



Accessory Kit 082-2134 Model 173 Rear Hook Update

Description

This kit includes parts to update one Ferno® Model 173 cot fastener. The update improves the function of the fastener by adding precision adjustment.

The Model 173 cot fastener system and this kit are for use only with Ferno® Model 28 and Model 28-Z PROFlexx® cots. Updated fasteners remain compatible with all older Ferno® Model 28 series cots.

Parts Supplied

1 ea Model 173 Rear Hook

Before You Begin

Inspect your existing fastener hook before using this update kit.

- If your fastener’s rear hook is permanently mounted to the ambulance floor by two large screws, follow the instructions in “Updating the Model 173-2 Permanently-Mounted Rear Hook” in this manual.
- If your fastener’s rear hook attaches to an aluminum floor plate, follow the instructions in “Updating the Model 173-3 Removable Rear Hook” in this manual.
- Backing (or anchor) plates are required to be installed under the ambulance at all mounting points. See the Model 173-2 or Model 173-3 Installation Manual for complete installation details. Contact Ferno Customer Relations for free manuals.

Ferno Customer Relations



Customer service and product support are important aspects of each Ferno product. For assistance or information:

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 Wilmington, Ohio 45177-9371 U.S.A.



Model 173 Rear Hook



Installation Instructions
234-3366-01

Parts Provided: Kit 082-2134

WARNING

A fastener installed without backing plates can fail in a crash. Use properly installed backing plates to secure the fastener at all mounting points.

Important

The fastener is designed to be installed with backing (anchor) plates at all mounting points. If the vehicle in which you are installing the fastener does not have the required backing plates, have them installed. See the Model 173-2 or 173-3 Installation Manual for complete installation information.

Limited Warranty Statement

The products sold by Ferno are covered by a limited warranty. The actual terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are available upon request by calling 1.800.733.3766 or 1.937.382.1451.

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Updating the Model 173-2 Permanently-Mounted Rear Hook

ITEMS REQUIRED FOR INSTALLATION (NOT SUPPLIED)

1/2" Socket head cap screw*	2 ea.
1/2" Jam nut*	2 ea.
1/2" Lock washer	2 ea.

* The socket head cap screws and jam nuts should be of at least SAE Grade 5, with a corrosion-resistant coating (zinc plating recommended) and a UNC-2 threading. The length of the screws will be determined by the combined thickness of the patient compartment floor and backing plates. When installed, the screws should extend beyond the backing plates a minimum of 3/4" (1.9 cm).

TOOLS REQUIRED

1/4" Allen wrench	1 ea.
3/4" Box or socket wrench	1 ea.

- Penetrating oil (WD-40®, Liquid Wrench® or similar)

REMOVING THE OLD REAR HOOK

Ferno specifies 1/2" socket head cap screws be used to mount the Model 173-2 fastener. These screws can be removed using a 1/4" Allen wrench and 3/4" box or socket wrench.

If the screws are difficult to remove, apply a penetrating oil (for example, WD-40®, Liquid Wrench® or similar) for the contact time recommended by the manufacturer.

Do not reuse any old parts. Discard the old rear hook and the screws, jam nuts and washers from the old installation. Use only new screws, jam nuts and washers to install the new rear hook.

Clean the area where the old rear hook was installed before installing the new rear hook.

INSTALLING THE NEW REAR HOOK

1. Place the rear hook on the ambulance floor with the hook facing the antler (away from the rear doors as indicated in Figure 1).
2. Attach the rear hook with two new 1/2" socket head cap screws, new lock washers, and new jam nuts. To ensure proper thread engagement, the screws should be long enough to extend beyond the backing plates a **minimum** of 3/4" (1.9 cm).

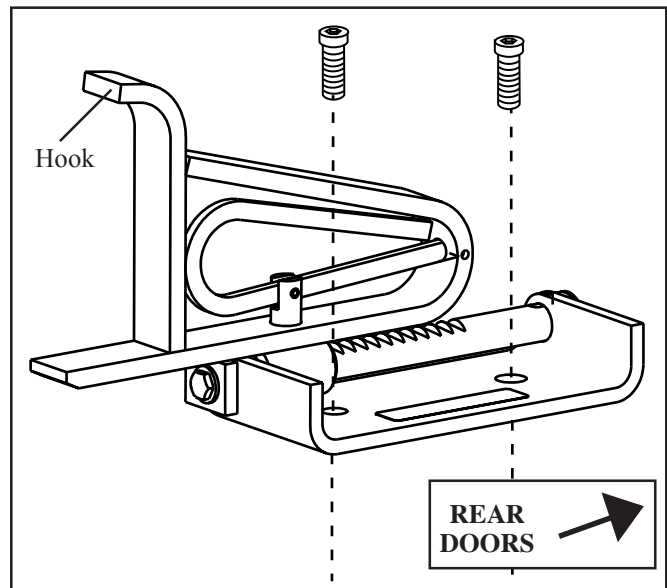


Figure 1 - Mounting the Rear Hook

Important

Do not reuse any portion of the old rear hook. Discard the old rear hook and the screws, jam nuts and washers from the previous installation. Use only **new** screws, jam nuts and washers to install the new rear hook.

WD-40® is a trademark of the WD-40 Company.

Liquid Wrench® is a trademark of Radiator Specialty Company.

Updating the Model 173-3 Removable Rear Hook

ITEMS REQUIRED FOR INSTALLATION (NOT SUPPLIED)

1/2"-13 x 1" Socket head cap screw*	1 ea.
1/2"-13 x 1-1/4" Socket head cap screw*	1 ea.
1/2"-13 Jam nut*	1 ea.

* The socket head cap screws and jam nut should be of at least SAE Grade 5, with a corrosion-resistant coating (zinc plating recommended) and a UNC-2 threading.

TOOLS REQUIRED

1/4" Allen wrench	1 ea.
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REMOVING THE OLD REAR HOOK

To remove the old rear hook:

1. Use a 1/4" Allen wrench to remove the socket-head cap screw closest to the rear doors.
2. Slide the rear hook toward the rear doors to position the upside-down socket head cap screw in the large end of the keyhole slot in the floor plate.
3. Lift the rear hook straight up to remove it from the mounting plate.

Do not reuse any old parts. Discard the old rear hook and the screws and jam nut from the old installation. Use only new screws and a new jam nut to install the new rear hook.

Clean the area where the old rear hook was installed before installing the new rear hook.

INSTALLING THE REAR HOOK

1. Thread a new 1-1/4" socket head cap screw upward through the hole closest to the hook, leaving a 1/2" gap between the screw head and the hook plate (Figure 2). Secure the screw with a new jam nut, using a 3/4" box or socket wrench to tighten the nut.
2. Position the rear hook over the rear-hook floor plate, with the hook facing the antler (away from the rear doors as shown in Figure 2). Set the rear hook with the screw head in the large part of the keyhole.
3. Push the rear hook forward to seat the head of the screw in the small end of the keyhole. (If the rear hook cannot be pushed forward, remove the hook and adjust the position of the 1-1/4" screw slightly, then reinstall the rear hook).
4. Use a new 1" socket head cap screw and 1/4" Allen wrench to secure the rear hook to the floor plate.

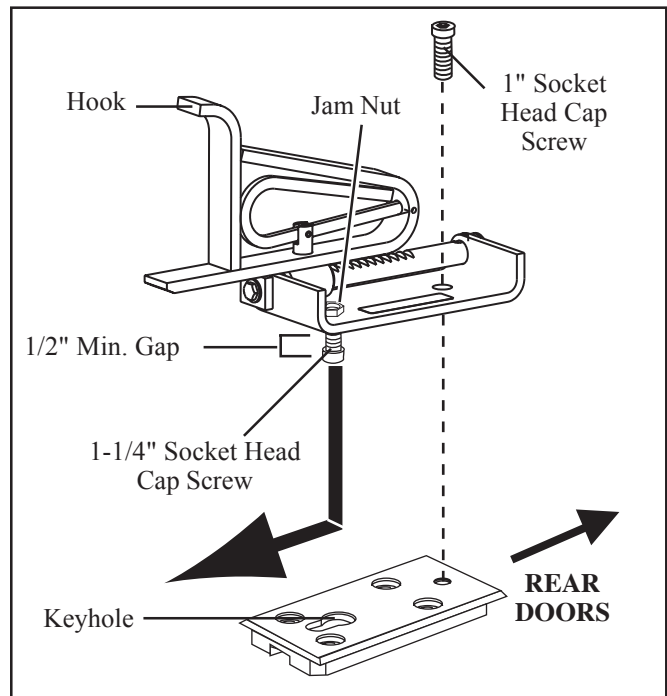


Figure 2 - Attaching the Rear Hook

Important

Do not reuse any portion of the old rear hook. Discard the old rear hook and the screws and jam nut from the previous installation. Use only **new** screws and a new jam nut to install the new rear hook.

Adjusting the Rear Hook

The new rear hook is adjustable. To adjust the rear hook, first place the cot in the fastener and verify that the head-end crosstube is engaged in the fastener antler. Then engage the rear hook as closely as possible against the cot. Follow the appropriate instructions below to adjust the hook forward or rearward on the ratchet bar shaft.

ADJUSTING THE HOOK FORWARD:

1. Lower the hook momentarily and use a 3/32" Allen wrench to loosen the set screw located **on top** of the ratchet bar shaft (Figure 3). Do not remove the set screw - loosen it only. Then raise and engage the hook. (If you can't raise the hook, the set screw is too loose.)
2. Use a 5/32" Allen wrench to **loosen** the socket head cap screw at the rear of the ratchet bar, Figure 3. (To loosen: turn counter-clockwise).
3. At the front of the ratchet bar shaft, use a 7/16" socket or box wrench to **tighten** the hex-head cap screw and shaft, Figure 4. (To tighten: turn clockwise).
4. Repeat Steps 2 and 3 until the cot is held firmly in place by the hook with no front-to-back slack or wiggling.

Note: If the shaft cannot be adjusted any further forward, move the hook itself forward by one locking ratchet position, then adjust the shaft using this position.

5. Use the 5/32" Allen wrench to tighten the socket head cap screw at the rear of the ratchet bar. Verify that both front and rear screws are tight.
6. Disengage the hook and tighten the set screw with the 3/32" Allen wrench.

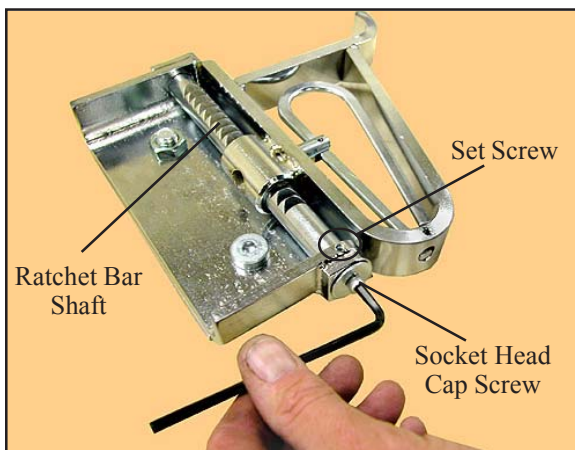


Figure 3 - Adjusting the Set Screw and Socket Head Cap Screw

ADJUSTING THE HOOK REARWARD:

1. Lower the hook momentarily and use a 3/32" Allen wrench to loosen the set screw located **on top** of the ratchet bar shaft (Figure 3). Do not remove the set screw - loosen it only. Then raise and engage the hook. (If you can't raise the hook, the set screw is too loose.)
2. At the front of the ratchet bar shaft, use a 7/16" socket or box wrench to **loosen** the hex-head cap screw and shaft, Figure 4. (To loosen: turn counter-clockwise).
3. At the rear of the ratchet bar shaft, use a 5/32" Allen wrench to **tighten** the socket head cap screw, Figure 3. (To tighten: turn clockwise).
4. Repeat Steps 2 and 3 until the cot is held firmly in place by the hook with no front-to-back slack or wiggling.

Note: If the shaft cannot be adjusted any further rearward, move the hook itself rearward by one locking ratchet position, then adjust the shaft using this position.

5. Use the 7/16" wrench to tighten the hex-head cap screw at the front of the ratchet bar. Verify that both front and rear screws are tight.
6. Disengage the hook and tighten the set screw with the 3/32" Allen wrench.

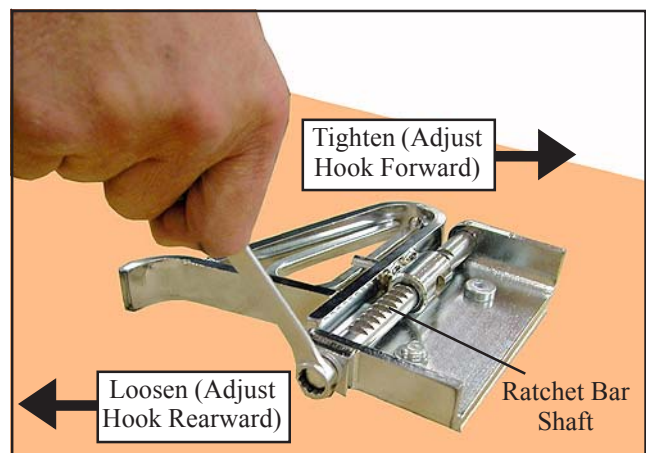


Figure 4 - Adjusting the Shaft

Parts and Service: U.S.A. and Canada

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Parts and Service: Outside North America

To order Ferno parts and for professional repairs, contact your Ferno distributor. Your distributor is the only agent authorized by Ferno to manage, service, and repair Ferno products.