



Unimog U 216 / U 218 / U 318 / U 423 /
U 427 / U 430 / U 527 / U 530

Tips on maintaining the value of your vehicle



Mercedes-Benz


Symbols


WARNING

Warning notes make you aware of dangers which could pose a threat to your health or life, or to the health and life of others.


Environmental note


Environmental notes provide you with information on environmentally aware actions or disposal.

 Notes on material damage alert you to dangers that could lead to damage to your vehicle.

 Useful instructions or further information that could be helpful to you.

- ▶ This symbol designates an instruction you must follow.
- ▶ Several consecutive symbols indicate an instruction with several steps.

 page) This symbol tells you where you can find further information on a topic.

 This symbol indicates a warning or an instruction that is continued on the next page.

Display This text indicates a message on the display.

Welcome to the world of Mercedes-Benz

You will want to fully enjoy your Unimog for a long time. To be able to do so, safety and reliability are essential. Maintenance requires regular servicing and vehicle care.

A maintenance programme has been developed especially for the Unimog by Mercedes-Benz. This includes all necessary services which you must carry out to keep your vehicle in the best possible condition.

The Unimog is a special-purpose vehicle which has specific applications. For this reason, there are certain care and maintenance procedures which need to be carried out at the regular maintenance intervals that we have specified.

The various care and maintenance procedures described in this booklet can, in part, be carried out by yourself.

You can find further information about cleaning and care in the "Cleaning and care" section of the Operating Instructions.

If, in the course of regular maintenance, you discover defects in the braking system, air-conditioning system or protective coating, have these rectified at a qualified specialist workshop. A qualified specialist workshop has the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz Service Centre for this purpose.

It is very important to check the paintwork and protective treatment both before and after the winter period and to make repairs where necessary. This helps to avoid corrosion damage.

Information on protective coatings, touch-up agents and vehicle care products is available at any Mercedes-Benz Service Centre or qualified workshop.

The technical documentation team at Daimler AG wishes you safe and pleasant motoring.

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Overview of care procedures

Daily	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Check the lighting system for correct function. ▶ Check the condition of the tyres.
Depending on operating conditions:	<ul style="list-style-type: none"> ▶ Clean the radiator (> page 7). ▶ Clean the fine particle filter or the active charcoal filter (> page 12).
Each time the vehicle is used under extreme conditions:	<ul style="list-style-type: none"> ▶ Rinse off all traces of corrosive materials using water.

Weekly	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Check the fluid level in the windscreen washer system. ▶ Check the wiper blades. ▶ Clean the radiator (> page 7).
During the winter season:	<ul style="list-style-type: none"> ▶ Clean the vehicle.

Monthly	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Clean the vehicle, especially following winter road service operation.

Quarterly	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Check the compressed-air dryer function (> page 9).

Annually	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Check the contents of the first-aid kit. ▶ Check the flashing beacon for correct function.
Before the winter season:	<ul style="list-style-type: none"> ▶ Check the antifreeze in the coolant.
At the end of the winter season:	<ul style="list-style-type: none"> ▶ Spray the earth points in the battery compartment and on the vehicle exterior and the connection points on the starter with VP 195/II wax. ▶ Clean the chassis and the platform area thoroughly. Only use pH-neutral cleaners, not alkaline or acidic products. ▶ Check protective treatment for blemishes and apply a new treatment if necessary¹ ▶ Clean the service brake (> page 7).

Every 2 years	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Check the function and condition of the fire extinguisher; see the manufacturer's information.

Every 3 years	Periodic checks and care
	<ul style="list-style-type: none"> ▶ Renew the protective agents for the entire vehicle¹.

i In some countries, the legal requirements may mandate deviations from the regular checks described here. Observe the legal requirements in all countries concerned.

¹ To remove blemishes or to re-apply dual-layer protection, please consult a qualified specialist workshop. They have the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz Service Centre for this purpose.

Chassis and body

WARNING

Flammable material such as leaves, grass or twigs may ignite if they come into contact with hot parts of the exhaust system or exhaust gas flow. There is a risk of fire.

Park the vehicle so that no flammable material can come into contact with hot vehicle components. In particular, do not park on dry grassland or harvested grain fields.

When working with equipment for the maintenance of grassland or plant protection, plants or parts of plants such as leaves, grass or twigs, could become caught on the vehicle. These deposits may ignite if they come into contact with hot parts of the exhaust system.

Clean the vehicle if it has become dirty after off-road driving before driving on public roads again.

Chassis and underbody protection

The Unimog's chassis and underbody have been treated with a special dual-layer protective coating.

This dual-layer protection consists of a penetrating wax (Carlofon 3650) and an underbody protection wax (Carlofon 4941). The penetrating wax improves the anti-corrosion protection on moving parts and at gaps, joints and overlaps. The underbody protection wax permanently seals the chassis.

Maintaining the anti-corrosion protection

To maintain the anti-corrosion protection, please observe the following:

- Do not clean the vehicle for the first time until at least 4 weeks after it has been delivered.
- If you use a high-pressure cleaner to clean the chassis and underbody, the water temperature must not exceed 40 °C. Spray pressure may not exceed 30 bar. Make sure that the distance between the vehicle and the nozzle is at least 30 cm.

- Do not use any petrol-based substances, rape seed oil, petrol, diesel or other solvents. They can cause the dual-layer protection to dissolve or peel off.
- Do not use any additional anti-corrosion agents.
- Whenever the vehicle is used in extreme conditions, remove all traces of corrosive substances with water afterwards. Particularly critical locations in which these corrosive substances accumulate are:
 - on the underbody
 - in the wheel arches and the steps
 - on the spring assemblies
 - on the drive train
 - between cab and platform or mounted equipment
 - in the cab interior
- Clean the Unimog at least once a week.
- The engine compartment can be treated using a special sealant (AP1505).
- After cleaning, check the chassis and underbody protection and touch it up where necessary.

These measures will help to prevent mechanical or electrical components from malfunctioning.

Chassis

The following components should be cleaned regularly:

- front flap
- cab
- platform
- cab support frame
- wheel arches
- vehicle underside

Cleaning equipment settings

Water temperature:	max. 40 °C
Jet pressure:	max. 30 bar
Nozzle distance:	min. 30 cm

Radiator

Important safety notes

WARNING

If you clean the radiator, the air conditioning condenser or the protective grid with the engine at normal operating temperature, you can burn yourself on the hot components. There is a risk of injury.

Allow the engine to cool down before cleaning the radiator, the air conditioning condenser or the protective grid. Always wear protective gloves while doing so.

- !** Only direct the compressed-air, steam or water jet towards the radiator surface in a vertical direction. Ensure that the radiator fins are not damaged. Remove any dirt from the radiator fins. Damaged or dirty radiator fins can cause the engine to overheat. If there is a loss of coolant or damage to the cooling and heating system, have it checked at a qualified specialist workshop.

Winter road service operations

In the case of compacted dirt:

- ▶ Flush the radiator fins with lukewarm tap water.

In the case of stubborn deposits:

- ▶ Carefully clean the radiator with a high-pressure cleaner; see the vehicle's Operating Instructions.

For better cleaning results, a Tunap cleaning agent can be used. We recommend that this cleaning is generally carried out before and after the mowing season. More detailed information can be obtained in any qualified specialist workshop.

The fan sucks in snow particles, salt and dust. This mixture accumulates in the radiators and condenses if cleaning is neglected.

To avoid impaired cooling and engine performance, all radiators should be cleaned daily, if necessary. Impaired cooling and engine performance can result in the vehicle breaking down.

Summer operation

- ▶ Remove grass and plant cuttings.
 - ▶ Clean the radiator fins using compressed air.
- Clean the radiator every day in the case of heavy soiling during mowing operation.

Cab interior

Cab floor

When getting in, snow, dirt and salt will inevitably be carried into the cab interior. This corrosive mixture accumulates in the footwell area and promotes corrosion of the electrical and other components in the interior.

- ▶ Regularly remove and clean the floor covers.
- ▶ Clean the cab floor.
- ▶ Dry off moist residue immediately.
- ▶ In case of dry dust and salt residue: vacuum and clean the cab interior, particularly in the corners and pedals.

- i** Mercedes-Benz recommends that you use floor mats. Floor mats can be removed and cleaned if dirty or wet. This prevents damage to the cab floor from residual dampness.

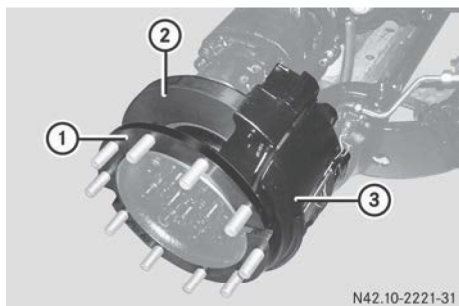
Cable guides

Correctly seal the cable guides on the rear wall of the cab after changing devices. If the cable guides have not been correctly sealed, the cab can become damp. This can cause corrosion to electric and other components in the interior. Observe the information contained in the vehicle's Operating Instructions.

Service brake

Clean the service brake after winter to avoid damage.

- ▶ Raise the vehicle; see the vehicle's Operating Instructions.
- ▶ Secure the vehicle with a jack stand.
- ▶ Remove the wheels; see the vehicle's Operating Instructions.



Example: disc brake

- ▶ Observe the notes on care (▷ page 9).
- ▶ Thoroughly clean the hub-drive housings, contact surfaces between the wheel rims and wheel hubs ①, brake discs ② and callipers ③.
- ▶ Fit the wheels and lower the vehicle; see the vehicle's Operating Instructions.
- ▶ Carefully test the brakes.

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Notes on care

After the winter season:

- ▶ Raise the vehicle, secure it using jack stands and remove the wheels; see the vehicle Operating Instructions.
- ▶ Clean the contact surfaces between the wheel rims and the wheel hubs and lightly coat them with penetrating wax (Carlofon 3650).
- ▶ Check the wheel rims for corrosion damage and cracks and replace where necessary.
- ▶ Fit the wheels and lower the vehicle; see the vehicle Operating Instructions.

After every off-road use:

- ▶ Check the frame, chassis parts and cab for damage to the paintwork and to the protective agents and have any damage rectified immediately.

To remove defects or re-apply dual-layer protection, please consult a qualified specialist workshop. They have the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz Service Centre for this purpose.

Compressed-air dryer

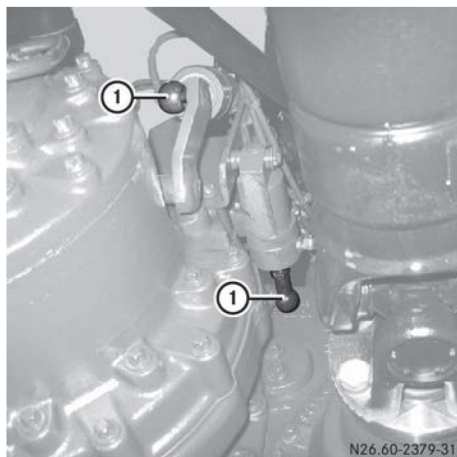
WARNING

If the condensation level in the compressed-air reservoir is too high, the braking effect may reduce or the brake system may fail. There is a risk of an accident.

Check the compressed-air drier for condensation before starting a journey. If the condensation level is high, have the compressed-air brake system checked at a qualified specialist workshop immediately.

Your vehicle is equipped with a condensation sensor on the compressed-air reservoir. If the condensation level in the compressed-air reservoir is too high, this is displayed by the yellow **Condensation in compressed-air reservoir** event window. In this case, have the compressed-air brake system checked at a qualified specialist workshop.

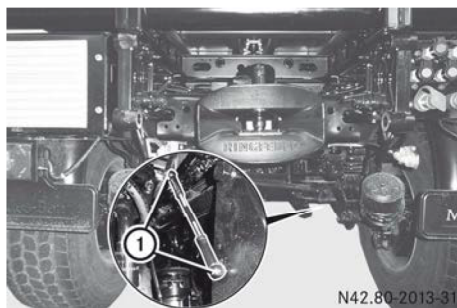
Gearshift linkage on the transmission



Example: ball socket

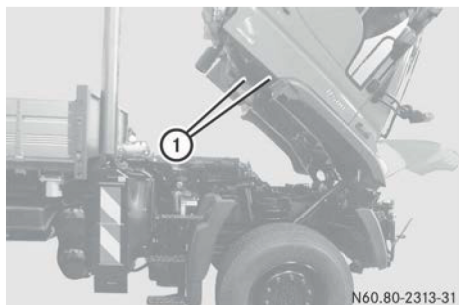
- ▶ Clean and grease ball sockets ① on the gearshift linkage of the working and crawler gears as well as on the planetary gear set.

ALB (automatic load-dependent brake)



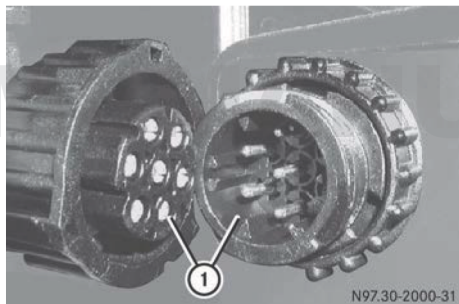
- ▶ Clean and grease ball sockets ① on the linkage of the ALB.

Cab tilt lock



- ▶ Clean and oil locks ① of the cab tilt lock. Locks ① of the cab tilt lock may not be greased.

Electrical contacts

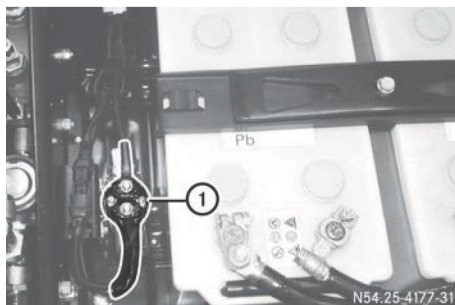


Example: electrical contacts

At least once a year or after operation in arduous conditions, such as fording or driving on roads treated with wet salt:

- ▶ Turn the key back in the ignition lock as far as it will go.
- ▶ Spray the electric contacts on electrical connector pins ① with contact spray.

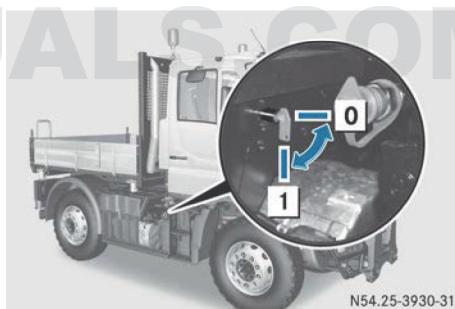
Relays



Fused relay

- ▶ Remove the battery cover; see the vehicle's Operating Instructions.
- ▶ Grease intake-air preheating relay ① with acid-proof grease.

Battery isolator switch



- 0 Interrupting the voltage supply
- 1 Reconnecting the voltage supply
- ▶ Pull out the lever of the battery isolator switch; see the vehicle Operating Instructions.
- ▶ Lubricate the lever guide of the battery isolator switch and the electrical connections with acid-proof grease.

Batteries

- ! Please observe the following points:
 - Dirty battery terminals and battery surfaces cause leak currents, which lead to the

batteries discharging. Always keep the battery terminals and battery surfaces clean and dry. Lightly grease the battery terminals, especially the undersides, with acid-resistant grease.

- Only clean batteries with the cell caps fitted. Otherwise, dirt can enter the battery cells.
 - Cleaning agents containing fuel corrode the battery housing. Only clean the battery housing with commercially available cleaning agents.
 - The vent holes of the cell caps must be open. Otherwise, gases cannot escape. Clean blocked vent holes with a suitable tool, e.g. a piece of wire. Unscrew the cell caps first. Otherwise, there is the risk of a short circuit.
 - If batteries that are not in use have a no-load voltage of less than 12.4 V, they must be recharged.
- ▶ Check the battery fluid level; see the vehicle Operating Instructions.
 - ▶ Disconnect the batteries; see the vehicle Operating Instructions.
 - ▶ Clean battery terminals and grease lightly using acid-proof grease.
 - ▶ Thoroughly clean the battery compartment with water and allow it to dry.
 - ▶ Reconnect the batteries; see the vehicle Operating Instructions.

Dual-layer protective coating

- ▶ Check the protective agents every week.
- ▶ Have paint and corrosion damage repaired immediately.

To remove defects or re-apply dual-layer protection, please consult a qualified specialist workshop. They have the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz Service Centre for this purpose.

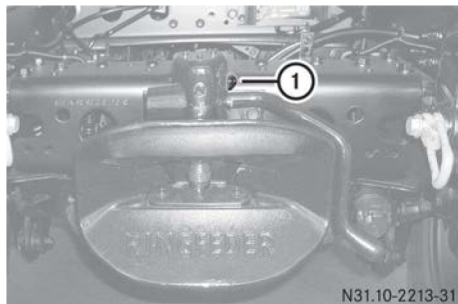
Paintwork damage and corrosion damage

To repair paint and corrosion damage, please consult a qualified specialist workshop. They have the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz Service Centre for this purpose.

Engine compartment

- ▶ After cleaning the engine compartment: spray the engine attachments and the engine compartment with engine sealant.

Trailer tow hitch



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Always keep the coupling bolts and the towing eye bush clean and lubricated. This reduces wear on these parts. If the coupling mechanism is sluggish, lubricate the coupling head above conical lubricating nipple ①.

Snow-clearing operation

Fine particle filter or active charcoal filter

When using the vehicle for snow-clearing, the fine particle filter or active charcoal filter may become clogged with fine snow crystals.

- ▶ Remove the fine particle filter or active charcoal filter; see the vehicle's Operating Instructions.
- ▶ Activate mixed air operation; see the vehicle's Operating Instructions.

Rear apron

- ▶ Fit suitable chassis protection such as a rear apron.

Mud flaps

- ▶ Attach the mud flaps to the front mudguard. This reduces the dirt on the radiators caused by the tyres to a minimum.

The mud flaps are available as Unimog accessories.

Loading snow-clearing machines

Grit:

- ▶ Do not spill any grit when loading gritters.

Liquid road salt:

- ▶ Avoid liquid road salt leakage through the ventilation of the spreading tank.

Protective agents

Penetrating wax (Carlofon 3650)	A 000 986 59 70 10 (1 litre)
Underbody protection wax (Carlofon 4941)	A 000 986 60 70 10 (1 litre)
Underbody protection wax (Carlofon 4942)	0.5 litre spray can, by Carlofon (www.carlofon.de)
Contact spray	by ITW or Carlofon (www.carlofon.de)
Protective agent (VP 195/II) for exterior parts	A 000 989 33 58 (1 litre)
Acid-proof grease (F40 v1)	by Bosch GmbH
Body cavity wax (VA 18/65-4)	A 000 986 37 70 10 (3 litre)
Engine sealant (AP 1505)	A 000 986 33 70 (1 litre)

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Imprint

Internet

Further information on Mercedes-Benz vehicles and Daimler AG can be found on the Internet at

<http://www.mercedes-benz.com>

<http://www.daimler.com>

Documentation team

Should you have any questions or suggestions regarding this manual, you can reach the technical documentation team at the following address:

Daimler AG, HPC: CAC, Customer Service,
70546 Stuttgart, Germany

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Vehicle manufacturer

Daimler AG
Mercedesstrasse 137
70327 Stuttgart
Germany



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