



CARAVAN OWNERS MANUAL

N – CROSS

Fabryka Przyczep Niewiadów Sp. z o.o.

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1. INTRODUCTION


Thank you for purchasing 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. We are constantly improving our caravans so we reserve the right to make changes to the equipment and technology used, which will not be presented in this document. We would also like to inform you that the User Manual covers various equipment configurations, which are not always available in the standard versions, and includes descriptions of accessories known by the time this manual was handed over to print. Please bear in mind that not all individual product options have been included.

Make sure you read this manual carefully before the first use of the caravan and follow the instructions given in it. Using the product without complying with the instructions given in this manual will void the warranty.

We wish you happy travels!

2. SPECIFICATION

	3 Berth N-Cross	4 Berth N-Cross
Overall Length	5,610 mm	
Overall Height	2,530 mm	
Maximum Technically Permissible Laden Mass (MTPLM)	900-1,300 kg	
Body Length	3,750 mm	
Total Width	2,230 mm	
Internal Width	2,050 mm	
Internal Headroom	1,850 mm	
Wheel Track	1,870 mm	
Number of Berths	3	4
Bed Dimensions	Front: 2,050 x 1,300 (mm)	
	– Rear: 2,000 x 650 (mm)	– Rear: two berths 2,000 x 650 (mm) Note: max load capacity of the upper bed 70 kg!
MIRO	770 kg	795 kg

 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!!!

Optional equipment purchased for the caravan increases its tare weight (MIRO).

3. EQUIPMENT

3.1. STANDARD EQUIPMENT

– Keys for entry door and drawbar box	3 pcs
– Caravan's jockey wheel	1 pc
– Winding handle for steadies	1 pc
– Fresh water tank	1 pc
– Rubber tension rings or straps for gas cylinder	3 pcs
– Gas cooker with user manual	1 pc
– Sink	1 pc
– Gas heating with user manual	1 pc
– Fridge with use manual (230V/12V)	1 pc
– Electric water heater (5 l) for 230V with user manual	1 pc
– Shower head and toilet with toilet cassette and user manual	1 pc
– Front window roller blind	1 pc
– USB port 2.1A	1 pc
– USB port 1A	1 pc
– Connection cable 230V, length 25 m	1 pc
– Electric water pump	1 pc
– Caravan owners manual	1 pc
– Entrance step	1 pc
– Battery charger with user manual	1 pc
– Axle shock absorbers	2 pcs


3.2. ACCESSORIES

Fabryka Przyczep NIEWIADÓW Sp. z o.o. offers the following optional equipment for its caravans, available at an extra charge:

- Spare wheel
- Spare wheel carrier
- Battery 60 Ah or 80 Ah
- Bike rack
- Gas boiler
- Underfloor heating
- Heating with hot water system
- Set of window blinds
- Oven with grill
- Mosquito door screen
- Awning top sheet
- Awning tent
- Second awning rail
- Silver hubcaps, kit (2 pcs)

- AKS ball coupling
- Aluminium rims

3.3. N-CROSS INTERIOR LAYOUT – 3 BERTH


 Day time layout:




 Night time layout:



3.3. N-CROSS INTERIOR LAYOUT – 4 BERTH

 *Day time layout:*



 *Night time 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 towballs, loop the cable around the neck of the towball and clip it back on itself in such a way that the cable cannot slip off the towball neck – see fig. 1.
 - For detachable towballs, connect the cable to a designated attachment point on the permanent part of the towbar structure – see fig. 2.
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 2 – Method of attaching the breakaway cable to a detachable towball



Figure 1 – Method of attaching the breakaway cable to a fixed towball



NOTE !!!

The towball on the vehicle's towbar should be $\varnothing 50-0.39$ 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 breakaway cable is attached correctly.
3. Ensure the caravan lights are working properly.
4. Store the tables in their 'sleeping' position.
5. Close the valve on the gas cylinder and switch off all gas appliances.
6. Check that the wheel bolts are tightened to the correct torque, see Section 5.4 Wheels/Changing 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:

- the roof vent and windows are secured;
- the water tanks are empty;

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 hitch ball. Once the caravan has been unhitched, replace the towball cover to prevent greasing on the towball.



NOTE!!!

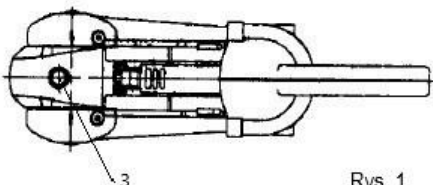
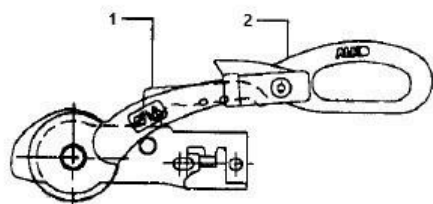
When pitching on a slope, ensure you chock both wheels of the caravan and apply the parking brake. If you park the caravan on soft standing ground, put levelling pads of at least 200x200 mm under the fold-out corner steadies.

5. USE, OPERATION, CHASSIS MAINTENANCE

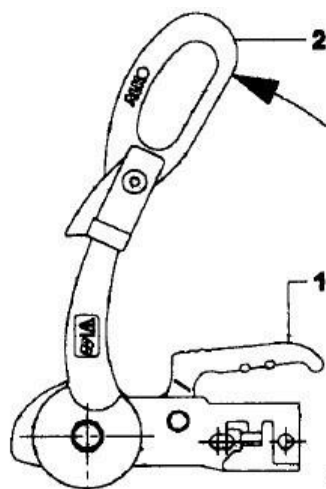
5.1. GENERAL

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).

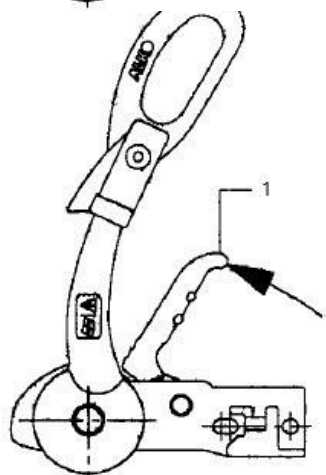
5.2. BALL-TYPE COUPLING



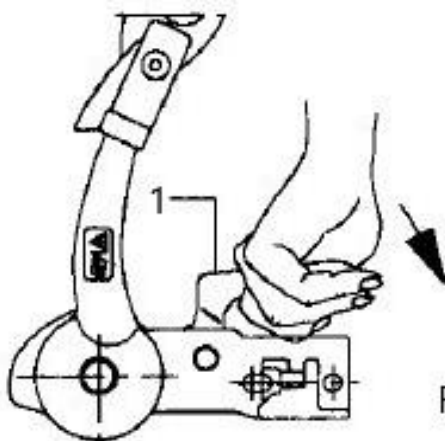
Rys. 1



Rys. 2



Rys. 3



Rys. 4

Niewiadów caravans can be fitted with ball couplings with stabiliser from KNOTT or AL-KO depending on the caravan version. Follow the procedure below to fit such 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 stabiliser 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 towball.

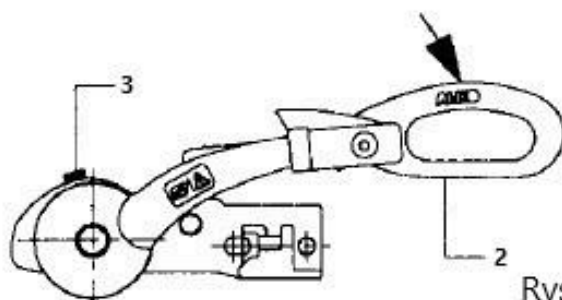
Note:

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.



Rys. 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 when not in use, support the caravan 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 hitch 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 any wooden blocks if no chocks are at hand).
6. The spare wheel is fixed in the holder of the caravan front locker.
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. Fit the spare wheel onto the wheel hub and position it so that the bolt holes in the wheel match up with the bolt holes in the hub.
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 !!!

When a wheel has been refitted, the torque of the wheel bolts should be re-checked with a torque wrench after 50 km of towing and, if necessary, re-tightened to the value indicated in Section 14 above.

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:

- Overrun device;
- 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.

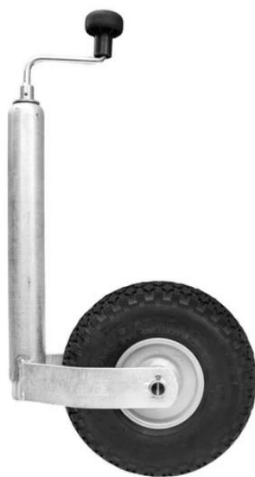
The caravan is fitted with a parking brake system, which is activated by pulling up the hand lever located at the overrun device. It ensures secure braking force for the caravan on slopes of up to 16%, however, only if you make sure the handbrake lever is applied all the way to the last tooth. If the handbrake 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.

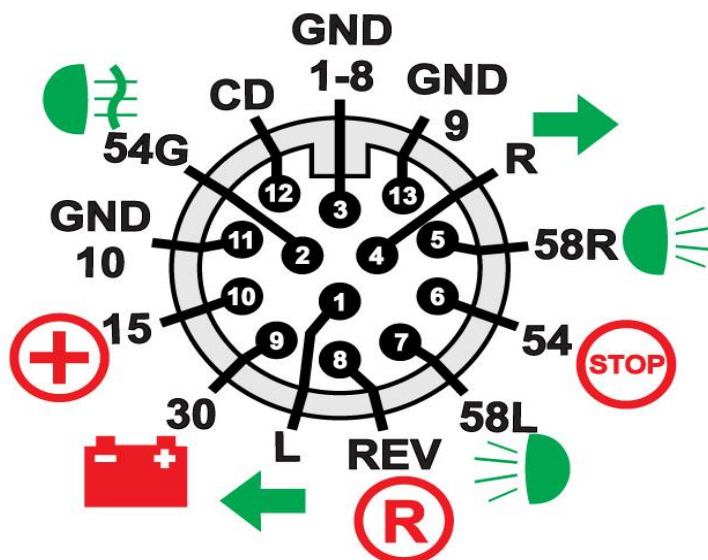
5.6. JOCKEY WHEEL

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 screw on the jockey wheel, which shows after being fully extended, is always lubricated with grease.



5.7. CARAVAN ROAD LIGHTING

The caravan is fitted with a 12 volt 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.



6.1. KITCHEN SET

- *Open the valve on the gas cylinder and the corresponding valve on the kitchen unit, see Section 6.5.3 for valve description.*
- *Refer to the user manual of the gas cooker to turn on the burner.*




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



NOTE!!!

Always operate the cooker in accordance with the instructions in its 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 operating conditions and technical data.

 **The fridge 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.**

6.3. 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;
- Open the heating valve in the kitchen cabinet, see Section 6.5.3 for a description of the valves;
- Turn on the heater as specified in the user manual for this appliance.

 **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 heating unit is covered by its manufacturer's warranty, which will provide remedy for any defects under its own product liability during the warranty period. Please report any such defects via the caravan dealer.**

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 power supply system is used to power the fridge, water pump and interior lighting units. The fridge can also be supplied with 230 V.

The 12 V voltage is fed by a power supply unit or from a car battery. This system is hooked up to the vehicle using a 13-pin connector in accordance with ISO 11446.

6.5.2. POWER SUPPLY, 230 V

The 230 V system is used to power the electric boiler, fridge and 230 V electrical outlets.

To start the 230 V system, use the power cord supplied with the caravan to connect the caravan to an external 230V power supply. When connecting for the first time on a new caravan, you may need to switch on the residual current fuse located in the fuse box next to the power supply unit, see Fig. 3. The power supply unit supplies electricity to the caravan and charges its battery.

To confirm selection of operating modes of the PSU display, press briefly the 'status selection' push button.

Modes available:

- 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.



NOTE !!!


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.

Do not allow the battery to run down completely and use the 230 V power source if possible.

Failure to follow these instructions may result in damaging the battery which will not be claimed under warranty.



Figure 3. Power supply unit with fuse box

 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

6.5.3. GAS SYSTEM

Before turning on any of the appliances, the gas cylinder must be connected to the system via the regulator (see Fig. 5). Ensure you close the valves in the kitchen cabinet for the time of start-up. The gas cylinder is not included as caravan equipment.

After connecting the cylinder and checking for leaks as described further in this section, open the appropriate valve in the kitchen cabinet depending on which appliance or appliances you want to use. The valves are marked with graphic symbols to indicate the equipment they supply, see Fig. 4.



Figure 4. Marking on the gas valves



Figure 5. Location of the gas cylinder including fixing straps, flexible hose and regulator



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

Connecting the gas cylinder:

- Place the gas cylinder in the box provided, and then use rubber tension rings or straps to secure it to the box.
- If the cylinder valve is sealed with a warranty film, remove it by making a slight cut and tearing.
- 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 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).
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

rag. Call emergency services immediately, and inform the firefighting manager about the location of the gas cylinder in the room in which the fire is present.



NOTE!!!

- ***It is forbidden to test the system tightness with an open flame.***
- ***It is forbidden to cover the vent grilles in the caravan.***



NOTE!!!

- ***Periodically check the condition of the gas hose which connects the gas cylinder to the system. Replace it with a new one approved for use in gas systems if necessary and always before the expiry date printed on it. We recommend that this work is done by one of the Authorised Service Stations the list of which is available at www.niewiadow.pl/service***
- ***Ensure an ABC-type fire extinguisher of at least 1 kg capacity is always present near the entry door, as well as a fire blanket placed near the kitchen unit, and make sure you read their instructions for use. A fire extinguisher and blanket are not provided with the caravan.***



NOTE!!!

Failure to use the gas appliance in accordance with this manual or with the instructions for use of the appliance can cause a considerable amount of gas to escape or burn incorrectly, resulting in fire or fume poisoning. The symptoms of carbon monoxide poisoning include ringing in the ears, heaviness, accelerated heart rate, dizziness, vomiting and general tiredness. If a person shows these symptoms, call the emergency services immediately and:

- ***Bring the affected person to fresh air;***
- ***Unbutton their clothes to facilitate breathing;***
- ***Cover them with a blanket and prevent them from falling asleep;***
- ***Watch them over until emergency services arrive.***

6.5.4 WATER SYSTEM

The water system consists of:

- *Water supply pipes;*
- *Fresh water tank with a capacity of 30 litres;*
- *Drain line;*
- *Sink tap, basin tap, shower head;*
- *Electric pump;*
- *Electric boiler.*

The fresh water tank is installed in the left front bed. To start up the water system, fill it with water and place the pump inside. Water will come out of the tap as soon as you turn the valve open.

Waste water is discharged via a piping system under the caravan. When on a campsite, place the waste water tank under the drain line or, where possible, position the caravan over a designated drain grid so that the outflowing waste water does not spill over to 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. Please bear in mind that moisture can develop inside the caravan especially when not in use post-seasonally.

Proper ventilation will help avoid any musty smells. To ensure this, set the side windows and roof window 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 6. The protruding toilet cassette shown through the open access door

7. CARAVAN MAINTENANCE

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.

Wash the mattress covers and curtains using normal laundry detergents.

Wash the floor with warm water with detergents added. Apply a floor maintenance product on the floor from time to time.

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 toilet cassette 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



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.



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

8.2. POST-WARRANTY INSPECTIONS

When	Services
Every 10,000 km or every 12 months	Inspection, adjustment and lubrication of the braking system.



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 permissible total weight (MTPLM) of the caravan must not exceed the value stated in the towing vehicle's documents even if the legal regulations allow higher values.*