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Foreword

This operator's information manual is supplied with each coach. It is intended to serve as a reference source for the use of qualified personnel in operating and servicing the vehicle. The information it contains is divided into the following categories:

- Please consult the Operator's Manual for detailed descriptions and information on safety-related systems and procedures.
- The Service Record serves as your guide to servicing and maintaining your vehicle's technical components. It includes all essential information on maintenance intervals and vehicle operation as well as pages reserved for dealer stamps certifying that the prescribed service and maintenance operations have been performed.

Before driving the vehicle for the first time, please take the time to familiarize yourself with the contents of the "Safety" chapter as well as all of the instructions and information provided in this Operator's Manual.

When they are required, this manual also furnishes descriptions of options and special equipment. Because your individual coach has been specially manufactured to include the special equipment and options that you have specified, some of the equipment descriptions and illustrations in this manual may not apply to your own vehicle.

The operator's manual and the Service Record are important documents and should remain with the vehicle at all times.

We pursue an engineering policy devoted to continuous improvement. This policy embraces all aspects of the technology and design features incorporated in our vehicles. We must therefore reserve the right to introduce modifications affecting design, equipment and technical features at any time. As a result, we are unable to recognize legal claims based on discrepancies between the descriptions in this manual and your own vehicle's features.

Environmental protection

At Setra and EvoBus we are committed to a policy of integrated environmental protection. Our synergistic approach to guarding the natural environment embraces all aspects of every production process, with the potential environmental effects of all our actions assuming a key role in each and every one of our business decisions.

Our ultimate objective is embodied in a consistent commitment to careful and economical application of the natural resources essential for the existence of both nature and mankind.

You can support these efforts by considering the environment as you operate your vehicle in a spirit of ecological awareness. Your driving style will

have a major effect on fuel consumption as well as on wear to powertrain components (engine, transmission, axles, brakes, tires).

We are proud of our products and the people who build them. We trust that you will be just as proud to own your new vehicle as we are to have built it, and we look forward to an extended and successful partnership with you in the years to come.

We hope you enjoy driving your coach.

EvoBus GmbH

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The VIN data plate is located on the left side of the cockpit. The VIN number is required for ordering parts and for service operations.



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Pos.	Designation	Figure
1	Vehicle type	
2	Vehicle Identification Number (VIN)	
3	Gross Vehicle Weight Rating (GVWR)	
4	Maximum approved front axle weight	
5	Maximum approved drive axle weight	
6	Maximum approved trailing axle weight	
7	Specified tire dimensions on individual axles	
8	For correct tire inflation pressures, refer to tire manufacturer's recommendations.	



M00.00-0606-71

The vehicle identification number (1) is also affixed to a support brace on the front of the vehicle. It is accessible via the service-access door in the entrance of the front right door.

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General safety information

Symbol usage and meanings

Special symbols appear in the text to call your attention to safety precautions and other important information.

The activities referred to in the accompanying instructions should be performed exclusively by qualified vehicle operators and technicians with the necessary professional training and experience.

These persons should also be able to recognize potential risks and avoid hazards while performing the prescribed activities.

Meanings of symbols:



Notice:

These sections contain important additional information.



Danger:

Alerts you to hazards that can lead to potentially serious or lethal injury as well as damage to property.



Environmental protection

These sections describe procedures to help protect the environment.

▷ They also contain references to additional information in other sections or manuals.

Notes on coach safety

We recommend that you:

- protect your warranty and ensure that your vehicle continues to provide optimal levels of operating safety by never installing anything other than officially approved OEM replacement parts on your coach. All factory-approved replacement components have been specially tested to ensure optimal safety, reliability and performance when installed on your vehicle.

You can obtain additional information from any SETRA ServicePartner.

Always observe all local, state and federal regulations.

Operating safety

Important information:

- Failure to observe all official instructions and recommendations when servicing the vehicle may lead to malfunctions, as can unapproved modifications to your coach.
- Unauthorized and unqualified attempts to service or modify electronic components or their software can lead to operational malfunctions. Because many electronic components are integrated within extended networks, such attempts can also produce collateral malfunctions in other electronic equipment. These kinds of malfunctions could pose a serious hazard to the vehicle's operating safety.

- We recommend that you have all service, maintenance and modification work performed by a SETRA ServicePartner.

Stickers

Warning stickers have been attached at various locations on your vehicle. These warning stickers are intended to alert you and other persons to potential hazards. Therefore: Never remove any warning sticker unless instructions specifically requesting removal are printed on the sticker.

Danger:

If a warning sticker is missing, you or another person could fail to recognize a potential hazard. The ultimate result could be personal injury.

Navigation and location system

Please follow the instructions below if your coach is equipped with a navigation system:

- When using the navigation system, always remember to devote your primary attention to road and traffic conditions.
- Never operate the controls on the navigation and location system unless the coach is stationary. Remember that your vehicle is already traveling at a rate of 46 feet (14 meters) per second by the time you reach 30 mph (50 km/h).
- The navigation system does not furnish information on maximum approved bridge loads or vertical clearances in tunnels and at underpasses. The driver remains responsible for determining maximum bridge loads and vertical clearances.

Operating the radio and mobile communications equipment

(mobile phones, two-way radios, fax machine, etc.)

Danger:

Accident risk.

Important information:

- When using mobile communications equipment, always remember to devote your primary attention to road and traffic conditions.
- Operate the display panel, radio and mobile-communications equipment only when road and traffic conditions permit you to do so safely. Remember that your vehicle is already traveling at a rate of 46 feet (14 meters) per second by the time you reach the 30 mph (50 km/h) range.

Danger:

Always observe all state, federal and local laws and regulations governing the use of cellular phones by operators of moving vehicles.

Operating cell phones and radio devices without outside antennas

Electromagnetic radiation emitted by devices that transmit radio waves, such as cell phones, can adversely affect operation of electrical equipment that is not shielded against electromagnetic interference (heart pacemakers, etc.). We therefore recommend that you urge all coach passengers to refrain from using cell phones at all times unless these phones are connected to an external antenna.

Danger:

Installation of a cell phone, radio device or fax machine that fails to conform to the SETRA specifications for official approval may invalidate the vehicle's warranty.

Danger:

Always observe all state, federal and local laws and regulations governing the use of cellular phones by operators of moving vehicles.

National Highway Traffic Safety Administration (NHTSA) Reporting Procedure

The following text is published as required of manufacturers under Title 49, Code of U.S. Federal Regulations, Part 575 pursuant to the "National Traffic and Motor Vehicle Safety Act of 1966":

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) - in addition to notifying SETRA of North America.

If the NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, the NHTSA cannot become involved in resolving individual issues between you, your dealer, or SETRA of North America.

To contact the NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0132 in the Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

Exhaust gases

Always observe the following precautions.

Danger:

Never breathe or inhale exhaust gases from the engine. Exhaust gases contain carbon monoxide, a colorless and odorless gas that can cause loss of consciousness and in some instances may be lethal.

Danger:

If you suspect that engine exhaust fumes may be entering the coach at any time, determine the source and have the defect corrected immediately. Should it be absolutely essential to operate the vehicle with a suspected leak of this type, discharge passengers if possible and drive with all air vents fully open.

Danger:

Keep the engine exhaust system, coach body and coach ventilation system properly maintained to prevent carbon monoxide from entering the coach. Always ensure that the area adjacent to the exhaust system's tailpipe is clear and not obstructed by snow or any other materials. This precaution will help reduce the tendency of exhaust gases to accumulate beneath the vehicle. The exhaust system and coach body should always be inspected by a competent technician whenever either is suspected of having sustained damage, whenever a change is noticed in the sound of the exhaust system, and each time the coach undergoes routine servicing.

Danger:

Keep the ventilation inlets and radiator grill free and clear of snow, leaves, dirt and other obstructions at all times to allow proper airflow through the coach ventilation system.

Danger:

Do not operate the engine with the vehicle parked inside a confined area such as a garage without first connecting a suitable exhaust-gas extraction system.

Danger:

Never allow the engine to run with the vehicle parked in a narrow alley or other confined area. If the vehicle must be parked with the engine running for an extended period while in an open and unconfined area, turn on the HVAC system on to bring outside air into the coach.

Danger:

Stationary regeneration: Make sure the gases emerging from the exhaust pipe are not aimed directly at any person, or at any surface or material that could melt, burn, or explode.

Location of first-aid kit/fire extinguisher

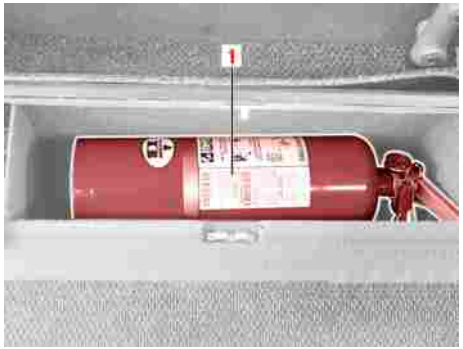


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The first-aid kit is located behind the access door at the left front (see "First Aid" symbol)

Notice:

Check the expiration dates for the various contents once a year and replace any materials whose service life has expired.



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The hand-held fire extinguisher (1) is located inside the vehicle, at the front in the center of the first step (to the right of the driver's seat).

Danger:

Observe safety and operating instructions for using the fire extinguisher.

Washing in an automatic coach wash

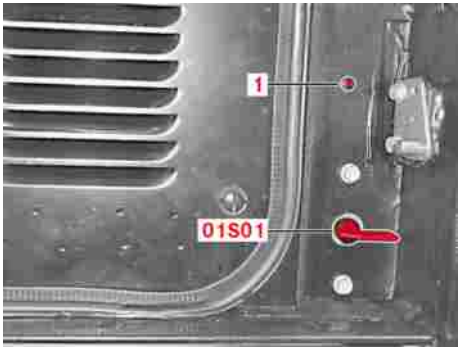
Before washing, make sure that the roof hatches, the driver's window and all doors are closed. Set the heaing - ventilation - air-conditioning system to the recirculated-air mode.

Remove any supplementary components (such as a satellite dish) that may be mounted on the outside of the coach before washing.

Before washing the coach always fold both integral mirrors inward toward the windshield.

After washing the coach fold the mirrors back out to their original driving positions and adjust them as required.

Note on safety for main battery switch



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Caution:

Be sure to read the information sticker before operating the main battery switch 01S01.

Overhead storage trays for carry-on luggage



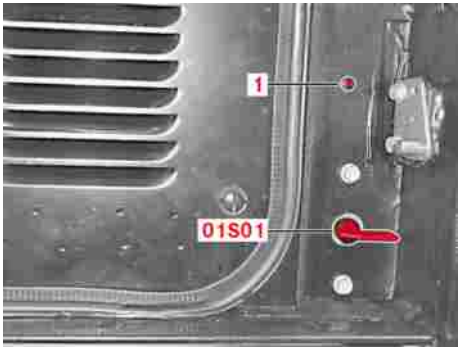
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The overhead storage trays above the seats are suitable only for light-weight carry-on articles.

Danger:

Severe braking, abrupt changes of direction or an accident could propel loose objects around the cabin, potentially leading to occupant injury. Never transport heavy or hard objects in the vehicle's interior without firmly securing them first.

Safety information on the windshield wiper system



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Danger:

INJURY HAZARD! Before working on the windshield wiper system (cleaning the wiper blades, replacing the blades or the wiper motor, etc.), be sure to switch off the battery master switch 01S01.

Caution:

Be sure to read the information sticker before operating the main battery switch 01S01.

Safety instructions for the air conditioning system

Air conditioning systems that operate using R 134a refrigerant are identified by corresponding stickers or data plates on the compressor.

Never mix R 134a refrigerant or the corresponding compressor oil, FUCHS Reniso Triton SE 55, with other products (see Specifications for Fluids and Lubricants).

When operating, servicing, repairing and deactivating air conditioning systems, always rely on the latest equipment and precautions to evacuate the system correctly - never allow the refrigerant to escape into the atmosphere.

When disposing of used refrigerant and compressor oil, always keep them separate and avoid all mixture with or contamination from other substances while forwarding them through the prescribed channels for disposal or recycling.

Maintenance work on air conditioning systems, including operations to recover refrigerants and oils, is to be carried out exclusively by qualified technicians with the required training and technical equipment as well as official certification.

The operator must maintain a log book documenting use of refrigerants and compressor oil.

Danger:

On automatically-controlled air conditioning systems, the ventilation fans that cool the condenser and evaporator units can start to rotate at any time. Therefore, always verify that the ignition switch is OFF before starting cleaning operations around these components. Do not reach into the fan blades or fan rollers. Avoid all contact with the refrigerant - risk of frostbite. Treat affected areas of the skin as for frostbite and consult a physician at once. Perform maintenance and repair operations with the engine OFF whenever possible. When working on a running engine, always keep well away from rotating components (such as belts, pulleys, etc.).

Operating auxiliary heaters

Danger:

Danger of fire and burns! High exhaust gas temperatures and the hot exhaust pipe of the auxiliary heater present a fire hazard. Therefore, do not park or let vehicle stand over combustible materials (like grass) when the auxiliary heater is currently in operation, has recently been operating or is started by the immediate heat button/timer.

Danger:

Danger of poisoning and suffocation! Due to the danger of poisoning and suffocation, never operate the auxiliary heater in enclosed spaces such as garages or service areas. Even with the timer or preselected operation.

Danger:

Risk of explosion. Switch off the auxiliary heater at filling stations and refueling systems due to the danger of explosion.

Danger:

Fire hazard! The auxiliary heater must be switched off where combustible fumes or dust can form (for example, in the vicinity of filling stations, fuel depots, cool depots, sawdust depots, grain depots or the like).

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Preparing coach for operation - Daily procedures

- Check oil level with engine off. Add oil as required, being sure to use the correct engine oil in accordance with the engine manufacturer's specifications.

Notice:

Allow engine to remain off for at least 10 minutes before checking the oil level.

- Check the level of the coolant in the engine's cooling system and top up as required, always remembering to use the correct mixture.

Notice:

Refer to Specifications for Fluids and Lubricants

- Check the fluid level in the windshield washer reservoir and verify that the windshield washers and wipers are operating correctly.
- Check the fuel tanks to ensure that adequate reserves are available to operate the vehicle's engine and the auxiliary heater (if installed).

Danger:

Always switch off the engine and auxiliary heater before refueling.

- Check supply of diesel exhaust fluid for exhaust cleaning system.
- Check the engine fuel filter by visually inspecting it for contamination

Notice:

(see chapter on "Driver service and roadside repairs").

- Check the electrical system, paying particular attention to the headlights, turn signals, taillights, brake lights and license plate lights.

Notice:

Under certain climatic and operating conditions condensation may accumulate in the headlights and other light units while the coach is stationary. This does not indicate any defect. The ventilation openings in the headlights will allow this moisture to dissipate automatically once the coach is again driven for a brief period.

- Verify that the luggage compartment doors and service-access doors are locked securely.
- Inspect all emergency exits

Danger:

(Check roof hatches and side emergency-exit windows)

Notice:

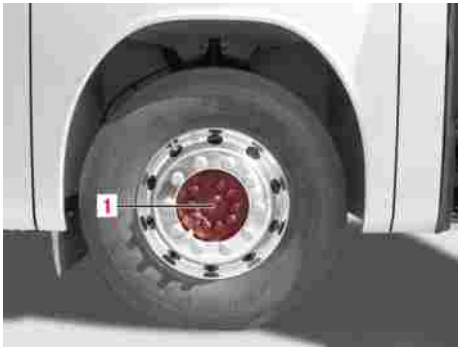
For safety and operating instructions regarding the emergency-exit windows and roof hatches, refer to chapter on "Driver service and roadside repairs"!

- Carry out an inspection to confirm that all emergency equipment is present and available for easy access in the event of an emergency.

Notice:

First aid kit, fire extinguisher, hazard warning triangle, vehicle jack, wheel chock.

- Check the adjustment of the rearview mirrors, clean mirror lenses, check operation of mirror heaters (with ignition switch at Position 2).
- Check the air brakes to ensure that system is operating correctly.
- Check the conditions and inflation pressures of the tires (remember the spare tire). Verify that all wheel lug nuts are tightened securely.
- Wheel and attached parts (rim, wheel trim cap, wheel bolts and nuts) must be checked for proper installation and freedom from damage. Damaged parts must be replaced.



M40_00-0115-71

- Check all wheel hubs (1) for leaks, remembering to inspect both inside and outside surfaces (visual inspection).

Notice:

Grease and oil residue, either on the surface where the vehicle has been standing, or on the tire itself, can indicate that a wheel hub is leaking. Respond to any leaks by contacting your SETRA ServicePartner.

Preparing coach for operation - Weekly procedures

- Check the coolant level in the cooling system and refill if necessary. Check the concentration of the anti-corrosion agent/antifreeze each time coolant is added and correct if necessary

Notice:

Observe Specifications for Fluids and Lubricants.

- Check the level of the fluid in the power steering fluid reservoir and top up as required.

Danger:

If the fluid is low, have the steering system inspected at an authorized service facility.

- Perform a visual inspection of all drive belts.
- Carry out a visual inspection of the engine, automatic transmission, drive axle, steering, cooling and heating systems to determine whether any leaks are present.
- Check the seat belts (inertia-reel locks). Carry out a visual check for damage to the belt straps.
- Check electrolyte levels in the starter batteries.

Danger:

Observe the safety instructions in chapter "Driver service and roadside repairs."

Supplementary maintenance requirements will vary according to individual operating conditions.

- The coach operator will also need to schedule additional service for the heater/ventilation/air conditioning system (driver's seat and passenger compartment) extending beyond the basic operations listed in the Service Record.

Notice:

See chapter on "Driver service and roadside repairs."

Basic service and maintenance procedures

► Perform service and maintenance prescribed in the Service Record

Danger:

Regular periodic maintenance on powertrain and chassis components is absolutely essential for ensuring that the vehicle continues to provide safe and reliable performance. Service intervals and required service procedures are described in the enclosed Service Record.

Danger:

We strongly urge you to have all listed service work performed at the specified intervals.

Notice:

Warranty claims based on our sales and delivery terms can be recognized only if the periodic maintenance operations have been performed at the specified mileages. Ensure that all service and maintenance operations are confirmed in the Service Record by a SETRA ServicePartner.

Care and cleaning

▷ You can find information and instructions describing the care and cleaning of your vehicle in the "Vehicle operation" chapter.

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Vehicle break-in procedures

► Breaking-in powertrain, brakes and suspension components

Notice:

Both the performance and the ultimate service life provided by the coach depend in no small part upon the treatment that the powertrain and chassis receive during the first 3000 miles (5000 km).

Notice:

The speeds and loads under which the coach is operated should be increased only gradually during this period. Strict compliance with the instructions for maintenance and lubrication contained in the service manual is essential.

Notice:

Do not subject the engine to its maximum load capacity during the break-in period. For the initial 1300 miles (2000 km): Drive as gently and carefully as possible. Do not accelerate beyond 3/4 of maximum rpm in any gear. After 1300 miles (2000 km): Slowly increase engine speeds to the levels recommended for maximum economy in each gear. During the break-in period you should attempt to vary engine and vehicle speeds frequently, always avoiding extended operation at constant vehicle and engine speeds. The best way to break in the vehicle is by frequently varying the engine speed the corresponding loads transmitted through the entire drivetrain.

Notice:

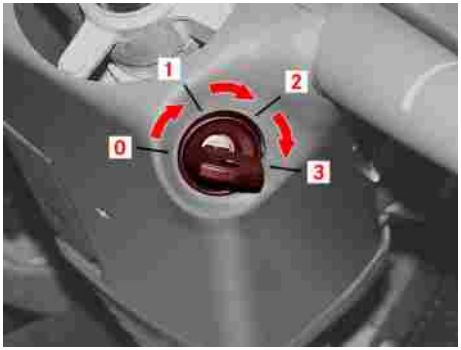
During the first 6500 - 13,000 miles (10,000 - 20,000 km) the engine may consume slightly more oil than later on during its service life. During this period you should therefore check the oil daily, or at intervals of no more than 300 miles.

Starting the engine

► The parking brake must be engaged. Transmission in neutral.

Notice:

At outside temperatures below -4 °F (-20 °C), use the auxiliary heater to preheat the engine prior to starting it (see section on controls for "Heater - Ventilation - Air conditioning").



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- Turn key in ignition switch to position 2. Wait until the vehicle performs an indicator lamp check (all indicator lamps should come on briefly) then turn the ignition switch to Position 3, remembering not to depress the accelerator pedal. If the engine fails to start within 15 seconds, break off the starting attempt and wait approximately 1 minute. Then turn the key all the way back to its initial position in the switch and repeat your starting attempt.

Notice:

Should the engine fail to start in 3 consecutive attempts, wait 15 minutes before trying again.

- Release the key as soon as the engine starts.

Caution:

Do not increase the engine speed until the low oil pressure symbol disappears from the display. If the low oil pressure symbol remains in the display for longer than 10 seconds, switch off the engine immediately and find the cause.



- Observe the display screen: Respond to any indicated malfunctions by identifying and rectifying the source of the problem.

Danger:

An audible warning will continue to sound until the pneumatic system supplying the air brakes reaches its normal operating pressure. Never attempt to release the parking brake or move the vehicle before the warning buzzer stops.

Driving

Notice:

Do not allow the engine to warm up by allowing it to run for an extended period while the vehicle remains parked. Instead, drive off immediately, being sure to avoid subjecting the engine to excessive loads and rpm until it reaches its normal operating temperature (165 °F - 195 °F (75 °C - 90 °C).

Danger:

Check the operation of the service brakes immediately after setting the vehicle in motion.

Danger:

All doors must be unlocked before the vehicle is moved.

Danger:

Never allow any objects to obstruct the pedals or prevent them from traveling through their entire range. Failure to observe this precaution could adversely affect the vehicle's operating safety and pose a hazard during highway operation. Sudden driving or braking maneuvers could propel objects into the footwell area around the pedals, interfering with their movement and preventing you from braking, accelerating, or disengaging the clutch. You could then cause an accident and endanger yourself and others.

- Check the pedals to confirm that their travel paths are unobstructed

Danger:

Make sure floor mats and carpets are installed securely and slip-free, and ensure that sufficient free space is available around the pedals.

Danger:

Never place or store any objects in the driver's footwell.

Danger:

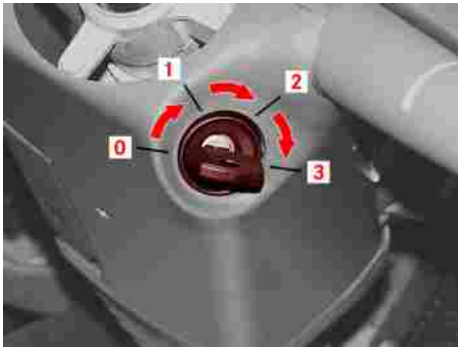
Stow and fasten all loose objects to prevent them from entering the driver's footwell while the vehicle is underway.

- Observe the tachometer while driving.

Notice:

Always attempt to keep the engine operating within its most economical range. Never allow engine speed to continue rising until the needle enters the tachometer's red overspeed sector.

Shutting down the engine



M54_00-0083-01

- Bring the vehicle to a stop - Transmission in neutral - Engage parking brake. Return ignition/starter switch from Pos. 2 (normal driving) to Pos. 1

Danger:

The high temperatures of the exhaust gases and the auxiliary heater's hot exhaust pipe are both potential sources of fires and burns. When parking the vehicle, always ensure that no flammable materials of any kind (dry grass, leaves, etc.) are in the area around the vehicle's exhaust, the engine or the auxiliary heater's exhaust system.

Notice:

Before you switch off the engine allow it to run at idle speed for approximately 1-2 minutes (if the coolant temperature is high or after driving under full engine load (e.g. after driving uphill) so that the exhaust turbochargers can cool down).

Notice:

An acoustic warning signal sounds whenever the ignition is switched off before the parking brake is engaged.

Towing

Danger:

An immobilized vehicle should be towed by authorized technicians only (breakdown service). Always observe all state and federal regulations.

Danger:

On vehicles with an Electronic Stability Program (ESP), this system must also always be switched off! - see the chapter "Vehicle Operation".

Danger:

During towing the ignition switch in the towed vehicle should always remain at Position 1. Ensure that the steering wheel lock cannot engage; otherwise the wheels on the steering axle may lock in one position.

Caution:

Special procedures are required to protect the transmission while the coach is being towed: To ensure safety, always disconnect the drive shaft before towing. It is vital to remove the bolts securing the drive shaft to the axle flange, and to secure the transmission output flange to prevent it from sliding.



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► Towing with raised front axle

Danger:

The tow fitting (1) is intended exclusively for towing and not for recovering vehicles that are stuck or seriously disabled.

Danger:

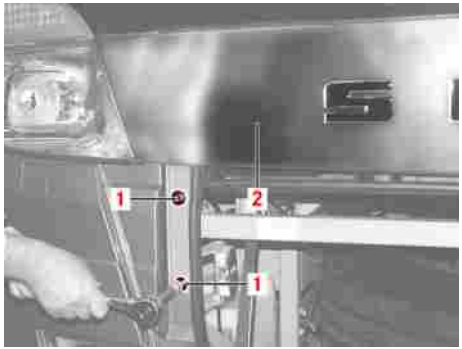
Unload the vehicle prior to raising and towing it.

Notice:

Lift the front axle at the tow fitting (1).

Danger:

Never turn the ignition/starter switch to Position 2 with the front axle raised above the ground. The wheels on the drive axle could lock up. In the event of failure to observe this precaution, the ABS and/or ESP could initiate braking at the rear axle, causing traction loss and possible fishtailing during towing.



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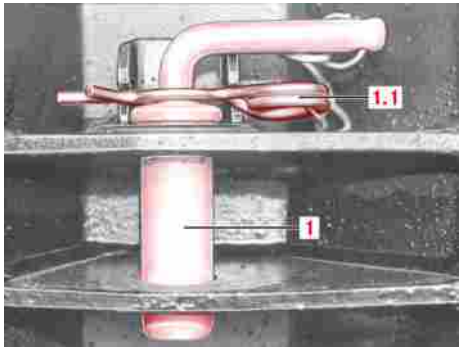
- Remove the front cover (when using the tow coupling)

Notice:

Open the spare tire door by pulling the lever in the entryway of the door at the right front of the coach.

Notice:

Loosen the 4 attachment screws (1) to remove the front panel (2) that covers the tow coupling.



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- Front towing device:

Notice:

For information on recharging a vehicle's pneumatic system with compressed air prior to towing, refer to the chapter on "Driver service and roadside repairs".

Danger:

The securing pin (1.1) must be installed on the top of the locking pin (1). Special procedures are required to protect the transmission while the coach is being towed: To ensure safety, always disconnect the propshaft before towing.

- Always observe this warning notice when towing.

Caution:

The towing vehicle could damage the left outside mirror when negotiating tight curves to the left. When the towing vehicle makes sharp turns to the right there is also a danger that the tow bar might damage the coach being towed. Observe the instructions on the sticker affixed to the tow bar.

Note on safety for brake system

Caution:

If a malfunction of the yellow warning level on the brake system appears on the display of the instrument cluster, the braking behavior of the vehicle may change. Drive especially cautiously. Have the malfunction eliminated as quickly as possible at a SETRA ServicePartner.

Danger:

If a malfunction of the red warning level on the brake system is shown, the braking behavior of the vehicle changes. The pedal travel during braking can increase. The lockup protection is now off. Stop the vehicle immediately and shut it down (watch the traffic situation). Have the malfunction eliminated immediately by a SETRA ServicePartner.

Braking and stopping

- When driving on long downhill slopes, use the braking effect of the engine by shifting into a lower gear. Use the integrated retarder or engine brake to reduce the strain on the service brakes.

Notice:

Normally, the service brakes need only be used for heavy braking in case of danger.

Notice:

Always engage the parking brake before you leave the vehicle. On uphill or downhill slopes you must also place wheel chocks under the wheels and turn the steering towards the curb.

Braking with anti-blocking protection

- In the event of danger the brake pedal should be pressed all the way down. This guarantees that all wheels are regulated and the coach decelerates at the ideal rate.

Notice:

The retarder is automatically deactivated during ABS control.

Danger:

The anti-blocking protection in the ABS system does not relieve the driver from the responsibility for adjusting his/her driving style to the traffic and road conditions. The tracking and steerability of the vehicle are improved during braking. However, the anti-blocking protection cannot compensate for inadequate following distances and excessive cornering speeds!

Engaging the parking brake



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- To engage the parking brake, pull knob (3) upward until it locks.

Danger:

Engage the parking brake only when the coach is stationary.

Danger:

Always engage the parking brake before you leave the driver's seat.

Danger:

On uphill or downhill slopes you must also place wheel chocks under the wheels and turn the steering towards the curb.

Danger:

When the parking brake is engaged, the effect of ESP and ABS is deactivated - danger of skidding.

Notice:

An acoustic warning signal sounds whenever the ignition is switched off before the parking brake is engaged.



This operating symbol appears on the screen.

Releasing the parking brake



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► To release the parking brake, apply substantial pressure to push the knob (3) down.



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► The operating symbol (1) must go out.

Danger:

The pneumatic system's air pressure must be at least 91 psi (6.3 bar) to release the parking brakes correctly. If the parking brake indicator lamp (2) does not go out despite there being adequate pneumatic system air pressure, there is a defect in the spring accumulator or emergency release circuit. Have the brake system inspected immediately by a SETRA ServicePartner.

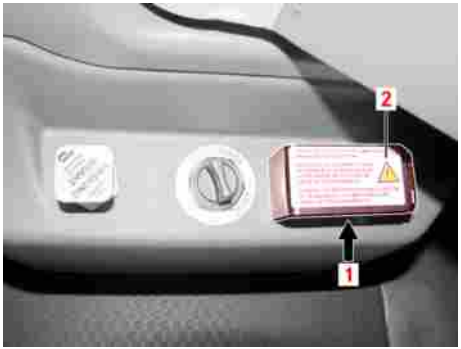
Using the parking brake emergency release switch

Notice:

Should the compressed air system for the parking brake malfunction, the parking brake can be released using the emergency release unit:

Danger:

This emergency release feature is intended exclusively for use when moving the vehicle from a hazardous area to a safe location. Then park the vehicle and contact a SETRA ServicePartner.



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- ▶ Fold the tab (2) to the side.
- ▶ Press and maintain pressure on the parking brake emergency release switch (1).

  The parking brake is released and the vehicle can be moved.

Hill-holder (Easy Start) (only together with ZF-AS TRONIC transmission control)

Danger:

Never abuse the hill-holder by using it for standard braking, and always ensure that the parking brake is firmly engaged before leaving the driver's seat. If the parking brake is not engaged the vehicle could start to roll on its own - Accident hazard.

Notice:

The hill-holder operates only when a gear is engaged. A transmission range (selector lever in D or R) must be engaged with the brake pedal depressed before the vehicle is started uphill.

Hill-holder (Easy Start) (only together with ZF-AS TRONIC transmission control)

Notice:

On both uphill and downhill gradients the hill-holder prevents the vehicle from rolling while you move your foot from the brake to the accelerator. The hill-holder prevents lurching to allow smooth starts on grades. The system maintains the applied braking pressure until the transmission registers that adequate torque to start off the vehicle is available.

Notice:

When a forward range is engaged the hill-holder prevents the vehicle from rolling backward.

Notice:

If reverse is engaged the hill-holder prevents the vehicle from rolling forward.

Notice:

The hill-holder's Easy Start feature also assists the driver during starts on level ground.

- Brake the vehicle to a complete stop.

  The system maintains the applied braking pressure.

Danger:

Accident risk. If the vehicle rolls, this indicates that the applied braking pressure is too low. Apply additional pressure to the brake pedal to increase the braking pressure.



The "hill-holder" symbol appears in the instrument cluster's display panel.

Notice:

The hill-holder remains active for as long as you continue to apply gentle pressure to the brake pedal.

- The hill-holder releases the brakes automatically as soon as the system registers that enough torque is being generated to move the vehicle in the desired direction.

Danger:

Accident risk. If a pedal (brake or accelerator) is not then depressed within 2 seconds the hill-holder automatically releases the brakes and the "Easy Start" symbol in the display goes out. The vehicle can then start to roll on its own.

Notice:

Once the accelerator pedal is pressed hard enough for the engine to generate adequate torque to move the vehicle, the hill-holder will release the vehicle and it will start moving in the desired direction.

Danger:

Accident risk. If the system fails to register adequate torque to propel the vehicle within 10 seconds, the hill-holder is deactivated to prevent excessive clutch wear. The "hill-holder" symbol in the instrument cluster display goes out. The vehicle can then start to roll on its own.



The "hill-holder" symbol in the instrument cluster's display panel goes out.

TCS Traction Control System

Regardless of the road conditions, the Traction Control System (TCS) prevents the drive wheels from spinning when starting off or accelerating.

Danger:

The Traction Control System (TCS) does not release drivers from the need to adjust their driving style to the traffic and road conditions. With the TCS switched off and the drive wheels spinning, the vehicle can swerve in an uncontrolled manner.

Electronic Stability Program (ESP) (system description)

The Vehicle Dynamics Control system prevents the vehicle from swerving or tipping within the applicable physical limits, regardless of the loading state of the vehicle, the road conditions or in critical driving situations (e.g. sudden evasive maneuver or increased speed in curves). This is achieved with specific braking of individual wheels and of the entire vehicle. In combination with the Traction Control System (TCS), this system is call the Electronic Stability Program (ESP). ESP is functional regardless of whether or not the service or permanent brake is actuated.

Danger:

ACCIDENT HAZARD! The Electronic Stability Program (ESP) does not release drivers from the need to adjust their driving style to the traffic and road conditions! ESP is only capable of stabilizing the vehicle within the applicable physical limits again! With the Electronic Stability Pro-

gram (ESP) switched off and the drive wheels spinning, the vehicle can swerve in an uncontrolled manner!

Notice:

When driving in winter, the Electronic Stability Program (ESP) only achieves optimum efficiency with winter tires (M+S).



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Notice:

It is recommended that the Electronic Stability Program (ESP) be switched off with the "ESP switch-off" button (1) if traction problems occur when driving with anti-skid chains or when driving on sections of road with a loose surface (e.g. sand or gravel roads).

Electronic Stability Program (ESP) (description of operation)

Functions:

- Operation of Electronic Stability Program (ESP)
- Initialization phase
- Driving behavior in case of understeer
- Driving behavior in case of oversteer

Operation of Electronic Stability Program (ESP)

The Electronic Stability Program (ESP) is an extension of the braking system which already includes the Antilock Braking System (ABS) and the Traction Control System (TCS). If ESP detects a critical driving situation during driving, control interventions for stabilizing the vehicle automatically become active by:

– Reducing the engine output.

– Specific wheel-by-wheel intervention in the vehicle brake system.

– Braking the entire vehicle.

Notice:

During an intervention of the Electronic Stability Program (ESP), the yellow warning indicator lamp flashes.

Notice:

The Electronic Stability Program (ESP) is only active when the vehicle is being driven and at speeds greater than 7 mph (10 km/h). With reverse gear engaged, the Electronic Stability Program (ESP) is not functional.

Notice:

The Electronic Stability Program (ESP) is automatically switched off when a malfunction occurs.

Initialization phase

From switch-on of the ignition/starter switch to driving the first several feet, the Electronic Stability Program (ESP) is initialized and the sensors are checked for proper operation. The ESP is not yet operational during the initialization phase, however the Traction Control System (TCS) is functional. Once the function is ensured, the initialization is ended and the system is ready for use.

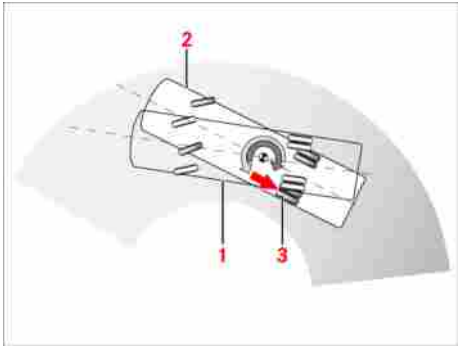
Notice:

If the warning lamp fails to go out immediately after the lamp test, but instead only goes out once the vehicle reaches a speed of approx. 15 mph (20 km/h), this indicates that the system detected a wheel speed sensor problem at some point before the last time the ignition switch was turned off.

Notice:

If an ABS malfunction is detected and shown with a pictograph on the screen, then the ESP and TCS function are also deactivated and this is indicated with the corresponding warning lamp in the instrument cluster.

Driving behavior in case of understeer



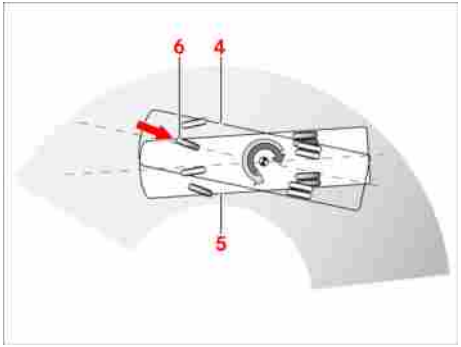
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In deviation from the intended course (1), the vehicle pushes over the front axle toward the outer edge of the road (2). The vehicle is stabilized again with specific braking of the rear wheel at the inside of the curve (3).

Notice:

The illustration shows an example for 2-axle vehicles. With 3-axle vehicles with an RAS axle, the 3rd axle may have to be controlled separately.

Driving behavior in case of oversteer



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The vehicle swerves out over the rear axle. In deviation from the intended course (4), the vehicle rotates toward the inner edge of the road (5). The vehicle is stabilized again with specific braking of the front wheel at the outside of the curve (6).

Notice:

The illustration shows an example for 2-axle vehicles. With 3-axle vehicles with an RAS axle, the 3rd axle may have to be controlled separately.

Switching off Electronic Stability Program (ESP)

► Press the "ESP switch-off" button.



Notice:

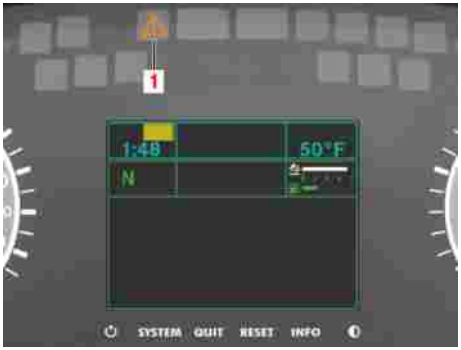
By pressing the "ESP switch-off" button again or after the ignition/starter switch is switched off and then on again, the Electronic Stability Program (ESP) is operational again.

Danger:

ACCIDENT HAZARD! With the Electronic Stability Program (ESP) switched off and the drive wheels spinning, the vehicle can swerve in an uncontrolled manner!

Notice:

It is recommended that the Electronic Stability Program (ESP) be switched off with the "ESP switch-off" button if traction problems occur when driving with anti-skid chains or when driving on sections of road with a loose surface (e.g. sand or gravel roads).



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- The control functions of the Electronic Stability Program (ESP) system and the Traction Control Systems (TCS) are deactivated. The indicator lamp (1) lights up continuously.

Operation and malfunction displays - Brake system

Pneumatic system air pressure circuit 1



If the pneumatic system air pressure for circuit 1 is below 83 psi (5.7 bar), then a red warning is displayed on the screen. The red malfunction indicator lamp for the brake system will light up in the instrument cluster and an acoustic warning will sound at the same time.

Notice:

The malfunction warning is canceled only once system pressure rises above 88 psi (6.1 bar).

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Pneumatic system air pressure circuit 2



If the pneumatic system air pressure for circuit 2 is below 83 psi (5.7 bar), then a red warning is displayed on the screen. The red malfunction indicator lamp for the brake system will light up in the instrument cluster and an acoustic warning will sound at the same time.

Notice:

The malfunction warning is canceled only once system pressure rises above 88 psi (6.1 bar).

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Pressure sensor malfunction in brake circuit 1 or 2



The supply pressures in circuit 1 and circuit 2 are monitored by sensors. Should a sensor fail in at least one circuit, then a red warning is displayed on the screen. The reading in the graphic air-pressure display for the affected circuit starts to alternate between 0 psi and 150 psi (10.3 bar) in one-second cycles. The red brake system warning lamp in the instrument cluster will light up at the same time.

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Parking brake engaged



The "parking brake" symbol appears on the display screen whenever the parking brake is engaged.

Brake interlock



This symbol appears in the instrument cluster's display panel when the brake interlock is activated.

Notice:

The lift doors must be closed and the "wheelchair lift" switch set to "off" before the "wheelchair lift" (special equipment option) brake interlock can be deactivated (refer to chapter on "Vehicle operation."

Danger:

The brake interlock is deactivated by pressure on the accelerator pedal. The symbol in the display goes out.

Brake interlock malfunction or emergency release switch activated



This symbol will appear in the instrument cluster's display panel if the sealed emergency release (red with sealed safety cap) is used as well as in response to any interruption in the brake interlock control circuit's operation.

Danger:

Have the brake system inspected by your SETRA ServicePartner as soon as possible.

Brake-pad wear indicator for front (1) and drive (2) axles



The indicator lamp on the instrument panel lights up when the brake pads on the front and/or the drive axle reach their wear limit.

Notice:

The indicator lamp comes on for roughly 2 seconds when the ignition switch is turned to Position 1 (bulb check).

Danger:

If the indicator lamp flashes, there is a malfunction in the wiring or sensor.

Danger:

A SETRA ServicePartner should check the brake system at the next opportunity.

Brake wear indicator for the trailing axle (3)



The indicator lamp on the instrument panel lights up when the brake pads on the trailing axle reach their wear limit.

Notice:

The indicator lamp comes on for roughly 2 seconds when the ignition switch is turned to Position 1 (bulb check).

Danger:

If the indicator lamp flashes, there is a malfunction in the wiring or sensor.

Danger:

A SETRA ServicePartner should check the brake system at the next opportunity.

Hill-holder activated



This symbol appears in the instrument cluster's display panel when the hill-holder is activated.

Notice:

The hill-holder is deactivated by pressure on the accelerator pedal. The symbol in the display goes out.

Hill-holder malfunction



This symbol appears together with a "condition red" malfunction warning in the instrument cluster's display panel to alert the driver to malfunctions.

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Traction Control System (TCS) active



The TCS automatically assumes active operation when the wheels on one or both sides of the drive axle start to spin. An active TCS intervention is indicated in the instrument cluster with a flashing warning lamp. If the drive wheels on one side start to spin, they are automatically braked. - If the drive wheels spin on both sides engine output is automatically reduced.

Danger:

Accident hazard! The Traction Control System does not release drivers from the need to adjust their driving style to the traffic and road conditions!

Electronic Stability Program (ESP) active



If the Electronic Stability Program (ESP) is active, then the control, and with it the critical driving state, is indicated in the instrument cluster with a flashing warning lamp.

Notice:

This symbol appears during an intervention of the Electronic Stability Program (ESP) if an error occurs in the ESP and during an intervention by the Traction Control System (TCS).

Danger:

Accident hazard! The Electronic Stability Program (ESP) does not release drivers from the need to adjust their driving style to the traffic and road conditions! ESP is only capable of stabilizing the vehicle within the applicable physical limits again!

Filling the compressed-air system from a second coach or a tow truck

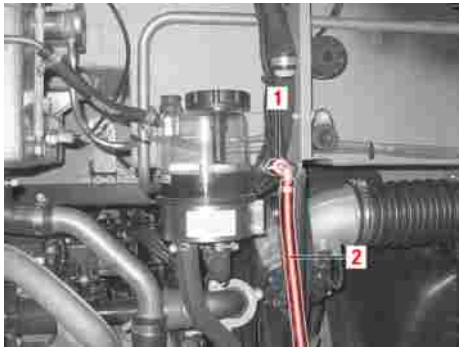
Danger:

Vehicles should be towed and their compressed-air systems recharged from a second vehicle only by authorized and specially trained personnel.

Notice:

Compressed air is available only when the compressor is actively charging the system.

- If the pressure regulator is switched off the pressure in the pneumatic system must be reduced by using the pedal-operated brake valve until the pressure regulator switches on (filling position).



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- An air hose (2) from the support vehicle can be connected to the tire inflation fitting in the engine compartment of the second vehicle (1) to recharge its pneumatic system.

Danger:

The coach must never be driven while the filler hose is still connected.

Activating the retarder

Danger:

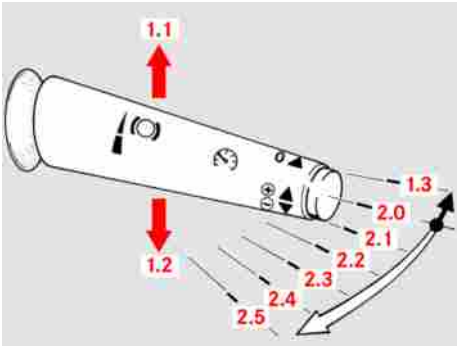
Never activate the retarder on slippery road surfaces. The wheels could lock - skidding hazard. Always respond to inclement and potentially dangerous weather by placing the retarder lever in Position 2 and leaving it in this position.

Danger:

Never shift the automatic transmission to "N" (neutral) while underway, as this would automatically deactivate the retarder to protect it against overheating, and also prevent it from assuming operation should the driver attempt to activate it. Braking force from the retarder is not available when the automatic transmission is in "N" (neutral).

Danger:

Keep a close eye on engine and transmission temperatures. Do not use the retarder if the transmission fluid temperature indicator lamp lights up. If the retarder starts to overheat, respond by applying the service brakes more frequently to control vehicle speed. Adjust (reduce) your vehicle speed accordingly.



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► Place retarder lever in Position 2.1 - 2.5.

The intensity of the retarder's braking effect on the vehicle varies according to the selected lever position.

Danger:

Press or pull the combination switch into each position in sequence to achieve the required braking torque (do not "rip" it forcefully through its entire travel range). Forcefully moving the switch through its entire range is allowed in response to emergency situations. To decrease the

braking torque, you can skip several steps at once. For optimal braking torque the engine's speed should be at the high end of its operating range to prevent excessive rises in coolant temperature.

Danger:

Release all pressure from the accelerator pedal before engaging the retarder.

Danger:

If the ABS is functioning correctly, then an activated retarder will be automatically switched off if one or both wheels on the drive axle start to lock. If an ABS error message appears (ABS warning lamp comes on), this feature may not be operating correctly - skidding hazard.

This symbol appears in the instrument cluster display.

- If you depress the accelerator pedal under these conditions, the retarder will not provide braking force at the selected level 2.1 - 2.5.

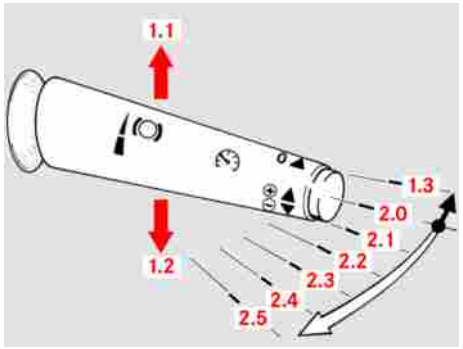
Danger:

However, the retarder remains ready for use, and will immediately resume operation as soon as you release the accelerator pedal - potential skidding hazard on slippery road surfaces and in inclement weather.

This symbol appears in the instrument cluster display.

- The retarder resumes active operation at the selected braking level, 1-5, when you release the accelerator pedal.

This symbol appears again.



M54_00-0827-01

- Return the retarder lever to position 2.0.

The retarder is now off.

Notice:

The symbol disappears from the display screen.

Refueling

The vehicle is equipped with 2 fuel tanks located to the rear of the front axle. The fuel tanks are connected to one another below floor level by a fuel line. The vehicle can be filled from both sides.

EPA10 compliant engines require ultralow-sulfur diesel (ULSD) with 15 ppm sulfur content or less, based on ASTM D2622 test procedure.

Do not use fuel blended with used engine lubricating oil.

Engine lubricating oil must have a sulfated ash level less than 1.0 wt %; currently referred to as CJ-4 oil.

Use only diesel fuels approved by the engine manufacturer.

Danger:

Never smoke while handling fuel.

Danger:

Always switch off engine and auxiliary heater before refueling. Return ignition switch to Position 0.

Danger:

Ensure that cleanliness is at the utmost level when refueling. Do not leave cotton rags or cloths in the vicinity of the open filler neck.

Notice:

Park the coach on level ground for refueling. The operator/attendant must remain with the vehicle at all times during refueling.

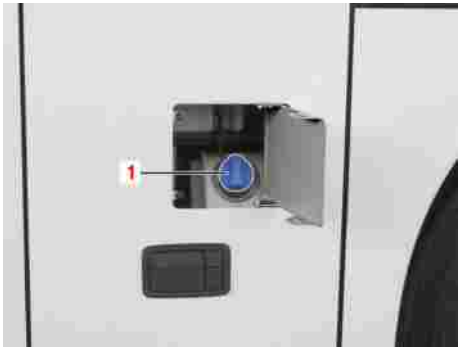
Danger:

Gasoline will damage the engine. If gasoline is filled into any of the vehicle's fuel tanks by mistake, the tank must be completely drained and refilled with diesel fuel. If the engine has been run with gasoline in the tank, then the entire fuel system must be drained, as the fuel pump will have pulled the gasoline through the lines and filters and into the pump and engine.

Environmental protection

Failure to observe the prescribed precautions and procedures when handling motor fuels can lead to personal injury while also posing a potential hazard to the environment. Never allow motor fuels to enter the public drainage system or the ground, and take precautions to prevent fuel from contaminating surface water and ground water supplies.

BlueTec Emission Control System



M47.00-0155-71

The BlueTec emission control system mainly consists of the storage tank, catalytic converter and DEF metering system (DEF = Diesel Exhaust Fluid). It is electronically controlled and monitored. The addition of DEF (AdBlue) and the catalytic converter integrated in the muffler converts pollutants in the exhaust gas into environmentally friendly substances.

The illustration shows the filling opening (1) of the DEF storage tank (after the trailing axle on the right).

Notice:

The consumption of DEF is approx. 3 % of the diesel fuel consumption. It is recommended that the DEF reservoir tank also be filled during every regular refueling stop.

The BlueTec emission control system must be operated with a reducing agent (DEF) in order to function properly. Filling with DEF is not included in the scope of maintenance and must be carried out regularly by the operating personnel during vehicle operation. Filling and vehicle operation with DEF are necessary for compliance with the emission regulations, and are therefore part of the vehicle's approval for road service. If the vehicle is operated without DEF, the approval for road service will be voided. The legal consequence is that the vehicle may no longer be operated on public roads. The operation of the vehicle without DEF may be a criminal offense or a misdemeanor in certain countries. Discounts granted when purchasing or oper-

ating the vehicle, e.g. a tax reduction or decreased road tolls, may also become invalid retroactively. This may be the case both in the country of licensing and in another country in which the vehicle is operated.

Danger:

It is vital that all safety-relevant service operations and all work on safety-relevant systems be performed exclusively by qualified technicians at professional service facilities.

Danger:

Always have service work carried out at a qualified professional service facility with the required expertise and tools.

Notice:

DEF freezes at a temperature of approx. -11 °C. The vehicle is equipped with a DEF preheating system at the factory. Winter operation is therefore ensured even at temperatures below -11 °C.

Environmental protection

DEF is biodegradable. When handled improperly, DEF presents a danger to the environment. Never allow larger quantities of DEF to get into the sewer system, surface water, ground water or the soil.

Danger: Danger of poisoning and injury!

DEF (Diesel Exhaust Fluid = AdBlue) is not classified as a hazardous substance as defined by German hazardous materials regulations. However, several precautions should be observed when using DEF.

When the engine is warm, the DEF lines and the system components to which they are attached are under pressure. If any of the system's lines is opened suddenly, a hot stream of DEF can emerge from the system, posing a scalding hazard. Contact with DEF can also result in skin irritation and eye injury.

- Wear protective gloves.
- Wear protective clothing.
- Wear safety goggles.
- Because compressed air continues to purge individual lines after the engine stops, you should always wait approximately 4 minutes before starting work on the emission-control system.
- Turn the ignition/starter switch to OFF and remove the key before working on the SCR system.
- Allow the DEF lines to cool.
- Open line connections and caps on system components slowly.
- Use a suitable container to catch any escaping DEF for subsequent disposal in accordance with environmental regulations.
- Never pour DEF into containers used for drinking.
- Because spilled DEF poses a slipping hazard, it should always be wiped up.

- Do not return any DEF that has escaped from the system to the DEF storage tank.
- Rinse any skin that has come into contact with the product with plenty of cold water.
- If the product splashes onto clothes, change out of them quickly.
- In the event of eye contact, rinse the eyes immediately with plenty of clean water, and consult an eye specialist as indicated.
- If DEF gets into the mouth or is swallowed, wash out the mouth with clean water, then drink a large quantity of water.
- If discomfort or symptoms persist, consult a physician.

DEF operating substance (Diesel Exhaust Fluid = AdBlue)

DEF is a non-flammable, colorless, odorless and water-soluble liquid.

Caution:

If DEF comes into contact with painted or aluminum surfaces during refueling, rinse the surfaces concerned immediately with plenty of water.

DEF at high temperatures

Notice:

If DEF heats up in the reservoir tank to over 50 °C for a longer time (e.g. due to exposure to direct sunlight), ammonia vapors can result from its decomposition.

Notice:

Ammonia vapors have a pungent odor. Therefore, do not breath in ammonia vapors which may escape when screwing off the DEF tank cap. Ammonia vapors are neither toxic nor do they present a health hazard in this concentration!

DEF at low temperatures

Notice:

DEF freezes at a temperature of approx. -11 °C. The vehicle is equipped with a DEF preheating system at the factory. Winter operation is therefore ensured even at temperatures below -11 °C.

DEF special additives

DEF operating substance (Diesel Exhaust Fluid = AdBlue)

Caution:

Do not mix DEF with any special additives. Do not dilute DEF with tap water, as this can destroy the emission control system. If damage to the emission control system occurs, which is caused by special additives/tap water, then the warranty will be voided.

Storage

Caution:

Use only containers of high-alloy CrNi steel or MoCrNi steel to store DEF. Containers made of aluminum, copper, copper alloys and non-alloyed or galvanized steel are not suitable for storing DEF. DEF could separate components of these metals when stored in such containers and destroy the emission control system. If the emission control system is damaged by separated components of the storage container, the warranty will be voided.

Disposing of DEF

Notice:

Observe all applicable country-specific laws and regulations when disposing of DEF.

DEF purity

Notice:

If DEF is pumped out of the tank, e.g. while making repairs, it may not be reused, as the purity of the liquid is no longer ensured.

Duration of use and shelf life

Notice:

DEF decomposes in the course of storage into ammonia hydroxide and carbon dioxide and then no longer meets the requirements of the standard DIN V 70070. If the maximum recommended storage temperature of 25 °C is complied with, DEF meets the requirements of the standard for at least 6 months following its manufacture. If this recommended storage temperature is exceeded, this period is shortened. DEF freezes and becomes solid at temperatures below -11 °C.

Filling with DEF (Diesel Exhaust Fluid)

Notice:

The possibility of accidentally filling the DEF reservoir tank with diesel fuel and vice versa is excluded with various technical precautionary measures.

Notice:

The consumption of DEF is approx. 3 % of the diesel fuel consumption. It is recommended that the DEF reservoir tank also be filled during every regular refueling stop.

Caution:

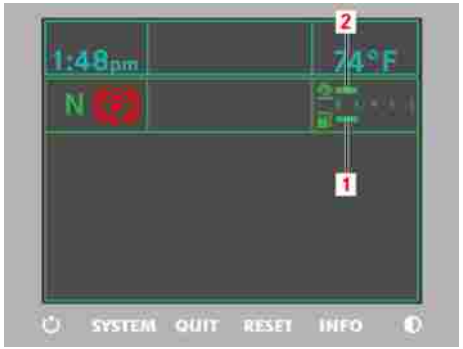
Special additives are not permissible.

Caution:

If DEF comes into contact with painted or aluminum surfaces during refueling, rinse the surfaces concerned immediately with plenty of water.

Notice:

DEF freezes at a temperature of approx. -11 °C. The vehicle is equipped with a DEF preheating system at the factory. Winter operation is therefore ensured even at temperatures below -11 °C.



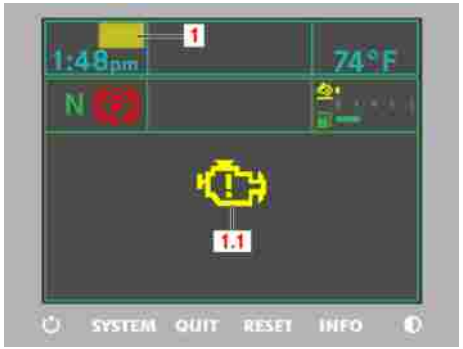
M54.00-1697-71

► Read off DEF fill level (2).



M47.00-0128-71

- When the fill level of the DEF reservoir tank reaches approx. 10 %, the yellow warning lamp lights up (1). The DEF gage (2) turns yellow and reminds the driver that refilling with DEF is necessary in the near future. The yellow warning lamp (1) does not go out until the vehicle has been refilled.



M47.00-0129-71

- When the DEF reservoir tank is empty, a yellow message appears (1). The pictograph (1.1) appears. In this situation there is simultaneously an error in the emission control system. In this case immediate refilling with DEF is required.

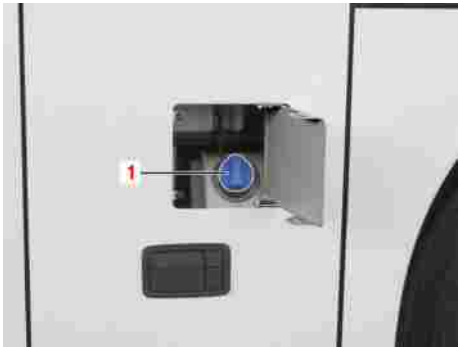
Notice:

The driver has previously manually acknowledged the yellow message "Diesel Exhaust Fuel Level too low" (see above).



M47.00-0130-71

If the DEF storage tank is empty, the engine output is reduced to 60 % and this symbol (1.1) appears.



M47.00-0155-71

► Fill the storage tank with DEF.

Notice:

The DEF storage tank is located behind the flap after the trailing axle on the right.

Notice:

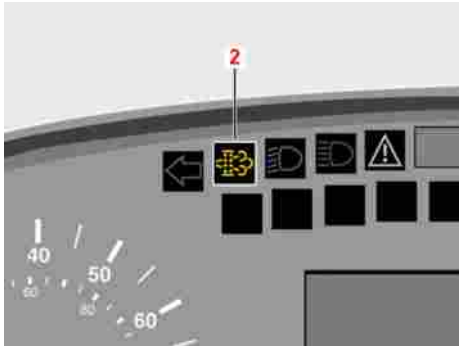
The possibility of accidentally filling the DEF reservoir tank with diesel fuel and vice versa is excluded with various technical precautionary measures.

After-Treatment System (ATS)

Vehicles with EPA10-compliant engines feature an After-Treatment System (ATS) equipped with a diesel particulate filter in place of a muffler. Particulate matter is collected in the filter, then reduced to ash in a process called regeneration.

Standard vehicle operation will usually be sufficient to sustain highway regeneration with no perceptible change in vehicle performance. However, a vehicle employed primarily in short-haul operation may not maintain exhaust temperatures high enough to support highway regeneration; in these cases it may necessary to respond by carrying out a stationary regeneration procedure.

Stationary regeneration

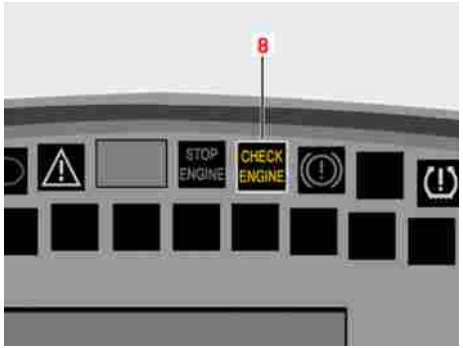


M68.00-0406-71

► A flashing yellow Diesel Particulate Filter (DPF) lamp (3) indicates that a stationary regeneration procedure should be executed immediately to prevent an engine derate.

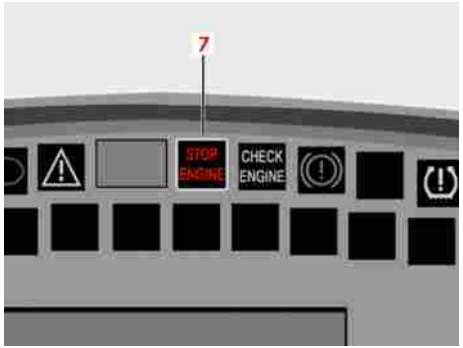
Notice:

A solid yellow diesel particulate filter (DPF) lamp (2) indicates that a stationary regeneration is required soon and should be scheduled for the earliest convenient time.



M68.00-0407-71

- If the vehicle is driven for longer than three hours while the Diesel Particulate Filter (DPF) sign is flashing, the engine switches into the derating mode. The "Check engine" indicator lamp (8) lights up and the (DPF) lamp flashes.



M68.00-0408-71

- If the vehicle is driven for another three hours while the DPF lamp flashes and the "Check engine" indicator lamp lights up, a torque limitation occurs and the red "Stop engine" lamp (5) lights up. Attempts to maintain engine operation over a longer period of time will result in automatic engine deactivation.

Danger:

The engine is programmed to shut down automatically within 30 seconds after the red "Stop engine" lamp or the engine protection lamp (5) lights up. The driver must immediately move the vehicle to a safe location at the side of the road to avoid potentially hazardous situations that could lead to bodily injury, property damage, or severe damage to the engine.



M54.00-1842-71

- To extend engine operation for an additional 30 seconds, press the "Stop engine override" button (1).

Danger:

If the "Stop engine override" button is pressed within these 30 seconds, then the engine can be operated for a further 30 seconds (for potentially hazardous conditions at railroad crossings, in intersections, etc.).

Notice:

This process can be repeated as often as desired until the vehicle can be parked in a safe location.

- The following steps must be carried out in preparation for stationary regeneration:
- Engine at idle.
- Parking brake engaged and released.
- Parking brake engaged.
- Transmission shifted in and out of gear.
- Transmission remains in Neutral position.



M54.00-1843-71

- Press Diesel Particulate Filter (DPF) switch (1) and maintain pressure until engine speed ramps up (4 - 5 seconds).

Danger:

Make sure the engine exhaust pipe outlet is not directed at any person, or at any surface or material that could melt, burn, or explode.



Engine speed will ramp up to 1,600 rpm, Diesel Particulate Filter (DPF) lamp is flashing. The process may take up to one hour. You can accelerate this process by switching off the HVAC (heater - ventilation - air conditioning).

Notice:

Do not activate any of the controls listed until the engine speed returns to 600 rpm (indicating that the regeneration process has been concluded).

Notice:

The vehicle can be driven at any time during this process in response to an emergency. However, it will then be necessary to restart the entire regeneration process.

Notice:

If the soot load is low, stationary regeneration will not start and the engine speed will not ramp up.

Operation and malfunction displays - Exhaust system

Stop engine



Indicates a serious malfunction in response to which the engine should be shut down at once. The engine-management ECU (electronic control unit) will reduce the maximum engine torque and speed and, if the condition does not improve, will shut down the engine within 30 seconds after the lamp comes on. If the red lamp comes on, you should respond by immediately bringing the vehicle to a stop at on the roadside and shutting down the engine as soon as possible. If the engine stops while the vehicle is in a hazardous location, you can restart it after first turning the key to the OFF position for a few seconds.

Check engine



Indicates that the system has detected an engine-related problem. If the condition gets worse, the "Stop engine" or engine protection lamp will light up.

Diesel Particulate Filter (DPF)



If the lamp remains on continuously this indicates that regeneration is required. Change to a more challenging duty cycle, such as highway driving, to raise exhaust temperatures for at least 20 minutes, or perform a stationary regeneration. A flashing lamp indicates that stationary regeneration is required immediately. An engine derate and shutdown will then be triggered.

High Exhaust System Temperature (HEST)



Indicates potentially hazardous exhaust temperatures at the outlet of the tail pipe at speeds below 5 mph (8 km/h). It does not signify that service is needed; it only alerts the vehicle operator to high exhaust temperatures.

Danger:

Make sure the engine exhaust pipe outlet is not directed at any person, or at any surface or material that could melt, burn, or explode.

Malfunction Indicator Lamp (MIL)



Indicates a malfunction in the engine's emissions control system, including, but not limited to, the After-Treatment System (ATS). Service and repairs to the Diesel Particulate Filter should be performed exclusively by authorized and specially-trained technicians.

Safety information on operating the wheelchair lift (special equipment option)

Safety information on operating the wheelchair lift (special equipment option)

Danger:

When parking the vehicle, position it to ensure that operation of the wheelchair lift will pose no danger to the person to be conveyed, to the operator or to other road users.

Danger:

Always verify that the parking brake is engaged before using the wheelchair lift.

Danger:

When the top lift door is open and the wheelchair lift is lowered, make certain that no persons are in the vicinity of the lift door inside the vehicle - danger of falling.

Danger:

The top lift door may be closed only from the outside; leaning out of the vehicle interior is strictly prohibited.

▷ For information on safety and operation, also refer to the manufacturer's operating instructions "RINCON Baylift".

Safety precautions to observe when using the wheelchair retaining system

The wheelchair retaining system consists of four retractors (straps with reels) featuring perforated rails and a 3-point belt (equipped with height adjustment).

Danger:

When attaching the wheelchair, always ensure that the sections of its frame selected as attachment points are solid and immobile. Never attach the retaining equipment to loose or moving parts, such as footrests, etc.

Notice:

Use the retractors (belt with belt retractor) to attach the wheelchair to the perforated rail on the vehicle's floor.

▷ For additional information on safety and operation, refer to the stickers and manufacturer's instructions for use.

Wheelchair lift enable (special equipment option)

- The luggage compartment doors on the right side must be unlocked (refer to chapter on "Engaging/releasing locks").
- Park the vehicle in a suitable, safe location and engage the parking brake.

Notice:

(refer to chapter on "Vehicle operation")

- Switch on the ignition/starter switch
- Transmission in Neutral.



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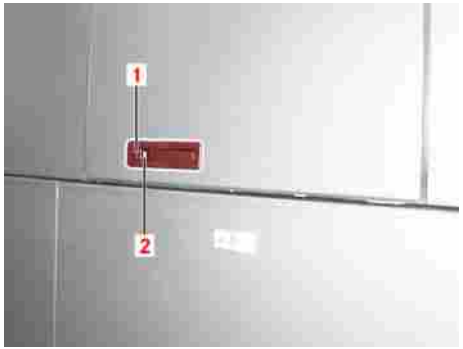
- Press the wheelchair lift switch (1) on the instrument panel.

  The LED in the switch lights up.

- Open the bottom lift door all the way.

Danger:

The bottom lift door may be opened only if the right-side luggage compartment door is closed - finger and crushing hazard.



M55_00-0007-01

- Open the top lift door all the way. Proceed by applying gentle pressure to the door handle (2) in the upper lift door (1) and then pull the handle outward.

Danger:

The wheelchair lift is now enabled and ready for operation in accordance with the affixed safety information sticker and the operating instructions provided by the lift manufacturer.

Deactivation of the wheelchair lift brake interlock (special equipment option)

Danger:

A brake interlock is activated whenever the wheelchair lift is enabled; the interlock cannot be deactivated again until specific requirements are satisfied.

Deactivation of the wheelchair lift brake interlock (special equipment option)

- ► The wheelchair lift is properly stowed again in the luggage compartment.
- ► Close the top and bottom lift doors.

Danger:

Danger to fingers and crushing hazard when the bottom and top lift doors are closed.



M68_00-0095-01

- ► Switch off the "wheelchair lift" switch (1) on the instrument panel.
- ► Depressing the accelerator deactivates the brake interlock.



This symbol in the instrument cluster's display panel goes out.

Note on maintenance work

Notice:

All maintenance operations are described in a separate manual. The operations and procedures described in this section are not scheduled to be carried out at fixed intervals. Instead, they should be performed according to need, at intervals that reflect the unique operating conditions encountered by each individual vehicle.

Cleaning the underbody

Notice:

The underbody includes the entire underside of the vehicle: the floor, the wheelhousings and the substructure frame.

Notice:

The underbody should be periodically inspected and cleaned as necessary, and at least once a year when the annual servicing is carried out. This makes it possible to detect and repair any problems or damage in the undercoating at an early stage.

Clean the underbody using hot water high-pressure cleaning equipment.

Notice:

Remove the protective trim from underbody and clean separately.

Notice:

The underbody has a protective coating to guard against corrosion and stone chipping. To prevent the intact protective coating from being washed away or destroyed, perform cleaning operations as gently as possible. The water temperature and water pressure, spray nozzle and spraying distance must be coordinated with one another.

Notice:

The underbody should be washed primarily with pure water. Use a cleanser only to remove more stubborn dirt and contamination.

Cleaning the underbody

Environmental protection

Comply with waste water disposal regulations. Clean the vehicle only at a suitably equipped cleaning station.

- Inspect the underbody, noting any damage or unusually soaked and discolored dirt layers.

Notice:

Soiled areas of the underbody indicate defects that may not be visible after cleaning. For example, soaked dirt layers can indicate leaks in connections to oil, fuel and coolant lines and tanks, while discolored dirt can indicate concealed corrosion. Any detected deficiencies and damage must be rectified after cleaning.

- Operate the hot water high-pressure cleaner according to the manufacturer's instructions.

Required tools

Hot-water high-pressure cleaner

Alfred Kärcher GmbH & Co.

Wap-Reinigungssysteme GmbH & Co

Danger:

Incorrect use of high-pressure spray cleaners and defective accessories both constitute an injury hazard. Observe the manufacturer's operating instructions, comply with the safety directions and wear protective clothing.

- Add the cleanser to the wash water according to the manufacturer's instructions as required, or add to the washer's supply tank in the specified concentration.

Repair materials

RM 55 XXL

Alfred Kärcher Vertriebs GmbH, www.kaercher.de, Tel: +49(0) 71 95-90 30

Repair materials

P3 Grato 80

Henkel KGaA, www.henkel.de

Repair materials

HAKAPUR 50-268

CHEMISCHE WERKE KLUTHE GmbH, www.kluthe.com, Tel: +49 (0)6221/ 5301-0

Danger:

Caustic substances contained in cleansers can pose a safety hazard. Observe the manufacturer's safety precautions.

Danger:

Use only the recommended cleansers. Unsuitable cleansers can damage the vehicle. Highly-concentrated cleansers must be diluted according to the manufacturer's instructions.

- Equip the spray wand with a flat nozzle, or adjust the spraying angle at the adjustable nozzle.

Adjustment values

Designation	Figure
Spraying angle of flat nozzle at least	25° (25°)

Danger:

Round and triangular nozzles are not approved. The stream of water from these nozzles is too aggressive for use in washing vehicles and can cause serious damage.

Notice:

The nozzle's spray pattern and the size of the spray angle are crucial factors in washing vehicles. A larger spray angle allows more gentle cleaning.

- Adjust the water pressure, water temperature and metering of the cleanser at the high-pressure cleaner.

Adjustment values

Designation	Figure
Maximum permissible water pressure	870 psi (870 psi) 871 psi (60 bar)

Adjustment values

Designation	Figure
Maximum permissible water temperature	140 °F (140 °F) 140 °F (60 °C)

Danger:

Excessive water pressure, excessive water temperature and the wrong nozzle can destroy the protective undercoating and damage components.

Danger:

The type and amount of the applied cleanser should be matched to the type and degree of contamination in the area being washed. Too much cleanser has a damaging effect.

- Aim the spray wand at the ground or into an open area when switching it on, then turn it toward the surface to be cleaned. Maintain the maximum approved spraying distance.

Adjustment values

Designation	Figure
Spraying distance to the object at least	1 ft (1 ft) 0.3 yd. (30 cm)

Cleaning the underbody

Danger:

Injury hazard from hot water. If the spray wand is held too close to the cleaned surface, it can jerk back when the high-pressure stream of water impacts against surface.

Danger:

Injury hazard from high pressure and hot water. Never direct the spray wand at animals or people.

- Thoroughly rinse down the dirt layer on the vehicle's underbody.

Notice:

Allowed the water to soak in. Depending upon the level of contamination, it may be necessary to conduct the initial rinse and soak operation several times.

Notice:

Pay special attention to dirt deposits in corners and box sections, in wheelhousings and on lines, as well as between the ramp and the underbody.

- Use a high-pressure stream of water to remove the contamination layer from the vehicle underbody.

Danger:

Never aim the high pressure jet directly at tires, air-suspension bellows or brake hoses, other hose connections made of rubber, seal boots and bearings on moving parts, or at electrical wiring, components and their connections. Continually move the high pressure jet and alternate directions as you guide it over the areas to be cleaned.

Notice:

Do not aim a continuous stream of pressurized water at seams, joints or box sections for extended periods. Deeply penetrating water, reinforced by the cleanser, can cause concealed corrosion and weaken structural components.

- Switch off the flow of cleanser. Then, using water, rinse off the entire underbody.

Notice:

Never allow cleansers to dry on vehicle and component surfaces. Residue from cleansers can permanently damage surfaces, and poses a special hazard to moving parts.

- Clean out the openings and condensation drain holes in tubes, shaped components and box sections by hand, for instance, using a thin rod.

Notice:

Do not use the high-pressure spray washer to clean blocked drain holes. The drain holes are intended to allow water and condensation from the washing process to drain and to dry.

- Allow the underbody to dry.

Danger:

Do not blow off remaining moisture with compressed air.

- Subject the underbody to a final visual inspection.

Notice:

The visual inspection should focus on confirming that the protective coating (wax and stone protection) is complete and free of damage, while any corrosion damage should also be noted. Also look for any damage to the tires, air bellows and brake hoses, to seal boots and bearings of moving parts, and to the electrical wiring and connections.

Notice:

If you discover any defects or damage, use the specified procedures to carry out the required repairs, and remember to lubricate all joints and bearings. Always replace damaged tires, air-suspenion bellows and pressure hoses.

- Perform a road test, including a brake test, and check the ride-height control to confirm that it is operating correctly.

Notice:

Use the specified procedures to repair any defects or damage.

Care and cleaning

Notice:

Observe all laws and regulations applicable in your country.

Danger:

Injury hazard. Always observe all applicable safety rules and precautions when working on the vehicle (as contained in operator's manuals and instructions, rules and regulations for environmental protection, occupational safety and accident-prevention regulations, etc.).

Danger:

Danger of poisoning. Observe the instructions provided with the products for care and cleaning.

Danger:

Danger of poisoning. Always store care and cleaning products in securely closed containers kept well out of the reach of children.

Danger:

Danger of poisoning. Diesel, regular and premium fuels all represent potential health hazards. They should never be used as cleansers.

Danger:

Fire hazard! Diesel, regular and premium fuels are flammable. They should never be used as cleansers.

Danger:

Do not use any round pattern nozzle for cleaning tires and air-suspension bellows. The pulsating stream of water could cause invisible damage to the tire structure or air-suspension bellows. The effects of this internal damage may only become apparent much later, when they can lead to sudden tire or bellows failure. This could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or other persons.

Caution:

We strongly recommend that you never use anything other than tested and officially approved care and cleaning products. Any SETRA ServicePartner can provide you with addition information on approved vehicle-care products.

Caution:

No cleaning agents containing acetone or ethyl dichloride may be used for cleaning work in the engine compartment.

Caution:

Stone chips and contamination, and especially contaminants such as insect residue, bird droppings, tree and plant resins, oil, grease, fuel and tar spray, should always be cleaned immediately using the approved products.

Caution:

In the winter the vehicle should be washed more frequently to remove salt residue.

Environmental protection

Always observe all applicable regulations and guidelines when disposing of empty containers, cleaning cloths and polishing pads.

Cleaning and caring for light-alloy wheels

Danger:

Observe all instructions and safety precautions contained in this chapter.

Notice:

We recommend that light-alloy wheels be maintained in good condition with regular cleaning. Intervals between scheduled cleanings may need to be shortened in response to extreme contamination or especially demanding operating conditions.

- Clean the light-alloy wheels with warm water (with a high-pressure spray washer if possible) and a soft sponge on a regular basis.

Danger:

Do not use any round pattern nozzle to clean tires. The pulsating stream of water could damage the tire's substructure. The effects of this internal damage may only become apparent much later, when they can lead to sudden tire failure. This could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or other persons.

- Respond to more intense dirt and contamination by applying a cleanser for light-alloy wheels.

Notice:

Alcoa Dura-Bright® wheels require only soap and water to maintain their shine. These wheels should not be polished with a standard polish such as ALpolish.

Caution:

We strongly recommend that you never use anything other than tested and officially approved care and cleaning products. Any SETRA ServicePartner can provide you with addition information on approved vehicle-care products.

Caution:

Never use alkaline cleansers or any substances containing acids. Such products can promote corrosion on the lug bolts (lug nuts) and on the spring clamps that retain the balance weights.

Care and cleaning of upholstery, fabrics and trim materials

Special information on cleaning and caring for upholstery, fabrics and trim materials

Notice:

Note the information on upholstery, fabrics and trim materials provided in the equipment description for the individual vehicle.

Caution:

Never use cleansers containing solvents (naphtha, acetone, alcohol, etc.). Contact with solvents can result in irreparable damage to fabric and plastic components.

Caution:

To prevent bleaching and discoloration of fabrics, always use pH-neutral products for care and cleaning.

►

Cleaning and caring for upholstery and fabrics.

Danger:

Observe all instructions and safety precautions contained in this chapter.

Notice:

Regular, periodic care and basic cleaning will maintain the value of the upholstery and fabrics while also enhancing their appearance. Remember to ensure that these materials are cleaned on a regular basis. Intervals between scheduled cleanings may need to be shortened in response to extreme contamination or especially demanding operating conditions.

Basic cleaning procedure - weekly.

► Vacuum the upholstery fabric thoroughly, moving the vacuum in the direction of the fabric's seams.

Caution:

Do not use vacuum cleaner head attachments that are made of rubber or feature rubber contact strips. Rubber could tear the threads from the upholstery fabric.

- Sweep across the surface of the fabric with a soft-bristled brush, remembering to wipe in the direction of the seam.

Cleaning - every six months

- Start by carrying out the weekly cleaning.
- Stir a gentle, lukewarm detergent (of the kind used for sensitive knit fabrics, etc.) to produce a foam.
- Then use a moistened soft sponge to wipe the foam onto the entire surface area of the fabric.
- Allow the fabric to dry thoroughly.

Caution:

Fabrics and upholstery materials must be allowed to dry completely before being used again. Failure to observe this precaution can lead to permanent pressure marks in the material.

- Use a soft-bristled brush to wipe off the fabric, proceeding along the direction of the seams. Brush gently, without applying force.

Removing stains

Caution:

Always clean soiled areas as soon as possible to prevent permanent stains or other damage to fabrics.

- Start by removing as much of the substance as possible using a lint-free cloth.
- Use a soft sponge to wipe a gentle, lukewarm detergent foam into the stained area; wipe in a circular motion, proceeding from the outside to the inside of the contaminated area. Apply gentle pressure to the sponge.

Notice:

To avoid spreading the stain, always wipe from the outside to the inside of the contaminated area.

- Remove the detergent foam with a clean, soft sponge.
- Allow the treated area to dry thoroughly.

Caution:

Fabrics and upholstery materials must be allowed to dry completely before being used again. Failure to observe this precaution can lead to permanent pressure marks in the material.

- Complete the procedure by using a soft-bristled brush to wipe the fabric in the direction of the seam, remembering to wipe the surrounding area around the original stain.

Caution:

Respond to any problems or severe stains by contacting a professional textile cleaning service.

Cleaning and caring for microfiber materials

Danger:

Observe all instructions and safety precautions contained in this chapter.

Notice:

Regular, periodic care and cleaning will help maintain the vehicle's value while also preserving the high-quality appearance of microthread fabric and flock textiles. Remember to ensure that these materials are cleaned on a regular basis. Intervals between scheduled cleanings may need to be shortened in response to extreme contamination or especially demanding operating conditions.

Basic cleaning procedure - weekly

- Vacuum the fabric in the direction of the seam, without applying force.

Caution:

Do not use vacuum cleaner head attachments that are made of rubber or feature rubber contact strips. Rubber could tear the threads from the upholstery fabric.

- Without applying force, use a soft-bristled brush to wipe the fabric in the direction of the seam.

Cleaning - every six months

- Start by carrying out the weekly cleaning.
- Stir a gentle, lukewarm detergent (of the kind used for sensitive knit fabrics, etc.) to produce a foam.
- Then use a moistened soft sponge to wipe the foam onto the entire surface area of the fabric.
- Allow the fabric to dry thoroughly.

Caution:

Fabrics and upholstery materials must be allowed to dry completely before being used again. Failure to observe this precaution can lead to permanent pressure marks in the material.

- Use a soft-bristled brush to wipe off the fabric, proceeding along the direction of the seams. Brush gently, without applying force.

Removing stains

Caution:

Always clean soiled areas as soon as possible to prevent permanent stains or other damage to fabrics.

Caution:

Never use cleansers containing solvents (naphtha, acetone, alcohol, etc.). Contact with solvents can result in permanent damage to microthread fabrics and to plastic components.

- Start by removing as much of the substance as possible using a lint-free cloth.
- Use a soft sponge to wipe a gentle, lukewarm detergent foam into the stained area; wipe in a circular motion, proceeding from the outside to the inside of the contaminated area. Apply gentle pressure to the sponge.

Notice:

To avoid spreading the stain, always wipe from the outside to the inside of the contaminated area.

Caution:

Never use cleansers containing solvents (naphtha, acetone, alcohol, etc.). Contact with solvents can result in permanent damage to microthread fabrics and to plastic components.

- Remove the detergent foam with a clean, soft sponge.
- Allow the treated area to dry thoroughly.

Caution:

Fabrics and upholstery materials must be allowed to dry completely before being used again. Failure to observe this precaution can result in permanent indentations in the fabric's surface.

- Complete the procedure by using a soft-bristled brush to wipe the fabric in the direction of the seam, remembering to wipe the surrounding area around the original stain.

Caution:

Respond to any problems or severe stains by contacting a professional textile cleaning service.

Cleaning and caring for leather upholstery and trim

Danger:

Observe all instructions and safety precautions contained in this chapter.

Caution:

To prevent mineral stains and water spots, always use distilled water for cleaning.

Caution:

To prevent bleaching and discoloration, avoid exposing the leather to direct sunlight.

Notice:

Regular, periodic care and cleaning will maintain both the value and the aesthetic appeal of the vehicle's leather upholstery and trim while also extending its service life and preserving its soft, supple texture.

This is why it is important to carry out the basic cleaning procedure at least four times a year. Intervals between scheduled cleanings may need to be shortened in response to extreme contamination or especially demanding operating conditions.

Basic cleaning procedure - every three months

- Use a brush with extremely soft bristles or a vacuum cleaner to remove coarse surface contamination.

Caution:

To avoid irreparable damage to the leather, never use vacuum cleaner suction attachments with sharp edges. For the same reason, only extremely soft and compliant brushes should be used.

- Moisten a soft, lint-free cloth with distilled water.
- Wipe off the leather with a moist cloth.

Caution:

Never use a cloth or sponge with a rough or coarse surface - it could scratch the leather's surface and cause permanent damage.

Caution:

Always allow the leather to dry thoroughly before using it again. Failure to observe this precaution can lead to permanent pressure marks in its surface.

Removing stains

Caution:

Always clean soiled areas as soon as possible to prevent permanent stains or other damage to fabrics.

- Use a soft, lint-free cloth to remove as much of the contaminant as possible from the stained area.
- Wipe gently with a gentle, lukewarm detergent foam.

- ▶ Then wipe the treated area with a clean cloth.
- ▶ Remove the detergent foam with pure distilled water.

Notice:

Ensure that all traces of both the dirt and the detergent foam are removed completely. Rinse a second time as required.

Notice:

To prevent permanent rings from forming around the original stain, remember to include a large section of the surrounding surface in the cleaning process.

- ▶ Then hold a hair dryer set to moderate heat at a distance of 30-40 cm from the surface and dry the material while moving the dryer in a circular pattern.

Caution:

Leather upholstery and trim must be allowed to dry completely before being used again. Failure to observe this precaution can lead to permanent pressure marks in the material.

Caution:

Respond to any problems or severe stains by contacting a professional leather cleaning service.

Caring for leather

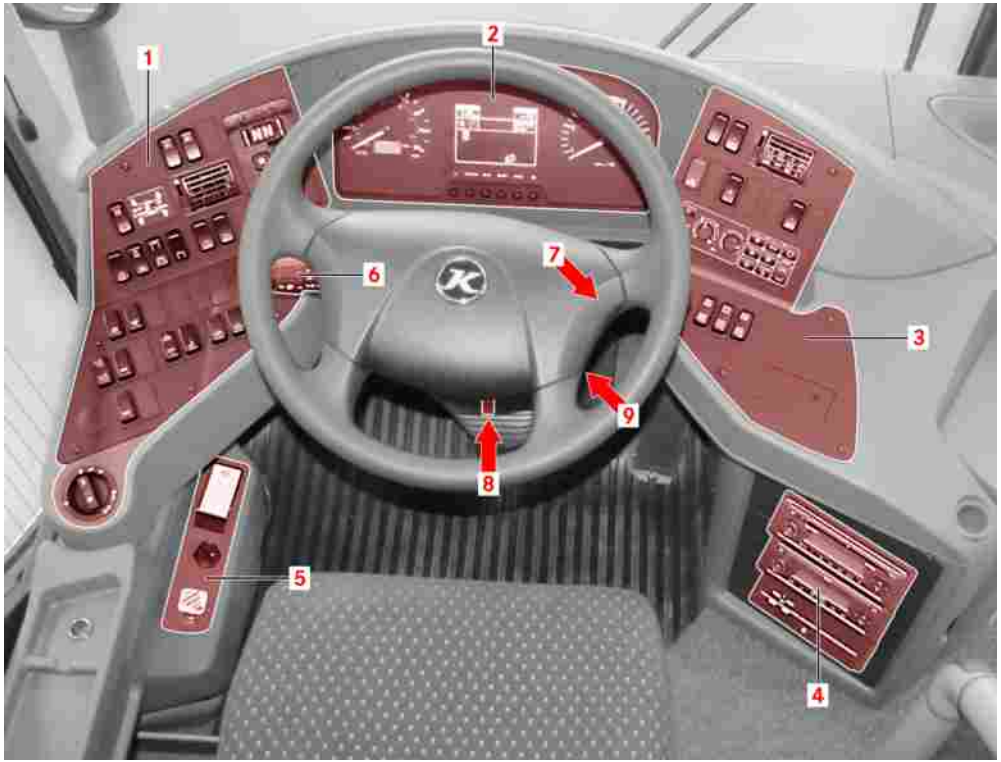
Notice:

Information on suitable leather-care products is available from your SETRA ServicePartner as well as professional leather-cleaning services.

▶

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Cockpit - General overview



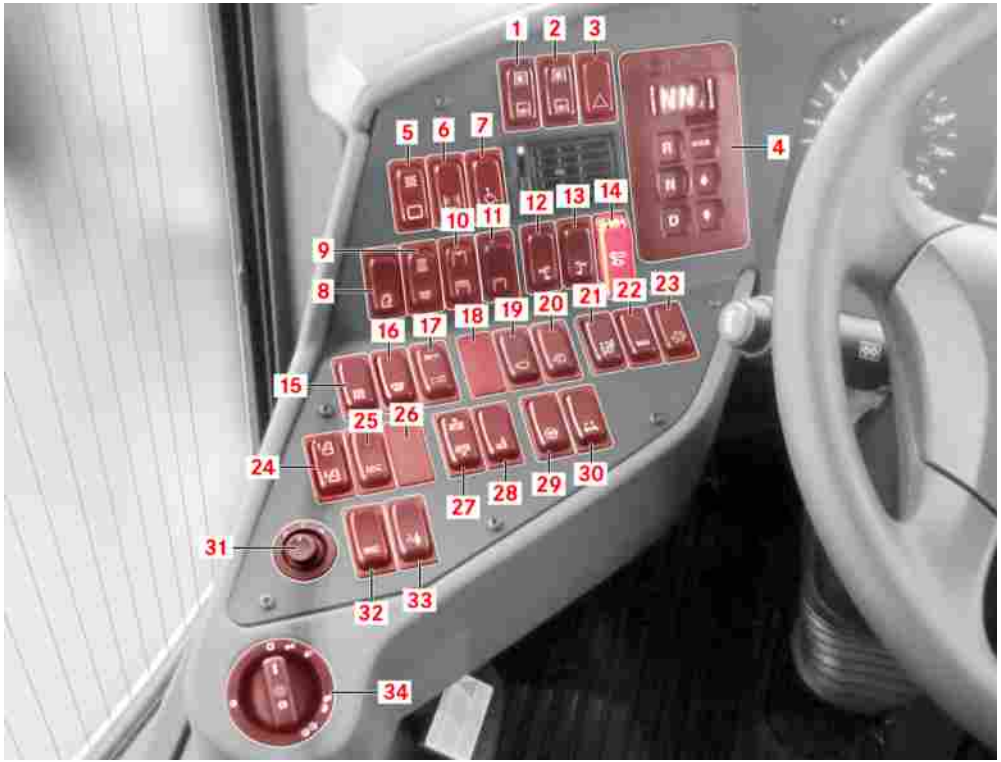
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11	Ignition switch	103
12	Adjustable steering column	103

Switches in left-hand area of instrument panel (Allison automatic transmission)

Notice:

The overview shows the maximum number of switches in the position provided for this purpose. The switches may be located in a different position on the instrument panel due to special customer requests.

Switches in left-hand area of instrument panel (Allison automatic transmission)



Switches in left-hand area of instrument panel (Allison automatic transmission)

Pos.	Description	Page
1	 Windshield sunshade switch (special equipment option)	
2	 Passenger's side sunshade switch (special equipment option)	136
3	 Not assigned	136
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5	 Dash display control switch	137
6	 Center aisle lighting switch	141
7	 Wheelchair lift switch (special equipment option)	137

Pos.	Description	Page
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9	 Reading lamp switch	141
10	 Switch for indirect illumination in passenger compartment	141
11	 Switch for night-illumination service set (special equipment option)	138
12	 Switch for left-hand docking light	139
13	 Switch for right-hand docking light	139

Pos.	Description	Page
14	 Emergency release switch for frequent-stop brake (special equipment option)	139
15	 Driver's side window and electric mirror heater switch	142
16	 Electric windshield heater switch	142
17	 Horn-mode selection switch (special equipment option)	140
18	Not assigned	
19	 Backup camera switch (special equipment option)	143

Switches in left-hand area of instrument panel (Allison automatic transmission)

Pos.	Description	Page
20	 Backup camera washer switch (special equipment option)	143
21	 Switch for switching off Electronic Stability Program (ESP)	151
22	 Stop engine override button (refer to chapter on "Driver service and roadside repairs")	151
23	 Start regeneration switch	152
24	 Driver's power window switch	145
25	 PA system switch	146
26	Not assigned	
27	 Front axle kneeling switch (special equipment option)	149
28	 Trailing axle load transfer switch	150
29	 Engine fast idle switch	147
30	 Trailing axle lock switch	150
31	Mirror adjustment switch	
32	 Lavatory enable switch	140
33	 Attendant call system switch (special equipment option)	138
34	Rotary headlight switch	

Switches and indicator lamps in right-hand area of instrument panel (Allison automatic transmission)

Notice:

The overview shows the maximum number of switches in the position provided for this purpose. The switches may be located in a different position on the instrument panel due to special customer requests.

Switches and indicator lamps in right-hand area of instrument panel (Allison automatic transmission)



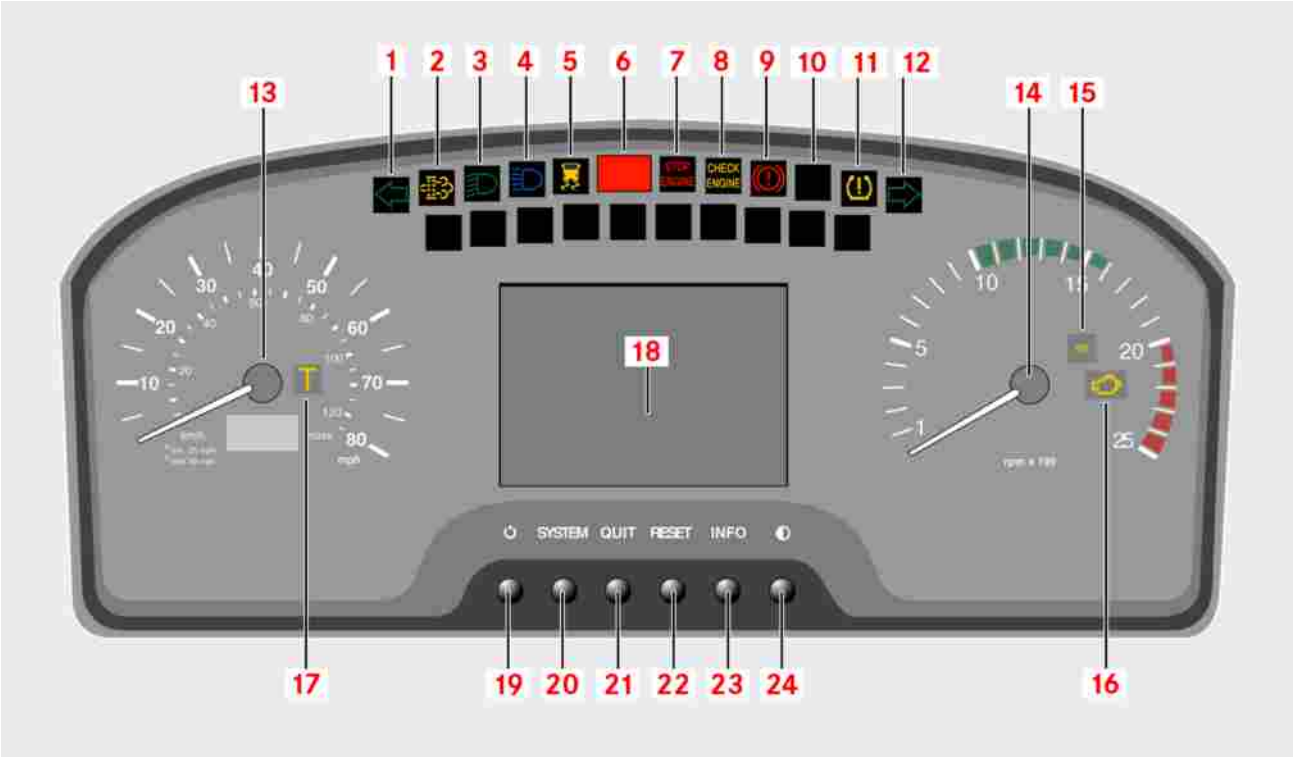
Switches and indicator lamps in right-hand area of instrument panel (Allison automatic transmission)

Pos.	Description	Page
35	 Central locking switch for the left luggage compartment	144
36	 Central locking switch for the right-side luggage compartment	144
37	 Hazard warning flasher switch	148
38	Not assigned	
39	 Entry door switch	146
40	Not assigned	
41	 Backup buzzer switch (special equipment option)	147

Pos.	Description	Page
42	 Passenger attendant calling system control switch (special equipment option)	147
43	Not assigned	
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45a	 Brake pad wear indicator display for front (1) and drive (2) axles.	152
45b	 Brake pad wear indicator - trailing axle (3)	152
46a	 Transmission fluid temperature warning lamp (top)	148

Pos.	Description	Page
46b	 Check transmission indicator lamp (bottom)	149
47	Not assigned	

Instrument cluster



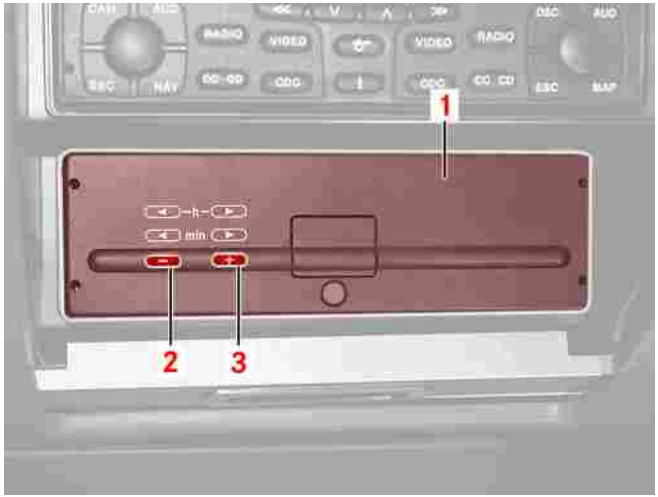
Pos.	Description	Page
1	Left turn signal indicator lamp	
2	Diesel Particulate Filter (DPF)	
3	Headlight indicator lamp	
4	High beam indicator lamp	
5	ESP/TCS indicator lamp	
6	"Condition red" malfunction warning lamp	
7	stop engine warning lamp	
8	check engine warning lamp	
9	Brake system malfunction lamp	
10	Not assigned	

Pos.	Description	Page
11	Tire-pressure indicator lamp	
12	Right turn signal indicator lamp	
13	Speedometer	
14	Tachometer	
15	ABS indicator lamp	
16	Malfunction Indicator Lamp (MIL)	
17	TCO indicator lamp	
18	Display screen	
19	Trip odometer reset switch	
20	"System" (on-board diagnosis settings menu) switch	

Pos.	Description	Page
21	"Quit" (on-board diagnosis settings menu) switch	
22	"Reset" (on-board diagnosis settings menu) switch	
23	"Info" (on-board diagnosis settings menu) switch	
24	Screen brightness switch	

Speedometer module

Speedometer module



Notice:

Setting the clock in the instrument panel display (see the "Cockpit controls" chapter in the Operator's Manual).

1 Speedometer module

2 Switch (-): : Set clock back

Notice:

The time set on the clock is used for the auxiliary heater's timer (Spheros) as well as the display in the instrument cluster.

3 Switch (+): : Set clock forward

Notice:

The time set on the clock is used for the auxiliary heater's timer (Spheros) as well as the display in the instrument cluster.

Location of tools and emergency equipment

The tools and emergency equipment are located on the right side of the storage compartment over the trailing axle.

Supplied tools and emergency equipment:

- Warning triangle
- Hydraulic jack, 22,000 lb. (10 t) maximum load with support base (note manufacturer's operating instructions).
- Hydraulic jack, 11,000 lb. (5 t) maximum load (observe manufacturer's operating instructions).
- Drive-on ramp
- Wheel chock
- Socket wrench 27/32 mm
- Towing bolts
- Tool box (containing spare bulbs, valve connector, tire inflation hose, flares and warning lamp etc.)
- Alignment sleeves
- Drive belt (special equipment option)

Safety information on operating the entry door

Danger:

Never move the vehicle when a "condition red" door malfunction is indicated.

Danger:

The door must always be unlocked during driving.

Danger:

Never open or close the entry door while persons are present at any location within its travel range.

Danger:

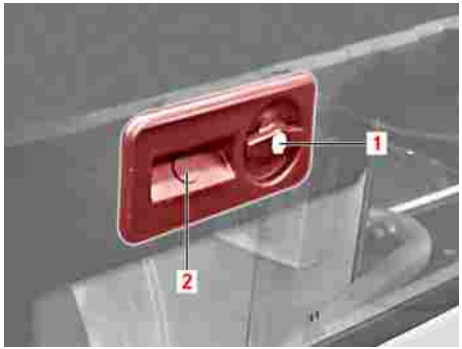
Before opening the entry door, ensure the front wheels are straight ahead to prevent damage to the door from contact with the wheel. When the door is open, do not turn the steering wheel in either direction. This could cause damage to the door system.

Outside button for entry door

The outside button (2) can be operated only if the door is unlocked.

Notice:

Unlock the door lock (1) using the vehicle key.



M72.00-0476-71

Entry door button (on the instrument panel)

Press entry door button (1) to open and close the entry door. When the entry door is open, the integral warning lamp within the button lights up. The lamp also remains on if the door fails to close securely (door not in the wedges). The warning lamp flashes in response to the following: emergency release valve open, insufficient air pressure for door operation, malfunction in potentiometer or wiring, and incorrect potentiometer adjustment.

Danger:

Do not drive the coach when the indicator lamp in the entry door button is on or flashing and/or there is a yellow or red warning in the display. If the coach is moved, the red warning symbol appears in the display and the warning buzzer sounds.

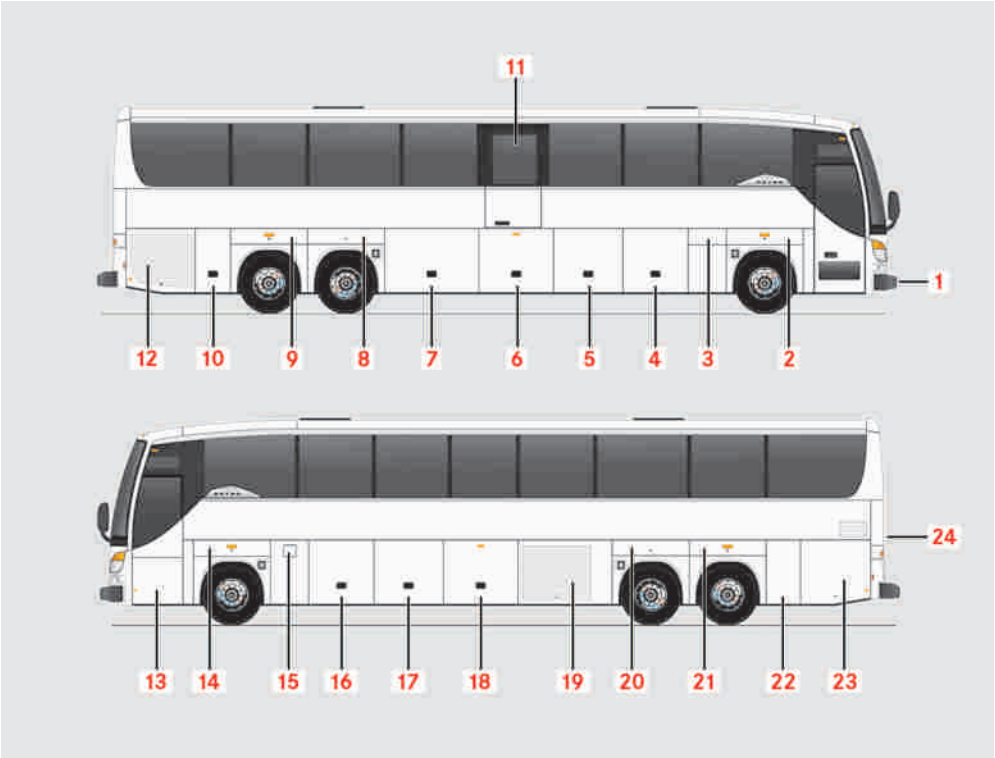
Notice:

The doors will not operate unless the ignition switch is ON and the coach is stationary.



Outer doors

Outer doors



1 Spare wheel
2 Multipurpose room/emergency valve for door at front right
3 Fuel tank
4 Luggage compartment
5 Luggage compartment
6 Luggage compartment or wheelchair lift (special equipment option)
7 Luggage compartment, central heating and climate control unit/equalizer/fuse panel of Power Distribution Board (PDB)
8 Batteries/Battery master switch
9 Auxiliary switch panel
10 Diesel Exhaust Fluid (DEF)/Waste holding tank/Water connections for lavatory
11 Wheelchair lift (special equipment option)
12 Radiator
13 Test connections/Main switch panel
14 Multipurpose compartment
15 Fuel tank
16 Luggage compartment
17 Luggage compartment
18 Luggage compartment
19 Condenser
20 Multipurpose compartment
21 Multipurpose compartment/On-board tool kit
22 Diesel Particulate Filter (DPF)
23 Exhaust system
24 Engine compartment

Open/close service-access door below driver's window



M00.00-0609-71

► To open: Pull the handle (1) to release the service-access door.

Danger:

Do not pull the release lever while the vehicle is underway: the service-access door could open unexpectedly.

Open/close service-access door below driver's window

Notice:

The handle (1) is located on the floor at the left side of the driver's seat.

The service-access door is unlocked.



M00_00-0584-71

► Open the service door (1) toward the front.

► Close and engage by pressing lightly.

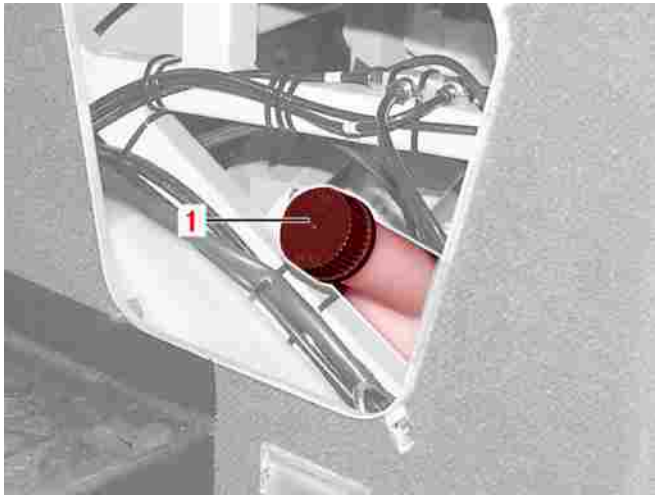
Danger:

The service-access door can pose a potential hazard to fingers during closing.

You will hear the detent engage as the service-access door snaps into place. Check to verify that the service-access door detent mechanism has engaged securely.

Windshield washer fluid reservoir

Windshield washer fluid reservoir



1 Windshield washer reservoir filler

Notice:

A service hatch in the entry door's entryway provides access to the windshield washer fluid reservoir. Turn the 4 quick-release couplings counterclockwise to remove the cover.

Washer fluid reservoir for backup camera

Washer fluid reservoir for backup camera



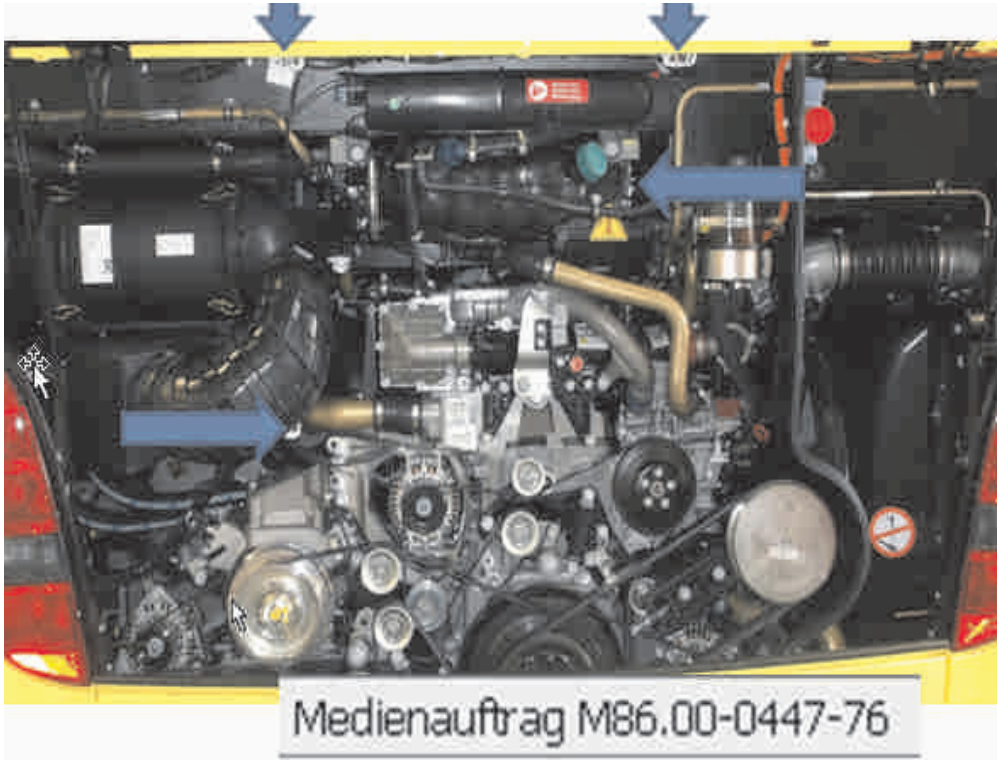
1 Washer fluid reservoir

Notice:

The washer fluid reservoir for the backup camera is installed in the engine compartment on the right in the driving direction.

Installation location of fire alert system in engine compartment

Installation location of fire alert system in engine compartment



Installation location of fire alert system in engine compartment

1 Fire detector

Notice:

Four fire detectors are installed in the engine compartment.

Fire alert system for central heating and climate control unit

Fire alert system for central heating and climate control unit



1 Fire detector

Notice:

One fire detector is installed near the auxiliary heater in the central heating and climate control unit.

Operation and malfunction displays - Fire alert system

Fire alert system malfunction



In the event of a malfunction or total failure in the fire alert system, a "condition yellow" warning appears in the display screen along with this symbol.

Caution:

If the "condition yellow" warning appears although no vehicle fire has occurred, the driver may cautiously continue to operate the vehicle, but it should be inspected by a SETRA ServicePartner at the earliest opportunity.

Fire alarm triggered



When the fire alert system is triggered (for instance, by an engine compartment fire), this symbol appears along with a "condition red" malfunction warning in the display screen. An acoustic signal sounds.

Danger:

Accident risk. When this warning occurs, stop the vehicle as quickly as road and traffic conditions allow, then open all doors and have the passengers exit the vehicle. Activate the main safety switch and engage the parking brake. Exit the vehicle and initiate appropriate action or request assistance to deal with the problem.

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Adjustable steering column 103
Rotary headlight switch 104
Combination switch for lights and wiper functions 105
Combination switch for retarder and cruise control 105
Parking brake 109
Emergency release valve for parking brake 110
Display with standard settings menu 111
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Display screen in instrument cluster 117
Coach maneuverability when the pneumatic suspension is depressurized 124
Use of the lifting and lowering system 125
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Turning the steering wheel when the coach is stationary 130
Setting the instrument panel time display 131

Ignition switch

Danger:

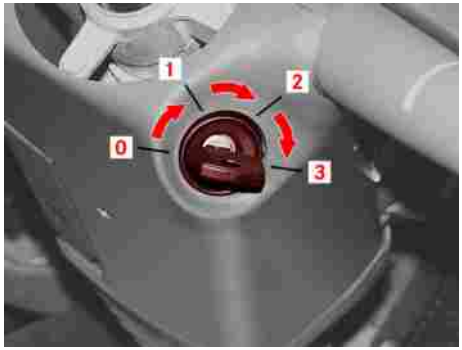
Accident hazard. Never turn the key in the ignition switch back to Position 1 or 0 while the vehicle is in motion - the power-assist for the steering is not operational when the engine is OFF.

Danger:

Never withdraw the key while driving - this locks the steering.

Danger:

Take out the key even when leaving the coach for a short time.



M54_00-0083-01

0 Lock position: Insert or withdraw the key at this position; the parking lights can be switched on.

1 Steering unlocked: All electrical accessories are available for operation.

2 Drive position

3 Start position

Adjustable steering column

In order to adjust the height and tilt of the steering wheel press bottom of switch (1) to release lock; move steering wheel to desired position. Press top of switch (1) to lock.

Danger:

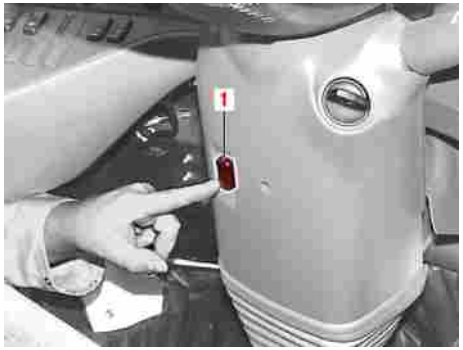
Never adjust the steering column unless the coach is stationary.

Danger:

After adjusting the steering column, verify that all instruments and indicator lamps are clearly visible.

Notice:

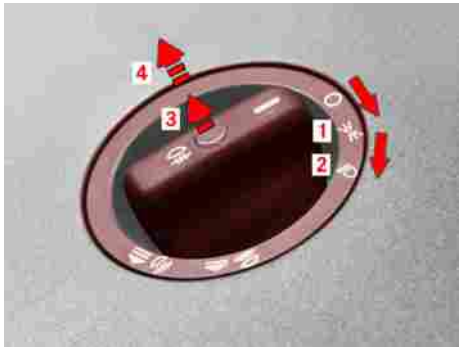
When you release the switch (1), the steering column locks automatically after a period of about 12 (+/- 5) seconds.



M46_00-0030-01

▷ For information on operation and safety, refer to the "Cockpit controls" chapter in the Operator's Manual.

Rotary headlight switch



M54_00-0068-01

0 Lights off/daytime running lights on (varies according to national version)

1 Parking lights

2 Headlights Low beam / high beam (depends upon the position of the combination switch) with ignition switch in Position 2 (standard driving position)

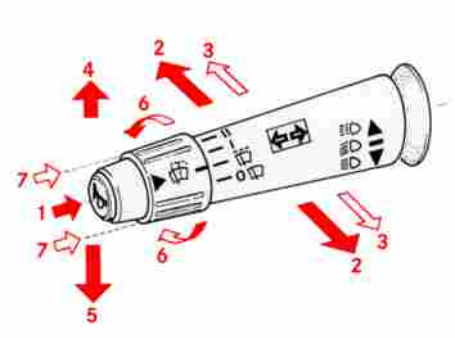
Danger:

If a service message (defective headlight low or high beam) appears in the display when you switch on the lights, following repairs you should always remember to check the emergency headlight failure circuit (refer to chapter on "Driver service and roadside repairs").

3 Front fog lamp (pull switch to 1st position). Available for operation together with the parking lights, and low or high beam headlights when the ignition switch is on

4 Rear fog lamp (pull switch to 2nd position). In addition to the front fog lamps. The indicator lamp in the headlight switch comes on.

Combination switch for lights and wiper functions



M54_00-0081-01

1 Horn: Press to sound horn

2 Left and right turn signal with automatic reset: Push the stalk past the detent, continuing until the detent engages.

3 Brief actuation of turn indicator when changing lanes: Briefly press the switch lever (not past the pressure point). The turn signal flashes five times.

4 Headlight flasher: Pull the stalk upward.

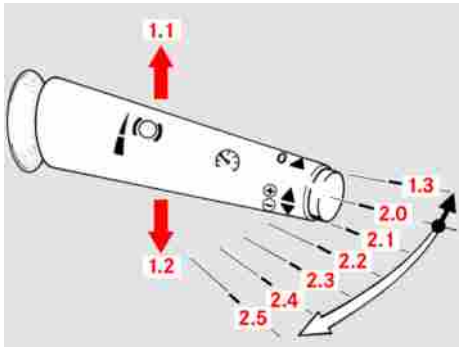
5 High and low beams: Stalk in base position = Low beam, Stalk in lower position = High beam.

6 Windshield wipers: Rotate the sleeve on the stalk: Position 0 = Off Position, INT = Intermittent wipe, Position I = Standard, Position II = Fast wipe.

7 Wipe and wash: Press the sleeve on the stalk toward the steering column. When windshield wipers are switched on = windshield wipe and wash.

Combination switch for retarder and cruise control

Drive/braking cruise control



M54_00-0827-01

Use the stalk on the right side of the steering column to activate the cruise control. Cruise control will only engage when vehicle speed is greater than 20 mph (32 km/h). The service brake and retarder must not be activated.

Combination switch for retarder and cruise control

1.1 Press briefly (< 0.5 seconds) = Return to a previously stored speed (memory). Press briefly once again (< 0.5 seconds) = Increases the selected vehicle speed by roughly 1 mph (1.6 km/h). Press longer (> 0.5 seconds) = Vehicle continues to accelerate until the switch is released. When you release the combination switch the system will adopt the current speed as the new control setting.

Notice:

The combined drive/braking cruise control automatically actuates both the engine control for accelerating the vehicle (drive cruise control) and the engine brake and the retarder (braking cruise control) to keep the vehicle at the stored speed.

1.2 Press briefly (< 0.5 seconds) = Set to maintain current vehicle speed. Press briefly again (< 0.5 seconds) = Reduce speed setting by roughly 1 mph (1.6 km/h). Press longer (> 0.5 seconds) = Vehicle continues to decelerate for as long as you maintain pressure on the switch. When you release the combination switch the system will adopt the current speed as the new control setting.

1.3 The cruise control is switched off, the last speed stored remains saved in the control unit.

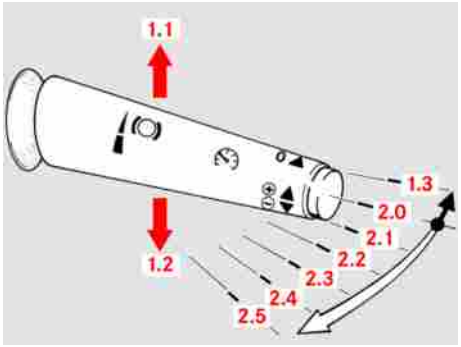
Notice:

The cruise control is also switched off when the service brake is applied or a retarder stage (2.1-2.5) is engaged.

Danger:

Never use the cruise control on slippery road surfaces - danger of skidding. Use the cruise control only when traffic conditions allow a constant speed. The vehicle may not be able to maintain the preset speed when ascending or descending hills. Remove your foot from the accelerator pedal when using the cruise control.

Retarder



M54_00-0827-01

The retarder is an integral component within the transmission and is used to decelerate the coach as a supplement to the service brakes. The retarder is applied by moving the stalk on the right side of the steering column.

Danger:

Never activate the retarder on slippery road surfaces. The wheels could lock - danger of skidding.

Danger:

Never shift the automatic transmission to "N" (neutral) while underway, as this would automatically deactivate the retarder to protect it against overheating, and also prevent it from assuming operation should the driver attempt to activate it. The braking power of the retarder is not available when the automatic transmission is in "N" (neutral).

Danger:

Do not use the retarder if the transmission fluid temperature indicator lamp lights up.

Notice:

Retarder braking levels 1-5 are available with the retarder lever in position 2.1 - 2.5. The symbol "(R)" (retarder active) appears in the instrument cluster's display panel. When you apply pressure to the accelerator pedal while the lever is in this position, this cancels the selected retarder braking level (2.1 - 2.5), and the symbol "R" (retarder in standby mode) appears on the display screen. When the accelerator pedal is again released, the retarder will resume operation at the selected braking level (1 - 5), and the "(R)" symbol (retarder active) will appear in the display.

Notice:

In the retarder lever position 2.1, only the retarder brakes. The Jake Brake first also becomes active from retarder lever position 2.2.

Combination switch for retarder and cruise control

Notice:

Retarder lever in position "2.0" = Retarder off. The "(R)" or "R" disappears from the display panel within the instrument cluster.

2.0 Retarder off

2.1 - 2.5 Retarder positions 1 - 5 active

Notice:

Stage 1 = low braking torque and stage 5 = high braking torque.

Notice:

Carefully move the combination switch through each position (avoid moving through the entire selection range in a single violent motion) to select the desired level of braking force. Rapid switch movement through the selection range is allowed in emergencies. When decreasing the braking torque, you can skip through several stages at a time. To keep coolant temperature as low as possible and to maximize braking effect, always maintain engine speed at the upper end of rev band in the current gear.

Danger:

If the ABS is functioning correctly, then an activated retarder will automatically be switched off if one or both wheels on the drive axle start to lock. If an ABS error message appears (ABS warning lamp comes on), this feature may not be operating correctly - danger of skidding.

▷ For additional information on safety and operating procedures, refer to the chapter on "Vehicle-control systems."

Parking brake

Engaging the parking brake with the parking brake valve (3).

Notice:

The parking brake valve (3) is located to the left of the driver's seat.

Notice:

To engage the parking brake, pull knob (3) up until it locks. To release the parking brake, push knob (3) down forcefully.

Danger:

The symbol should appear on the display screen whenever the parking brake is engaged.

Danger:

A system pressure of 80 to 87 psi (5.5 to 6.0 bar) is needed to overcome the spring pressure in the brake chambers and release the parking brakes. If the pressure in the pneumatic system is lower, the brakes may fail to disengage completely. The resulting light contact between friction surfaces can lead to overheating. The symbol on the display screen should go out when the parking brake is released. In case of damage to the compressed-air system for the parking brake, the brake can be disengaged using the emergency release switch on the instrument panel.

Danger:

Engage the parking brake only when the coach is stationary.

Danger:

Always engage the parking brake before you leave the driver's seat.

Danger:

On uphill or downhill slopes you must also place wheel chocks under the wheels and turn the steering towards the curb.

Danger:

The ABS is disabled whenever the parking brake is engaged - possible traction loss and skidding hazard.

Emergency release valve for parking brake



M42.00-0809-71

▷ For information on operation and safety, see the "Vehicle operation" chapter in the Operator's Manual.

Emergency release valve for parking brake

In the event of a malfunction in the pneumatic system supplying compressed air to the parking brakes, you can disengage the brakes using the emergency release valve: Keep switch (1) pressed down = parking brake released.

Danger:

To use the emergency release switch, fold the cover (2) to the side.

Danger:

This emergency release feature is intended exclusively for use when moving the vehicle from a hazardous area to a safe location. Then park the vehicle and contact a SETRA ServicePartner.



M42.00-0811-71

▷ For information on operation and safety, see the "Vehicle operation" chapter in the Operator's Manual.

Display with standard settings menu

Notice:

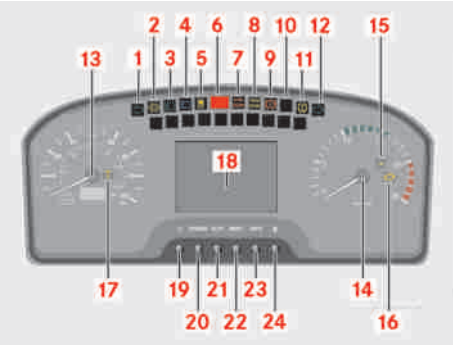
You can use the menu described in this section to select standard settings for the intensity of the display screen and instrument lighting when the headlights are on, the volume of the turn signal buzzer and the language that appears in the display panel.

- Switch on the ignition

Notice:

The parking brake must be engaged.

- Turn the rotary lighting switch to activate the headlights.

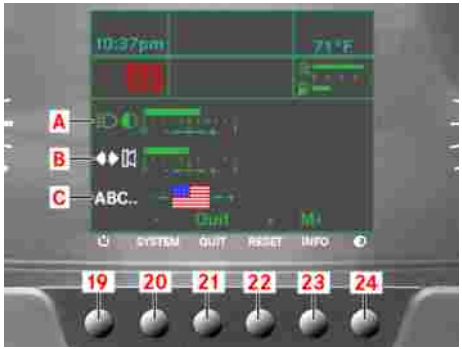


M68.00-0634-71

- Wait for the display screen to proceed through its start-up routine; the basic display screen appears once the routine has been completed.

Notice:

Press "Quit" (21) to acknowledge any malfunction messages that appear.



M54.00-1833-71

- Press the "Info" button (23).

  The following display appears.

Notice:

A = Standard settings for display screen/ instrument lighting with headlights ON

Notice:

B = Turn-signal buzzer volume level

Illumination intensity for display screen and instrument lighting

Notice:

C = Language selection display

- Use the "Info" button (23) to select the desired setting.

Notice:

The symbol for the selected setting appears in green.

- Select the setting using the "-" (20) and "+" (22) buttons.
- Confirm your selection with the button (23).
- Press the "Quit" button (21) to exit the "settings" menu.

Illumination intensity for display screen and instrument lighting

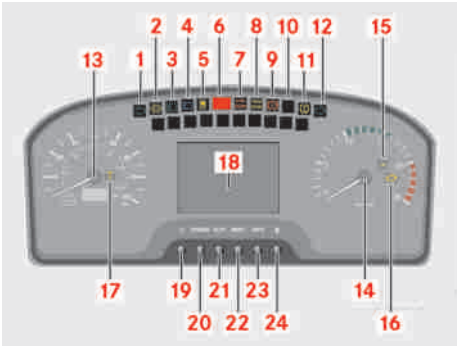
Notice:

The system adjusts the illumination intensity to the daytime or night level according to the position of the rotary lighting switch.

Notice:

The selected settings are stored automatically when the button (24) is released.

- Switch on the ignition/starter switch



M68.00-0634-71

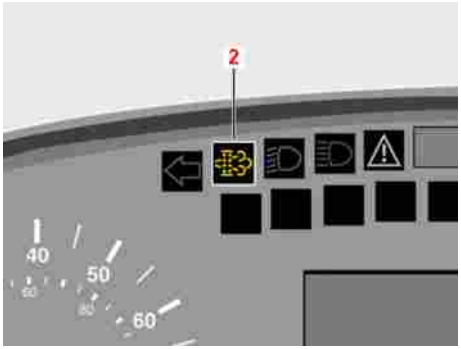
- Press and hold the button (24).

  This reduces the intensity of the lighting for the display screen and instruments.
- Briefly press the button (24).

  The display screen and instrument lighting brighten to maximum intensity.

Indicator lamps in instrument cluster

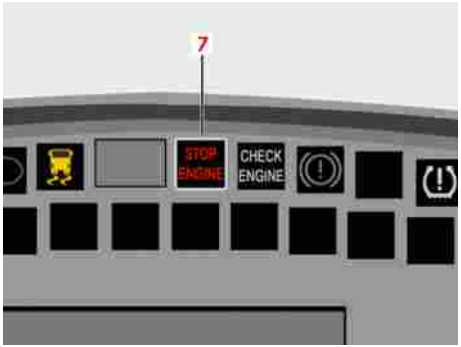
Diesel Particulate Filter (DPF)



M68.00-0406-71

If the lamp remains on continuously, this indicates that regeneration is required. Change to a more challenging duty cycle, such as highway driving, to raise exhaust temperatures for at least 20 minutes, or perform a stationary regeneration. A flashing lamp indicates that stationary regeneration is required immediately. An engine derate and shutdown will occur.

"Stop engine" warning lamp



M68.00-0630-71

The "Stop engine" lamp lights up to indicate that the engine-management ECU has detected a serious malfunction requiring immediate attention (low oil pressure, high oil temperature, coolant overheated, low engine-coolant level, etc.).

Danger:

When the "Stop engine" lamp comes on, power is gradually reduced over a 30 second period until the engine is automatically shut off.

Danger:

The driver is then responsible for bringing the vehicle to a stop and shutting down the engine as soon as possible in order to prevent serious damage. Please watch road and traffic conditions when stopping the vehicle.

Danger:

When the "Stop engine" warning lamp lights up, a "condition red" status warning appears along with the corresponding symbol in the instrument cluster's display panel. An audible warning signal will also be heard.

Danger:

Should the driver note that an automatic shutdown is about to be initiated under critical road or traffic conditions, the shutdown can be delayed by pressing the "Stop engine override" button before the 30 seconds have elapsed. From this point onward, in order to continue operation the driver will only need to press the button every 15 - 20 seconds until such time as the vehicle can be stopped safely. This allows the driver to disable the engine shutdown feature in 30-second increments in an emergency.

Danger:

After the engine has been shut off by the automatic shutdown feature, it is necessary to bring the vehicle to a complete stop before attempting to restart the engine. You can then proceed to turn the ignition switch all the way off and then on again. Press "Stop engine override" button. Should the vehicle be parked in a potentially hazardous location, it will now be possible to restart the engine and proceed to a safer area.

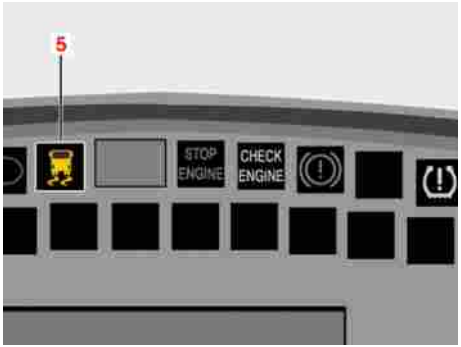
Danger:

The response to excessively high engine coolant temperatures is as follows: when the temperature reaches a specified threshold (226 °F (108 °C)), the system reduces engine output and triggers the "Check engine" lamp. If the temperature continues to rise to the second response threshold (228 °F (109 °C)), the "Stop engine" lamp will light up. The system will then automatically shut down the engine in 30 seconds unless the driver presses the "Stop engine override" button within this period. This feature allows the driver to disable the engine shutdown feature for 30-second increments in an emergency.

Danger:

The response to excessively high engine oil temperatures is as follows: when the temperature reaches a specified threshold (244 °F (118 °C)), the system reduces engine output and triggers the "Check engine" lamp. If the oil temperature continues to rise to the second response threshold (253 °F (123 °C)), the "Stop engine" lamp will come on. The system will then automatically shut down the engine in 30 seconds unless the driver presses the "Stop engine override" button within this period. The override option allows the driver to deactivate the engine shutdown in response to an emergency.

ESP warning lamp



M68.00-0631-71

The ESP warning lamp lights up during an intervention by or an error in the Electronic Stability Program or the Traction Control System (TCS).

Notice:

The indicator lamp flashes during an intervention of the Electronic Stability Program (ESP) or the Traction Control System (TCS).

Notice:

If the Electronic Stability Program (ESP) is deactivated, the warning lamp lights up continuously.

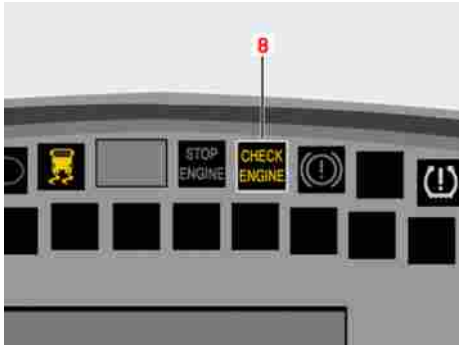
Notice:

If the ESP warning lamp lights up continually during normal vehicle operation with the ESP system active, this indicates that a defect or malfunction has been detected within the system.

Notice:

The other functions of the brake system can continue to operate fault-free. Their faults are displayed with a separate fault message if necessary.

Check engine warning lamp



M68.00-0632-71

When the "Check engine" warning lamp comes on this indicates that the engine-management ECU has detected a malfunction within the system.

Danger:

While the "Check engine" warning lamp is lit, a yellow status warning appears along with the corresponding symbol in the instrument cluster's display panel. An audible warning signal will also be heard.

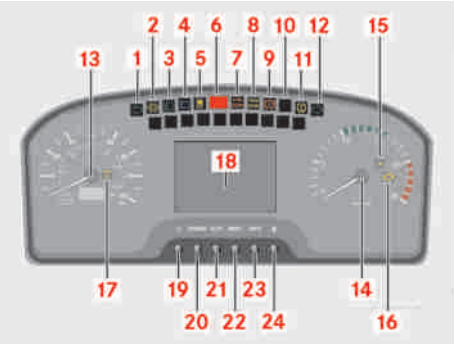
Danger:

When the engine coolant temperature rises beyond a specified threshold (226 °F (108 °C)), the engine-management system responds by reducing engine output and triggering the "Check engine" warning lamp. From this point onward any additional increases in engine coolant temperature will initiate the 30-second routine that ultimately leads to an automatic engine shutdown; the "Stop engine" warning lamp comes on to alert you that this routine is in progress. To prevent additional rises in engine coolant temperature and the accompanying risk of automatic engine shutdown, please monitor all aspects of coach operation closely while carefully proceeding to your nearest SETRA ServicePartner.

Danger:

When engine oil temperature rises beyond a specified threshold (244 °F (118 °C)), the engine-management system responds by reducing engine output and triggering the "Check engine" warning lamp. From this point onward any additional increases in engine oil temperature will initiate the 30-second routine that ultimately leads to an automatic engine shutdown; the "Stop engine" warning lamp comes on to alert you that this routine is in progress. To prevent additional rises in engine oil temperature and the accompanying risk of automatic engine shutdown, please monitor all aspects of coach operation closely while carefully proceeding to your nearest SETRA ServicePartner.

ABS warning lamp (15)



M68.00-0634-71

If the ABS warning lamp (15) lights up, a malfunction has occurred in the ABS function. The malfunction is also displayed on the screen of the instrument cluster with a pictograph.

Caution:

The wheels can lock during braking, especially on slippery road surfaces - danger of skidding.

Caution:

If a malfunction of the yellow warning level on the brake system appears on the display of the instrument cluster, the braking behavior of the vehicle may change. Drive especially cautiously. Have the malfunction eliminated as quickly as possible at a SETRA ServicePartner.

Notice:

If the warning lamp fails to go out immediately after the lamp test, but instead only goes out once the vehicle reaches a speed of approx. 15 mph (20 km/h), this indicates that the system detected a wheel speed sensor problem at some point before the last time the ignition switch was turned off.

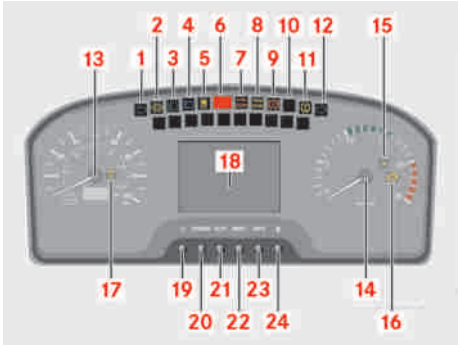
Notice:

If the ABS warning lamp comes on during normal vehicle operation this indicates that a defect or malfunction has been detected within the system.

Notice:

If an ABS malfunction is detected and shown with a pictograph on the screen, then the ESP and TCS function are also deactivated and this is indicated with the corresponding warning lamp in the instrument cluster.

Malfunction indicator lamp (MIL) (16)



M68.00-0634-71

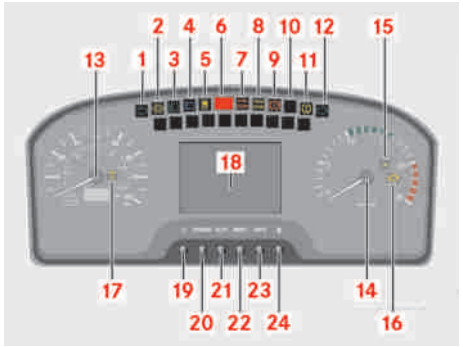
Indicates a malfunction in the engine's emissions control system (16), including, but not limited to, the AfterTreatment System (ATS). Service and repairs to the Diesel Particulate Filter should be performed exclusively by authorized, specially-trained technicians.

Display screen in instrument cluster



M68_00-0092-01

Display screen (18)



M68.00-0634-71

Display screen in instrument cluster

The display screen assumes active status each time the ignition switch is switched on. The screen is also in operation when the following functions are activated: parking lights / hazard warning flashers / interior lighting / door opened from outside. The screen furnishes a status display with information on operating status and malfunctions (symbols). In addition, it can also be used to access the on-board diagnosis system (see chapter on "Driver service and roadside repairs").

Notice:

Displays indicating malfunctions appear only when the ignition switch is turned to Position 2.

Scroll forward/freeze frame



M68.00-0451-71

Press the bottom of the display control button (1) to view the operation, service and malfunction displays one after the other (exception: "condition red" malfunction warning). Press the top of the display control button (1) to remain in the current display mode. This will prevent the display screen from showing any other information, with the exception of "condition red" status alerts. The information shown on the screen is updated continuously.

Display screen in freeze-frame mode



M54.00-1826-71

Press the top of the display control button to freeze the display of the screen's current content. This mode is indicated by a checkered symbol (1) in the upper right corner. Press the button either upward or downward to release the screen for the next display menu.

Screen sequence at start



M54.00-1827-71

When the ignition switch is turned to Position 2, the system responds by briefly triggering all of the indicator lamps and the warning buzzer in the instrument cluster to ensure that they are operational (function check). An overview containing messages with any "condition red" or "condition yellow" status warnings then appears on the display screen, along with information on any service or maintenance that is due. If no malfunctions are present and/or no service due, then this overview is skipped and the display proceeds directly to "pneumatic system air pressure" (illustration). If the reservoir pressure is insufficient, the operation display remains unchanged until the reservoir pressure is OK. This is followed by the "engine" display, then the "battery and fuel level" display and finally the "vehicle operation" display.

Notice:

You can access the following screen displays at any time by pressing the bottom of the display control button. You can then freeze the current display by pressing the top of the button.

Overview of "condition red", "condition yellow" and service warnings



M54.00-1828-71

This overview of the "condition red", "condition yellow" and service warnings is indicated by an illuminated red (1), yellow (2) and/or white (3) field in the top row of the display. All current red (1.1), yellow (2.1) and/or service (3.1) warnings are indicated by the respective operating or malfunction symbols in the corresponding color. Should the display fail a red lamp in the instrument cluster above the display screen will indicate a "condition red" malfunction. If

no red, yellow and/or service warnings are present, then the display immediately changes to the "pneumatic system air pressure" operation display. Otherwise the display changes to the "pneumatic system air pressure" operation display after about 10 seconds.

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Danger:

If a "condition yellow" warning appears, you may continue to drive the vehicle cautiously, but you should have it inspected by a SETRA ServicePartner at the earliest opportunity.

"Pneumatic system air pressure" display



M54.00-1827-71

The display shows the pneumatic system air pressures (0 to 150 psi) for circuits 1 (front axle and trailing axle) and 2 (drive axle). If the pneumatic system air pressure is sufficient in all circuits, then after about 10 seconds the display changes to "Engine operation" and the warning tone ends. If no plausible signal is being received from the sensor, the display will start to alternate between minimum and maximum readings at intervals of 1 second.

Danger:

The vehicle may be driven only after the audible warning has ended and no "condition red" warnings are present.

Engine operation display



M54.00-1834-71

The coolant temperature (1) (30 to 246 °F) is shown. The display changes to "fuel level, battery" after about 10 seconds. If no plausible signal is being received from the sensor, the display will start to alternate between minimum and maximum readings at intervals of 1 second.

Notice:

The coolant temperature should stabilize at roughly 165 °F - 195 °F (75 °C - 90 °C) once the engine warms to operating temperature.

Notice:

The system updates the displays monitoring engine operation only when the ignition switch is turned to Position 2; with the switch in other positions the status bars appear with a gray background.

Fuel level, battery operation display



M54.00-1829-71

The fuel tank level (1) (empty 0 to full 1/1), the DEF tank level (2) (empty 0 to full 1/1) and the battery voltage (3) (16 to 32 V) are shown. (The fuel and DEF gages are also continuously displayed at the upper right of the screen). The display changes to its "vehicle operation" mode after about 10 seconds. If no plausible signal is being received from the sensor, the display will start to alternate between minimum and maximum readings at intervals of 1 second.

Notice:

A symbol appears in the basic display screen once the level falls to roughly 10 % of the tank's capacity. The battery voltage should remain within the 25...28 V range when the engine is running. Otherwise you should contact a SETRA ServicePartner without delay.

Vehicle operation display



M54.00-1830-71

This is the basic display that normally appears when the coach is being driven as well as when it is stationary. All of

the coach operating information is shown as symbols in this display panel.

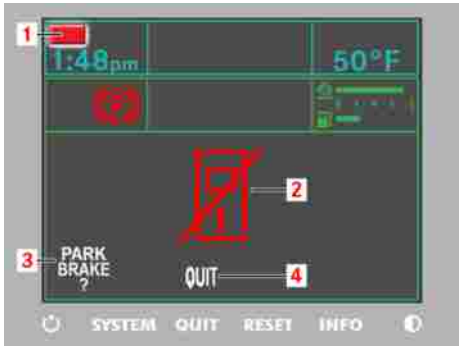
Notice:

The outside temperature (1) appears at the upper right in all displays.

Danger:

ACCIDENT HAZARD! By the time the temperature display falls to 32 °F (0 °C), ice may already have formed on road surfaces, especially on bridges and on roads surrounded by woods and forests. There will be a delay before abrupt changes in temperature (such as those that occur when the coach is driven back outside from within a garage) are reflected in the display.

Condition red status warnings



M54.00-1831-71

The first time a "condition red" status warning is generated, the symbol representing the defective system (2) will appear at the center of the display screen. At the same time, an audible signal starts to sound and the red panel in the top left of the display (1) flashes. Provided that the vehicle is stationary and the parking brake is engaged, you can acknowledge the malfunction warning by pressing the "Quit" button located below the display screen (4). If the parking brake is not engaged, the "Quit" command will appear in gray, accompanied by a request for the operator to engage the parking brake (3).

Danger:

Should a "condition red" warning appear, stop the vehicle immediately (traffic permitting) and contact a SETRA ServicePartner.

Condition red warnings (continued)



M54.00-1835-71

If the parking brake is engaged (Symbol (1) appears), the "Quit" command will appear in green, meaning that the op-

erator can now press the button below the display screen (2) to acknowledge the warning message. This removes the "condition red" warning display from the foreground. The screen is now free for other messages and data requests. If the condition red warning (3) remains visible, this indicates that condition red malfunctions are present but are not currently being displayed on the screen.

Condition yellow malfunctions



M54.00-1832-71

Initial detection of a "condition yellow" malfunction is indicated by a malfunction symbol identifying the problem area in the center of the screen. At the same time, an audible signal sounds and the yellow sector at the upper left of the display (5) flashes.

Danger:

If a "condition yellow" warning appears, you may continue to drive the vehicle cautiously, but you should have it inspected by a SETRA ServicePartner at the earliest opportunity.

Yellow warning in the background



M54.00-1836-71

The yellow malfunction warning display automatically recedes into the background after approximately 10 seconds. The screen is now free for other messages and data requests. A continuous yellow warning signals that yellow warning malfunctions (1) are present but not being displayed on the screen.

External lighting system malfunction



M54.00-1700-71

When an exterior lamp fails, a symbol (1) appears on the screen at the upper right.

Coach maneuverability when the pneumatic suspension is depressurized

Danger:

If the malfunction affects the low or high beam headlamps, always remember to check the "emergency headlight malfunction circuit" (see chapter on "Driver service and roadside repairs").

Coach maneuverability when the pneumatic suspension is depressurized

The designs of the front suspension and of the drive axle's locating elements ensure that the vehicle can still be maneuvered in the event of pressure loss in the suspension bellows.

In this case, the entire vehicle weight rests on the front suspension and against the jounce stops installed at the rear axle. These jounce stops do not come into play when the suspension is operating under normal conditions. Their function is to prevent the axle and the vehicle from hard contact under extreme compression of the suspension. The jounce stops are not designed for extended exposure to loads and are not a substitute for the standard suspension. Moreover, the body can also be damaged (cracks, etc.).

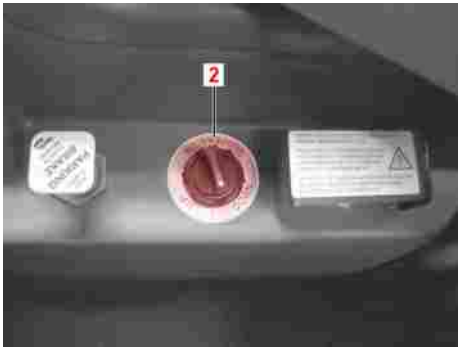
Danger:

Injury hazard. When working on the air suspension system, always support the body at the specified points by placing jacks and jack stands below it, as decompression in the air-suspension system can allow the bodywork to drop rapidly.

Danger:

Although the vehicle remains maneuverable following pressure loss in the system, it should only be driven as slowly as possible (walking pace) to the nearest available parking area, from which the driver should immediately contact a SETRA ServicePartner.

Use of the lifting and lowering system



M32.00-0272-71

▶ Rotary knob (2) in center position

Notice:

Normal level of the vehicle (drive mode).

Danger:

The vehicle must not be lowered if persons are located in its immediate vicinity.

Danger:

Never move the vehicle at anything faster than a walking pace when the lifting and lowering system is activated.

Notice:

The system is also operational with the ignition switch OFF.



When the vehicle is raised or lowered, the display shows the symbol for "vehicle not at standard ride height."

▶ To raise the vehicle, turn the knob (2) clockwise from its center position to the right position. To lower the vehicle, turn the knob (2) of the lifting and lowering system counterclockwise from the center position to the left position.

Notice:

The air bellows are inflated or deflated and the vehicle body raised or lowered by 2.75 inches (70 mm), respectively.

Danger:

The vehicle must not be lowered if persons are located in its immediate vicinity.

Lowering vehicle over front axle (kneeling) (special equipment option)

Lowering vehicle over front axle (kneeling) (special equipment option)

► Ignition switch ON and parking brake engaged.

Notice:

This function provides extra convenience for passengers entering and exiting the vehicle.



M32.00-0273-71

► Press the bottom of the switch (1).

Danger:

Never press the switch if persons are located in the immediate vicinity of the front entrance.

Danger:

Vehicle must remain stationary and not be moved when lowered to its kneeling position.



The coach is lowered in a smoothly progressive descent that continues for as long as the switch is pressed.

Notice:

The display in the instrument cluster shows the symbol for "vehicle not at standard ride height."

Notice:

The side turn signals flash.



M32_00-0074-01

► Press the top of the switch (1).

The lowered vehicle returns to its normal level.

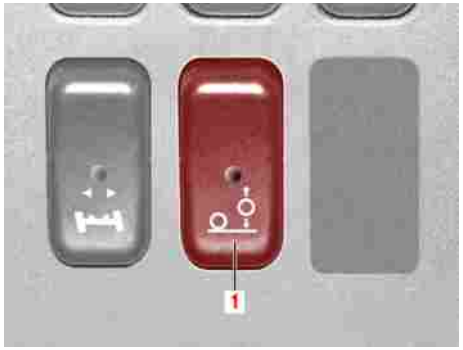
Notice:

The symbol for "vehicle not at standard ride height" goes out.

Notice:

The side turn signals stop flashing.

Activating and deactivating the trailing axle load transfer



M54.00-1844-71

► Pressing the switch (1) in the driver's cockpit activates the axle load transfer at the trailing axle.

Notice:

The load transfer feature is intended primarily to furnish assistance in winter when the vehicle is set in motion in either direction on surfaces affording only limited traction. It should also be activated for maneuvering in close quarters when extreme steering angles are required. This feature shifts weight away

from the trailing axle to increase the effective weight on the drive axle and enhance traction at the drive wheels.

Notice:

The trailing axle load transfer feature is available for operation only when the ignition switch is ON and the vehicle speed is less than 18 mph (30 km/h).



When the trailing axle load transfer system is active the LED lights up in the switch and the "trailing axle load transfer" symbol appears in the display.

- Press the switch (1) again to deactivate the trailing axle load transfer system.

Notice:

The trailing axle load transfer is automatically deactivated whenever air pressure levels within the air suspension bellows rise above 100 psi (7 bar). This restores the original balance of the weights on the individual air suspension units.

Notice:

The start-assist is also automatically deactivated once vehicle speed exceeds 18 mph (30 km/h).

Activating and deactivating the trailing axle lock



M35.00-0200-71

- Pressing the switch (1) on the instrument panel activates the trailing axle lock.

Notice:

This switch should be used if the trailing axle is not locked and the LED in the switch fails to light up when backing up or during operation at speeds greater than 37 mph (60 km/h).

Notice:

The axle lock is also activated automatically at speeds greater than 37 mph (60 km/h) and during backing.

The LED in the switch lights up when the trailing axle lock is engaged.

Danger:

The axle lock disengages in response to deactivation using the switch in the instrument panel (below 30 mph (50 km/h), once vehicle speed drops below 30 mph (50 km/h), or when reverse is disengaged. For this reason you should never allow the vehicle to roll backward without reverse gear engaged. This would cause damage to the trailing axle.

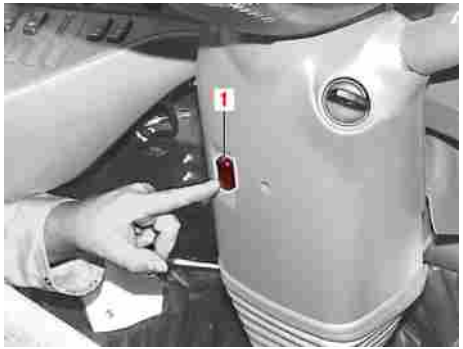
Important note on steering

Should the hydraulic power steering system fail, it will still be possible to control the coach. However, there will be a considerable increase in the effort required to steer the vehicle.

Danger:

Malfunctions in the power steering's hydraulic system can greatly increase the effort needed to control the coach. Please respond to any malfunctions of this kind by immediately contacting a SETRA ServicePartner for repairs.

Adjusting the steering column



M46_00-0030-01

► To adjust the steering column, press the bottom of the switch (1).

Danger:

Only make adjustments when the coach is stationary. Lock the steering column in place after you have adjusted the steering wheel to reflect the driver's requirements. Lock by pressing the top of the switch (1).

Turning the steering wheel when the coach is stationary

Notice:

The steering column will automatically lock after roughly 12 sec. unless the switch (1) is pressed again.

Danger:

After adjusting the steering column, verify that all instruments and indicator lamps are clearly visible.

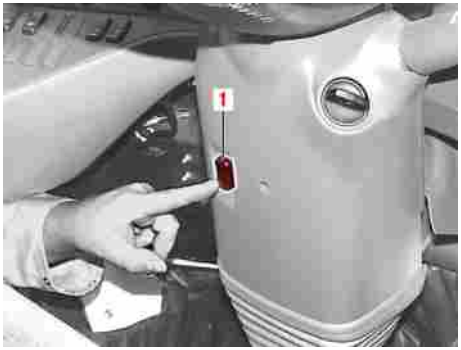
Turning the steering wheel when the coach is stationary

Danger:

Never turn the steering wheel while the engine is running and the entry door is open. Always close the door first to avoid damaging the door's drive mechanism.

Danger:

To prevent possible damage to the steering column, always observe the following precautions whenever turning the steering wheel while the power steering pump is not operating (engine off) and the front wheels are resting on a hard surface (no turntable or other special equipment):



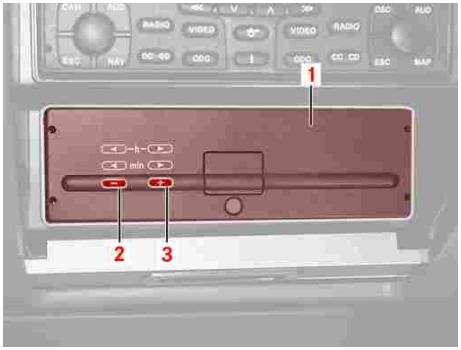
M46_00-0030-01

- Release the steering column by pressing the bottom of the switch (1) and then push the steering wheel all the way down to its lowest position. Relock the steering by pressing the top of the switch (1). Grasp the steering wheel with your hands spaced at an angle of between 90° and 180°, then turn the steering wheel with both hands.

Danger:

The steering wheel should never be turned by two people at once. Do not pull on the steering wheel on one side.

Setting the instrument panel time display



M68_00-0086-01

- Maintain pressure on "+" (3) or "-" (2) until the desired minute appears in the instrument panel display.

Notice:

Release the switch to conclude the resetting operation.

- Press "+" and "-" and maintain pressure for longer than three seconds.
- Then within three seconds, maintain pressure on the "+" or "-" switch until the desired hour appears in the display.

Notice:

Releasing the switch concludes setting the hour; after three seconds the display returns to its initial mode.

Notice:

The date changes automatically when you move past 24:00 hours in either direction.

Notice:

The time setting is also adopted for the clock in the passenger compartment.

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Driver's side sunshade switch (special equipment option)

Driver's side sunshade switch (special equipment option)

The switch is used to raise or lower the sunshade. The sunshade remains in motion only while the switch is depressed.

Danger:

ACCIDENT HAZARD! When lowering the sunshade ensure that it is not so low as to obstruct visibility to either front or rear (mirror).

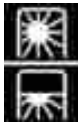


Passenger's side sunshade switch (special equipment option)

The switch is used to raise or lower the sunshade. The sunshade remains in motion only while the switch is depressed.

Danger:

When adjusting the sunshade, please ensure that its position does not interfere with visibility to either front or rear (rearview mirrors).



Not assigned

This switch activates all of the turn signal lights on both sides of the vehicle. You can use either the school bus warning flasher switch or the turn signal lever on the steering column (move up or down) to reset the school bus warning flashers.



Dash display control switch

To proceed to next display or maintain current display content on the screen

Notice:

Press down: Scroll through displays.
Press top of switch: Freeze screen at current display

Danger:

Operate this switch only when road and traffic conditions allow.



Cockpit light switch

Press switch down to turn on light.
Press switch up to turn off light.



Wheelchair lift switch (special equipment option)

The wheelchair lift switch is cleared for operation once the following conditions have been satisfied: ignition switch ON, "wheelchair lift" switch activated, transmission in neutral and luggage compartment door/hatch (lower) and lift door (top) completely open.

Notice:

The luggage compartment doors on the right side must be unlocked (refer to chapter on "Engaging/releasing locks").

Danger:

Apply the parking brake before starting the lift.

Attendant call system switch (special equipment option)

Notice:

The engine will only run at idle while the wheelchair lift is enabled.



▷ For information on safety and operation, refer to chapter on "Vehicle operation" as well as to the enclosed manufacturer's instruction manual.

Attendant call system switch (special equipment option)

Press switch to activate attendant call system at passenger seats. When a passenger activates the attendant call switch, a symbol appears in the dash display.



Switch for night-illumination service set (special equipment option)

This switch can be used to activate an LED in the service set with the ignition/starter switch switched on, which is intended to make it easier to find the ventilation grills when driving at night.



Switch for left-hand docking light

The outside lighting in the area of the left-hand luggage compartment can be switched on and off.



Switch for right-hand docking light

The outside lighting in the area of the right-hand luggage compartment can be switched on and off.



Emergency release switch for frequent-stop brake (special equipment option)

This switch is sealed and should only be operated if there is a fault in the frequent stop brake or brake interlock.

Danger:

Make sure that the parking brake is engaged before actuating the emergency release switch for the frequent-stop brake. Otherwise the vehicle could roll away.



▷ For additional safety and operating instructions, see the chapter "Driver service and roadside repairs".

Horn-mode selection switch (special equipment option)

Horn-mode selection switch (special equipment option)

Use to select conventional electric horn 1 (top) or air horn 2 (bottom)

Notice:

Use the electric horn in cities and built-up areas. The pneumatic horn is intended exclusively for highway use in rural areas.



Lavatory enable switch

All functions in the lavatory can be used when the lavatory switch is enabled.



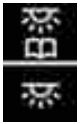
Attendant call system switch (special equipment option)

Press switch to activate attendant call system at passenger seats. When a passenger activates the attendant call switch, a symbol appears in the dash display.



Reading lamp switch

The reading lamps are available for use only when the ignition switch and parking lights are switched on. Press the switch to the upward position to allow the passengers to control their individual reading lamps. Press the switch to the downward position to turn all reading lamps on. The lights are off when the switch is in the center position.



Center aisle lighting switch

The center aisle lighting is available only when the parking lights are switched on.



Switch for indirect illumination in passenger compartment

In switch position 1 (at bottom) the interior lighting can be fully switched on if the ignition switch has been switched on and the economy circuit has not been switched on. However, if the ignition switch has not been switched on then the night illumination is switched on irrespective of the economy function. In switch position 2 (at top) the night illumination is switched on irrespective of the economy circuit if the ignition switch has been switched on.

Danger:

The passenger compartment lighting switch should never be moved all the way down to its "full illumination" while the vehicle is underway, as resulting reflections on the windshield could distract the driver.



Driver's side window and electric mirror heater switch

Driver's side window and electric mirror heater switch

Provided that the power conservation mode is not active, you can use this switch to activate the heaters for the driver's window and the mirrors whenever the ignition switch is turned to "ON." The indicator lamp within the switch comes on to signal that the heater is operating. The driver's window and mirror heaters are available for renewed activation only once the timer-controlled operating period (30 minutes) has elapsed. When you return the ignition switch to its "OFF" position this cancels the delayed deactivation mode, immediately interrupting the supply of electrical power to the heaters for the driver's window and the mirrors. If the power conservation mode is activated during the timer-controlled operating period, the driver's window and mirror heaters remain deactivated for the length of time in which the system remains in this mode. If the system reverts from the power conservation mode to normal operating status before the timer-controlled operating period has elapsed, then the driver's window and mirror heaters will resume operation for the remainder of the timer-controlled period.



Electric windshield heater switch

Provided that the power conservation mode is not active, you can use this switch to activate the electric windshield heater whenever the ignition switch is turned to "ON." The indicator lamp within the switch comes on to signal that the heater is operating. The windshield heater is available for renewed activation only once the timer-controlled operating period (30 minutes) has elapsed. When you return the ignition switch to its "OFF" position this cancels the delayed deactivation mode, immediately interrupting the supply of electrical power to the windshield heater. If the power conservation mode is activated during the timer-controlled operating period the windshield heater is deactivated for the length of time in which the system remains in this mode. If the system reverts from the power conservation mode to normal operating status before the timer-controlled operating period has elapsed, the windshield heater will resume operation for the remainder of the timer-controlled period.



Backup camera switch (special equipment option)

When this switch is pressed, the image recorded by the backup camera appears on the instrument cluster's display screen.

Danger:

While the backup camera provides the driver with extra assistance during backing maneuvers, it is important to remember that legal responsibility for safe vehicle operation remains with the driver at all times.

Danger:

The actual distance from an obstacle may differ from the perceived distance.



Backup camera washer switch (special equipment option)

Press once to wash camera lens.



Central locking switch for the left luggage compartment

Central locking switch for the left luggage compartment



This rocker switch controls the electropneumatic lock mechanism that engages and releases the locks on the luggage compartment doors, and is available for use whenever the ignition switch is "ON." The luggage compartment lighting is automatically switched on whenever a side of a luggage compartment door is unlocked. When the ignition switch is turned "OFF" and remains off, the automatic mandatory relocking feature will be activated once 43 minutes have elapsed. This engages the locks and also switches off the lights in order to reduce the current draw on the batteries. The automatic mandatory relocking feature is not activated while the ignition switch remains "ON." The LED in the switch serves as a status indicator for the driver. LED illuminated -> luggage compartment doors unlocked and luggage compartment lighting on. LED off -> luggage compartment doors locked.

Central locking switch for the right-side luggage compartment

This rocker switch controls the electropneumatic lock mechanism that engages and releases the locks for the luggage compartment doors and the lift door (top); it is available for use whenever the ignition switch is "ON." The luggage compartment lighting is automatically switched on whenever a side of a luggage compartment door is unlocked. When the ignition switch is turned "OFF" and remains off, the automatic mandatory relocking feature will be activated once 43 minutes have elapsed. This engages the locks and also switches off the lights in order to reduce the current draw on the batteries. The automatic mandatory relocking feature is not activated while the ignition switch remains "ON." The LED in the switch serves as a status indicator for the driver. LED illuminated -> luggage compartment doors unlocked and luggage compartment lighting on. LED off -> luggage compartment doors locked.



Driver's power window switch

This switch opens and closes the driver's window. The electric power windows continue to move only while the switch is depressed.

Danger:

Before pressing the switch (especially when closing the driver's window), ensure that no parts of the body or other objects are protruding into the window's travel path.



Multichannel system switch (special equipment option)

For switching the multichannel system on and off at the passenger seats



PA system switch

This switch activates the driver's seat microphone (special equipment option) for announcements.



Entry door switch

Use the door switch to open and close the entry door. The coach must be stationary for the door to open. The indicator lamp within the switch comes on and a symbol appears in the display screen to signal to the driver that the door is open.

Danger:

Please note that the entry door will not open if the compartment door immediately above the front wheel well is open.

Danger:

Ensure that no persons are within the door panels' traveling ranges when activating the entry door.

Danger:

To prevent possible damage to the entry door, never turn the steering wheel while the door is open.



▷ For information on operation and safety, refer to the "Engaging/releasing locks" chapter in the Operator's Manual.

Backup buzzer switch (special equipment option)

Pressing the switch deactivates the acoustic signal when backing up.



Passenger attendant calling system control switch (special equipment option)

Use this switch to disable the passenger attendant calling system.



Engine fast idle switch

With the transmission in neutral and no pressure on the accelerator pedal, the driver can use this switch to raise the engine's idle speed to roughly 1,100 rpm. The fast idle feature is automatically deactivated when the accelerator pedal is depressed or a gear is engaged. It can also be deactivated by pressing the switch again.

Notice:

When the fast idle is activated, a corresponding symbol appears on the instrument cluster's display screen.



Hazard warning flasher switch

This switch activates all of the turn signals on both sides of the vehicle regardless of the key's position in the ignition switch. The hazard warning flasher switch and the turn signal indicator lamps within the instrument cluster flash to indicate that the hazard warning flashers are operating.



Transmission fluid temperature warning lamp (top)

Lights up if the transmission fluid's temperature is too high

Notice:

Use the service brakes rather than the retarder to brake the vehicle until the transmission fluid returns to its normal temperature.

Notice:

If the transmission fluid temperature warning lamp does not go out, stop vehicle, shift transmission to neutral and run engine about 3 minutes at 1,200 - 1,500 rpm.

Notice:

If the transmission fluid fails to cool to an acceptable level, proceed to check the fluid level. If the level is satisfactory, park and secure the vehicle. Contact the nearest SETRA ServicePartner.



▷ For information on operation and safety, see the "Transmission control" chapter in the Operator's Manual.

Check transmission indicator lamp (bottom)

Lights up when ignition is switched on and goes out when the engine is running, provided that no malfunctions are present. It lights up whenever the transmission ECU detects a problem. It is therefore possible to continue using the transmission, but it is advisable to consult a SETRA ServicePartner for advice without delay. If the condition of the vehicle permits, the trip can be continued. Nevertheless, the electronic transmission control unit may initiate certain measures, such as restricting the transmission to one speed.



▷ For information on operation and safety, see the "Transmission control" chapter in the Operator's Manual.

Front axle kneeling switch (special equipment option)

This switch is available for operation when the ignition switch is "ON" and the parking brake is engaged. Press the bottom of the switch to lower the vehicle at the front axle and ease ingress and egress for passengers. Press the top of the switch to return the vehicle to its normal level.

Danger:

Never press the switch if persons are located in the immediate vicinity of the front entrance.

Danger:

Vehicle must remain stationary and not be moved when lowered to its kneeling position.

Notice:

A symbol appears in the instrument cluster's display screen to alert the driver whenever the vehicle is lowered. The side turn signals will also flash.



▷ For information on operation and safety, refer to the "Cockpit controls" chapter in the Operator's Manual.

Trailing axle lock switch

The trailing axle is locked in line with the drive axle when this switch is activated. When the trailing axle lock is engaged the LED in the switch lights up. The system automatically locks the trailing axle under the following conditions: when the speed of the vehicle exceeds 20 mph (32 km/h) or when reverse gear is selected. The system will automatically unlock the trailing axle once the vehicle speed drops below 15 mph (25 km/h) or when reverse gear is disengaged

Danger:

Never allow the vehicle to roll or coast backwards without first either engaging reverse gear or activating the axle lock at the switch. Failure to observe these precautions can result in damage to the trailing axle.

Notice:

The LED in the switch lights up when the axle lock is engaged.



▷ For information on operation and safety, refer to the "Cockpit controls" chapter in the Operator's Manual.

Trailing axle load transfer switch

Weight from the trailing axle is transferred to the drive axle when the switch is activated, provided that the vehicle speed is below 18 mph (30 km/h). The load is transferred back to the trailing axle when the switch is pressed again. An active axle-load transfer is indicated on the screen by a symbol and in the switch by the LED.



▷ For information on operation and safety, refer to the "Cockpit controls" chapter in the Operator's Manual.

Switch for switching off Electronic Stability Program (ESP)

This switch deactivates the ESP function. In the process, both the Electronic Stability Program (ESP) and the Traction Control System (TCS) are deactivated. This is indicated by the warning lamp in the instrument cluster lighting up continuously. The system automatically resumes its standard operating mode each time the ignition switch is turned off and then on again; you can also reset the system manually by pressing the switch again.



▷ For information on operation and safety, see the "Vehicle operation" chapter in the Operator's Manual.

Stop engine override button (refer to chapter on "Driver service and roadside repairs")

A special engine-protection routine is activated in response to major problems related to the power plant (inadequate oil pressure, excessive oil temperature, coolant temperature too high or engine coolant level too low, etc.). Should one of these problems arise, the "Stop engine" and "Check engine" lights will both come on, while engine power is reduced at the same time. 30 seconds after the "Stop engine" light comes on the engine will be shut down (even if the vehicle is still moving).

Danger:

If the "Stop engine override" switch is pressed within these 30 seconds, then the engine can be operated for a further 30 seconds (under potentially hazardous conditions at railroad crossings, in intersections, etc.).

Notice:

This process can be repeated as often as desired until the vehicle can be parked in a safe location.



Start regeneration switch

The regeneration start switch can be used to initiate regeneration in the AfterTreatment System (ATS) while the vehicle is stationary.

Notice:

If the soot load is low, stationary regeneration will not start and the engine speed will not ramp up.

Notice:

For additional information on operation, refer to the chapter "Vehicle operation - Stationary regeneration" in the Operator's Manual.



Brake pad wear indicator display for front (1) and drive (2) axles.

The indicator lamp on the instrument panel lights up when the brake pads on the front and/or the drive axle reach their wear limit.

Danger:

Immediately have the brake system checked and repaired as necessary by a SETRA ServicePartner.

Notice:

indicator lamp flashes to indicate sensor signal error or ruptured wire.



Brake pad wear indicator - trailing axle (3)

The indicator lamp on the instrument panel lights up when the brake pads on the trailing axle reach their wear limit.

Danger:

Immediately have the brake system checked and repaired as necessary by a SETRA ServicePartner.

Notice:

indicator lamp flashes to indicate sensor signal error or ruptured wire.



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Safety notes on driver's seat

Safety notes on driver's seat

The following information must always be observed:

Danger:

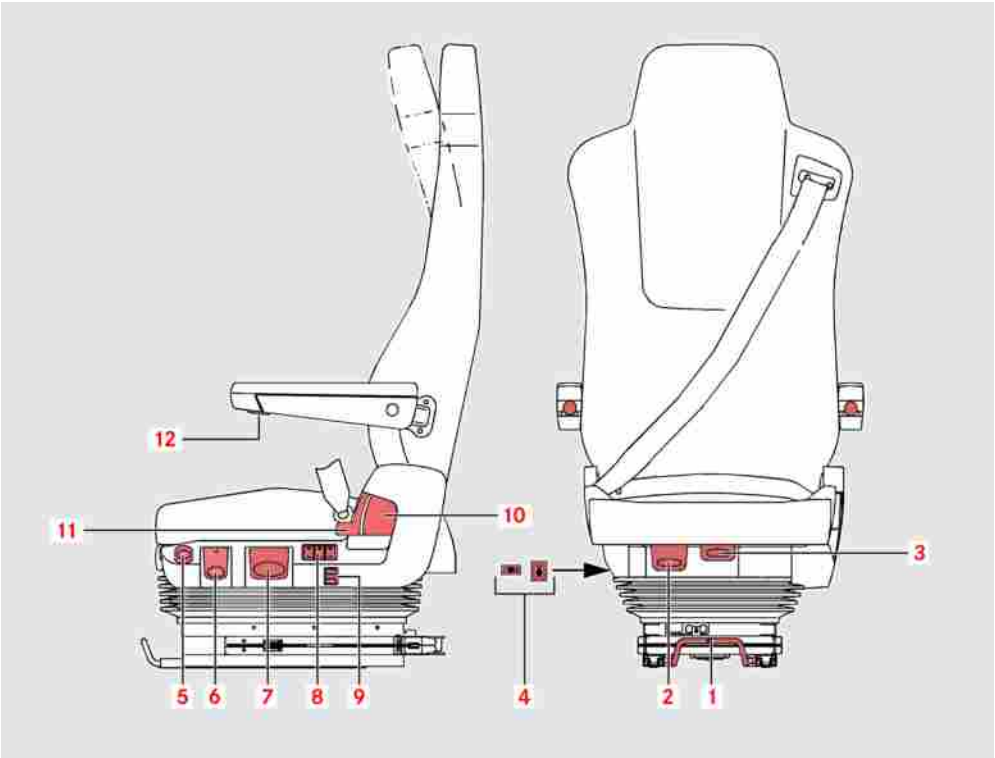
For traffic safety reasons, the driver's seat must never be adjusted while driving!

Notice:

The following descriptions only represent a brief overview of the operating elements. The included manufacturer's operating instructions must always be observed!

Operating elements of driver's seat ISRI 6832/872 and 6860/875

Operating elements of driver's seat ISRI 6832/872 and 6860/875



Operating elements of driver's seat ISRI 6832/872 and 6860/875

1 Driver's seat longitudinal adjustment

Notice:

Pull the stalk upward. The seat can now be moved in the longitudinal direction.

2 Tilt adjustment

Notice:

Pull up the handle. Change the tilt by loading and unloading the seat cushion in the front area.

3 Seat cushion height adjustment

Notice:

Pull up the handle and slide the seat cushion forward/back. Then allow the seat cushion to lock in place again.

4 Lowering

Notice:

Lower the seat by pressing the rocker. Move upward to the set height by pressing the rocker.

5 Shock absorber adjustment

Notice:

Handle up = minimum shock absorber force. Handle down = maximum shock absorber force.

6 Height adjustment

Notice:

Pull or push the handle and adjust the desired seat height.

7 Lumbar support

Notice:

Press button to fill and vent the respective air chamber

8 Backrest adjustment

Notice:

Pull up the handle and move the backrest into the desired position.

9 Shoulder adjustment

Notice:

Pull up the handle and move the upper half of the backrest into the desired position.

10 Arm rests

Notice:

The tilt can be steplessly adjusted with the knurled knob.

Using the driver's seat belt

Notice:

The installed driver's seat features an integrated belt system. The user instructions therefore only apply to belts installed in the manufacturer's plant.

Notice:

Observe the regulations of the specific country.

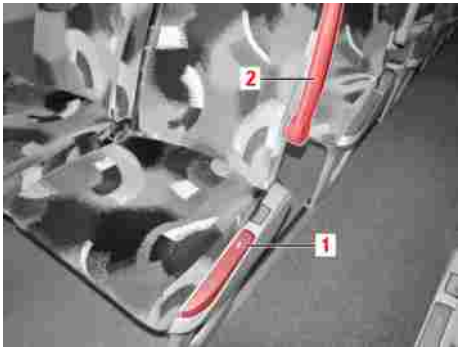
- Putting on the seat belt: Lay the seat belt untwisted and taut across your lap and shoulder and audibly engage the seat belt buckle when closing.

Danger:

The seat belt must not lie on the neck, be pinched or scrape against sharp edges. It should lie as close as possible to the body; avoid bulky clothing. Do not place the seat belt across firm or fragile objects in pockets. Retension the seat belt across the shoulder often.

- Releasing the seat belt: Press the red button in the belt buckle, then guide the belt as it retracts into the inertia reel.

Adjusting passenger seats



M91.00-0050-71

- Adjusting backrest on aisle side: Press the button (1) down and simultaneously push the backrest backwards with your torso. Release the button (1) when the backrest reaches the desired position. The backrest locks in place immediately. On window side: Pull the gray lever between the seat surface and the vehicle wall to the rear. At the same time, push the backrest with your torso. Release the lever when the backrest reaches the desired position.

Numerous backrest positions are available between the standard vertical position and the tilted limit position. You can choose any of these positions.

- The armrest (2) can be folded down or up.

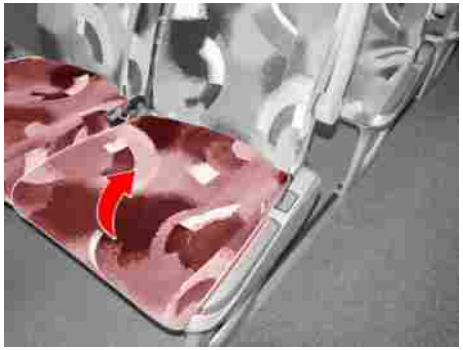
Passenger compartment seat belts

- Putting on the seat belt: Ensure that the belt is taut and untwisted while pulling it across your torso, then lock the buckle, listening for the click that indicates that the detent mechanism is securely engaged.

Notice:

Each seat belt may be used to secure one person only.

Removing seat cushion (new seat generation)



M91.00-0051-71

- To remove the seat cushion, grasp the seat cushion at the front with both hands and pull it upward. Then pull the cushion out of the guide in the driving direction and remove it upward.

Installing seat cushions

- Slightly raise the seat cushion at the front and push it into the guide up to the stop at the rear. Press the seat cushion downward at the front until it audibly engages.

Theater seats with quick-release attachments (special equipment option)

The quick-release attachment mechanisms on the seat supports are intended to be operated exclusively by the vehicle driver (or other authorized personnel).

Danger:

Passenger use of the control lever is strictly prohibited.

Danger:

The lever should never be operated unless the vehicle is completely stationary. Never use the lever or allow it to be used while the vehicle is moving.

The levers must be in their "open" position before the theater seats can be adjusted.

Danger:

When sliding the seats to adjust them, always ensure that they are not occupied.

Notice:

During this operation, the levers at the bottoms of the seat supports must always be in their uppermost position.

The safety pin must be pulled outward for the lever to be opened.

Notice:

Then you can release the mechanism by swinging the lever upward. It is not possible to swing the lever to the "open" position without releasing the safety pin first.

Always ensure that the levers are closed before allowing passengers to sit in the theater seats.

Danger:

The levers on the seat bases must always be in their lowered positions before passengers are allowed to sit in the seats.

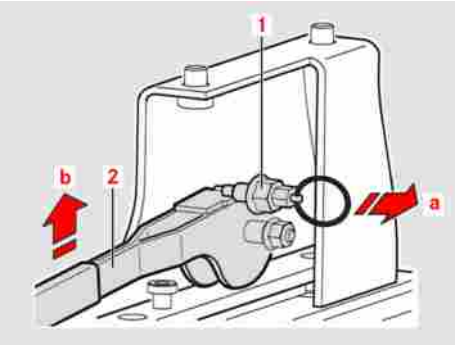
Danger:

When closing the engagement mechanism, maintain downward pressure until the safety pin engages. The lever must be down with the pin engaged for the seats to be secured in the vehicle.

Danger:

The seats can be considered to be securely mounted only after the safety pins have engaged, and passengers should never be allowed to occupy these seats if they have not.

Instructions for theater seats with quick-release attachment mechanisms (special equipment option)



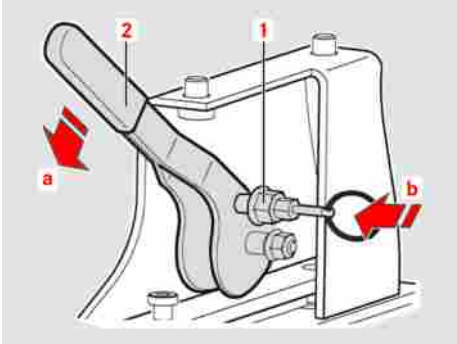
M91_00-0024-71

- To release the seat frame, pull the safety pin (1) outward (a), then swivel the lever (2) upward (b).

Danger:

Always observe all safety precautions contained in the previous chapter, "General information/Safety precautions."

You can now slide the seats to adjust them.



M91_00-0025-71

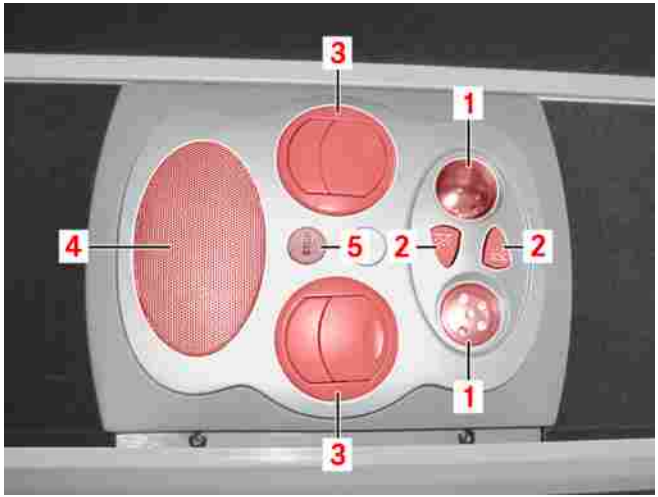
- To resecure the seats following adjustment, press the lever (2) back down (a).

Danger:

The safety pin (1) should engage automatically.

Passenger seat service set

Passenger seat service set



1 Reading lamp
2 Reading lamp switch
3 Air outlet
4 Speaker
5 Stop request button

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Allison automatic transmission

Danger:

Should it be necessary to leave the vehicle - even briefly - while the engine remains running, ensure that the transmission is in N (neutral) and the parking brake is engaged, then position wheel chocks for extra security. Never leave the vehicle with the engine running unless no passengers are in the passenger compartment and the vehicle is secured against unauthorized entry.

▷ Safety and operating information: see also manufacturer's operating instructions, "Allison World Transmission Operator's Manual" (No.: SA2995A).



M68.00-0378-71

Important information on driving:

Danger:

Because no engine braking is available in neutral, you should never allow the vehicle to roll while "N" is selected. In addition, serious damage to the transmission could result. Avoid rolling in neutral (N) to prevent personal injury and/or property damage.

Danger:

Before shifting from a forward gear to reverse or vice versa, always bring the vehicle to a complete stop.

Danger:

Use the switch in the instrument panel to deactivate the fast idle function before attempting to shift from "N" (neutral) to "D" (drive) or "R" (reverse). It is not possible to engage "D" or "R" with the engine running in its fast idle mode. To engage one of these drive ranges from neutral, first return the selector lever to "N," then reduce the engine speed to normal idle. You can now engage the desired range. The indicator lamp in the display panel will also flash whenever the interlock intervenes to prevent engagement of "D" or "R."

Danger:

Never downshift for additional engine braking while traveling on slippery road surfaces. This could cause the drive wheels to break into a skid and reduce your control over the vehicle. Your vehicle's ABS will not prevent this type of loss of control.

Danger:

The transmission is equipped with a driving range lock that prevents upshifting beyond the programmed gear. To exploit engine braking while descending hills, use the arrow keys to select a lower range. The transmission may still upshift to a higher gear if the engine is in danger of exceeding the rpm at which the governor intervenes. This reduces the engine braking effect and control over the vehicle may be lost. To prevent exceeding the governed speed in the selected lower gear, apply the service brake and the retarder.

Danger:

To rock the vehicle out of mud, sand or deep snow, apply gentle pressure to the accelerator with "D" engaged (no full throttle). If the vehicle does not move further forward, apply and maintain pressure on the service brake. Let the engine return to idle before selecting "R" (reverse). Apply gentle pressure to the accelerator pedal to back the vehicle until it stops moving. Apply the service brake again and hold; allow the engine to idle. Repeat this procedure several times. Never shift from N into a driving range or from forward to reverse with the engine running above idle.

Notice:

The Allison automatic transmission features adaptive electronic control. The electronic control circuitry monitors the operator's driving patterns and adapts the transmission's response accordingly. The initial gear changes may therefore seem a bit "abrupt," but this will change after the transmission has been able to execute several shifts.

Fluid level check on the Allison automatic transmission (via display)

Fluid level check on the Allison automatic transmission (via display)

Danger:

If the fluid level is too low or too high, the transmission will overheat and fail to shift correctly. If this condition is not rectified, then the transmission may be damaged.

Notice:

The Allison automatic transmission installed on this vehicle is equipped with an electronic fluid level sensor, making it possible to monitor the automatic transmission's fluid level in the display of the Allison control module in the instrument panel.

Notice:

The system automatically compensates for variations in transmission fluid temperature between 140 °F and 220 °F (60-104 °C) based on data from the temperature sensor. At temperatures below 140 °F (60 °C) or over 220 °F (104 °C), the display is invalid.

- ▶ Park the vehicle on a level surface, shift to "N" (neutral) and apply the parking brake.
- ▶ Wait until the following conditions are satisfied.

Notice:

The fluid temperature must be greater than 140 °F (60 °C) and below 220 °F (104 °C).

Notice:

The vehicle should be stationary, with the parking brake engaged and the engine running with the transmission in “N” (neutral).

Notice:

The vehicle must be stationary for about 2 minutes to allow the fluid to settle.



M68.00-0378-71

► Press the "up" and "down" arrow keys simultaneously.

Notice:

The display flashes and runs through the digits 8, 7, 6....to 1 until the level check can be carried out. Only then can a correct measurement be made.

► Interpreting the display

Notice:

If the fluid level is OK, then "OL" (fluid level) and then "OK" are displayed.

Notice:

If the fluid level is too low, "OL" (fluid level) and then "LO" (low fluid level) are displayed. The number of quarts (liters) by which the fluid level is too low is then displayed. Example: "OL" "LO" "02" signifies that you need to add 2 quarts (liters) of transmission fluid in order to bring it to the correct level.

Notice:

Immediately have the oil topped up to the correct level at an authorized specialized workshop.

Caution:

Only use oil in accordance with the Allison Transmission TES-295 specifications.

Notice:

If the fluid level is too high, "OL" (fluid level) and then "HI" (high fluid level) are displayed. The number of quarts (liters) by which the fluid level is too high is then displayed. Example: "OL" "HI" "01" means that you should drain 1 quart (liter) of fluid from the transmission to bring it to the correct level.

Notice:

If "OL" (fluid level) and then "- -" and a number are displayed, then the conditions do not allow a proper level display or there is a malfunction.

"OL" "- -" "0X": Waiting period too short

"OL" "- -" "50": Engine speed too low

"OL" "- -" "59": Engine speed too high

"OL" "- -" "65": Automatic transmission not in "N" (neutral)

"OL" "- -" "70": Fluid temperature too low

"OL" "- -" "79": Fluid temperature too high

"OL" "- -" "89": Transmission output shaft rotating

"OL" "- -" "95": Fluid level sensor defective

► To exit the fluid level display, press any driving range button on the Allison control panel.

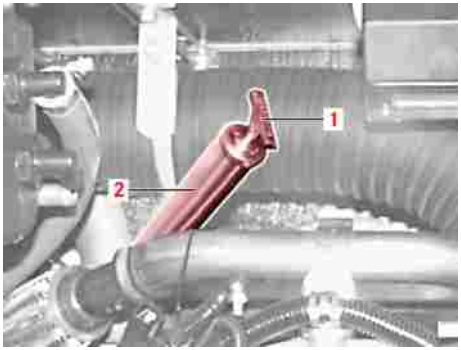
Manual fluid level check for Allison automatic transmission (cold test)

Danger:

Failure to observe the following precautions could result in sudden and unexpected vehicle movement. During the fluid level check, the automatic transmission must be in "N" (neutral), the parking brake engaged and the wheels secured by chocks.

Danger:

Clean the area around the upper end of the filler neck before pulling out the fluid dipstick. Dirt and foreign matter should never be allowed to enter the transmission's fluid circuits, as sticking valves, excessive wear of transmission components and obstructions in fluid passages could result.



M27_00-0025-01

► Performing the cold test

Notice:

The cold test is used to determine whether enough fluid is in the transmission for safe operation until the test at operating temperature can be performed.

Danger:

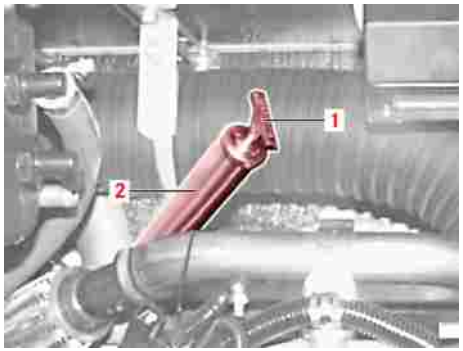
Never start the engine until you are sure that the transmission contains fluid. Pull out the transmission fluid dipstick (1) and check whether the static level is near the "HOT FULL" graduation.

- You can carry out a cold level check after starting the engine for the first time provided that you are certain that at least some fluid is in the transmission.

Notice:

The fluid temperature is then typically between 60 °F (16 °C) and 120 °F (49 °C).

- After the engine has been stationary for an extended period, park the vehicle on a level surface and apply the parking brake.
- Start the engine and allow it to idle for about 1 minute (500-800 rpm) in neutral ("N"). Select "D" (drive) and then "R" (reverse) to discharge air from the system. Then shift back to "N" (neutral) and allow engine to idle.



M27_00-0025-01

- Check the fluid level after cleaning the dipstick (1).

Notice:

The fluid level is OK if the level is in the "COLD RUN" range. Otherwise add or drain fluid through the filler tube (2) until the level is in the "COLD RUN" range.

- Carry out the warm fluid level test at the first opportunity once the engine has warmed to its normal operating temperature (160-200 °F (71-93 °C)).

Manual fluid level check on Allison automatic transmission (test at operating temperature)

Danger:

Do not use the transmission for any extended period of time without checking the fluid level at normal operating temperature. Extended operation at the wrong fluid level can damage the transmission.

Danger:

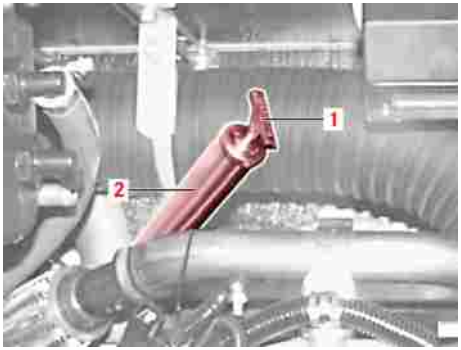
A precise reading of fluid level is possible only if the engine is running at idle (500-800 rpm), the transmission is in "N" (neutral), the transmission fluid is at the correct temperature and the vehicle is parked on a level surface.

Manual fluid level check on Allison automatic transmission (test at operating temperature)

Notice:

To obtain an accurate reading of its level, the transmission fluid must first be allowed to warm to its normal operating temperature.

- Verify that the transmission fluid has reached its normal operating temperature (160-200 °F (71-93 °C)). The transmission should have run under load for at least 1 hour beforehand.
- Park the vehicle on a level surface and shift to "N" (neutral). Apply the parking brake and allow the engine to idle (500-800 rpm).



M27_00-0025-01

- Wipe the dipstick (1), the insert and remove it again to check the fluid level.

Notice:

A fluid level within the "HOT RUN" range on the dipstick (1) is suitable for safe operation.

Notice:

If the fluid level does not lie within the "HOT RUN" range, then add or drain transmission fluid through the filler tube (2) to adjust it to the correct level.

Danger:

Check the fluid level often and make sure that the fluid level remains constant. If you note substantial variations between individual readings, ensure that the transmission vent is clean and unobstructed. If even greater differences are found, contact the nearest SETRA ServicePartner or Allison representative.

Allison automatic transmission control panel

Functions:

- Switch "R" (reverse gear)
- Switch "N" (neutral).
- Switch "D"
- Arrow keys
- "MODE" Switch
- LED with the MODE switch
- Digital display

Switch "R" (reverse gear)

This switch shifts to reverse gear. The vehicle must be stationary and the engine running at standard idle speed.

Danger:

Before shifting from a forward gear to reverse or vice versa, always bring the vehicle to a complete stop.

Notice:

When the reverse gear is engaged, an "R" appears in the display of the Allison control panel.

Switch "N" (neutral).

Select this position when starting the engine and when allowing the engine to idle for extended periods. It is automatically selected by the control unit when the engine is started.

Danger:

There is no "PARK" position on the electronic transmission shift control selector. Therefore, you should always place the shift control selector in the "N" (neutral) position and always apply the parking brake to hold the coach when leaving it unattended.

Danger:

Because no engine braking is available in neutral, you should never allow the vehicle to roll while "N" is selected. In addition, serious damage to the transmission may result. Avoid rolling in neutral (N) to prevent personal injury and/or property damage.

Danger:

Always select "N" (neutral) before shutting down the engine.

Notice:

An "N" appears on the control panel display as soon as the transmission returns to neutral

Switch "D"

The vehicle automatically starts off in first gear when "D" is selected. As the speed increases, the transmission automatically upshifts to a higher gear. As the vehicle decelerates, the transmission automatically downshifts. The display in the Allison control panel indicates the highest available gear.

Arrow keys

Occasionally road conditions, vehicle cargo or traffic conditions require limiting automatic shifts for operation in the lower ranges only. These ranges also offer a better engine braking effect (the lower the gear, the greater the engine braking effect).

Use the arrow keys to select these forward gear ranges. The highest available gear is shown in the display.

Danger:

When you select a lower gear, under some conditions the transmission may delay the downshift until the vehicle has slowed sufficiently to allow excecution of the desired shift.

Danger:

The transmission may respond to acceleration on downhill stretches by automatically upshifting beyond the selected gear and into a higher gear to prevent the engine from revving beyond the governor-intervention speed. This reduces the engine braking effect and control over the vehicle may be lost. To avoid exceeding the governed speed in the selected low gear, apply the service brakes and other deceleration devices (such as the retarder).

Danger:

To operate the vehicle in slush or deep snow, when maneuvering space is limited, and on steep uphill and downhill grades, press the arrow key down until "1" appears in the control panel display. This gear furnishes maximum effective torque as well as the highest level of engine braking.

Notice:

The arrow keys can also be used to activate an electronic fluid level check on the Allison automatic transmission (see "Fluid level check on the Allison automatic transmission (via display)".

"MODE" Switch

Use this switch to change between two different transmission modes.

One transmission mode shifts through all 6 gears, The other transmission program also uses all six gears, but executes upshifts at higher engine speeds.

The MODE switch is also used to display stored malfunctions using the on-board diagnosis system.

LED with the MODE switch

This LED lights up when the second transmission program is activated.

It also lights up when data from the on-board diagnosis system are being processed if the displayed error is currently active.

Digital display

Shows selector position registered by the ECU or current transmission range when normal shifts cannot be executed owing to malfunction.

Danger:

Digital display flashing - indicates that the requested shift is currently unavailable but will be executed as soon as conditions allow (for example, engine speed or vehicle speed changes within a specified limit). The flashing display shows the range that is currently engaged. You may need to attempt your gear selection again once the conditions preventing the desired gear change are no longer present.

Danger:

Digital display blank - no power to the shift selector or the data link has failed.

Danger:

Digital display shows "cat's eye" - Communications with the ECU have been interrupted.

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Operating instructions: Air conditioning

Notice:

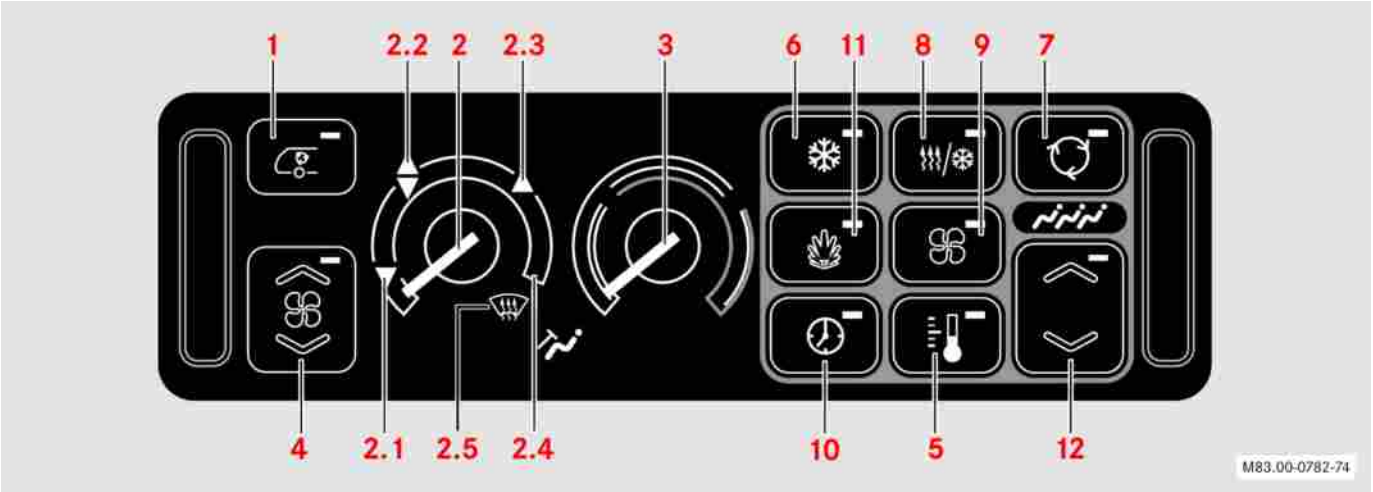
To ensure optimal performance from the controller in the heating and cooling mode, always ensure that the driver's window remains closed while it is in operation.

Notice:

Ensure that the openings below the spare tire in the forward compartment are never closed or obstructed by objects of any kind, as this could prevent the heater, ventilation and air conditioning systems from providing efficient and trouble-free performance.

Heating, ventilation, air conditioning (HVAC) control panel

Heating, ventilation, air conditioning (HVAC) control panel



Notice:
Turn the ignition switch on before using.

1 Recirculated/fresh air switch in the cockpit

Notice:
(Integrated LED lights up when recirculated-air mode is active - LED goes out for fresh air)

2 Rotary air-distribution switch for cockpit

Notice:
Air emerges from the swiveling air vents in the instrument panel (driver's position in cockpit) as well as on the other side (replacement driver's position) at the front of the vehicle regardless of the rotary air-distribution switch's position. The sliding adjuster on the vent allows manual regulation of airflow as desired.

3 Temperature control switch for cockpit

4 Fan speed switch for cockpit ventilation

5 Temperature control switch for the passenger compartment

Notice:
Pressing and holding this switch for longer than 2 seconds will automatically set system to 70 °F (21 °C).

6 Air conditioner standby mode "ON/OFF" switch

Notice:
(LED lights up with A/C in standby mode)

Notice:
The roof hatches should be closed to ensure optimal cooling.

7 Recirculated-air switch for cockpit and passenger compartment (use when driving through tunnels, etc.): The ventilation systems for the driver's cockpit area and passenger compartment both switch to operation in the recirculated-air mode.

Notice:
The LED integrated in the switch lights up.

8 Reheat switch (use to dehumidify the interior of the coach): The air conditioning system switches to operation in its controlled heat mode. In this mode recirculated air or a reduced flow of outside air is cooled in the air conditioner's evaporator unit before being rewarmed in the heater core. In this mode moisture within the incoming air is condensed and removed to purge excess humidity from the ventilation air entering the passenger compartment.

Notice:

The LED integrated in the switch lights up

9 Manual fan speed adjustment switch (passenger compartment)

10 Timer preset switch:

Notice:

See section on setting the timer

Danger:

Always carefully observe the safety precautions for using the auxiliary heater described in the Operator's Manual.

11 Auxiliary heater "ON/OFF" switch: The integral LED lights up to indicate that the auxiliary heater is ready for operation. The auxiliary heater is available for operation only when the outside temperature is at least 43 °F (6° C) below the programmed temperature (passenger compartment).

12 Toggle switch for selecting operational parameters and functions for switches at Pos. 5/9/10 :

Manual control of cockpit fan speed



M83_00-0783-71

► Press the switch (4) on the control panel

Notice:

The LED in the switch (4) starts to flash.



M54.00-1669-71

The fan speed currently set can be read off with the bar graphs (1) in the display.



M54.00-1689-71

- The switch (4) can now be used to reduce (-) or increase (+) the fan speed.

Notice:

If switch (4) is not pressed within 10 sec. or another switch is used, then the display on the screen goes out and the LED in the switch (4) stops flashing.

If the symbol (1) appears in the display of the instrument cluster when the fan speed is reduced, then a minimum fan speed is required. The fan speed in the driver's cockpit cannot be decreased below 50%, or 60% at a coolant temperature above 140°F (60°C).

Notice:

During the transition from the AC mode to the heating mode (anti-fog mode), the fan must operate at or above a specified minimum speed to support controlled evaporation of condensation that has collected on the heater core. This prevents sudden accumulation of condensation on the windshield and side windows (especially in the area around the cockpit).

Notice:

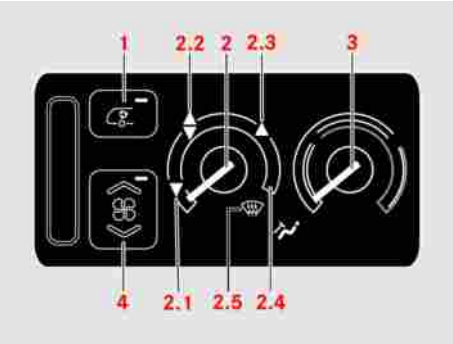
This transition (anti-fog mode) can take 40 - 60 minutes, depending on the coolant temperature.



When the system is in the anti-fog mode, this pictograph is shown in the

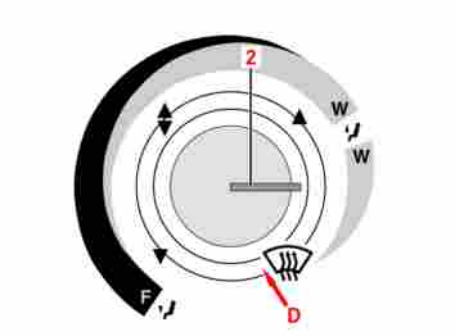
display in the "Operational notices" submenu.

Adjusting air distribution pattern for cockpit



M83_00-0783-71

- Use the rotary knob (2) on the control panel to select from among an infinitely-variable range of air-distribution patterns for the cockpit.



M83_00-0328-01

- Turn the knob (2) to the desired position.

Notice:

Footwell (F), windshield (W), defrost (D)

- Setting the knob (2) to position "D" activates the defroster.

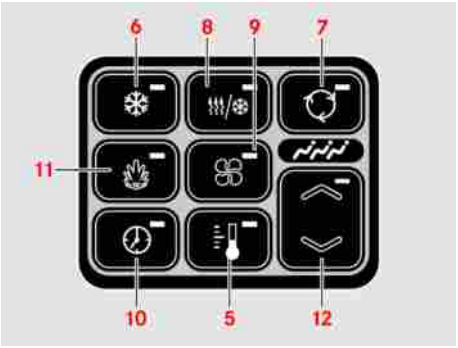
Notice:

In defroster mode the full air flow is directed onto the windshield. The cockpit fan operates at maximum output.



This symbol appears in the instrument cluster display panel.

Preselecting passenger compartment temperature



M83_00-0117-01

- Press switch (5) on the control unit

  The LED in the switch (12) starts to flash.



M54.00-1671-71

The desired value currently set can be read off with the bar graphs in the display.

- The operator can now use the rocker switch (12) (+ or -) to adjust the temperature specified for the passenger compartment.

Manually regulating the fan speed in the passenger compartment

Notice:

The switch (12) can be used to manually increase or reduce the temperature as desired. Adjust the temperature setting in small increments only.

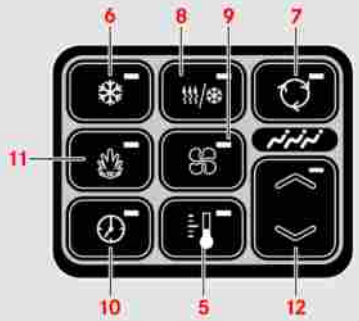
Notice:

If switch (12) is not pressed within 3 sec. or another switch is used, the display in the screen goes out and the LED in the switch no longer flashes. The system stores the newly selected setting.

Notice:

The system automatically selects the ideal temperature setting if the switch (5) is pressed for longer than 2 sec.

Manually regulating the fan speed in the passenger compartment



M83_00-0117-01

► Press switch (9) on the control unit

Notice:

The heater / ventilation / AC control system always selects the ideal fan speed for the passenger compartment. We recommend that manual adjustments of fan speed be limited to exceptional or unusual conditions (for night-time operation, etc.).



M54.00-1672-71

When switch (9) is pressed, the LED in switch (12) flashes. The bar graphs in the instrument cluster display panel indicate the current fan speed.

► The roof fan's speed can now be adjusted between 20 - 100% by pressing the rocker switch (12) (+ or -).

Notice:

The automatic fan speed control is no longer active and the roof fan speed remains at the preset level.

Notice:

The fan speed is set to AUTO if the switch (9) remains depressed for longer than 2 seconds. The LED in switch (9) will go out.

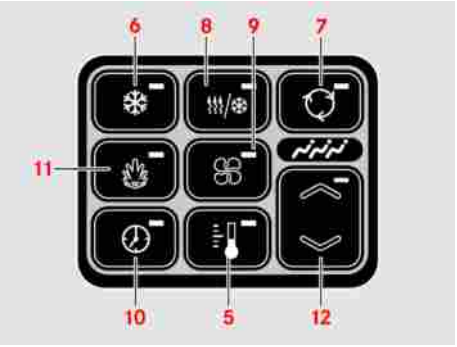
Notice:

If switch (12) is not pressed within 10 sec. or another switch is used, then the display in the screen goes out and the LEDs in the switch (12) stop flashing.

Notice:

The system will resume controlling the fan speed in its automatic mode when the ignition switch is subsequently turned OFF and then ON again.

Activating air conditioning



M83_00-0117-01

▶ Press switch (6) on the control unit



The integral LEDs light up to confirm that the system is ready for operation. In addition, this symbol also appears in the display when the air conditioner is activated.

Notice:

The air conditioning system is switched on automatically after 11 sec. depending on the selected temperature and the external and internal temperatures.

Notice:

The cockpit ventilation fan operates at a min. speed of 20% whenever the air conditioner is on.

Notice:

The most recently selected settings remain stored after ignition switch OFF - ON.

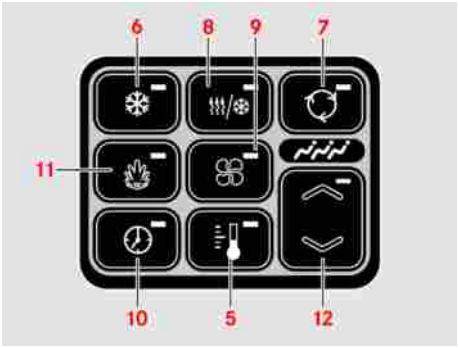
Notice:

If the air conditioning system should fail to furnish adequate cooling, although no malfunction is indicated in the display panel, you can deactivate the air conditioning standby mode to activate the ventilation program.



If this symbol appears in the display, the AC mode is not possible over the temperature switch-on conditions.

Switching on the emergency ventilation program



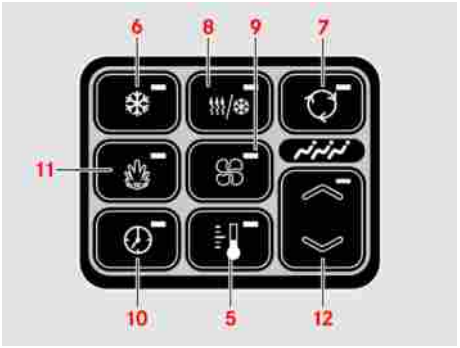
M83_00-0117-01

- Press the switch (6) to deactivate the air conditioning system's standby mode. The LED in the switch does not light up.

Notice:

If the air conditioning system should fail to furnish adequate cooling, although no malfunction is being indicated in the display panel, you can deactivate the air conditioning standby mode to activate the emergency ventilation program.

Activating recirculated-air mode for cockpit/passenger compartment



M83_00-0117-01

- Press switch (7) on the control unit.

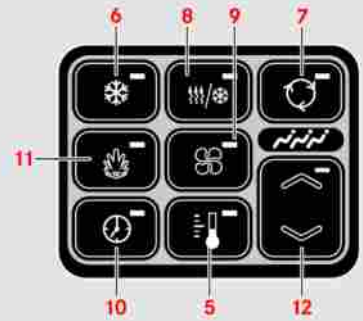


This symbol appears in the instrument cluster display panel. The LED integrated in the switch (7) lights up.

Notice:

Intended for use when driving in tunnels, etc. The period for which the "recirculated-air" mode remains active is limited to approximately 10 min. The operator can use the switch (1) to revert to the fresh-air mode for the cockpit while simultaneously allowing the passenger compartment to remain in the "recirculated-air" mode. Switch off by pressing switch (7) (LED off) again.

Switching on the reheat function



M83_00-0117-01

▶ Press switch (8) on the control unit

Notice:

In this mode recirculated air or a reduced flow of outside air is cooled in the air conditioner's evaporator unit before being rewarmed in the heater core. Moisture within the incoming air is condensed and removed to purge excess humidity from the ventilation air entering the passenger compartment or cockpit.

The LED integrated in switch lights up.

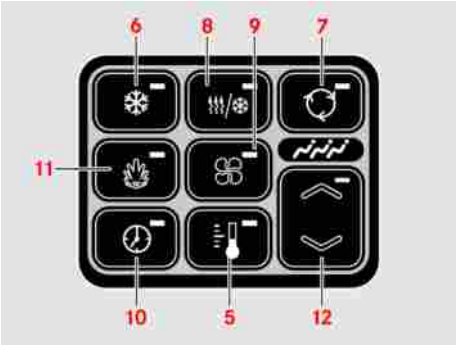
Notice:

The reheat mode is available only at outside temperatures greater than approx. 53 °F (12 °C) and its operation is limited to about 30 minutes. Switch off by pressing the "Reheat" switch again (LED OFF).



The "temperature lockout" symbol will appear in the display panel whenever the current temperature is outside the range for active operation of the air conditioning system.

Switching on the auxiliary heater



M83_00-0117-01

► Press switch (11) on the control panel

Danger:

Always switch off the auxiliary heater in refueling areas and at filling stations. Never use the auxiliary heater in enclosed areas or within buildings. Risk of explosion from fuel vapors, risk of poisoning from inhalation of combustion gas and risk of injury from burns during or after heater operation.

Danger:

Do not park the vehicle over combustible materials (high grass, etc.) while the auxiliary heater is in operation. The high temperature of the auxiliary heater's exhaust gases means that they pose a fire hazard when they emerge from the exhaust pipe during heater operation.

Notice:

The integral LED lights up to indicate that the auxiliary heater is ready for operation. The automatic control system must release the auxiliary heater for operation before it can enter its standby mode.

Notice:

With the ignition switch OFF, the auxiliary heater can be switched on manually using the switch (11) on the control panel. The integral LED in switch (11) lights up and the auxiliary heater is activated. The auxiliary heater is switched off and the LED in switch (11) goes out either when the switch is pressed again, or automatically after 30 minutes.



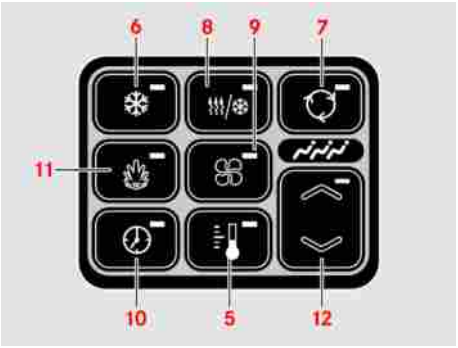
Once the auxiliary heater has been switched on (ignition switch ON), after a brief delay (roughly 20 seconds) the adjacent symbol will appear in the display panel to confirm that the auxiliary heater's burner unit is operating ("burner active" display). The "auxiliary heater not installed" symbol appears when the switch (11) is pressed on coaches not equipped with an auxiliary heater system. The most recently selected settings re-

main stored after ignition switch OFF - ON.



The "temperature lockout" symbol will appear in the display panel whenever the current temperature is outside the range specified for active heater operation.

Setting auxiliary heater running times



M83_00-0117-01

► Press and hold the switch (10) until the timer preset menu appears in the display. Use the rocker switch (12) (+ or -) to select the desired activation times.



M54.00-1673-71

Display in timer preset menu

Setting auxiliary heater running times



M54.00-1690-71

- Apply brief pressure to the switch (10) to access the timer set mode. A bar appears below the time display (hours). The hour display can now be adjusted using the rocker switch (12). (Switch (10) can be used to adjust minutes if it is not necessary to correct the hours).



M54.00-1691-71

- The minutes display can be set with switch (12) when the bar appears under the minutes. (Switch (10) can be used to adjust weekdays if it is not necessary to correct the minutes).



M54.00-1692-71

- Use switch (10) to select the correct day of the week and then rocker switch (12) to save or scroll back. (The weekday is enabled if it is shown in green. Weekdays displayed in white are not enabled).

Notice:

The changes are saved when switch (10) is pressed at the last day of the week (Sunday) and the display automatically returns to the setting mode.

Notice:

Use switch (12) in the setting mode to select the next program (P1, P2, P3).

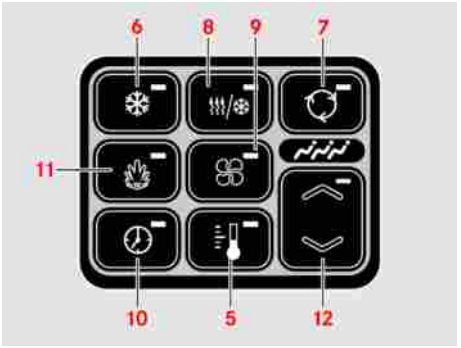
Activating the programmed running time for the auxiliary heater

Danger:

Always switch off the auxiliary heater in refueling areas and at filling stations. Never use the auxiliary heater in enclosed areas or within buildings. Risk of explosion from fuel vapors, risk of poisoning from inhalation of combustion gas and risk of injury from burns during or after heater operation.

Danger:

Do not park the vehicle over combustible materials (high grass, etc.) while the auxiliary heater is in operation. Danger of fire from high exhaust gas temperatures at the auxiliary heater's exhaust pipe during heater operation.



M83_00-0117-01

► Briefly press the switch (10) and then select the desired memory sector (P1, P2 or P3) with the switch (12).



M54.00-1692-71

Display during activation of running times.

► Confirm your selection by pressing switch (10).

Notice:

The integral LED in the switch (10) indicates when a running time is activated. Remains on continuously with ignition switch ON. Flashes when ignition switch is turned to OFF.

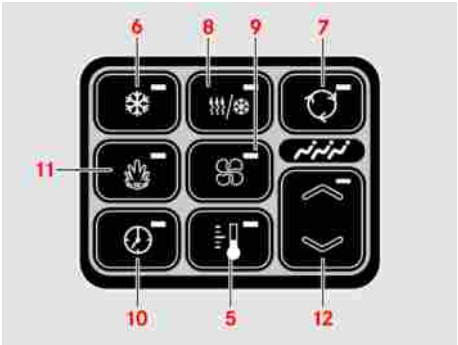
Canceling preset activation time

► Briefly press the switch (10) and select the menu item "OFF" with the switch (12). Confirm the selection by pressing the switch (10).

Notice:

The integral LED in switch (10) goes out. Deactivation is possible only with the ignition switch ON.

Programming auxiliary heater duty cycles



M83_00-0117-01

► Maintain pressure on switch (10) until the timer preset menu appears in the display.



M54.00-1673-71

Display in timer menu

► Press switch (12) downward until the running time menu appears in the display.



M54.00-1678-71

► Briefly press the switch (10) to display the adjustment mode. The running time can now be set in the range of 10-120 minutes with the rocker switch (12). Confirm the change by pressing switch (10).

Notice:

The auxiliary heater's operating period is programmed once and then applies to all activation times (P1, P2, P3).

Notice:

We recommend setting the running time to about 30 to 40 minutes. Longer running times place a greater load on the vehicle's batteries.



M54.00-1679-71

Obstruction sensor (reversing) when closing the door 198
Finger/entrapment protection when doors are opening 198
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Unlocking the luggage compartment doors using the switches on control panel 199
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Emergency exit window 201

Obstruction sensor (reversing) when closing the door

The finger/entrapment protection is activated if a person or an object blocks the door leaf during the closing phase.

The door valve is switched over to "Open".

Danger:

If the door button of Door 1 is pressed continually, then it is possible to bypass the reversal - NO finger/entrapment protection! After the door button is released, the finger/entrapment protection is reactivated!

Finger/entrapment protection when doors are opening

.

Danger:

If an object or a person is trapped during the opening process, then the door valve can be switched over in the closing direction again by pressing the door button again! The door system can also be depressurized and therefore immediately deenergized by actuating the emergency valve.

Operation and malfunction displays - Doors

Emergency valve open



This symbol appears when the emergency valve is opened (no pneumatic pressure at door).

Notice:

It appears when the inside or outside emergency valve is used to open the entry door.

Door malfunction stop message



When this symbol appears while the coach is underway it indicates a serious malfunction in the door. Simultaneous-

ly a condition RED malfunction warning appears and the warning buzzer sounds.

Danger:

Stop the coach immediately. (Note road and traffic conditions.) The coach must not be moved until this malfunction is repaired. Have the doors checked immediately by a SETRA ServicePartner.

Door malfunction warning



This malfunction message appears when the door-control system's compressed-air supply is too low. Start the coach and build up the air pressure. It also appears when the power to a door is cut off (finger jam protection in the opening direction). Press the cockpit-mounted switch again to return the cockpit door to operational status. If these measures do not cause the display to go out, have the door system checked by a SETRA ServicePartner.

Unlocking the luggage compartment doors using the switches on control panel



M68_00-0093-01

- Unlock the left luggage compartment doors using switch (24) and the right ones using switch (25).

  The left or right luggage compartment doors can be opened, the LEDs in switches (24) or (25) light up when the luggage compartment doors are unlocked.

Notice:

Operation is possible only when sufficient pressure is present in the pneumatic system.

Notice:

If the vehicle is equipped with a wheelchair lift (special equipment option), then the bottom and top lift doors are unlocked and locked with the right luggage compartment doors.

Notice:

If the bottom lift door is open, then the luggage compartment door cannot be opened before the lift door, since the latter is automatically locked. If the luggage compartment door is opened before the lift door, then the bottom lift door cannot be opened, since the automatic locking acts on the lift door. This applies only to vehicles with lifts installed at the center, not in the rear.

Operation and malfunction displays - Central locking system

Luggage compartment door open



This symbol appears on the screen if one or more luggage compartment doors or service-access doors are not closed correctly.

Danger:

Before starting off, always perform a visual inspection to verify that all luggage compartment doors and service-access doors are securely closed.

Wheelchair lift door open (special equipment option)



This symbol appears on the screen in combination with a red warning when the bottom or top lift door (special equipment option) is not securely closed. At the same time a warning buzzer sounds at the lift door.

Danger:

Before starting off perform a visual inspection to confirm that the bottom and top lift doors are correctly closed.

Emergency exit window



M54.00-1693-71

- Provided that the ignition switch is ON, this symbol appears in the instrument cluster's display panel when an emergency exit window is opened. It is accompanied by a "condition red" emergency warning.

Danger:

If the vehicle is in motion, bring it to a stop (watch traffic). If there is no emergency, close the emergency exit window again. Gently swivel the window out and allow it to fall. The symbol in the display then goes out.

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Chemical toilet

Functions:

- Tanks
- Filling fresh water tank
- Basic filling of the chemical lavatory
- Emptying waste holding tank 1

Tanks

Three different liquid tanks are installed for operating the chemical toilet:

Notice:

A fresh water tank for the basic filling of the chemical lavatory (installed at the rear wall of the lavatory).

Notice:

A tank containing the chemical-water mixture (waste holding tank 1 - installed below the toilet seat).

Notice:

A waste holding tank that can receive the content of the tank with the chemical-water mixture twice (waste holding tank 2 - installed under the lavatory).

Filling fresh water tank

The fresh water tank (approx. 13.5 gallons (51 liters)) can be filled with fresh water through a connection at the top right in the engine compartment.

Basic filling of the chemical lavatory

The tank is located directly below the toilet seat (waste holding tank 1, approx. 12.5 gallons (47 liters)). Prior to toilet operation the tank is filled to a specified level with chemical-water mixture. An indicator lamp in the lavatory lights up to show the mixture has reached the required level.

Emptying waste holding tank 1

Once the contents of waste holding tank 1 reach a specified level, the driver receives a message in the display of the instrument cluster.

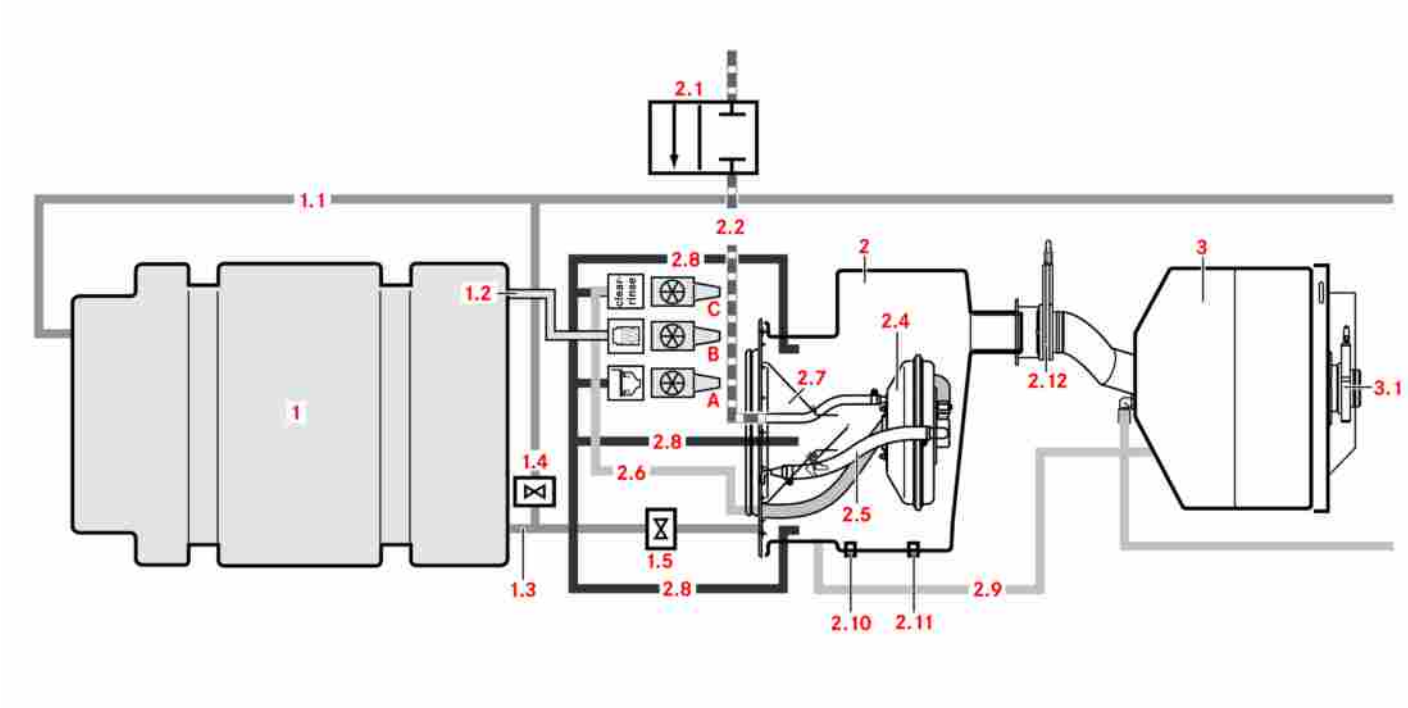
At the next stop, the driver must now operate a switch, accessible from the right rear service-access door, to empty the content of waste holding tank 1 into waste holding tank 2 (approx. 33 gallons (126 liters)) (this procedure can be performed twice, after which waste holding tank 2 is full and must be emptied at a suitable location).

The contents of waste holding tank 1 can also be emptied by pressing the right-hand button behind the cover in the WC.

Basic filling of waste holding tank 1 with a chemical-water mixture must then be performed again.

Schematic diagram of the chemical toilet

Schematic diagram of the chemical toilet



A	Service valve for "rinse waste holding tank 1"
B	Service valve for filling with fresh water
C	"Clear rinse" service valve (rinses the lower diaphragm chamber)
1	Fresh water tank
1.1	Fresh water tank runoff
1.2	Connection for filling with fresh water from outside
1.3	Fresh water connection fitting for filling waste holding tank 1 with initial water charge
1.4	Antifreeze valve (special equipment option)
1.5	Shutoff valve in cabinet below sink counter
2	Waste holding tank 1 (primary tank)
2.1	Switch for flushing toilet (compressed air valve)
2.2	Compressed air connection for flushing toilet
2.4	Diaphragm pump (air-operated)
2.5	Hose line for flushing toilet
2.6	"Clear rinse" hose line (rinses the lower diaphragm chamber)
2.7	Toilet bowl
2.8	Flush hoses for waste holding tank 1
2.9	Waste holding tank 1 runoff
2.10	Level sensor for "waste holding tank 1 full"
2.11	Level sensor for "waste holding tank 1 initial water charge"
2.12	Waste holding tank 1 dump valve
3	Waste holding tank 2 (secondary tank)
3.1	Waste holding tank 2 dump valve

Returning lavatory to operational status

Danger:

When the lavatory is out of use for any extended period of time, and no chemical and water mixture is in the tank, it is absolutely essential that both the waste holding tanks and the diaphragm chamber in waste holding tank 1 be cleaned.

Returning lavatory to operational status

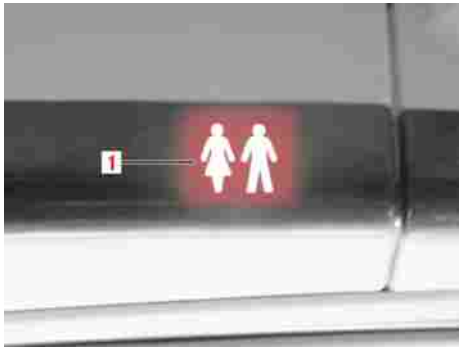


M68_00-0097-01

► The lavatory assumes standby status and is ready for operation when the operator presses the instrument panel switch (1) while the ignition switch is ON.

Notice:

The LED lights up in the switch and the lavatory lighting switches on.

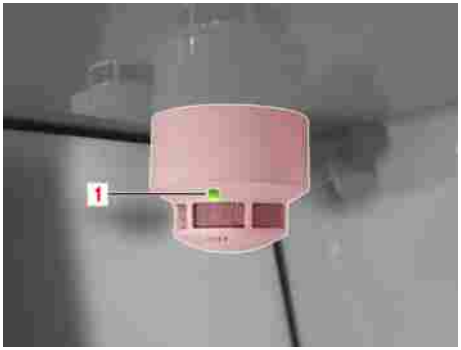


M86_00-0102-01

When the lavatory is locked from the inside, the ventilation fan in the lavatory is switched on and "Lavatory occupied" appears in the passenger compartment display (1).

Notice:

The ventilation system's air-discharge fan operates in the lavatory when the engine is running.



M86.00-0428-717

► When the ignition/starter switch is switched on, the smoke detector in the WC is also activated. The LED (1) lights up green.

Notice:

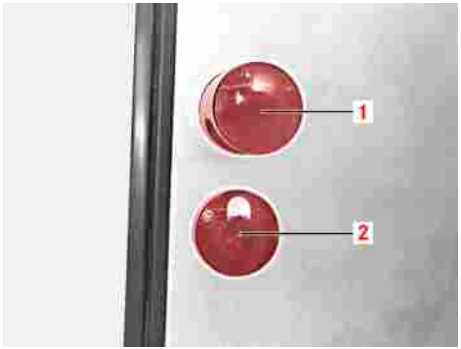
When the LED (1) lights up green, the smoke detector is in the normal operating mode. In case of light soiling, the LED (1) lights up green and alternates briefly to yellow. Heavy soiling of the detector is indicated with alternating green and yellow flashing. Have the smoke detector replaced by an OMNIplus ServicePartner.

If a malfunction occurs, the LED (1) flashes yellow.

Danger:

If smoke is detected, the LED (1) lights up red and a red message appears in the display in the cockpit in conjunction with this symbol.





M86_00-0103-01

► Opening a door locked mechanically

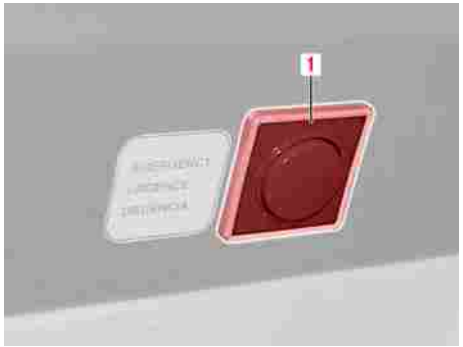
Danger:

When the lavatory door's lock (2) has been engaged manually, you can unlock it in an emergency using a suitable coin or screwdriver.

Lavatory emergency switch

Notice:

Ignition switch ON.



M86_00-0096-01

► Lavatory emergency switch (1) pressed.

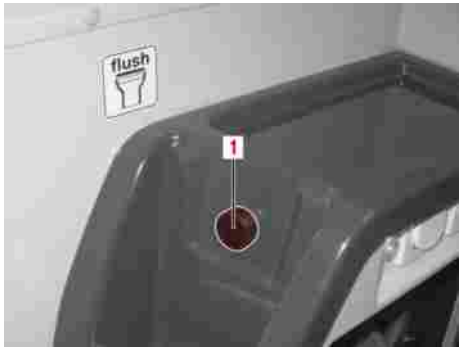


The instrument cluster display panel shows the adjacent symbol together with a "condition yellow" warning.

Notice:

An audible warning signal will also be heard.

Flushing the toilet



M86_00-0423-71

▶ Pressing the "WC - Flush" switch (1) flushes the toilet.

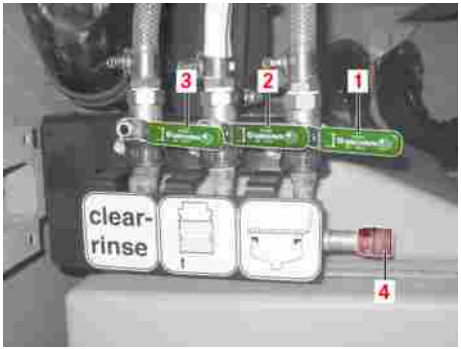
Notice:

The flushing operation is supported by compressed air provided by a diaphragm installed in waste holding tank 1.

Notice:

Reflushing is possible only after the switch (1) is released and following a brief interval.

Filling fresh water storage tank



M86_00-0421-71

► Connect a water hose to the service fitting (4) and then open the valve (2).

Danger:

Always ensure that the filling operation is monitored at all times. If excessive water pressure is used to refill the system, or if the runoff is blocked by any foreign object, the result can be uncontrolled expansion, ultimately causing damage to the lavatory.

► Completing filling operation

Notice:

Once the tank is completely full water will start to emerge from the runoff and collect beneath the vehicle. Close the valve (2) immediately and disconnect the supply hose.

Danger:

Never add antifreeze to the fresh water tank - poisoning hazard.

Filling waste holding tank 1 to initial level

► Ignition switch ON.

Notice:

Waste holding tank 1 is located at floor level directly below the toilet seat.

Notice:

Waste holding tank 1 must be completely empty before being filled to its initial level for operation. The indicator lamp in the washstand bottom cabinet lights up.

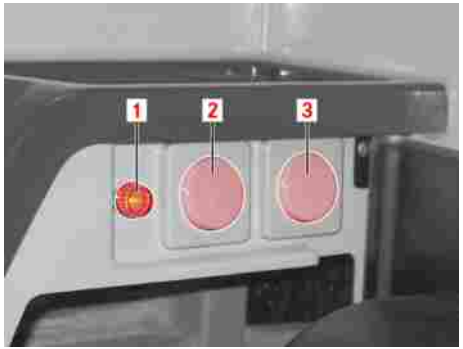
Notice:

There must be sufficient fresh water in the storage tank. When there is any danger of freezing, the fresh water tank must be empty, and it will be necessary to fill waste holding tank 1 to its initial operating level through the toilet bowl.

▷ Also note CC operating instructions on sticker in the washstand bottom cabinet.

Discharging contents from waste holding tank 1

- Open the washstand bottom cabinet with a square key.



M86_00-0422-71

- Press and hold the switch (2) until the required water level in waste holding tank 1 is reached and the red indicator lamp (1) goes out.
- Add chemical additive in mixture ratio specified by the manufacturer.

Notice:

Roughly 4 to 5 gallons (15 to 20 liters) of water are added to waste holding tank 1 during the initial filling process.

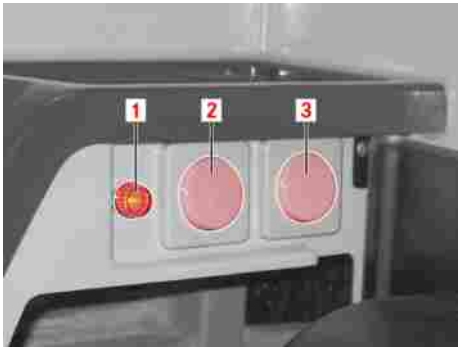
Notice:

Pour the chemical into the stainless-steel bowl.

Discharging contents from waste holding tank 1

- Ignition switch ON
- The adjacent symbol appears in the instrument cluster's display panel when the contents of waste holding tank 1 reach a predefined level.





M86_00-0422-71

► Respond by taking the earliest opportunity to allow the contents of waste holding tank 1 to flow into waste holding tank 2 by pressing the button (3).

Notice:

Press and hold the button until waste holding tank 1 is completely empty

The contents of waste holding tank 1 flow into waste holding tank 2.

Notice:

If waste holding tank 2 is empty, this procedure may be performed two times.

Notice:

If the signal in the display then fails to go out, waste holding tank 2 is full and must be emptied.

► Filling waste holding tank 1 to its initial operating level.

Emptying waste holding tanks 1 and 2

Notice:

Waste holding tank 1 is located at floor level directly below the toilet seat.

Notice:

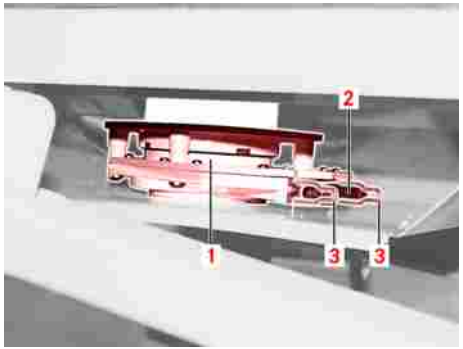
Waste holding tank 2 is located below the lavatory.

► To empty the waste tanks, position vehicle with the sewage outlet over a suitable draining point.

Environmental protection

Empty waste tanks only at locations specially provided for this purpose.

Emptying waste holding tanks 1 and 2

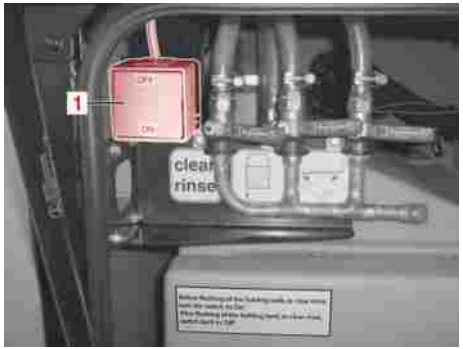


M86_00-0108-01

- Open dump valve (1) below waste holding tank 1 and waste holding tank 2.

Notice:

To open the dump valve within the waste holding tank 2, fold the securing clamp (3) to the side and pull out the operating lever (2).



M54.00-1665-71

- Open the dump valve below the waste holding tank 1 with switch (1). The switch (1) is located behind the service-access door.

Notice:

The switch (1) is only active with the "ignition on".

Notice:

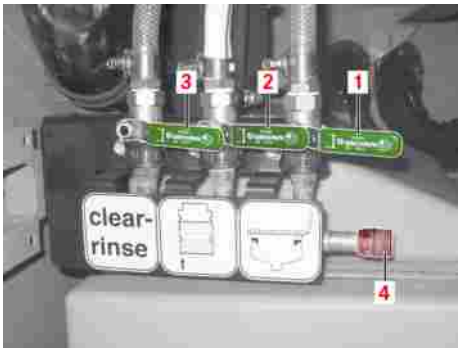
Once all contents have been discharged from the waste holding tanks, waste holding tank 1 and the diaphragm chamber must both be flushed out (clear-rinse).

Move the switch (1) into the "off" position again after completing rinsing (clear rinse).

Rinsing waste holding tank 1

Notice:

To rinse waste holding tank 1, first park the vehicle above a suitable disposal point. Then open the dump valves for waste holding tanks 1 and 2. Empty both waste holding tanks (see "Emptying waste holding tanks 1 and 2").



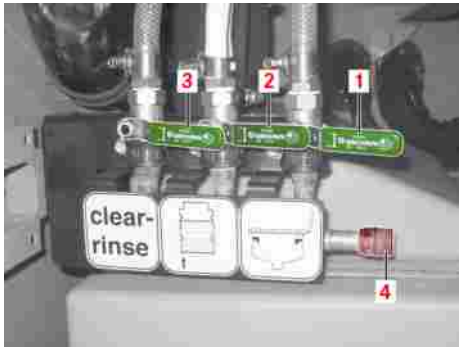
M86_00-0421-71

- Connect a water hose to the service fitting (4) and then open the valve (1).
- Wait until the water emerging from the discharge opening at the bottom of the vehicle is clear, then reclose the valve (1) at the service fitting and the dump valves on waste holding tanks 1 and 2.

Rinsing diaphragm chamber in waste holding tank 1 (clear-rinse)

Notice:

To rinse the diaphragm chamber in waste holding tank 1, first park the vehicle above a suitable discharge facility. Then open the dump valves for waste holding tanks 1 and 2. Empty both waste holding tanks (see "Emptying waste holding tanks 1 and 2").



M86_00-0421-71

- Connect a water hose to the service fitting (4) (clear-rinse) and then open the valve (3).
- Wait until the water emerging from the discharge opening at the bottom of the vehicle is clear, then reclose the valve (3) at the service fitting and the dump valves on waste holding tanks 1 and 2.

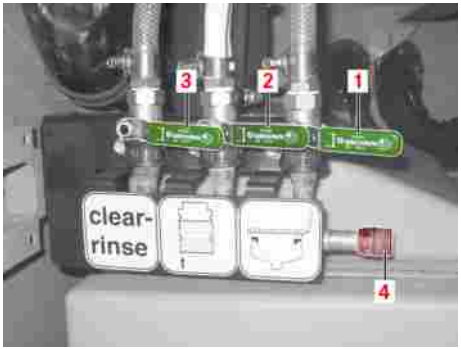
Winter operation

Danger:

When temperatures fall below 32 °F (0 °C) the specified mixture of chemical and water must always be present in waste holding tanks 1 and 2 to prevent them from freezing.

Danger:

The fresh water tank should be drained and remain out of use at temperatures below 32 °F (0 °C). Under these conditions waste holding tank 1 should be filled to the initial level required for operation through the toilet bowl.



M86_00-0421-71

- Emptying the fresh water tank: Connect discharge hose to service fitting (4).

Notice:

As special equipment (optional), a temperature-sensitive safety valve can be installed to automatically drain the fresh water from the tank onto the pavement at temperatures below 41 °F (5 °C).

- ► Open the valve (2) and allow the fresh water tank to drain until it is empty.
- ► Reclose the valve (2) and disconnect the discharge hose.

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Overview of screen operation, function and malfunction displays



M68_00-0092-01

The display (14) is a status display that shows information on the operating status, functions and malfunctions (pictographs). It can also be used to access information from the on-bord diagnosis utility.

Notice:

The following symbols can be displayed on the screen:

Symbol	Description
	Alternator malfunction
	Alternator 1 malfunction
	Alternator 2 malfunction
	Alternator 3 malfunction
	Low battery voltage
	High battery voltage
	Low battery voltage 12 V

Symbol	Description
	High battery voltage 12 V
	Battery 1 and Battery 2 voltages differ
	Electrical malfunction
	General FPS system malfunction
	FPS 1 malfunction
	FPS 2 malfunction
	FPS 3 malfunction
	FPS 4 malfunction

Symbol	Description
	FPS 5 malfunction
	FPS 6 malfunction
	FPS 7 malfunction
	FPS 8 malfunction
	Power supply FPS 1
	Power supply FPS 2
	Power supply FPS 3
	Power supply FPS 4

Symbol	Description
	Power supply FPS 5
	Power supply FPS 6
	Power supply FPS 7
	Power supply FPS 8
	Service instructions
	Service summary
	Engine-management system malfunction or failure
	Air filter service due

Symbol	Description
	Engine torque reduction
	Stop engine
	Engine electrical system malfunction
	Drive control (FR) malfunction or failure
	High exhaust system temperature (HEST)
	Cruise control active
	Retarder in standby mode
	Retarder active

Overview of screen operation, function and malfunction displays

Symbol	Description
	Retarder temperature too high
	Engine oil level too low
	Low engine oil pressure or sensor failure
	Oil refill
	Oil temperature too high
	Coolant level too low or sensor failure
	Coolant temperature too high or sensor failure
	Brake circuit 1 and/or 2 pressure sensor malfunction

Symbol	Description
	System air pressure for brake circuit 1 too low
	System air pressure for brake circuit 2 too low
	Parking brake engaged
	Brake pad wear
	Bus-stop brake switch operating
	Bus-stop brake switch malfunction/emergency release switch activated
	Hill-holder (Easy Start)
	ABS malfunction

Symbol	Description
	Fault in ESP (Electronic Stability Program) or TCS (Traction Control System)
	Auxiliary accessory system air pressure too low or sensor failure
	Circuit 3 pneumatic system air pressure display
	Compressed air intake filter needs service
	Coach not at standard level (kneeling, raised or lowered)
	Vehicle above standard level
	Vehicle below standard level
	Power steering fluid low

Symbol	Description
	Axle load transfer active
	Lubrication system
	High beams
	Low beams
	Parking lights
	Trailer turn signal
	Front fog lamp
	Rear fog lamp

Symbol	Description
	Brake light
	Backup light
	Lights, general
	Light malfunction
	High beam defective
	Low beam defective
	Parking light defective
	Parking light defective

Symbol	Description
	Front fog lamp defective
	Rear fog lamp defective
	Brake light defective
	Backup light defective
	Defroster operating at MAX
	Open driver's window
	Windshield washer fluid level
	Entry door emergency valve open

Overview of screen operation, function and malfunction displays

Symbol	Description
	Door malfunction
	Ready to roll
	Wheelchair lift door open
	Entry door open
	Entry door malfunction
	Wheelchair lift extended
	Stop request
	Ramp request

Symbol	Description
	Baby carriage request
	Passenger service call
	Wheelchair access stopping position
	Driver's cockpit fan
	Fan speed
	Auxiliary heater Program 1
	Auxiliary heater Program 2
	Auxiliary heater Program 3

Symbol	Description
	A/C compressor operating
	Outside temperature
	Air conditioning or reheat not available
	Auxiliary heater activation period
	Auxiliary heater time remaining
	Off display
	Comfort temperature setting
	Antifog mode active

Symbol	Description
	Passenger compartment blower
	Heater, ventilation and air conditioning interior temperature / malfunction warning
	Passenger compartment temperature setting
	Temperature lockout (requested function not available)
	Recirculated-air mode for cockpit and passenger compartment
	HVAC control in passenger compartment off
	Emergency exit warning system

Symbol	Description
	Auxiliary heater on
	Auxiliary heater not installed
	General malfunction
	Ignition switch malfunction
	Fire alarm
	Seatbelt warning
	Fuel reserve
	Heater fuel level

Symbol	Description
	Fuel level sensor
	Engine fast idle
	Lavatory in use
	Lavatory assistance required (with yellow warning status)
	Smoke alarm
	Water tank 1 empty
	Waste holding tank 1 requires emptying
	Refrigerator open

Safety instructions for working in the engine compartment

Symbol	Description
	Left luggage compartment door central locking
	Right luggage compartment door central locking
	Open engine compartment door
	Luggage compartment doors and engine compartment door are open
	Luggage compartment doors are open
	Scroll forward with dash display control switch
	Acknowledge malfunction by pressing "Quit" switch
	Enable condition: Apply parking brake.

Symbol	Description
	Telephone malfunction

Safety instructions for working in the engine compartment

Danger:

Never leave the engine running when work is being carried out in the engine compartment.

Danger:

Take precautions to prevent the engine from being switched on without authorization. Always remove the key from the ignition switch.

Danger:

If the engine is hot, allow it to cool before proceeding - burn hazard.

Should it be necessary to respond to a breakdown by replacing a drive belt without a suitable gauge for adjusting its tension, remember to contact the nearest SETRA ServicePartner as soon

as possible in order to ensure that the belt is tensioned correctly and that all torques are as specified.

Removing drive belt (OM 471 LA)

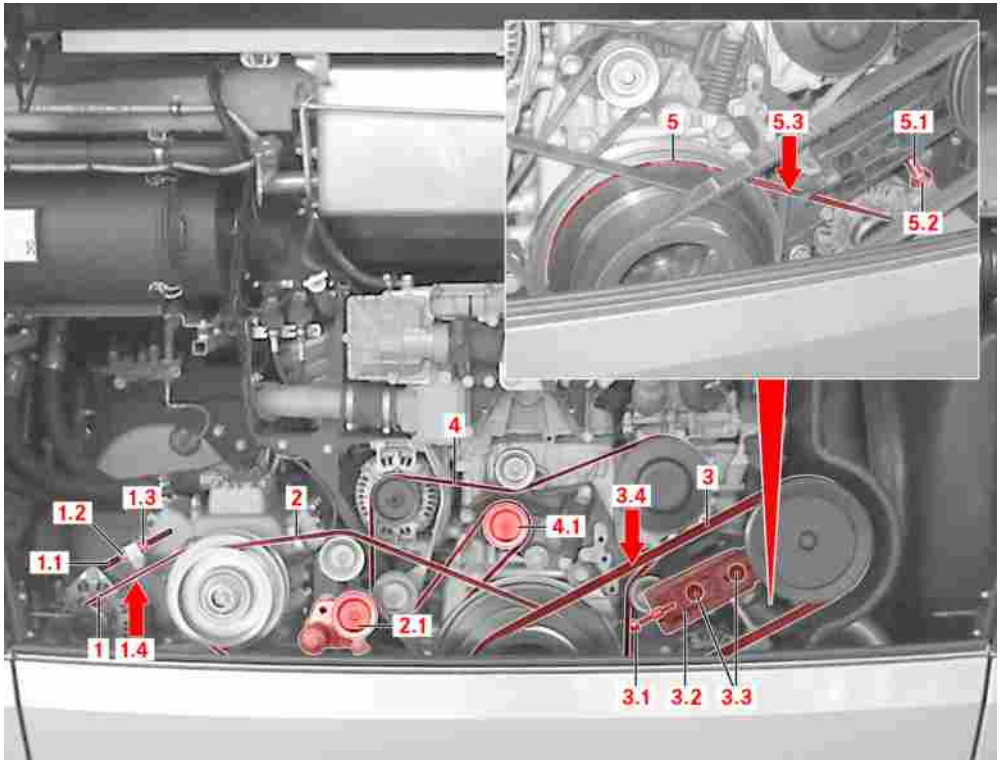
Danger:

Work in the engine compartment only with the engine OFF and the ignition key removed from the switch. If the engine is hot, allow it to cool before proceeding - burn hazard.

Danger:

Spare replacement belts and some of the tools described below are not supplied with the vehicle at delivery. Always use genuine OEM replacement belts.

Removing drive belt (OM 471 LA)

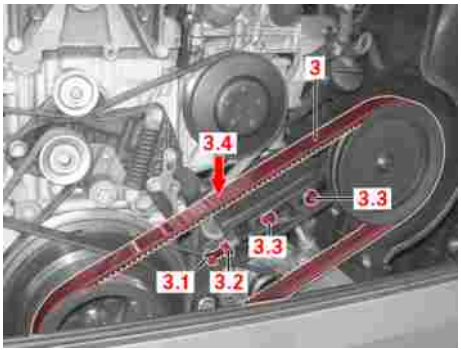


Overview of OM 471 LA (EPA10) belt drives

1	Left-hand generator drive belt
1.1	*Adjustment screw*
1.2	*Adjustment nut*
1.3	*Locknut*
1.4	*Belt tension test point*
2	A/C compressor drive belt
2.1	*Automatic tensioner*
3	Cooling fan drive belt
3.1	*Adjustment screw*
3.2	*Locknut*
3.3.	*Attachment bolts*
3.4	*Belt tension test point*
4	Drive belt for water pump and generator
4.1	*Automatic tensioner*
5	Right hand generator drive belt
5.1	*Adjustment screw*
5.2	*Locknut*
5.3	*Belt tension test point*

Removing fan drive belt

Notice:



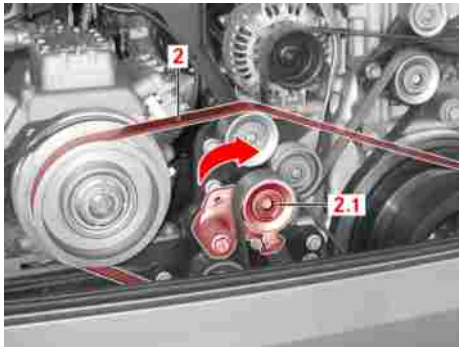
M01_00-0132-71

- Loosen the mounting bolts (3.3) approx. 1 full turn using the 18 mm socket and breaker bar.
- Loosen the lock nut (3.2) on the tensioning bolt with the 19 mm open-end wrench as needed.
- Loosen the tensioning bolt (3.1) using the 19 mm open-end wrench as needed.
- Press down on the belt (3) with your hands to pull the fan drive pulley all the way back.
- Remove the fan drive belt (3) from the pulleys.

Remove the air conditioner compressor drive belt

Notice:

Required tool: 1/2" bar with clamp extension.



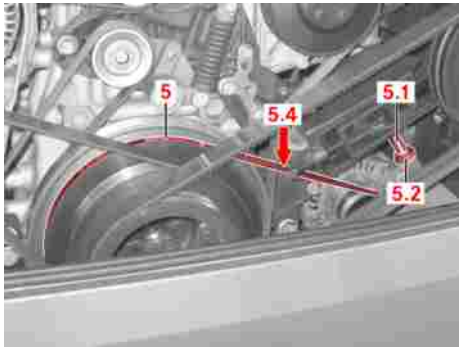
M01_00-0134-71

- Position a 1/2" bar with clamp extension against the tensioner pulley

(2.1), then use the bar to pull it up and hold it.

► Remove the drive belt (2) from the belt pulleys.

Removing right-hand generator drive belt



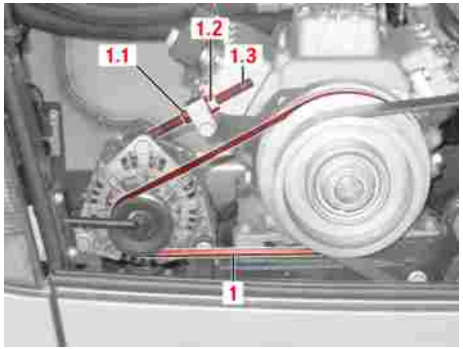
M01_00-0133-71

► Loosen the locknut (5.2).

► Loosen the tensioning screw (5.1) until the drive belt lies loosely on the belt pulley.

► Remove the drive belt (5) from the belt pulleys.

Removing left-hand generator drive belt



M01_00-0136-71

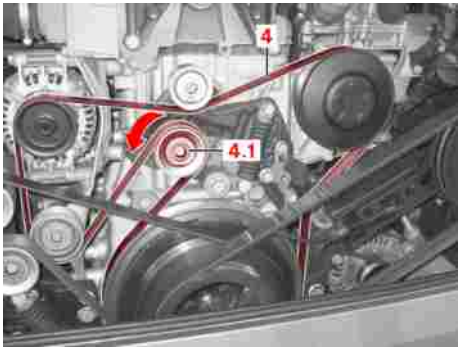
► Loosen the locknut (1.2) and the tensioning nut (1.1) until the drive belt lies loosely on the belt pulley.

► Remove the drive belt (1) from the belt pulleys.

Removing drive belt of water pump and center generator

Notice:

Required tool: 1/2" bar with clamp extension.



M01_00-0135-71

► Position a 1/2" bar with clamp extension against the tensioner pulley (4.1), then use the bar to pull it up and hold it.

► Remove the drive belt (4) from the belt pulleys.

Mounting drive belt (OM 471 LA)

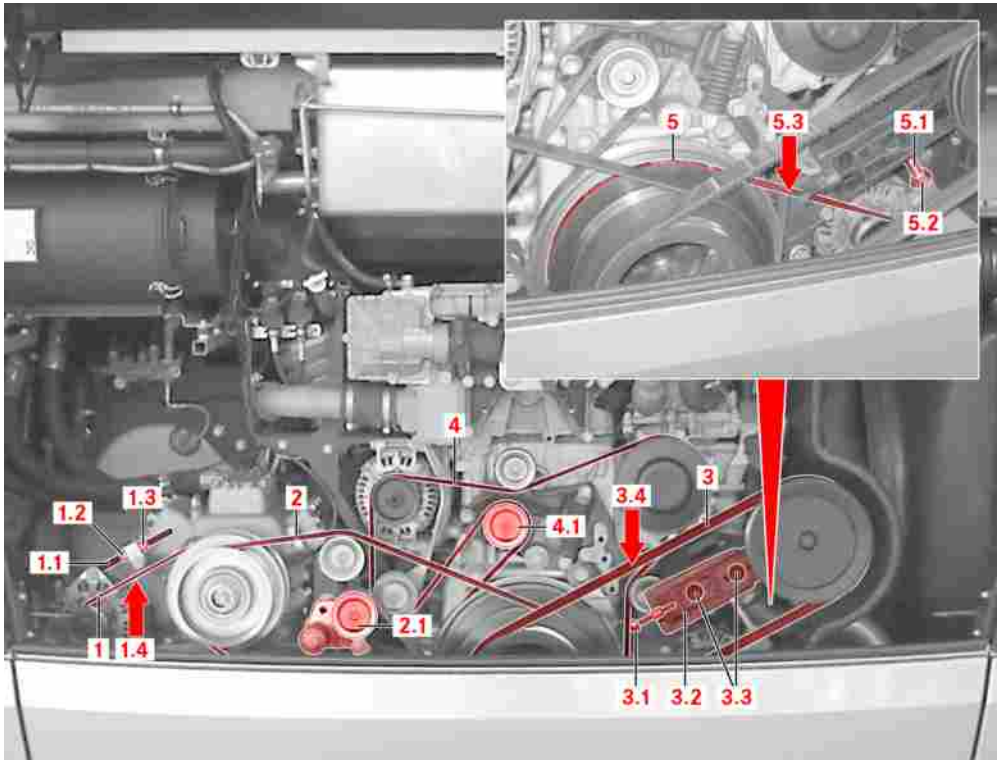
Danger:

Work in the engine compartment only with the engine OFF and the ignition key removed from the switch. If the engine is hot, allow it to cool before proceeding - burn hazard.

Danger:

Mount the belt by hand, do not use force (pry bar, etc.) to pull it over the edges of the pulleys. Excessive force could lead to invisible damage to the belt's cord structure, substantially reducing its service life.

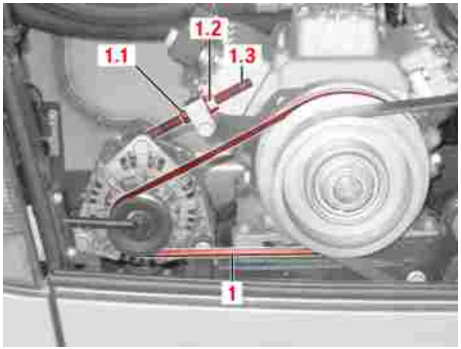
Mounting drive belt (OM 471 LA)



Overview of OM 471 LA (EPA10) belt drives

1	Left-hand generator drive belt
1.1	*Adjustment screw*
1.2	*Adjustment nut*
1.3	*Locknut*
1.4	*Belt tension test point*
2	A/C compressor drive belt
2.1	*Automatic tensioner*
3	Cooling fan drive belt
3.1	*Adjustment screw*
3.2	*Locknut*
3.3.	*Attachment bolts*
3.4	*Belt tension test point*
4	Drive belt for water pump and generator
4.1	*Automatic tensioner*
5	Right hand generator drive belt
5.1	*Adjustment screw*
5.2	*Locknut*
5.3	*Belt tension test point*

Mounting left-hand generator drive belt



M01_00-0136-71

- Manually place the new drive belt (1) on the belt pulleys of the generator and the AC compressor.
- Tighten the tensioning nut (1.1) with an open-end wrench until the required belt tension is achieved.

Notice:

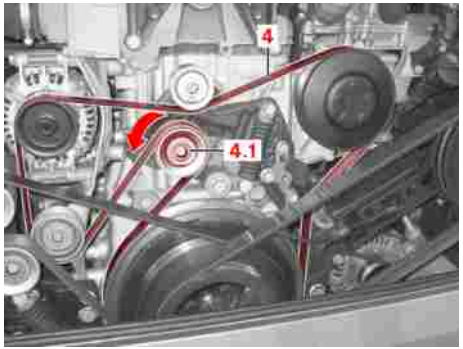
Do not overtighten the drive belt. You must be able to twist the drive belt by at least 90° using two fingers at the measuring point (1.4).

Caution:

For the correct adjustment of the drive belt tension with a gage, visit the nearest SETRA ServicePartner.

- Tighten the locknut (1.2) of the tensioning spindle with an open-end wrench.

Mounting drive belt of water pump and center generator



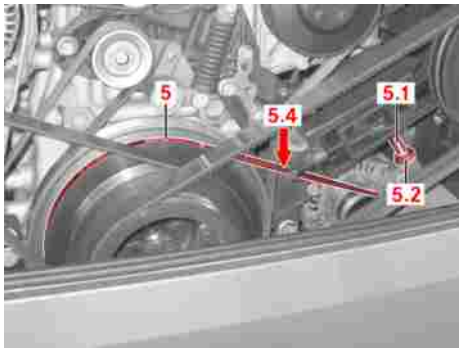
M01_00-0135-71

- ► Manually place the new drive belt (4) on the belt pulleys for the crankshaft, the idler pulley and the belt pulley of the water pump and the generator.
- ► Position a 1/2" bar with clamp extension against the tensioner pulley (4.1), then use the bar to pull it in the direction of the arrow and hold it.
- ► Lay the drive belt (4) on the tensioner pulley (4.1).

Notice:

The tensioner pulley (4.1) is spring-loaded, so that the correct drive belt tension is set automatically.

Mounting right-hand generator drive belt



M01_00-0133-71

- ► Manually place the new drive belt (5) on the belt pulleys of the right-hand alternator and the crankshaft.
- ► Tighten the adjustment screw until the required belt tension is reached.

Notice:

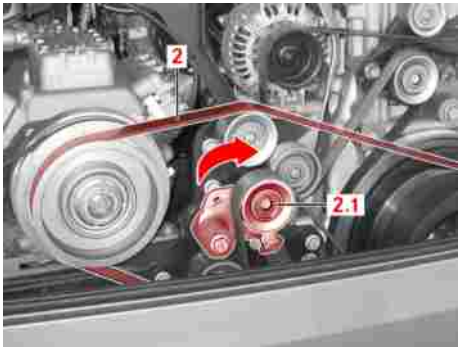
Do not overtighten the drive belt. You must be able to twist the drive belt by at least 90° using two fingers at the measuring point (5.3).

Caution:

For the correct adjustment of the drive belt tension with a gage, visit the nearest SETRA ServicePartner.

- ► Tighten the locknut (5.2) of the adjustment screw with an open-end wrench.

Installing drive belt on air conditioning compressor



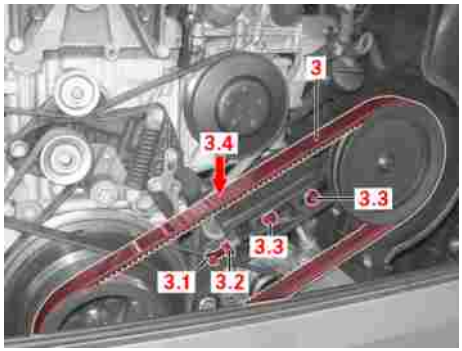
M01_00-0134-71

- Manually place the new drive belt (2) on the belt pulleys for the crankshaft, the idler pulley and the belt pulley of the refrigerant compressor.
- Position a 1/2" bar with clamp extension against the tensioner pulley (2.1), then use the bar to pull it in the direction of the arrow and hold it.
- Lay the drive belt (2) on the tensioner pulley.

Notice:

The tensioner pulley (2.1) is spring-loaded, so that the correct drive belt tension is set automatically.

Installing fan drive belt



M01_00-0132-71

- Manually place the new drive belt (3) on the belt pulleys for the crankshaft and fan drive.
- Screw in the tensioning bolt (3.1) with 19 mm box-end wrench, continuing until the belt is tensioned correctly.

Notice:

Do not overtighten the drive belt. You must be able to twist the drive belt by at least 90° using two fingers at measuring point (3.4).

Notice:

For the correct adjustment of the drive belt tension with a gage, visit the nearest SETRA ServicePartner.

- Tighten the mounting bolts (3.3) using the 1/2" ratchet bar and 18 mm socket.
- Tighten the locknut (3.2) of the tensioning bolt with 19 mm open-end wrench.

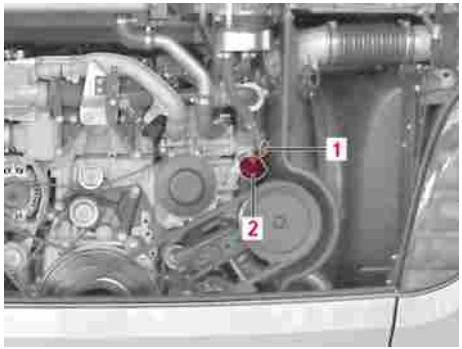
Engine oil level check

Danger:

If the engine is hot, allow it to cool before proceeding - burn hazard.

Notice:

With the engine warmed to its normal operating temperature, shut the engine down, then wait roughly ten minutes to allow the oil to drain back down into the oil pan before proceeding to check the oil.



M01_00-0128-71

- With the engine warmed to normal operating temperature and then switched off, withdraw the oil dipstick (1).

Notice:

The oil level should extend to between the "min" and "max" graduations on the dipstick.

- Top up the oil to the specified level by pouring it into the filler opening (2); use prescribed oil as listed in the specifications for fluids and lubricants.

Danger:

Do not fill beyond the "max" graduation!

Engine oil quantity and type

► Use only engine oils containing little ash in accordance with API CJ-4.

Notice:

Lubricating oil must have a sulfated ash level less than 1.0 wt %; currently referred to as CJ-4 oil.

Notice:

The engine is filled with oil of the SAE 5W-30 viscosity class when delivered.

Notice:

The differential quantity between the "min" and the "max" marking is approx. 5.3 quarts (5 liters).

► Add engine oil if necessary.

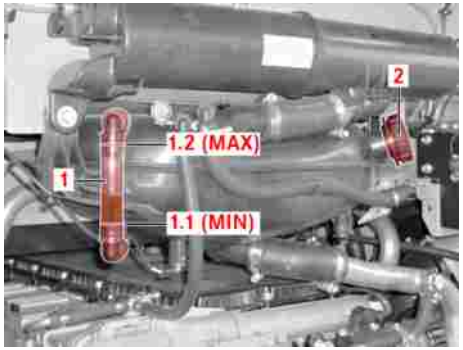
Notice:

Do not add too much oil. If the oil level is above the "max" marking, then too much oil has been added. This can damage the engine or the emission control system. Have excess oil extracted.

Environmental protection

Do no spill oil. If oil gets into the soil or bodies of water, it is harmful to the environment.

Checking the coolant level of the engine and heating systems



M20.00-0144-71

► Read coolant level.

Danger:

Hot coolant can squirt out and pose a scalding hazard to skin and eyes. Wear protective clothing (gloves and goggles). Open the cap (2) of the coolant expansion tank only when the coolant temperature is below 50°C. Slowly open the sealing cap (2) to release excessive pressure. Slowly turn further and remove sealing cap. Swallowing coolant can cause poisoning.

Notice:

With a cold engine below °F (50°C), the engine coolant level must be visible between the upper and lower marks (min. (1.1) and max. (1.2)) at the sight glass (1) of the expansion tank.

► Top up coolant.

Caution:

Fill up only when the engine is cold.

Notice:

Use clean and well filtered water with the lowest calcium content possible (drinking water quality) mixed with antifreeze containing corrosion inhibitor (observe specifications for fluids and lubricants).

Caution:

Only use antifreeze containing corrosion inhibitor in accordance with the DDC Power Coolant Specification.

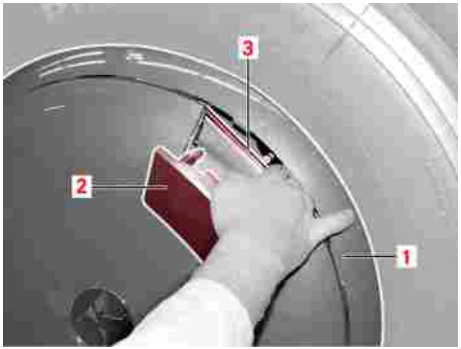
Notice:

For information on bleeding air from the heating system's coolant circuit, please refer to the chapter on "Driver service and roadside repairs."

Operational and road safety

Tires are an especially important factor for vehicle safety on the road. Regular inspections of each tire's inflation pressure, its tread and its overall condition are vital.

Tire pressures



M40_00-0025-01

The valve for checking the tire inflation pressure can be accessed by removing the cover plate (2) in the hub cap (only with steel rims). Check the tire inflation pressures (including the spare tire) with the tires cold. The pressure difference in the tires on any axle must not exceed 3 psi (0.2 bar). When the inflation pressure within a tire is too low, you should respond by checking that tire's valve, wheel and the tire itself for leaks.

Fast driving and hot weather can raise the tire pressures by as much as 15 psi (1 bar). Never respond to this condition by bleeding air, otherwise the air pressure will be too low after the tires have cooled. Check the "tire pressure table" published by the tire manufacturer for details on tires and air pressures.

Danger:

Always make certain that the tires on the vehicle are inflated to the specified pressures. Both the tires and the air that they contain heat up during normal vehicle operation. This is why you should never discharge air in an attempt to adjust the inflation pressure on warm tires. Such attempts would cause the pressure to drop below the specified level once the tire cools. Inadequate inflation pressures can lead to abrupt tire failure. This risk rises as the number of passengers, the vehicle's load and its speed increase. Tire failure could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or others.

Notice:

Low tire pressure leads to overheated tires and accelerated tire wear, while also affecting the vehicle's directional stability and increasing fuel consumption.

Notice:

Excessively high tire pressure leads to longer braking and stopping distances while also reducing overall traction and accelerating the rate at which the tires wear.

Caution:

The caps on the tires' valve stems protect the stem inserts against dirt and moisture. Therefore: Always remember to screw the valve stem caps on tightly and securely.

Notice:

Tire inflation pressures can be adjusted for current climate conditions. Cold climate: Increase tire inflation pressure by 0.5 bar. Hot climate: Set the normal tire inflation pressure according to the tire pressure chart. For specified tire pressures refer to the "tire pressure chart" provided by the tire manufacturer.

Tire tread

Legal regulations specify the minimum tread depth for tires. Always observe all national and state regulations governing approved tread depths.

Tire wear and the accompanying loss of tread depth lead to corresponding decreases in available traction and handling response. These negative effects are particularly pronounced on wet road surfaces and on snow.

To ensure continued safety: Always replace tires before they wear to the legally prescribed minimum tread depth.

Danger:

Keep a close eye on your tires to ensure that the remaining tread depth is always adequate. During high-speed operation in heavy rain or in snow and slush, tires with worn tread increase the danger of aquaplaning. Inadequate tread depth prevents tires from dissipating water, allowing it to collect under the tread. Tire failure could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or others.

Tire condition

Before driving the vehicle, always check the tires for:

- external damage
- foreign objects lodged in the tread
- foreign objects lodged between dual wheels
- cracks and swelling

Danger:

Remember that cracks, swelling and external damage can lead to tire failure. Tire failure could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or others. Have any damaged tires replaced immediately.

Tire age

Regardless of tire wear and mileage, tires should always be replaced every six years at the very latest. This also applies to the spare tire.

Danger:

Tires age in response to the sun's rays as well as other environmental factors. The rubber in the tires loses its flexibility. The tires become hard and brittle, while cracks and fissures also appear in response to aging. Once tires age beyond the six year mark they are no longer safe to use on the road.

Invisible tire damage

Avoid allowing the tires to rub against curbs, and remember not to park the vehicle with a portion of the tread resting on a curb.

Danger:

Driving over curbs and sharp-edged objects can damage the tire's substructure, causing damage that is not externally visible. The effects of this internal damage may only become apparent much later, when they can lead to sudden tire failure. This could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or others.

Tire load capacity, speed ratings and specifications

Danger:

Exceeding either the maximum load capacity or the maximum speed for which a tire is rated can lead to damage and total tire failure. This could cause you to lose control of your vehicle, leading to an accident and causing personal injury to yourself or others. Therefore, never mount anything other than tires of the approved type and size as specified for your particular vehicle, remembering to pay close attention to the load capacity and speed rating specified for tires used on your individual vehicle. Always devote special attention to ensuring that the tires comply with all applicable national and state regulations. Under some conditions these regulations may prescribe a specific type of tire for your vehicle, or prohibit the use of certain tires that may be approved for use in other countries. Going beyond strictly legal considerations, it may prove advisable to use specific types of tires for operation in particular regions or under certain conditions. Information on tires is available from any SETRA ServicePartner.

Caution:

Tire balancing materials, e.g. "balancing powder, beads or gel", may not be used, as these can result in undesirable pulsations and/or vibrations.

When mounting dual wheels, ensure that the outside diameters of the two tires are identical; if one tire has a greater diameter, it will carry an excessive proportion of the weight. Tip: the simplest and most reliable measurement method is to check circumferences using a tape measure.

Notice:

The maximum tolerance for twin tires is 0.5 % of the tire diameter. The larger tire must always be mounted at the outer position.

Retreaded tires

it is recommended that only tires and wheels be used which have been especially tested and approved for your vehicle by EvoBus.

Safety precautions for breakdowns and tire changes

Danger:

Park the vehicle on a firm surface as far as possible from moving traffic. Switch on the hazard warning lights. Have all passengers disembark and have them proceed to a safe area where they will not be in immediate danger (behind a guard rail, etc.). Set up a warning triangle or portable emergency flasher at an appropriate distance from the vehicle. Always observe all state and national regulations.

Danger:

Perform the wheel change only on a level, firm surface affording good traction. The vehicle or jack could slide sideways on a soft or slippery surface (snow, ice, slippery ground, etc.).

Danger:

Never lie under the coach if it is raised up and is not supported by jack stands. Never start the engine under these conditions, as a running engine would pose a potentially fatal hazard. Take precautions to prevent the engine from being switched on without authorization. Always remove the key from the ignition switch.

Installing tire chains

► Installing tire chains (snow chains)

Notice:

Comply with the manufacturer's assembly instructions and legal requirements.

Notice:

Only chain type "RUD-MATIC MAXI" is approved.

Notice:

Installation of snow chains can be made easier by using the lift function to raise and lower the coach. This procedure is particularly useful when installing chains on the drive axle.

Danger:

Make sure the tire chains are installed tightly. Do not exceed the approved maximum speed of 25 mph (40 km/h).

Notice:

Check that the tire chains are installed tightly after driving a suitable distance (depending on the operating conditions); retighten if required.

Removing the spare tire



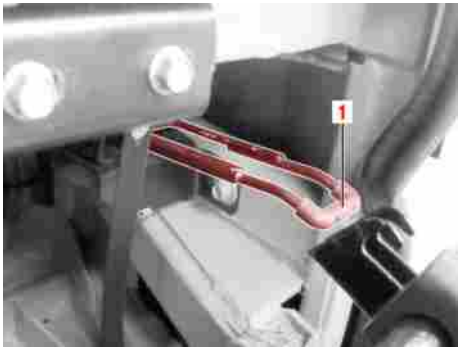
M00.00-0601-71

- Pull handle (1) in step well to open the front bumper and access spare tire.

Notice:

Ensure that the openings below the spare tire in the forward compartment are never closed or obstructed by objects of any kind, as this could prevent the heating, ventilation and air conditioning systems from providing efficient and trouble-free performance.

The front access door opens slightly.



M00.00-0611-71

- Raise the locking bar (1) to unlock the front access door.

  The front access door can now be opened.

Notice:

If the cover only opens slightly, grasp bumper and pull open.

- Loosen and remove the spare tire retaining strap



M40_00-0028-01

► Pull spare tire (1) forward over roller bar (3)

Positioning the jack

► Observe all safety precautions and instructions.

Danger:

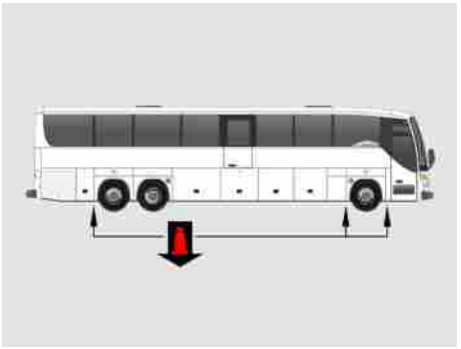
Follow the jack manufacturer's instructions.

Danger:

The vehicle contains two different jacks. Use in accordance with instructions.

Danger:

Engage the parking brake to secure the coach and prevent it from moving; if the defective tire is on the drive axle you should remember to install a chock against a front wheel as well. The engine must be switched off for tire changes, and it is absolutely vital to ensure that NO occupants remain in the coach during this operation.



M00.00-0613-71

► Positioning the jack

Danger:

The jacking points on the frame are identified by jack symbols on the exterior of the coach. Make sure you follow the instructions in the relevant sections of this document when you set up the jack for a spare tire change.

Danger:

Only position jacks at the marked points to avoid damage to the frame. If jack stands are not being used, either the intact spare tire or the defective tire must be placed in a suitable position under the coach in order to provide protection should the jack fail while you are changing the tire.

Removing the wheels

Removing a front tire



M40_00-0027-01

► Place a drive-on ramp at the defective tire and drive the coach onto the ramp. Loosen wheel lug nuts no more than one half a turn.

Danger:

If the floor is very smooth and hard, the ramp may slide out from under the tire during attempts to drive the coach onto it. Follow the instructions on the plate mounted on the drive-on ramp.



M40_00-0028-01

► Use the lug wrench supplied in the on-board tool kit to loosen the lug nuts.

Notice:

The rod (3) used to extract the spare tire from its storage compartment can be used as an extension for the wrench. Remove the spring clamp from the bracket to remove the rod.



M40_00-0011-01

- Place a 22,000 lb. (10t) telescopic jack on a laminated wood base. Position the top of the jack against the underside of the A-frame adjacent to the ball joint (arrow) and begin lifting vehicle.

Required tools

Telescopic jack - 22,000 lb. (10 t)

Tools for on-site fabrication

Laminated wood base

Notice:

Raise the telescopic jack to its maximum height, continuing until there is a gap between the wheel and the drive-on wedge

Danger:

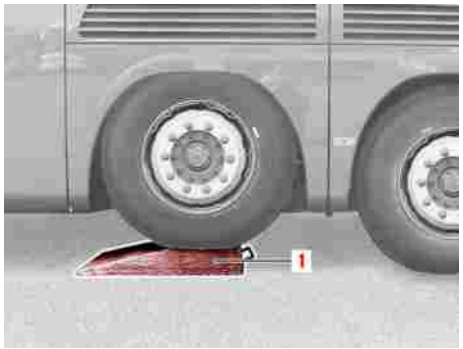
To avoid frame damage, never position the jacks anywhere other than at the specified jacking points. If jack stands are not being used, either the intact spare tire or the defective tire must be placed in a suitable position under the coach in order to provide protection should the jack fail while you are changing the tire.

- Remove drive-on ramp
- Unscrew and remove all the wheel lug nuts except for 3 nuts spaced at offset angles to one another
- Only unscrew the last 3 wheel lug nuts after you have checked that the wheel is resting loosely on the wheel bolts.
- Remove the wheel with the defective tire

Danger:

When removing the wheel take care not to damage the threads on the wheel lugs.

Removing a wheel from the drive axle



M40_00-0032-01

- Place a drive-on ramp against the intact tire in the dual wheel assembly and drive the coach onto the ramp.

Notice:

If the floor is very smooth and hard, the ramp may slide out from under the tire during attempts to drive the coach onto it. Follow the instructions on the plate mounted on the drive-on ramp.

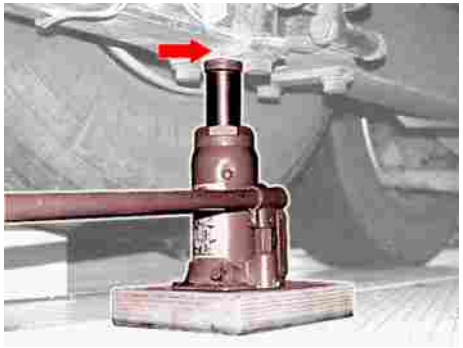


M40_00-0028-01

- Use the lug wrench from the on-board tool kit to break the wheel lug nuts loose, taking care to avoid loosening them by more than half a turn at this stage.

Notice:

The rod (3) used to extract the spare tire from its storage compartment can be used as an extension for the wrench. Remove the spring clamp from the bracket to remove the rod.



M40_00-0013-01

- Place a 22,000 lb. (10t) telescopic jack on a laminated wood base and lift the vehicle at the jacking point (arrow). Be sure that the jack is in the center of the side member beam and not at its end or on the edge.

Required tools

Telescopic jack - 22,000 lb. (10 t)

Tools for on-site fabrication

Laminated wood base

Danger:

To avoid frame damage, never position the jacks anywhere other than at the specified jacking points. If jack stands are not being used, either the intact spare tire or the defective tire must be placed in a suitable position under the coach in order to provide protection should the jack fail while you are changing the tire.

Notice:

Raise the telescopic jack to its maximum height, continuing until there is a gap between the wheel and the drive-on wedge

- Remove drive-on wedge
- Unscrew and remove all the wheel lug nuts except for 3 nuts spaced at offset angles to one another

- ► Only unscrew the last 3 wheel lug nuts after you have checked that the wheel is resting loosely on the wheel bolts.
- ► Remove the defective wheel (first remove the outer wheel if the inner tire is defective)

Danger:

When removing the wheel take care to avoid pulling it over the threaded studs with its weight directly against them. This would damage the stud threads and make it difficult to screw on the wheel lug nuts. Under unfavorable circumstances the wheel's lug nut could seize on the damaged wheel stud's threads.

Removing a wheel from the trailing axle



M40_00-0012-01

- ► Drive the defective wheel onto the drive-on wedge

Notice:

If the floor is very smooth and hard, the ramp may slide out from under the tire during attempts to drive the coach onto it. Follow the instructions on the plate mounted on the drive-on ramp.



M40_00-0028-01

- ► Use the lug wrench from the on-board tool kit to break the wheel lug nuts loose, taking care to avoid loosening them by more than half a turn at this stage.

Notice:

The rod (3) used to extract the spare tire from its storage compartment can be used as an extension on the wrench. Remove the spring clamp from the bracket to remove the rod.

Removing the wheels



M40_00-0086-71

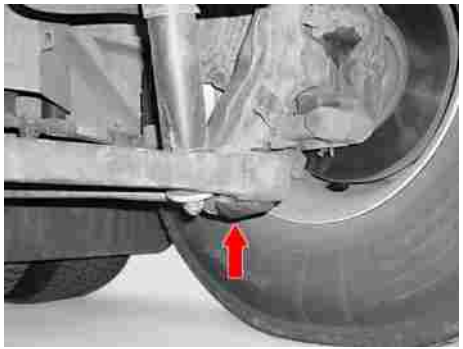
- To avoid exposing the trailing axle to excessive loads, start by using the 22,000 lb. (10 t.) telescopic jack (3) to raise the body at the specified jacking point behind the trailing axle.

Required tools

Telescopic jack - 22,000 lb. (10 t)

Danger:

To avoid frame damage, never position the jacks anywhere other than at the specified jacking points. If jack stands are not being used, either the intact spare tire or the defective tire must be placed in a suitable position under the coach in order to provide protection should the jack fail while you are changing the tire.



M40_00-0087-71

- Then raise the trailing axle at the control arm mount (arrow) using the 11,000 lb. (5t) screw-type jack, continuing until the weight is removed from the defective wheel.

Required tools

Telescopic jack - 11,000 lb. (5 t)

Danger:

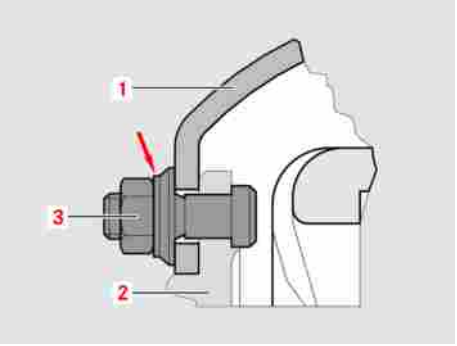
The weight of the coach must not be placed upon the trailing axle.

- Remove drive-on wedge
- Unscrew and remove all the wheel lug nuts except for 3 nuts spaced at offset angles to one another
- Only unscrew the last 3 wheel lug nuts after you have confirmed that the wheel is resting loosely on the wheel bolts.
- Remove the wheel with the defective tire

Danger:

When removing the wheel be careful not to damage the threads on the wheel studs.

Installing wheels



M40_00-0016-01

- Coat the outside of the alignment lug on the hub (2) with Plastilube anti-seize paste to prevent the disk wheels (wheel rims) from rusting and seizing.

Danger:

The threads of the wheel bolts and the wheel nuts must be oil and grease-free; degrease the threads if necessary.

Caution:

Clean rust and dirt from the contact surfaces on the disk wheel, wheel hub, alignment lug, and the lug nuts, as required.

- Install the wheel

Notice:

When mounting the wheel be careful not to damage the threads on the wheel studs.

Danger:

If the vehicle is equipped with steel wheels, a steel wheel must be mounted again. If the rest of the vehicle is equipped with light-alloy wheels, only a light-alloy wheel may be mounted when changing the wheel. The wheel nuts required for mounting light-alloy wheels differ from those used to install steel wheels.

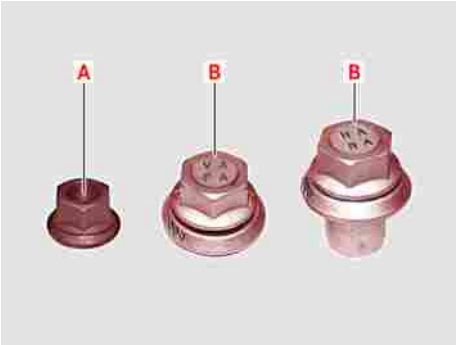
Installing wheels

Danger:

If the wheels have been converted from aluminum to steel wheels, the wheel flanges must also be replaced.

Notice:

The wheels (1) are centered using the alignment lug on the hub (2).



M40_00-0053-01

- Position the wheel lug nuts and screw them on until they are against the wheel but do not tighten.

Danger:

Note differences in flat shoulder nuts! A: Lug nuts for steel wheels do not have any lettering, B: The lug nuts prescribed for use with aluminum wheels in single wheel assemblies carry the letters "VA FA," "HA RA" for dual-wheel assemblies and an inscription with three rings on the contact shoulder (see illustration).

Danger:

Always avoid mixing lug nuts. Take care to ensure that the correct lug nuts are installed when mounting tires.



M40_00-0061-01

- To prevent possible damage when mounting and removing the light-alloy (aluminum) wheels, always slide the installation sleeves (on-board tool kit) over two opposite wheel studs.
- Replace the drive-on wedge under the wheel, lower the coach down and remove the jack.

Notice:

If you do not push the drive-on wedge under the wheel, you will not be able to remove the jack.



M40_00-0028-01

► Tighten the wheel lug nuts, alternating in a cross pattern

Danger:

Tighten the wheel lug nuts with the available tool and cautiously drive to the nearest SETRA ServicePartner. Have a specialist tighten the wheel lug nuts to the prescribed torque.

Danger:

If you are using an impact wrench, just tighten the lug nuts gently while remembering to proceed in a cross pattern, then use a torque wrench to tighten the nuts to the specified torque setting.

Notice:

The rod (3) used to extract the spare tire from its storage compartment can be used as an extension on the wrench. Remove the spring clamp from the bracket to remove the rod.

Danger:

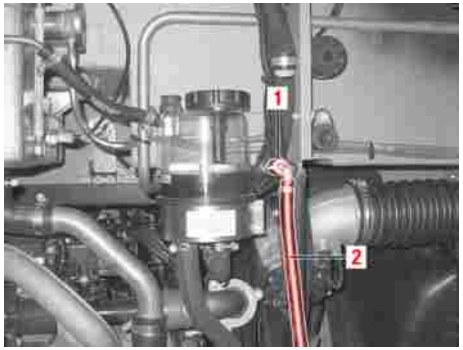
Torque specification for the wheel lug nuts: 450 lb-ft (600 Nm).

► Drive the coach off the drive-on wedge

Danger:

Always retighten the wheel lug nuts after 30 - 90 miles (50 - 150 km).

Inflating tires using the tire inflation connection



M42_00-0785-71

- ► Switch off the engine and open the engine compartment door.
- ► Locate the compressed-air supply fitting in the top right section of the engine compartment. Remove the protective cap and attach the tire inflation hose (2) from the tool kit. Route the hose away from all moving parts and out through the bottom or side of the engine compartment.

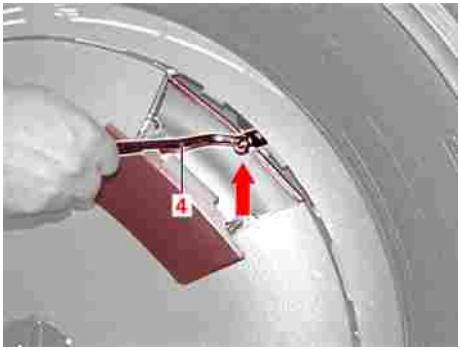
Notice:

The system can supply air pressure of up to 130 psi (9 bar) (cycling point at which the regulator shuts down the compressor). Compressed air will only flow out of the fitting and hose when the compressor is pumping.

Danger:

Because the pressure may be too high for inflating a tire, the filling procedure should be monitored using the compressed air pressure display on the instrument cluster's display screen.

- ► Bleed air from the compressed air system by pumping the brake pedal, continuing until the pneumatic system air pressure in circuits 1 and 2 drops below 95 psi (6.5 bar).



M40_00-0029-01

- ► Screw on the valve stem connector (4), if not already installed, to the other end of the tire inflation hose using the wing nut.
- ► Unscrew the protective cap from the tire's valve stem and place the valve connector (4) in position.

Notice:

Position the hose so that the engine compartment door can be closed.

- ▶ Close the engine compartment door
- ▶ Start the engine and inflate the tires to the specified pressure (see manufacturer's tire pressure chart), then switch off the engine.

Danger:

Check the display for pneumatic system air pressure in circuits 1 and 2

- ▶ After you have finished inflating the tires, unscrew the tire inflation hose and seal the tire inflation connection with the protective cap.

Danger:

Never drive the coach when the tire inflation hose is connected.

Danger:

Correct tire inflation pressure to the specified level at the earliest opportunity.

Operation and malfunction displays - Steering system

Low hydraulic fluid in power steering system (special equipment option)



When the level of the hydraulic fluid in the power steering system's reservoir falls below the minimum level a "condition yellow" warning appears along with this symbol on the display screen.

Danger:

Have the vehicle checked by a SETRA ServicePartner at once.

Checking hydraulic fluid level in power steering system reservoir

Checking hydraulic fluid level in power steering system reservoir



M46_00-0032-01

► Checking the fluid level

Notice:

With the engine running the fluid should reach to between MIN and MAX markings (2) on the reservoir (1).

Danger:

Hydraulic fluid should be added to the power-steering system exclusively by authorized technicians and in accordance with the official specifications for fluids and lubricants.

Caution:

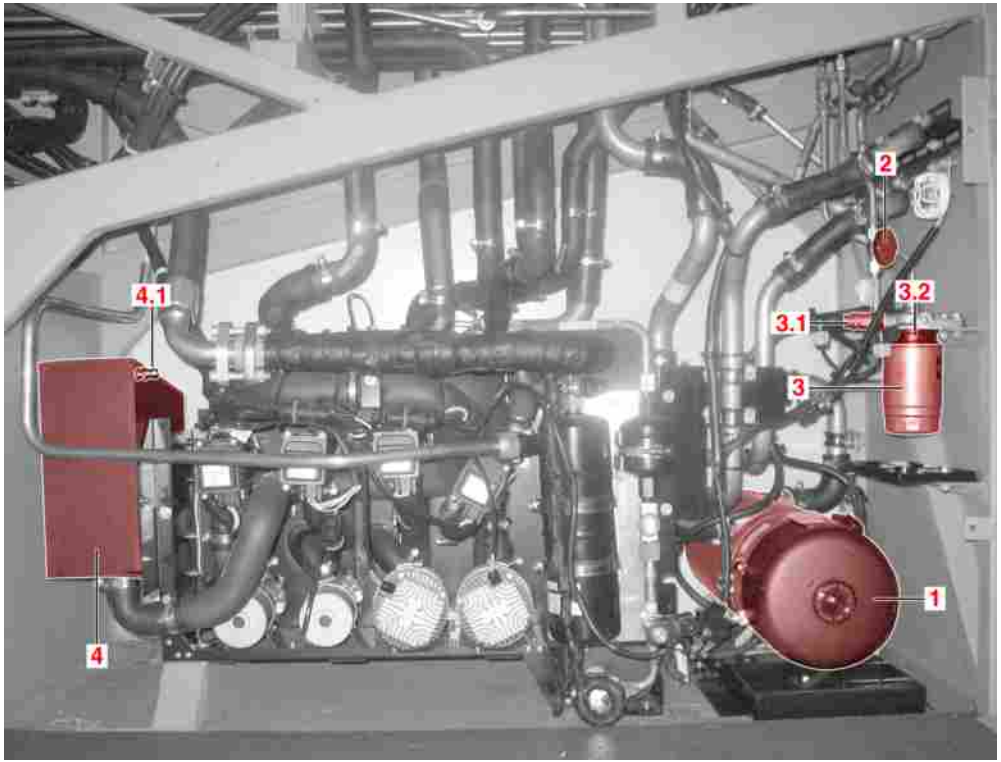
Only use ATF oil in accordance with the ZF Lubricant List TE-ML 09 X. (For example: Mobil ATF SHC, Gulf ATF Synt, Valvoline Synpower ATF, etc.)

Notice:

When the level of the fluid in the power steering system's reservoir falls below the minimum approved level a yellow warning appears on the display (special equipment option) when the ignition switch is turned on. No transparent container is installed with electrical fluid level sensing (special equipment option). The fluid level can only be checked manually using the installed dipstick.

Replacing fuel filter for auxiliary heater.

Replacing fuel filter for auxiliary heater.



Central heating and climate control unit

1	Auxiliary heater
2	Auxiliary heater fuel feed line shutoff lever
3	Auxiliary heater fuel filter
3.1	*Fuel filter heater temperature switch*
3.2	*Fuel heater*
4	Coolant circuit purge tank
4.1	*Purge tank ventilation connection*

Danger:

Accident risk. Secure the vehicle to prevent it from moving. Switch off the ignition and remove the key. Injury hazard. Use extreme caution when working in the vicinity of hot, rotating and moving parts.

Danger:

Risk of explosion through ignition, risk of poisoning through inhalation or ingestion of fuel and risk of injury through contact of skin and eyes with fuel.

- Close the fuel shut-off valve (2) (above the filter).
- Place a container underneath the fuel filter housing.

Danger:

Take precautions to ensure that the auxiliary heater cannot be inadvertently started.

- Loosen and remove the filter cartridge (3)

Environmental protection

Dispose of used filter cartridges in accordance with environmental-protection regulations.

- Lightly oil the seal ring on the new filter cartridge (3)
- Fill the filter cartridge (3) with diesel fuel and screw it back into place.
- Fully tighten manually

Caution:

Do not use tools.

- Start the auxiliary heater. Check to verify correct operation and inspect for leaks.

Operating the emergency release switch for the frequent-stop brake

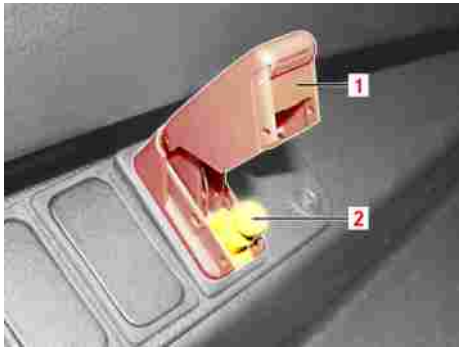
Danger:

This switch is sealed and should only be operated if there is a fault in the frequent stop brake or brake interlock.

Danger:

Make sure that the parking brake is engaged before actuating the emergency release switch for the frequent-stop brake. Otherwise the vehicle could roll away.

- Remove the lead seal



M68_00-0311-71

- Fold out the red cover (1) of the emergency release switch.
- Operate the switch (2) by pulling it out.

  The frequent-stop brake feature is no longer active.

Danger:

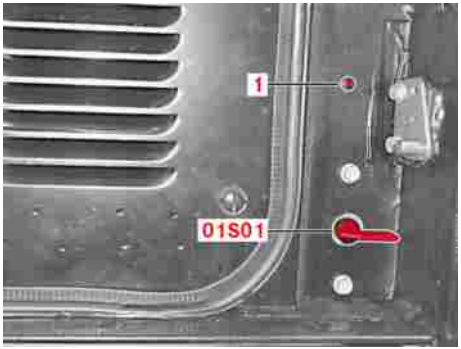
Have the problem corrected by a SETRA ServicePartner as soon as possible.

Electrical system safety precautions

To ensure safety, always switch off the power supply at the battery master switch (01S01) before working on the vehicle's electrical system as well as before connecting or disconnecting batteries.

Caution:

Before working on the vehicle electrical system, and in particular on the batteries, set the ignition/starter switch to the "OFF" position and switch off the main battery switch. The main battery switch interrupts the main line from the battery's positive terminal to the vehicle's entire electrical system. Therefore, it may only be switched off when the ignition/starter switch is OFF and after the hot water heater and the SCR system have completed their shut-down routine (red LED has gone out).



M54.00-2272-71

Always ensure that the ignition switch is OFF before removing or attaching any of the plugs that connect the electronic control units to the vehicle's wiring harness.

Always protect the starter, alternators and electrical plug connections against moisture when the engine is washed.

Never use conductive material of any kind to serve as a jumper between fuse terminals. Never attempt to repair a defective fuse.

Never use fuses with anything other than the specified amperage rating. Never replace a fuse with another fuse of a higher amperage rating - this could damage to the electrical system.

Safety instructions for handling batteries



M54_00-0117-01

Danger:

Avoid open flames and the formation of sparks in the vicinity of the batteries. Refrain from smoking or cell phone use. Observe safety precautions when handling batteries. Exercise care near moving engine components and electrical cables. Failure to follow these directions will cause damage to the electronic components, and can lead to a battery explosion and severe injury or death. Never lean

over batteries while connecting or jump-starting. You might injure yourself. Battery fluid contains sulfuric acid. Do not allow this fluid to come into contact with eyes, skin or clothing. In case it does, immediately flush affected area with water, and seek medical help. A battery will also produce hydrogen gas, which is flammable and very explosive. Keep flames or sparks away from the battery, avoid improper connection of jumper cables, smoking etc. Read all instructions before proceeding. Keep children away.

Danger:

The safety cotter pins of the battery tray must always be mounted on the left and right, in order to prevent the batteries from dislodging during vehicle operation.

Danger:

Install only lead acid batteries - never gel-type batteries. The individual cells of the batteries must be equipped with special caps connected to one another by ventilation hoses to conduct the generated gases into the air.

Measures for avoiding damage to vehicles or components during electrical welding

To avoid damaging the various components of the vehicle be sure to take the following precautions before welding:

- Have a fire extinguisher standing by.
- Ensure that the cable is disconnected from the negative terminal of the battery and that the battery's negative terminal is covered (observe notice on disconnecting the vehicle batteries).
- Remove the acoustic-insulation foam from box sections in the bodywork before removing dents, welding or applying tin lead.
- Connect the grounding cable from the electrical welder directly to the part to be welded. Make sure when doing this that there are no electrically insulated components between the ground cable and the weld point.

- Always protect heat-sensitive components such as plastic pipes from damage by either covering or removing them.
- Before welding remove all lines and wiring routed through box sections as well as any hidden reservoirs or electronic components.
- Protect interiors and glass against welding sparks and arcing by covering them with protective matting.

- Shield endangered areas against sparks and radiant heat.
- Never allow casings for electronic components or electrical wiring to come into contact with either the welding rod or the ground clamp from the arc-welding unit.
- If two parts are welded together, both parts must be connected to the ground clamp of the welder.
- Ensure that the surface of the vehicle part being welded is as clean and bare as possible prior to attaching the ground clamp from the arc welder; always remove all paint, rust, oil, grease and dirt.
- Never connect the arc welder's ground clamp to the transmission. The welding current can cause an arc-over to the bearings inside the transmission. The resulting structural changes can lead to premature failure of the unit.

Danger:

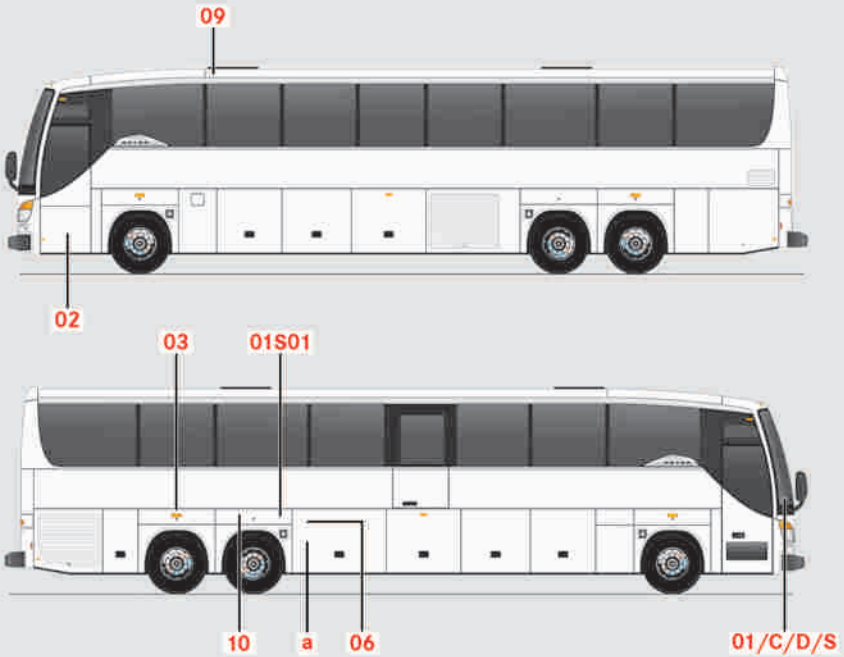
The heat generated during welding can cause severe smoke or fire.

Notice:

Plug X1 must be disconnected from the ABS/ESP electronics. This control unit is located below the driver's cockpit.

Electrical system - overview

Electrical system - overview



01 Cockpit switch panel, vehicle electrical system data CD

C Socket for download and self-healing (FPS)

D ISO diagnostic connection

S SAE diagnostic connection (Allison transmission)

Notice:

Detailed information on the locations of various electrical system components (control units, fuses, relays, plugs, etc.) is contained on the "Vehicle Data: Electrical System" CD.

01S01 Main battery switch

Caution:

Be sure to read the information sticker before operating the main battery switch 01S01.

02 Control panel under the driver seat

03 Auxiliary switch panel

06 Fuse panel (PDB)

09 Ceiling-mounted electrical interface board

Notice:

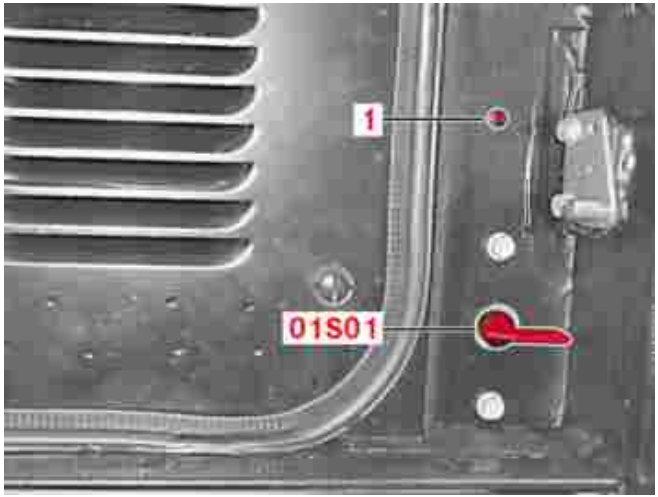
Mounted above row 3 on left side

10 Battery compartment

a Equalizer

Main battery switch (with LED for switch-off enable)

Main battery switch (with LED for switch-off enable)



01S01 Main battery switch

1 LED for switch-off enable

Caution:

The main battery switch may not be set to the "OFF" position when this LED lights up, as failure to observe this could result in damage to the emission treatment system.

Notice:

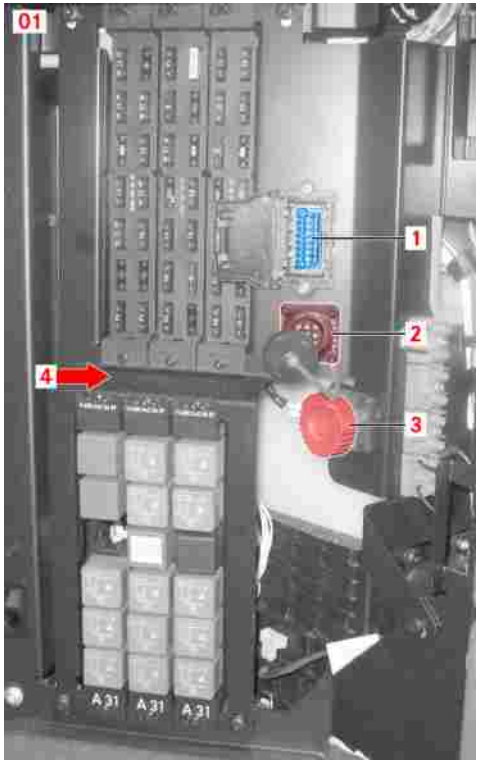
Nor should the main battery switch be set to the "OFF" position with the anti-theft alarm system (special equipment option) activated, as then an alarm will be triggered.

Notice:

The main battery switch (01S01) is located in the battery compartment.

Interior switch panel located in cockpit (01)

Interior switch panel located in cockpit (01)



Notice:

This switch panel contains fuses and relays for accessories in the front of the vehicle.

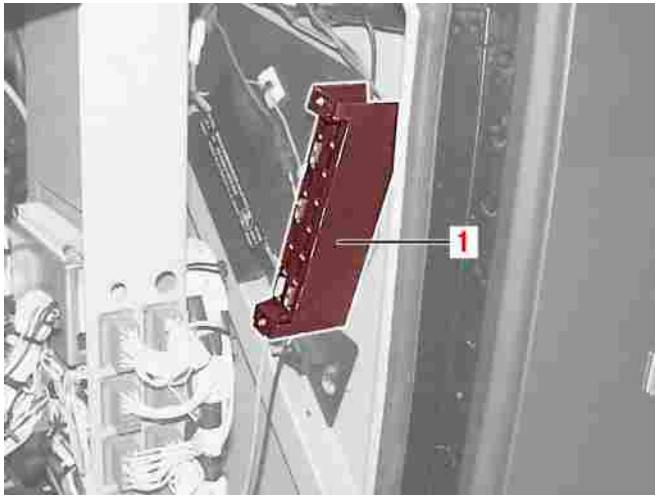
Notice:

The switch panel cover in the cockpit also contains the vehicle CD (4). It is important that this CD remain in the coach as it contains essential vehicle-specific information required for maintenance and service.

1 Diagnostic socket ISO
2 Socket for download and FPS self-healing
3 SAE diagnostic socket (Allison)
4 CD vehicle data

Main switch panel (below cockpit)

Main switch panel (below cockpit)

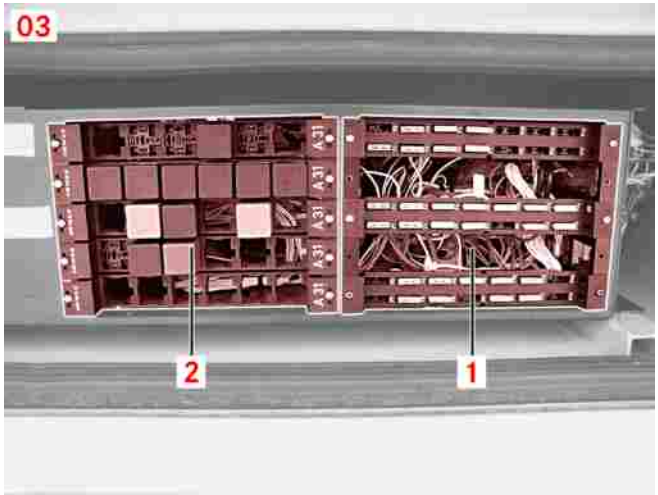


Notice:

This compartment houses the electronic controls units for various systems such as ABS/ESP, the retarder, etc. Some fuses (1) are also installed at this location.

Auxiliary switch panel (03), display of fuses

Auxiliary switch panel (03), display of fuses



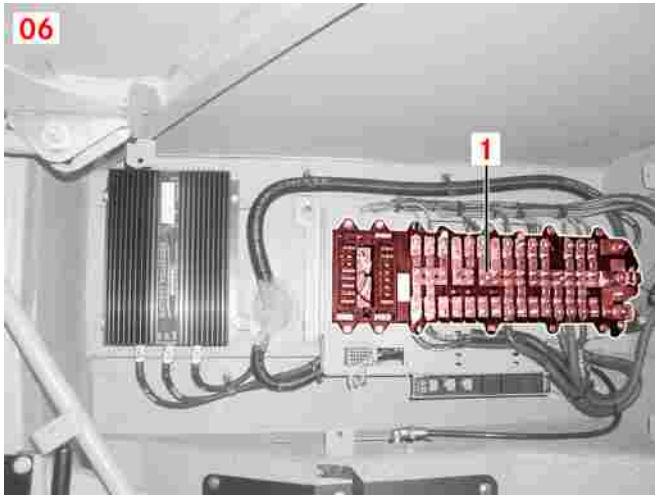
1 Fuses (for different systems, including FPS)
2 Relays

Notice:

Here the main fuses and modules FPS 3 and 4 are located, among other items. The auxiliary switch panel is located above the trailing axle on the right.

Fuse panel (PDB) (06)

Fuse panel (PDB) (06)

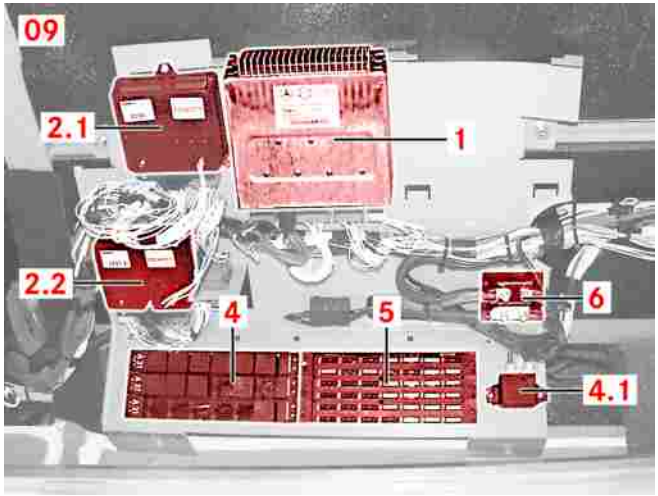


Notice:

The fuse panel (1) is located behind a cover and includes the main fuses and as well various other fuses, for instance, for the FPS system. The fuse panel is located forward of the drive axle on the right side of the vehicle.

Roof control panel (09)

Roof control panel (09)



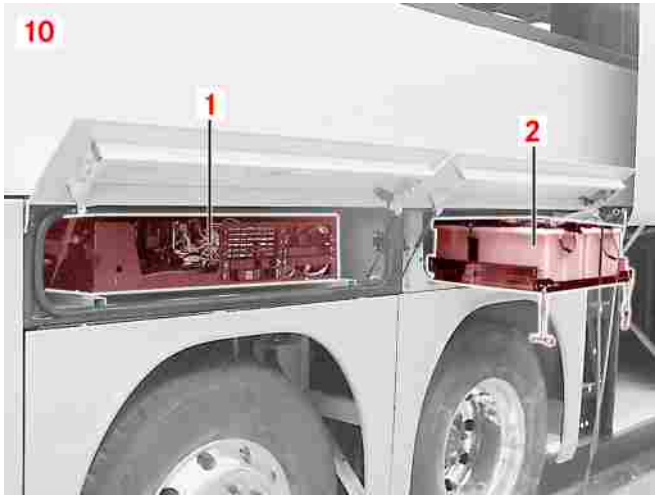
Notice:

The ceiling-mounted switch panel also contains several fuses (5) for electrical equipment in the roof area. It is located in the roof duct at the front left.

1	Module FPS 5
2.1	Heater, ventilation, air conditioning (HVAC) substation
2.2	Heater, ventilation, air conditioning (HVAC) substation
4	Relay area
4.1	Windshield heater relay
5	Fuse area
6	Voltage supply screw connector

Battery compartment (10)

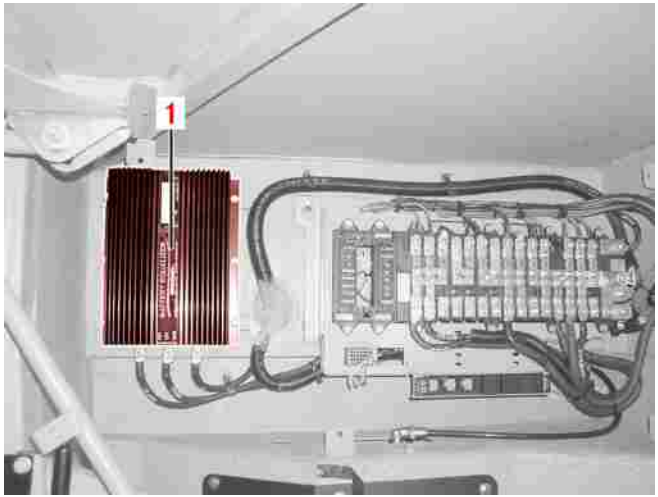
Battery compartment (10)



1 Auxiliary switch panel over the trailing axle
2 Battery compartment over the drive axle

Equalizer (a)

Equalizer (a)



Notice:

The equalizer secures both on-board electrical systems while synchronizing charging of the two 12 V batteries.

Information on fuse assignments

The following information applies to the fuse assignments listed in the following:

Notice:

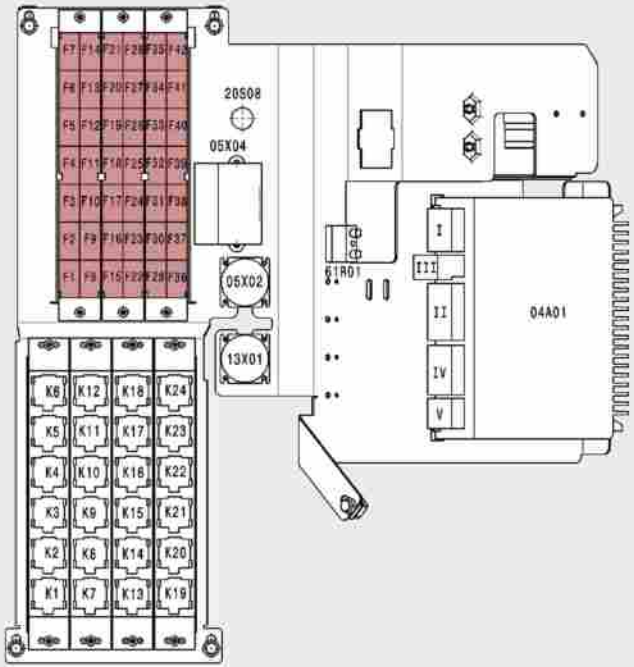
The information in this section is based on a vehicle with standard fuse assignments. Actual fuse assignments may vary from one vehicle to the next. Not all fuse sockets are used in all vehicles. Fuses may also be installed in sockets listed as "unassigned" in response to special customer specifications and when supplementary equipment is installed in the field.

Notice:

The assigned locations and individual amperage ratings for the fuses in your specific vehicle can be found in the "Vehicle Data" CD located in the interior switch panel within the cockpit.

Fuse assignments of interior switch panel in cockpit S 407

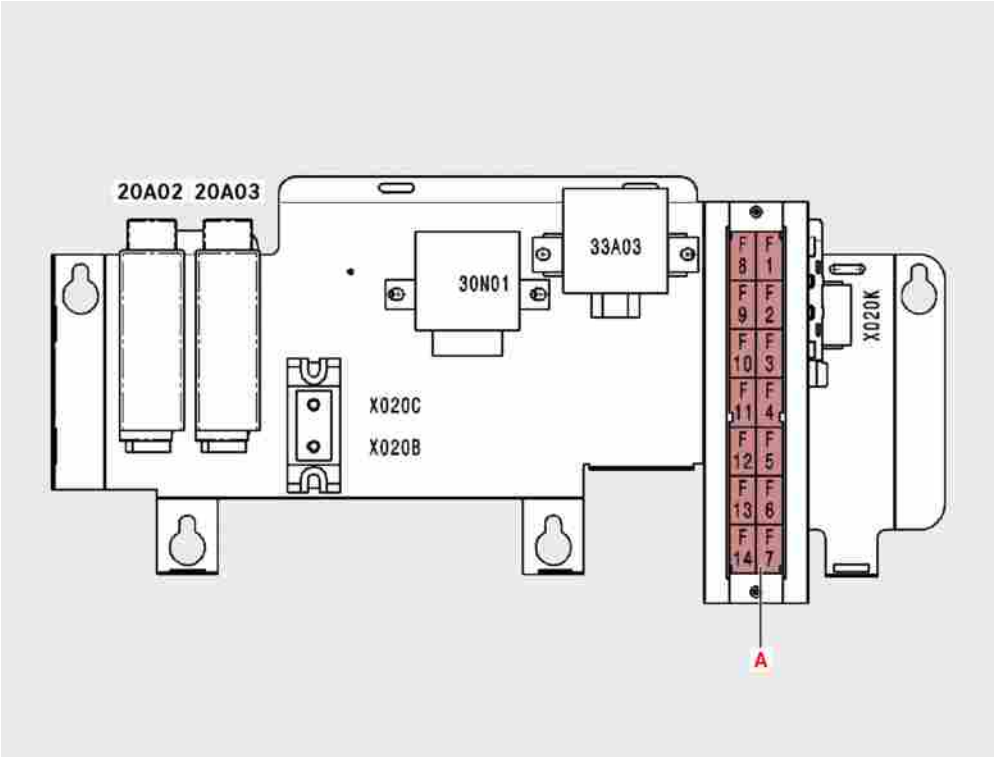
Fuse assignments of interior switch panel in cockpit S 407



F1	7.5 A - Passenger side reading lamp (31F01)
F2	Not assigned
F3	15 A - Radio and sound system (70F01)
F4	7.5 A - Front fog lights (30F03)
F5	Not assigned
F6	15 A - Driver's seat (81F01)
F7	15 A - Front module (50F02)
F8	7.5 A - Download/Diagnosis (05F01)
F9	Not assigned
F10	7.5 A - C3 signal of I module (60F01)
F11	15 A - Video monitor (70F03)
F12	7.5 A - Fuel level sensor (65F08)
F13	Not assigned
F14	Not assigned
F15	7.5 A - Powertrain warning lamps (10F17)
F16	7.5 A - Brake pad wear indicator (20F01)
F17	Not assigned
F18	Not assigned
F19	15 A - Driver's window heater (32F07)
F20	3 A - Telematic system TR. 15
F21	7.5 A- Lighting for entrance of Door 1 (41F04)
F22	Not assigned
F23	3 A - Attendant paging system (83F01)
F24	7.5 A - Allison automatic transmission (13F01)
F24	7.5 A - Roll-back lock with AS-Tronic automatic manual transmission (20F09)
F25	7.5 A - Brake light (30F11)
F26	Not assigned
F27	Not assigned
F28	25 A - Wiper (33F02)
F29	7.5 A - Download/Diagnosis interface (05F02)
F30	7.5 A - Power supply for door control (41F06)
F31	25 A - Fuse 2 Antilock Braking System (ABS) (20F04)
F32	Not assigned
F33	3 A - Telematic system (77F02)
F34	15 A - Central locking system (82F01)
F35	15 A - Radio system TR. 30 (70F20)
F36	15 A - Fuse and relay compartment sockets, instrument panel (02F02)
F37	15 A - Transformer 24 V/12 V (01F18)
F38	15 A - Heater, ventilation and A/C (HVAC) control panel (50F01)
F39	7.5 A - TR. 30/Instrument node supply (60F02)
F40	7.5 A - Pro-Driver TR. 30 (65F15)
F41	7.5 A - Driver's seat (81F02)
F42	15 A - Control module cornering lamp (30F19)

Main switch panel fuse assignments (below cockpit) S 407

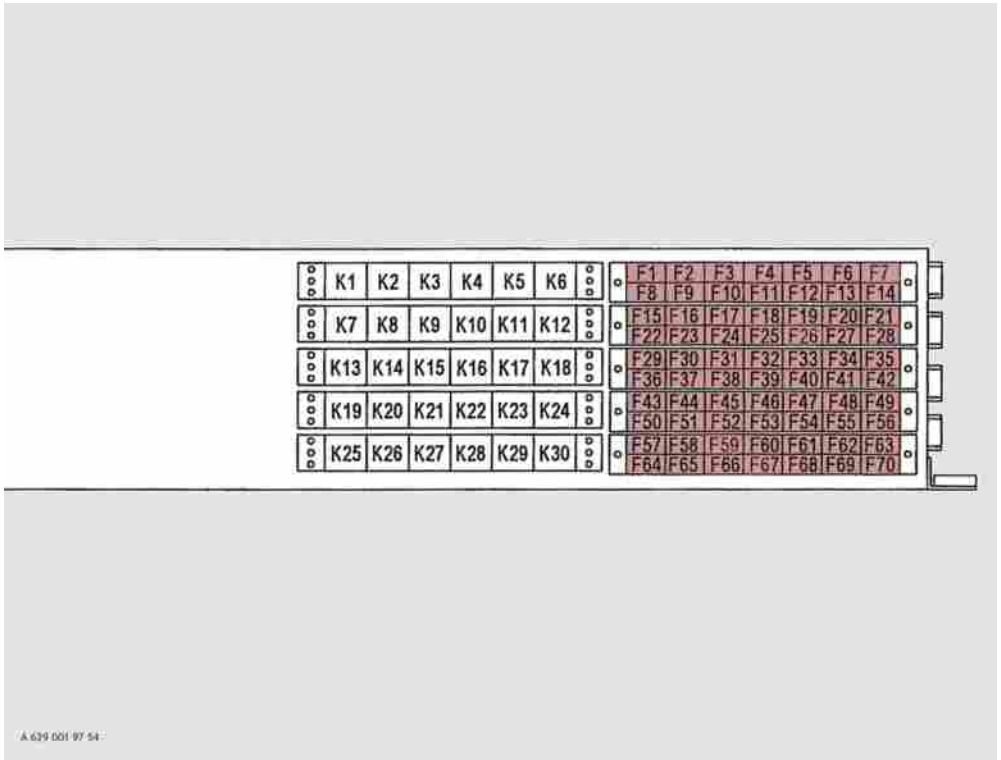
Main switch panel fuse assignments (below cockpit) S 407



	Fuse rail A
F1	*15 A - 12 V power sockets (02F08)*
F2	*7.5 A - Video monitoring system (70F06)*
F3	*7.5 A - Park distance monitor (70F07)*
F4	*Not assigned*
F5	*7.5 A - Phone, mobile TR 15 (72F09)*
F6	*7.5 A - Dimming ignition switch (13F11)*
F7	*15 A - Cigarette lighter 12 V (02F15)*
F8	*7.5 A - SAE diagnostic socket 12 V (13F08)*
F9	*15 A - Electric mirror heater (32F13)*
F10	*15 A - Electric mirror heater (32F15)*
F11	*Not assigned*
F12	*Not assigned*
F13	*Not assigned*
F14	*Not assigned*

Auxiliary switch panel fuse assignments S 407

Auxiliary switch panel fuse assignments S 407



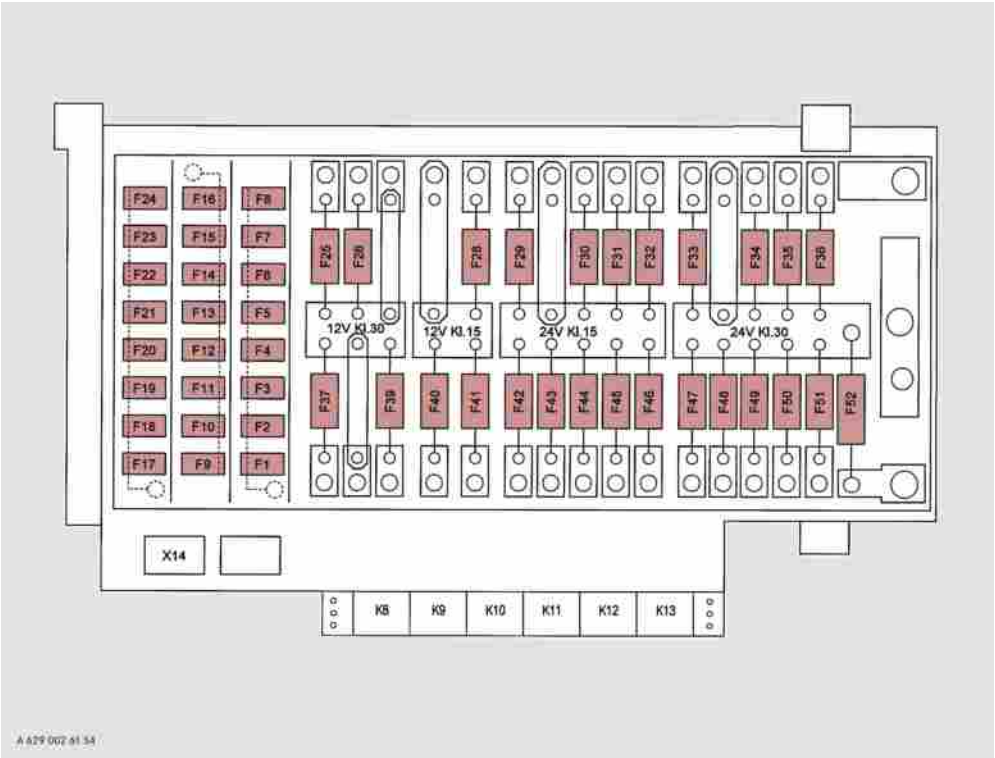
F1	7.5 A - Compressed-air supply (24F01)
F2	7.5 A - Lavatory (80F11)
F3	7.5 A - Lift door/Emergency door (46F03)
F4	Not assigned
F5	7.5 A - Generators TR. 15 (01F55)
F6	25 A - Fuel pump (15F15)
F7	3 A - Fuel pump switch (15F16)
F8	7.5 A - FPS TR. 15 (04F17)
F9	7.5 A - Starter control relay (10F38)
F10	Not assigned
F11	7.5 A - Sensing system TR. 15 (01F68)
F12	Not assigned
F13	Not assigned
F14	Not assigned
F15	Not assigned
F16	7.5 A - Automatic manual transmission TR. 30 (12F04)
F17	7.5 A - Automatic manual transmission TR. 30 (12F05)
F18	7.5 A - Automatic manual transmission TR. 15 (12F03)
F19	7.5 A - Retarder RET TR. 15 (14F02)
F20	7.5 A - Retarder RET TR. 30 (14F03)
F21	7.5 A - Transmission TR. 15 (13F07)
F22	Not assigned
F23	Not assigned
F24	Not assigned
F25	7.5 A - Smoke detector system (64F12)
F26	Not assigned
F27	Not assigned
F28	Not assigned
F29	7.5 A - Substation 1 (51F30)
F30	15 A - Water pump, HVAC floor circuit (51F32)
F31	Not assigned
F32	Not assigned
F33	15 A - Water pump, HVAC front module circuit (51F34)
F34	25 A - Liquefier fan speed module (51F10)
F35	25 A - Auxiliary heater (54F02)
F36	15 A - Auxiliary switch panel/engine compartment light socket (02F01)
F37	15 A - Water pump for center HVAC circuit (51F31)
F38	15 A - Water pump, HVAC roof circuit (51F33)
F39	Not assigned
F40	Not assigned
F41	25 A - Liquefier fan speed module (51F09)
F42	25 A - Auxiliary heater (54F01)
F43	Not assigned
F44	Not assigned
F45	Not assigned
F46	Not assigned
F47	Not assigned
F48	Not assigned
F49	Not assigned
F50	Not assigned
F51	Not assigned
F52	Not assigned

Auxiliary switch panel fuse assignments S 407

F53	Not assigned
F54	Not assigned
F55	Not assigned
F56	Not assigned
F57	Not assigned
F58	Not assigned
F59	7.5 A - Engine compartment and lighting socket (02F04)
F60	15 A - Resistor heater diesel exhaust fluid line (17F03)
F61	Not assigned
F62	Not assigned
F63	Not assigned
F64	Not assigned
F65	Not assigned
F66	Not assigned
F67	Not assigned
F68	Not assigned
F69	Not assigned
F70	Not assigned

Fuse assignment on fuse panel (power distribution board (PDB))

Fuse assignment on fuse panel (power distribution board (PDB))



Fuse assignment on fuse panel (power distribution board (PDB))

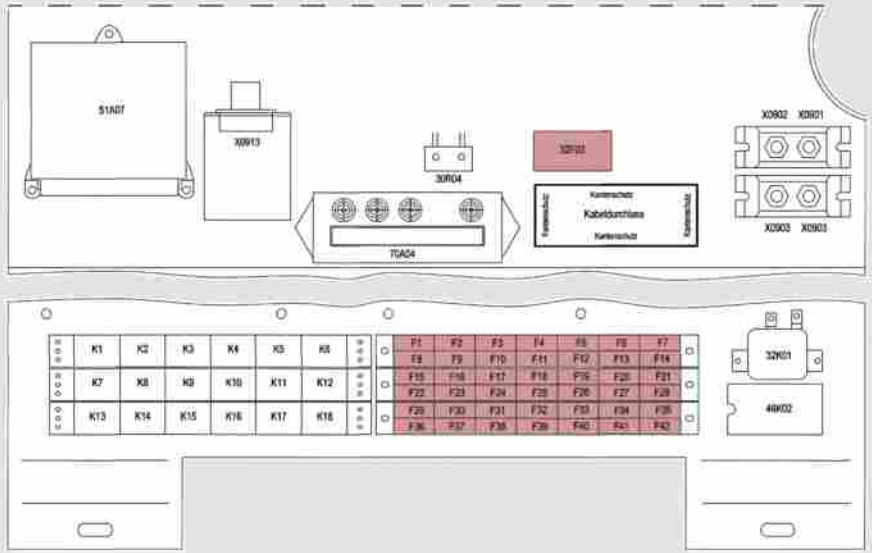
F1	7.5 A - Engine management 12 V (10F33)
F2	10 A - Common Powertrain Controller CPC TR. 30 12 V (10F34)
F3	7.5 A - Common Powertrain Controller CPC 12 V (10F35)
F4	7.5 A - Headlight low beam emergency circuit (30F13)
F5	7.5 A - Headlight high beam emergency circuit (30F14)
F6	7.5 A - Voltage monitoring 12 V (01F79)
F7	Not assigned
F8	Not assigned
F9	Not assigned
F10	7.5 A - Wheelchair lift lighting (46F05)
F11	Not assigned
F12	Not assigned
F13	Not assigned
F14	Not assigned
F15	15 A - Outside lighting left-hand luggage compartment (30F31)
F16	15 A - Outside lighting right-hand luggage compartment (30F32)
F17	7.5 A - Flexible programmed control (FPS 1) (04F09)
F18	7.5 A - Flexible programmed control (FPS 2) (04F10)
F19	7.5 A - Flexible programmed control (FPS 3) (04F11)
F20	7.5 A - Flexible programmed control (FPS 4) (04F12)
F21	7.5 A - Flexible programmed control (FPS 5) (04F13)
F22	7.5 A - Voltage sensing generator (01F20)
F23	Not assigned
F24	7.5 A - Tachograph/instrument node (60F03)
F25	30 A - Main fuse 12 V TR. 30 (01F28)
F26	30 A - Engine management TR. 30 12 V (10F36)
F28	30 A - Main fuse 12 V TR. 15 (01F29)
F29	50 A - Flexible programmed control (FPS 1) (04F01)
F30	50 A - Flexible programmed control (FPS 2) (04F02)
F31	50 A - Flexible programmed control (FPS 3) (04F03)
F32	50 A - Flexible programmed control (FPS 4) (04F04)
F33	50 A - Terminal 50 (01F17)
F34	50 A - Main fuse TR. 15 (01F02)
F35	Not assigned
F36	Not assigned
F37	30 A - Aftertreatment Control Module ACM 12 V TR. 30 (17F07)
F38	Not assigned
F40	100 A - Equalizer 12 V (01F31)
F41	Not assigned
F42	Not assigned
F43	Not assigned
F44	*125 A - Main fuse TR. 30 (01F07)*
F45	80 A - Main fuse TR. 30 (01F13)
F46	50 A - Flexible programmed control (FPS 5) (04F05)

Fuse assignment on fuse panel (power distribution board (PDB))

F47	50 A - Equalizer 24 V (01F30)
F48	Not assigned
F49	125 A - Air conditioner (51F01)
F50	100 A - Wheelchair lift power supply (46F02)
F51	Not assigned

Ceiling switch panel fuse assignments S 407

Ceiling switch panel fuse assignments S 407



F1	Not assigned
F2	Not assigned
F3	Not assigned
F4	7.5 A - Clock (65F01)
F5	15 A - Ceiling light rail (31F06)
F6	15 A - Reading lamps (31F04)
F7	7.5 A - Video system (70F24)
F8	7.5 A - Clock (65F02)
F9	7.5 A - Video system (70F11)
F10	7.5 A - 12 V power supply (01F16)
F11	7.5 A - Pro Driver Terminal 30 (65F15)
F12	Not assigned
F13	15 A - Ceiling light rail (31F05)
F14	25 A - Reading lamps (31F03)
F15	Not assigned
F16	Not assigned
F17	7.5 A - Club corner lighting (31F18)
F18	15 A - Fan speed module, rear roof module (51F41)
F19	15 A - Fan speed module, center roof module (51F39)
F20	15 A - Fan speed module, front roof module (51F37)
F21	7.5 A - Substation 0 Terminal 30 (51F35)
F22	Not assigned
F23	Not assigned
F24	Not assigned
F25	15 A - Fan speed module, rear roof module (51F42)
F26	15 A - Fan speed module, center roof module (51F40)
F27	15 A - Fan speed module, front roof module (51F38)
F28	7.5 A - Substation 2 Terminal 30 (51F35)
F29	Not assigned
F30	Not assigned
F31	Not assigned
F32	7.5 A - Luggage tray illumination (31F08)
F33	15 A - Fan speed module, rear roof module (51F47)
F34	15 A - Fan speed module, center roof module (51F45)
F35	15 A - Fan speed module, front roof module (51F43)
F36	Not assigned
F37	Not assigned
F38	Not assigned
F39	Not assigned
F40	15 A - Fan speed module, rear roof module (51F48)
F41	15 A - Fan speed module, center roof module (51F46)
F42	15 A - Fan speed module, front roof module (51F44)
32F03	40 A - Fuse, electric heated windshield

Handling fuses

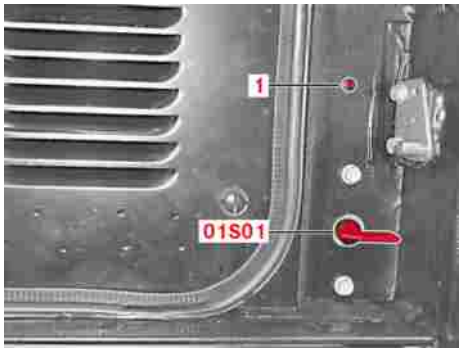
► Always carry some extra fuses in the coach for emergencies.

Caution:

Fuses provide protection against excessive currents (wire temperatures exceed limits) in the electrical system.

Notice:

Fuses are located at the cockpit interior switch panel (01), the switch panel below the cockpit (02), the auxiliary switch panel (03) and the ceiling-mounted switch panel (09)



M54.00-2272-71

► Always observe the following instructions.

Danger:

Always ensure that the cause of the short circuit has been found and repaired before replacing a blown fuse. Make sure the connections have good contacts.

Danger:

Never use conductive material of any kind to serve as a jumper between fuse terminals. Never attempt to repair a defective fuse.

Danger:

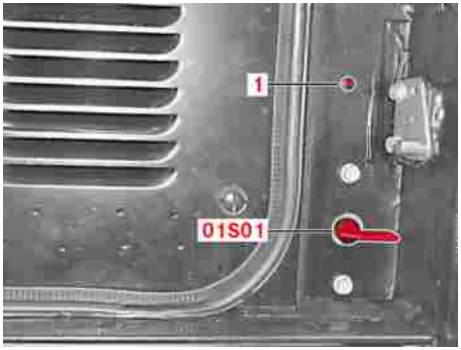
Never use fuses with anything other than the specified amperage rating. Never replace a fuse with another fuse of a higher amperage rating - this could damage the electrical system.

Danger:

Always use the battery master switch (01S01) to disconnect the batteries before proceeding to work on the electrical system.

Disconnecting battery cables from terminals

► Switch off the engine



M54.00-2272-71

► Switch off power supply at battery master switch (01S01).

Caution:

Be sure to read the information sticker before operating the main battery switch 01S01.

Danger:

Avoid open flames and the formation of sparks in the vicinity of the batteries. Refrain from smoking or cell phone use. Observe safety precautions when handling batteries. Exercise care near moving engine components and electrical cables. Failure to follow these directions will cause damage to the electronic components, and can lead to a battery explosion and severe injury or death. Never lean over batteries while connecting or jump-starting. You might injure yourself. Battery fluid contains sulfuric acid. Do not allow this fluid to come in contact with eyes, skin or clothing. If it does, immediately flush affected area with water, and seek medical help. A battery will also produce hydrogen gas, which is flammable and very explosive. Keep flames or sparks away from the battery, avoid improper connection of jumper cables, smoking etc. Read all instructions before proceeding. Keep children away.

Danger:

Disconnecting the battery cables may cause sparks, which produce a risk of explosion from hydrogen gases. The battery master switch (01S01) is equipped with a warning plate to alert users to this potential hazard and prevent injuries.

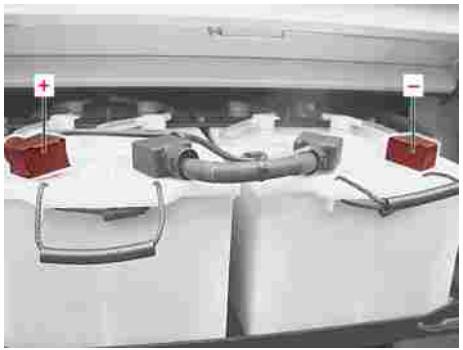
Danger:

Always place the battery master switch in the OFF position (key can be removed) before working on the vehicle's electrical system or components. It is especially important to observe this precaution before carrying out any operations related to the batteries. Because the battery master switch opens the circuit in the main cable leading from the battery's positive terminal to the vehicle's electrical system, it is absolutely essential to ensure that the ignition switch is OFF and that the auxiliary heater has completed its shutdown routine (overheating hazard) before using the switch to interrupt the vehicle power supply.

Disconnecting battery cables from terminals

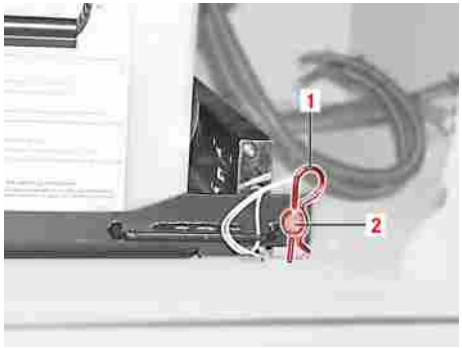
Danger:

Install lead acid batteries only - never gell-type. The individual cells of the batteries must be equipped with special caps connected to one another by ventilation hoses that conduct the generated gases into the air.



M54_00-0803-01

- Remove the negative terminal from the battery
- Remove the positive terminal from the battery
- Replace terminals to the batteries in the reverse order



M54_00-0839-01

- Slide the battery tray back in to the stop until the pins (2) appear with the transverse hole and lock with both cotter pins (1) on the left and right.

Danger:

The safety cotter pins (1) of the battery tray must always be mounted on the left and right, in order to prevent the batteries from dislodging during vehicle operation.

Recharging the coach batteries

Danger:

Avoid open flames and the formation of sparks in the vicinity of the batteries. Refrain from smoking or cell phone use. Observe safety precautions when handling batteries. Exercise care near moving engine components and electrical cables. Failure to follow these directions will cause damage to the electronic components, and can lead to a battery explosion and severe injury or death. Never lean over batteries while connecting or jump-starting. You might injure yourself. Battery fluid contains sulfuric acid. Do not allow this fluid to come in contact with eyes, skin or clothing. In case it does, immediately flush affected area with water, and seek medical help. A battery will also produce hydrogen gas, which is flammable and very explosive. Keep flames or sparks away from the battery, avoid improper connection of jumper cables, smoking etc. Read all instructions before proceeding. Keep children away.

Notice:

Recharge any batteries that are not used once per month.

- Connecting the charger

Danger:

Before connecting the battery charger make sure the polarity is correct.

Danger:

Charging the batteries generates volatile hydrogen gas - explosion hazard. Make sure there is good ventilation when the coach batteries are being charged.

Notice:

Verify that the charging voltage (24 or 12 V) and charging current (approximately 1/10 of the rated capacity, e.g., 200 Ah battery with 20 A charging current) are correct.

- Switch off the charger after charging has finished.

Danger:

Wait until the battery stops discharging gases before disconnecting the cable clamps from the battery terminals (wait several minutes).

Instructions for jump starting

► Observe the instructions for jump-starting.

Danger:

Avoid open flames and the formation of sparks in the vicinity of the batteries. Refrain from smoking or cell phone use. Observe safety precautions when handling batteries. Exercise care near moving engine components and electrical cables. Failure to follow these directions will cause damage to the electronic components, and can lead to a battery explosion and severe injury or death. Never lean over batteries while connecting or jump-starting. You might injure yourself. Battery fluid contains sulfuric acid. Do not allow this fluid to come in contact with eyes, skin or clothing. In case it does, immediately flush affected area with water, and seek medical help. A battery will also produce hydrogen gas, which is flammable and very explosive. Keep flames or sparks away from the battery, avoid improper connection of jumper cables, smoking etc. Read all instructions before proceeding. Keep children away.

Danger:

Before you connect the jumper cables confirm that the voltages (24V) are the same on both ends. Ensure correct polarity.

Danger:

Use only jumper cables (cable diameter approximately 2.75 in (70 mm2) for jump-starting, and never use a booster charger. Always comply with all safety precautions and regulations.

Danger:

Use only jumper cables equipped with insulated clamps.

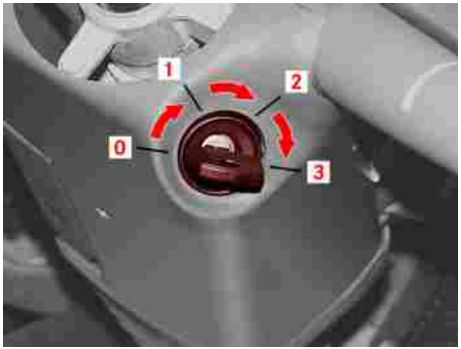
Notice:

Discharged batteries can freeze at temperatures of less than 14 °F (-10°C). Such batteries must be allowed to thaw before an attempt at jump-starting is made.

Danger:

Risk of acid burns. Never lean over the batteries during jump starting.

Jump-starting

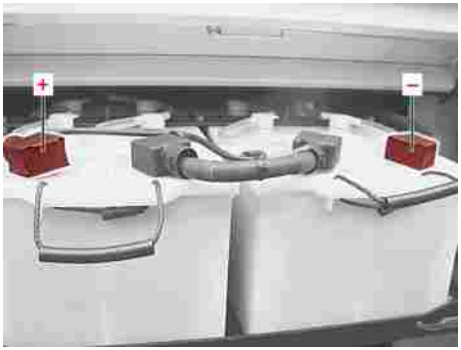


M54_00-0083-01

- Turn the key in the ignition switch all the way back to Position 0.
- Wait approx. 60 seconds, then switch off the battery master switch.

Caution:

Be sure to observe this point to prevent damage to the electrical system!



M54_00-0803-01

- First connect one end of the positive cable to the (+) terminal on the discharged battery and the other end to the (+) terminal on the charged battery.
- Connect one end of the negative cable to the (-) terminal on the support vehicle's battery. Then connect the other end to any large metal part that is bolted directly to the engine block on the vehicle being jumped.

Notice:

When connecting the cable, clamp it on as far as possible from the discharged battery.

- Switch on the battery master switch.
- The engine in the support vehicle serving as the power source should be running at fast idle.
- Start the engine of the coach being jump-started in the normal way and let it idle.
- Switch off the engine in the support vehicle.
- Disconnect both ends of the ground cable, then disconnect the positive cable.

Enabling the on-bord diagnosis for the systems: FPS, DM, HLK

Notice:

Before you disconnect the jumper cables, switch on major electrical accessories in the jump-started coach, such as the lighting, heated windows and ventilation fans; this precaution helps prevent voltage surge.

Enabling the on-bord diagnosis for the systems: FPS, DM, HLK

Notice:

The on-bord diagnosis can only be activated with the vehicle stopped, the parking brake engaged and the ignition switch switched on.

Notice:

FPS = Flexible Program System

Notice:

DM = Dash display

Notice:

HVAC = Heater, Ventilation, Air Conditioning

Notice:

The on-board diagnosis does not replace the external diagnosis system (STAR diagnostics), which continues to provide the only means of assessing many functions.



M68.00-0425-71

► Press the "System" button (20) repeatedly until the desired system appears in the display (18).

Danger:

Never access the on-bord diagnosis unless the coach is parked in a safe location and the parking brake is engaged.

Notice:

Before activating the on-bord diagnosis (all systems) the ignition switch must be turned to Position II.

Danger:

All repairs on the coach to correct displayed malfunctions are to be carried out exclusively by qualified, authorized personnel.

FPS Flexible Program System

DM Dash display

HLK (HVAC) Heater, Ventilation, Air Conditioning

► Press "Info" button (23).

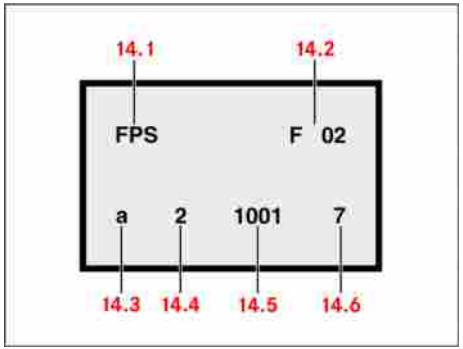
Notice:

The following information can be displayed:

MBS code number (control unit)

F error code (current/stored malfunctions)

On-board diagnostic screen example



M54_00-0193-01

► Example:

Notice:

System (14.1) for ex. FPS

Notice:

Error code (14.2) for ex. F 02 = malfunction 2

Deleting error codes from malfunction logs for the selected system

Notice:

Current malfunction (14.3) for ex. a: a = current malfunction, no indication = stored malfunction

Notice:

Malfunction severity rating (14.4) for ex. 2. levels: 0 = minor, 1 = medium, 2 = major

Notice:

Error code (FC) (14.5) for ex. 1001 (error code FPS module 1 (04A01))

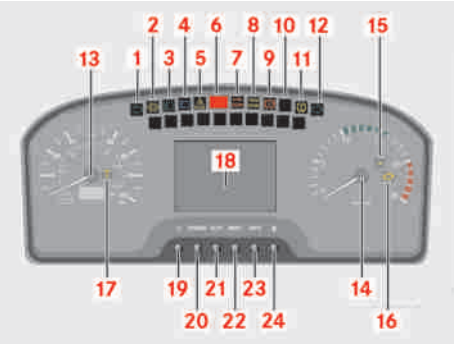
Notice:

Additional information (14.6) for ex. 7. Channel numbers 1 to 18 with FPS, channel numbers 0/1/2/3 and 10 with HLK TopClass 400 US Coach

Notice:

For additional information, see CD: "Workshop Information"

Deleting error codes from malfunction logs for the selected system



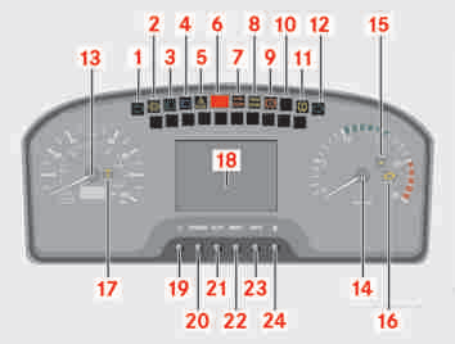
M68.00-0425-71

- Press and hold down the "Reset" button (22). Simultaneously press the "Quit" button (21) until "Reset" appears in the display (18).

Notice:

Be sure to record all codes displayed before deleting them. This step can be vital for subsequent diagnosis.

Quitting the On-Board Diagnosis



M68.00-0425-71

► Press the "Quit" button (21).

Enabling the on-board diagnosis for the Allison Transmission system

Notice:

The on-board diagnosis does not replace the external diagnosis system, which continues to provide the only means of assessing many functions.



M68.00-0378-71

► Simultaneously press the "Up" and "Down" arrow switches once to access the diagnostic display mode – Press the switches twice if a transmission fluid level sensor is installed.

Danger:

The on-board diagnosis may only be activated if the coach is stationary at a safe location and the parking brake is applied.

Notice:

Before activation of the on-board diagnosis (all systems) the ignition switch must be turned to Position II.

Notice:

The transmission must be in neutral.

Danger:

All repairs on the coach to correct displayed malfunctions are to be carried out exclusively by qualified, authorized personnel.

Observe the digital display for codes (codes will appear one digit at a time).

Notice:

Diagnostic codes are displayed as follows:

The code list position is the first item displayed, followed by the main code and the subcode. Each item is displayed for about one second. The display cycles continuously until the next code list position is accessed by pressing the MODE switch. The following list represents the display cycle using code 25 11 as an example:

Code list position – d, 1

Main code – 2, 5

Subcode – 1, 1

Cycle repeats – d, 1

Notice:

If a listed code is active, the LED indicator next to the MODE switch is illuminated. Any code position that does not have a diagnostic code logged will display " - " for both the main and subcodes.

Notice:

A maximum of five error codes (numbered d1–d5) can be stored in the malfunction log at any one time. As codes are added, the oldest inactive code is dropped from the list. If all codes are active, the code with the lowest priority that is not included on the severity list is dropped from the list.

- To view the second, third, fourth, and fifth positions (d2, d3, d4, d5), briefly press the MODE switch. Briefly press the MODE switch after the fifth position is displayed to restart the sequence of code list positions.

Notice:

For additional information, see CD: "Workshop Information"

Clearing active indicators and resuming vehicle operation



M68.00-0378-71

- Press and hold the MODE switch for approximately three seconds.

  The mode indicator (LED) flashes three times after about three seconds and three times again after about ten seconds, indicating that all of the codes are cleared.

Notice:

Be sure to record all codes displayed before deleting them. This step can be vital for subsequent diagnosis.

Notice:

Some codes are deleted automatically, while others will be deleted only after a certain number of ignition on-off cycles. Some error codes will be automatically deleted from the malfunction log if they do not recur before a specific number of ignition cycles has elapsed.

Notice:

If the condition that caused the error code is still present, the code will be entered again.

- Release the MODE switch.



M68.00-0473-71

Active indicators such as the CHECK TRANS light (1.2) will not be illuminated.

Exiting the diagnostic mode



M68.00-0378-71

► Press the "Up" and "Down" arrow switches at the same time, or press N (neutral).

Notice:

The shift selector diagnostic mode will end automatically after two minutes without operator input.

Replacing bulbs

Notice:

Bulbs and lamps are vital elements of vehicle safety. Make sure that all bulbs are always functional.

Danger:

The bulbs can become very hot! Risk of burn injuries! Always allow bulbs to cool completely before changing them!

Danger:

When changing bulbs wear safety glasses and non-slip gloves to avoid injuries!

Caution:

Always turn off the lighting before changing bulbs in order to avoid short circuits.

Danger:

Never use bulbs that have fallen down or with scratched glass! The bulb is pressurized and can burst! You can injure yourself on the glass splinters of broken bulbs!

Notice:

Protect bulbs against moisture and avoid all contact with fluids when they are in operation.

Notice:

Contaminants on the bulb's glass surface will reduce its service life. Do not touch the bulb's glass surface with your bare hands. If necessary, you can clean a light bulb when it is cold by applying alcohol and then rubbing it with a lint-free cloth.

Notice:

Operate bulbs only in the enclosed lamp assemblies for which they were designed. When replacing bulbs, use only bulbs of the same type and voltage rating as those that were originally installed.

Notice:

Check for corrosion on contacts, clean if necessary.

Notice:

Check that the seals are seated properly; replace damaged seals.

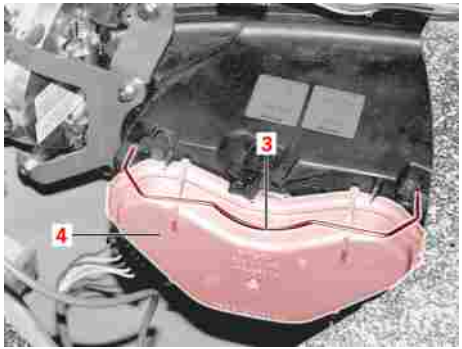
Notice:

Keep children away from bulbs.

Environmental protection

Comply with legal requirements when you dispose of bulbs or fluorescent tubes.

Replacing high beam and low beam bulbs



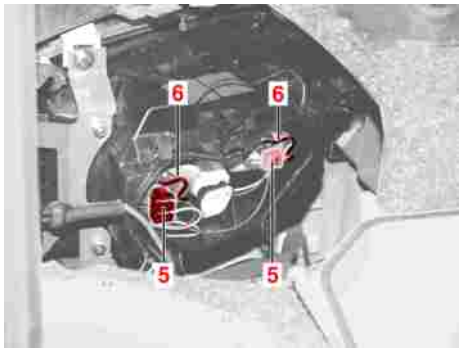
M54_00-0836-01

- Remove cover (4x quick-release on right)

Notice:

Access to the covers is available from the interior of the vehicle (on right) and through the service access hatch on the floor of the driver's cockpit area (left). Use the pull handle to the left of the driver's seat to open the hatch door.

- To change a high beam or low beam bulb, press up the wire clamp (3) and then remove the plastic cover (4).



M54_00-0102-01

- Disconnect the wiring connector from the bulb (5).

- Detach the spring clamp (6) and take out the bulb.

Notice:

Insert the new bulb, guiding the lugs on the bulb's base into the recesses on the reflector extension.

Notice:

Reverse the removal sequence to install.

Danger:

After replacing the bulb always remember to check the emergency headlight failure circuit (low and high beam).

Checking emergency headlight failure circuit (low and high beam)

Danger:

To ensure that the failure of a bulb (for example, low beam) on one side will not affect operation of the corresponding bulb on the other side, always check the status of the emergency headlight failure circuit after completing the repairs.

- Switch on ignition
- Turn headlight switch to ON
- Set combination stalk on steering column to "Low beam" position

Notice:

(refer to the "Cockpit controls" chapter in the Operator's manual)

- Ensure that the bulbs for low beam light up on both left and right sides.
- Turn off headlights at switch
- Unplug the low beam bulb in the left headlight

Notice:

(refer to section on "Replacing low and high-beam bulbs")



M54.00-1700-71

- Turn the headlights on again at the switch

Notice:

This service message will now appear in the instrument cluster display.

Notice:

The right-side headlight should remain on in its low-beam mode.

Danger:

If the right headlight is not operating on low beam, please contact a SETRA ServicePartner. Never attempt to continue driving if the emergency headlight failure circuit is not operating correctly.

- Turn off the headlights at the switch
- Install the left low beam bulb in its socket within the headlight.
- Turn the headlights on again at the switch

Notice:

The service message should now disappear from the display panel in the instrument cluster.

Danger:

Both the left and right-side headlights should now be illuminated on low beam.

- Switch to high beam using the combination stalk on the steering column.

Notice:

(refer to the "Cockpit controls" chapter in the Operator's Manual)

- Now repeat the test procedure, this time for the emergency failure circuit for the high beams

Replacing bulbs in front fog lamps

- Remove the plastic cover

Notice:

Access to the covers is available from the interior of the vehicle (on right) and through the service access hatch on the floor of the driver's cockpit area (left). Use the pull handle to the left of the driver's seat to open the hatch door.

- Disconnect the wiring
- Release the spring clamp and remove the bulb

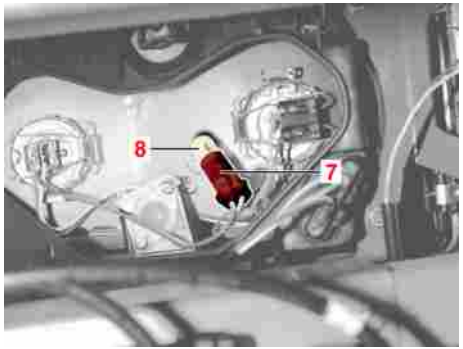
Notice:

Insert the new bulb, guiding the lugs on the bulb's base into the recesses on the reflector extension.

Notice:

Reverse the removal sequence to install.

Replacing bulb in bottom front clearance light



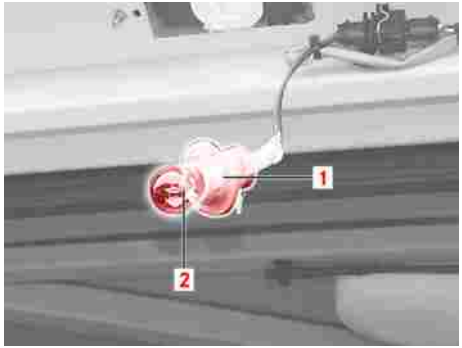
M54_00-0103-01

- ► Pull the bulb socket (7) to the rear to remove.
- ► Pull the wedge-base bulb (8) out of the bulb socket.

Notice:

Reverse the removal sequence to install.

Replacing side turn signal bulb



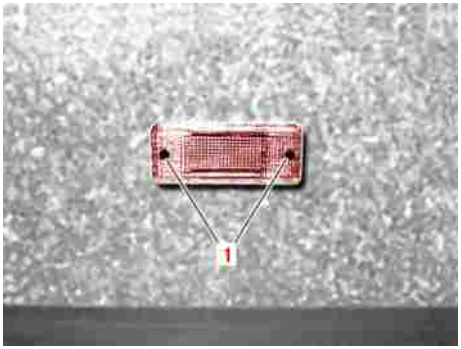
M54_00-0837-01

- ► Open the left or right access door above the front axle.
- ► Turn the socket (1) of the bulb counterclockwise and remove.
- ► Press down the bulb (2), turn counterclockwise and replace bulb (2).

Notice:

Reverse the removal sequence to install.

Replacing entryway light's bulb



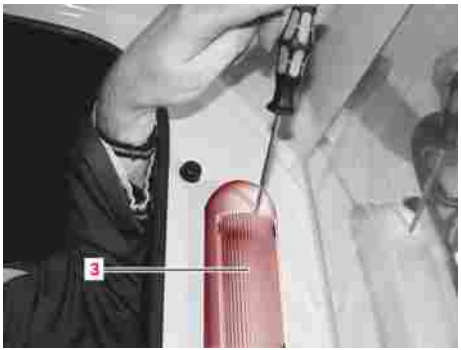
M54_00-0110-01

- ► Unscrew and remove the two fixing screws (1) and take out the light
- ► Remove the bulb.

Notice:

Reverse the removal sequence to install.

Replacing lavatory light's fluorescent tube



M54_00-0114-01

- Remove the cover (3) using a screwdriver.
- Twist the fluorescent tube 90° and remove it.

Notice:

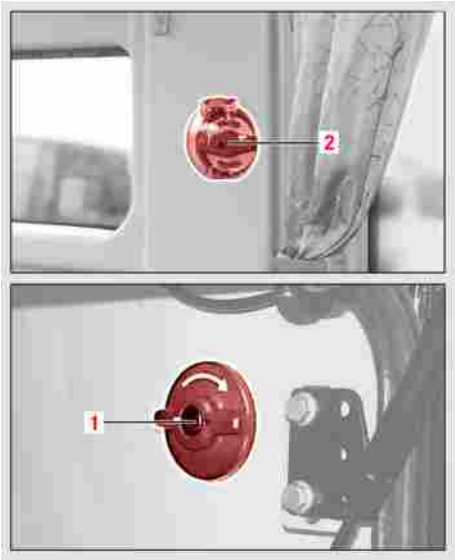
Reverse the removal sequence to install.

Emergency operation (door operation using emergency valve in response to pressure loss in pneumatic system)

Danger:

The door must be released with the central locking system for highway operation.

Emergency operation (door operation using emergency valve in response to pressure loss in pneumatic ...



M72_00-0112-02

- Remove the securing seal from the emergency valve

Notice:

1 Outside emergency valve for entry door (in compartment behind locking hatch on the right above the front axle) / 2 Inside emergency valve for entry door

- Turn the outside emergency valve (1) or the inside emergency valve (2) in the direction indicated by the arrow.

Notice:

To gain access to the outside emergency valve, use the key to open the access door located immediately to the rear of the entry door.

Notice:

The emergency valve discharges the air from the door valve. It simultaneously bleeds pressure from the pneumatic door-control system. The door's pneumatic system is then depressurized and the door can be moved manually.

The cockpit warning buzzer goes off. The red warning lamp in the door switch must flash. This symbol appears together with a "condition red" status alert in the instrument cluster's display.

- Returning the door system to operation: - Bring the emergency valve to its normal position - close the door using the door switch

Danger:

Injury hazard. When the door system is returned to operation make sure that no one is within range of the moving door's panels or edges. Doors must not make any abrupt or sudden movements when resuming operation.

► Reseal the emergency valve.

Emergency release of luggage compartment doors

Notice:

In the event of a total system failure affecting both the central pneumatic system and the electrical power supply, the luggage compartment doors can still be opened using the emergency system (compressed air supply in spare tire).



M00.00-0601-71

► Pull handle (1) in step well to open the front bumper and access spare tire.

The front access door opens slightly.



M00.00-0611-71

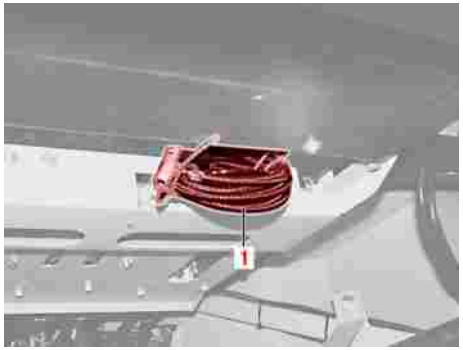
- Raise the locking bar (1) to unlock the front access door.

  The front access door can now be opened.

Notice:

If the cover only opens slightly, grasp bumper and pull open.

- Take out the spare tire.



M88_00-0055-01

- Take the hose line (1) with the tire connection from the plate behind the front heater cabinet and connect it to the tire inflation valve on the spare tire.

Notice:

The spare tire has a pressure of approx. 115 psi (8 bar). The compressed air from the spare tire flows through the shuttle valve and directly to the cylinders in the luggage compartment lock mechanism, where it releases the luggage compartment doors. The luggage compartment door can now be opened.

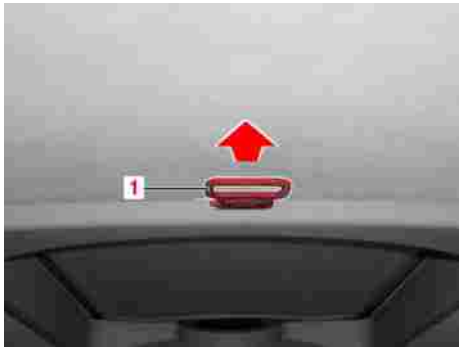
Notice:

Refill the spare tire to the correct pressure as quickly as possible.

Using the roof hatches as emergency exits

Danger:

Risk of accident - operate only in case of an emergency and when the vehicle is stationary. Check before the start of driving - only drive with undamaged emergency release.



M77_00-0026-71

▶ The emergency release is triggered with a red inside handle.

Danger:

The inside handle (1) must be pulled in the direction of the arrow in an emergency. The hatch of the emergency exit can now be deposited outside.

Danger:

Following emergency operation, the covers of the roof-mounted emergency exit hatches must be inserted by a SETRA ServicePartner technician.

Emergency operation of the passenger compartment heating

Notice:

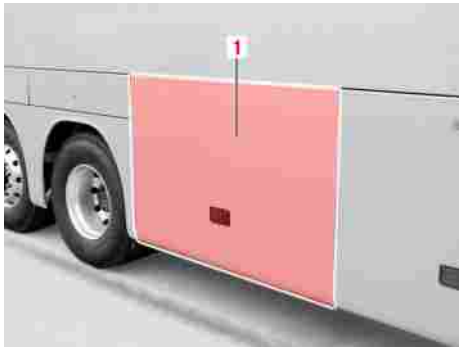
You can respond to failure in the control systems that modulate heating, ventilation and climate control (leaky heater control valve/heating in summer) and to leaks in the heater circuit by disconnecting the heating system from the engine's cooling circuit using the two manual shut-off valves in the heater supply and return lines.

Danger:

When the passenger compartment control system is OFF, the roof fans are switched off and therefore no fresh air supply (oxygen) is available. If required, the fan speed at the driver seat can be increased up to 100%

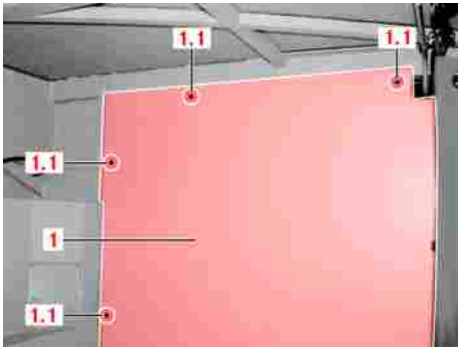
Danger:

Switch off the passenger compartment heater and auxiliary heater using the control panel (HVAC) and do not start.



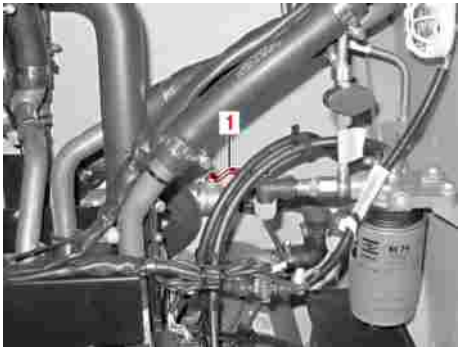
M83_00-0344-01

► Open the luggage compartment door (1).



M83_00-0360-01

► Loosen mounting bolts (1.1) and remove cover (1).



M20.00-0133-71

► Switch the manual shut-off valve to feed (1)

Notice:

The manual shut-off valve is mounted near the central heating and air-conditioning unit above the heating unit.

Danger:

Risk of injury to skin and eyes when handling hot or glowing objects.



M20.00-0134-71

► Switch the manual shut-off valve to return (1)

Notice:

The manual shut-off valve (1) is located in the engine compartment at the upper right.

Danger:

Risk of death from being pulled in by rotating vehicle parts.

Danger:

The heater manual shut-off valve (1) may only be actuated with the engine switched off.

Check air filter for cockpit and passenger compartment for dirt; clean or replace as required.

Check air filter for cockpit and passenger compartment for dirt; clean or replace as required.

Cleaning and replacing the fresh and recirculated-air filters in the roof duct

Danger:

Accident risk! Secure the vehicle to prevent it from moving. Switch off the ignition and remove the key. Injury hazard! Exercise extreme caution when working in the vicinity of hot, rotating and moving parts.

Notice:

Maintenance requirements vary according to the contamination to which the condenser is exposed and to the amount of time the system spends in active operation.



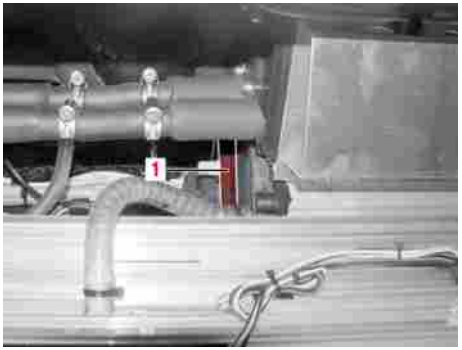
M83.00-0841-71

- ► Switch off the ignition.
- ► Place protective covers over the seats.
- ► Unscrew screws (1) and remove the service sets (2).

Notice:

The corresponding service sets are located on both sides at the level of the second, fifth and seventh passenger window.

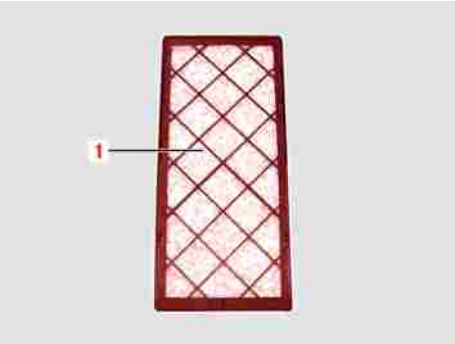
- ► Pull off the covers (3).



M83.00-0842-71

- ► Remove the rubber strips (1) at the 6 heater cores (3 on each side of the coach).

Check air filter for cockpit and passenger compartment for dirt; clean or replace as required.



M83_00-0372-01

► The filter elements (1) can be removed and installed from either side.

Notice:

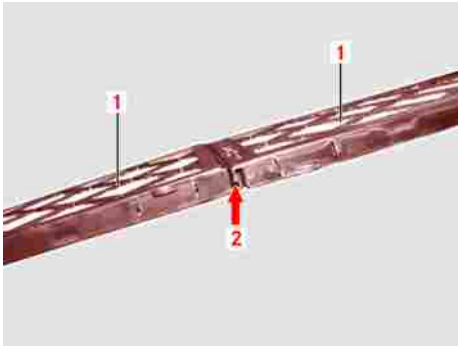
Four filters are required for each heater core.

Notice:

Be sure to install in the right direction with the fine-mesh side of the filter toward the heat exchanger.

Notice:

The filter element consists of a two-section frame (1) and a felt filter (2).

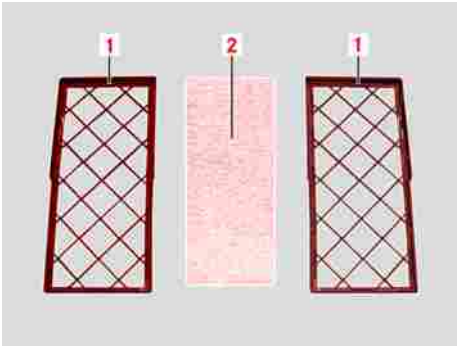


M83_00-0373-01

► Slide the first filter on one side approximately 5 cm into the filter chamber. This will push the last filter on the other side out of the filter chamber by roughly 5 cm. Now you can remove all 4 filter elements (1) from the filter chamber.

Notice:

The ends of the filter elements are joined together (2). This makes it possible to remove and install all 4 filter elements at once by sliding them in either direction.



M83_00-0374-01

► Dismantle the (2-section) filter element frame (1) and replace the filtration element (2). Assemble the frame (1) with the new filter element and

Check air filter for cockpit and passenger compartment for dirt; clean or replace as required.

then slide the complete assembly into the filter casing.

Notice:

The ends of the filter elements must be joined together.

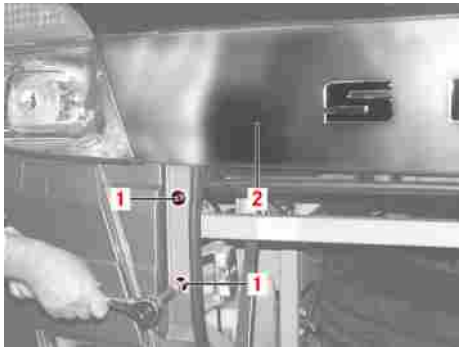
Notice:

Reverse the removal sequence to install.

Cleaning the fresh air filter for the cockpit

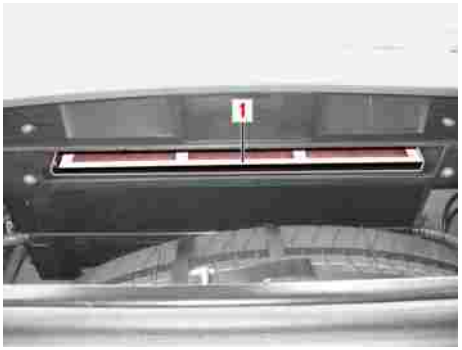
Notice:

Maintenance requirements vary according to the contamination to which the condenser is exposed and to the amount of time the system spends in active operation.



M00_00-0152-01

- Open the spare tire compartment door on the front of the vehicle (lever located in entryway of entry door).
- Remove the front panel (2) after loosening the 4 mounting bolts (1).
- Remove the air duct at the heater front cabinet after loosening the four mounting screws.



M83_00-0796-71

- Lift the fresh-air filter mat with both hands (approximately 6 mm) and then extract it by pulling down and forward.
- Beat dust out of the fresh air filter mat, vacuum it or blow out the dust with compressed air aimed against the normal airflow direction and then reinstall the mat. Replace mat if necessary.

Air conditioner maintenance procedures

Cleaning the condenser

Danger:

Accident risk. Secure the vehicle to prevent it from moving. Switch off the ignition and remove the key. Injury hazard. Use extreme caution when working in the vicinity of hot, rotating and moving parts.

Notice:

Check the condenser for dirt and clean if necessary with the engine stationary and the AC switched off.

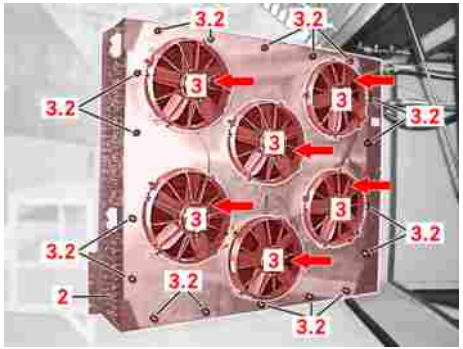
Notice:

A contaminated condenser will increase pressure levels within the air conditioner's refrigerant circuit and trigger the high pressure switch. The air conditioning is then switched off.



M83_00-0329-01

► Open the service-access door (1), unscrew the mounting bolts (2.1) and swing out the condenser (2).



M83_00-0320-01

► Remove the condenser fan bracket (3.1) by removing the mounting bolts (3.2). Respond to normal levels of contamination by using compressed air to blow through the fins in the direction indicated by the arrow. If the accumulation of contaminants is more severe, apply a spray cleaner suitable for removing grease. Allow it to soak in, then rinse with water. Finally, blow dry by directing compressed air in the direction indicated by the arrows.

Notice:

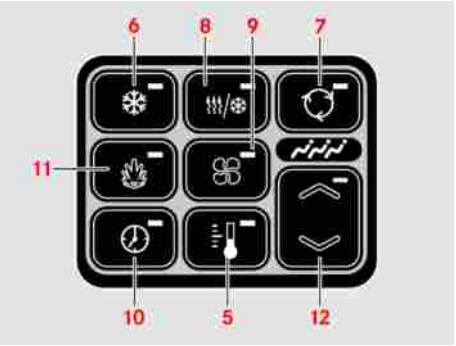
To avoid bending the fins, never spray water or compressed air at the surface of the condenser from anything other than a 90° angle to the vertical unit. Maintenance requirements vary according to the contamination to which the condenser is exposed and to the amount of time the system spends in active operation.

- Then check the operation of all condenser fans (3) - the fans draw air from the direction opposite that indicated by the arrows.

Danger:

Injury hazard. Use extreme caution in the vicinity of the rotating condenser fans.

Compressor maintenance



M83_00-0117-01

- With the ignition OFF, simultaneously press the a/c standby (6) and rocker (12) switches on the control panel. Switch on the ignition and start the engine. The LED in the recirculated-air switch (7) starts to flash and the LED in switch (6) lights up. The air conditioning is switched on after a delay of about 11 seconds, and the symbol for "AC condenser in operation" appears on the screen. After about 10 minutes the LED in the switch (12) starts to flash. The maintenance cycle can now be concluded by pressing the switch (12). The only way to abort the test before it has run its normal course is by switching off the engine (ignition switch OFF).

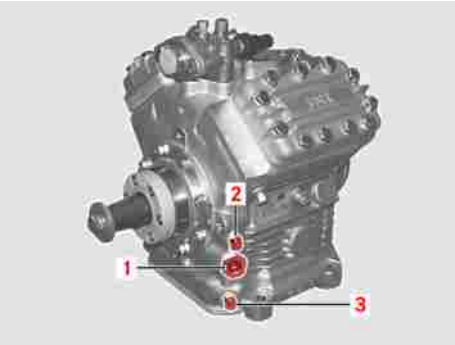
Notice:

To ensure that the sealed friction bearing on the compressor's input shaft remains tight and leak-free, operate the air conditioning at least once a month (also in the winter months).

Notice:

Outside temperatures must be above 32 °F (0 °C) and coolant temperatures (engine circuit) above 122 °F (50 °C) before the compressor can be operated in its periodic maintenance cycle.

Checking the oil level in the air conditioning compressor



M83_00-0106-01

- Look through the sight glass (1.2) on the air conditioning compressor while it is running (approx. 10-15 minutes). Compressor oil should be visible.

Danger:

Injury hazard. Rotating parts in the area of the running engine and air conditioner compressor can cause serious injury.

Notice:

The air conditioning system can be restarted for about 10-15 minutes using the "Reheat" switch (8) on the HVAC control panel. At outside temperatures below 54 °F (12 °C) this procedure must be carried out in an enclosed garage, as the reheat feature will otherwise be disabled.

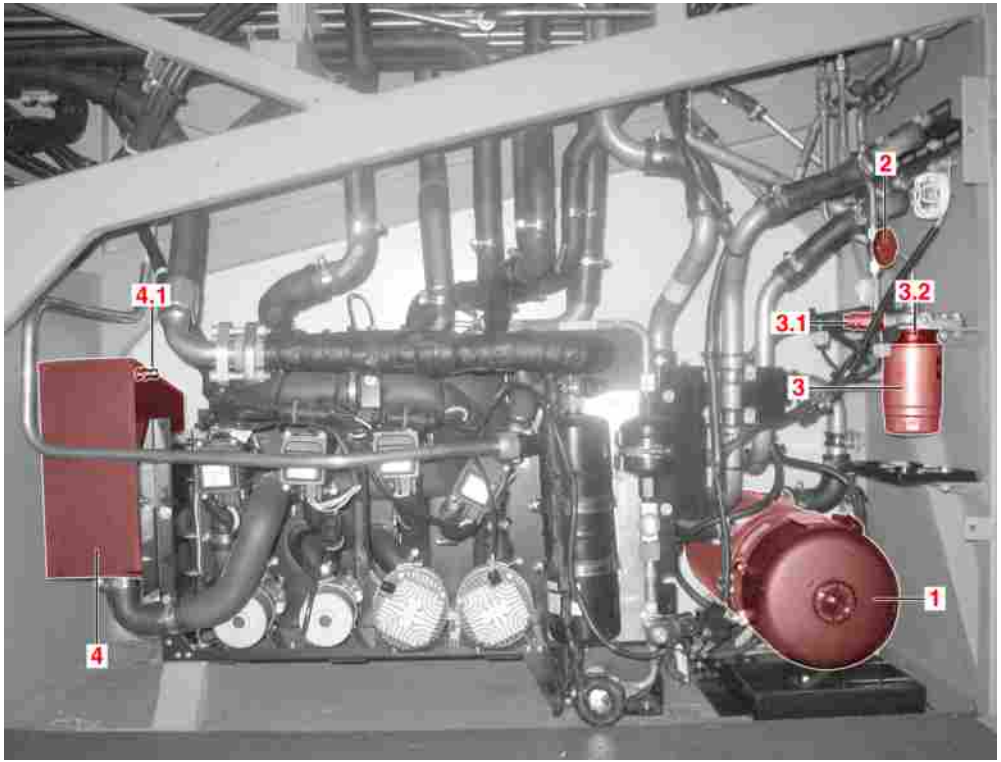
Notice:

The compressor oil circulates together with the refrigerant in the air conditioning system. For this reason oil levels may vary from one inspection to the next. Important is that oil should always be visible at the lower edge of the sight glass.

Danger:

If the compressor oil is low, have it replenished only by authorized technicians at a SETRA ServicePartner.

Bleeding the heating system coolant circuit



Central heating and climate control unit	
1	Auxiliary heater
2	Fuel filter shut-off valve (auxiliary heater)
3	Fuel filter (auxiliary heater)
3.1	Temperature sensor for fuel filter heater
3.2	Fuel heater
4	Degassing tank (auxiliary heater)
4.1	Bleed screw (HVAC)

Danger:

The operations may be performed only by an authorized technician (SETRA ServicePartner).

Danger:

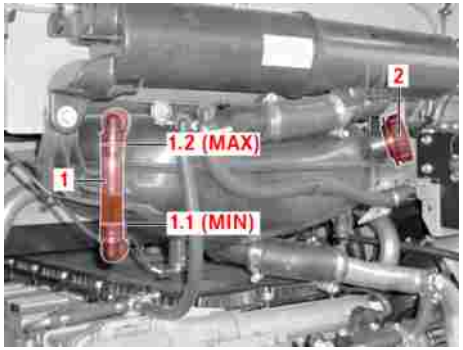
Hot coolant squirting out poses a risk of scalding to skin and eyes. Wear protective clothing (gloves and goggles). Open the cap on the coolant expansion tank only when the coolant temperature is below 122 °F (50 °C). Swallowing coolant can cause poisoning.

Danger:

Always ensure that the engine is off and remove the key from the ignition switch before working within the engine compartment.

Notice:

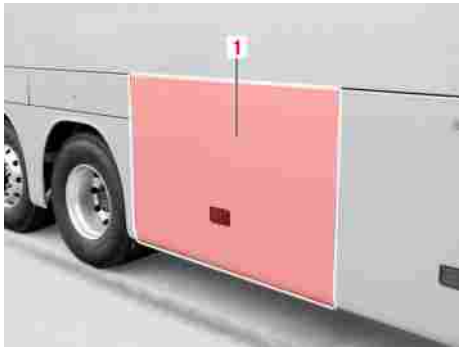
A "filling program" is integrated in the heating-ventilation-air conditioning control panel. This program contains all necessary features (actuation of the recirculation pumps and coolant valves) required to completely fill and bleed the heating system's coolant circuit.



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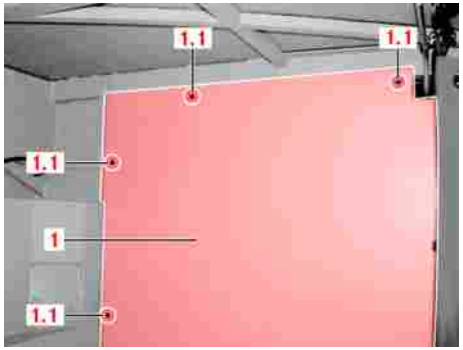
- Slowly open the sealing cap (2) to release excessive pressure. Then remove the sealing cap (2).

Bleeding the heating system coolant circuit



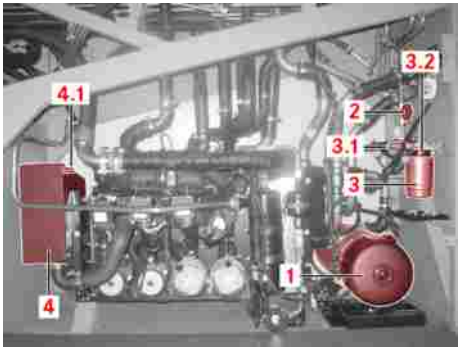
M83_00-0344-01

► Open the right luggage compartment door (1).



M83_00-0360-01

► Loosen the mounting bolts (1.1) and remove the cover (1).

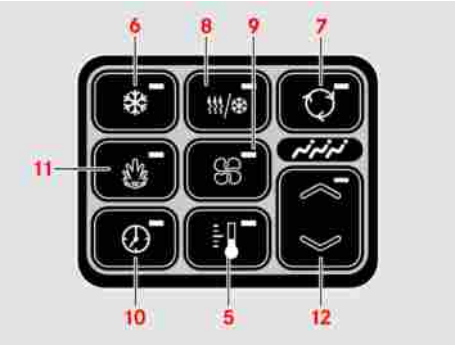


M83.00-0843-71

► Connect bleed screw (4.1) at the purge tank (4) (HVAC) with a transparent hose (so that the air bubbles are visible) and place the hose in a collection container so that escaping coolant will be caught. Open the bleed screw (4.1) about one revolution (turn counterclockwise)

Notice:

If the transparent hose is of a sufficient length, it can also be directly connected to the coolant expansion tank.



M83_00-0117-01

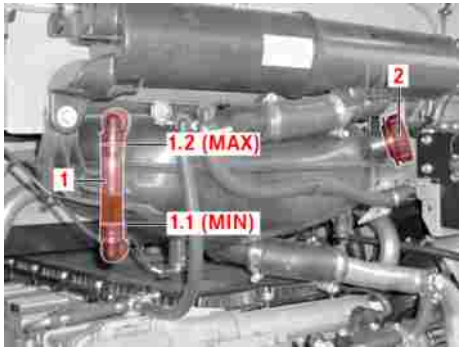
- Start the filling program (program step 1). Start the system recharge program with the ignition switch in its OFF position. Simultaneously press and maintain pressure on the recirculated-air switch (7) and switch (12) on the control panel. Maintain pressure on the two switches while turning the ignition switch ON (Pos. 2). Keep the recirculated-air switch (7) and switch (12) pressed until the LEDs on the right side of the control panel light up. The LED in the switch (12) flashes.

Notice:

The filling program consists of 7 steps. Use the switch (12) to proceed to the next step in the program sequence. Each time a program step has been completed, one LED on the button field of the HVAC control panel. A mandatory interval of 5 seconds occurs between the steps. The interval for the final step is 5 minutes. Continued switching through the sequence is possible only after the mandatory intervals have elapsed (LED in the switch (12) starts to flash). The engine must be running from program step 2 onward, otherwise the program sequence will be halted. For program steps 2 through 5, use the "fast idle" button to raise the engine speed to approx. 1,100 rpm (refer to chapter on "Switch descriptions").

Notice:

During and after each program step, check the level of the coolant in the engine's coolant expansion tank and top it up as required (engine coolant level between MIN and MAX).



M20.00-0144-71

- Fill the coolant through the opening (2), continuing until the expansion tank is completely full. Press the rocker switch (12) on the control panel. Start the engine.

Bleeding the heating system coolant circuit

Notice:

The correct proportion of 50 % by volume of antifreeze with corrosion inhibitor is present in the cooling system if the check indicates protection against freezing to -35 °F (-37 °C). Correct if less freeze protection is indicated.

Notice:

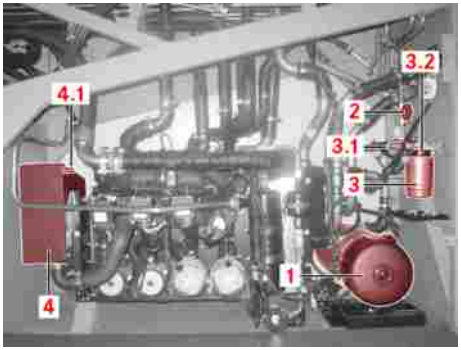
An inadequate concentration of antifreeze in the coolant can lead to corrosion/cavitation and engine damage.

Notice:

Do not use concentrations of more than 55 % by volume of antifreeze with corrosion inhibitor. This mixture ratio provides optimal protection against freezing (down to -49 °F/-45 °C), and higher levels of antifreeze will have a negative effect on the cooling system's ability to transfer heat.

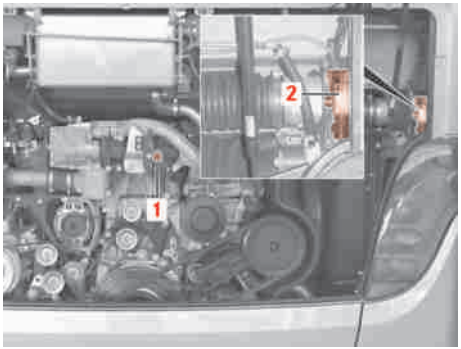
Danger:

If no antifreeze with corrosion inhibitor is available, you can also use pure water (drinking water quality). Drive the vehicle to the nearest SETRA ServicePartner to have the coolant adjusted to the specified concentration of antifreeze with corrosion inhibitor. The heating, ventilation and air conditioning system's standby mode must be switched off at the control panel (HVAC) (LED in the A/C switch is off) to prevent the air conditioner from being activated (refer to chapter on "Heating - ventilation - air conditioning" for operating instructions).



M83.00-0843-71

► Program step 2 (vehicle engine runs at fast idle of approx. 1,100 rpm/ duration approx. 5 min.): Continue to bleed coolant circuits until the coolant emerging from the purge tank (4) is free of bubbles.



M01_00-0129-71

► Shut down the engine using the button (1) on the stop/start combination switch.

Danger:

Injury hazard. Exercise extreme caution when working in the vicinity of hot, rotating and moving parts.

Notice:

Do not use the ignition switch to shut down the engine; this would cause the charging program to abort.



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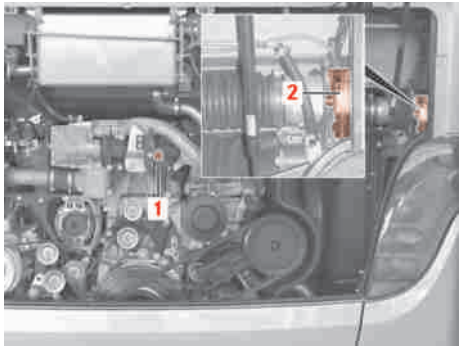
► Close the heating shut-off valve (1) (return). Press the switch (12) on the control panel. Top up the coolant expansion tank.

Notice:

The heating shut-off valve (1) may be operated only if the engine is shut off.

Danger:

Risk of death from being pulled in by rotating vehicle parts.



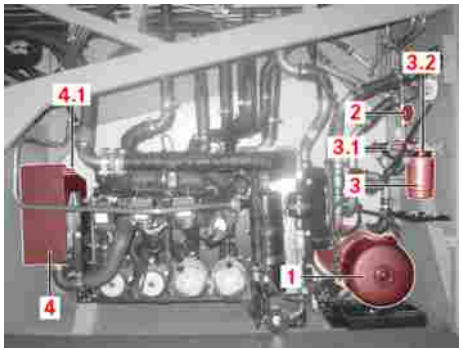
M01_00-0129-71

► Start the engine using the button (1) on the stop/start combination switch.

Bleeding the heating system coolant circuit

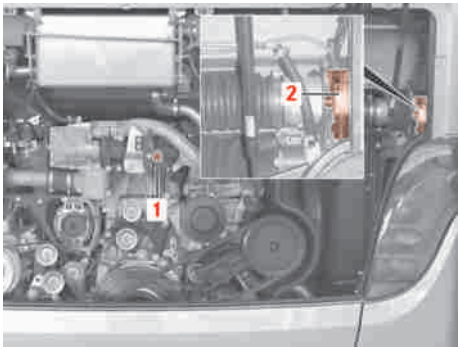
Danger:

Injury hazard. Exercise extreme caution when working in the vicinity of hot, rotating and moving parts.



M83.00-0843-71

- Program step 3 (vehicle engine runs at fast idle of approx. 1,100 rpm/duration approx. 5 min.): The coolant circuit (cockpit-mounted front module) is charged by the recirculation pump for the floor circuit. Continue to bleed the cooling circuit until the coolant emerging from the purge tank (4) is free of bubbles. Top up the coolant expansion tank. Press the switch (12) on the control panel.
- Program step 4 (vehicle engine runs at fast idle of approx. 1,100 rpm/duration approx. 5 min.): In this step the coolant circuit (roof) is charged by the recirculation pump for the floor circuit. Continue to bleed the cooling circuit until the coolant emerging from the purge tank (4) is free of bubbles. Top up the coolant expansion tank. Press the rocker switch (12) on the control panel.
- Program step 5 (vehicle engine runs at fast idle of approx. 1,100 rpm/duration approx. 4 min.): The coolant circuit (central) and coolant circuit (reheat front box and roof) are filled by the floor circuit recirculation pump. Continue to bleed the cooling circuits until coolant emerging from the purge tank (4) is free of bubbles. Then close bleed screw (4.1) at the purge tank (4).



M01_00-0129-71

- Shut down the engine using the button (1) on the start/stop combination switch.

Notice:

Do not use the ignition switch to shut down the engine.

Danger:

Injury hazard. Exercise extreme caution when working in the vicinity of hot, rotating and moving parts.

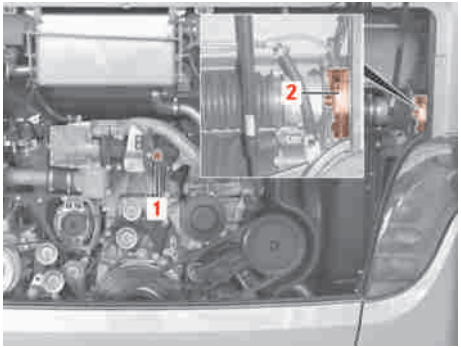


M20.00-0134-71

- Open the heating shut-off valve (1) (return line).

Notice:

The heating shut-off valve (1) may be operated only if the engine is shut off.



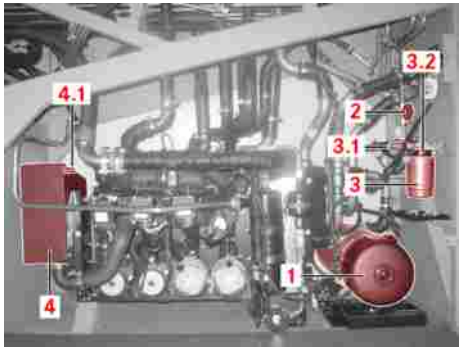
M01_00-0129-71

- Start the engine using the button (1) on the start/stop combination switch.

Danger:

Injury hazard. Exercise extreme caution when working in the vicinity of hot, rotating and moving parts.

- Top up the coolant expansion tank. Press the switch (12) on the control panel.



M83.00-0843-71

- Program step 6 (vehicle engine runs at fast idle of approx. 1,100 rpm/ duration approx. 10 min.): Open the bleed screw (4.1) on the purge tank (4). Bleed the coolant circuits

using all recirculation pumps until coolant emerging from the purge tank (4) is free of bubbles. Close the bleed screw (4.1) on the purge tank (4). Remove the transparent hose from the bleed screw (4.1). Refill the coolant expansion tank up to the lower edge of the filler opening. Close the cap on the expansion tank. Press the rocker switch (12) on the control panel.

- ► Program step 7 (duration approx. 15 -20 min.): Carry out road test (warm up vehicle). The engine coolant must reach its normal operating temperature of 185 °F (85 °C) during the road test. After completing the road test, switch off the engine (ignition switch OFF). Briefly open the bleed screw (4.1) again and bleed air (if necessary briefly reconnect transparent hose).

Danger:

Hot coolant squirting out poses a risk of scalding to skin and eyes. Wear protective clothing (gloves and goggles). Open the cap of the coolant expansion tank only when the coolant temperature is below 122 °F (50 °C). Swallowing coolant can cause poisoning.

- ► Install cover and screw tight.

Cleaning backup camera

Notice:

Should the stream of water from the nozzle fail to thoroughly clean the backup camera's lens it will be necessary to use a fine-bristled brush to remove all dirt.

- ► Clean the lens with a wet brush.

Danger:

If the backup camera is being cleaned manually, secure the stationary vehicle so that no authorized person can move it.

Danger:

Secure yourself against falling from the roof (safety belt, scaffolding, ladder, etc.).

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General safety information

General safety information

Danger: Injury hazard!

Be careful when handling wheels and tires. Observe the following recommendations exactly to prevent injuries.

Always remember that the high energy of the inflation pressure can burst an inflated tire.

- Follow the usual safety precautions for workshop work. Wear safety goggles during all service or maintenance work.
- Do not strike steel rims with a steel hammer: Sharp-edged metal fragments could chip off the rims and cause injuries.
- Maintain the largest possible safe distance from the valve when inflating the tires. Use an extension hose with a clamped connection. Do not stand in front of or over the tire when inflating it. Use a tire inflation cage when inflating a wheel removed from the vehicle; this also applies to drop-center rims.
- Only use tested precision measuring devices to ensure the correct inflation pressure.

Danger: Caution.

During final tire assembly, the sensors of the SmarTire RV system can be damaged if the corresponding instructions are not followed. If the work is carried out by a company without a SmarTire permit, please inform it that the vehicle is equipped with a tire monitoring system before the tire is pulled off the rim.

- 1. When working on tires, make sure that they do not fall onto feet, hands or other body parts or strike the floor too firmly. Watch for puddles of oil and obstacles on the floor when carrying wheels and tires. Keep the floor dry and clean.
- 2. If the air inflation is to be released form the tire, first release the inflation pressure as far as possible by pressing the valve stem. Keep your eyes averted from the valve. Remove the valve insert so that the air can escape completely.
- 3. To pull the tires off drop-center rims, they must be secured on a rim stand or a tire changing machine to prevent cutting injuries on hands and wrists. Only use tire mounting tools and equipment which conform with standards.
- 4. Thoroughly examine the removed tires and carry out all required repair measures if necessary. A tire spreader is helpful, however be careful when working near it. Keep the arms of the tire spreader closed when the machine is not in use.
- 5. Thoroughly examine the rim components for rust, damage or deformations. Also check the screw openings for wear. Never use rums with deformations, corrosion, cracks or breakage.



M40.00-0139-82

(1) Handling of wheels and tires

(2) Safely release pressure

(3) Tire change with drop-center rims

(4) Use of tire levers

(5) Tire spreaders

(6) Thorough visual inspection

(7) Use rubber mallet

(8) Precautionary measures for inflation (use tire inflation cage)

General description

Tires are used on the bus which are designed for use on the highway. These are generally steel-belted tires with a speed index of (J) or higher. Recommendations of EvoBus GmbH on the choice of tires for this vehicle are provided under "TIRE SPECIFICATIONS" at the end of the chapter.

General information on maintenance

- The performance and wear of a tire can be affected by many different factors. An incorrect inflation pressure and faulty balancing, an incorrect driving height of the coach, errors during wheel adjustment, exceeding of the maximum load and/or the maximum speed, sharp cornering, etc. are only a few examples which directly affect tire performance and wear.
- Compliance with the correct maintenance experience is of decisive importance for the safe, efficient use of tires. The tires should be carefully inspected every day for cuts or foreign bodies, such as nails, glass fragments, etc. Foreign bodies lodged between double tires and rims must be removed.

Tire inflation pressure

Notice:

Always check the tire pressure when the tire is cold or use Smart Wave if available. The specified inflation pressure for cold times applies for a tire temperature of 18 °C (65 °F).



M40.15-0031-71

- (1) Inflation pressure too high
- (2) Inflation pressure too low
- (3) Correct inflation pressure

- The tire pressure must be measured before driving. The pressure value must match the specifications in the maintenance manual (see "Nominal values according to total vehicle weight" in this chapter). When measuring the pressure, always use the same measuring unit for all tires in order to prevent pressure differences between the individual tires.
- If a higher pressure loss than normal is determined, remove the tire and inspect it to determine the cause. Missing valve caps must be replaced.
- The valve core is a spring-loaded check valve in the valve insert with which the tire inflation pressure can be increased or decreased. The value ensures the leak-tight trapping of the compressed air in the tire. When the valve cap is firmly screwed onto the valve stem, the sealing disk in the cap presses firmly against the upper end of the stem and prevents the compressed air from escaping.
- Incorrect inflation of the tire is the most common cause of premature wear. A tire with an insufficient inflation pressure heats up more due to the more intensive flexion movements. An excessively high inflation pressure will weaken the tire, as it cannot dampen impacts as effectively and the risk of tire damage increases. In addition, an incorrect tire inflation pressure has a negative effect on steering behavior, driving comfort, fuel consumption, CO2 emissions and driving safety.
- All tires on the same axle should always have the same inflation pressure. An inflation pressure in a front tire which is 34.5 kPa (5 psi) too low cannot only make increased steering force necessary, it can also cause dangerous situations when steering. An insufficient inflation pressure in the rear tires can greatly impair the braking performance.
- The recommended inflation pressures are listed in the tire specifications.

Changing tires

A tire change can affect the clearance and the rolling circumference (rotations per mile/km). Make sure that the new tires have sufficient clearance and that no negative effects result for the rolling circumference.

Caution:

When changing, tires with the same speed index, the same size and the same or a better rolling-resistance coefficient (RRC) must be used; the RRC value for the respective tires can be requested from the tire manufacturer. Otherwise, the tires can be overloaded and problems with the vehicle control systems can result. This could in turn cause accidents and injuries, as faulty driving-speed input signals sent to the vehicle control units can impair the behavior of the drive train.

Caution:

In addition, the new tires must be checked while installed on the vehicle for sufficient clearance with the wheel suspension at full deflection and between the tires of the drive axle.

Rotating tires

Radial tires should only be rotated when this is actually necessary: Tires must be rotated if uneven wear is determined or if the tires wear at different rates. New tires should be mounted on the front wheels, as the operating temperature is lowest there.

Notice:

Before rotating the tires, the tire manufacturer should be asked whether special instructions apply to the specific tires of this manufacturer.

Tightening torques for wheels

Description	Size	Torque Value Range	
		Ft-Lb	Nm
Front	M22 x 1.5	450–500	610–678
Drive	M22 x 1.5	450–500	610–678
Tag (Trailing)	M22 x 1.5	450–500	610–678

Nominal values according to total vehicle weight

D4000/D4005 at 46,000 GVWR with 9 in. Rims D4500/D4505 at 48,000 GVWR with 9 in. Rims			
Axle	**GAWR (lbs)**	**Load/Tire (lbs)**	**Inflation Pressure**
Front	16,000	8,000	120 psi (827 kPa)
Drive	22,500	5,625	100 psi (690 kPa)
Tag (D4500)	12,000	6,000	85 psi (586 kPa)
Tag (D4000)	10,000	5,000	85 psi (586 kPa)

D4500/D4505 at 50,000 GVWR with 9 in. Rims			
Axle	**GAWR (lbs)**	**Load/Tire (lbs)**	**Inflation Pressure**
Front	16,000	8,000	120 psi (827 kPa)
Drive	22,500	5,625	100 psi (690 kPa)
Tag	14,000	7,000	100 psi (690 kPa)

D4500/D4505 HYBRID Coach at 50,000 GVWR with 9 in. Rims			
Axle	**GAWR (lbs)**	**Load/Tire (lbs)**	**Inflation Pressure**
Front	16,000	8,000	120 psi (827 kPa)
Drive	22,500	5,625	100 psi (690 kPa)
Tag	12,000	6,000	85 psi (586 kPa)

Tire specifications/Speed index (9-inch rims)

Make and Type	Size	Load Range	Axle	Max. Speed mph (km/hr)	Revs/Mile
Goodyear G409MBA	315/80R22.5	J	All Axles	75 (120)	486.5
Michelin XDN2 (Grip Tires)	315/80R22.5	L	Drive Axle Only	75 (120)	486
Michelin XZA-2 Energy	315/80R22.5	L	All Axles	75 (120)	492
Firestone FS400	315/80R22.5	L	All Axles	75 (120)	490.4

Notice:

Use only approved rims of the size 22.5/9 inches.

Notice:

Customers, who equip their coach with Michelin Grip Tires 315/80R22.5 XDN2 should note the following: To compensate for the larger profile width of the Michelin Grip Tires 315/80R22.5 with XDN2, a shim is required to prevent the drive axle from coming into contact with the wheel suspension.

Emission-related warranty

(a) General. EvoBus GmbH warrants to Buyer and each subsequent purchaser that the Coach, including all parts of its emission control system, meets two conditions:

- (1) It is designed, built, and equipped so it conforms at the time of sale to Buyer with the requirements of 40 CFR Part 1037.
- (2) It is free from defects in materials and workmanship that cause the Coach to fail to conform to the requirements of 40 CFR Part 1037 during the applicable warranty period.

The above warranty will be referred to as the "EvoBus Emission Warranty" in this document.

(b) The warranty period of the EvoBus Emission Warranty is as follows:

- (1) Five (5) years from the date the Coach is first put into service or 100,000 miles, whichever occurs first; and
- (2) For tires, two (2) years from the date the Coach is first put into service or 24,000 miles, whichever occurs first.

(c) Components covered. The EvoBus Emission Warranty covers emission-related components that are included in the certified emission controls. The EvoBus Emission Warranty covers the coach's tires. The EvoBus Emission Warranty does not cover components whose failure would not increase the coach's emissions of any regulated pollutant, nor does it cover tire tread wear.

(d) Warranty Exclusions. The EvoBus Emission Warranty does not cover any failures resulting from any improper maintenance or use, as described in 40 CFR § 1068.115.

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Overview of bulbs 352

Coach data

Coach data

Designation	Figure
Coach length	538.4 in (13675 mm)
Coach width	102.4 in (2600 mm)
Coach height Roof hatches closed	143.7 in (3650 mm)
Coach height Roof hatches open	147 in (3735 mm)
Gross Vehicle Weight Rating (GVWR)	52886.7 lb. (24000 kg)
Wheelbase 1st - 2nd axle	289 in (7340 mm)
Wheelbase 2nd - 3rd axle	53.1 in (1350 mm)
Turning circle	27 yd. (24.59 m)

Designation	Figure
Overhang, front	84 in (2135 mm)
Overhang, rear	108.3 in (2750 mm)
Overhang angle, front	9°24' (9°24')
Overhang angle, rear	9°36' (9°36')
Fuel tank capacity, total	680 US gal (680 l)
Tank volume for diesel exhaust fluid	56 l

Overview of bulbs

Designation	Figure
Headlights	12 V 55 W H1
Low beam headlight	12 V 55 W H7
Front fog light	24 V 70 W H1
Side lights, front bottom	24 V 5 W wedge-base
Upper front identification lights	LED
Turn signal indicator, front bottom	LED
Turn signal indicator, side	24 V 21 W BA15
Turn signal lights, rear bottom	LED
Backup lights, stop lights, rear fog lights	LED

Designation	Figure
Auxiliary stop light	LED
Upper rear identification lights	LED
Taillights, bottom	LED
License plate lights	LED
Side marker lights	LED
Docking lights	LED
Central aisle lighting, top	F 8 T 5/WW (8 W, 2,700 K) fluorescent tube
Night illumination	LED
Reading lamps	LED
Entrance lights	24 V 10 W tubular type

Designation	Figure
Cockpit light	24 V 10 W halogen
Lavatory lights	24 V 8 W fluorescent tube

A

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