



Pegasus / Pegasus MK2 Trolley

User Manual

IMPORTANT NOTE

To comply with BS EN 1789: 2007, the four-point harness **MUST** be used as a patient restraint and the Pegasus **MUST** be secured with the two-part locking device.

1. Intended Use of the Pegasus/Pegasus MK 2

The Pegasus trolley is intended for use by fully qualified, trained and competent carers, attendants, paramedics or other such medical staff as an aid to provide safe and secure transportation of patients.

The Pegasus trolley's primary intended use is for the transportation of patients, either physically impaired, ill, or with other types of injuries from ground or hospital bed level to and from an ambulance providing effortless powered lifting and lowering making use of its self contained hydraulic system.

The Pegasus trolley's secondary intended use (PTS version only) is as a seat base for a maximum of three passengers, when positioned at the bulk head of a Patient Transfer Vehicle, with the foot end of the trolley folded down and the trolley secured by the correct locking device. When used as a seat base the trolley **DOES NOT** meet CEN requirements.

Pegasus MK 2 Trolley can be fitted with a mattress that is constructed of moulded cellular foam that is impermeable to bodily fluids and has an antibacterial additive impregnated through the material during manufacturing to assist infection control.

2. Checking the trolley

The following checks are recommended before the start of each shift's use of the Pegasus Trolley.

1. Does the trolley have a properly installed mattress and patient restraining system? Check the mattress for damage; if any damage is found, it must be replaced. (Please refer to page 12 for fitting instructions)
2. Do the trolley cot sides raise, lower and lock in position properly?
3. Check that the wheels and brakes operate satisfactorily.
4. Does the trolley lower and raise satisfactorily?
5. Does the ambulance have a properly installed approved locking device?
6. Check the operation of the push/pull handles and ensure the head end handle clips in the stowed position.
7. Does the headrest extension operate correctly and lock in position.
8. Study this manual before use. Practice without a patient until totally competent in using the trolley.

Once these checks have been completed, then the trolley is ready to be used in regular service.

SAFE WORKING LOAD

300 kg in lowest position

200kg in highest position

(Tested in accordance with the requirements of BS EN 1789: 2007)

WARNING

**DO NOT OPERATE THE HEIGHT ADJUSTMENT PEDAL
WHEN THE TROLLEY IS FIXED INTO THE VEHICLE
LOCK.**

**THIS WILL CAUSE THE TROLLEY TO JAM IN THE
LOCKS AND MAY CAUSE DAMAGE.**

Important Notes

**Always ensure that two operators are with the trolley at all times.
A non-laden trolley may be controlled by one operator provided it is considered safe to do so.**

When rolling the trolley in the elevated position along hospital corridors or similar smooth surfaces, DO NOT use the pull handles, instead roll the trolley by firmly grasping the main frame, for added control.

Trapping hazards cannot be eliminated due to the operation of this product. EXTRA CARE to be taken whilst raising and lowering the trolley, operating leg rest features and any features with hinge assemblies.

Before driving the ambulance, make sure that the trolley is secured with the recommended locking device to prevent its movement in the patient compartment.

REFER TO PAGES 9 & 10 IF USING PRODUCT WITH 2-PART TRACK-MOUNTED FLOOR LOCK

This product must be regularly serviced and maintained in line with the manufacturer's recommendation to ensure satisfactory operation. A preventative maintenance scheme should be contracted at time of purchase. Regular cleaning helps reduce the risk of transmitting disease and enables the equipment to function at its optimum.

PLEASE NOTE

Always ensure the drop down foot end and head end are in the raised position before operating the lifting mechanism on the trolley.

PLEASE NOTE

Cot Sides are not intended to be used to either manoeuvre or lift the trolley, damage may result from this practice.

3. Operating Procedure

WARNING

Always ensure that two operators are with a laden trolley at all times.

Ensure that the following procedures are complied with:

1. Advise the patient before making adjustments, lifting or loading the trolley.
2. Stay with the patient and control the trolley at all times.
3. Keep the patient restrained and the cot side rails up when using the trolley.
4. Use help when needed to ensure patient and operator safety.

Transferring a Patient onto a Trolley

1. Lower the cot side rails.
2. Place the trolley beside the patient and open the restraints.
3. Ensure that at least one wheel brake at each end of the trolley is applied.
4. Transfer the patient onto the trolley using recognised manual handling procedures.
5. Close the restraints around the patient (see page 11).
6. Raise the cot side rails and lock in position.
7. Make adjustments as necessary.

When transferring a patient from a bed or other apparatus,

1. Raise/lower the trolley to a suitable height.
2. Proceed with the transfer as aforementioned.

Height Adjustment – Do not raise the trolley when located in the vehicle lock.

1. The height adjustment of the Pegasus is achieved by a simple hydraulic pumping action.
2. The raising and lowering action is achieved by means of foot pedals, which are located on each side of the trolley. **NOTE** ensure pedals on both sides are clear before operating.
3. The foot pedal is a rocker action about an off centre pivot, the longer pedal is for raising the trolley top and the shorter for lowering.

4. To raise the trolley, operate the long side of the foot pedal through full strokes to achieve the desired height, this operation may be better achieved with two wheel brakes engaged.
5. To lower the trolley, depress the short pedal. Slight repositioning of the foot pedal will control the rate of lowering.
6. Using two operators, making use of both pump pedals, can ease the raising a heavily laden trolley. Practice is advised to achieve unison of action.

Wheeling the Trolley

IMPORTANT

Ensure the push/pull handles are clear of any obstructions when raising or lowering.

1. Transporting a patient should be done **with the side rails raised and restraints fastened**.
2. The trolley is best rolled by two attendants, one pulling and the other assisting with guidance and steering as necessary.
3. If low obstacles (such as door sills) are encountered, roll up to them squarely and lift the leading wheels over the obstacle using the corner frame grips. Repeat for the trailing wheels.
4. High obstacles such as kerbs or steps, rough terrain, etc. should be recognised as potentially hazardous to smooth rolling and trolley balance and may require physical assistance or an alternative route.
5. **Ensure that the restraints are fastened around the patient (see page 11).** Place the trolley in the lowest position possible. However, the trolley may be wheeled in an elevated position along hospital corridors or similar smooth surfaces, provided that the patient is securely strapped to the trolley and that the two attendants are in control of the patient and trolley at all times.
6. To lift the trolley top and base together the operator sited at the foot end needs to lift slightly before the head end operator. This is necessary to ensure that the lifting notches engage. Apart from the fully raised position there are two other positions at which the lifting notches engage these are at mid lift and just above fully lowered. When lifting from the fully lowered position the top and base will separate slightly prior to the notch engaging, this is a normal action. It is recommended that this process is practiced on an un-laden trolley.

PLEASE NOTE: Cot sides are not intended to be used to either manoeuvre or lift the trolley; damage may result from this practice.

Locking system – dependent on type fitted.

Manual Foot End Lock

1. To load the trolley, ensure that the pedal on the foot end lock is depressed, and guide the trolley into the head end floor lock. The foot end will automatically lock when the trolley is in the correct position. To remove trolley, depress pedal whilst pulling back on the trolley.

DO NOT OPERATE PUMP WHILST THE TROLLEY IS LOCATED IN THE LOCKING SYSTEM, AS THIS WILL DAMAGE THE TROLLEY FRAME.

Loading/Unloading from a vehicle with ramp or lift

When using a powered winch, reference must be made to the winch manufacturer's instructions and Ferno UK Ltd for trolley winch connection positions.

Unloading the trolley from a vehicle fitted with ramps

1. Make sure that the patient is disconnected from any vehicle mounted apparatus or instrumentation.
2. Operation by a minimum of two operators at all times.
3. Disengage the trolley from the two part locking.
4. Unfold the push/pull handles and ensure they are locked in the extended position.
5. Using two operators guide the trolley down the ramp and out of the vehicle.

Loading the trolley into a vehicle fitted with ramps

1. Make sure that the patient is secure at all times whilst on the trolley.
2. The trolley is loaded with the patient's head towards the front of the ambulance.
3. Ensure that the trolley is in its lowest position.
4. Ensure that the push/pull handles are locked in the extended position.
5. Position the trolley at the base of the ramp, head end first.
6. With the operator at the head end pulling and the operator at the foot end pushing simultaneously, the trolley can now be advanced into the vehicle.
7. **IMPORTANT: ONCE IN THE VEHICLE, BEFORE ENTERING THE LOCK, FOLD THE HEAD END PUSH/PULL HANDLE AND ROTATE UNDER THE TROLLEY TOP UNTIL IT IS SECURED IN THE RETAINING CLIPS AS DAMAGE TO THE HANDLE WILL OCCUR IF IT IS INCORRECTLY STOWED. NEVER ROTATE THE PUSH/PULL HANDLE OVER THE TOP OF**

THE TROLLEY AS DAMAGE COULD OCCUR WHEN THE BACKREST IS LOWERED.

Unloading the trolley from a vehicle fitted with a tail lift

1. Make sure that the patient is disconnected from any vehicle mounted apparatus or instrumentation.
2. Operation by a minimum of two operators at all times.
3. Disengage the trolley from the two part locking device by depressing the foot pedal (manual lock), or pressing the green button (electric lock) and roll the trolley to the rear of the ambulance compartment.
4. Guide the trolley onto the tail lift and out of the vehicle.

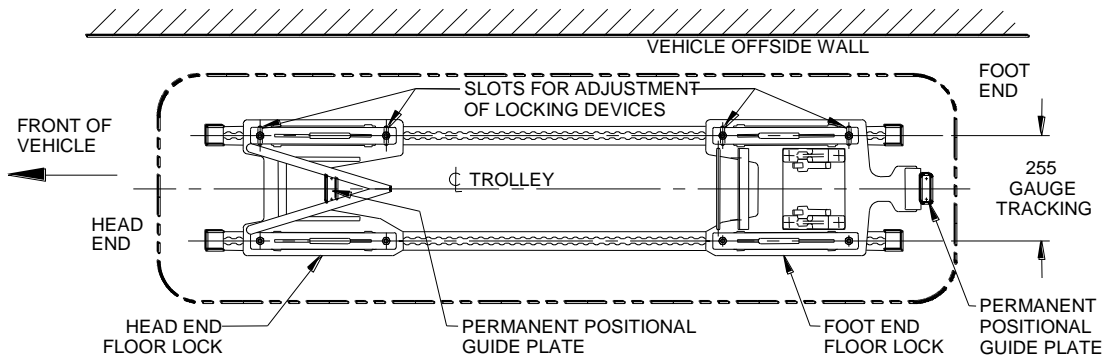
Loading the trolley into a vehicle fitted with a tail lift

1. Make sure that the patient is secure at all times whilst on the trolley.
2. The trolley is loaded with the patient's head towards the front of the ambulance.
3. Ensure that the trolley is in its lowest position and there are no trailing straps, blankets etc.
4. **IMPORTANT: BEFORE LOADING ONTO THE TAIL LIFT, FOLD THE HEAD END PUSH/PULL HANDLE AND ROTATE UNDER THE TROLLEY TOP UNTIL IT IS SECURED IN THE RETAINING CLIPS AS DAMAGE TO THE HANDLE WILL OCCUR IF IT IS INCORRECTLY STOWED. NEVER ROTATE THE PUSH/PULL HANDLE OVER THE TOP OF THE TROLLEY AS DAMAGE COULD OCCUR WHEN THE BACKREST IS LOWERED.**
5. Guide the trolley on to the tail lift, head end first.
6. Operate the tail lift as per manufacturer's instructions.

IMPORTANT NOTE

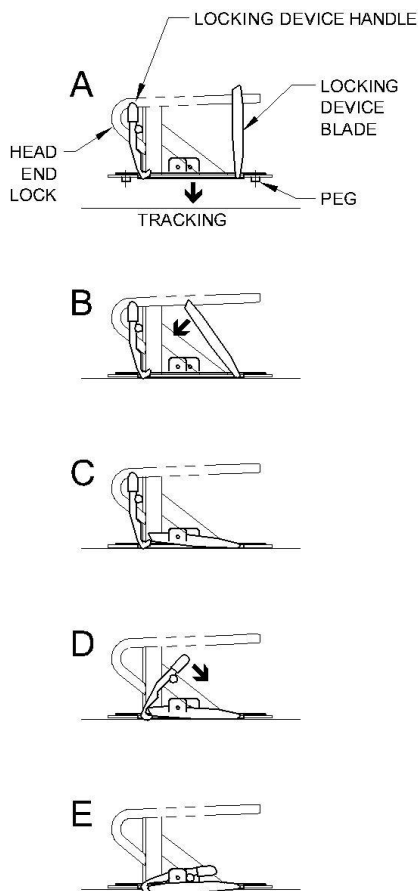
Ensure the trolley is secure at all times when on board the tail lift

User Guide for 2-part Track-Mounted Floor Lock (255-mm Gauge NMI System)



1 Removal of Head End and Foot End Lock Assemblies

- On each locking assembly, retract the plunger and pull up release handle and blade of both locking devices.
- Remove lock assemblies.
- The small positional guide plates at the head end and foot end must remain fitted to the floor of the vehicle.



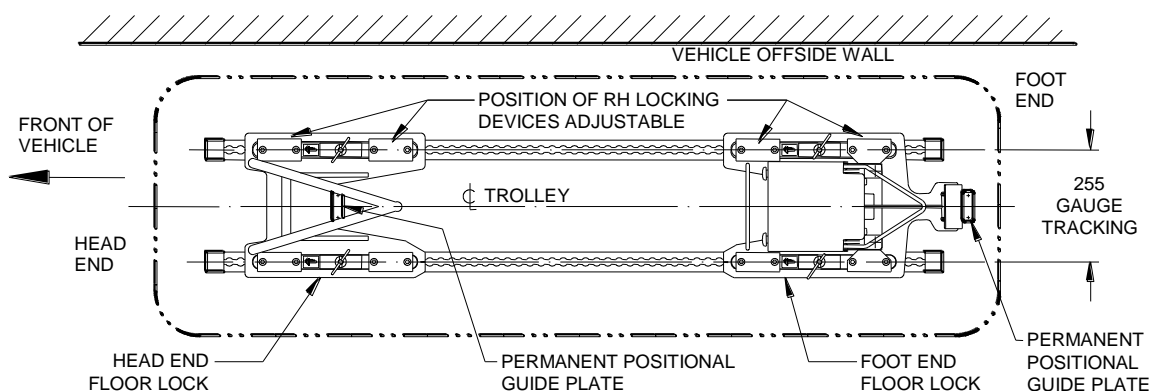
2 Installation of Head End Lock Assembly

- As shown in diagram **A** (left), ensure handle and blade of locking devices are in the fully open (up) position.
- Adjacent to the positional guide plate fitted to the vehicle floor between the tracking at the head end, locate the pegs on the underside of the lock assembly in the tracking.
- As shown in diagrams **B** & **C**, push blade of each locking mechanism down by hand until it stops.
- Push handle of each locking mechanism fully down (diagram **D**) until the integral plunger locks into place (diagram **E**).
- Test for security & safety.

3 Installation of Foot End Lock Assembly

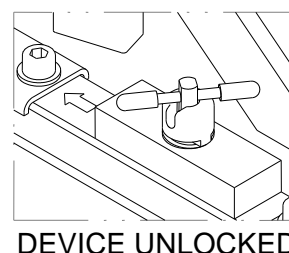
Install foot end lock assembly in exactly the same way as above adjacent to the positional guide plate at the foot end.

User Guide For 2-Part Track-Mounted Floor Lock (255-mm Gauge Unwin System)



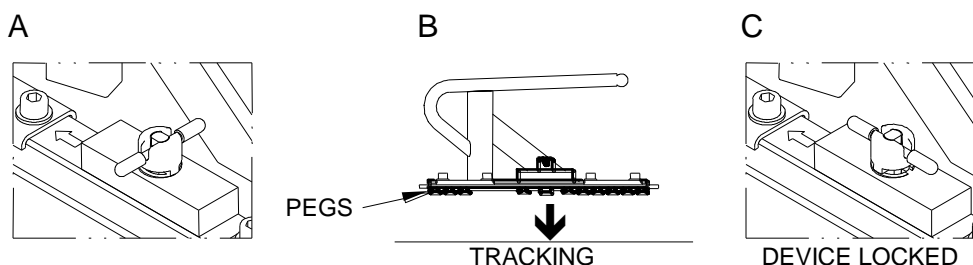
1 Removal of Head End and Foot End Lock Assemblies

- On each Unwin locking device, rotate the plunger crossbar and turret anticlockwise a quarter of a turn. Lift the plunger crossbar from its U-slot in the turret, and rotate it slightly to rest it on top of the turret.
- Remove the assembly from the tracking by sliding the assembly along the track half a hole pitch (12-13 mm) and lifting clear.



2 Installation of Head End Lock Assembly

- On each Unwin locking device, rotate the plunger crossbar until it snaps into the U-slot on the turret (diagram **A** below). Do not rotate the turret clockwise at this stage.
- Close to the positional guide plate fitted to the vehicle floor between the tracking at the head end, engage the pegs on the underside of the lock assembly in the tracking (diagram **B**).
- Slide the assembly towards its required position until both plungers locate in the track.
- For each of the two Unwin devices, use the plunger crossbar to rotate the turret clockwise a quarter of a turn (diagram **C**). The assembly will be locked rigidly to the tracking.
- Test for security and safety.

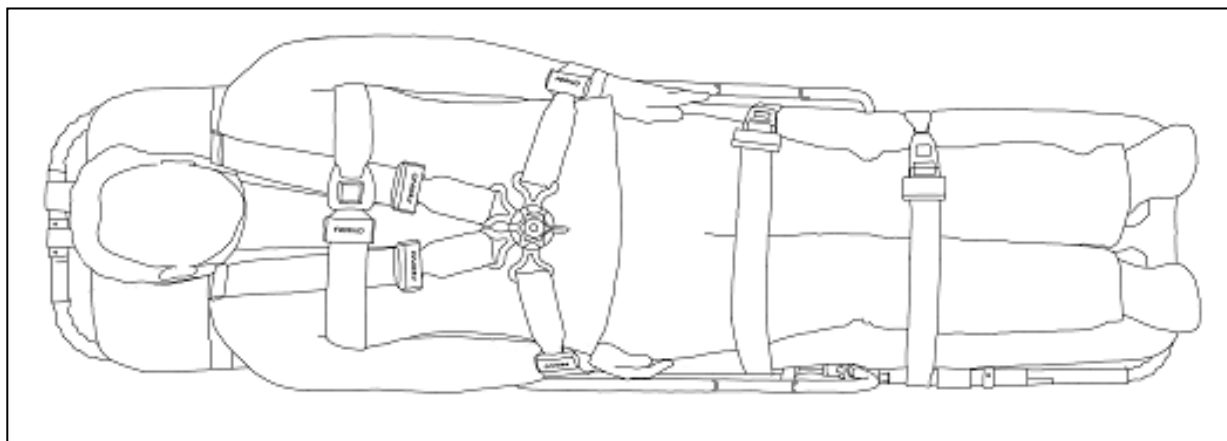


3 Installation of Foot End Lock Assembly

Install foot end lock assembly in exactly the same way as above adjacent to the positional guide plate at the foot end.

Using the Restraints (Pegasus Trolley)

1. The patient should be secured using the harness and both single strap restraints.
2. Dispose of and replace any restraints that are worn, damaged or have been involved in any accident – they may have hidden damage.
3. Unbuckle all restraints and lay the straps out of the way before transferring the patient.
4. Transfer the patient onto the trolley using recognised techniques.
5. Buckle the harness by inserting all three tangs into the buckle until they lock in place. Adjust the shoulder straps so they are snug against the patient's shoulders.
6. Fasten the one-piece restraint across the patient's chest and under the arms.
7. Fasten the two leg restraints and adjust to ensure patient comfort.
8. To release the harness, twist the buckle lever.

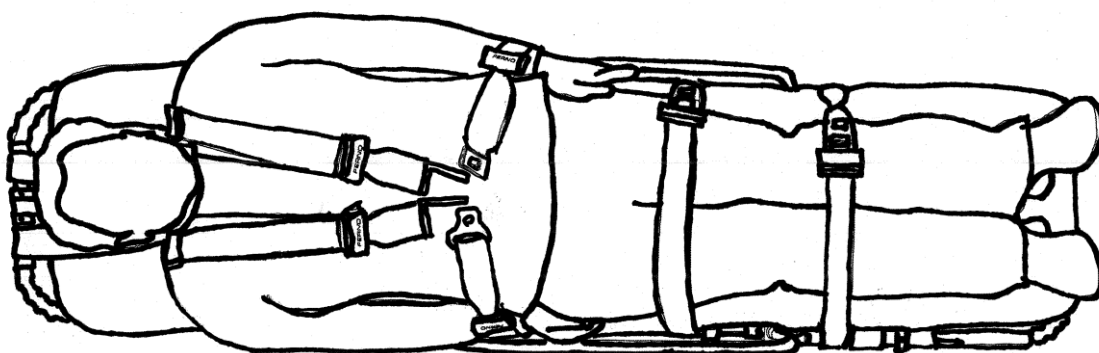


NOTE

To remove the four-point harness, unclip all four brackets from mounting pegs positioned on the trolley frame.

Using the Restraints (Pegasus MK2)

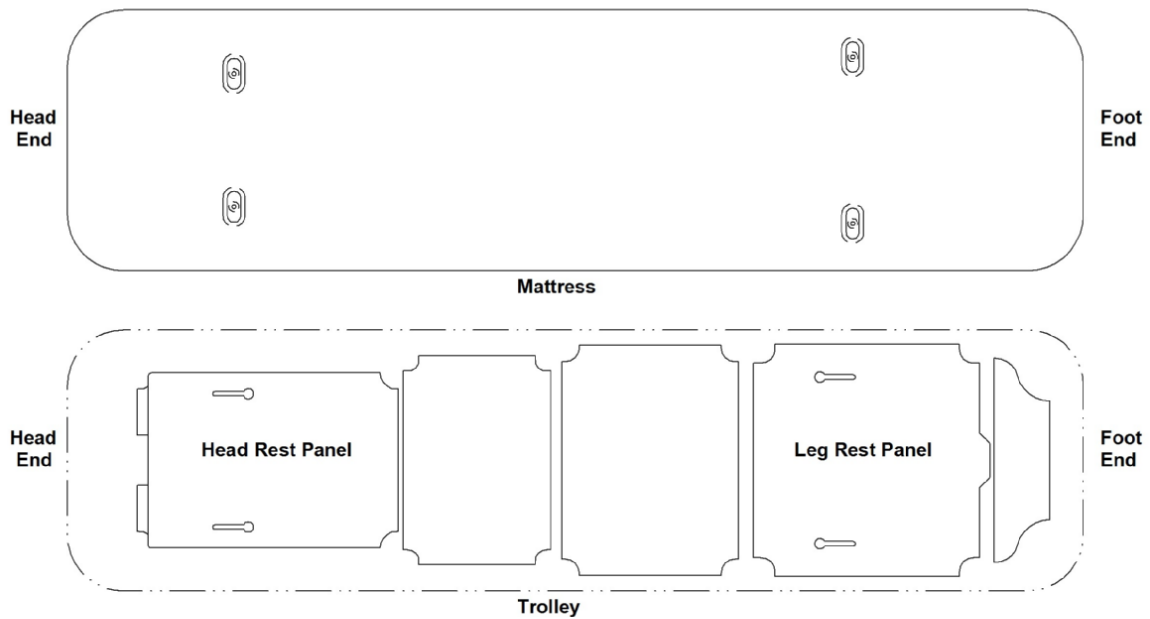
9. The patient should be secured using the harness and both single strap restraints.
10. Dispose of and replace any restraints that are worn, damaged or have been involved in any accident – they may have hidden damage.
11. Unbuckle all restraints and lay the straps out of the way before transferring the patient.
12. Transfer the patient onto the trolley using recognised techniques.
13. To secure the 4 point harness, slide the two buckles on the shoulder straps onto the buckle on the right hand side strap and then clip left hand side to the right hand side buckle. Adjust the shoulder straps so they are snug against the patient's shoulders and adjust left and right hand side straps so they are snug against the patients sides.
14. Fasten the two leg restraints and adjust to ensure patient comfort.
15. To release the harness, press release button.



NOTE:

To remove the four-point harness, unclip two side brackets and un-loop the shoulder straps from the cross bar at the top of the X Frame.

Fitting the Mattress to the Pegasus Trolley



Ensure the trolley is flat before fitting the mattress. Fit mattress to the Foot End of the trolley first, as follows:

1. Insert the two pegs through the keyhole slots in the Leg Rest Panel, and slide mattress towards the foot end (see Fig 1 and Fig 2). **Note:** Should a peg not fit a slot the peg will need checking for any damage.
2. Raise the mid-section of the mattress slightly (see Fig 3).
3. Insert the two pegs through the keyhole slots in the Head Rest Panel and slide the mattress towards the head end until flat (see enlarged detail in Fig 3).
4. Insert plastic plugs into the round end of keyhole slots to secure mattress (see enlarged detail in Fig 3).

Fig 1

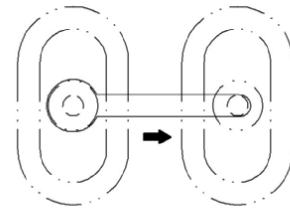


Fig 2

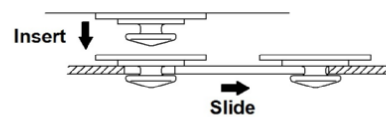
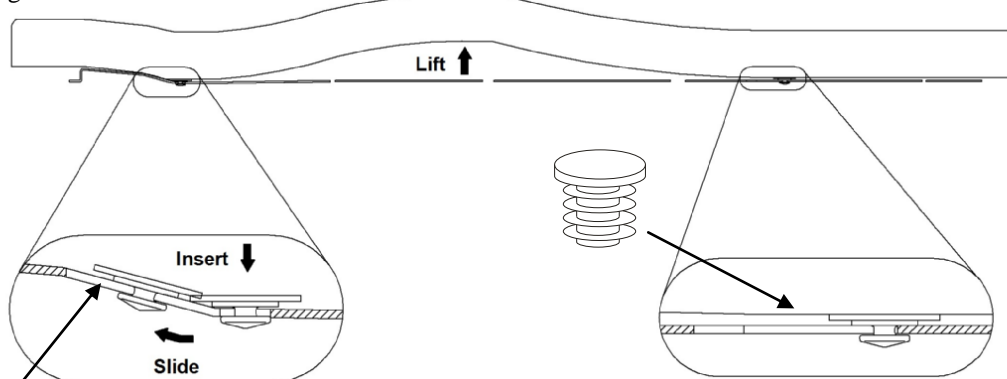


Fig 3



Note: The pegs in the Head Rest Panel should not reach the end of the slot when the Head Rest is down. The gap left allows movement when the Head Rest is raised.

To remove the mattress the trolley should be flat. Disengage the four pegs from the keyhole slots, starting with the two at the head end.

4. Trolley Features

Restraints

Each trolley is equipped with a 4-point harness and two restraint straps, **all of which should be used at all times**. The harness is secured to the trolley using locating posts with hooks, and each strap has loops so that they can be easily attached to the trolley frame.

Cot Sides

Cot sides should always be used when the patient has been placed on the trolley. These can be lowered by pulling out the lock pin, the cot sides lock automatically when raised to the vertical position.

NOTE:- Cot sides are not intended to be used to manoeuvre; lift the trolley; or as seat, damage may result from this practice.

Backrest

The backrest may be locked in any inclined position. Support the backrest with one hand (to avoid sudden movement). Squeeze the control lever with the other hand. Raise the backrest to the desired angle and release the lever to lock it in position. Support the backrest while making adjustments. The backrest also incorporates superior support for CPR. **DO NOT** use the backrest to manoeuvre the trolley under any circumstances. When using the trolley as a seat in a PTS vehicle ensure the headrest is in its lowest position.

Headrest

The Pegasus is provided with a detachable headrest that affords support particularly in the patient seated position. The black push button, located at the top of the backrest, allows the fitting and removal of the headrest, which can be rotated through half a turn to provide either a cup shape head support or flat support to incorporate a pillow. A vehicle CEN tested stowage bracket, for the headrest, is also available.

Push/Pull Handles

IMPORTANT

When the push/pull handles are not in use then they should be locked in their folded position.

The pull handles have a unique feature, which enables them to be locked securely into the extended position. This enables them to be used as push/pull handles.

To operate this feature, unclip the push/pull handle extension from the securing clip and fully extend the handle. Slide the knurled sleeves over the hinges to prevent the handle folding up, enabling the push handle feature.

When folding the handles, pull and **HOLD** the knurled sleeves against the stops to ensure the knurled sleeves are clear of the hinges, then fold the handle and push into the securing clip.

The head end push/pull handle should be locked in place when not in use.

NOTE:- If knurled sleeves are not held clear of the hinge section during the folding procedure damage may result to same.

Length Reduction Facility

A feature of the trolley is the capability of the head end of the trolley to fold down, thus allowing the trolley to be adapted for different circumstances.

Additionally, the foot end of the top frame and tray on the PTS version of the Pegasus will fold down, thus enabling the trolley to be used within a Patient Transport Vehicle as either a normal trolley or as a seat base.

Head End Fold Down

The benefit of a shorter trolley using the head end fold section can only be achieved with the trolley in the elevated position, the backrest in a partially raised.

- Using the foot pedal raise the trolley to its maximum height.
- Stand at the head end of the trolley and grasp the two knurled sleeves, located one each side of the trolley frame.
- Pull each knurled sleeve against the springs until the head end section can be folded down.
- Adjust the backrest angle to achieve the shortest length possible whilst considering the comfort of the patient. **Only leave the trolley in this condition until sufficient space allows its return to normal length.**
Always ensure that two operators are with a laden trolley at all times

- To return the trolley to normal length, lift the folded head end and the spring loaded knurled sleeves will return to their locked position. Adjust the backrest as necessary.
- Hold the foot pedal down and lower the trolley.

Foot End Fold Down (PTS version only)

IMPORTANT

When changing from PTS vehicle position, with the fold down frame locked into its normal position, ensure the push/pull handle does not interfere with the foot end floor lock bracket

- Stand at the foot end of the trolley and grasp the two knurled sleeves, located one each side of the trolley frame.
- Depress the spring loaded pins, which are positioned underneath each sleeve. This will allow each sleeve to be pushed along the frame, thus releasing the foot end of the frame to drop down.
- The foot end tray can now be shortened by simply pulling out the spring loaded knob and folding the tray down.
- Stow the push/pull handle below the lock-bracket. **Do not raise the trolley top when in this condition.**
- The trolley is now ready for use as a seat base within the Patient Transport Vehicle.
- To return the trolley to its normal length, the reverse procedure should be applied: raise the lowered foot end to its horizontal position and slide both sleeves back over the hinged positions until they lock in position. The trolley is now ready for use normally.

IMPORTANT:

**When using as a seat base the length reduction feature at the foot end MUST BE FOLDED DOWN.
Thus enabling seating for a maximum of three persons (total weight 200 kg)**

Wheels

All wheels have a braking system ensuring that the castor wheel will neither roll nor rotate when the brake lever is applied. A minimum of two brakes should be engaged whenever a patient is being transferred onto or off the trolley.

Leg Rest Features

The following features must be executed with the operator positioned at the foot end of the trolley.

Trendelenberg Position

To raise the leg rest to the Trendelenberg position, grip and support the leg rest frame at the foot end. Lift the leg rest until the support bar locks into position. Maintain a grip on the frame and gradually reduce support of the leg rest until you are confident that the support bar has locked.

To lower the leg rest from the Trendelenberg position, hold the leg rest frame at both sides **at the foot end**. Slide hands forward until fingers contact the support bar on the underside of the leg rest frame. At this point, simultaneously lift and move the support bar forward, thus releasing it from its locked position and slowly lower the leg rest frame to its resting position.

NOTE:

Potential pinch point - care should be taken during operation

Knee Contour (Fowler) Position (when fitted)

To raise the knee contour position, hold both lifting straps (yellow) and lift up. Gradually release the lifting straps, ensuring that the support bar has locked in position.

To lower the knee contour position, hold both release straps (red), lift up and pull straps in the direction of the foot end and slowly lower the frame to its resting position.

NOTE:

Potential pinch point - care should be taken during operation

5. Cleaning and Lubrication

Cleaning

Regular cleaning helps reduce the risk of transmitting disease and enables equipment to function at its optimum.

Steam cleaning with a suitable cleaning additive is the most effective method. The same results may be achieved by using a sponge and mild detergent soap mixed in warm water. For particularly grimy cases, especially if the trolley has been in storage for a long period, it may be necessary to first wash the trolley with a water soluble solvent soaked cloth prior to using soap and water.

Once cleaned, dry the trolley with a soft towel, paying particular attention to swivel and sliding joints. If a compressed air hose is available, you may find that compressed air jets are more effective in drying the hard-to-reach places. Once the trolley is dry, you may wish to apply a liquid car wax to polished surfaces.

Lubrication

Your Ferno Pegasus trolley will work efficiently and safely only when it is well lubricated. You **MUST** lubricate all moving and sliding parts after every inspection or preventative maintenance programme, or if there is inadequate lubrication for the moving parts to operate easily and quietly.

In general terms, almost all sliding and moving parts may be lubricated with a light duty grease. A penetrating fluid lubrication is used on some sliding parts of the trolley. However, when a penetrating fluid lubricant is used, all excess **MUST** be wiped away, to prevent any build-up of dust or grime, which can clog up working parts and impede movement.

Specific recommendations are available in the Pegasus Service Manual, contact Ferno Fieldcare on 01274 851111, for details.

6. Warranty and Service

Ferno (UK) Ltd. standard terms and conditions apply to all sales. A copy is available on request. These contain full details of warranty terms and do not limit the statutory rights of the customer.

For service, maintenance and any questions regarding this, or any other Ferno product, please contact:

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BD19 4TZ
Telephone: +44 (0) 1274 851999
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or your local distributor.

**PREVENTATIVE MAINTENANCE MUST BE IN ACCORDANCE WITH
THE RECOMMENDATIONS IN THE SERVICE BOOK PROVIDED WITH
EACH TROLLEY**

7. Technical Data

Product Name	Pegasus Trolley
Overall Length	1905 mm
Folded Length (Foot End Only)	1440 mm
Folded Length (Head End Only)	1950 mm
Minimum Folded Length (Both Ends)	1450 mm
Overall Width	570 mm
Maximum Height (excluding mattress)	875 mm (mid position)
Minimum Height	470 mm
Weight (Including Mattress)	66 kg
Max SWL lowest Position	300 kg
Max SWL Elevated	200kg
Construction Materials	Aluminium Tubing Aluminium Castings Plastic Injection Mouldings

IMPORTANT NOTE

The ambulance vehicle must be fitted with a ramp or tail lift to assist trolley loading. Contact our Technical Sales Department on 01274 851999 for further details.



The CE mark on this product demonstrates conformity with the requirements of the EC Directive 93/42/EEC for Medical Devices.

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As our policy is one of continuous development Ferno (UK) Ltd reserves the right to change the specifications without notice.

Stock Code: 2003-0073