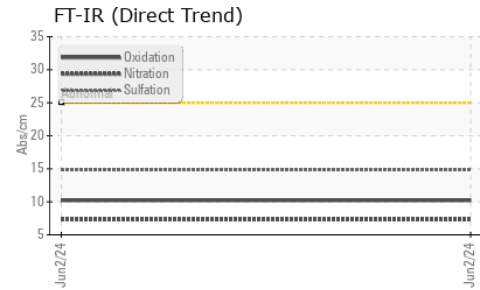
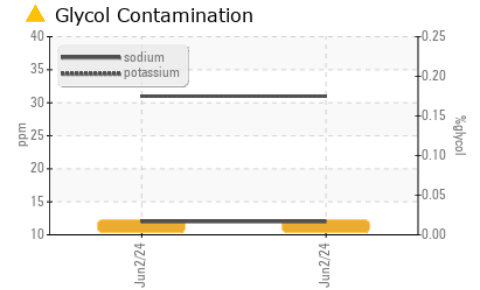
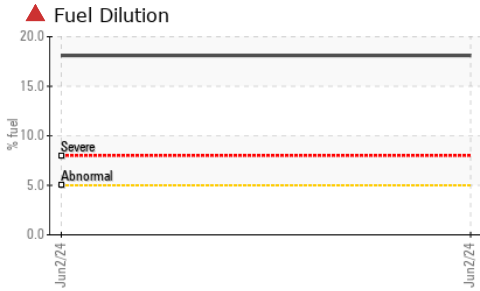
	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>33</b>	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---
Nickel	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	---
Titanium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	---
Aluminum	ppm	ASTM D5185(m)	>50	<b>4</b>	---
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	---
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	---

### FERROGRAPHY

	method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*	<b>1</b>		
Ferrous Sliding	Scale 0-10	ASTM D7684*			
Ferrous Cutting	Scale 0-10	ASTM D7684*			
Ferrous Rolling	Scale 0-10	ASTM D7684*	<b>1</b>		
Ferrous Break-in	Scale 0-10	ASTM D7684*			
Ferrous Spheres	Scale 0-10	ASTM D7684*			
Ferrous Black Oxides	Scale 0-10	ASTM D7684*			
Ferrous Red Oxides	Scale 0-10	ASTM D7684*			
Ferrous Corrosive	Scale 0-10	ASTM D7684*			
Ferrous Other	Scale 0-10	ASTM D7684*			
Nonferrous Rubbing	Scale 0-10	ASTM D7684*			
Nonferrous Sliding	Scale 0-10	ASTM D7684*			
Nonferrous Cutting	Scale 0-10	ASTM D7684*			
Nonferrous Rolling	Scale 0-10	ASTM D7684*			
Nonferrous Other	Scale 0-10	ASTM D7684*			
Sand/Dirt	Scale 0-10	ASTM D7684*	<b>1</b>		
Fibres	Scale 0-10	ASTM D7684*	<b>1</b>		
Spheres	Scale 0-10	ASTM D7684*			
Other	Scale 0-10	ASTM D7684*	<b>1</b>		
Patch Weight	mg	ASTM D7684*	<b>2</b>	---	---



# OIL ANALYSIS REPORT



ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	37	---	---
Barium	ppm	ASTM D5185(m)	0	---	---
Molybdenum	ppm	ASTM D5185(m)	3	---	---
Manganese	ppm	ASTM D5185(m)	<1	---	---
Magnesium	ppm	ASTM D5185(m)	56	---	---
Calcium	ppm	ASTM D5185(m)	1427	---	---
Phosphorus	ppm	ASTM D5185(m)	548	---	---
Zinc	ppm	ASTM D5185(m)	603	---	---
Sulfur	ppm	ASTM D5185(m)	1379	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	2	---	---
Sodium	ppm	ASTM D5185(m)		12	---	---
Potassium	ppm	ASTM D5185(m)	>20	31	---	---
Fuel	%	ASTM D7593*	>5	18.1	---	---
Glycol	%	ASTM D7922*		0.018	---	---

INFRA-RED	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.2	---	---
Nitration	Abs/cm	ASTM D7624*	>20	7.3	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	14.8	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.2	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*		2.02	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*		6.46	---	---

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)		34.7	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		8.0	---	---
Viscosity Index (VI)	Scale	ASTM D2270*		214	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC486645  
**Lab Number** : 02641580  
**Unique Number** : 5799119  
**Test Package** : INS ( Additional Tests: FT-IR, FuelDilution, Glycol, PercentFuel, TAN Man, Viscosity Index (VI) )

**Mercedes Benz Canada**  
 2680 Matheson Blvd E, Suit 500  
 Mississauga, ON  
 CA L4W 0A5  
 Contact: Greg Bebbington  
 gregory.bebbington@mercedes-benz.ca

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.

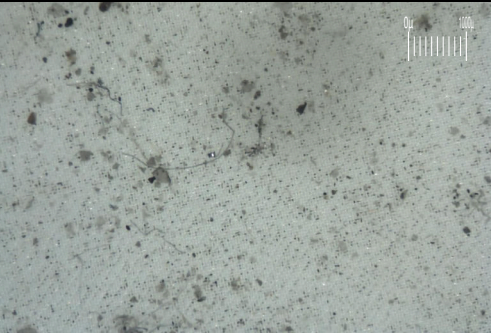
Validity of results and interpretation are based on the sample and information as supplied.

T:  
F:

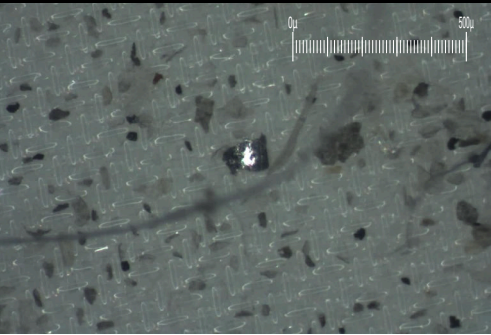
# FILTER REPORT

Machine Id  
**MERCEDES-BENZ WD3BE8DC3E5894576**  
 Component  
**Front Diesel Engine**  
 Fluid  
**{not provided} (12 LTR)**

Magn: 10x Illum: RW



Magn: 60x Illum: RW



FERROGRAPHY			method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*			█ 1		
Ferrous Sliding	Scale 0-10	ASTM D7684*					
Ferrous Cutting	Scale 0-10	ASTM D7684*					
Ferrous Rolling	Scale 0-10	ASTM D7684*			█ 1		
Ferrous Break-in	Scale 0-10	ASTM D7684*					
Ferrous Spheres	Scale 0-10	ASTM D7684*					
Ferrous Black Oxides	Scale 0-10	ASTM D7684*					
Ferrous Red Oxides	Scale 0-10	ASTM D7684*					
Ferrous Corrosive	Scale 0-10	ASTM D7684*					
Ferrous Other	Scale 0-10	ASTM D7684*					
Nonferrous Rubbing	Scale 0-10	ASTM D7684*					
Nonferrous Sliding	Scale 0-10	ASTM D7684*					
Nonferrous Cutting	Scale 0-10	ASTM D7684*					
Nonferrous Rolling	Scale 0-10	ASTM D7684*					
Nonferrous Other	Scale 0-10	ASTM D7684*					
Sand/Dirt	Scale 0-10	ASTM D7684*			█ 1		
Fibres	Scale 0-10	ASTM D7684*			█ 1		
Spheres	Scale 0-10	ASTM D7684*					
Other	Scale 0-10	ASTM D7684*			█ 1		
Patch Weight	mg	ASTM D7684*			2	---	---

## WEAR

The filter contained no appreciable wear particles. All filter wear levels are normal. The wear metal levels do not reflect the reported failure.

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