

# Retrofit Instructions

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Medical

**Important  
Information**

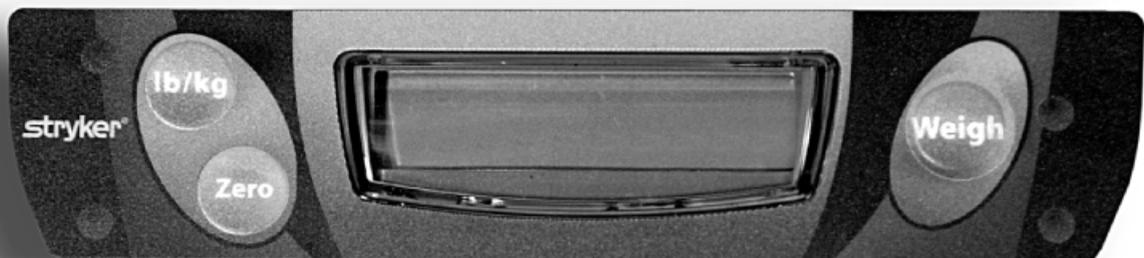
File in your  
maintenance  
records

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Stretcher Scales Option

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For parts or technical  
assistance call  
800 327 0770 (option 2)



# Stretcher Scale Retrofit Kit Assembly and Installation Checks

This checklist is used to document pre–shipping and installation checks of the Stretcher Scale. Completion of this form is required to document installation of the Stretcher Scale and to facilitate any future maintenance the unit may require. Section I is completed prior to shipment of the Stretcher Scale Retrofit Kit. Complete Section II immediately following installation of the Stretcher Scale Retrofit Kit. For each required check, indicate completion by initialing in the Checked By box. Please refer questions regarding this sheet to Stryker Medical Technical Support or Advanced Quality Engineering (1 800) STR–YKER (1 800 787–9537).

## Stretcher Scale Field Upgrade Checks

### Section I: Pre–Shipping Checks

| Check |   | Checked By |
|-------|---|------------|
| 1     | Date:   |            |
| 2     | Order Entry #:  |            |
| 3     | Line Number:  |            |
| 4     | Load cells and display functionally tested. Record Value: _____ Record<br>display serial number _____ |            |
| 5     | Lift header assembled to print  |            |
| 6     | Verify all components required by the scale retrofit kit are included                                 |            |

Quality Department: Verify Section I complete then sign OK to ship.

|                               |
|-------------------------------|
| OK to Ship: _____ Date: _____ |
|-------------------------------|

### Section II: Installation Checks

| Check |   | Checked By |
|-------|---|------------|
| 1     | Indicate Stretcher Model #: _____ and<br>Serial #: _____        |            |
| 2     | Scale system installed in accordance with retrofit instructions |            |
| 3     | Scale system functionally checked                               |            |
|       | Buttons operate as described in manual                          |            |
|       | Diagnostic mode is functional                                   |            |
|       | Verify accuracy is within specifications using a known weight   |            |

|                                    |           |      |
|------------------------------------|-----------|------|
| Installation Checks Completed by : |           |      |
| Printed Name                       | Signature | Date |

### Return Instructions:

When Section II is complete, return this sheet by mail or fax using the information below.

Mail to:  
Stryker Medical  
Attention: Advanced Quality Engineering  
3800 E. Centre Ave.  
Portage, MI 49002

Fax to:  
Stryker Medical  
Attention: Advanced Quality Engineering  
269) 329–2307

# Scale System Retrofit Instructions – 1–Person

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The following procedure is for stretchers with serial numbers of 0410067643 and lower.

## Required Tools:

Drill w/3/16" & 1/4" Bits

1/4" Drive Ratchet

1/2" Open End Wrench

Masking Tape

7/16" Wrench

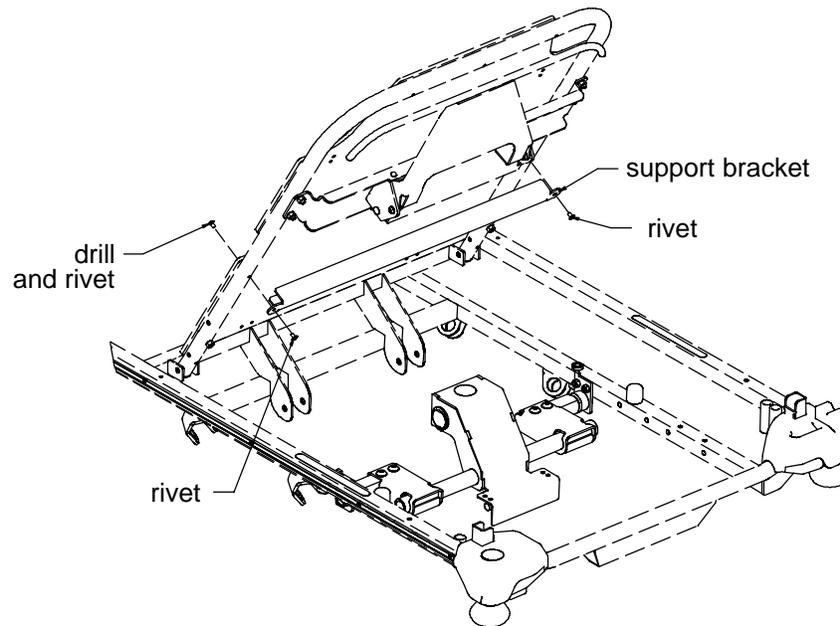
Phillips Screwdriver

Pop Rivet Gun

Side Cutters

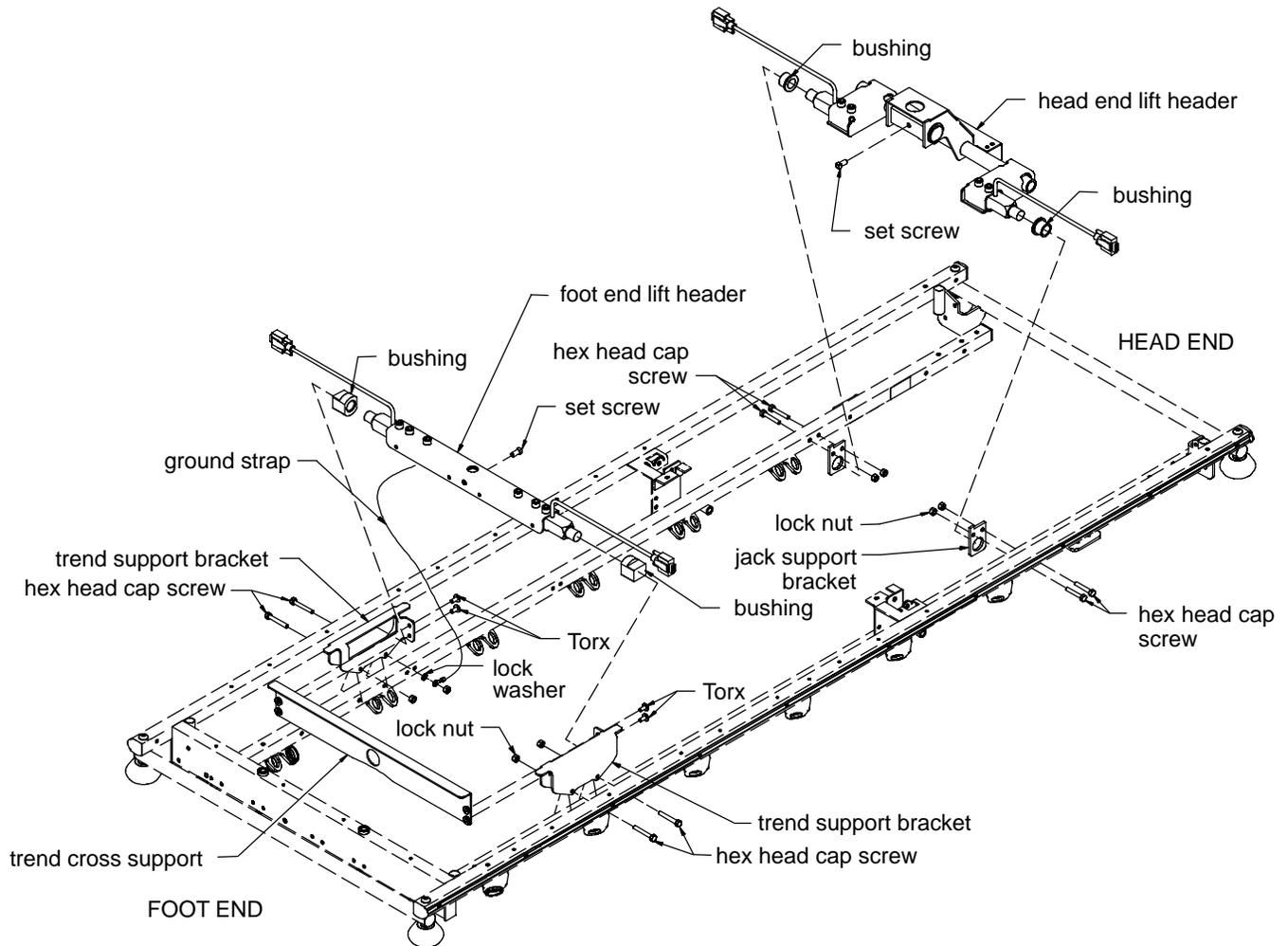
5/16" Allen Wrench

Sawhorse



1. Remove the mattress from the litter.
2. Raise the Fowler to allow access to the back.
3. Using a 3/16" drill bit, drill out the two rivets on the sides of the Fowler skin as indicated on the illustration. Using the existing holes as guides, drill holes through the other side of the Fowler tube.
4. Using two new pop rivets, attach the cross support bracket to the Fowler in the drilled holes. Using two new pop rivets, reattach the litter skin.

# Scale System Retrofit Instructions – 1-Person

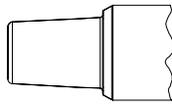


5. Pump the litter all the way up.
6. Remove the  $\frac{1}{2}$ " bolt holding the jack support tube to the jack shaft at the head end of the stretcher. Thread a  $\frac{7}{16}$ -20 fine thread bolt into the top of the jack support to separate it from the jack shaft.
7. Lift the head end of the litter up, swing it over and support it on a sawhorse or the equivalent.
8. Remove the (4)  $\frac{1}{4}$ -20 bolts and nuts holding the head end jack support tube to the litter, and remove the jack support tube assembly from the litter frame. Save the bolts and nuts for reuse.

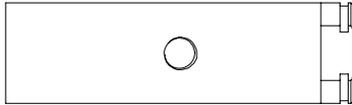
# Scale System Retrofit Instructions – 1–Person

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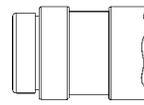
If the top of the jack actuator looks like this:



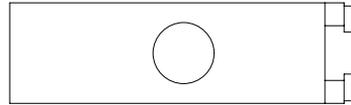
Use this support block.



If the top of the jack actuator looks like this:



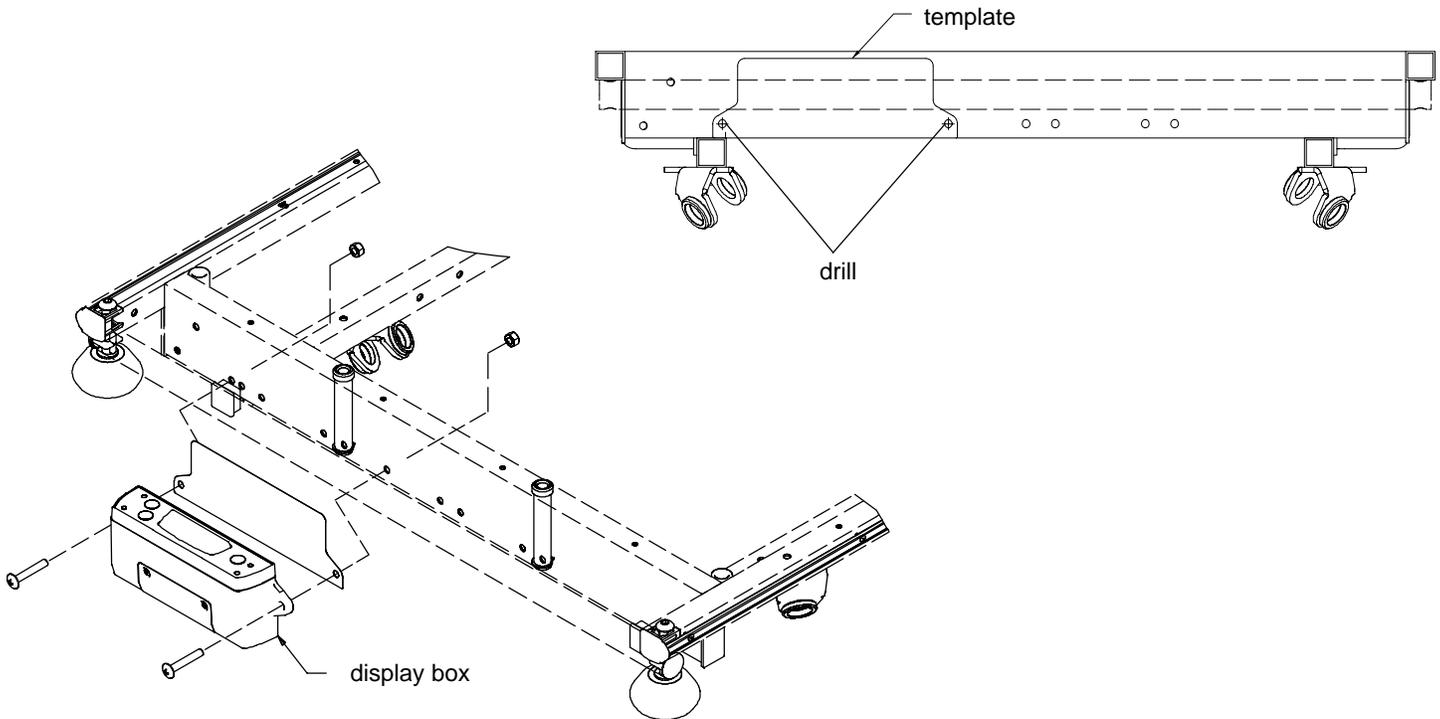
Use this support block.



9. Install the support block on top of the jack actuator. Refer to the above illustrations to determine which block is correct for the type of jack on the stretcher.
10. Grease the ends of the load cells using SynTech grease (Stryker part number 3000–200–700).
11. Install the bushings on the ends of the load cells.
12. Install the jack support brackets on the ends of the load cell bushings with the tabs toward the foot end of the stretcher and pointing toward the top of the litter as shown in the illustration.
13. Install the head end lift header on the litter frame, reusing the (4) ¼–20 bolts and nuts.
14. Swing the litter back over and attach the head end lift header to the jack shaft, reusing the ½” bolt.
15. Remove the hole plug in the foot end litter skin and remove the bolt holding the jack support tube to the jack shaft.
16. Thread a 7/16–20 fine thread bolt into the top of the jack support to separate it from the jack shaft.
17. Lift the foot end of the litter up, swing it out of the way and support it on a sawhorse or the equivalent.
18. Remove the (4) ¼–20 bolts and nuts holding the foot end trend support brackets to the litter frame.
19. Install the new patient left trend support bracket on the litter frame reusing two of the ¼–20 bolts and nuts.
20. Grease the ends of the load cells using SynTech grease (Stryker part number 3000–200–700).
21. Install the bushings on the ends of the load cells.
22. Insert the new footend scale lift header into the channel in the patient left trend support bracket. Orient the header as shown in the illustration.
23. Install the channel in the patient right trend support bracket onto the new footend scale lift header.
24. Install the patient right trend support bracket onto litter frame reusing the remaining two ¼–20 bolts and nuts. Attach the ground strap as shown in the illustration before installing the lock nuts.
25. Swing the litter back over and attach the foot end lift header to the jack shaft, reusing the ½” bolt. Reinstall the small hole plug in the foot end litter skin.

# Scale System Retrofit Instructions – 1–Person

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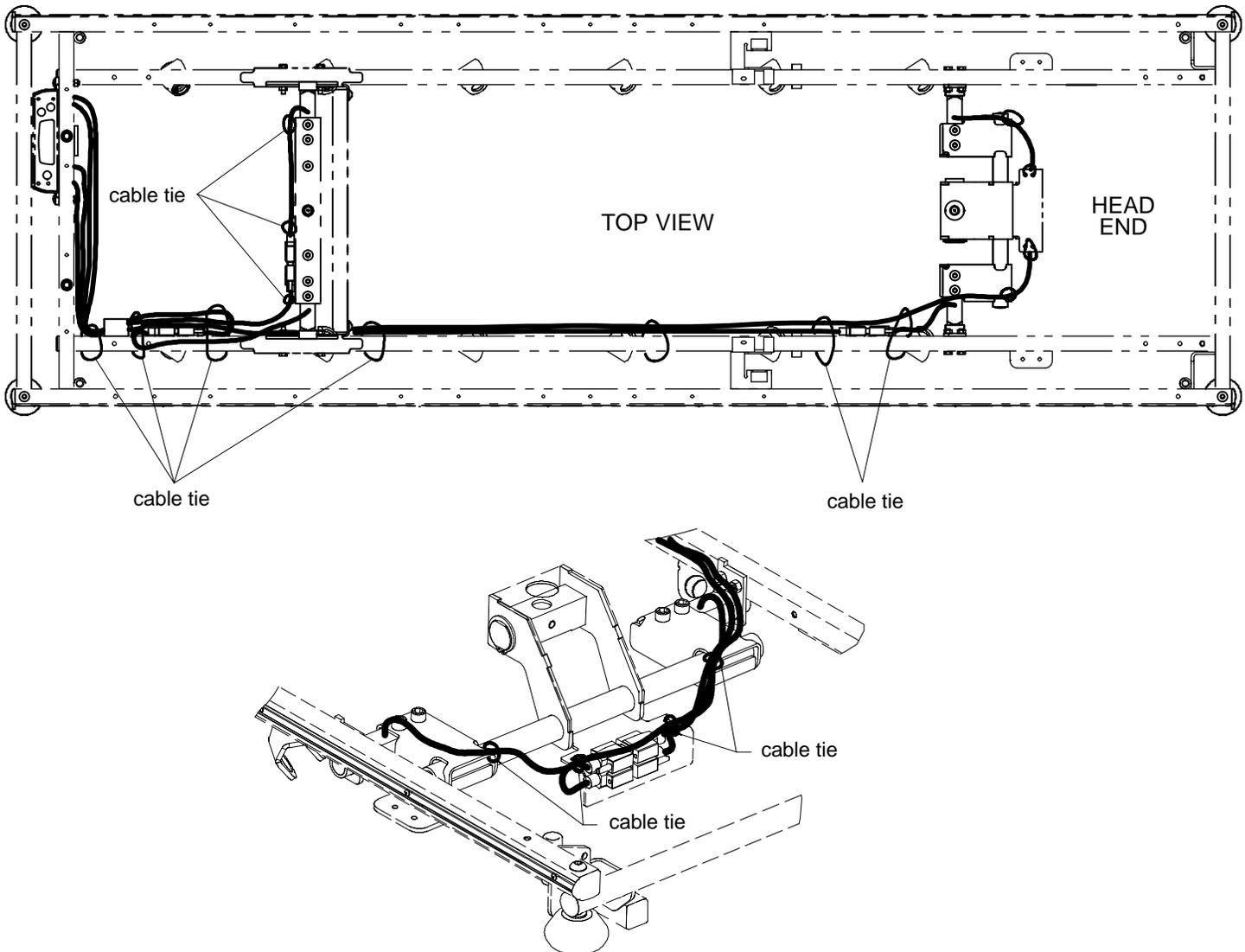
26. Locate the display template on the foot end cross tube as described on the template.
27. Apply masking tape to the bottom of the foot end litter tube to protect it.
28. Using a drill with a 1/4" drill bit, drill through both walls of the foot end cross tube at the two locations as indicated on the template.
29. Using a Phillips screwdriver and a 1/2" open end wrench, use two Phillips head screws and lock nuts to attach the display box to the litter frame.

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## CAUTION

To avoid cracking the plastic display box, don't over-tighten the Phillips head screws when reattaching the display box to the litter frame. Torque the screws to 15 foot-pounds maximum.

# Scale System Retrofit Instructions – 1-Person



30. Connect the display cables to the foot end load cell cables. They're labeled foot/right and foot/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
31. Route the cable down the litter tube and between the Fowler and head end jack support tube.
32. Connect the display cables to the head end load cell cables. They are labeled head/right and head/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
33. Secure the cables to the litter frame with cable ties as shown in the illustrations above. Don't tighten the cable ties yet.
34. Starting at the foot end of the stretcher, working toward the head end, remove the slack in the cables and tighten the cable ties. **Do not** compress the cables when tightening the cable ties.
35. Loop any slack left in the cables at the head end load cells before tightening the cable ties.
36. Trim the ends of the cable ties.
37. Check scale system for functionality and accuracy in all litter positions before returning the stretcher to service. Fill out a copy of the Product History Card (see page 1) and mail or fax it to Stryker.

# 1550 Scale System Retrofit Instructions – 1 Person

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## Required Tools:

Drill w/3/16" & 1/4" Bits

1/4" Drive Ratchet

1/2" Open End Wrench

Masking Tape

Small Standard Screwdriver

7/16" Wrench

Phillips Screwdriver

Pop Rivet Gun

5/16" Wrench

Large Standard Screwdriver

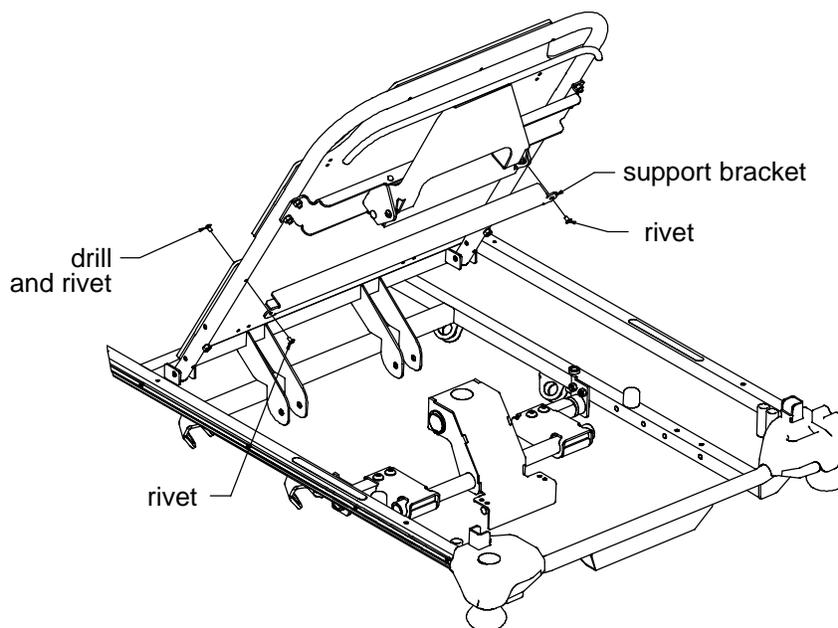
Side Cutters

5/16" Allen Wrench

Sawhorse

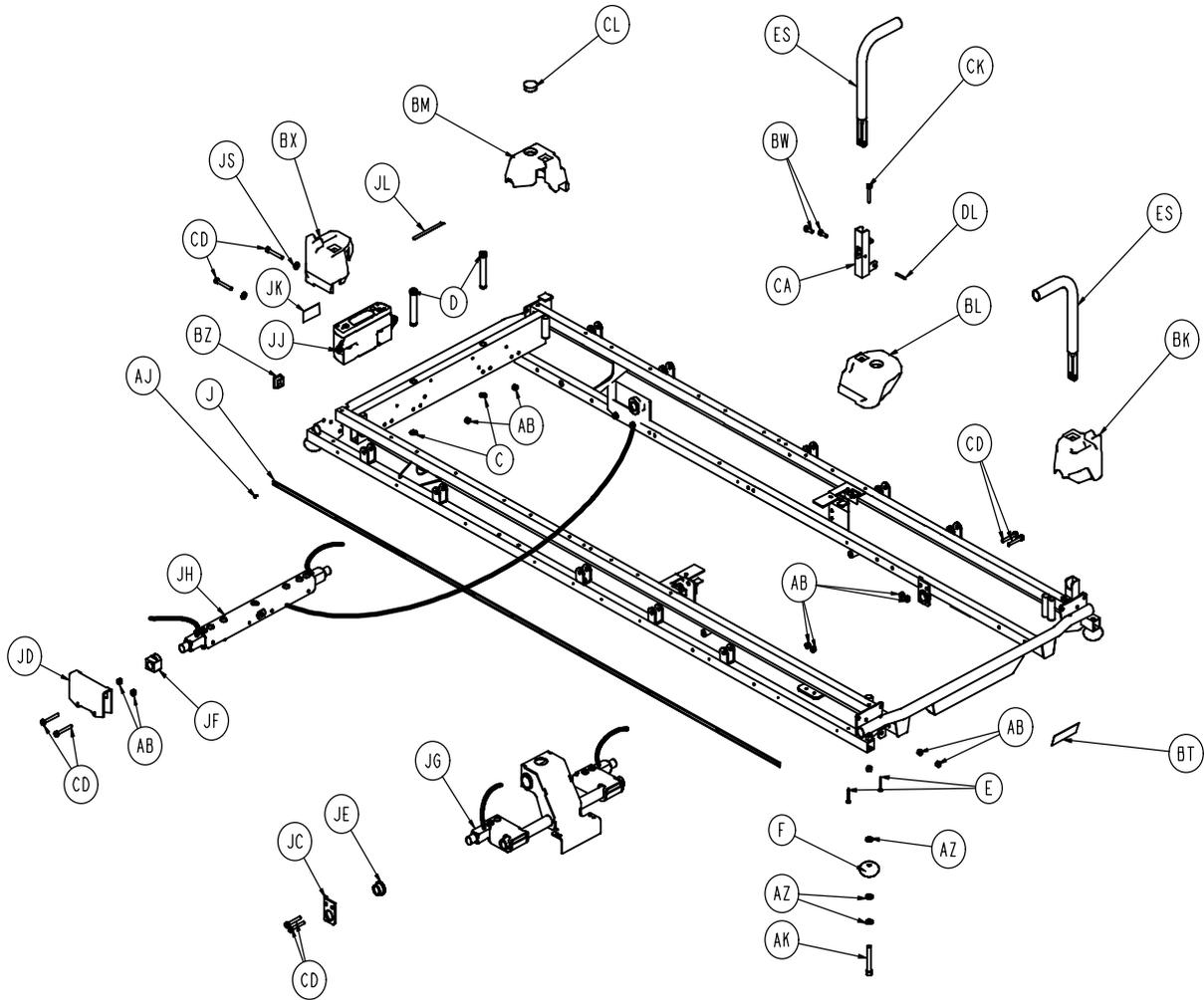
5/32" Allen Wrench

3/8" Drive Ratchet



1. Remove the mattress from the litter.
2. Raise the Fowler to allow access to the back.
3. Using a 3/16" drill bit, drill out the two rivets on the sides of the Fowler skin as indicated on the illustration. Using the existing holes as guides, drill holes through the other side of the Fowler tube.
4. Using two new pop rivets, attach the cross support bracket to the Fowler in the drilled holes. Using two new pop rivets, reattach the litter skin.
5. Pump the litter all the way up.
6. Be sure the stretcher power cord has been unplugged from the wall socket. Properly ground yourself.
7. Lift the foot section and fold it back.
8. Using a 5/16" wrench, remove the 3 hex head screws holding the electrical enclosure cover at the foot end of the litter.
9. Disconnect all cables on the control board, noting their locations so they will be reconnected properly.

# 1550 Scale System Retrofit Instructions – 1 Person



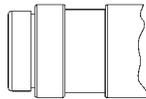
| Item | Part No.     | Part Name               | Qty. | Item | Part No.     | Part Name               | Qty. |
|------|--------------|-------------------------|------|------|--------------|-------------------------|------|
| C    | 28-72        | Retaining Ring          | 2    | D    | 1001-40-12   | Footboard receptacle    | 2    |
| E    | 23-104       | Self-Tapping Screw      | 8    | F    | 926-400-142  | Corner Wheel            | 4    |
| J    | 1010-201-27  | Bumper Extrusion        | 2    | AB   | 16-28        | Nylock Nut              | 61   |
| AJ   | 25-38        | Pop Rivet               | 24   | AK   | 4-201        | Socket Head Cap Screw   | 4    |
| AZ   | 14-21        | Nylon Flat Washer       | 2    | BK   | 1010-201-236 | Corner Cover Hole Slot  | 1    |
| BL   | 1010-201-237 | Corner Cover, Hole/Hole | 1    | BM   | 1010-201-238 | Corner Cover, Slot Only | 1    |
| BT   | 946-1-60     | Logo Label              | 1    | BW   | 3-1          | Hex Hd. Cap Screw       | 1    |
| BZ   | 37-10        | Hole Plug               | 2    | CA   | 1010-254-4   | Receptacle Ass'y, Lt.   | 1    |
| CD   | 3-78         | Hex Hd. Cap Screw       | 6    | CK   | 3-47         | Hex Head Cap Screw      | 14   |
| CL   | 37-59        | Hole Plug               | 2    | DL   | 26-12        | Roll Pin                | 2    |
| ES   | 1211-351-10  | Push Handle Assembly    | 2    | JD   | 1070-10-23   | Trend Support           | 2    |
| JE   | 1070-17-21   | Loadcell Bushing        | 2    | JF   | 1070-17-22   | Loadcell Bushing        | 2    |
| JG   | 1070-17-115  | Lifthead Assembly H/E   | 1    | JH   | 1070-17-170  | Lifthead Assembly F/E   | 1    |
| JJ   | 1070-137-20  | Scale Display Assembly  | 1    |      |              |                         |      |

# 1550 Scale System Retrofit Instructions – 1 Person

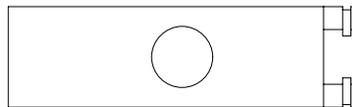
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10. Remove the set screw holding the jack support tube to the jack shaft at both ends of the stretcher.
11. Remove the umbilical assembly.
12. Litter must be taken off completely to replace hood and bellows.
  - Remove litter from base.
  - Remove hood and bellows.
  - Disconnect umbilical cable from base.
  - Assemble new umbilical cable to base.
  - Assemble new hood and bellows.
13. Remove the (4)  $\frac{1}{4}$ -20 bolts and nuts holding the head end jack support tube to the litter, and remove the jack support tube assembly from the litter frame. Save the bolts and nuts for reuse.

If the top of the jack actuator looks like this:



Use this support block.



14. Install the support block on top of the jack actuator. Refer to the above illustrations to determine which block is correct for the type of jack on the stretcher.
15. Grease the ends of the load cells using SynTech grease (Stryker part number 3000-200-700).
16. Install the bushings on the ends of the load cells.
17. Install the jack support brackets on the ends of the load cell bushings with the tabs toward the foot end of the stretcher and pointing toward the top of the litter as shown in the illustration.
18. Install the head end lift header on the litter frame, reusing the (4)  $\frac{1}{4}$ -20 bolts and nuts.
19. Remove the (4)  $\frac{1}{4}$ -20 bolts and nuts holding the foot end trend support brackets to the litter frame.
20. Install the new patient left trend support bracket on the litter frame reusing two of the  $\frac{1}{4}$ -20 bolts and nuts.
21. Grease the ends of the load cells using SynTech grease (Stryker part number 3000-200-700).
22. Install the bushings on the ends of the load cells.
23. Insert the new footend scale lift header into the channel in the patient left trend support bracket. Orient the header as shown in the illustration.
24. Install the channel in the patient right trend support bracket onto the new foot end scale lift header.
25. Install the patient right trend support bracket onto litter frame reusing the remaining two  $\frac{1}{4}$ -20 bolts and nuts. Attach the ground strap as shown in the illustration before installing the lock nuts.
26. Place litter back on base.
27. Using side cutter, snip the four cable ties holding the cables to the side supports.
28. Using a 5/16" wrench, remove the 2 sheet metal screws holding the enclosure to the foot end cross tube.

# 1550 Scale System Retrofit Instructions – 1 Person

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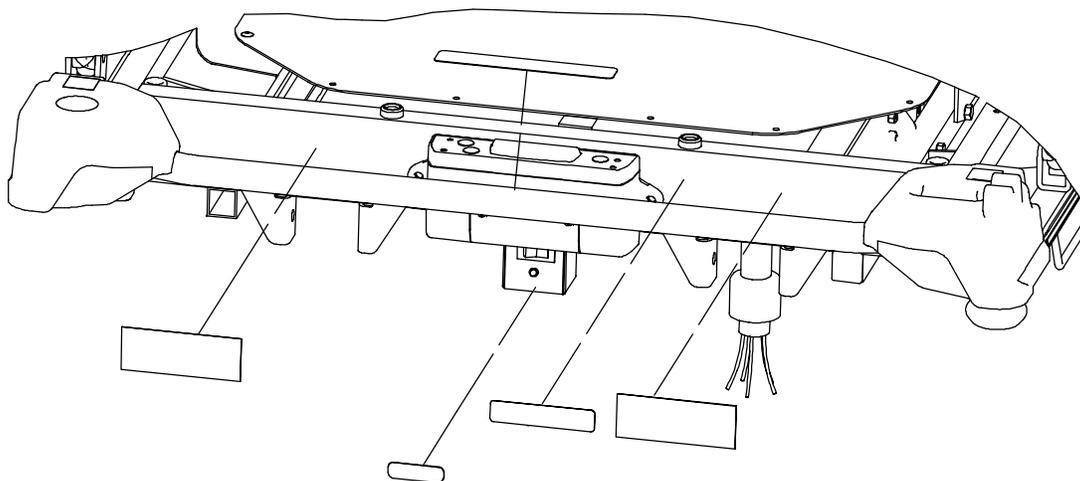
29. Using a 5/32" Allen wrench, remove the two Allen screws and locknuts holding the side supports to the Gatch slides.
30. Remove the enclosure assembly.
31. Remove the four 7/16" holding the slider supports to the litter frame and remove the slider supports.
32. Using a small flat screwdriver, remove the six plastic screws holding the circuit board to the enclosure.
33. Reuse the six standoffs and plastic screws, install the circuit board in the new enclosure.
34. Using a large flat screwdriver, remove the four sheet metal screws holding the motor bracket, allowing the Gatch and Fowler motors to swing down.
35. Align the notchers in the drilling template with the two crankscrew mounting brackets in the inside of the foot end litter crosstube.
36. Using a drill with a 1/4" drill bit, from the inside of the foot end crosstube, drill through both walls of the foot end crosstube at the two locations as indicated on the template.
37. Remove all the labels from the outside of the foot end crosstube. Using alcohol, remove all residue from the crosstube.
38. Using a 3/8" drive ratchet, and a 7/16" wrench, install the new slider supports on the litter frame.
39. Using the two sheet metal screws, install the new enclosure on the litter frame.
40. Using the four sheet metal screws. reinstall the motor bracket.
41. Reconnect all cables to the circuit board and connect the new umbilical cord.
42. Use the two hex head screws and lock nuts to attach the display box to the litter frame.

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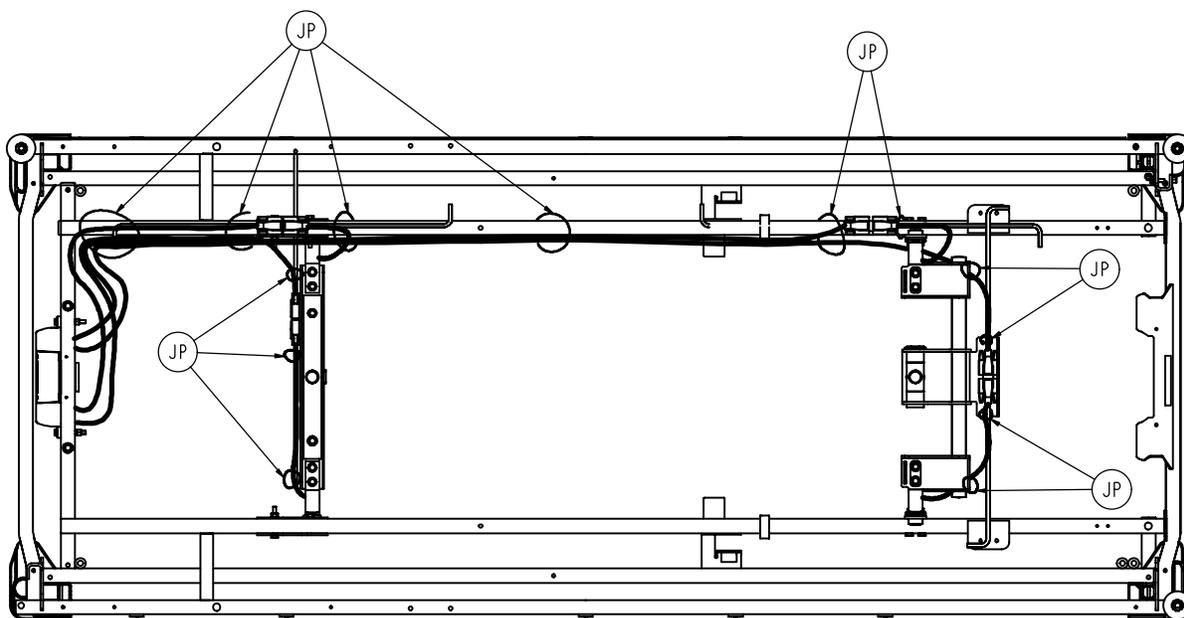
## CAUTION

To avoid cracking the plastic display box, don't over-tighten the Phillips head screws when reattaching the display box to the litter frame. Torque the screws to 15 foot-pounds maximum.

43. Apply the new labels to the foot end crosstube as shown in the illustration below.



# 1550 Scale System Retrofit Instructions – 1 Person



BOTTOM VIEW

| Item | Part No.     | Part Name | Qty. |
|------|--------------|-----------|------|
| JP   | 3000-300-113 | CableTie  | 13   |

44. Connect the display cables to the foot end load cell cables. They're labeled foot/right and foot/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
45. Route the cable down the litter tube and between the Fowler and head end jack support tube.
46. Connect the display cables to the head end load cell cables. They are labeled head/right and head/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
47. Secure the cables to the litter frame with cable ties as shown in the illustrations above. Don't tighten the cable ties yet.
48. Starting at the foot end of the stretcher, working toward the head end, remove the slack in the cables and tighten the cable ties. **Do not** compress the cables when tightening the cable ties.
49. Trim the ends of the cable ties.
50. Replace the rubber bumpers under the foot section with the new plastic bumpers and new brackets.
51. Reattach the enclosure cover.
52. Check the scale system for functionality and accuracy in all litter positions before returning the stretcher to service. Fill out a copy of the Product History Card (see page 1) and mail or fax it to Stryker.

# Scale System Retrofit Instructions – 2–Person

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The following procedure is for stretchers with serial numbers of 0410067643 and lower.

## Required Tools:

Drill w/3/16" & 1/4" Bits

1/4" Drive Ratchet

1/2" Open End Wrench

7/16" Wrench

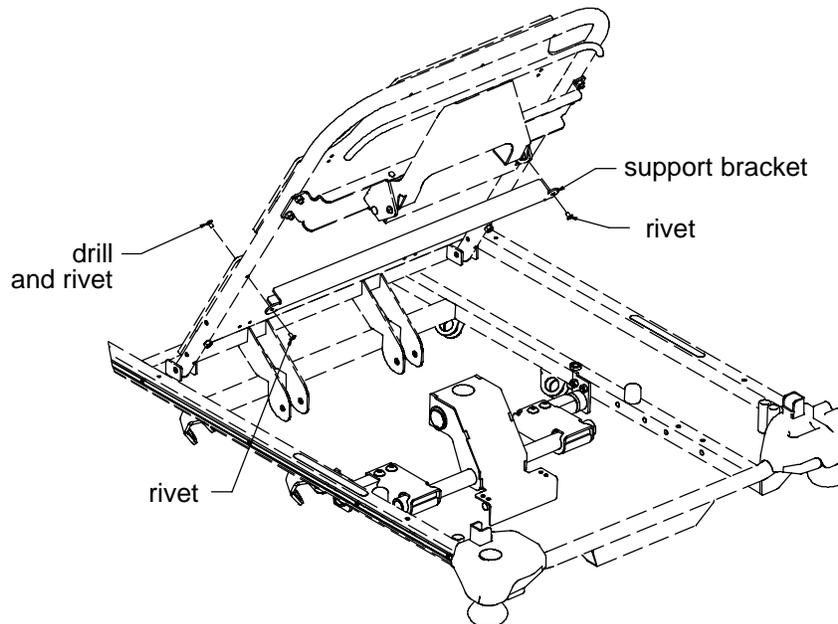
Phillips Screwdriver

Pop Rivet Gun

Side Cutters

5/16" Allen Wrench

Masking Tape



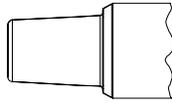
1. Remove the mattress from the litter.
2. Raise the Fowler to allow access to the back.
3. Using a 3/16" drill bit, drill out the two rivets on the sides of the Fowler skin. Using the existing holes as guides, drill holes through the other side of the Fowler tube.
4. Using two new pop rivets, attach the cross support bracket to the Fowler in the drilled holes. Using two new pop rivets, reattach the litter skin.



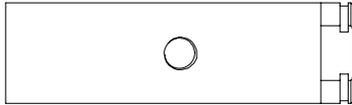
# Scale System Retrofit Instructions – 2–Person

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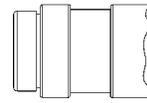
If the top of the jack actuator looks like this:



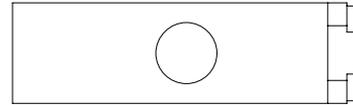
Use this support block.



If the top of the jack actuator looks like this:



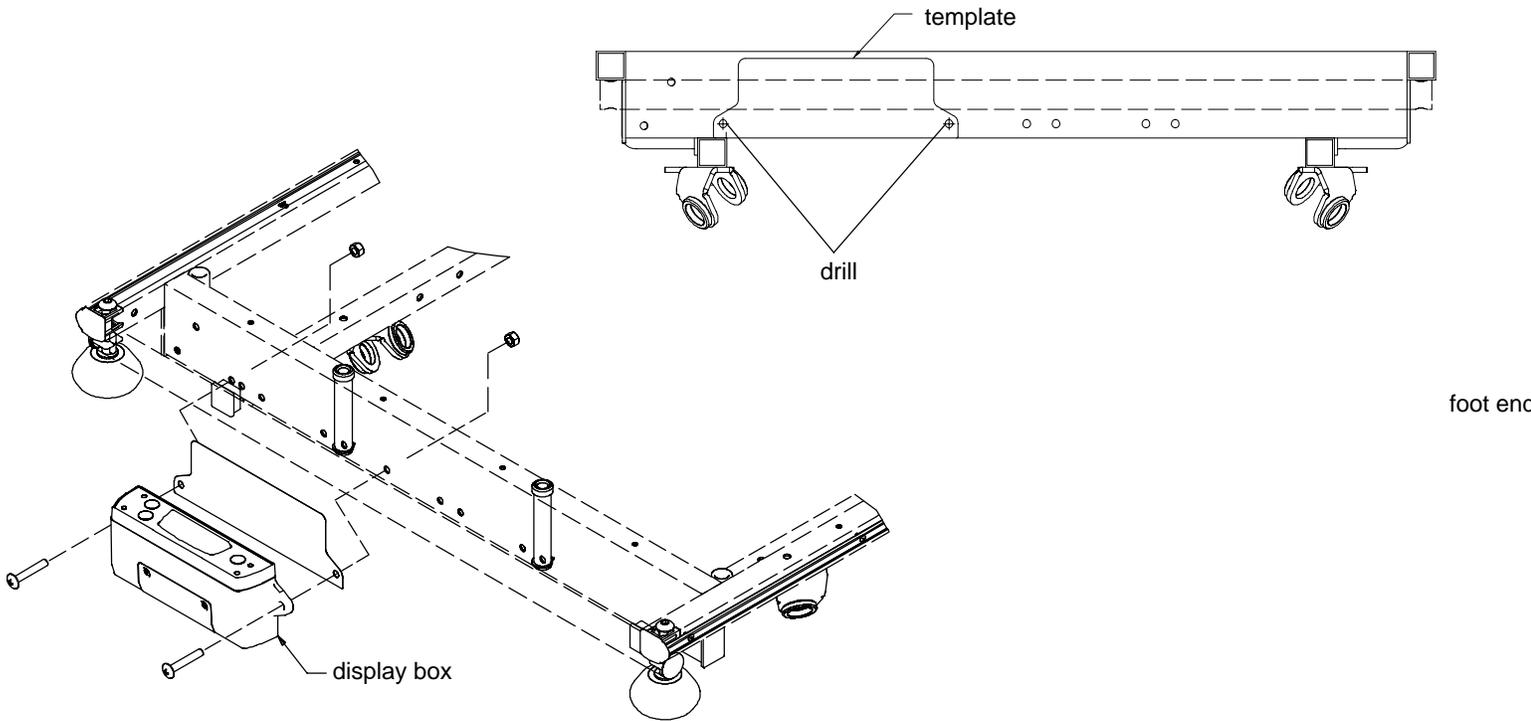
Use this support block.



9. Install the support block on top of the jack actuator. Refer to the above illustrations to determine which block is correct for the type of jack on the stretcher.
10. Remove the (4) ¼–20 bolts and nuts holding the foot end trend brackets and remove the brackets from the litter frame. Save the screws and nuts for reuse.
11. Grease the ends of the load cells using SynTech grease (Stryker part number 3000–200–700).
12. Install the bushings on the ends of the load cells.
13. Insert the foot end scale header assembly into the new trend support brackets with the weld nut toward the head end of the stretcher.
14. Attach the trend brackets to the litter frame reusing the ¼–20 bolts and nuts. Don't fully tighten the fasteners yet.
15. Install the foot end trend cross support inside the flanges on the trend brackets.
16. Install the foot end lift header ground strap at the hole in the in the patient right side trend bracket as shown in the illustration.
17. Tighten the fasteners holding the foot end trend brackets to the litter frame.
18. Remove the head end jack support brackets from the litter.
19. Grease the ends of the load cells on the head end lift header using SynTech grease (Stryker part number 3000–200–700).
20. Install the bushings on the ends of the load cells with the tapered end out.
21. Install the jack support brackets on the ends of the load cell bushings with the tabs toward the foot end of the stretcher and pointing toward the top of the litter.
22. Attach the jack support brackets to the litter frame reusing the (4) ¼–20 bolts and nuts.

# Scale System Retrofit Instructions – 2–Person

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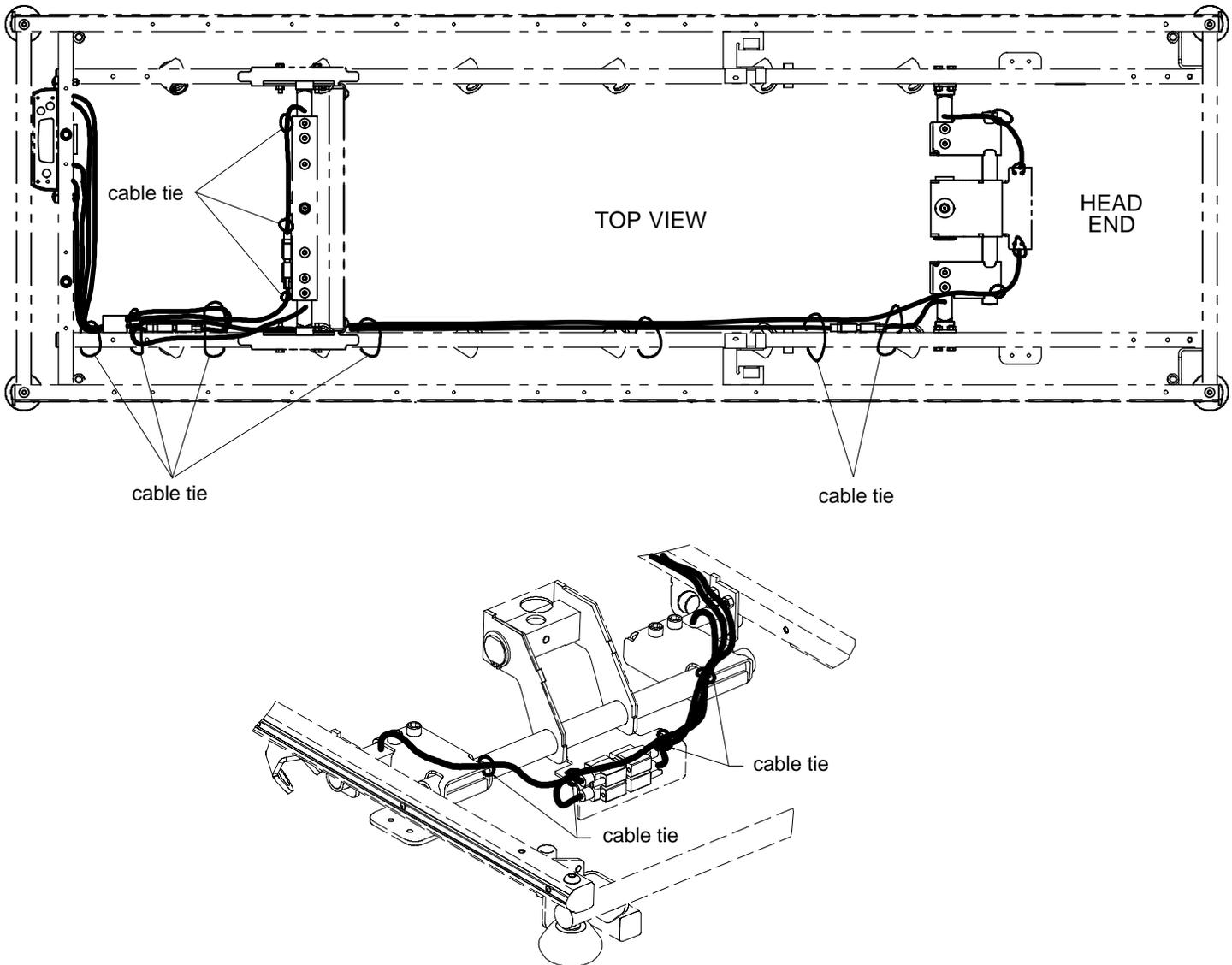
23. Locate the display template on the foot end cross tube as described on the template.
24. Apply masking tape to the bottom of the foot end litter tube to protect it.
25. Using an 1/4" drill bit, drill through both walls of the foot end cross tube at the two locations indicated on the template.
26. Using a Phillips screwdriver and a 1/2" open end wrench, use the two Phillips head screws and lock nuts to attach the display box to the litter frame.

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## CAUTION

To avoid cracking the plastic display box, don't over-tighten the Phillips head screws when reattaching the display box to the litter frame. Torque the screws to 15 foot-pounds maximum.

# Scale System Retrofit Instructions – 2-Person



27. Connect the display cables to the foot end load cell cables. They're labeled foot/right and foot/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
28. Route the cable down the litter tube and between the Fowler and head end jack support tube.
29. Connect the display cables to the head end load cell cables. They are labeled head/right and head/left to help with proper connection. Tighten the screw jacks on the load cell cables equally.
30. Starting at the foot end of the stretcher, working toward the head end, remove the slack in the cables and tighten the cable ties. **Do not** compress the cables when tightening the cable ties.
31. Loop any slack left in the cables at the head end load cells before tightening the cable ties.
32. Trim the ends of the cable ties.
33. Reattach the litter.
34. Check scale system for functionality and accuracy in all litter positions before returning the stretcher to service. Fill out a copy of the Product History Card (see page 1) and mail or fax it to Stryker.

# Scale System Retrofit Instructions

Scale Option Kit for 26" Litters – part number 1070-700-101

Scale Option Kit for 30" Litters – part number 1070-700-102

The following procedure is for stretchers with serial numbers of 0410067644 and higher.

## Required Tools:

3/8" Drive Ratchet

T-40 Torx Bit

1/4" Drive Ratchet

1/2" Socket w/Extension

Rivet Gun

T-20 Torx

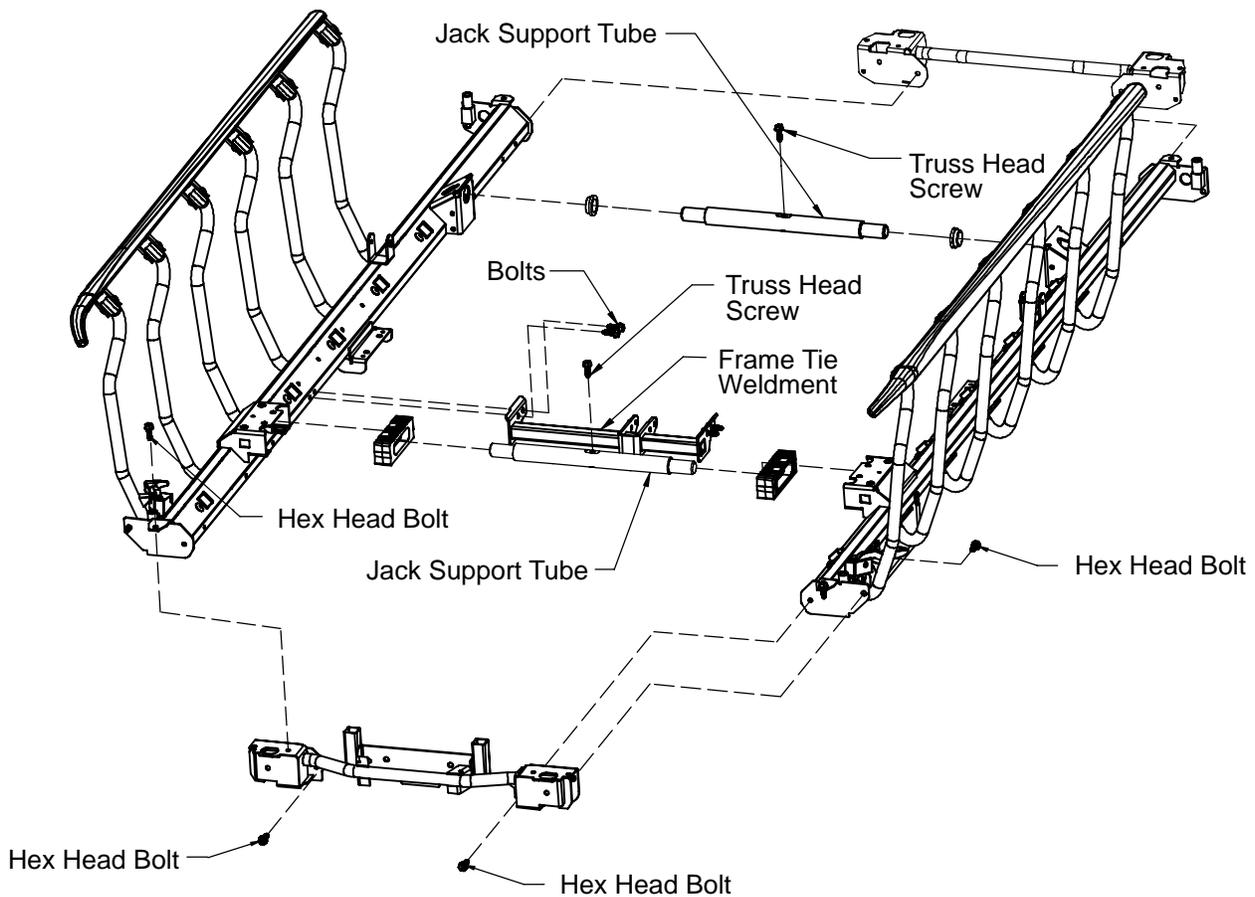
Standard Screwdriver

Wire Cutters

Torque Wrench

## Remove the litter assembly from the base assembly:

1. Using the pump pedal, raise the litter top to full height.
2. Remove the stretcher mattress.

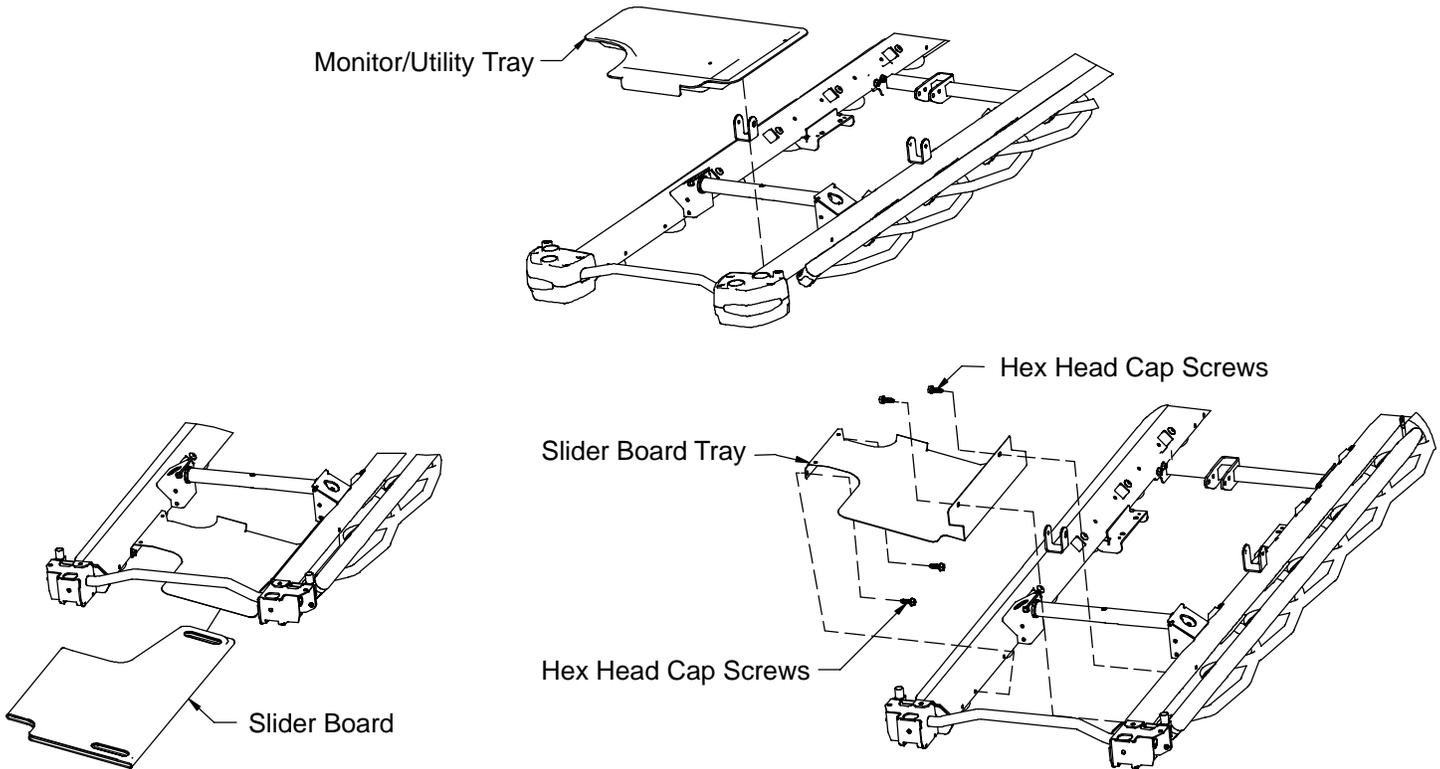


3. Using a 1/2" socket, and a 3/8" drive ratchet, remove the truss head screws holding the jack support tubes to the jack shafts.
4. Thread a 7/16-20 fine thread bolt (with at least 1 inch of usable thread) far enough into the top of the jack supports to separate the litter top from the jack shaft.
5. With the assistance of another person, lift the litter straight up to remove it from the jack shafts and set it on the floor.

# Scale System Retrofit Instructions

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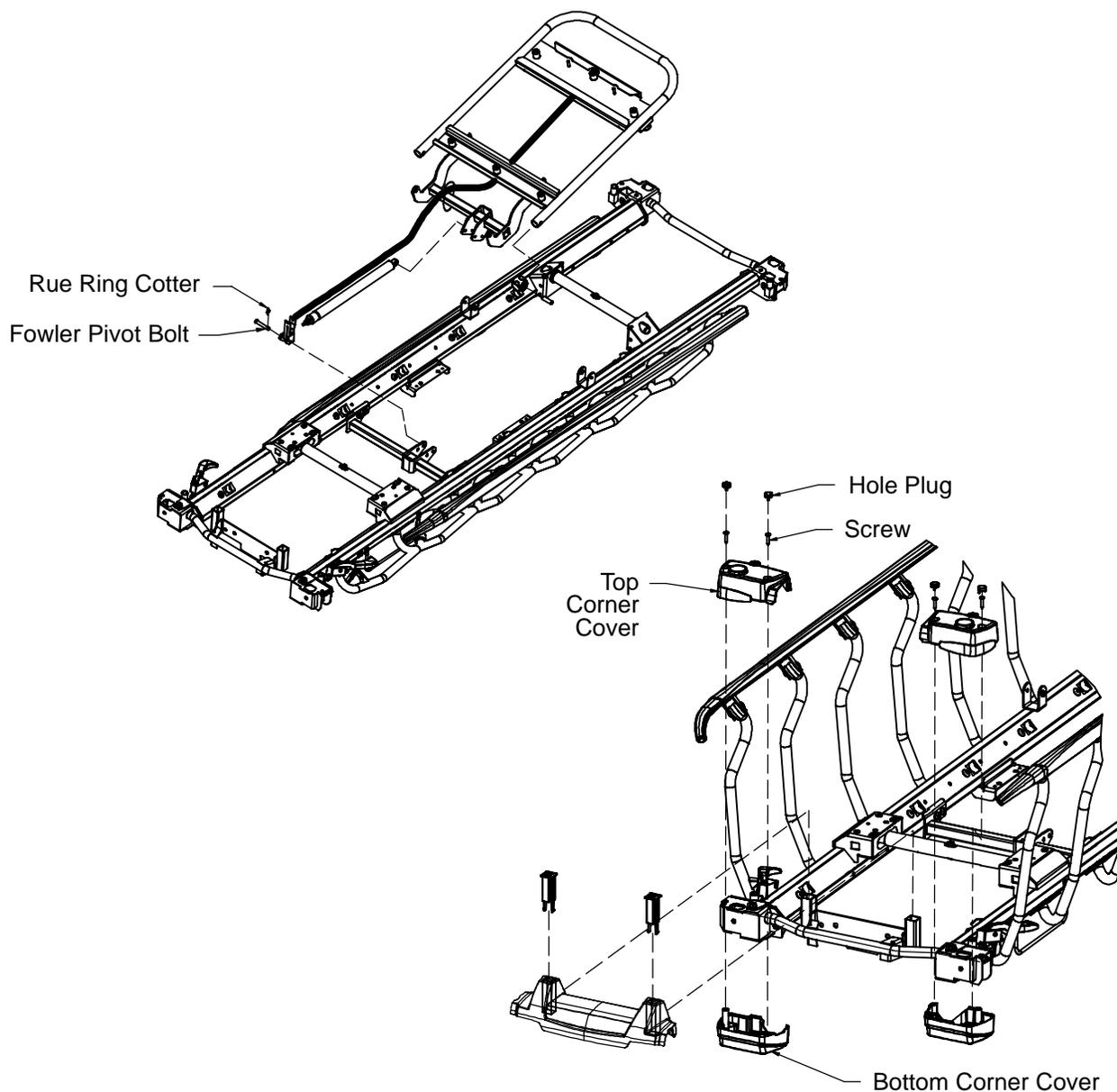
Remove either the left or right siderail assembly:



6. Raise the Fowler. Remove the slider board from the storage tray.
7. Pull up on the monitor/utility tray to remove it from the litter frame.
8. Remove the four hex head cap screws holding the slider board tray to the litter frame.

# Scale System Retrofit Instructions

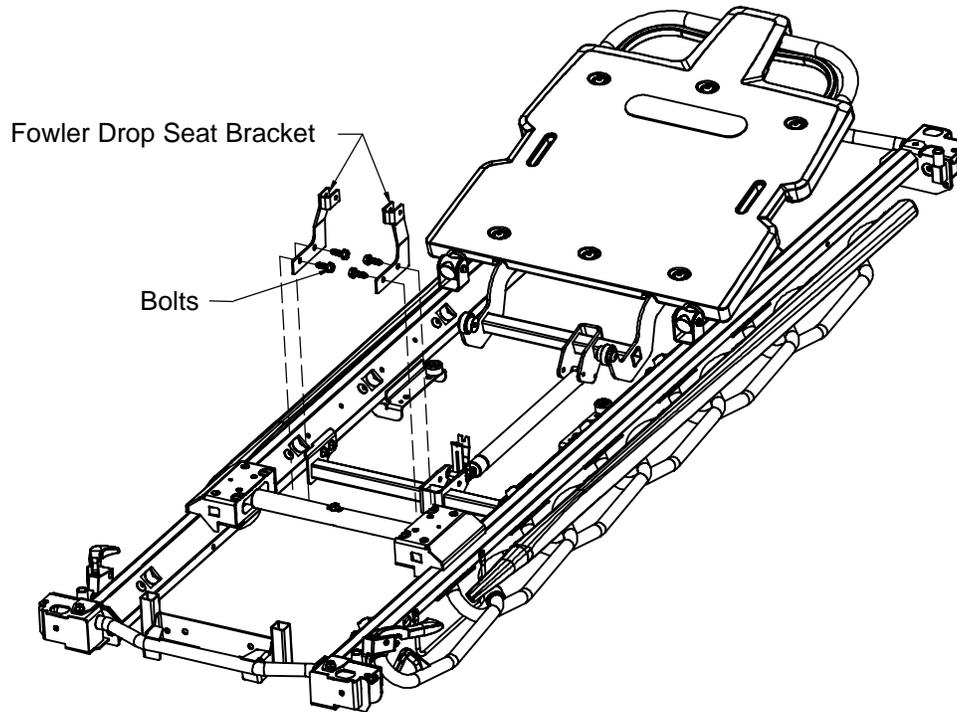
Remove either the left or right siderail assembly (continued):



9. Remove the rue ring cotter holding the Fowler pivot bolt and remove the pivot bolt.
10. Remove the two bolts holding the frame tie weldment (reference the illustration on page 17).
11. Using a utility knife, pry off the three hole plugs in the top of the corner cover.
12. Using a T25 Torx, remove the screws holding the top and bottom covers together and pull apart the cover. Repeat for the remaining corner covers.

# Scale System Retrofit Instructions

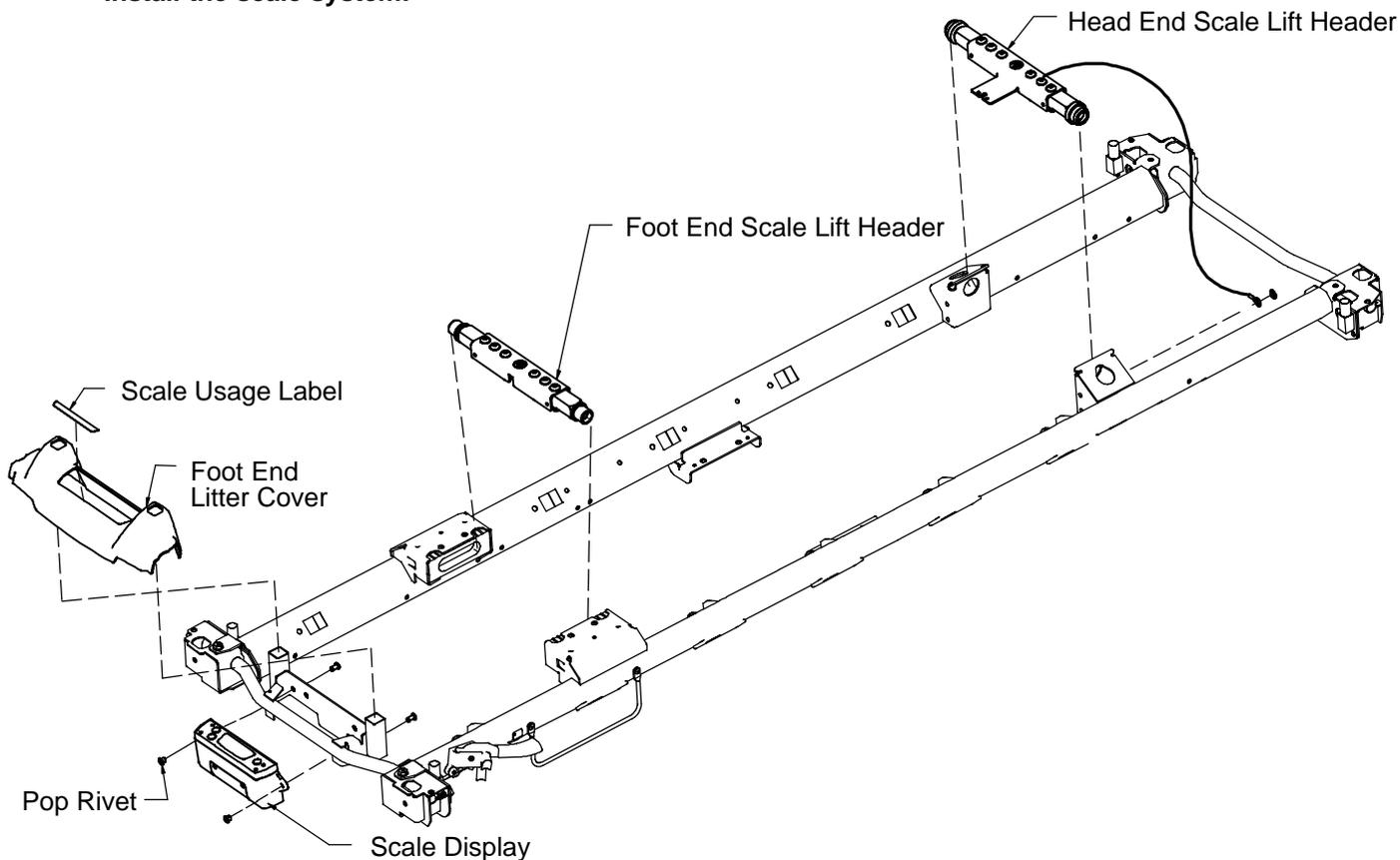
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13. Remove the two bolts holding the Fowler drop seat bracket.
14. While support the siderail to keep it from falling, remove the six hex head bolts holding the siderail to the head end and foot end litter weldments (reference the illustration on page 17).
15. Carefully remove the siderail assembly and set it aside.
16. Remove the head and foot end jack support tubes from the brackets on the siderails (reference the illustration on page 17).

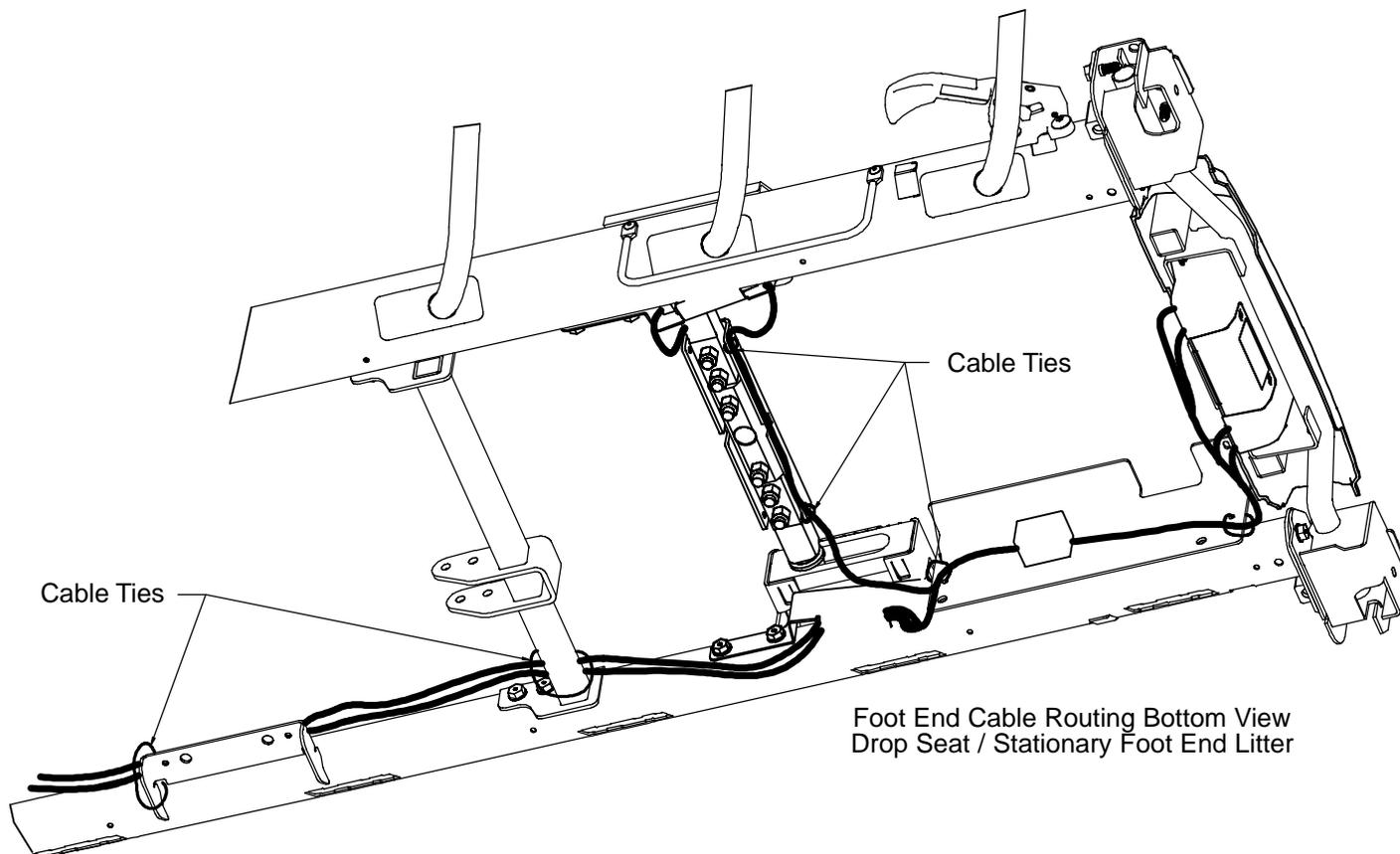
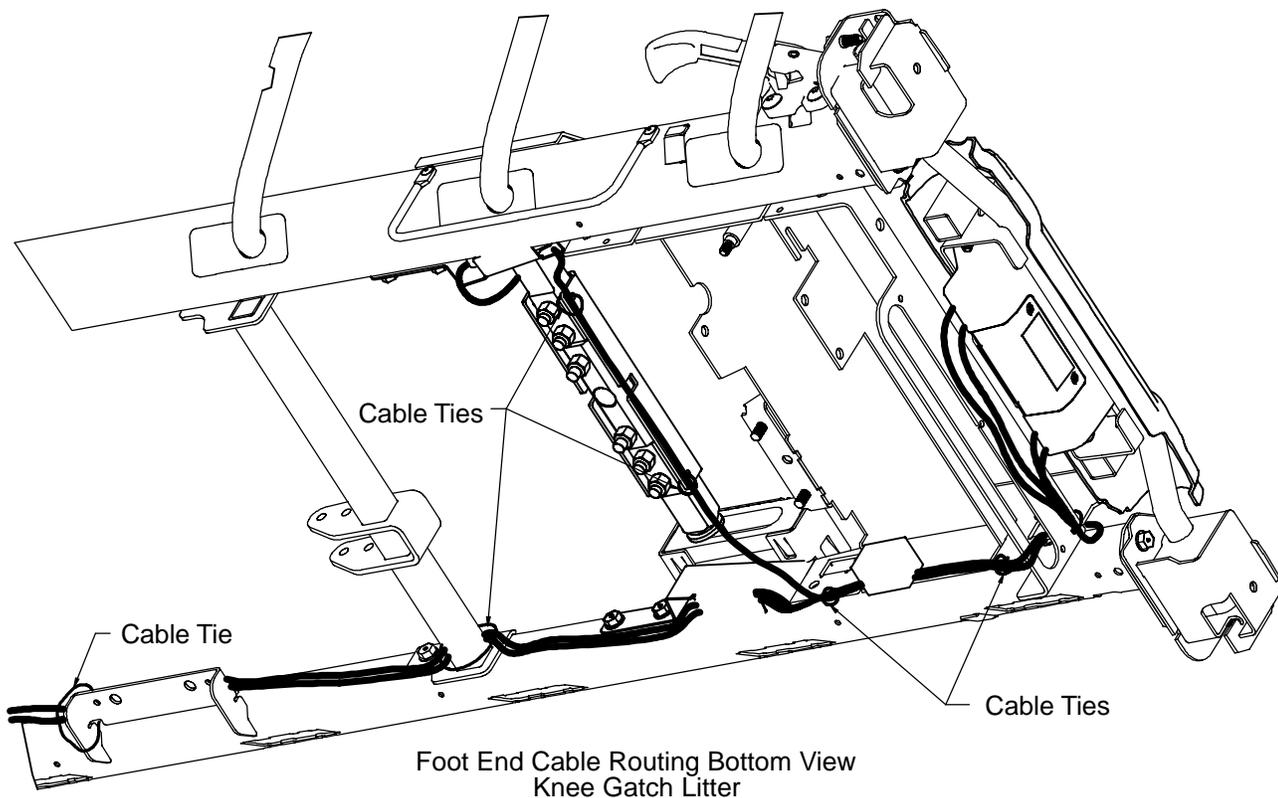
# Scale System Retrofit Instructions

Install the scale system:

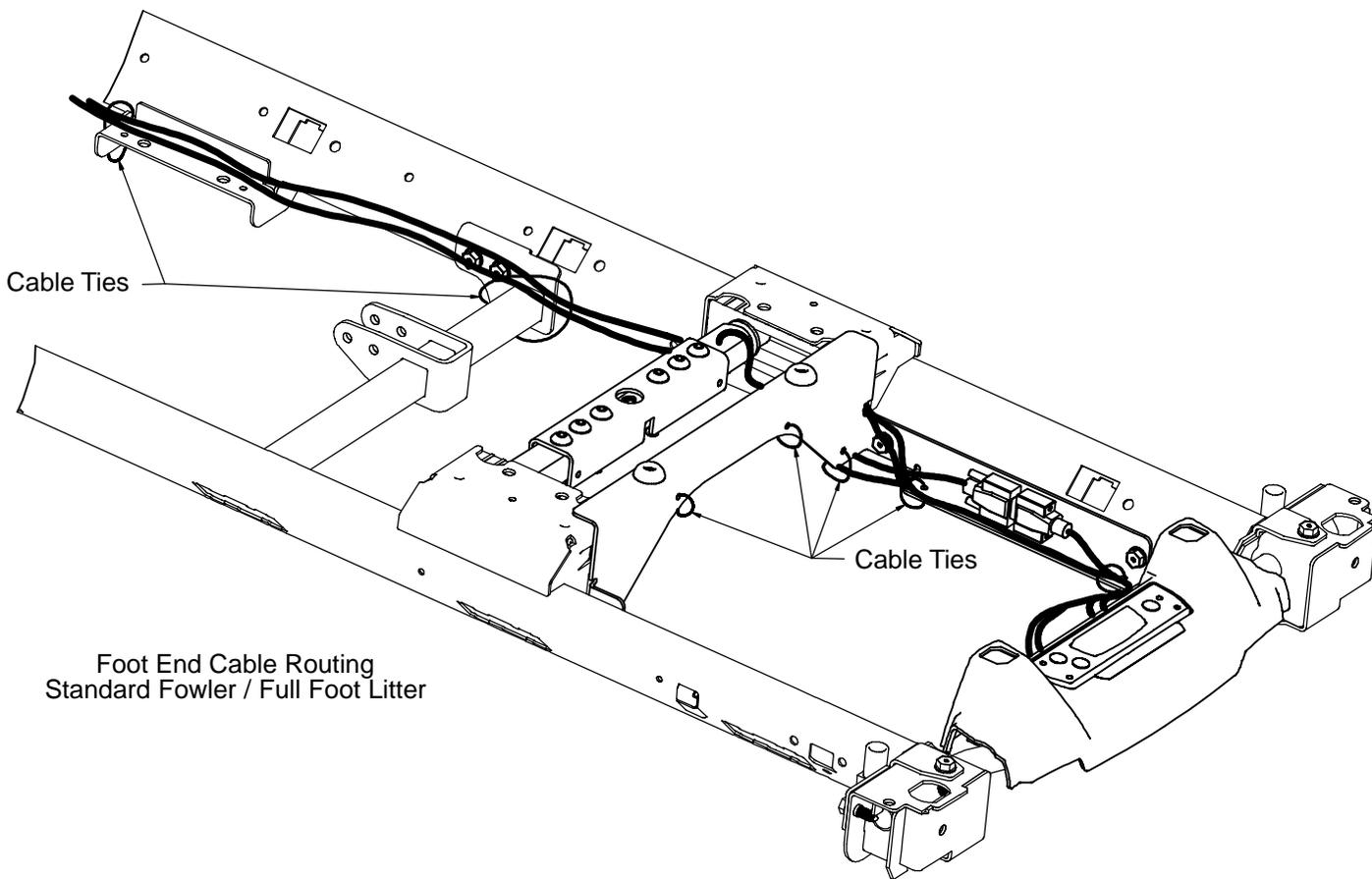


17. Install the bushings on the ends of the load cells on the new scale lift headers.
18. Insert the head end load cells into the holes in the support tube brackets on the siderails. Insert the foot end load cells into the slots in the Trend slide blocks on the siderails.
19. Install the three bolts at the foot end litter weldment. Tighten to 13 foot-pounds torque.
20. Install the two bolts at the frame tie weldment.
21. Install the three bolts at the head end litter weldment.
22. Install the two bolts at the Fowler drop seat bracket. Tighten to 13 foot-pounds torque.
23. Reinstall the Fowler pivot bolt and the rue ring cotter to hold it in place.
24. Reattach the litter to the jack shafts.
25. Using the pop rivets provided in the kit, mount the scale display to the foot end litter frame.
26. Install the new litter foot end cover and scale usage label.
27. Reinstall the litter corner covers and the IV pole and/or push handles.
28. Connect the scale display cables to the load cell cables (DB9 connectors).
29. Starting at the foot end of the stretcher, route the scale cables and install the cable ties as shown on the drawings on pages 22-24. **Do not** compress the cables when tightening the cable ties. Trim the ends of the cable ties.
30. Reinstall the slider board tray, the O2 holder and the monitor tray.
31. Check the scale system for functionality and accuracy in all litter positions before returning the stretcher to service. Fill out a copy of the Product History Card (see page 1) and mail or fax it to Stryker.

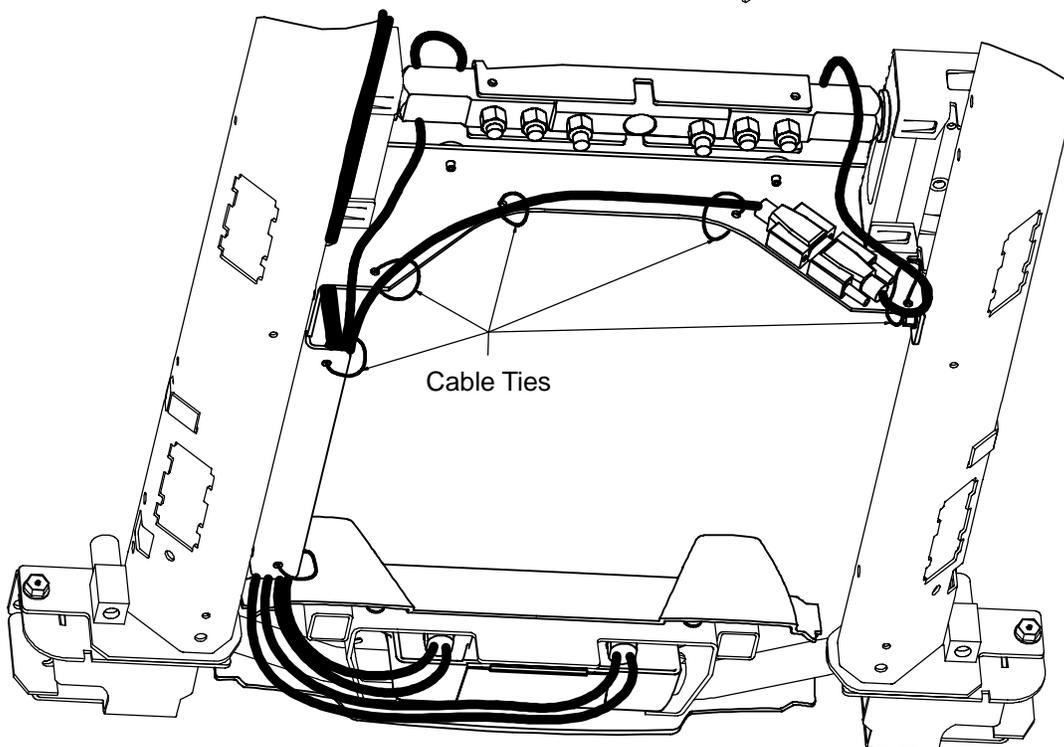
# Scale System Retrofit Instructions



# Scale System Retrofit Instructions

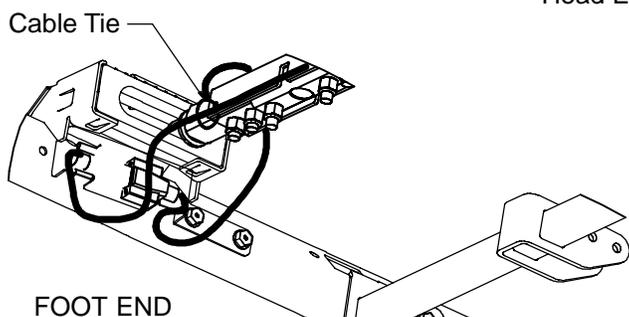
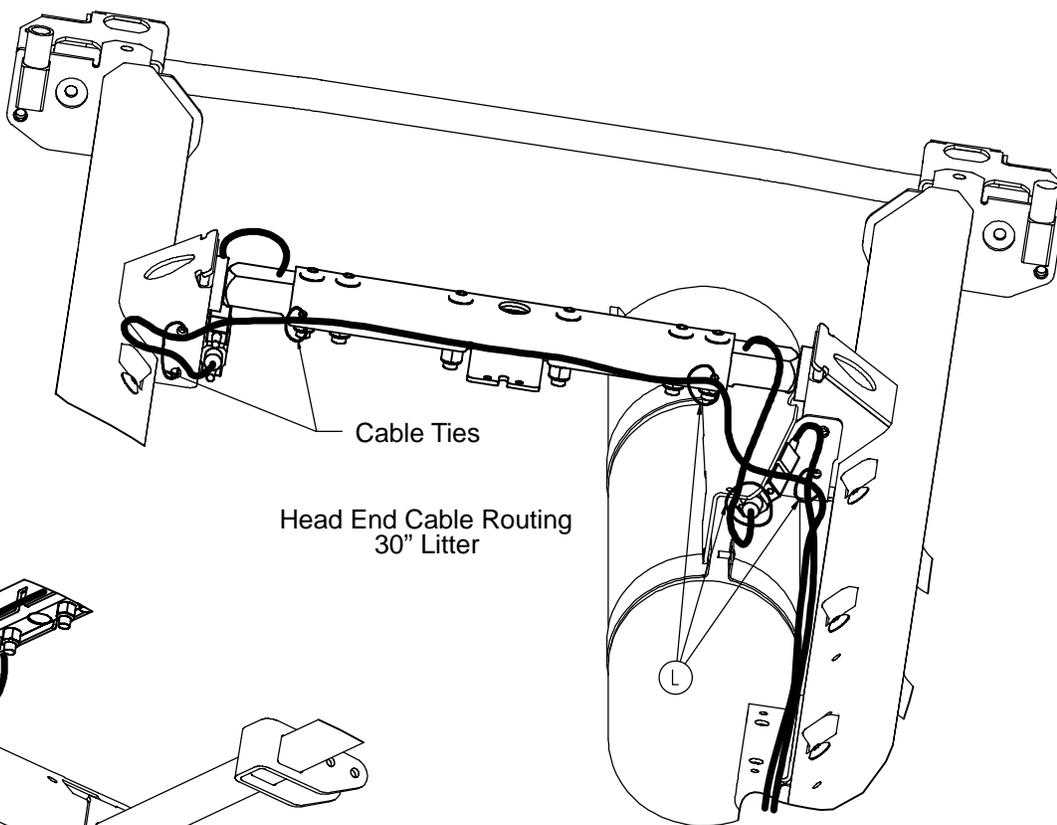
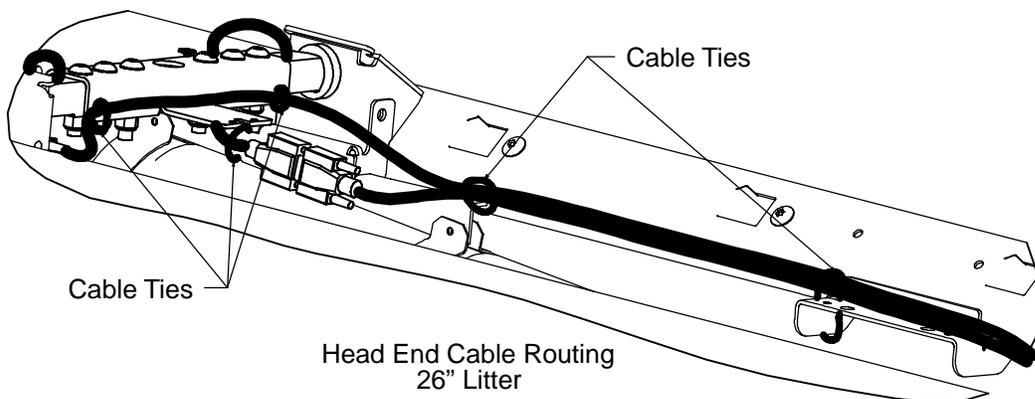


Foot End Cable Routing  
Standard Fowler / Full Foot Litter

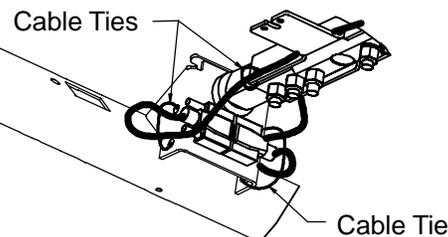


Foot End Cable Routing Bottom View  
Standard Fowler / Full Foot Litter

# Scale System Retrofit Instructions



Patient Right Side Cable Routing  
Drop Seat Litter



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