



# VIPER2

Powered Ambulance Transporter System



Read this Manual and Retain  for Future Reference

**FERNO®**

**Instructions for Use**

2025-12-12, Rev 1  
Pub. No. VTR2-IFU-EN

## Ferno Customer Relations

For ordering assistance or general information:

### CANADA AND THE U.S.A.

Telephone (Toll-free)	1.877.733.0911
Telephone	1.937.382.1451
Fax (Toll-free)	1.888.388.1349
Fax	1.937.382.1191
Internet	<a href="http://www.ferno.com">www.ferno.com</a>

### ALL OTHER LOCATIONS

For assistance or information, please contact your Ferno distributor. If you do not have a Ferno distributor, please contact Ferno Customer Relations:

Ferno-Washington, Inc., 70 Weil Way  
Wilmington, Ohio 45177-9371, U.S.A.

Telephone	Country Code +1.937.382.1451
Fax	Country Code +1.937.382.6569
Internet	<a href="http://www.ferno.com">www.ferno.com</a>

## Disclaimer

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations and local protocol. Training on the proper use of this product must be provided before using this product in an actual situation.

Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Relations.

## Proprietary Notice

The information disclosed in this manual is the property of Ferno-Washington, Inc., Wilmington, Ohio, USA. Ferno-Washington, Inc. reserves all intellectual property rights, proprietary design rights, manufacturing rights, reproduction use rights, and sales use rights thereto, and to any article disclosed therein except to the extent those rights are expressly granted to others or where not applicable to vendor proprietary parts.

## Limited Warranty Statement

The products sold by Ferno are covered by a limited warranty, which is printed on all Ferno invoices. The complete terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are also available upon request by calling Ferno at 1.800.733.3766 or 1.937.382.1451.

## Adverse Event Notice

In the event of an adverse event or serious incident related to the use of this device, the end user/operator must report the incident to Ferno-Washington, Inc. at 70 Weil Way, Wilmington, Ohio 45177 USA, 1-877-733-0911, or via e-mail at [tscoordinator@ferno.com](mailto:tscoordinator@ferno.com). If the incident occurred in the European Union, report it to Ferno's Authorised EU Representative and the competent authority of the Member State in which the end user is established.



### USERS' MANUALS

To request additional free users' manuals, contact Ferno Customer Relations, your Ferno distributor, or [www.ferno.com](http://www.ferno.com).



### DEVICE TRADE NAME (CATALOG NO)

Date of Manuf.

Serial Number

(01) GTIN  
(11) Date of Manuf.  
(21) Serial Number

MEDIROL s.r.o., Na Strži 126/4, 140 00 Praha 4, Czech Republic



## Unique Device Identification (UDI)

Ferno complies with the United States Food and Drug Administration's (FDA), MDA & CE Unique Device Identification (UDI) regulation to identify medical devices. The UDI label contains information in human- and machine-readable form, which includes the serial number, date of manufacture and product name.

The label is located on the control-end control panel as per the photo above.



MEDIROL s.r.o.  
Na Strži 126/4  
140 00 Prague, Czech Republic



Ferno (UK) Ltd.  
Ferno House, Stubs Beck Lane  
Cleckheaton, West Yorkshire, BD19 4TZ  
+44 (0) 1274 851999



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# 1 - SAFETY INFORMATION

## 1.1 Warning

Warning safety alerts indicate a potentially hazardous situation that, if not avoided, could result in injury or death.

### WARNING

**Uncontrolled movement can cause injury or damage.** Support and control the Transporter at all times. Untrained helpers can cause injury or be injured. Trained operators must instruct helpers where to hold the Transporter to avoid injury.

**Improper use of the Transporter can cause injury.** Use the Transporter only for the purpose described in this manual.

**An improper fastener can cause injury.** Use only a compatible Ferno fastener designed for use with this Transporter.

**Modifying the Transporter can cause injury and damage.** Use the Transporter only as designed by Ferno.

**Attaching improper items to the VIPER2 Transporter can cause injury.** Use only Ferno-approved items on the VIPER2 Transporter.

**Turning the power switch off while operating the Transporter can damage the Transporter.** Only turn the power switch off when removing or attaching the battery, or when storing the Transporter.

**The button lockout feature is active only when charging.** Pressing height-control buttons while the Transporter is locked in the loading system can damage both the Transporter and the loading system. Do not press the buttons when the Transporter is locked in the loading system.

**Removing/attaching the battery while power switch is ON (I) can damage the Transporter.** Remove or attach the battery only when power switch is OFF (O).

**Improper charging can cause injury and damage.** Charge the battery only with an approved Ferno charger or in the compatible loading system.

**Modifying the battery can cause injury and damage.** Use the battery only as designed in this manual.

**Improper maintenance can cause injury and damage.** Maintain the Transporter and battery only as described in this manual.

**Turning the power switch off while operating the Transporter can damage the Transporter.** Only turn the power switch off when removing or attaching the battery, or when storing the Transporter.

**An improperly secured stretcher can separate from the Transporter and cause injury.** Attach the stretcher securely and verify that the slam latches have locked.

**Uncontrolled movement can cause injury or damage.** Support and control the Transporter at all times.

**Moving the Transporter sideways can cause it to tip and injure the patient and/or operators.** Move the Transporter only toward the control end or loading end.

### WARNING

**Pushing the Transporter by the backrest can cause it to tip and injure the patient or operators.** Move the Transporter only by grasping the main frame.

**Trained operators must consider the environment and terrain before moving.** Moving the Transporter in a lowered position will minimise the potential of a Transporter tip.

**Failure to engage the Transporter in the loading arm during loading can cause injury.** Operators must ensure lock indicator illuminates green and the Transporter is secure in the loading arm before attempting to raise the legs.

**Uncontrolled movement can cause injury or damage.** Support the load before using a manual override handle.

**Improper maintenance can cause injury.** Maintain the Transporter only as described in this manual.

**Incorrect use of bleach can cause injury or damage.** After using bleach, rinse the device with plenty of clear water.

**Abrasive cleaning compounds can cause damage or injury.** Do not use abrasive materials to clean the Transporter.

**Spraying directly into the battery cradle, control box, hydraulic unit or wiring can damage the product.** Pressure-wash the Transporter only as described in this manual.

**Failure to perform preventative maintenance inspections can cause injury or damage.** Have the Transporter inspected regularly by a factory-trained technician.

**A damaged or excessively worn Transporter can cause injury or device damage.** Inspect the device regularly. Remove any damaged device from service.

**Storing the Transporter with battery in the loading system connected to the vehicle's electrical circuit for long period can damage the battery.** Always follow the instructions in this manual when storing the Transporter or battery.

**Attaching improper items to the VIPER2 Transporter can cause injury.** Use only Ferno-approved items on the VIPER2 Transporter.

## 1.2 Notice

Notices emphasize important, but not hazard-related information. Failure to follow Notices could result in product or property damage.

### NOTICE

## 1.3 Bloodborne Disease Notice

To reduce the risk of exposure to blood or other potentially infectious materials when using the product, follow the disinfecting and cleaning instructions in this manual.

## 1.4 Symbol Glossary

The symbols defined here are used on the product and/or in this' manual. Ferno uses symbols recognised by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.

Symbol	Definition
	Extend Legs
	Retract Legs
	Release
	Lights

Symbol	Definition
	General warning of potential injury
	Read the users' manual
	Two trained operators required
	Load Capacity/Safe Working Load
	Lock
	Unlock
	Serial Number
	Medical Device
	Compliant with European Union standards
	Compliant with United Kingdom standards
	Date of Manufacture
	Manufacturer
	Temperature limit
<b>IP 66</b>	IP rating
	Duty cycle
	E8 homologation certificate
	OFF
	ON
	WEEE Directive: Dispose of batteries properly
	Attachment part type B

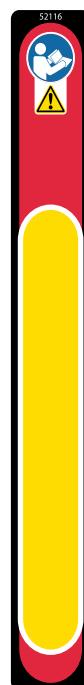
## 1.5 Safety and Instruction Labels

Safety and instruction labels place important information from the users' manual on the VIPER2 Transporter. Read and follow label instructions. Replace worn or damaged labels immediately. New labels are available upon request from your FERNO distributor or FERNO Customer Service.

Symbol	Definition	Part Number
A	General injury warning, read the users' manual, two trained operators required, load capacity	52114
B	Loading height indicator, side	52115
C	Loading height indicator	52116
D	Directional wheel lock	52108
E	Manual release	52106
F	Main switch button	52107
G	Release button; height control buttons	52063



A



B

C



D



E



F



G

## 2 - OPERATOR FOCUS

### 2.1 Operator Training

Operator that using the Transporter:

- must read and understand this manual.
- must have training on proper use of the Transporter.
- must have the physical ability to assist the patient.
- must practice using the Transporter before using it with a patient.
- must keep training records. For a sample training record sheet, see "Training Record" on page 36.

#### ⚠️ WARNING

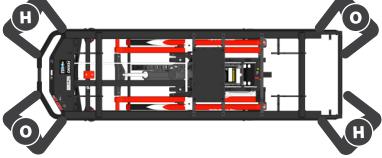
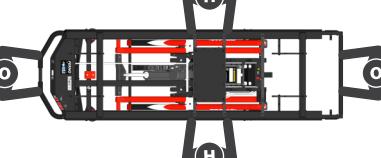
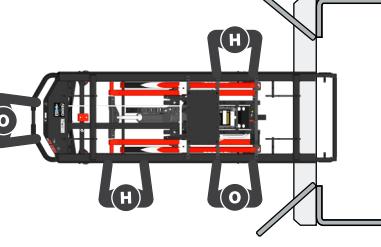
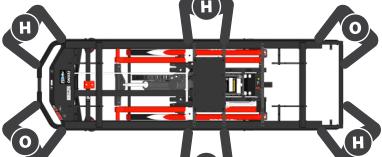
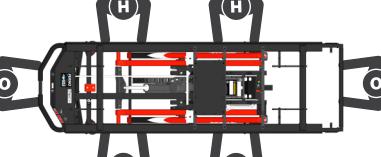
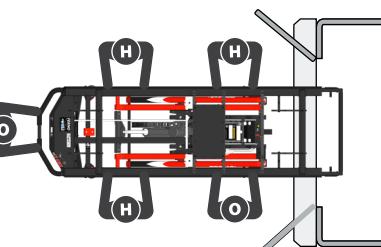
Untrained helpers can cause injury or be injured. Trained operators must instruct helpers where to hold the Transporter to avoid injury.

### 2.2 Using Additional Help

Trained operators may need additional help when working with heavy patients.

- Two trained people stand at either end of the Transporter and instructing the helpers.
- It is recommended that helpers work in pairs to help keep the Transporter balanced.

Look at the chart to see where the operators and helpers should stand.

Helpers	Changing Levels	Moving	Loading/Unloading
<b>Two Operators + Two Helpers</b>			
<b>Two Operators + Four Helpers</b>			

Key: O = Operator H = Helper

## 3 - ABOUT THE TRANSPORTER

### 3.1 Description

The Ferno® VIPER2 Transporter is a medical device designed to transport a patient in a vehicle. It is designed for use in conjunction with Viper Lift-Off Stretcher or detachable Incubator Platform.

The Transporter is for use by a minimum of two trained operators.

#### OPTIONS

The Transporter comes equipped with options selected at time of purchase.

- Transport Wheels:
  - 150 mm diameter
  - 200 mm diameter
- Wheel Locks:
  - Two Wheel Locks, Foot-End
  - Four Wheel Locks

#### COMPATIBLE STRETCHER PLATFORMS

- Ferno® Viper Lift-Off Stretcher
- Ferno® Viper Incubator Platform

#### COMPATIBLE FASTENERS

- Ferno® Viper Loading System (VLS)

### 3.2 Compliance

The Transporter meets the following standards:

- **EN 1865-2:** Patient handling equipment used in road ambulances – Part 2: Power assisted stretcher
- **EN 1865-3:** Patient handling equipment used in road ambulances – Part 3: Heavy duty stretcher
- **EN 1789:** Medical vehicles and their equipment – Road ambulances
- **EN 60601-1:2006:** Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- **EN 60601-1-2:2015:** Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance
  - Collateral Standard: Electromagnetic disturbances – Requirements and tests
- **EN 60601-1-6:2010:** Medical electrical equipment – Part 1-6: General requirements for basic safety and essential performance
  - Collateral standard: Usability

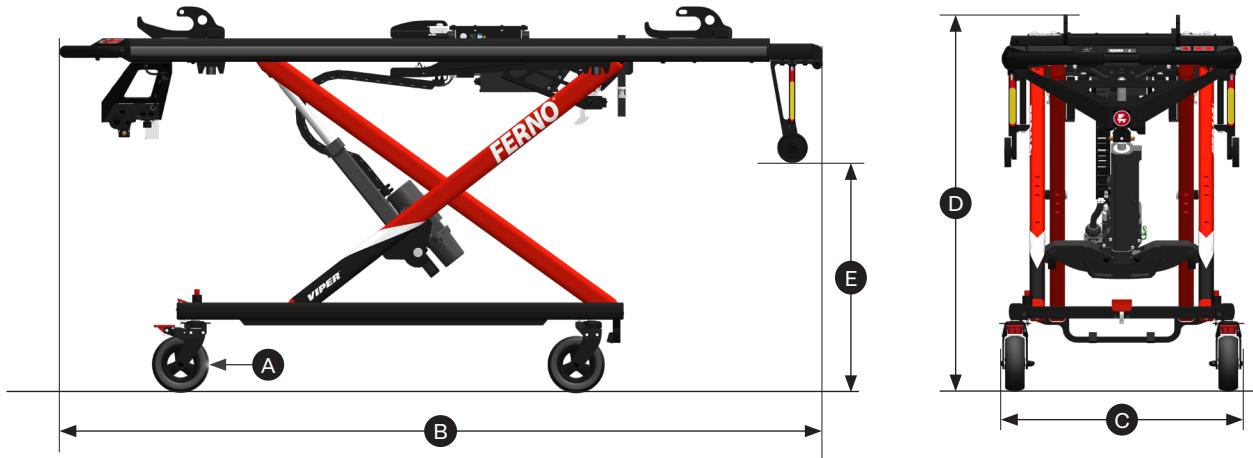
#### WARNING

Improper use of the Transporter can cause injury. Use the Transporter only for the purpose described in this manual.

An improper fastener can cause injury. Use only a compatible Ferno fastener designed for use with this Transporter.

Modifying the Transporter can cause injury and damage. Use the Transporter only as designed by Ferno.

### 3.3 General Specifications



Specifications	Metric	Imperial
A) Wheels	150 x 50 mm or 200 x 50 mm	6" x 2" or 8" x 2"
B) Length	1630 mm - 2000 mm	64" - 79"
C) Width of Transporter / with push poles	600 mm / 710 mm	24" / 28"
D) Height with 150 mm / 200 mm wheels (Minimum-Maximum)	470 mm - 1420 mm / 520 mm - 1470 mm	18" - 56" / 20" - 58"
E) Loading Height (User-Programmable)	Max 950 mm	Max 37.4"
Load Capacity (Unassisted)	320 kg / 50 stone	705 lbs
Transporter Weight	71 kg	156 lbs

Specifications are rounded. Imperial conversions are calculated before rounding the metric measurement. Ferno reserves the right to change specifications without notice.

- Load capacity is the amount of weight the Transporter is designed to hold, including stretcher platform, patient and accessories attached.
- Loading height is the distance from the ground to the bottom of the loading wheels.
- Transporter weight includes the battery but is without optional features.

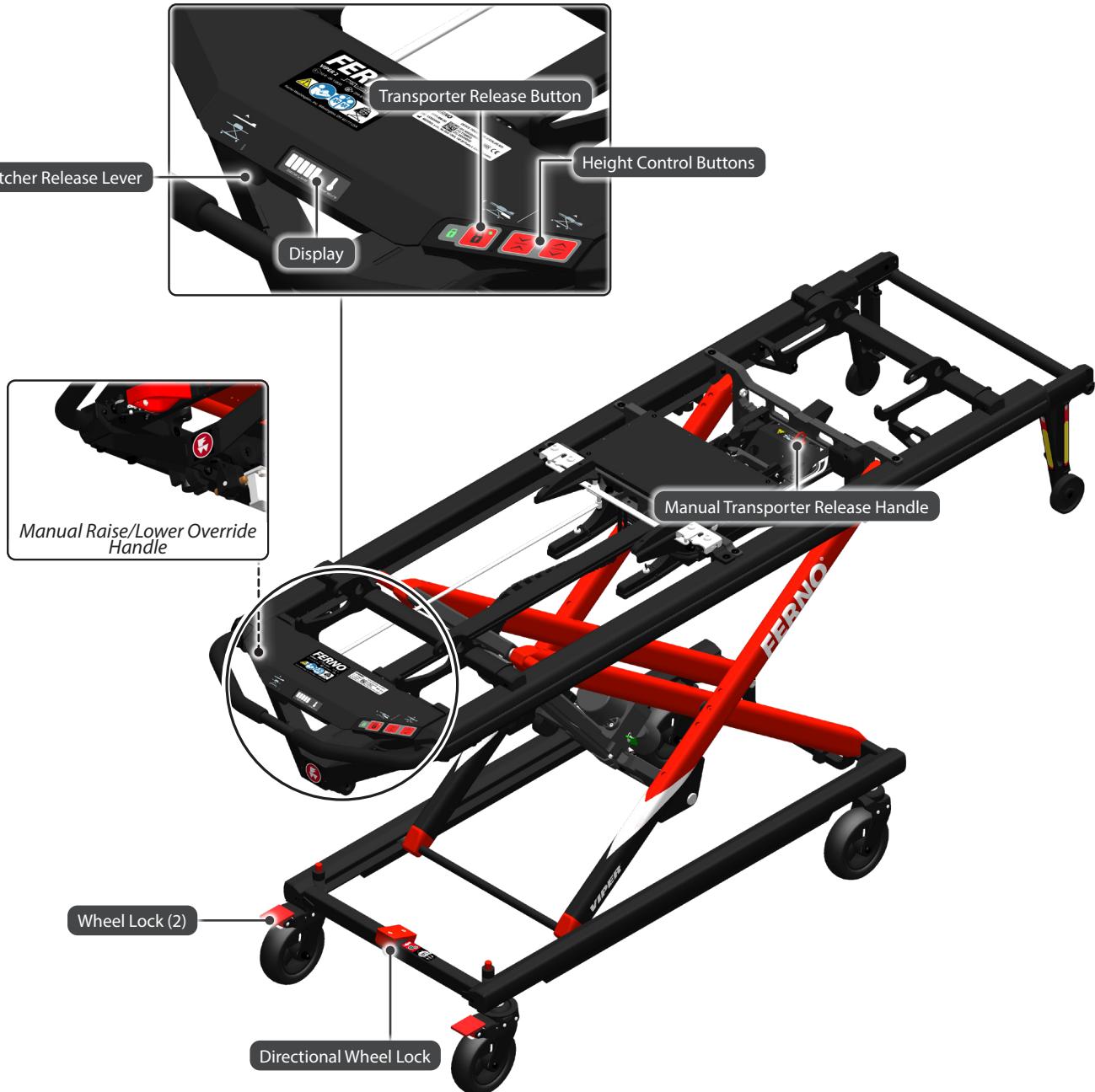
Power System	
Transporter Operating Range	-34°C to 60°C/-29°F to 140°F
Battery Operating Range	-40°C to 60°C/-40°F to 140°F
Battery Output	36 VDC, 9 Ah
Recommended Max Operating Duty Cycle	<18 sec ON; >102 sec OFF



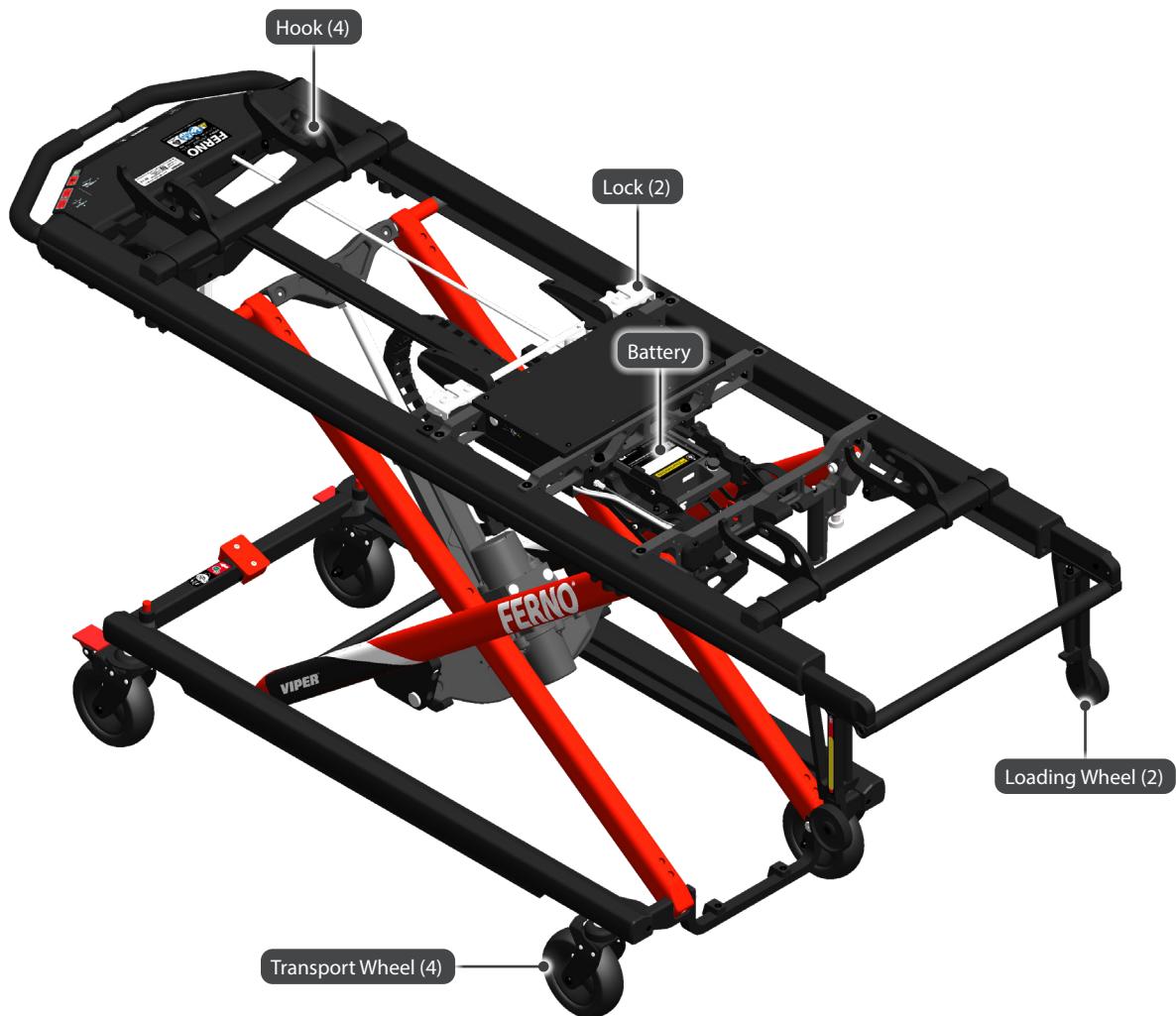
#### Load Capacity

Inspect the Transporter if the load capacity has been exceeded. See "Regular Inspections" on page 39.

### 3.4 Components



**Control End**



**Loading End**

## 4 - SETUP

### 4.1 Ambulance Information

The patient compartment should have a level floor large enough for the Transporter and installed accessories, and the compatible loading system installed.

### 4.2 Install Accessories

Before placing the Transporter in service, assign appropriate personnel to install any accessories shipped with the Transporter. Keep accessory users' manuals with this manual for future reference.

### 4.3 Charge the Battery

Charge the battery immediately upon receipt until it has a full charge. To comply with shipping regulations, the battery must be shipped with less than a 30% charge.

Charge the battery by connecting the supplied Viper battery charger (see "Battery Charger" on page 17) or by securing the Transporter into a Viper Loading System (VLS) with integrated charging system correctly connected and powered.

Refer to the battery users' manual for complete information.

### 4.4 Turn On the Transporter

The power switch is located under the seat panel on the patient left side (see "Power Switch", page 13). Turn the power switch ON (1) to turn on the Transporter.

### 4.5 Set the Loading Height

The user can set the Transporter so it stops automatically at a suitable loading height for the assigned vehicle in which it is being used.

To set or change the loading height:

1. On a level surface, raise or lower the Transporter until the yellow arrows on loading system are aligned within the loading height range on the Transporter (Figure 1).

**Note:** The yellow arrows should point to the upper half of the loading height range. This will provide a reserve for loading on uneven surfaces.

2. Press and hold **both**  height-control buttons until the blue indicator lights  reach 5 bars and flash quickly to confirm the new setting.
3. Lower and raise the legs to verify the Transporter stops at the new loading height. Test loading and unloading the Transporter with the vehicle.

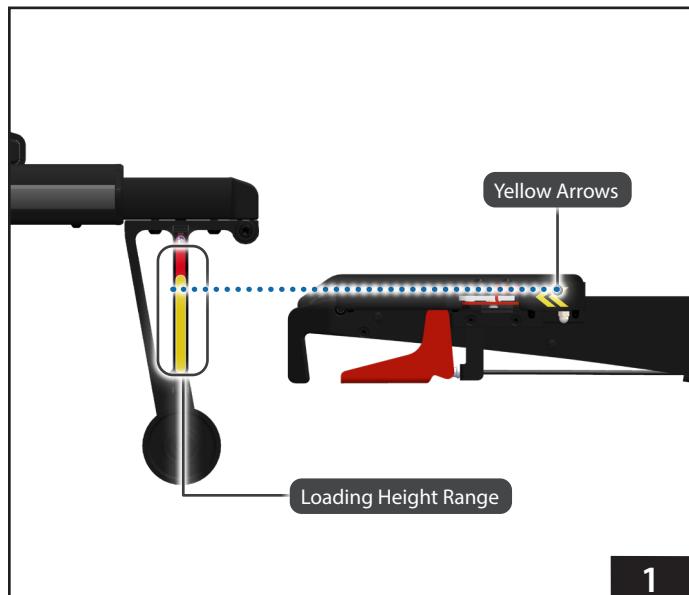
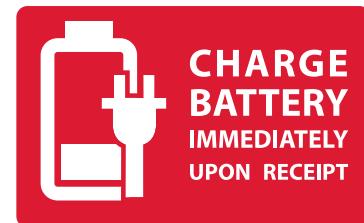
**Note:** The loading height cannot be set when the Transporter is at the factory-set maximum height.

#### WARNING

Attaching improper items to the VIPER2 Transporter can cause injury. Use only Ferno-approved items on the VIPER2 Transporter.

#### NOTICE

Loose items and debris on the patient compartment floor can interfere with the operation of the VIPER2 Transporter with the fastening system. Keep the patient compartment floor clear.



## 5 - FEATURES

### 5.1 Power Switch

The power switch (Figure 2) can be accessed from the side of the Transporter.

Keep the switch in the ON (I) position. Turn the power switch OFF (O) only when removing or installing the battery, or when storing the Transporter.

#### WARNING

Turning the power switch off while operating the Transporter can damage the Transporter. Only turn the power switch off when removing or attaching the battery, or when storing the Transporter.

### 5.2 Display

When the Transporter is activated the display shows the Transporter status (Figure 3).

#### INDICATOR LIGHTS

These lights show approximate battery charge:

- 80 - 100%
- 60 - 79%
- 40 - 59%
- 20 - 39%
- < 19 %

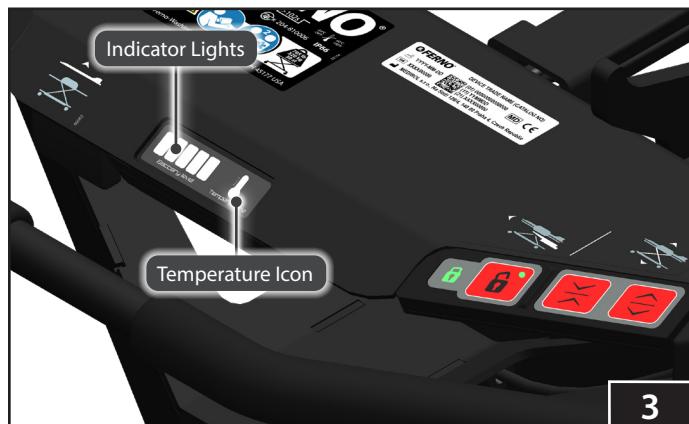
When the battery is charging, the lights flash green.

The lights turn red or orange to alert the operator to functional issues (see "Troubleshooting", page 34).

#### TEMPERATURE ICON

This icon indicates low or high system temperatures.

- Flashing blue:** Control box temperature is below -20 °C / -4 °F. The Transporter will shut down if the temperature drops below -35 °C / -11 °F. Keep the Transporter in Transporter operational temperatures.
- Flashing red:** Electronic components temperature is high. Reduce the raising/lowering frequency to allow the system to cool down.
  - Motor driver/controller temperature exceeds 70 °C / 158 °F.
  - Motor temperature exceeds 80 °C / 176 °F.
  - Battery temperature exceeds 55 °C / 131 °F.
  - BMS temperature over exceeds 55 °C / 131 °F.
  - Control box temperature exceeds 55 °C / 131 °F.



## 5.3 Height-Control Buttons

Height-control buttons are located on the control panel (Figure 4).

👉 **EXTEND LEGS:** Raises the Transporter when on the ground / lowers the legs when Transporter is on the loading arm.

👈 **RETRACT LEGS:** Lowers the Transporter when on the ground / raises the legs when the Transporter is on the loading arm.

### AUTOMATIC STOPS

The Transporter stops automatically at four set heights:

- Fully-lowered
- Fully-raised
- Factory-set minimum transport height (only stops at this point when lowering the Transporter with a patient on)
- User-set loading height (only stops at this point when raising)

VIPER2 Transporter has a number of pre-set positions where it will automatically stop when pressing (and keeping pressed) the👉 or👈 to raise or lower the Transporter. Additional to this, at any time the button is released, the Transporter will stop at that position.

When raising the Transporter from its lowest position, it will first automatically stop at the user-set loading height (see page 12). Depressing the👉 again, the Transporter will then continue to move up to the maximum height.

When lowering the Transporter from maximum height or below, the Transporter will automatically stop first at a pre-set "minimum transport height", but only when there is a patient on the Transporter. This is the minimum height which the Transporter can be physically wheeled, which is just above the lowest height (thereby ensuring the foot-end direction wheel locks are disengaged, allowing the Transporter to be manoeuvred correctly). Pressing the👈 again the Transporter will then move to the lowest height. When lowering with no patient on the Transporter, it will not stop at minimum transport height, but will move directly to lowest height.

To set the loading height, see page 12.

### BUTTON LOCKOUT

Buttons function is locked out to prevent accidental use when the Transporter is being charged.

## 5.4 Transporter Release Button

The Transporter release button (Figure 4) unlocks the Transporter from the loading system. This function operates during unloading only when the Transporter legs are on the ground and the „Safe to Release“ indicator light has illuminated.

In the event that powered operation is unavailable, refer to the non-powered operation sections of this manual to operate the Transporter manually.

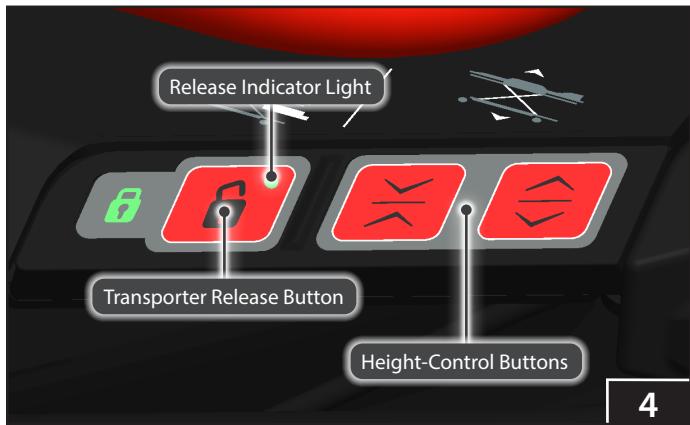
## 5.5 Sleep Mode

Sleep Mode conserves battery power. If the Transporter is not in use for more than 10 minutes (no buttons pressed), the system enters Sleep Mode. In Sleep Mode, the display and lights (optional) are OFF. Sleep time interval is configurable in Service App (see "Service App", page 33).

Press👉 or👈 to activate the Transporter.

### ⚠️ WARNING

The button lockout feature is active only when charging. Pressing height-control buttons while the Transporter is locked in the loading system can damage both the Transporter and the loading system. Do not press the buttons when the Transporter is locked in the loading system.



## 5.6 Lights (Optional)

Lights are located under main frame (Figure 5) and provide steady white light to illuminate the ground around the Transporter.

To turn the lights ON, press  button.

Press  button again to turn the lights OFF.

**Note:** Lights turn OFF automatically when system enters Sleep Mode (page 14) and turn ON again when the Transporter is activated.

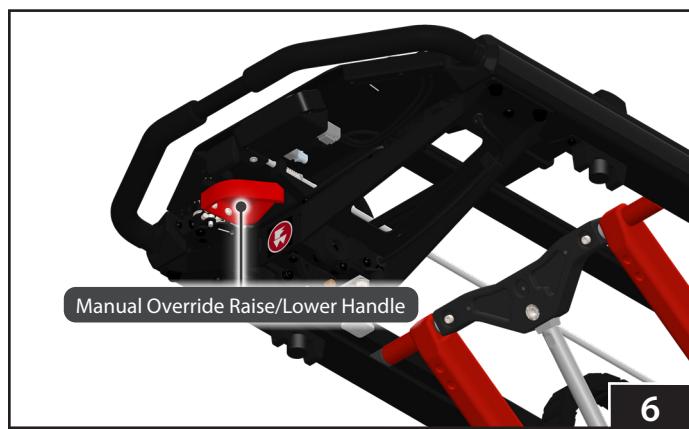


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## 5.7 Manual Override Raise/Lower Handle

Manual override handle is located under control panel (Figure 6). This handle disengages the Transporter's power system and allows operators to raise or lower the Transporter manually.

Refer to the non-powered operation sections of this manual to operate the Transporter manually.

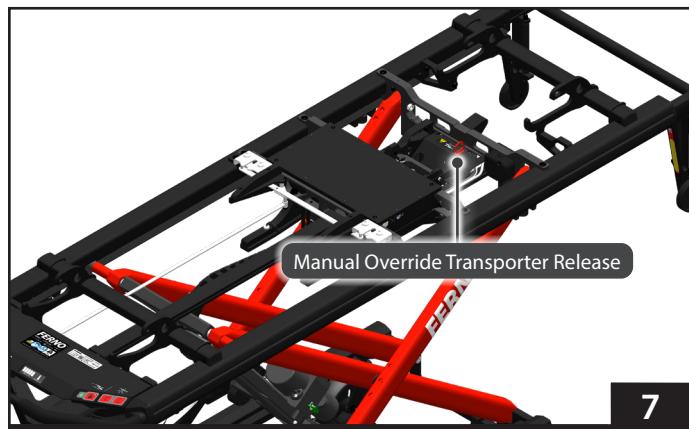


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## 5.8 Manual Override Transporter Release

Manual override Transporter release handle is located under the backrest (Figure 7). This handle disengages the Transporter from loading arm and allows operators to release the Transporter manually.

Refer to the non-powered operation sections of this manual to operate the Transporter manually.



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## 5.9 Stretcher Release Lever

Stretcher release lever (Figure 8) is located at the Transporter control end and unlocks the stretcher for removal.



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## 5.10 Battery

The Transporter battery (Figure 9) is a rechargeable 36 V Li-Ion battery with a carry handle, installed under the seat panel, accessible from the head-end of the Transporter below the backrest.

For complete use, maintenance, and safety information, refer to battery users' manual.

- Press check button to display the approximate battery charge.
- Charge the battery by securing the Transporter in the loading system or connect it directly to a battery charger.
- Refer to "Storing the Battery" on page 32 for instructions on storing the battery.
- Replace a damaged or cracked battery. Do not open the sealed battery case. Do not dismantle, open or shred the battery.
- Recycle the battery when it no longer holds a charge (see "Recycling Notice", page 32).

### REMOVING THE BATTERY

1. Turn the power switch OFF (O).
2. Slide the release lever to the right and use the carry handle to lift the battery out of the cradle.

### ATTACHING THE BATTERY

1. Confirm the power switch is OFF (O).
2. Angle and slide the battery into the cradle. Press down to lock the battery in place in the cradle until it locks. Ensure the battery release lever is in locked position (pin on the left).
3. Turn the power switch ON (I).

### WARNING

Removing/attaching the battery while power switch is ON (I) can damage the Transporter. Remove or attach the battery only when power switch is OFF (O).

Improper charging can cause injury and damage. Charge the battery only with an approved Ferno charger or in the compatible loading system.

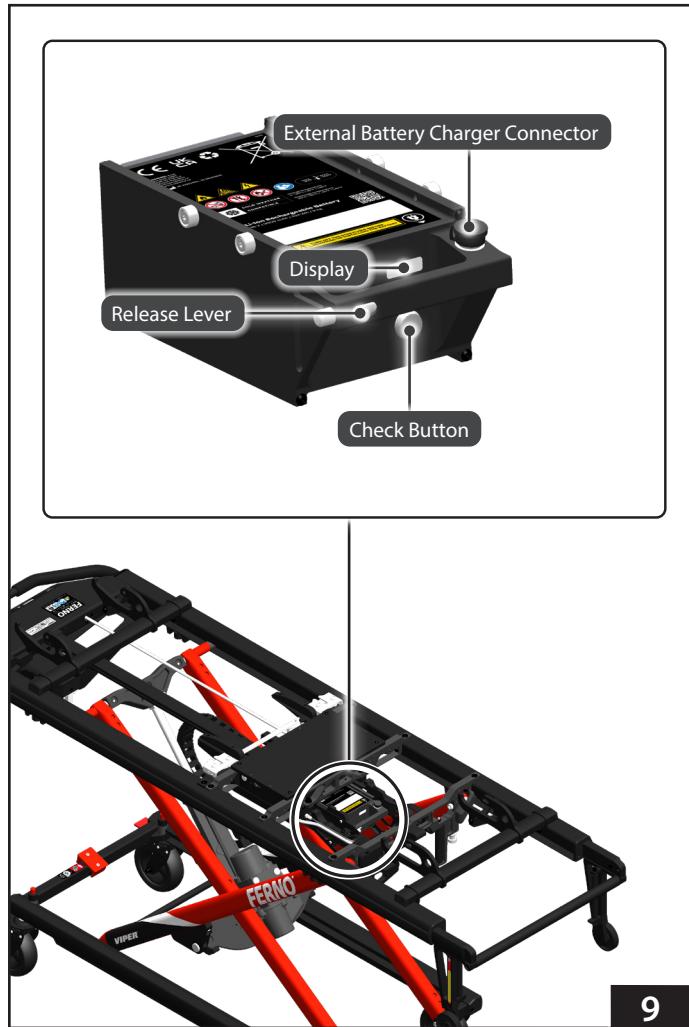
Modifying the battery can cause injury and damage. Use the battery only as designed in this manual.

Improper maintenance can cause injury and damage. Maintain the Transporter and battery only as described in this manual.

### NOTICE

Charge the battery immediately upon receipt. Shipping regulations require the battery to be shipped with a 30% charge. Failure to charge the battery in a timely manner can damage the battery.

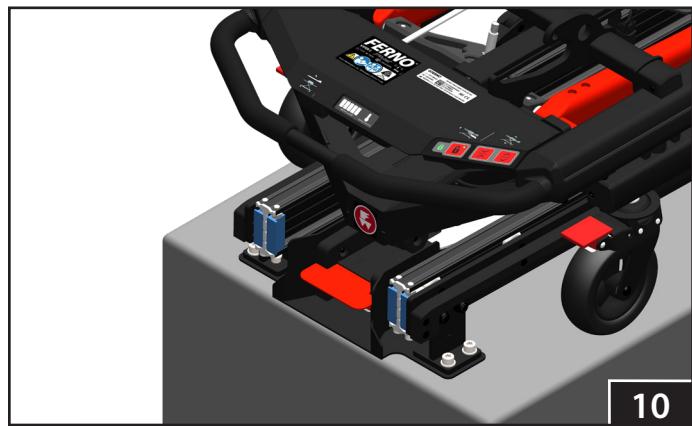
Charge the battery only with a compatible charger.



## 5.11 Integrated Charging System

When the Transporter is locked in the loading system (Figure 10), integrated charging system charges the Transporter battery and disables all powered operations of the Transporter (up/down, Transporter release from platform, etc.). Confirm the loading system is receiving power from the vehicle. The Transporter light indicators will flash green when charging or stay constant 5 bar green when fully charged.

If the battery has a very low charge, the charging system may not be able to charge the battery. In this case, connect the battery directly to the charger separate from the vehicle and loading system.



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## 5.12 Battery Charger

The supplied battery charger for Viper (Figure 11) connects to the external battery charger connector port on top of the battery (Figure 12) for charging the battery outside of the vehicle.

Do not try to connect the external battery charger whilst the Transporter is on the loading system and integrated charging system is charging the Transporter battery.

Use only the provided compatible battery charger to charge the battery, and charge only Viper batteries with the charger.

The charger meets EN 60601-1 standard and is compatible with standard household electricity and is supplied with an input cable for your country.

For complete use, maintenance, and safety information, refer to battery charger users' manual.

### Electrical Parameters

Input Voltage	110–120 V AC / 220–240 V AC, 50–60 Hz
Maximum Input Current	2.1 A
Output Voltage	42 V DC
Maximum Charging Current	1.5 A
Cut-Off Current	< 100mA
Recommended Battery Capacity	15 Ah - 300 Ah
Charging Method	CC/CV

### Operating Conditions

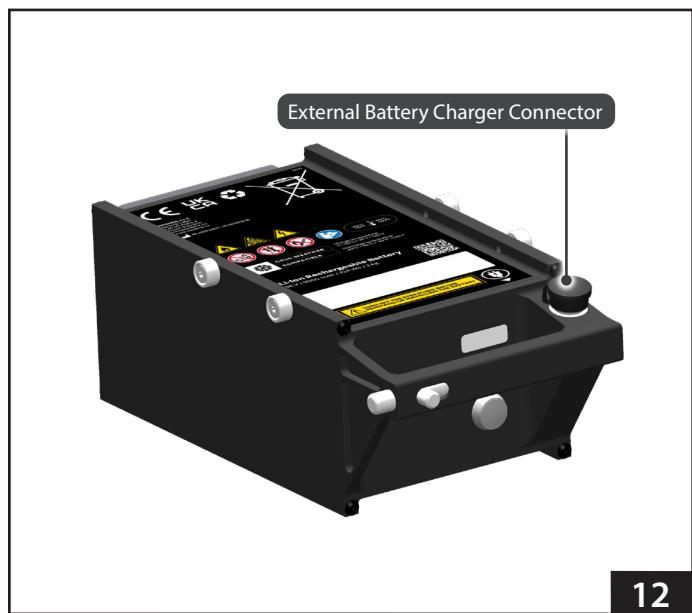
Temperature	+5 °C to +40 °C
Relative Humidity	15–93 % RH
Atmospheric Pressure	70–106 kPa
IP Rating	IP41
Insulation Class	Class II (double insulation)

### NOTICE

It is not recommended to use previous generation Viper battery charger with VIPER2 Transporter as this may affect the life time of the battery. Use only VIPER2 charger with VIPER2 Transporter. VIPER2 charger can be used with previous generation Viper Transporters.



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## 5.13 Wheel Locks

Wheel locks (Figure 13) stop wheel rotation when engaged, and help keep the Transporter from moving during patient transfer and certain medical procedures. Wheel locks are mounted to control-end transport wheels (or to all transport wheels, optional).

Press the red lever down to engage the lock. Press the opposite end of the lever to unlock.

Remain with the Transporter and keep control of it at all times. Do not leave the patient unattended.

### NOTICE

Wheel locks are not a substitute for operator control. The operators must remain with the Transporter and keep control of it at all times. Do not leave the patient unattended.

Wheel locks are not brakes. Do not use wheel locks to slow a moving Transporter.



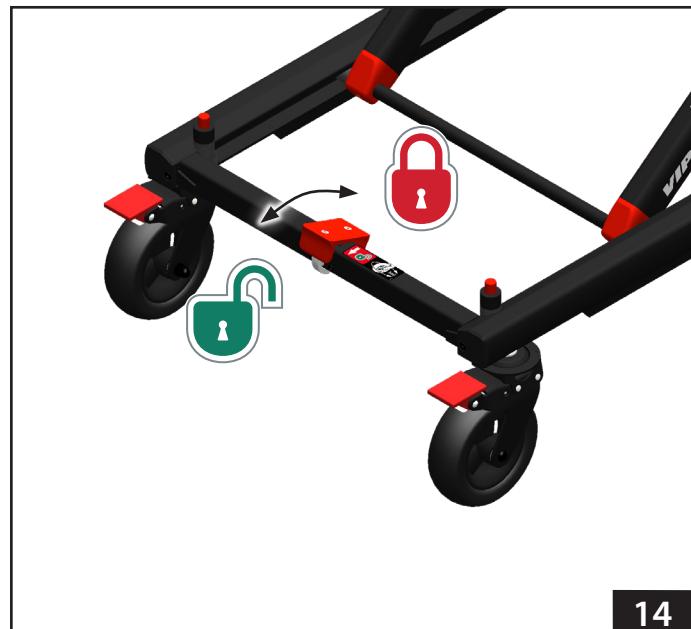
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## 5.14 Directional Wheel Locks

Directional wheel locks (Figure 14) allow the operators to lock the direction of both head-end transport wheels in line with the length of the Transporter.

To lock, press the top of lock lever located at the foot-end of the Transporter. The directional wheels will lock automatically when they align with the length of the Transporter when start to move the Transporter. To unlock, press the opposite end of the lever to disengage and allow 360° swivelling of the head-end wheels.

The directional wheels must be locked before loading the Transporter into a vehicle or unloading the Transporter from a vehicle.



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## 5.15 Medical Rail (Optional)

The Medical Rail option (Figure 15) is fixed to the side(s) of the Transporter and is designed to allow a variety of devices and accessories to be carried on the side of the Transporter when not in vehicle. Medical rail may be installed to either/both sides of the Transporter.

Medical rail is available in standard or short length, according to amount of equipment requiring to be carried.

### NOTICE

Consider the size of the attached equipment when lowering/ extending the transporter to avoid damage.



## 5.16 Push Poles (Optional)

Push poles are designed to assist operators in safely maneuvering the Transporter during patient transport, especially when the Transporter is in lower position. This ensures better stability and control, particularly in confined spaces or on uneven ground.

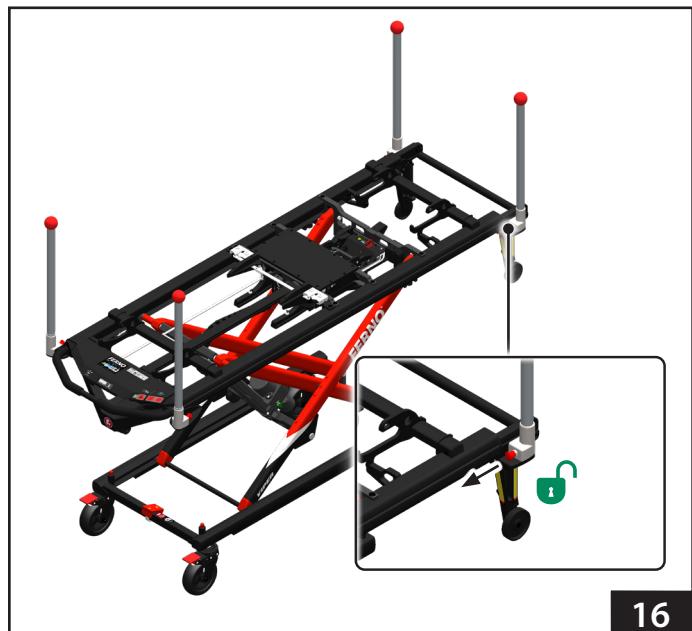
To use the push pole: place push pole into the holder and press down until it locks securely in place.

To remove the push pole: Pull red plunger out and lift the push pole out of holder (Figure 16).

Ensure all poles are fully engaged before moving the Transporter.

Use both hands to maintain control and stability, especially when navigating tight spaces or uneven surfaces.

Ensure to store the push poles in a safe place when not in use to avoid them getting lost or causing damage or injury.



## 6 - USING THE TRANSPORTER

### 6.1 Before Placing the Transporter in Service

- Before use, personnel who will work with the Transporter must read and understand this manual. Appropriate training is also required. See "Operator Training", page 7.
- Install any accessories shipped with the Transporter, if not already fitted. Keep accessory users' manuals with this manual for future reference.
- Turn the power switch ON (I) to turn on the Transporter.
- Charge the battery until it has a full charge.
- Set the loading height according to the vehicle it is being used in (page 12).
- Confirm that the Transporter operates properly. See "Inspecting", page 31.

#### ⚠️ WARNING

Turning the power switch off while operating the Transporter can damage the Transporter. Only turn the power switch off when removing or attaching the battery, or when storing the Transporter.

#### NOTICE

Charge the battery immediately upon receipt. Shipping regulations require the battery to be shipped with a 30% charge. Failure to charge the battery in a timely manner can damage the battery.

Charge the battery only with a compatible Ferno charger or loading system.

### 6.2 General Guidelines for Use

Medical advice is beyond the parameters of this manual. It is the operators' responsibility to ensure safe practices for the patient and themselves. A minimum of two trained operators is required.

- Follow standard patient-handling procedures when operating the Transporter.
- Communicate with one another and use coordinated movements to operate the Transporter.
- Talk to the patient. Communicate with the patient before changing the Transporter position.
- Stay with the patient at all times. Do not leave a patient unattended.
- Use additional help as needed (page 7).
- Read the loading system users' manual.
- The Transporter enters Sleep Mode when not in use to preserve the battery. To wake the Transporter from Sleep Mode, press  or .

## 6.3 Attaching and Removing A Stretcher

The Transporter is designed for use with a range of Ferno® lift-off stretcher platforms. See “Compatible Stretchers” on page 8. The stretcher platform can be locked onto the Transporter with the patient’s head at either end of the Transporter.

A stretcher locks onto the Transporter when the strike pins on the bottom of a stretcher platform engage the slam latches on the Transporter (Figure 17).

### ATTACHING THE STRETCHER

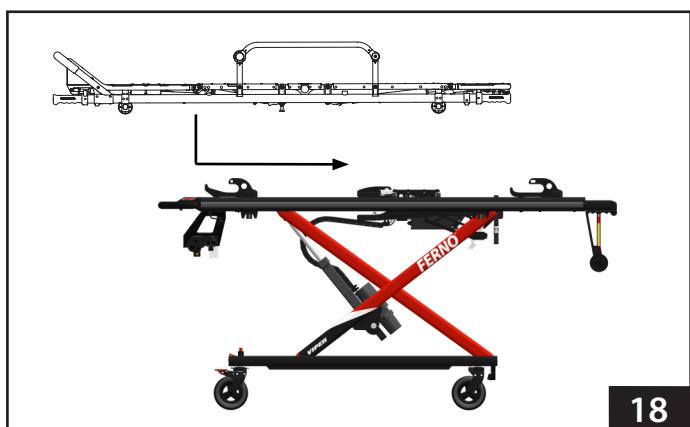
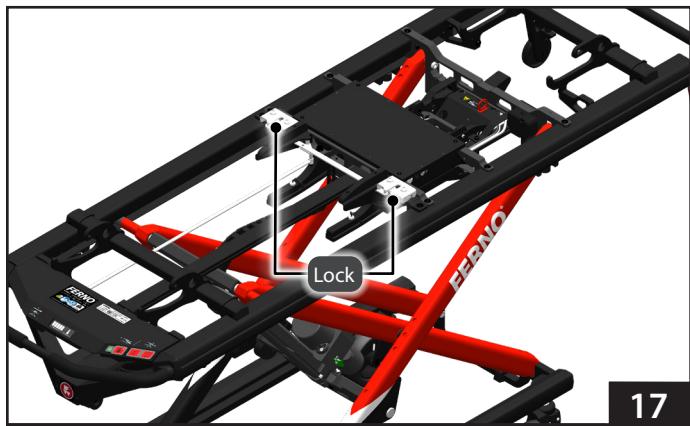
1. Lock the wheel locks to help hold the Transporter stationary.
2. Lift the stretcher platform and position it slightly toward the control end of the Transporter (Figure 18). Use additional help as needed to control the load (see Using Additional Help, page 7).
3. Align the stretcher glides with the Transporter main frame and set the stretcher on the Transporter main frame.
4. Roll the stretcher toward the loading end of the Transporter until the stretcher strike pins fully engage in the Transporter slam latches.
5. Verify that the stretcher is locked by attempting to pull it toward the control end of the Transporter. If the locks have engaged, the stretcher will remain fixed on the Transporter. If the locks have not engaged, repeat Steps 2-4.
6. Release the wheel locks before moving the Transporter.

### REMOVING THE STRETCHER

1. As the operator pushes the stretcher release handle on the Transporter (Figure 19), both operators move the stretcher slightly toward the control end of the Transporter to move the strike pins out of the slam latches.
2. Let go of the stretcher-release handle when the stretcher has cleared the strike pins.
3. Together, lift the stretcher platform off the Transporter. Use additional help as needed to control the load. See “Using Additional Help” on page 7.

### WARNING

An improperly secured stretcher can separate from the Transporter and cause injury. Attach the stretcher securely and verify that the slam latches have locked.



## 6.4 Powered Raising/Lowering

Raising or lowering the legs with a patient on the Transporter requires a minimum of two trained operators who are communicating, working together, and maintaining control of the Transporter at all times.

Be aware that the Transporter automatically stops at the minimum height, minimum transport height (only with a patient on it), user-set loading height (only when raising), and at the maximum height. To continue, press  or .

1. Keep both hands on the Transporter main frame. Maintain control of the Transporter so it does not shift when raising or lowering the legs. During the position change, move with the Transporter and maintain your grasp on the main frame.
2. Press  or  to awaken the Transporter from Sleep Mode.
3. Press  or  until the Transporter reaches the desired height (Figure 20).

### WARNING

**Uncontrolled movement can cause injury or damage.  
Support and control the Transporter at all times.**

### NOTICE

Operators must maintain a firm grasp on the main frame and control the Transporter at all times. Be prepared to help raise or lower the Transporter.



## 6.5 Moving the Transporter

Moving the Transporter with a patient on it requires a minimum of two trained operators who are communicating, working together, and maintaining control of the Transporter at all times.

Use additional trained helpers as needed to safely control the weight of the patient and Transporter. See "Using Additional Help", page 7.

Move the Transporter on smooth, unobstructed surfaces whenever possible. Do not move the Transporter sideways or push the Transporter using the backrest. Move the Transporter only with both hands grasping the Transporter main frame.

Move the Transporter at the recommended transport height. Moving above this height can increase the chance for the Transporter to tip.

1. Make sure the patient is secured.
2. Press  or  to adjust the Transporter height (Figure 21).
3. Operators position themselves at the ends of the Transporter, grasp the main frame with both hands and maintain control of the Transporter. If needed, direct trained helpers where to stand and how to grasp the Transporter.

The recommended height at which to move the Transporter is dependent on the height/preference of the operators, but may also be dictated by local manual handling protocols and procedures.

The height of the Transporter should be set as low as possible to minimise the risk of tipping, especially on rough ground, but at a height such that the operator is in control and comfortable operating the Transporter.

However if local protocols dictate that the Transporter should be moved in the lowest possible position when moving a patient, then the Transporter should be lowered to the minimum transport height (see "Powered Raising/Lowering" on page 22). The option of Push poles is designed to allow the Transporter to be moved in such position.

### WARNING

**Moving the Transporter sideways can cause it to tip and injure the patient and/or operators. Move the Transporter only toward the control end or loading end.**

**Pushing the Transporter by the backrest can cause it to tip and injure the patient or operators. Move the Transporter only by grasping the main frame.**

**Trained operators must consider the environment and terrain before moving. Moving the Transporter in a lowered position will minimise the potential of a Transporter tip.**



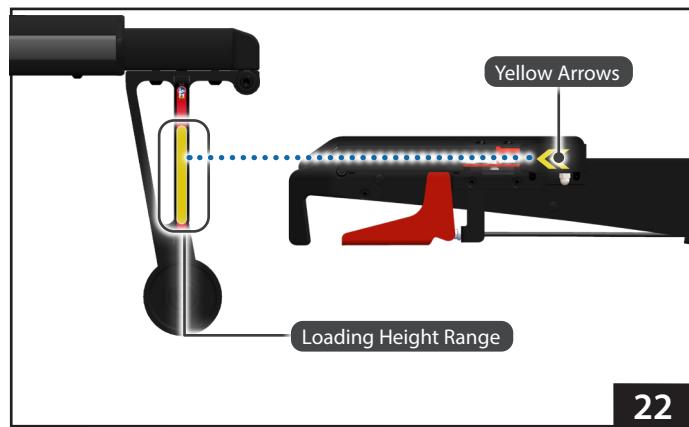
## 6.6 Loading the Transporter

Loading the Transporter into a vehicle with a patient on it requires a minimum of two trained operators who are communicating, working together, and maintaining control of the Transporter at all times.

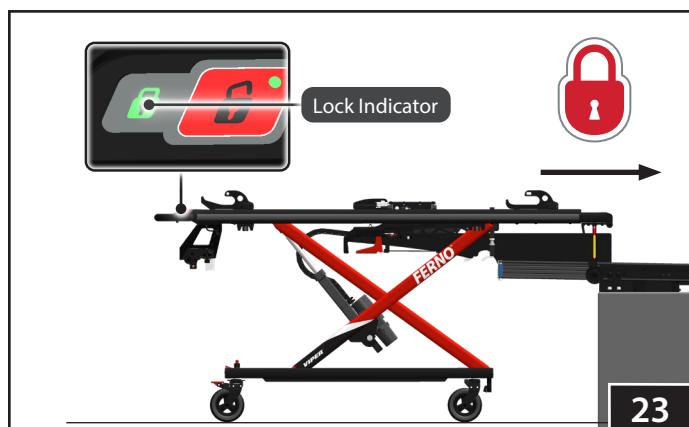
To set the loading height, see "Set the Loading Height", page 12.

1. Raise the vehicle folding bumper, if present.
2. Lock directional wheels.
3. Move the Transporter near the vehicle back door.
4. Extend the loading arm **fully** (refer to loading system users' manual).
5. Press  to raise the Transporter to the user-set loading height. The yellow arrows on loading arm must align within the loading height range shown on the Transporter (Figure 22). If not, press  or  to adjust Transporter height.
6. Align the Transporter with the loading system, then move the Transporter into the vehicle until the Transporter locks in the loading arm and lock indicator illuminates green (Figure 23). If not, re-adjust the position of the Transporter and retry.
7. Press and hold  to lower the Transporter onto the loading arm and fully raise the Transporter legs (Figure 24).
8. Push the Transporter completely into the vehicle and confirm it is locked into the loading system by pulling back on the Transporter. The loading arm red release handle must be in horizontal position (Figure 25).

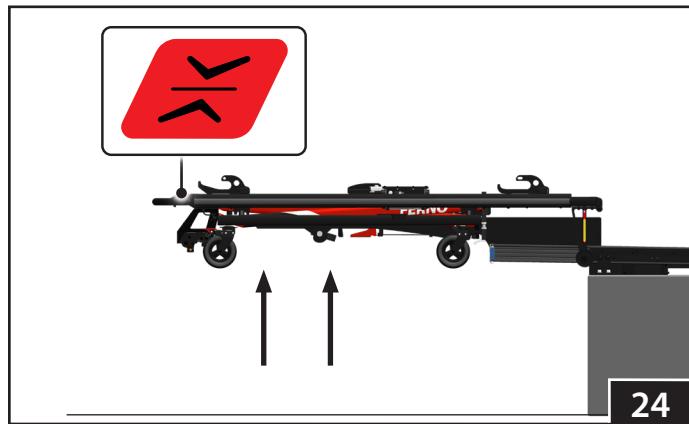
**Button Lockout:** Do not press  or  while the Transporter is inside the vehicle. Also refer to "Button Lockout", page 14.



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## 6.7 Unloading the Transporter

Unloading the Transporter from a vehicle with a patient on it requires a minimum of two trained operators who are communicating, working together, and maintaining control of the Transporter at all times.

1. Raise the vehicle folding bumper, if present.
2. Press the loading arm release handle to unlock the loading arm (Figure 26).
3. Grasp the Transporter with both hands and pull the Transporter on the loading arm **completely** out of the vehicle as far as it will go until the loading arm stops and the Transporter is fully out of the vehicle (Figure 27).
4. Press and hold  (Figure 27) until legs stop and touch the ground, and safe release indicator illuminates green (Figure 28).
5. Press  to disengage the Transporter from loading arm (Figure 28).
6. Move the Transporter completely out of the loading arm. Keep the Transporter parallel with the extended loading arm during moving.
7. Press  to lower the Transporter before moving. See "Moving the Transporter" on page 23.

**Note:** When unloading on inclined surfaces, the lock might not release the Transporter when  is pressed. In this case, push the Transporter towards the loading arm and press  again. If the Transporter is still not released, use the manual override release (see "Manual Override Transporter Release", page 15).

### NOTICE

If the vehicle is parked on an uneven surface, the operators may need to adjust the Transporter height to allow the Transporter to move out of the vehicle.

## 6.8 One Operator, Empty Transporter

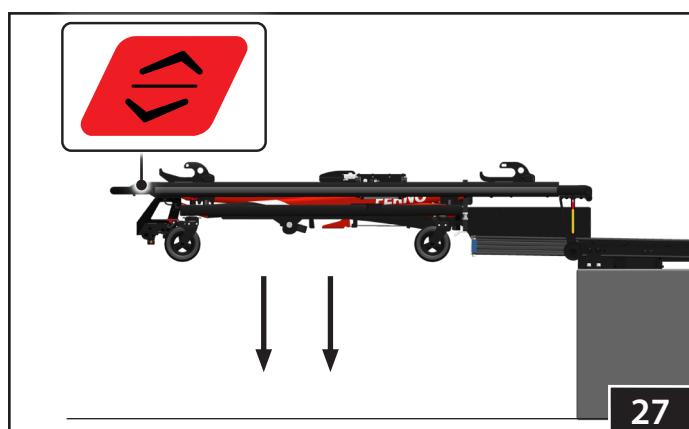
If local protocols permit, an empty Transporter (without patient) may be operated by one trained operator. Always use two operators when a patient is on the Transporter.

**Raising and Lowering:** Press  or  to adjust the Transporter height.

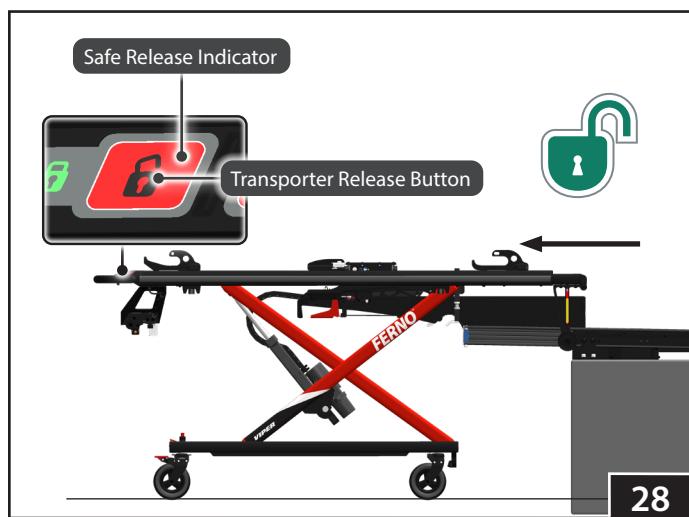
**Loading and Unloading:** Follow the procedures as for two operators. See "Loading the Transporter" on page 24 or "Unloading the Transporter" on page 25.



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## 6.9 Non-Powered Operation: Raising and Lowering

When the battery charge is low or depleted, swap for a charged battery. If a charged battery is not available, use the manual override system to operate the Transporter. Use additional trained helpers as needed. See "Using Additional Help" on page 7.

### MANUAL RAISING OR LOWERING

1. Stand at opposite ends of the Transporter and grasp the main frame with an underhand grip (palms facing up).
2. Lift the Transporter slightly to lift the weight off the leg locking mechanism.
3. Pull the manual override handle fully (Figure 29) and keep it pulled whilst making the position change.
4. Manually lift or lower the Transporter to the desired height, keeping the Transporter held at that position until the legs touch the ground.
5. Release the manual override handle to lock the Transporter at the desired height.
6. Slowly lower your hands and loosen grip to ensure the Transporter has stabilised at the new position.

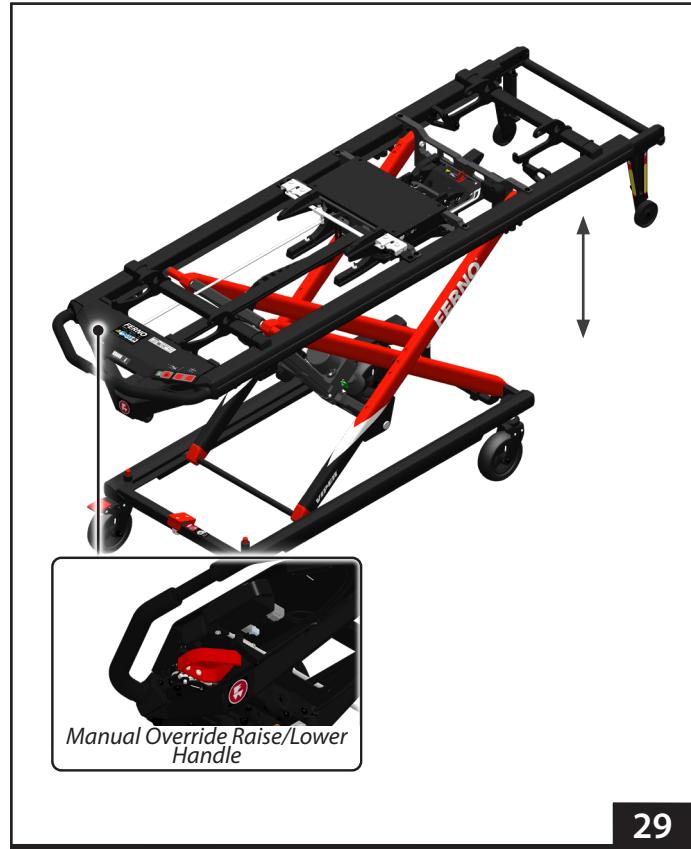
### WARNING

Uncontrolled movement can cause injury or damage.  
Support the load before using a manual override handle.

### NOTICE

The manual override handle will not function unless the weight has been lifted off the leg locking mechanism. This is a safety feature to help prevent accidental lowering of the legs.

After power-raising the Transporter legs, wait at least 10 seconds before using the manual override handle. This delay allows the hydraulic pressure to equalize.



## 6.10 Non-Powered Operation: Loading

To load the Transporter into a vehicle if no power on the Transporter and no way of charging and no spare battery, follow the normal loading procedures, but with the following differences:

1. Raise the vehicle folding bumper, if present.
2. Lock directional wheels.
3. Move the Transporter near the vehicle back door.
4. Extend the loading arm **fully** (refer to loading system users' manual).

### If helpers are available:

- o Use additional help to adjust the Transporter to the loading height (see "Non-Powered Operation: Raising and Lowering" on page 26).
- o Align the Transporter with the loading system, then move the Transporter into the vehicle until the Transporter locks in the loading arm.

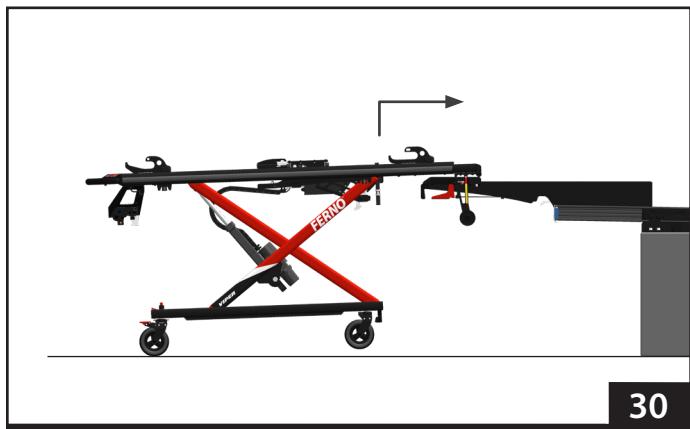
### If helpers are not available:

- o Manually raise the Transporter as high as possible.
- o Align the Transporter with the loading system, then lift the loading-end of the Transporter and place it on the slider of the loading arm (Figure 30).
- o Lift the control-end and push the Transporter towards the vehicle until the Transporter locks in the loading arm (Figure 31).

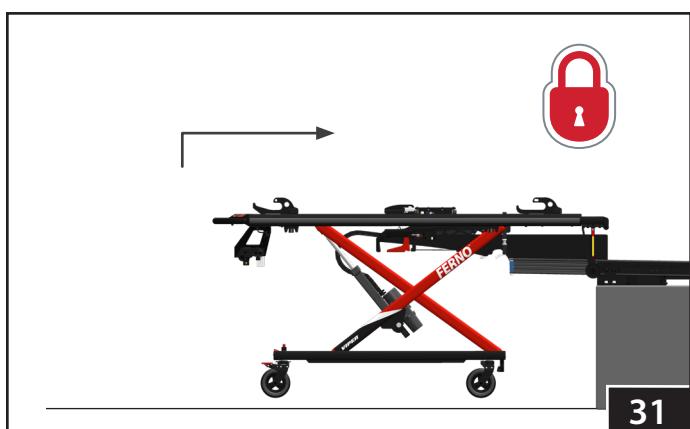
6. Confirm the Transporter is locked in loading arm by pulling it slightly outwards from the vehicle. If not, adjust and retry. Reminder: Lock indicator does not function when there is no power.
7. Pull the raise/lower manual override lever and keep it engaged.
8. Hold the lower frame of the undercarriage by the longitudinal beams, ensuring your fingers rest on the outer surfaces (Figure 32).
9. Raise the undercarriage to raise the Transporter legs (Figure 33).

**Note:** The Transporter legs must be fully raised to be able to unlock the loading arm, allowing the Transporter to be loaded into a vehicle.

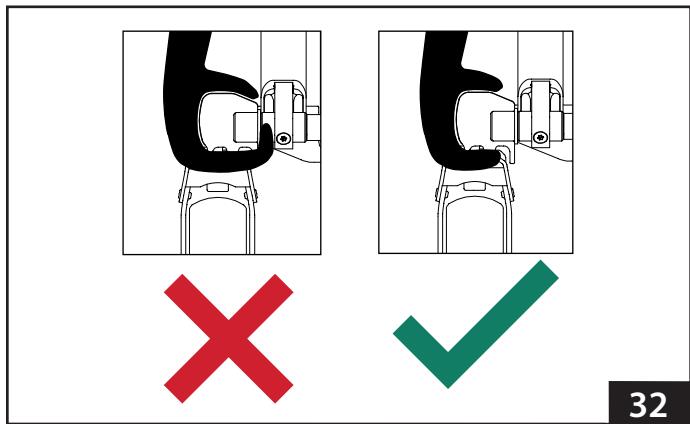
10. Push the Transporter completely into the vehicle and confirm it is locked into the loading system. The loading arm red release handle must be in horizontal position.
11. Release the manual override handle.



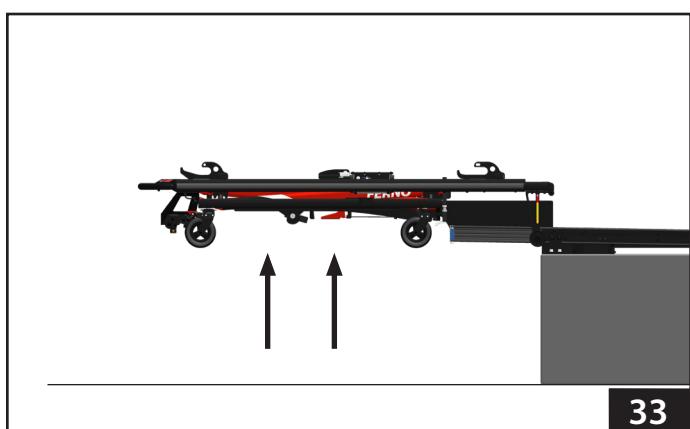
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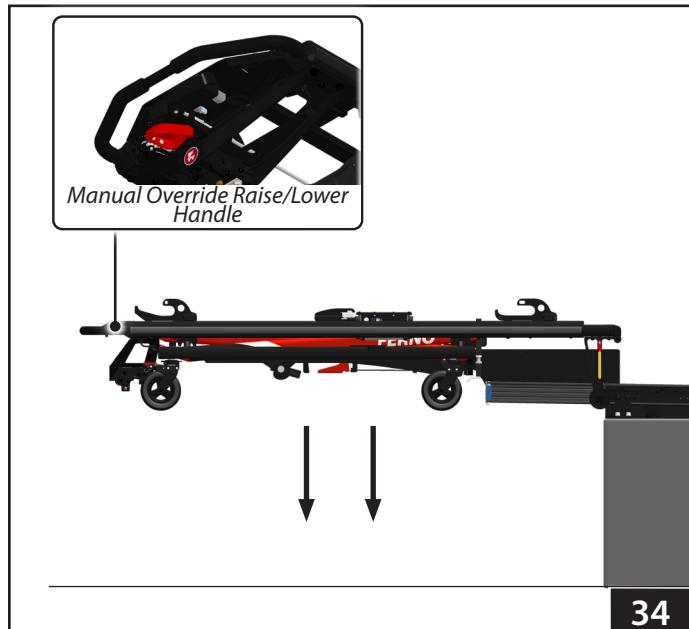
## 6.11 Non-Powered Operation: Unloading

To unload the Transporter from a vehicle if no power on the Transporter and no way of charging and no spare battery, follow the normal unload procedures, but with the following differences:

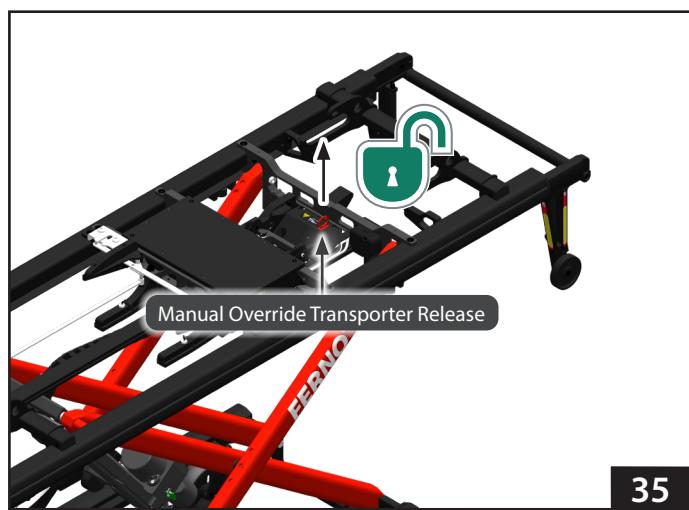
1. Raise the vehicle folding bumper, if present.
2. Press the loading system release handle to unlock the loading arm.
3. Grasp the Transporter with both hands and move the loading arm and Transporter completely out of the vehicle until the loading arm stops.
4. Pull and hold the manual override handle until legs stop and touch the ground (Figure 34). Release the override handle.
5. Pull the manual override Transporter release lever to release the Transporter from loading arm (Figure 35). Reminder: Release button does not function when there is no power.
6. Move the Transporter completely out of the loading arm (Figure 36). Keep the Transporter parallel with the extended loading arm during moving.

**Note:** Support the loading-end of the Transporter when telescoping frame leaving the slider of loading arm. The Transporter may drop slightly since it is not at its regular height for unloading.

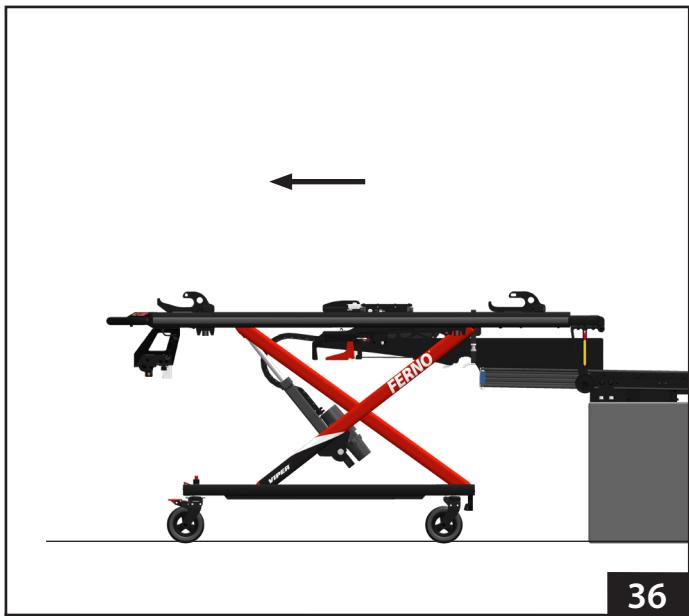
7. Lower the Transporter (see "Non-Powered Operation: Raising and Lowering" on page 26) before moving.



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## 7 - MAINTENANCE

### 7.1 Maintenance Schedule

The VIPER2 transporter requires regular maintenance. Set up and follow a maintenance schedule. The table at right represents minimum intervals for maintenance. Keep the maintenance records. For a sample record sheet, see "Maintenance Record" on page 46. When using maintenance products, always follow the instructions given by the manufacturers, and read any material safety data sheets!

### 7.2 Disinfecting the Transporter

Wipe all surfaces with disinfectant. Follow the disinfectant manufacturer's instructions for application method and contact time. It is recommended to inspect the Transporter for any damage as you disinfect it.

### 7.3 Cleaning the Transporter

1. Remove the harness system, the mattress and any accessories.
2. Hand clean all surfaces of the Transporter with warm water and a mild detergent, or pressure-wash the Transporter as described in "Pressure-Washing" on page 30.
3. Rinse with warm, clear water. Dry the Transporter with a towel or allow it to dry.

**Note:** Do not lubricate the Transporter. Lubricating allows dirt and foreign particles to collect on the Transporter, causing damage.

4. When fully dry, reattach the straps, the mattress and the accessories.

#### WARNING

Improper maintenance can cause injury. Maintain the Transporter only as described in this manual.

Incorrect use of bleach can cause injury or damage. After using bleach, rinse the device with plenty of clear water.

Abrasive cleaning compounds can cause damage or injury. Do not use abrasive materials to clean the Transporter.

Minimum Maintenance	Each Use or Daily	As Needed	Monthly
Disinfecting (this page)	•		
Cleaning (this page)	•	•	
Pressure-Washing (page 30)	•		
Regular Inspection (page 31)	•	•	

#### NOTICE

Disinfectants and cleaners containing phenolics or iodines can cause damage. Do not use products containing these chemicals. If bleach is used, rinse with plenty of clear water to remove bleach residue.

Using abrasive cleaning compounds or applicators on the Transporter can cause damage. Do not use abrasive materials to clean the Transporter.

Do not lubricate the Transporter. Applying lubricant can cause damage to the Transporter.

Water under high pressure, or steam, can penetrate joints and cause corrosion. Use caution when cleaning moving parts.

Clean and disinfect the product properly before preventative maintenance inspection.

## 7.4 Pressure-Washing

Use caution when cleaning the Transporter with pressurised water. Wear all safety equipment recommended by the manufacturer of the pressure washer. Do not pressure wash the battery.

1. Remove the stretcher and any accessories.
2. Turn the power switch OFF (O), engage the wheel locks, and remove the battery.
3. Set the nozzle pressure at or below 20,000 kPa/2,900 psi or less and flow rate at 15 liters/4 gallons per minute or less. Keep the nozzle at least 50 cm/20" away from the Transporter at all times. **Do not spray directly into the battery cradle, control box, hydraulic unit or wiring** (Figure 37).
4. Use only cold water without disinfectants.
5. Spray the legs and wheels of the Transporter.
6. Allow the Transporter to dry for 10 minutes.
7. Attach the battery and turn the power switch ON (I).
8. When fully dry, reattach the stretcher and accessories.

### WARNING

**Spraying directly into the battery cradle, control box, hydraulic unit or wiring can damage the product. Pressure-wash the Transporter only as described in this manual.**

### NOTICE

The Transporter is water-resistant. When pressure-washing:

- Remove the battery.
- Keep nozzle pressure at 20,000 kPa/2,900 psi or less, or flow rate at 15 liters/4 gallons per minute or less.
- Keep the nozzle at least 50 cm/20" from the Transporter at all times during cleaning.
- To clean the display and buttons, reduce water pressure and/or increase the distance (greater than 50 cm/20").
- Do not spray water upward into the wiring or forcibly at or around the control panel and control box.



## 7.5 Preventative Maintenance Inspections

Preventative Maintenance Inspections must be carried out regularly. VIPER2 transporters are first inspected 24 months after purchase and then every 12 months. Inspections may only be performed by a service technician certified by the manufacturer. A report must always be prepared for each inspection, and it must be kept for the entire lifetime of the device or in accordance with applicable local legal regulations. Before the inspection, always ensure that the Transporter is properly cleaned and disinfected.

## 7.6 Regular Inspection

Inspect the Transporter regularly at the start of each operator shift. Follow the checklist on the right and try all the Transporter functions described in this manual. If the inspection reveals damage or excessive wear, remove the Transporter from service and contact the manufacturer or a service organization recommended by the manufacturer. The Transporter cannot be used until it has been repaired!



### WARNING

**Failure to perform preventative maintenance inspections can cause injury or damage. Have the Transporter inspected regularly by a factory-trained technician.**

**A damaged or excessively worn Transporter can cause injury or device damage. Inspect the device regularly. Remove any damaged device from service.**

### Electrical Inspection

- Do both sets of height-adjustment buttons function properly?
- Does the powered system operate properly through the full range of motion?
- Does the powered system operate smoothly, without binding or excessive noise?
- Does the actuator stop running at the user-set loading height, fully-raised and fully-lowered positions?
- Do all indicator lights on the control panel function?
- Is there visible sign of damage to the control box?
- Are all cords/cables free of excessive wear, cuts, and fraying?
- Does the integrated charging system charge the Transporter battery and prevent Transporter operation when the Transporter is secured in the loading system?

### Mechanical inspection

- Are all components present?
- Is the Transporter free of excessive wear?
- Does the hydraulic power system operate smoothly, without excessive noise?
- Is all hardware securely in place?
- Do all moving parts operate smoothly and properly?
- Does the Transporter load and unload properly?
- Do the legs show signs of wear or damage?
- Does the manual override release handle function properly and is the cable free of excessive play?
- Does the Transporter move smoothly?
- Do the wheels show excessive wear or damage?
- Do the wheel locks and directional wheel locks engage properly and function properly?
- Is the ambulance properly prepared for the Transporter with the loading system installed?
- Do the installed accessories operate properly without interfering with Transporter operation?
- Are contacts of integrated charging system clean and make a good connection?

## 7.7 Storing the Transporter

If the Transporter will not be in service for long period of time, prepare it for storage as follows:

1. Lower the Transporter to the fully-lowered position (Figure 38). Turn the power switch OFF (O).
2. Remove the battery and prepare it for storage. See "Storing the Battery" below.

Before returning the Transporter to service:

1. Fully charge the battery. Attach only a fully-charged battery.
2. Turn the power switch ON (I).
3. Have your service's equipment maintenance personnel inspect the Transporter. See "Inspecting" on page 31.



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## 7.8 Storing the Battery

- Charge/discharge the battery to 30-50% before storing it. Do not store the battery with full charge.
- Maximum storage duration is **3 months**.
- After a period of storage, charge the battery fully before use.
- Store the battery only indoors in a cool, dry place.
  - Do not store batteries outdoors, or where temperatures will exceed 23°C / 73°F.
  - Battery capacity can be affected if the battery is stored for long periods outside of the recommended temperature range.

## 7.9 Service Life

The minimum expected lifetime of the device, as assumed by the manufacturer, is ten (10) years, provided it is used and maintained in accordance with the instructions in this user manual. The manufacturer guarantees the availability of spare parts on the market for 8 years after the end of the device's lifetime.

### WARNING

**Storing the Transporter with battery in the loading system connected to the vehicle's electrical circuit for long period can damage the battery. Always follow the instructions in this manual when storing the Transporter or battery.**

### NOTICE

Before placing the battery in storage, charge/discharge the battery to 30-50%. Never store fully-charged battery.

A battery with a very low charge may not be able to be charged by the integrated charging system in the loading system. Connect the battery directly to the charger separate from the vehicle and loading system.

If the battery sustains noticeable or suspected damage or is hot to the touch, immediately remove it from service and store outside of a building.

## 7.10 Disposal

**Packaging Materials:** The packing materials used for this product are recyclable. They must be collected and disposed of in accordance with the local regulations applicable in the country or region where the packaging of the product or its accessories has been opened.

**Product Disposal:** Transporters and their components may be disposed of as common solid waste, provided they are not contaminated with hazardous chemical substances. Disposal must be carried out in compliance with the applicable local regulations.

## 7.11 Recycling Notice

The Transporter uses a rechargeable, 36 V Li-Ion battery (specifically "LiFePO4" as noted on the battery label, Figure 54).

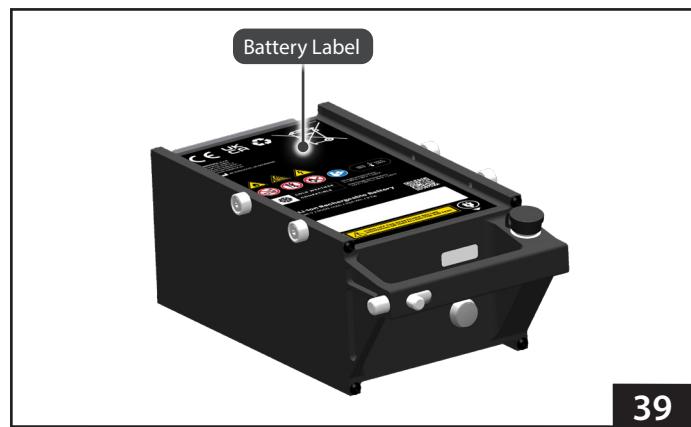
Contact the government in your state, territory or country for information about proper recycling of the battery and the charger. Do not dispose of the battery or the charger with municipal waste.

**Battery:** Recycle the main battery when it can no longer hold a charge.

**Charger:** Recycle the charger if it becomes damaged or fails to properly charge the battery.

### WEEE DIRECTIVE (EUROPEAN UNION)

European Union directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) limits the disposal of electrical and electronic equipment in landfills. Contact the government in the country in which you reside for recycling information.



### NOTICE

Before placing the battery in storage, charge/discharge the battery to 30-50%. Never store fully-charged battery.

A battery with a very low charge may not be able to be charged by the integrated charging system in the loading system. Connect the battery directly to the charger separate from the vehicle and loading system.

If the battery sustains noticeable or suspected damage or is hot to the touch, immediately remove it from service and store outside of a building.

## Battery Care

- The battery is water-resistant and is suitable for outdoor use. Do not submerge the battery in water.
- Remove the battery from the Transporter before pressure washing the Transporter.
- Refer to the battery users' manual for disinfecting and cleaning instructions.
- Recycle the battery when it can no longer maintain a charge. Do not dispose of batteries with municipal waste. See "Recycling Notice" on page 40.
- Replace a damaged or cracked battery.

## 7.12 Viper Service App

The Viper service app is available for iOS and Android mobile devices to provide service and usage information of the Transporter. Advanced settings features are only for Ferno service technicians upon login.

**To install:** Search for “Viper Service” in the App Store or Google Play Store and install the application (Figure 40).

**To connect:**

1. Launch the “Viper” service app on your mobile device.
2. If asked, allow the app to use bluetooth connection.
3. Press  or  to activate the Transporter.
4. Select the Transporter you want to connect. The Transporter is identified by the serial number of control box on patient right (Figure 41).
5. When successfully connected, the indicator lights on control panel illuminate yellow .

**To disconnect:** Click the “Disconnect” button in the service app.

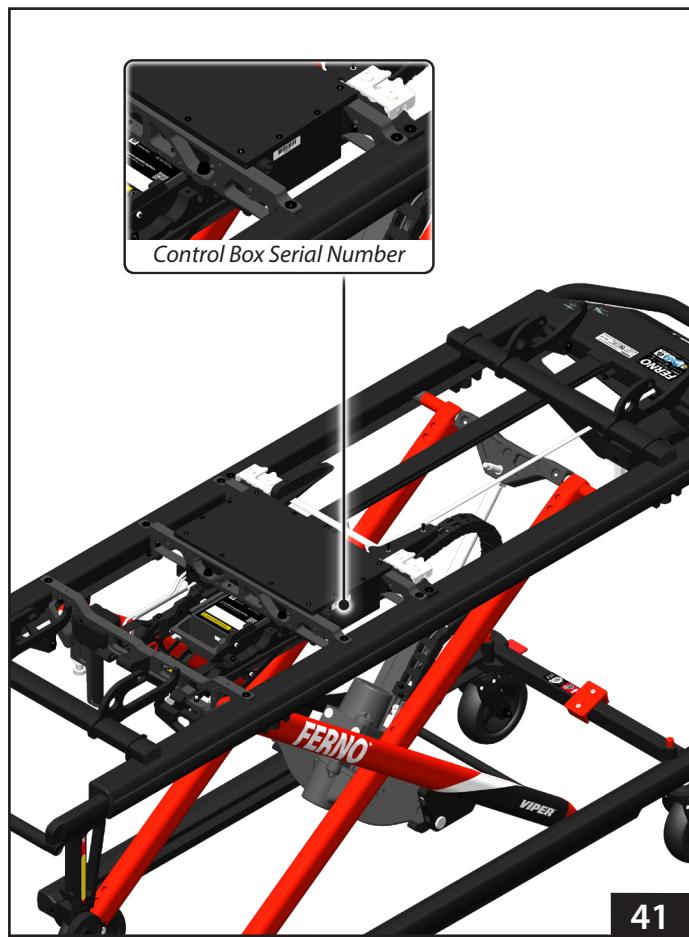
### FEATURES

#### System status screen:

- Warning and error messages
- Firmware information
  - Main Unit firmware
  - BMS firmware
- Battery information
  - Capacity
  - Voltage
  - Battery current
  - Highest cell voltage
  - Lowest cell voltage
  - Charging voltage
  - Battery temperature
  - Invertor temperature
  - Battery cycles
  - Overall inner temperature
- Usage information
  - Number of relative cycles
- Motor information
  - RPM
  - Current
  - Temperature
- Battery management system information
  - BMS temperature
- Download CSV data file feature
- Download PDF service report feature



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#### Height positions screen:

- Current height
- Loading height
- Highest position possible
- Lowest position possible

## 8 - TROUBLESHOOTING

Indicator lights alert the operator to functional issues. Red lights are high priority, orange lights are medium priority. For service, contact your distributor.

Indicator Lights	Meaning	Solution
	The motor current is high, because Transporter is overloaded, or maximum motor running time has been exceeded. The system stops the motor for 5 seconds.  Five indicator lights flash orange	Press  or  to continue. Provide manual lift assistance if the situation repeats.
	Exceeding the range of high or low operation temperatures, low battery voltage or interrupted CANBUS communication. The system switch off within 5 seconds to protect electronic components.  Five indicator lights illuminate red	<ol style="list-style-type: none"> <li>1. Connect the external battery charger.</li> <li>2. Press  or  to activate the Transporter.</li> <li>3. Contact an authorised service center.</li> </ol>
	Sleep mode activated or system shut down.  No lights out	<ol style="list-style-type: none"> <li>1. Press  or  to activate the Transporter.</li> <li>2. Connect the external battery charger.</li> <li>3. Contact an authorised service center.</li> </ol>

## 9 - ACCESSORIES

Ferno offers a full line of accessories approved for use with the VIPER2 Transporter. Follow all instructions in accessory users' manuals. Keep the instructions with this manual.

When using accessories, be aware of any special considerations such as doorway heights and widths, or other factors which may be affected by the addition of the accessory/accessories to the VIPER2 Transporter.

Contact Ferno Customer Relations (page 2) or your Ferno distributor for VIPER2 information.

### ⚠ WARNING

Attaching improper items to the VIPER2 Transporter can cause injury. Use only Ferno-approved items on the VIPER2 Transporter.

## TRAINING RECORD

# TRAINING RECORD

## MAINTENANCE RECORD



70 Weil Way  
Wilmington, OH 45177

Aviation

Military

Mortuary

EMS

Rescue