NIEWIADÓW

CARAVAN OWNER'S

MANUAL

Sprint, Sport and Lazur series

Fabryka Przyczep Niewiadów Sp. z o .o .

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1. INTRODUCTION

Thank you for buying our caravan manufactured at Fabryka Przyczep NIEWIADÓW Sp. z o.o.
We draw on more than 50 years of experience to provide you with a durable and safe product. Our caravans are constantly being improved and therefore we reserve the right to make changes to the equipment and technology used. This manual takes into account various equipment configurations that are not always available in the basic versions.

For these reasons, no claims may be made against Fabryka Przyczep NIEWIADÓW Sp. z o.o. concerning the contents of this manual. The manual contains descriptions of the equipment known by the time the text went to print. Please bear in mind that not all individual product options have been included.

Make sure you read this user's manual carefully before the first use of the caravan and follow the instructions given in it. Use not in accordance with the manual will void the warranty. In an effort to continuously improve the quality of our products, we reserve the right to make changes resulting from ongoing upgrades and not included in this manual.

We wish you happy travels!

2. SPECIFICATION

	Sport, NT-SPORT, NTL-Sport and New Sport 4 series	***N-Sprint, NT-Sprint, NTL-Sprint***	***NTL LAZUR***	***LAZUR 3.4***
Total length	*4,500 mm*	*4,500*	*4,470*	*5,580*
Total width	*2,050 mm*	*2,050*	*2,070*	*2,200*
Total height	*2,450 mm*	*2,550*	*2,530*	*2,530*
Interior length	*2,930 mm*	*3,050*	*2,950*	*3,950*
Interior width	*1,900 mm*	*1,950*	*1,910*	*2,050*
Interior height	*1,840 mm*	*1,810*	*1,850*	*1,850*
Kerb weight	*670 to 720* kg*		*680*	*780*
Maximum technically permissible laden mass	*750 kg*			*950-1,000 kg*

** depending on the equipment*

☞ *Please be advised that actual weights and caravan and berth dimensions may deviate slightly from those stated in the description above. These will not be considered grounds for any claims.*

⚠ ***NOTE!!!***

Accessories purchased for the caravan should be regarded as cargo.

3. TECHNICAL DATA

3.1.1 BASIC EQUIPMENT in the N-Sprint:

Braked axle, overrun device, jockey wheel, steel rim wheels, 4 stabilising supports, body in white colour, veneer, overrun device cover (drawbar cover), gas cooker and sink, plywood furniture, tinted double glazed windows (colour of your choice), curtains in windows (fabric of your choice according to the sample catalogue), mattresses and backrests (fabric of your choice according to the sample catalogue), 57 l compressor fridge, Fiamma entrance step, 25 m connection cable, crank for supports, Mini Heki roof vent, LED awning lamp, LED interior lighting, LED road lights, third STOP light, 230V socket, USB socket, 12 V power supply (with 7-phase battery charging function), AGM 95/100Ah battery, 30 l water tank, apron rail, NT-Sprint and NTL-Sprint models are equipped with a cassette toilet and a shower with a hot water system (Truma TT2 electric boiler)

3.1.2 OPTIONAL EQUIPMENT of the N-Sprint caravan offered for an additional fee:

Option:	*Available in models:*
AL-KO axle shock absorbers	*all*
Thule Essential Short bike carrier for 2 bikes	*all*
5 l electric boiler. Truma TT2	*N-Sprint*
10 l gas boiler Truma BG10	*N-Sprint*
10 l gas boiler Truma BG10 (extra fee, instead of Truma Therme TT2)	*NT-, NTL-Sprint*
COMO canopy 3.0 m	*all*
Extra fee for MTPLM of 1,000 kg	*all*
Extra fee for MTPLM of 900 kg	*all*
Second aluminium awning trim	*all*
Service door	*all*
12 V cigarette lighter socket	*all*
Photovoltaic system - 110 W glued-on panel, MPPT controller	*all*
Aluminium wheels 2 pcs (extra fee)	*all*
Spare wheel 165/70R13	*all*
Spare wheel 175/70R13	*caravans with MTPLM of 900 kg and 1,000 kg*
Silver wheel covers, set (2 pcs)	*all*
230 V induction hob (two-zone) - extra charge (instead of a gas cooker)	*all*
Spare wheel mounting - suspended under the caravan	*all*
Thule Essential Short Bike carrier mounting (4-point)	*all*
Vertical door screen	*all*
Horizontal door screen (opens to the side)	*all*
Underfloor heating	*all*
Truma heating S3004 (set)	*N-, NT-Sprint*
Distribution for S3004 to the bathroom and under the beds	*N-, NT-Sprint*

Propex HS2000 blow heating system with distribution	*all*
Truma Vario Heat blow heating system	*all*
Heating with a Truma Combi 4 G hot water system (set)	*all*
Heating with a Truma Combi 4 G/E hot water system /(set)	*all*
Heating with a JP Heaters hot water system	*all*
Thetford Duplex MK3 oven with grill	*all*
Active Life awning, 2.5 m deep	*all*
Active Life awning, 2.5 m deep, Ten Cate roof	*all*
Active Life awning, 3 m deep	*all*
Active Life awning, 3 m deep, Ten Cate roof	*all*
Roller blinds with screen - 2 pcs Front and rear windows	*NT-, NTL-Sprint*
Roller blinds with screen - 4 pcs All except the bathroom window	*NT-, NTL-Sprint*
Roller blinds with screen - 5 pcs All except the bathroom window	*N-sprint*
Roller blind with screen - for the large front window	*all*
Roller blind with screen - side, 1 pcs, additional	*all*
AKS 3004 overrun device (extra fee)	*all on Al-Ko systems*
MaxxFan roof fan with a remote control	*all*
Change of the interior colour (walls+ceiling) to RAL7035	*all*
Enduro EM 303 mover	*all*
TrumaUltraflow water pump (caravan without a water tank)	*all*

3.1.3 BASIC EQUIPMENT of the N-Sport caravan:

Braked axle, overrun device, jockey wheel, steel rim wheels, 4 stabilising supports, body in white colour, overrun device cover (drawbar cover), gas cooker and sink, plywood furniture, tinted double glazed windows, curtains in windows (fabric of your choice according to the sample catalogue), mattresses and backrests (fabric of your choice according to the sample catalogue), 57 l compressor fridge, Fiamma entrance step, 25 m connection cable, crank for supports, cassette toilet and shower with a hot water system (Truma TT2 electric boiler), Mini Heki roof vent, LED awning lamp next to the door, LED interior lighting, LED road lights, third STOP light, 230 V socket, USB socket, 12 V power supply (with 7-phase battery charging function), AGM 95/100Ah battery, 30 l water tank, spare wheel holder in the storage box.

3.1.4 OPTIONAL EQUIPMENT of the N-Sport caravan offered for an additional fee:

Option:	***Available in models:***
AL-KO axle shock absorbers	*all*
Thule Essential Short bike carrier for 2 bikes	*all except New Sport 4*
5 l electric boiler. Truma TT2	*N-Sport*
10 l gas boiler Truma BG10	*N-Sport*
10 l gas boiler Truma BG10 (extra fee, instead of Truma Therme TT2)	*NT-, NTL-Sport, New Sport 4*
Folding top bed	*New Sport 4*
COMO canopy 3.0 m	*all*
Extra fee for MTPLM of 1,000 kg	*all*

Extra fee for MTPLM of 900 kg	*all*
Second aluminium awning trim	*all*
Service door	*all*
12 V cigarette lighter socket	*all*
Photovoltaic system - 190 W panel in a frame, MPPT controller	*all*
Aluminium wheels 2 pcs (extra fee)	*all*
Spare wheel 165/70R13	*all*
Spare wheel 175/70R13	*caravans with MTPLM of 900 kg and 1,000 kg*
Silver wheel covers, set (2 pcs)	*all*
230 V induction hob (two-zone) - extra charge (instead of a gas cooker)	*all*
Thule Essential Short Bike carrier mounting (4-point)	*all except New Sport 4*
Vertical door screen	*all except New Sport 4*
Horizontal door screen (opens to the side)	*all except New Sport 4*
Underfloor heating	*all*
Truma heating S3004 (set)	*N-, NT-Sport*
Distribution for S3004 to the bathroom and under the beds	*N-, NT-Sport*
Propex HS2000 blow heating system, with distribution	*all*
Truma Vario Heat blow heating system	*all*
Heating with a hot water system - Truma Combi 4 G (set)	*all except New Sport 4*
Heating with a hot water system - Truma Combi 4 G/E (set)	*all except New Sport 4*
Heating with a JP Heaters hot water system	*all except New Sport 4*
Thetford Duplex MK3 oven with grill	*all except New Sport 4*
Active Life awning, 2.5 m deep	*all*
Active Life awning, 2.5 m deep, Ten Cate roof	*all*
Active Life awning, 3 m deep	*all*
Active Life awning, 3 m deep, Ten Cate roof	*all*
Roller blinds with screen - 2 pcs Front and rear windows	*all except New Sport 4*
Roller blinds with screen - 4 pcs All except the bathroom window	*NT-, NTL-Sport*
Roller blinds with screen - 5 pcs All except the bathroom window	*N-Sport*
Roller blind with screen - for the large front window	*all*
Roller blind with screen - side, 1 pcs, additional	*all*
AKS 3004 overrun device (extra fee)	*all on Al-Ko systems*
MaxxFan roof fan with a remote control	*all*
Change of the interior colour (walls+ceiling) to RAL7035	*all*
Enduro EM 303 mover	*all*
TrumaUltraflow water pump (caravan without a water tank)	*all*

3.1.5 BASIC EQUIPMENT of the Lazur 3 and Lazur 4 caravans:

Braked axle, overrun device, steel rim wheels, 4 stabilising supports, gas cooker and sink, body in white colour, plywood furniture, tinted double glazed windows (colour of your choice), curtains in windows (fabric of your choice according to the sample catalogue), mattresses and backrests (fabric of your choice according to the sample catalogue), 57 l compressor fridge, tinted double glazed windows, two Dometic Mini Heki roof vents, LED awning lamp, LED interior lighting, LED road lights, third STOP light, 230 V socket, USB socket, 12 V power supply (with 7-phase battery charging function), AGM 95 Ah battery, 30 l water tank, Fiamma entrance step, 25 m connection cable, crank for supports, apron trim, cassette toilet and shower with a hot water system (Truma TT2 electric boiler)

3.1.6 BASIC EQUIPMENT of the NTL-Lazur caravan:

Braked axle, overrun device, steel rim wheels, 4 stabilising supports, body in white colour, gas cooker and sink, plywood furniture, tinted double glazed windows (colour of your choice), curtains in windows (fabric of your choice according to the sample catalogue), mattresses and backrests (fabric of your choice according to the sample catalogue), 57 l compressor fridge, Mini Heki roof vent, LED awning lamp, LED interior lighting, LED road lights, third STOP light, 230 V socket, USB socket, 12 V power supply (with 7-phase battery charging function), AGM 95 Ah battery, 30 l water tank, Fiamma entrance step, 25 m connection cable, crank for supports, apron trim, cassette toilet and shower with a hot water system (Truma TT2 electric boiler)

3.1.7. OPTIONAL EQUIPMENT of the Lazur caravan offered for an extra fee

Option:	***Available in models:***
Thule Essential Short bike carrier for 2 bikes (mounted on the rear wall)	*all*
extra fee for veneer (decorative veneer on outside walls)	*extra fee for veneer (decorative veneer on outside walls)*
extra fee for veneer (decorative veneer on outside walls)	*NTL-Lazur*
AL-KO axle shock absorbers	*all*
Spare wheel 165/70R13	*NTL-Lazur*
Spare wheel 175/70R13	*Lazur 3, Lazur 4*
230 V induction hob (two-zone) - extra charge (instead of a gas cooker)	*all*
Spare wheel mounting - suspended under the caravan	*all*
Thule Essential Short Bike carrier mounting (4-point)	*All*
Vertical door screen	*All*
Horizontal door screen (opens to the side)	*All*
Roller blinds with screen - 4 pcs All except the bathroom window	*Lazur 3*
Roller blinds with screen - 3 pcs Side and front	*Lazur 4*
Roller blinds with screen - 3 pcs Side and rear	*NTL-Lazur*
Truma heating S3004 (set)	*Lazur 3, Lazur 4*
Distribution for S3004 to the bathroom and under the beds	*Lazur 3, Lazur 4*
Propex HS2000 blow heating system with distribution	*All*
Truma Vario Heat blow heating system	*All*
Truma Vario Heat blow heating system	*All*

⚠ **CAUTION!**

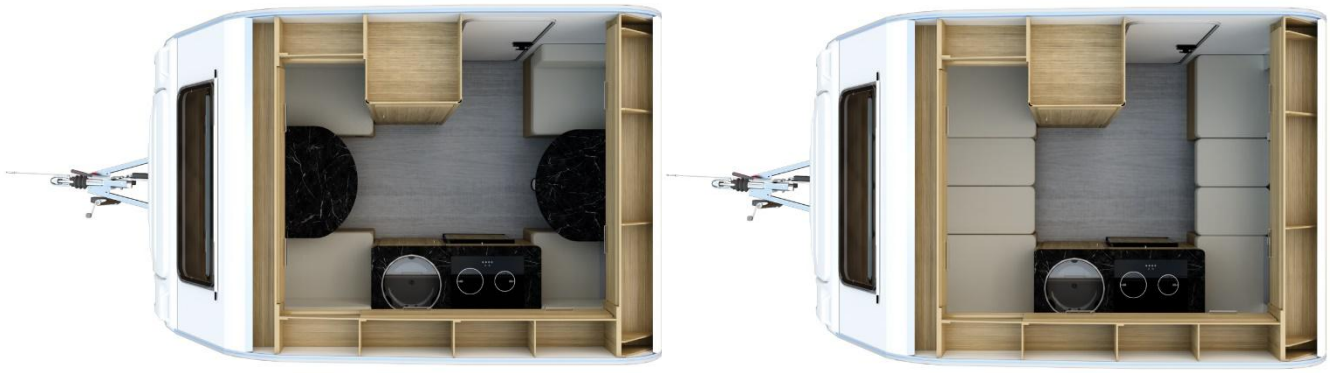
The load capacity of the folding top bed offered as an equipment option is 50 kg

The load capacity of the top bed offered as standard (not folding) is 70 kg

3.2. INTERIOR LAYOUTS

N-SPORT (3 persons)

☞ *Daytime and nighttime layout:*



NT - SPORT (2 persons)

☞ *Daytime and nighttime layout:*

NTL - SPORT (3 persons)

☞ *Daytime and nighttime layout:*

NEW SPORT 4 (3 + 1 persons)

☞ *Daytime and nighttime layout:*

N - SPRINT (3 persons)

☞ *Daytime and nighttime layout:*

NT - SPRINT (2 persons)

☞ *Daytime and nighttime layout:*

NTL - SPRINT (3 persons)

Daytime and nighttime layout:

LAZUR (3 persons)

Daytime and nighttime layout:

LAZUR (4 persons)

Daytime and nighttime layout:

LAZUR NTL (3 persons)

Daytime and nighttime layout:

4. INSTRUCTIONS FOR USE

4.1. HITCHING UP

1. *The caravan must be hitched to the towbar of a vehicle using the caravan ball-type coupling. The procedure for hitching up to a vehicle towbar is given in Section 5.2 of the manual.*

2. *The breakaway cable must be attached in such a way that it will apply the caravan brakes if the coupling comes off the towball. The method for attaching depends on the type of vehicle's towbar.*
   - *For fixed towbars, loop the cable around the neck of the towbar and clip it back on itself in such a way that the cable cannot slip off the towball neck.*
   - *For detachable towbars, connect the cable to a designated attachment point on the permanent part of the towbar structure.*

3. *Connect the electrical line plug of the caravan to the receiving socket of the towing vehicle. The caravan is fitted with a 13-pin lead to ISO 11446.*

Figure - attaching the cable to a fixed towbar

Illustration - attachment of line to a detachable towbar

⚠ ***NOTE!!!***

The towball on the vehicle's towbar should be ø50$_{-0.39\ mm}$ and its horizontal centre line should be at a height of 350÷420 mm from the ground when the car is loaded to its maximum technically permissible laden mass (MTPLM).

The nose weight or the static force at the coupling head should be approx. 4% of the actual laden caravan weight, while a load of approx. 25 kg ensures correct outfit on-road behaviour. Higher weights are permitted, but ensure you do not exceed the maximum values specified in the car documents and the certificate of conformity of the caravan approval.

4.2. LOADING

The caravan is not designed for carrying loads. It is only permitted to carry light items (cutlery, sleeping bags, etc.), clothing or bedding stowed securely against movement in cupboards, lockers, wardrobes, drawers and bed boxes. Carry a gas cylinder only in the designated space in the caravan.

⚠ ***NOTE!!!***

Carrying loads without adhering to the rules described above can lead to a too low nose weight at the towing coupling, resulting in the disengagement of the coupling from the towball. Damage caused by carrying loads in a manner other than that specified in Section 4.2 is not covered by the warranty.

4.3. BEFORE TOWING

1. *Ensure the coupling is correctly engaged onto the towball of the vehicle's towbar.*
2. *Ensure the caravan lights are working properly.*
3. *Check that the load is correctly positioned and secured against movement.*
4. *Store the tables in their 'sleeping' position.*
5. *Switch off all gas appliances.*
6. *Check the tightness of the bolts securing the running wheels.*
7. *Detach the jockey wheel or pull it upwards as far as possible, with the jockey wheel pointing towards the caravan, and lock it in this position.*
8. *Raise the fold-out steadies as high as possible.*
9. *Check that all doors, windows and the roof vent are closed securely.*

4.4. TOWING THE CARAVAN

When towing, remember that:
– the braking distance of the vehicle and caravan combination is greater than that of the towing vehicle alone;
– you need to keep a speed reserve and increased distance from preceding vehicles to be able to increase the speed should you encounter snaking;
– caution must be exercised when driving down the slope, especially in wet road conditions.

⚠ ***NOTE!!!***

When towing the caravan ensure that:

- ***windows, air vents and roof vents must be tightly closed;***
- ***water containers, together with the water system, and the boiler must be emptied; the boiler and the water system are emptied through the taps***

4.5. UNHITCHING

1. *Disconnect the pin connector from the socket and put the plug away in the holder.*
2. *Detach the breakaway cable.*
3. *Unhitch the caravan from the vehicle's towbar.*

Use the jockey wheel to raise the drawbar and unhitch the tow hitch from the towball. Once the caravan has been unhitched, replace the towball cover to prevent greasing on the towball.

⚠ ***NOTE!!!***

When using the caravan on a slope, ensure you chock both wheels of the caravan and apply the parking brake. If you park the caravan on soft standing ground, put levelling pads of at least 200x200 mm under the fold-out corner steadies.

5. USE, OPERATION, CHASSIS MAINTENANCE

5.1. GENERAL

Check the wheels are tightened to the correct torque with a torque wrench before each trip. The force to use to tighten the wheel bolts is specified in Section 5.4 (Changing wheels).

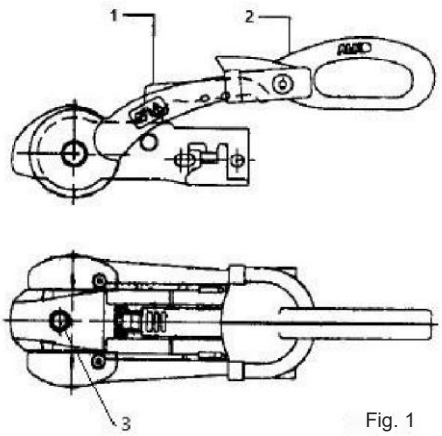


Fig. 1

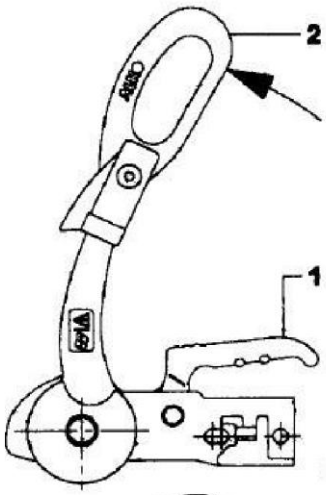


Fig. 2

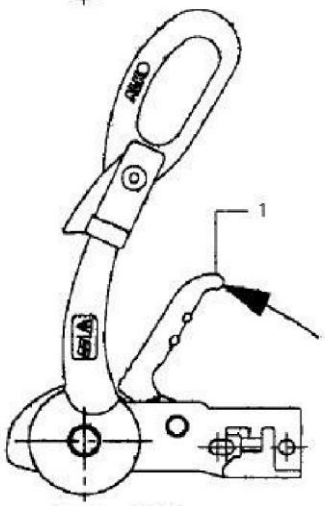


Fig. 3

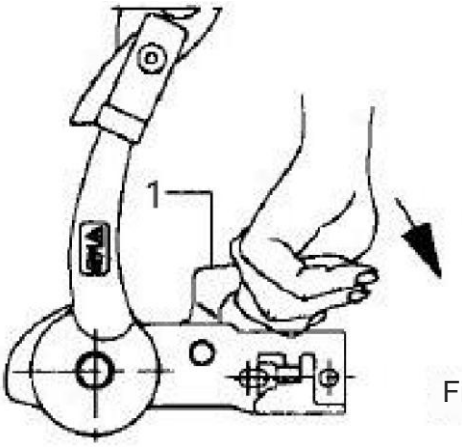


Fig. 4

5.2. BALL-TYPE COUPLING

Niewiadów caravans can be fitted with ball couplings from KNOTT or AL-KO depending on the caravan version. Follow the procedure below to fit a hitch correctly:

Caravan hitching

Make sure the stabiliser lever (2) is open (Fig. 2), which means its highest position. Open the hitch head by pulling the handle (1) up and forward, as shown by the arrow (Fig. 3). The hitch head remains open until it is fitted onto the towball at the rear of the towing vehicle. Only then the hitch handle snaps back into its original position, which is clearly audible.

Push down the handle (1) manually. The hitch head is closed and secured automatically. (Fig. 4) The towball of the towbar is correctly inserted into the hitch head if you can see the green edge of the hitch indicator (item 3 in Fig. 1).
Firmly push the stabiliser lever (2) all the way down. (Fig. 5)

Unhitching

Unhitch the caravan from the vehicle in reverse order. Raise the stabilisation lever (2) as far as it will go (top lever position). Open the hitch handle (1) and remove the hitch head from the vehicle towball. Use the jockey wheel to assist hitching and unhitching the caravan with higher loads applied on the towbar.

Note:

The friction pads are pressed against the towball. The torque induced by the pressure on the pads that dampens the side to side movement of the caravan during towing causes wear on the pads. The friction pads are designed with a considerable wear reserve to ensure a long service life.

KNOTT and some AL-KO coupling heads are fitted with hitch indicators. When correctly locked, the indicator will point to the green field (KNOTT) or the green field will show above the spherical part of the hitch body (AL-KO).

When the ball coupling is engaged, you should feel no perceptible play between the hitch head and the towball. Any perceptible play means that the towball or the ball hitch is worn and you should not start towing the caravan.

As standard, the caravans fitted with KNOTT or AL-KO ball hitches do not integrate a hitch lock to help prevent intrusion by thieves. You can order a hitch lock as an extra accessory.

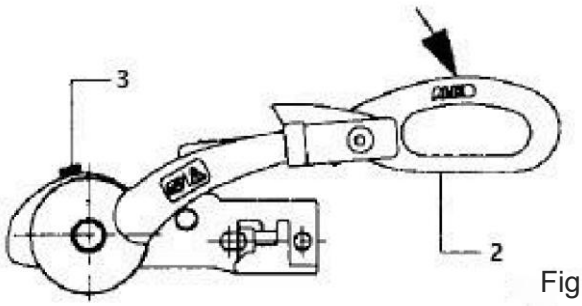


Fig. 5

5.3. SUSPENSION

All NIEWIADÓW caravans are fitted with axles with rubber damping components. The suspension system does not require maintenance, but should be checked according to the procedures described in Section 8.

5.4. CARAVAN WHEELS

A safety prerequisite prior to each journey is to ensure correct and equal pressure in all caravan wheel tyres. Ensure the optimum tyre pressure for caravans loaded to the permissible total weight (MTPLM) between 0.19 ± 0.01 MPa.

To ensure a long service life for your tyres:

– Maintain the required tyre pressure;

– Avoid bumping kerbs with caravan wheels;

– When storing the caravan for a long time, support it so that the wheels do not touch the ground;

– Avoid prolonged static loading.

Use a 19 mm socket wrench to tighten the wheel nuts. Make sure the treads in your tyres wear evenly. If you notice the tyre treads wear quicker and unevenly, have your caravan suspension checked at one of the Authorised Service Stations the list of which can be found at https://niewiadow.pl/pl/serwis/

Changing Wheels

1. *Change caravan wheels when coupled up to the towing vehicle, if possible.*
2. *Stop your outfit on a ground which is as level and solid as possible, and if you get a puncture on a public road, switch on the hazard lights and put out a warning triangle.*
3. *In the towing vehicle, engage the handbrake, set the wheels straight, set the gearshift lever in 1st gear or for automatic transmissions, select position P of the gearshift lever.*
4. *On the caravan, engage the handbrake, leave the jockey wheel in the towing position and raise the stabiliser lever* ***(Caution !!! DO NOT OPEN ALL THE WAY UP)****.*
5. *Chock the unaffected wheel at the front and rear to prevent any movement of the caravan (use the chocks your car is equipped with or any wooden blocks).*
6. *Depending on the option, the spare wheel is either mounted in the caravan's storage box holder or under the caravan.*
7. *Position the jack under the axle tube or on the frame of the wheel to be replaced. Place a levelling pad or board under the jack where the ground is soft.*
8. *Slacken off the bolts by one turn before jacking up the caravan; do not remove the bolts.*
9. *Jack up the caravan until the wheel is 2-3 cm off the ground.*
10. *Remove the wheel bolts and remove the wheel.*
11. *Place the spare wheel on the wheel hub and align it.*
12. *Screw on the wheel bolts and tighten lightly one by one in a diagonal sequence.*
13. *Lower the jack and remove it.*
14. *Use the wheel torque wrench to tighten the wheel bolts evenly. The desired bolt torque value is 110 Nm for steel rims and 120 Nm for aluminium rims.*
15. *Release the handbrake and return the stabiliser lever to its lower position.*

⚠ ***NOTE !!!***

After a wheel change has been carried out, the wheel bolts must be checked after 50 km and tightened if necessary.

5.5. BRAKING SYSTEM

The caravans manufactured by Fabryka Przyczep NIEWIADÓW Sp. z o.o. are fitted with an overrun type braking system composed of:

– an overrun device;

– a transfer system;

– wheel braking units.

When braking the towing vehicle, the inertia force of the caravan exerts pressure on the overrun device, which actuates the braking units in the caravan wheels via the transfer linkages. The design of the braking units allows the caravan to move backwards without any extra operation. When changing from reverse to forward travel, the braking system is automatically ready to brake.

The caravan has a parking brake system, which is activated by a hand lever located at the overrun device and ensures that the caravan is braked on gradients of up to 16%. The parking brake only works effectively if the ratchet lever is pulled to the last tooth.

If the hand lever is pulled too low, the caravan brakes work in the forward direction without providing adequate braking in the rearward direction.

Chocking the wheels when parking the caravan on a slope for an extended period is recommended in addition to applying the handbrake.

The caravan braking system requires maintenance and adjustment according to the procedures given Section 8.

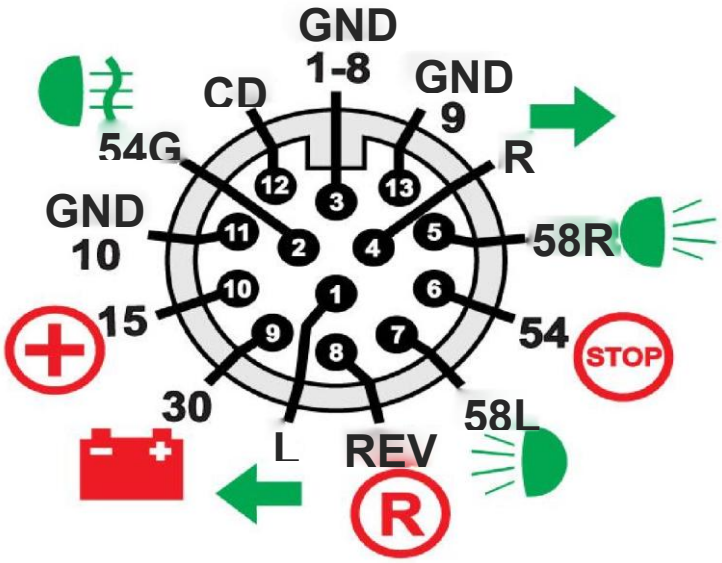
5.6. JOCKEY WHEEL

The jockey wheel is used to support the front part of the caravan when manoeuvring, hitching to a vehicle or replacing a wheel. Care must be taken to ensure that the bolt of the jockey wheel, after being unscrewed, is always lubricated with grease.

5.7. CARAVAN ROAD LIGHTING

The caravan is fitted with a 12 V powered road lighting. Below we show the wiring of the terminals of the 13-pin connector and the colours of the cores with which they are connected to the corresponding lights.

13-CONTACT SOCKET



Caravan uses LED type lights.

6. CARAVAN BODY

6.1. KITCHEN SET

The kitchen set includes a gas cooker and a sink. These components come with dark glass lids. The cooker is designed for propane-butane gas and can only be connected to a gas cylinder via a suitable gas pressure regulator (30 mbar).

When the cooker is in use in the caravan, ensure a continuous exchange of air sufficiently for the gas to burn and for the fumes to escape (open vents or window).

To ignite the burners:
open the valve on the gas cylinder and the corresponding valve in the kitchen cabinet - for a description of the valves, see section 6.5.3.; turn on the burner of the gas cooker according to its operating instructions

☞ ***When not using the cooker, make sure the gas cylinder valve is closed.***

⚠ ***NOTE!!!***

Always operate the cooker in accordance with the instructions in the cooker's user manual which is supplied with the caravan. It is forbidden to connect the cooker directly to the cylinder without using the correct regulator.

☞ ***The cooker and the sink are covered by the guarantee of their manufacturer who will rectify any defects under its own product liability during the warranty period. Please report any such defects via the caravan dealer.***

6.2. FRIDGE

The fridges used by Fabryka Przyczep NIEWIADÓW Sp. z o.o. can be powered with 230 V and 12 V.

☞ ***Refer to the fridge user manual supplied with the caravan for a detailed description of the operation, use and technical data for the fridge.***

☞ ***The fridge is covered with the warranty from its manufacturer, which will repair any defects under its own product liability during the warranty period. Please report any such defects via the caravan dealer.***

6.3.1. INTERIOR HEATING

Our caravans are fitted with interior heating equipment supplied with propane-butane gas at a working pressure of 30 mbar.

Follow the procedure below to start the heating:

– connect the gas cylinder via a suitable regulator;

– unscrew the heating valve located in the kitchen cabinet;

– turn the knob on the appliance (the gas in the appliance ignites automatically).

☞ ***When not using the heating, ensure the gas supply valve in the kitchen cabinet to the appliance is closed.***

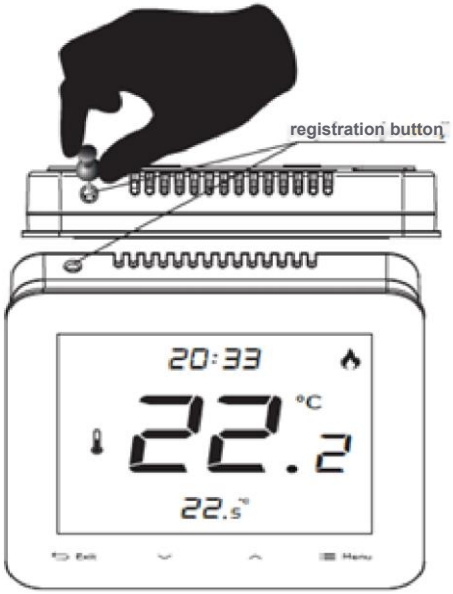
Please refer to the user manual of the unit for a detailed description of the operation, use and technical data of the heating appliance.

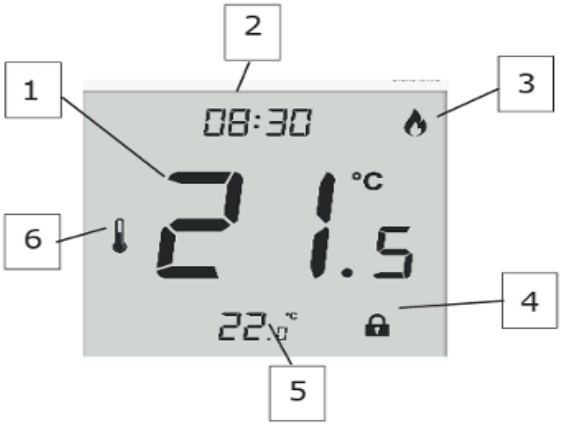
☞ ***The interior heating unit is covered by the warranty of its manufacturer's, which will repair any defects under its own product liability during the warranty period. Please report any such defects via the caravan dealer.***

6.3.2. UNDERFLOOR HEATING

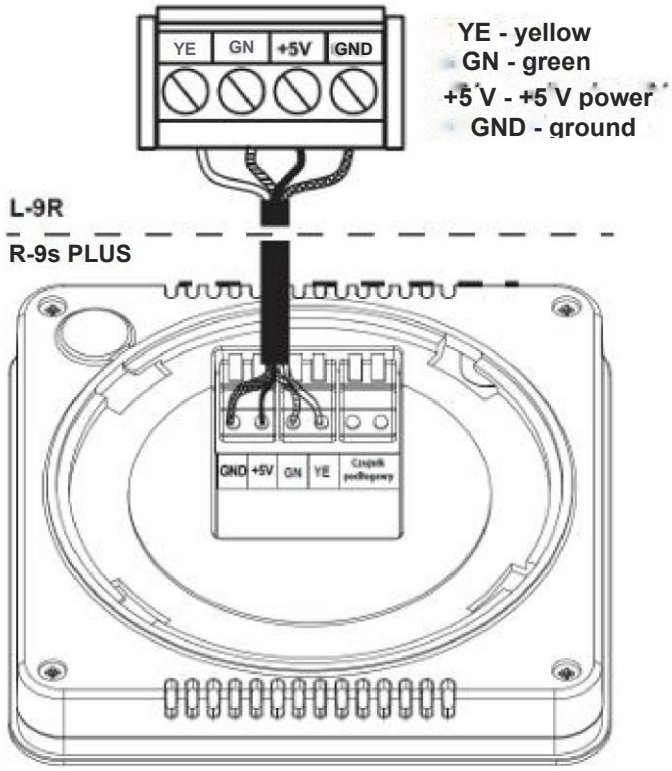
The R-9s room controller maintains the desired room/floor temperature by sending a signal to the heating unit or to the strip that controls the actuators, with information on the need to heat the room/floor. When such a signal is received, the heating unit unblocks the flow on the thermostatic valve. The controller has a built-in temperature and humidity sensor and a glass panel. Control is done by means of the "V" and "/\", EXIT and MENU touch buttons.

1. *Current room/floor temperature (if a floor sensor is connected)*
2. *Current time*
3. *Active heating to the set temperature*
4. *Active button lock*
5. *Set temperature*
6. *Room temperature icon*





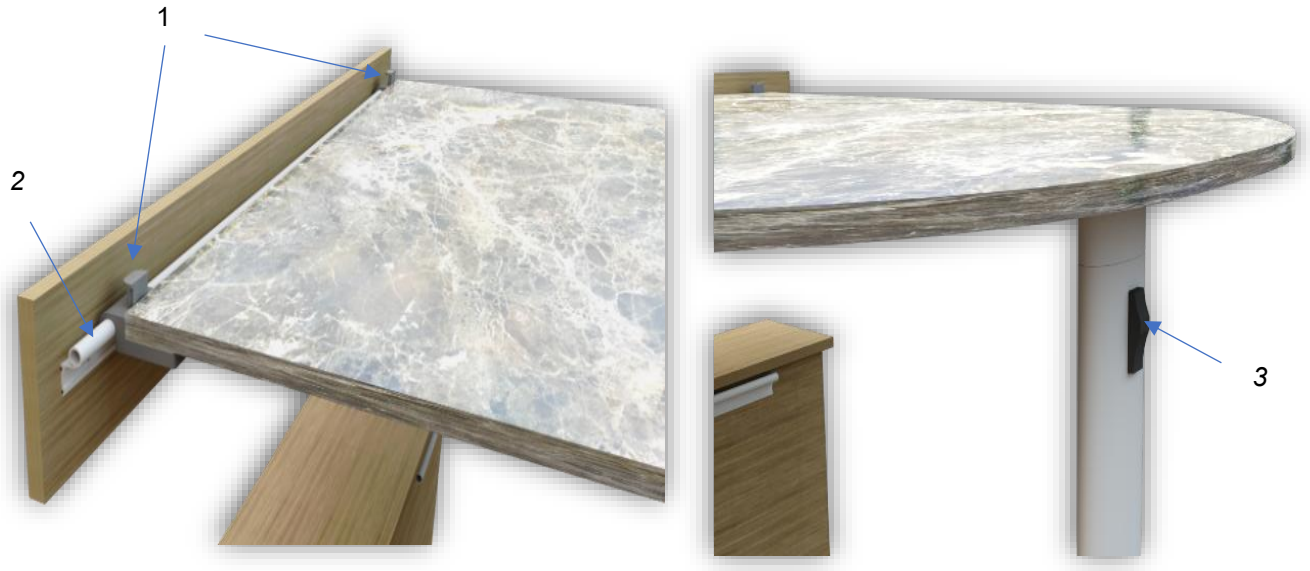
To register the R-9s Plus controller in the selected zone, select "Registration" in the L-9/L-9r strip menu (Menu > Zones > Zone 1-8 > Sensor type > Wired RS), then press the registration button for approximately 2 seconds. When the registration process has been carried out correctly, the display of strip 12 will show the relevant message, while the display of the room sensor will show Suc. An Err message on the room sensor display indicates an error in the registration process. No more than one room controller can be assigned to one zone. If the Una message appears (despite correct device registration), wait approx. 4 min. or force communication again by holding down the registration button for approx. 2 sec. until the program version is displayed. The set room temperature can be changed directly from the R-9s Plus room controller using the ∨ and ∧ buttons. During idle time, the current zone temperature is displayed on the controller screen. By pressing the ∨ or ∧ button, the user can change the set temperature - the digits flash. When the MENU button is held pressed, the individual controller functions are displayed: - CAL - display of the current calibration value of the embedded sensor. Calibration is only performed from the strip level if the room temperature measured by the sensor deviates from the actual temperature - CAL (with the thermometer pictogram) display of the current calibration value of the floor sensor - VER 100 - software version - when contacting the service department, the software version number must be provided. Button lock - the lock is activated by pressing MENU and selecting ON using the ∨ and ∧ buttons. To unlock the buttons, simultaneously press and hold the ∨ and ∧ buttons for approx. 3 sec. Re-entering the Menu and selecting OFF cancels the activation of the lock. The connection of the controller is shown in the figure below.



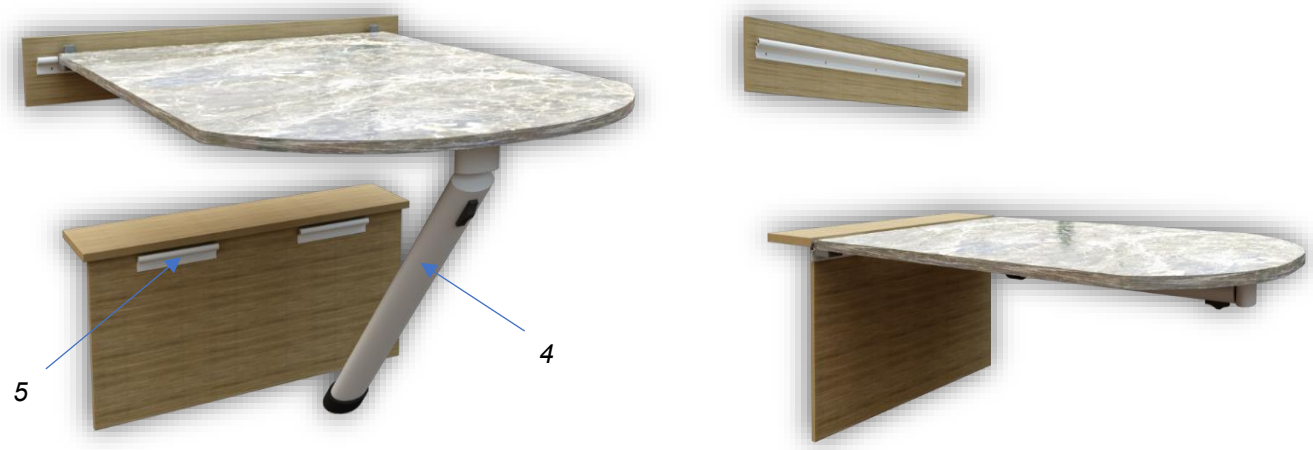
To avoid unnecessary errors and accidents, ensure that all persons using the device have thoroughly familiarized themselves with its operation and safety features. Please keep the manual and ensure that it remains with the device in the event of transfer or sale, so that anyone using it throughout its lifetime can have adequate information on the use and safety of the device.

6.4. SEATING AND BEDDING CONFIGURATIONS

To make up into seats:
– Attach the table hooks (fixed on the edge of the table) on the aluminium rail (2) on the wall of the caravan and extend the table leg (4) using the push button (3). Then, press out the push buttons (1) on the table hooks.



To make up into beds:
– Press the push buttons in (1) on the table hooks, fold in the table leg (4) using the push button (3),
– Unhitch the table from the aluminium rail (2) and attach it on the rail (5), as you are placing the table on the bed edges.



6.5. SERVICES

6.5.1. POWER SUPPLY, 12 V

The 12 V voltage is fed by a power supply unit or from a car battery. This installation is connected to the car using a 13-pin connector according to ISO 11446. The installation in the caravan consists of the following components, which make up the system:

Main AGM battery (1). *This is the heart of the system. The battery used is a 95 Ah Ca/Ca battery of the latest design, intended for the economy sector and available in the most popular housings used in European cars. It is located in the couch compartment on the 230V connection side. Sometimes a separate starter battery is used to power the mover (if fitted).*

BC PRO 15 A battery charger (2). *This is a rectifier for charging 12 and 24 V lead-acid (wet), gel, AGM and LFP batteries with capacities of 10-300 Ah, which are used in motorbikes, cars, etc. It has a single-phase power supply and is protected against short-circuits, overload and reverse polarity. The power supply is activated on by switching on the residual current device (located in the fuse box of the 230 V system)*
Individual selections are confirmed by briefly pressing the "status selection" button. The available modes are:

- *Voltage – displays the battery charging voltage*
- *Current – displays the charging current*
- *Charging phase – displays the charging phase*

The display can also indicate that the unit is overheating by displaying the '-P' sign. This sign is displayed if the battery is connected in reversed order. You can use the LFP mode to operate the rectifier as a 12 V (13.8 ; 14.2 ; 14.6) or 24 V (27.6 ; 28.4V ; 29.2V) stabilised power supply.

The rectifier is designed for indoor use and should be used as intended. Do not use near flammable materials or liquids, close to sources of fire or exposed to direct sunlight. Beware of the hot housing when under full load. In the event of a fire, use a fire extinguisher designed for extinguishing electrical equipment.

DC/DC 12V 10A MR10 charger (3). *Any extra battery used to power various devices needs to be recharged from time to time. It is not always possible to charge the additional battery from 230 V mains or from photovoltaic panels when the photovoltaic energy is insufficient.*

Ideally, the running engine and its alternator (which charges the starter battery) should be used to charge an additional battery. For certain reasons, the batteries are not permanently connected (the idea is to prevent the starter battery from discharging) or the alternator's current output is so low that there is a risk of continually undercharging the starter battery.

Smart BatteryProtect 12/24V 65A (4). *Disconnects all power consumers from the battery if the caravan battery is discharged to below 11V, which could damage it if the battery is undercharged for a long period. If the battery is disconnected by the Smart BatteryProtect, the caravan must be connected to an external 230 V power source, which will ensure the operation of the equipment and charge the battery to the desired level*

Circuit breaker 50A 12V 24V 48V (5) *This circuit breaker is compatible with 12V, 24V and 48V systems and handles up to 50A, making it an essential component in any vehicle to ensure safety and reliability.*

Fuse box GB-12 LED (6). *The central point where all 12V circuits connect and where the fuses are located. It manages the system and allows problems to be diagnosed.*

Fuses: *Each circuit is protected by a suitable fuse against short circuits and overload. The fuses are located in the fuse box.*

BlueSolar charger MPPT 75/15 *(optional for a photovoltaic installation) The solar charger collects energy from the photovoltaic panels and stores it in a battery. Using the latest and fastest technology, the BlueSolar charger maximises the amount of energy produced and transmits it intelligently to fully charge the battery in the shortest possible time. BlueSolar keeps the battery in a good condition, extending its life.*

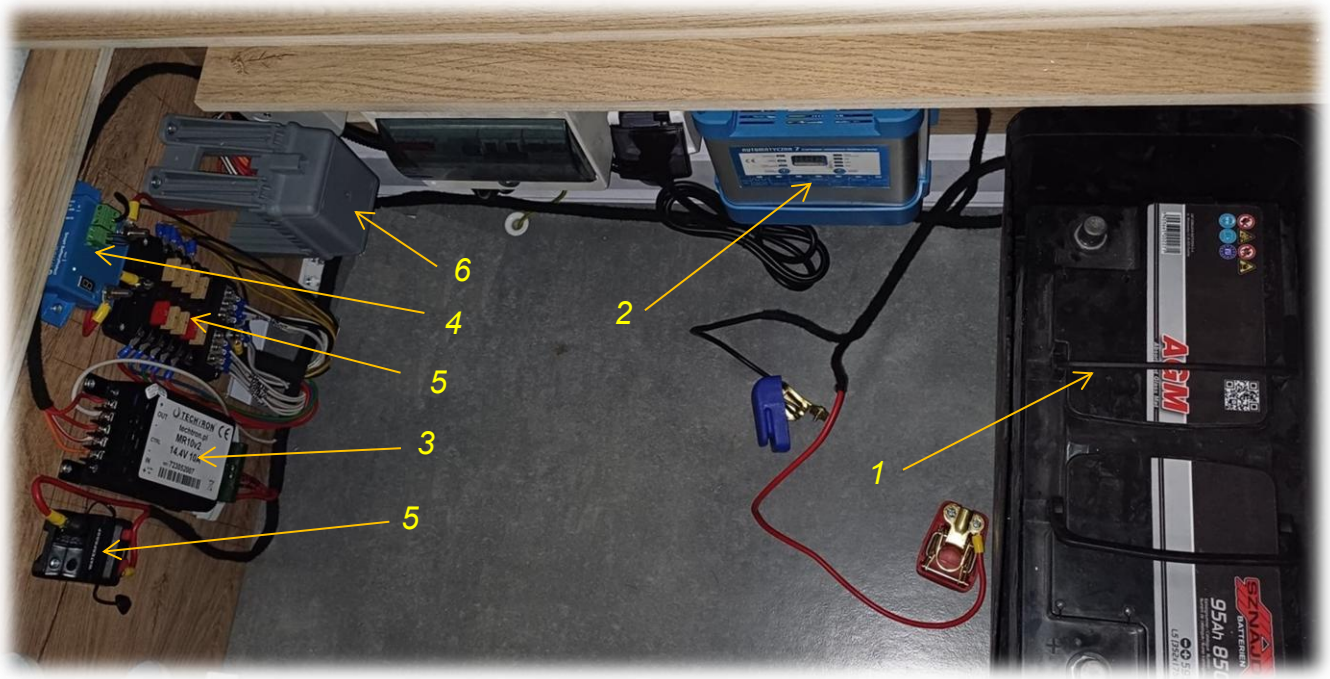


Figure - layout of electrical components. The layout may vary slightly depending on the version of the interior.

6.5.2 230 V ELECTRICAL SYSTEM

The 230V system in the caravan takes into account the specific characteristics of this mobile home and the safety aspects. It consists of the following key elements:

Connection socket: *Located on the outside of the caravan, secured with a flap. This is the point to which the power cable from an external source (e.g. at a campsite, from a generator) is connected. The standard is a CEE socket (so-called "blue camping socket") with three pins (phase, neutral, earth).*

Connection cable: *A special camping cable, 25 m long, with a CEE plug on one side and a standard mains plug on the other. The caravan must be connected to an external 230 V power source in order to activate the electrical power supply.*

Isolating disconnectors SV (1) *are used as main switches in residential and industrial switchgear and as individual switches in power systems. They do not have built-in overcurrent protection. SV disconnectors can be set either in the ON or in the OFF position.*

Residual current device (RCD/FI) (2): *This device is absolutely key to ensuring safety. It detects the difference in the current flowing into and out of the circuit and, in the event of a current leak (e.g. touching a faulty appliance), it immediately cuts off the power supply, protecting against electrocution.*

Overcurrent circuit breakers (3): *They protect individual circuits against overload and short circuits. They are selected according to the maximum current that can flow through the circuit (depending on the devices connected and the cross-section of the wires).*

Figure - protection of the 230 V system. The layout may vary slightly depending on the interior design.

⚠ ***CAUTION!!!***

Before connecting the caravan to an external 230 V power source, the caravan must be disconnected from the vehicle system, so first remove the 13-pin connector from the vehicle socket and then plug the 230 V connector into the caravan socket. Disconnect the 230 V power supply in reverse order.

Failure to follow these rules risks damaging the battery.

The battery is covered by the warranty from its manufacturer which is responsible for any defects found and will rectify them under its own product liability. Please report any such defects via the caravan dealer.

⚠ ***NOTE!!!***

1. ***Never use portable cooking appliances or heaters due to risk of fire or suffocation.***
2. ***Never allow electrical systems and appliances (230 V and 12 V) to be repaired by unqualified persons.***

6.5.3. GAS SYSTEM

Before starting any of the appliances, a gas cylinder (not supplied with the vehicle) must be connected to the system via the reducing valve, and the valves in the kitchen cupboard - if present in the caravan - should be closed at this time.

After connecting the cylinder and checking for leaks, unscrew the appropriate valve in the kitchen cabinet depending on which appliance you want to use.

Figure - pictograms indicating the purpose of the gas valves

Each time a cylinder is connected to the regulator, all connections should be checked for leaks. To do this, apply or spray soapy water on the connection points of the hose, the valve and the connection of the valve to the regulator, and then open the valve. If no gas bubbles show, this means that the system is tight.

Figure - a gas pipe with a reducing valve

⚠ ***NOTE!!!***

All gas appliances in caravans are designed to be supplied with a 30 mbar propane-butane gas mixture, so make sure the regulator is also designed for this pressure value to ensure these appliances work properly.

6.5.3.1. GAS CYLINDER INSTALLATION

⚠ ***CAUTION!***

Only use cylinders that you are sure have been filled at gas bottling plants.

Do not use a cylinder filled at a fuel station or autogas station, or try to fill it yourself there - for the safety of cylinder users, this is prohibited by law.

Connecting the gas cylinder:

1. *Place the gas cylinder in the special basket located in the box and then use rubber tension rings or straps to secure it to the box.*
2. *If the cylinder valve is sealed with a warranty film, remove it by making a slight cut and tearing.*
3. *The regulator connection on the valve has a left-hand thread. Use a 27 spanner to unscrew the plastic cap by turning clockwise. To screw on the reducer cap, use the counterclockwise turn.*

⚠ ***NOTE!!!***

Before removing the plastic cap on the reducing valve connection (on the cylinder valve), check that the cylinder valve is closed.

We recommend that the gas cylinder is connected by a person who is properly qualified for gas work.

☞ ***Follow the check procedure for leaks:***

1. *Each time a cylinder is connected to the regulator, all connections should be checked for leaks. To do this, apply or spray soapy water on the connection points of the hose, the valve and the connection of the valve to the regulator, and then open the valve. If no gas bubbles show, this means that the system is tight.*

2. *If you find that gas is escaping from the system, follow the procedure below.*

- Close the cylinder valve;
- Close all sources of open flame;
- Do not use equipment that causes sparks (electrical plug outlets, power switches, radios, televisions, etc.);
- Open doors and windows and air the room thoroughly (liquid gas is heavier than air so it accumulates in the lower parts of rooms). In justified cases, the seller - the gas supplier - should be notified.

3. *If the room or cylinder catches fire, turn off the valve if possible and take it out of the room to outside air. When this is not possible, the cylinder should be cooled as much as possible with a jet of water or heavy wet rags. The presence of gas cylinders in the room where there is a fire should be brought to the attention of the person in charge of the firefighting operation.*

⚠ ***NOTE!!!***

1. ***It is forbidden to test the system tightness with an open flame.***
2. ***Ventilation grilles must not be obstructed.***
3. ***Check the condition of the gas hoses regularly and, if necessary and always before the expiry date marked on them, replace them with new ones, exclusively approved for use in gas systems.***
4. ***Place one approved powder or ISO 7165 compliant extinguisher, with a capacity of at least 1 kg, and an extinguishing blanket near the kitchen appliance close to the entrance door; become familiar with the extinguisher user instructions. A fire extinguisher and blanket are not provided with the caravan.***
5. ***Never allow unqualified persons to modify LPG systems and equipment.***

⚠ ***NOTE!!!***

Improper handling can result in significant amounts of gas escaping or burning improperly, which can cause a fire or poisoning. The symptoms of carbon monoxide poisoning include ringing in the ears, heaviness, accelerated heart rate, dizziness, vomiting and general tiredness.

The victim should be administered first aid and an ambulance should be called.

When administering first aid you should:

– Bring the affected person to fresh air;
- Facilitate breathing by unbuttoning clothing;
- Administer sobering agents (e.g. ammonia) for inhalation;
– Cover the victim with a blanket and prevent him or her from falling asleep;
- Call for medical assistance and continuously supervise the victim until it arrives.

6.5.4 WATER SYSTEM

The water system consists of:

– Water supply pipes

– A fresh water tank with a capacity of 30 litres

– A drain line

- A tap with a solenoid valve

- An electric pump

The water tank is located in the sofa or cupboard. Place the pump in a container with water. Water comes out of the tap when the valve is turned (the pump is switched on automatically).
The water used is discharged through a system of water pipes under the caravan.
It is advisable to position the caravan in a campsite over the drainage grating so that the outflowing water does not spill over the sides.

6.5.5 VENTILATION

Air vents and grilles are caravan components that allow air to flow freely inside the caravan. They are essential for maintaining the right level of humidity and also for providing fresh air in the room. This should be borne in mind especially when parking the caravan after the season.

Moisture absorbers are great for getting rid of moisture in a caravan. They eliminate excess moisture in a room such as the interior of a caravan. With proper ventilation, you prevent musty odours and fungal growth. Place the windows and the roof hatch in the ventilation position. Also use the ventilation position for the fridge and refrigerator.

6.5.6. TOILET CASSETTE

The caravan is equipped with a toilet cassette. The cassette has a tank which can be accessed from outside the caravan through an access door.

Please refer to the manual that is supplied with the caravan for details on the operation and use of the toilet cassette.

☞ ***The toilet cassette is covered with its manufacturer's warranty, which provides remedy of any defects under its own product liability during the warranty period. Please report any such defects via the caravan dealer.***

Figure - pulled out toilet cassette visible through the open access door

7. CARAVAN BODY MAINTENANCE

Body

The purpose of maintenance works is to keep the caravan clean. Wet wash the bodywork with a soft cloth and rinse generously with water. The rough materials used for cleaning may scratch the surfaces, particularly the windows – such defects are not covered by the warranty. The materials the bodywork is made of do not require additional waxing and we recommend that no protective coatings are applied to the walls and windows. Any discolouration caused by this is not covered by the warranty.

Mattresses and curtains

Wash the mattress covers and curtains using normal laundry detergents.

Furniture

The cooker and sink should be washed with water and mild detergents and wiped dry.
Do not use products that can scratch the surface or damage it chemically.

Floor

Wash the floor with warm water with detergents added. From time to time, the floor should be treated with a wax polish or other floor maintenance product.

Post season maintenance

- *Wash the caravan body;*
- *Protect the plug contacts of the 230V supply cable with a temporary protection agent (e.g. WD40);*
- ***Drain any residual water from the water system, the cassette toilet, the boiler and the travel toilet;***
- ***Charge the battery in the box under the right front bed, and then use a 13 mm wrench to disconnect the cables from the battery, first the one with the (-) terminal, and then the one with the (+) terminal.***

⚠ ***NOTE !!!***

The battery which is being charging can heat up. Before disconnecting the terminals, check if the battery is hot to avoid burns.

Prior to season carry out the above procedure in reverse order to connect the battery.

⚠ ***NOTE!!!***

We recommend that at the end of the season, once the battery has been charged according to the procedure described above, you remove it from the caravan and put away at a place with constant positive temperatures. To remove the battery, disconnect the cables from the battery following the procedure described above, and then pull it up out of the plastic box in which it sits. Some models use batteries that are narrower than the mounting box. In such cases, pulling up the battery requires first moving the locking device fitted in the box towards the empty space of the box. Carry out the above steps in reverse order to install such a battery: after sliding it into the box, move the locking device as far as possible towards the edge of the battery.

Leaving the battery in the caravan for the winter period can cause it to discharge completely, resulting in damage to the battery or the inability to achieve nominal performance when recharged.

Beware of the risk of overcharging the battery if it is removed from the caravan and charged with a charger not designed for this particular model. This typically causes the battery temperature to rise suddenly, with its maximum permissible value being 50°C. In such a case, not only do you risk damage to the battery, but also explosion. If the temperature of the battery exceeds 50°C (the housing is very hot and will cause a burn), you must stop the charging process.

For post-seasonal storage, ensure you disconnect the battery from the equipment, store it in a dry and cool place in an upright position.

We recommend regular charging once every 2 months to keep the battery in good working order.

8. Inspections

In order to ensure the safe and reliable use of the caravan, it is essential to carry out periodic inspections. These inspections should be carried out as part of the warranty and post-warranty inspection schedule.

8.1 Warranty inspections

During the warranty period, the user must carry out the following inspections at one of the Authorised Service Stations:

When	***Services***
*5,000 km or 12 months after purchase**	*Functional check of caravan interior equipment* *Braking system check* *Braking shoe adjustment* *Wheel bearing adjustment check*

	Lubrication of the bearing bushes of the overrun device
10,000 km	*Replacing grease in the tapered wheel bearings* *Lubrication of brake cables and other brake components*

**) whichever happens first*

8.2. Post warranty inspections

☞ *Refer to the list of Authorised Service Stations at https://niewiadow.pl/pl/serwis/*

⚠ ***NOTE!!!***

Failure to carry out warranty inspections or carrying them out to different schedule than indicated here, or carrying them out at a service centre other than one of the Authorised Service Stations will result in voiding the warranty.

When	***Services***
Every 10,000 km or every 12 months	*Inspection, adjustment and lubrication of the braking system.* *Lubrication of the bearing bushes of the overrun device*

⚠ ***NOTE!!!***

We recommend post-warranty servicing at Authorised Service Stations.

9. INFORMATION FOR THE USER

☞ ***When towing the caravan***

– Keep a speed reserve and increased distance from preceding vehicles to be able to increase the speed should you encounter snaking;
– Extra caution must be exercised when driving down the slope, especially in wet road conditions;
– The braking distance of the vehicle and caravan combination is greater than that of the towing vehicle alone;
– When pitching on a slope, ensure you chock the wheels of the caravan and apply the handbrake if the caravan is equipped with a braking system;
– The MTPLM of the caravan must not exceed the value stated in the towing vehicle's documents even if the law allows higher values.