



HYDRAULIC TAILGATE SYSTEM 《 MOTORHOME ENGLISH

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## **Limited Warranty**

Under all circumstances this manual should be read thoroughly, before installing and/or using the product. In no event shall E&P Hydraulics be liable for any direct, indirect, special consequential or incidental damages arising out of the use or inability to use this documentation or product, even if advised of the possibility of such damages.

E&P Hydraulics reserves the right to change parts of the device at any time without preceding or direct announcement to the client.

E&P Hydraulics reserves the right to revise the manual(s), and to make changes in the contents without obligation to notify any person or entity of the revision or change. A registration number appears on the product. Make sure that this official registration number has not been removed. It should be used whenever servicing by E&P Hydraulics or an authorized E&P Hydraulics dealer is necessary.

## Important

The warranty period begins on the date the product is purchased from an end customer. The guarantee period is 24 months.

This equipment has been tested and found to comply with the limits valid for this device, pursuant to EN300220, EN301489, EN60950 rules conform 868MHZ. These limits are designed to provide reasonable protection against harmful interference when this product is operated in a commercial environment. Any unauthorized changes or modifications to this device could void the user's authority to operate this equipment.

For CE-countries:

This device is in conformity with the CE standards. Please note that this device can ONLY be used with the official E&P Hydraulics parts to conform to these standards.

# **User Manual**

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# Preface

With the aid of the E&P Hydraulics Tailgate System, it is now possible to open the tailgate (garage door) of the motorhome semi-automatically at the push of a button.

The ergonomic design ensures effortless handling and the sympathetic good looks will automatically enhance your working environment. It is based on proven E&P Hydraulics technology which forms the basis of all our E&P Hydraulics products.

Within the E&P Hydraulics strategic vision, this product is 100% user friendly and reliable.

This philosophy does not only apply to our customers (end users), as the technicians installing this device/system are very important to us also. This product greatly depends on a proper, professional installation. That is the reason why E&P Hydraulics do all they can do to support the people who are responsible for installing our products for you.

This manual is part of our policy. In this manual we explain how to use the general characteristics as easy and efficient as possible. Follow these instructions precisely, because installing the E&P Hydraulics Tailgate System was a precise job. Fully installing the system requires a high level of skill. After all, we are dealing with equipment that must be able to withstand huge forces, something that is often underrated by people with insufficient technical training. If the operation is not performed correctly, serious damages could result in a short space of time, including personal injury. This system is installed by professional technicians with sufficient practical experience and thorough relevant technical training. Therefore in all instances, the installer will bear sole responsibility for the assembly of the system.

This product is based on hundreds of test hours as well as many successful installations. If you follow this manual step-by-step, you will see what a wonderful, user friendly, quality product this is. However there will always be aspects which can be improved. If you have any suggestions, remarks or questions concerning this product or manual, please do not hesitate to contact us.

On behalf of, E&P Hydraulics

# 1. The E&P Hydraulics Tailgate System

### 1.1 Operating the system

The E&P Hydraulics Tailgate System is an electrically/hydraulically driven system.

A hydraulic pump is powered by a 12V direct current motor, which will pump hydraulic oil through hydraulic hoses to two tailgate jacks, allowing the tailgate (garage door) to be opened and closed.

The Tailgate System is electronically controlled by an operating system or so called 'main-unit'.

The Tailgate System can be operated with the aid of the E&P Hydraulics remote control.



### The E&P Hydraulics Tailgate System (continued)

### 1.2 Using the system

• Safely park the vehicle somewhere with ample space behind.

#### 1.3 Specific characteristics of the system

- Semi-automatically extending the tailgate/garage door.
- Semi-automatically retracting the tailgate/garage door.
- Control of the lighting in the garage compartment.
- Activation of the winch.
- Automatic error notification.

### 1.4 Components of the system

The E&P Hydraulics Tailgate System consists of:

- Hydraulic pump
- Hydraulic tailgate jacks (2 pcs)
- Set of hydraulic hoses
- Operating system
- Remote control



# 2. Safety warnings

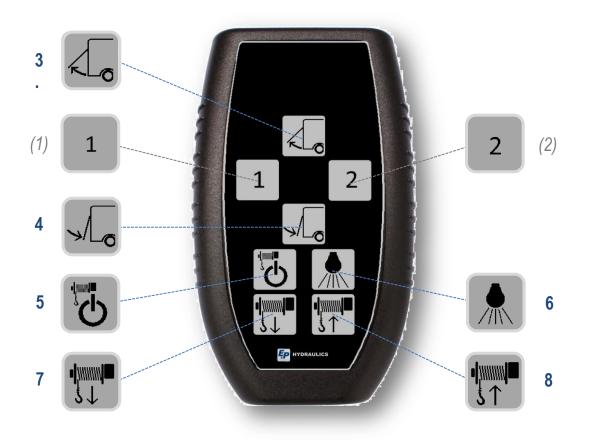
Not observing the following warnings may lead to damages to the vehicle, the tailgate and/or serious physical injuries.

- Using the E&P Hydraulics Tailgate System for other purposes as mentioned in chapter 1 is officially forbidden according to the E&P Hydraulics limited warranty.
- This product is exclusively developed as a semi-automatic hydraulic tailgate/garage door system for opening and closing.
- When the system is operating, all persons and animals should keep their distance from the immediate vicinity of the garage door.
- Safely park the vehicle somewhere with ample space behind. Make sure there is adequate room to allow the extension of the tailgate/garage door.
- In case of repairs/malfunctions to the hydraulic system: know what you are doing.
- Fully read this user manual before using the hydraulic Tailgate System.

# 3. Control functions

### 3.1 Functions on the remote control

Below is an image of the remote control which allows you to operate the Tailgate System, the winch and the Lamp..



## Function declaration:

- (1) Not in use (free function)
- (2) Not in use (free function)
- 3. Button: TAILGATE OPEN
- 4. Button: TAILGATE CLOSE

- 5. Button: WINCH ON
- 6. Button: LAMP ON / OFF
- 7. Button: WINCH ROLL OUT
- 8. Button: WINCH ROLL IN

# 4. Operating the Tailgate System

### 4.1 Operating by means of the remote control

Before opening the tailgate/garage door with the remote control, the tailgate must first be unlocked manually (a "reading contact" is released).

Immediately after unlocking, the garage compartment light switches on. After half an hour, this light will turn off automatically.



#### To turn the lamp on:

- Push the "LAMP ON / OFF" button (No.6)

*Note:* Pressing the button for 2 seconds will switch the lamp on for 4 hours. You will hear a sound to signify the button has been pressed for long enough.



### To open the garage door:

- Push the "TAILGATE OPEN" button (No.3)

*Note:* The first time the garage door is opened, the hydraulic system opens the door relatively slowly.



### To close the garage door:

- Push the "TAILGATE CLOSE" button (No.4)



## To activate the winch:

- Push the "WINCH ON" button (No.5) for 2 seconds You will hear a sound to signify the button has been pressed for long enough.

*Note 1:* Immediately after activation of the winch, the system provides a 12V signal which activates a green safety lamp\*, to indicate the winch is ready for operation. \* the safety lamp is not included in the E&P delivery

*Note 2:* After pressing the "Winch On" button, you have 2 minutes to activate the winch. If you do not use the winch within this time, the system turns off and the green light goes out. To activate the winch system again, press the (No.5) button again for 2 seconds.



To unroll the winch cable (unwind): - Push the "WINCH ROLL OUT" button (No.7)



To retract the winch cable (wind in):

- Push the "WINCH ROLL IN" button (No.8)

# 5. Extra functions

### 5.1 Remote control (programming)

- **Step 1** In order to pair the remote control to the garage door system, remove the fuse from the power cable
- Step 2 Push the "WINCH ROLL OUT" (No.7) and "WINCH ROLL IN" (No.8) buttons on the remote control <u>simultaneously</u>

*Note:* Once you have done this, an acoustic signal sounds every second for 1 minute. This means the remote control is looking for its receiver, mounted within the operating system. When the connection is established, you will hear a continuous acoustic signal for 2 seconds. If it fails to connect, the short acoustic signal stops.

- Step 3 Replace the fuse. The remote control will now turn off
- Step 4 Push the "WINCH ON" button (No.5) on the remote control to turn the system ON

Further operation as described in chapter 4.1

#### 5.2 Battery replacement

When the remote control battery is nearly flat, an audible signal will sound when the buttons are pressed. (Make sure there is a spare battery in the vehicle).

Remove the battery-cover on the rear side of the remote control by firmly pressing on the cover and then sliding out. Insert the 9V battery and carefully reassemble the battery-cover (in most common cases the battery is already fitted).



### 5.3 Emergency control

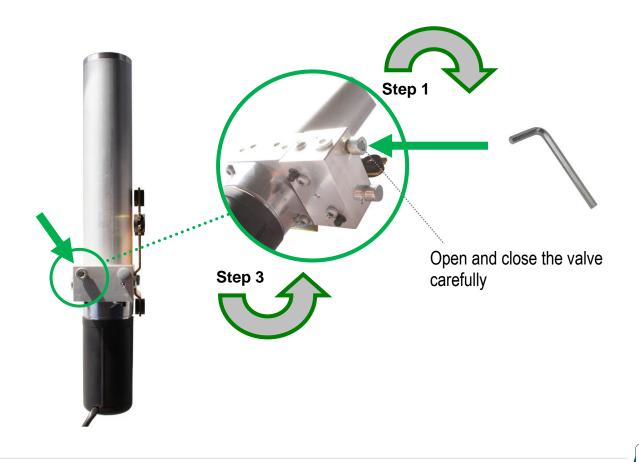
If the system does not function for any reason, e.g. a defective battery, the system has an emergency operation function so the garage door can be closed manually.

The hydraulic pump includes a valve which can be open and closed using an Allen key.

### ATTENTION ! be careful, hand-tightening is enough. Do not over tighten.

The emergency operation must be used as follows:

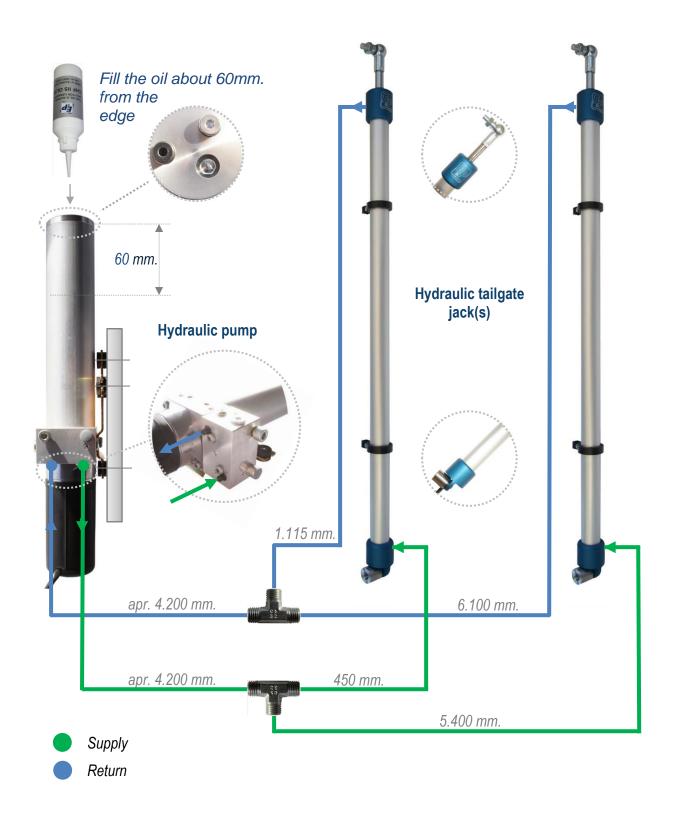
- **Step 1** Using the supplied (hexagonal) Allen key, open the valve on the hydraulic pump by carefully **turning it to the right** (clockwise) until it stops
- Step 2 Close the garage door manually
- Step 3 Using the supplied (hexagonal) Allen key, close the valve on the hydraulic pump by carefully turning it to the left (anti-clockwise) until it stops



# **6.** Schematic diagram of the Tailgate System

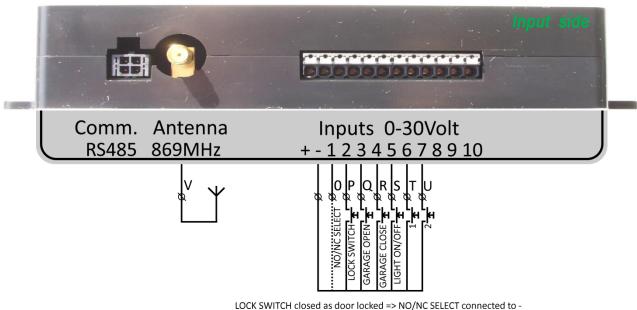
# 6.1 Hydraulic system

The diagram below shows the hydraulic system.

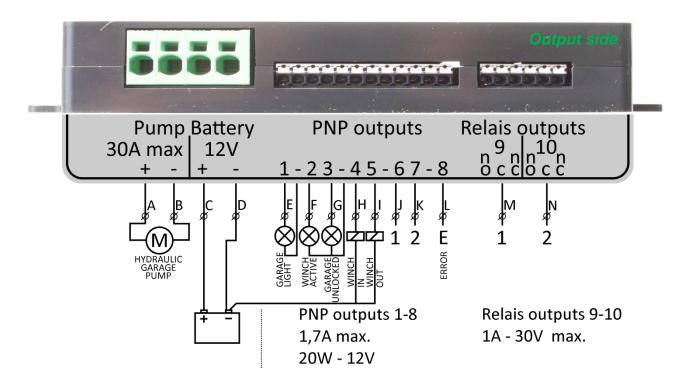


### 6.2 Electrical system

The diagram below shows the electrical system.



LOCK SWITCH open as door locked => NO/NC SELECT not connected



### Important:

- When connecting the cables, do not apply any voltage to the system.
- Never disconnect cables when power is applied to the system.

# **7.** Remarks and recommendations

Below is an overview concerning remarks and recommendations for the hydraulic Tailgate System:

- At very low battery voltage the system switches off directly
- In case of heavy frost, check the garage door is not frozen
- In the event of a hydraulic pipe breaking, the two hydraulic jacks retract slowly by the use of two specially developed "brake holes" in the jacks
- If the system does not work, the system has a manual emergency operation, so the garage door can be closed manually
- According to TÜV guidelines the pressure relief valve gives a residual pressure of max. 15 kg at the garage door

## **8.** Troubleshooting (ONLY to be carried out by the dealer/installer)

In case of an error message, check the battery has sufficient voltage, the oil level is correct, whether there is any damage to the hydraulic garage door jacks, and check all the hydraulic hoses and electrical cables.

If this does not resolve the issue, the fault could be located in the drive units. As the drive unit does not have any repairable parts, you should contact your E&P Hydraulics dealer/installer.

#### The error mode

A timer will run, which will count up when the pump is running and count down when the pump is not running. If this timer reaches a value which is too high, the pump will stop running in order to prevent overheating.

If you press a key which is not currently active, you will hear an audio signal for 1 second, this will happen when:

- The winch is not activated while pushing on the buttons "WINCH ROLL OUT" (No.7) or "WINCH ROLL IN" (No.8)
- The garage door is locked while pushing on the buttons "TAILGATE OPEN" (No.3) or "TAILGATE CLOSE" (No.4)
- Two self-contradictory buttons are pressed simultaneously.

When pushing the "LAMP ON / OFF" (No.6) button, you will always hear a short acoustic signal. If this is not the case and the 3-fold acoustic signal is not heard, the battery is flat or has no contact.

#### Error message from the remote control:

3-fold acoustic signal = The remote control battery is nearly flat

#### Error message from the operating system:

4-fold acoustic signal	=	The battery voltage of the vehicle is too low (under 9V)
5-fold acoustic signal	=	The hydraulic pump has overheated
6-fold acoustic signal	=	The battery voltage is too high for the hydraulic pump (over

16V)

# Troubleshooting (continued)

Problem	Possible causes	Solution(s)
<ul> <li>The system fails to start **</li> </ul>	Battery voltage low	<ul> <li>Recharge the battery. Charger is defective or there is no voltage being supplied</li> </ul>
<ul> <li>The jacks do not extend when the pump is running</li> </ul>	Oil level too low or no oil in the system The pump is not working correctly	<ul><li>Check for any oil-leaks</li><li>Repair or exchange</li></ul>
<ul> <li>No electrical contact between the operating system and the valve</li> </ul>	Check cables for voltage loss	<ul> <li>Repair or exchange</li> </ul>
** NOTHING works	Possible cause: the <b>battery</b> is <b>fully out of order</b> (<5V)	

IMPORTANT: For all other reports and/or malfunctioning of the system, please contact your E&P Hydraulics dealer/installer

### 9. Maintenance (ONLY to be carried out by the dealer/installer)

The E&P Hydraulics Tailgate System does not have parts which need to be maintained periodically. When parts have been taken apart, the warranty will become invalid. If necessary parts can be substituted, repaired and/or exchanged (warranty). Please contact your E&P Hydraulics dealer/installer if necessary.

#### **Preventative controls**

- Periodically checking the hydraulic oil level. (ONLY to be carried out by the dealer/installer)
  - Check the oil level only when the cylinders are fully retracted. When checking the oil level it must lie approximately 6 centimeters below the filling opening of the tank.
  - Fill the tank only when the cylinders are fully retracted. Filling whilst the jacks are extended can cause an overflow of oil when they are retracted again.
  - If necessary preventative replacement of the hydraulic oil.
  - Only use hydraulic oil type: Pentosin CHF 11S
- Periodically check the electronic cables and connections.
- Periodically check the hydraulic garage door jacks.
  - Remove dirt, sand and other contaminates from the piston rods which may obstruct the operation of the system.
  - Periodically monitor for any damage to the piston rods.

## **User Manual**

# **10.** Warranty

E&P Hydraulics has a limited factory warranty for (parts of) the hydraulic garage door system. This manufacturer's warranty applies solely and strictly on the following conditions and exclusions.

- 1. The guarantee is valid for a period of 24 months from date of purchase.
- 2. This guarantee covers only defects caused by material and / or workmanship.
- 3. In order to implement the guarantee, E&P Hydraulics can at its own discretion and preference write a credit note for the defective product/part, either repair or replace the defective product/part at no additional charge by an appointed E&P Hydraulics authorised technician at a location to be designated by E&P Hydraulics. This location can be the E&P Hydraulics factory, another repair facility or the location where the defective product/part is at the moment (repair on location). If E&P Hydraulics on a request as worded would be willing to deviate from her herein at its own discretion and preference choices made, if necessary appropriate fees will be charged at the sole discretion of E&P Hydraulics.
- 4. The manufacturer's warranty is only valid if the product is purchased from an authorised E&P Hydraulics dealer.
- 5. The guarantee expires if installation, modification, maintenance or repairs are made to the product or its components by a non E&P Hydraulics authorised dealer or installer. Any attempt to repair a defect will inevitably lead to voiding the warranty.
- 6. An appeal on the manufacturer's limited factory warranty is only eligible for adoption if an official E&P Hydraulics dealer or installer determines the material and/or manufacturing defect within the warranty period and the appeal to guarantee is done within two weeks after this determination. E&P Hydraulics assesses independently and exclusively or a guarantee request may or may not be allocated.
- 7. Repair and/or restoration work must not be started before the warranty claim is assigned by E&P Hydraulics and the planned repair is approved by E&P Hydraulics. Any work carried out beforehand will result in the loss of warranty coverage.
- 8. A warranty claim must be made promptly upon discovery of the problem to E&P Hydraulics. Should this not be the case, E&P Hydraulics can reject the warranty claim, especially if the problem could be exacerbated by the late reporting, this is at the sole discretion of E&P Hydraulics.

## Warranty (continued)

- 9. In the event of damage caused by abuse, misuse, overloading, improper loading (including incorrect weight distribution), improper maintenance, incorrect connection, connection to wrong parts, negligence, accident, intent or deliberate recklessness, it is at the sole discretion of E&P Hydraulics to void the warranty.
- 10. E&P Hydraulics is not liable for any form of physical, financial or physical direct or consequential damage caused by (parts of) the product, except where the damage concerns the product itself, as per the regulations provided in Directive 85/374/EEC.
- 11. Excluded are (parts of) products which are used for commercial business, in the sale or on offer, or sold with defects, and/or products where the E&P Hydraulics identification signs have been deleted, removed or made unreadable.

# 11. Notes

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