*In*Touch™ Critical Care Bed

Model FL27 (2130/2140)

UPGRADED
1.0 to 2.x

stryker®

Maintenance Manual

For Technical Assistance:
USA: 1-800-327-0770 (option 2)
Canada: 1-888-233-6888

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INTENDED USE

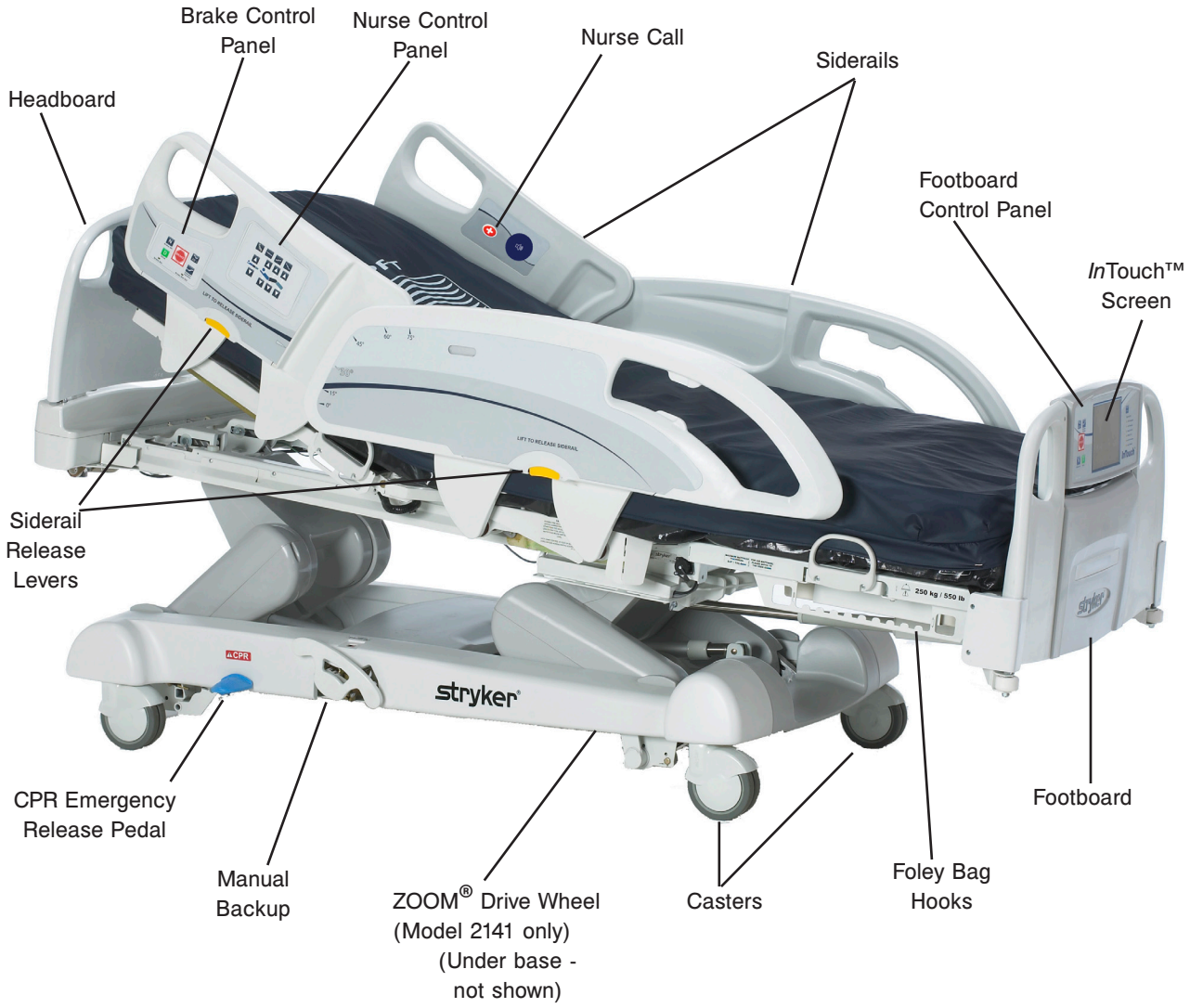
This manual is designed to assist you with the maintenance of the Stryker *In*Touch™ Critical Care Bed, Model FL27 (2130/2140). Carefully read this manual thoroughly before using the equipment or beginning maintenance on it. To ensure safe operation of this equipment, it is recommended that methods and procedures be established for educating and training staff on the safe operation of this bed.

This Maintenance Manual is an integral part of the bed and should be included if the bed is sold or transferred.

PRODUCT DESCRIPTION

This product is intended to be used as an Intensive Care Unit bed.

PRODUCT ILLUSTRATION



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SPECIFICATIONS

	**Safe Working Load** **Note:** Safe Working Load indicates the sum of the patient, mattress and accessory weight.	550 lbs	250 kg
Overall Bed Length		90”	228.6 cm
Overall Bed Width	Siderails Up	42”	104.1 cm
	Siderails Down	41”	101.6 cm
Base	Underbed Clearance	5”	12.7 cm
Litter	Patient Surface • Width • Length • Length (with Optional Bed Extender)	 35” 84” 90”	 88.9 cm 213.4 cm 228.6 cm
	Seat Section • Depth • Seat Inclination	 18.5” 0˚ to 15˚	 41.9 cm 0˚ to 15˚
	Foot Section • Length • Chair Angle	 29” 0˚ to 50˚	 78.7 cm 0˚ to 50˚
	Fowler Section • Length • Width • Angle	 36” 34” to 35” 0˚ to 70˚	 91.4 cm 86.3 cm - 88.9 cm 0˚ to 70˚
	Gatch Section • Length • Width	 18” 34” to 35”	 45.7 cm 86.3 cm - 88.9 cm
	Cardiac Chair • Standard Cardiac Chair Position • Enhanced Cardiac Chair Position	 Head: 65˚, Seat: 17˚, Foot: 30˚, Trend: 3˚ Head: 70˚, Seat: 19˚, Foot: 47˚, Trend: 3˚	
Fowler	Length	36.5”	92.7 cm
Bed Lift System	Height (high) to top of Litter	31”	78.7 cm
	Height (low) to top of Litter	16”	40.6 cm
	Trendelenburg/Reverse Trendelenburg	12˚	
	Bed Lift Time	35 seconds maximum from lowest to highest position	
Scale System	Capacity	550 lbs	250 kg
	Accuracy: • For weight from 100 lb to 550 lb • For weight from 100 lb to 550 lb • For weight under 100 lb • For weight under 100 lb	 +/- 2% when in Trendelenburg or Reverse Trendelenburg +/- 1% when Flat +/- 2 lb when in Trendelenburg or Reverse Trendelenburg +/- 1 lb when Flat	
CPR System	Speed to level bed from any position • Fowler • Foot • Seat	 15 seconds 60 seconds 30 seconds	
Drive System	Speed (Optional ZOOM® Drive) • Forward • Backwards	 3.6 mph 2.5 mph	 5.6 km/h 4.0 km/h

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SPECIFICATIONS (CONTINUED)

Mattress	Recommended Mattress Size	35” x 84” x 6”	88.9 cm x 213.4 cm x 15.2 cm
	Recommended Air Mattress Size	35” x 84” x 6” - 8.5”	88.9 cm x 213.4 cm x 15.2 cm - 21.6 cm
Environmental Conditions	Storage • Ambient Temperature • Relative Humidity • Atmospheric Pressure	-40˚F to 158˚F 10 to 100% 500 to 1060 hPa	-40˚C to 70˚C
	Operating • Ambient Temperature • Relative Humidity • Atmospheric Pressure	50˚F to 104˚F 30 to 75% 700 to 1060 hPa	10˚C to 40˚C
Electrical Requirements	All electrical requirements meet CSA C22.2 No. 601.1, UL 60601-1 and IEC 60601-1.60601-2-38 specifications.	120 ± 10% Vac, 50/60Hz	
Battery Voltage	12 V, 17.6 Ahr, Sealed Lead-Acid Battery (Part Number QDF9188) 3.0 V 220mAh Lithium Battery, Size 20mm - Varta Int. CR2032 Coin Cell PC Battery Holder, Size 20mm - MDP Int. BA2032		

Stryker reserves the right to change specifications without notice.
Specifications listed are approximate and may vary slightly from unit to unit or by power supply fluctuations.

WARNING / CAUTION / NOTE DEFINITION

The words WARNING, CAUTION, and NOTE carry special meanings and should be carefully reviewed.

⚠ WARNING

Alerts the reader about a situation, which if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards.

⚠ CAUTION

Alerts the reader of a potentially hazardous situation, which if not avoided, may result in minor or moderate injury to the user or patient or damage to the equipment or other property. This includes special care necessary for the safe and effective use of the device and the care necessary to avoid damage to a device that may occur as a result of use or misuse.

Note

This provides special information to make maintenance easier or important instructions clearer.

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Warning, consult accompanying documentation

Safe Working Load Symbol

~ Alternating Current

Fuse Rating for Beds with the 120V~ Electric System

Type B Equipment: equipment providing a particular degree of protection against electric shock, particularly regarding allowable leakage current and reliability of the protective earth connection.

Class 1 Equipment: equipment in which protection against electric shock does not rely on BASIC INSULATION only, but which includes an additional safety precaution in that means are provided for the connection of the EQUIPMENT to the protective earth conductor in the fixed wiring of the installation in such a way that ACCESSIBLE METAL PARTS cannot become live in the event of a failure of the BASIC INSULATION.

Mode of Operation: Continuous

IPX4 Protection from liquid splash

Dangerous Voltage Symbol

Protective Earth Terminal

Potential Equalization Symbol

Medical Equipment Classified by Canadian Standards Association with Respect to Electric Shock, Fire, Mechanical and Other Specified Hazards.

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Summary of Safety Precautions

Before operating the bed, it is important to read and understand all information in this manual. Carefully read and strictly follow the safety guidelines listed below.

Note

To ensure safe operations of the bed, methods and procedures must be established for educating and training hospital staff on the intrinsic risks associated with the usage of electric beds.

⚠ WARNING

- To prevent permanent damage to this unit, the unit must reach room temperature prior to conducting any setup and/or unit operations.
- Preventative maintenance should be performed at least once a year to ensure all bed features are functioning properly.
- This bed is not intended for pediatric use.
- The mattress thickness should not exceed 6 inches (15.24 cm).
- This bed is equipped with a hospital grade plug for protection against shock hazard. It must be plugged directly into a properly grounded receptacle. Grounding reliability can be achieved only when a hospital grade receptacle is used.
- Shock Hazard - Improper handling of the power cord may result in damage to the power cord and potential shock hazards. If damage has occurred to the power cord, immediately remove the bed from service and contact the appropriate maintenance personnel. Failure to do so could result in serious injury or death.
- Serious injury can result if caution is not used when operating the bed. Operate the bed only when all people and equipment are clear of the electrical and mechanical systems.
- Always apply the brakes when a patient is on the bed or entering/exiting the bed. Serious injury could result if the bed moves while a patient is getting on or off the bed. Once the brake pedal is engaged, push on the bed to ensure the brakes are securely applied. Do the same test when using the electrical brake.
- Keep siderails in the fully raised position and the sleep surface horizontal in its lowest position when the patient is unattended, unless his/her medical condition dictates otherwise. When raising the siderails, be sure that you hear the “click” that signals the locked condition. Pull firmly on the siderail to ensure it is locked into position.
- When the sleep surface sections are articulated, ensure that all the patient’s limbs are within the raised siderails to avoid patient injury.
- When a patient’s condition requires greater safety measures for his/her security, use the lockout controls in the foot board control panel to inhibit the siderail functions or remove any optional pendant control and install protective pads on the siderails.
- Siderails, with or without their padded covers, are not intended to serve as restraint devices to keep patient from exiting the bed. Siderails are designed to keep a patient from inadvertently rolling off the bed. It is the responsibility of the attending medical personnel to determine the degree of restraint necessary to ensure a patient will remain safely in bed. Failure to use the siderails properly could result in serious patient injury.
- To reduce risk of injury, ensure the sleep surface is horizontal and in the lowest position with the siderails fully raised and locked when moving the bed with a patient in it.
- To avoid injury to the patient and/or user, do not attempt to move the bed laterally with the steer mode engaged. The steer wheel cannot swivel.
- The CPR emergency pedal is for emergency use only. When activating the CPR pedal, all people and equipment must be removed from the area below and around the head, thigh and foot sections of the bed or serious personal injury and/or equipment damage could occur.
- The manual backup brake is for emergency use only. It should not be used for any other situation than an emergency or it might get overused when the time comes to use it for an emergency.
- Possible fire hazard exists when this bed is used with oxygen administering equipment other than nasal, mask type or half bed-length tent type. Unplug the bed power cord from the wall when oxygen administering equipment is used. When using a half bed-length tent type, ensure that the siderails are outside the oxygen tent and that the tent does not extend below the mattress support level.

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⚠ WARNING (CONTINUED)

- The Bed Exit system (optional) is intended only to aid in the detection of a patient exiting the bed. It is not intended to replace patient monitoring protocol. The Bed Exit system signals when a patient is about to exit the bed. The addition or removal of equipment with the Bed Exit system armed must be done using the “Adding or Removing Equipment with the System Armed” procedure, otherwise the sensitivity of the system may be affected and the readings of the patient’s movements in the bed be erroneous.
- The Bed Exit system is not designed to be used with patients weighing less than 50 lbs (23 kg).
- Do not steam clean, hose off or ultrasonically clean the bed. Do not immerse any part of the bed. The internal electrical parts may be damaged by exposure to water. Hand wash regularly all surfaces of the bed with warm water and a mild detergent. Wipe cleaned surfaces dry to avoid build-up of cleaning substance. Inspect the mattress after each use. Discontinue use if any cracks or rips, which may allow fluid to enter the mattress, are found in the mattress cover. Failure to properly clean the mattress, or dispose of it if defective, may increase the risk of exposure to pathogenic substances and may bring about diseases to the patient and user.
- Always unplug the bed power cord from the wall socket when servicing or cleaning the bed. When working under the bed with the bed in the high position, always apply the brakes and place blocks under the Bed Lift levers to prevent injury in case the Bed Down switch is accidentally pressed.

⚠ CAUTION

- Preventative maintenance should be performed at least once a year to ensure all bed features are functioning properly. Ensure that any bed malfunction is promptly reported to your service personnel for immediate attention.
- When large fluid spills occur in the area of the circuit boards, cables and motors, immediately unplug the bed power cord from the wall socket, remove the patient from the bed and clean up the fluid. Have maintenance completely check the bed. Fluids can have an adverse effect on operational capabilities of any electrical product. DO NOT put the bed back into service until it is completely dried and has been thoroughly tested for safe operation. Ensure, among other things, that the plastic components being used as covers for the siderail mechanism arms and the foot end casing are removed and that the parts they cover are thoroughly dried.
- To avoid damage to the siderail mechanisms, do not move the bed using the raised siderails. Move the bed using the handles integrated to the boards.
- Because individual beds may have different options, foot boards should not be moved from one bed to another. Mixing foot boards could result in unpredictable bed operation.
- When servicing use only identical replacement parts provided by Stryker.

Note

- Throughout this Operations Manual, the words “right” and “left” refer to the right and left sides of a patient lying on his/her back on the bed.
- The addition of accessories affects the motion of the bed.

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OPTIONAL ZOOM® DRIVE SYSTEM (MODEL 2140)

In addition to the previous warnings and cautions, all of the following warnings and cautions apply to units equipped with the ZOOM®.

⚠ WARNING

- The 2140 *In*Touch™ Bed is intended for use by trained hospital personnel only. Failure to properly train personnel could result in injury.
- USE CAUTION while maneuvering the unit with the drive wheel activated. Always ensure there are no obstacles near the unit while the drive wheel is activated. Injury to the patient, user or bystanders or damage to the frame or surrounding equipment could occur if the unit collides with an obstacle.
- Use caution when transporting the unit down halls, through doors, in and out of elevators, etc. Damage to the siderails or other parts of the unit could occur if the unit comes in contact with walls or door frames.
- Put the drive wheel in the neutral position and release the brake before pushing the unit manually. For 2140 models; push the Brake Off button to disengage drive wheel (ZOOM®) before pushing the unit manually. Do not attempt to push the unit manually with the drive wheel engaged. The unit will be difficult to push and injury could result.
- If unanticipated motion occurs, unplug the power cord from the wall socket, push the battery power on/off switch to the “OFF” (0) position (the LED will not be illuminated), actuate the drive wheel pedal to the neutral position and call maintenance.
- The power save mode is activated after one hour on battery power with no motion release switch activation. Functions including Bed Exit, Scale and Motion will cease to operate when the unit enters the power save mode. Injury to the patient could occur if proper patient monitoring protocol is not observed.
- Always unplug the power cord and push the battery power on/off switch to the “OFF” (0) position before service or cleaning. When working under the frame, always support the litter frame to prevent injury in case the Bed Down switch is accidently activated.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.
- Do not modify the *In*Touch™ Model 2140 bed. Modifying the unit can cause unpredictable operation resulting in injury to the patient or user. Modifying the unit will also void this warranty.

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Static Discharge Precautions

The electronic circuits in the *In*Touch™ Critical Care Bed are completely protected from static electricity damage only while the bed is assembled. It is extremely important that all service personnel always use adequate static protection when servicing the electronic systems of the *In*Touch™ Critical Care Bed. Whenever you are touching wires, you should be using static protection.

Static Protection Equipment

The necessary equipment for proper static protection is:

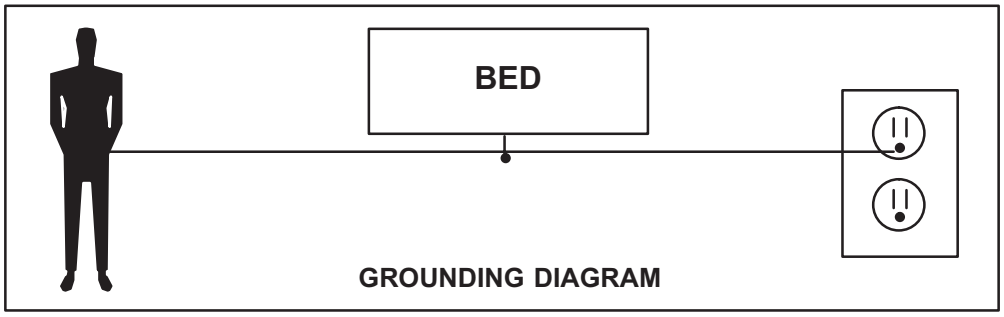
- 1 static wrist; 3M part number 2214 or equivalent,
- 1 grounding plug; 3M part number 61038 or equivalent,
- 1 test lead with a banana plug on one end and an alligator clip on the other; Smith part number N132B699 or equivalent.

⚠ CAUTION

All electronic service parts will be shipped in static shielding bags. Do not open the bags until you have completed steps 2 and 3 of the following procedure. Do not place unprotected circuit boards on the floor. All circuit boards to be returned to Stryker Medical should be shipped in the static shielding bags the new boards were shipped in.

Static Protection Procedure

1. Unplug the power cord from the power source.
2. Insert the grounding plug into a properly grounded hospital grade wall receptacle. Plug the banana plug of the test lead into the receptacle on the grounding plug. Connect the alligator clip on the other end of the test lead to a ground point on the bed.
3. Place the static control wrist strap on your wrist. Connect the alligator clip at the other end of the wrist strap cord to a ground point on the bed.



GROUNDING DIAGRAM

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Setup Procedures

To prevent permanent damage to this unit, the unit must reach room temperature prior to conducting any setup and/or unit operations.

It is important to ensure that the bed is working properly before it is put into service. The following list will help ensure that each part of the bed is checked.

- Install the foot and head boards on the bed. Insert the foot board carefully so that the foot board and the casing connectors fit in smoothly.

⚠ WARNING

Because individual beds may have different options, foot boards should not be moved from one bed to another. Mixing foot boards could result in unpredictable bed operation.

- Plug the power cord to the bed connector at the head end of the bed and into a properly grounded hospital grade wall outlet.
- Turn the battery power switch to the “ON” (1) position (located below the litter surface at patient right side).
- Set the time and date through the touch screen (refer to the *In*Touch™ Operations Manual for procedures).

⚠ WARNING

This bed is equipped with a hospital grade plug for protection against shock hazard. It must be plugged directly into a properly grounded receptacle. Grounding reliability can be achieved only when a hospital grade receptacle is used.

- To test the manual backup brake (located on the patients right side only), flip the manual backup brake pedal outward and depress down fully on the foot end side of the pedal. The word BRAKE in red will be visible in the clear window located on the base next to the pedal and the Brake symbol will be flashing on the footboard control panel. The brakes should now be applied.
- To test the electric brake; engage the brake by pressing the brake button on the siderail or foot board control panel. Try moving the bed to ensure the brakes are applied. Press the Neutral or Brake button on the siderail control panel or on the foot board to disengage the brake.
- For Model 2140 Beds only: On the patients right side, flip the manual backup brake pedal outward and depress down fully on the head side of the pedal. The letter D in GREEN should be visible in the clear window located on the base next to the pedal. The ZOOM® Drive wheel should now be engaged. Depress down fully on the center of the pedal until the letter N in BLUE is visible in the clear window. The ZOOM® Drive wheel should now be disengaged.
- Ensure that the siderails raise, lock in the fully raised position and lower smoothly.
- Run through each control on the foot board.
- Verify the scale system and the Bed Exit system for proper operation.
- Run through each control on both inner and outer control panels of the head siderails. If the bed is equipped with the optional Siderail Communication Pendant, plug the provided cable to the 37-pin connector located at the head end of the bed and into the proper wall outlet.
- Raise the bed completely and activate the Trendelenburg function. Ensure the head end lowers to the full down position (refer to the *In*Touch™ Operations Manual for procedures). Level the bed using the Bed Lift system controls.
- Raise the bed completely and activate the reverse Trendelenburg function. Ensure the foot end lowers to the full down position (refer to the *In*Touch™ Operations Manual for procedures). Level the bed using the Bed Lift system controls.
- Verify functionality of the CPR emergency release: raise the fowler up then depress down on the CPR pedal located on either side of the bed at the head end of the base. The fowler will lower towards a flat position until the pedal is released.
- Ensure the Knee Gatch (if raised) also starts flattening when the Fowler is completely down. Following the complete lowering of the Fowler, wait approximately 30 seconds (the time for the Fowler control motor to reset) and verify that the motor has indeed reset by raising the Fowler fully up using the “Fowler Up” control.
- Verify the following optional equipment for proper operation: 120V Auxiliary Outlet, Head End Nurse Controls, Pendant, Roller Bumpers, Zoom Handles®, etc.
- To prevent permanent damage to the bed, ensure the unit reaches room temperature prior to use.

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OPTIONAL XPRT THERAPY MATTRESS

If your bed is equipped with the XPRT Therapy Mattress option, perform the following setup procedures to install the Mattress. For graphic representation of the setup procedures, refer to the XPRT Therapy Mattress Operations Manual.

1. Place mattress over bed litter with printed logo at head end of the bed.
2. Fold back foot end section of mattress.
3. Place foot box on foot end of bed litter.
4. Connect the two (2) color coded connectors on the foot box to the corresponding color coded connectors on the mattress. Connect black connection on foot box to cable adapter 2950-001-180 and then to the bed frame.
5. Turn the locking collars clockwise to secure the connections.
6. Connect the other end of the black connector to the bed (left side of litter at foot end behind the accessory outlet).
7. Connect the air line from the mattress to the corresponding fitting on the foot box.
8. Fasten the two (2) retaining clips to the two (2) D-Rings on the foot box.
9. Lower the foot section of mattress over the foot box. Attach the mattress to the bed frame using the mattress tie-downs.
10. Apply linens utilizing the “D” rings for the flat sheet.
11. To secure linens, to mattress, thread four corners through D-Rings attached to mattress.
12. To ensure proper therapy, do not pull linens taut. The linens should remain loose and wrinkly on the surface of the mattress.
13. Plug the mattress power cord into a properly grounded, hospital grade receptacle.

Note

The *In*Touch™ bed will detect when the mattress has been connected as well as what type of mattress it is. This will be shown on the *In*Touch™ screen.

⚠ WARNING

- Do not route the power cord between the mattress and the bed frame.
- Do not attach the power cord to any moving parts of the bed frame.
- The power cord could be pinched and may cause electrical shock if a bed extender is used.

OPTIONAL PositionPRO™ REPOSITIONING MATTRESS OPTION

If your bed is equipped with the PositionPRO™ Patient Repositioning Mattress option, perform the following setup procedures to install the mattress. For graphic representation of the setup procedures, refer to the PositionPRO™ Mattress Operations Manual.

1. Place the mattress onto the bed.
2. Flip the foot section towards the head end.
3. Place the control box (upside down) into the opening in the foot section.
4. Connect outer transparent tubes to manifold, matching the color coding.
5. Connect tilt sensor cables.
   a. Align the white dots.
   b. Twist clockwise to fasten.
6. Connect pendant cable.
7. Connect power cord (4’) and turn the switch to on.
   Note: The switch is hidden under the power cord.
8. Fasten straps over the power cord.
9. Install the power cord in the two (2) retaining clips.
10. Fasten the three (3) retaining straps.
11. Carefully rotate the foot end control box and the mattress into the flat posi

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OPTIONAL PositionPRO™ REPOSITIONING MATTRESS (CONTINUED)

⚠ CAUTION

Gently lower the foot end section to not damage the control box.

12. Fasten the retaining straps to secure the mattress to the bed frame (four (4) straps total).
13. Connect the power cord to the 110V outlet on the bed.

Applying the linens

1. Apply the linens using the “D” rings for the flat sheet.
2. To effectively use the “Turn Assist”, do not pull linens taut. Linens should remain loose and wrinkly on surface of the mattress.

⚠ WARNING

Ensure that you have always access to the CPR straps.

Note

If any problems are found during bed setup, contact our Technical Service department at USA: 1-800-327-0770 (option 2), Canada 1-888-233-6888.

OPTIONAL ZOOM® DRIVE SYSTEM (MODEL 2140)

If your bed is equipped with the ZOOM® drive, run through the preceding setup procedures and continue with the procedures listed below.

- With the battery power switch in the “ON” (1) position and the drive wheel in the neutral position (not touching the floor), ensure the “Engage Drive Wheel” LED on the head end control panel is illuminated.
- Run through the operation of the drive wheel (refer to *In*Touch™ Operations Manual for procedures) to ensure it is operating properly.
- On both sides of the bed, flip the manual backup brake pedal outward and depress down fully on the head side of the pedal. The letter D in GREEN should be visible in the clear window located on the base next to the pedal. The ZOOM® drive (2140 Model only) should now be engaged. Depress down fully on the center of the pedal until the letter N in BLUE is visible in the clear window. The ZOOM® drive should now be disengaged.

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The Maintenance Menu is accessed through the Touch Screen and contains additional features of the product. This menu provides an itnerface to the user and/or service personnel in order to provide the ability to control and access maintenance features.

ACCESSING CONFIGURATION SCREEN

⚠ WARNING

Please ensure patient is not in the bed prior to starting bed calibration. In calibration mode, the software does not control the interferences between the mechanical parts of the bed. Mechanical damage could occur without supervision. Only qualified personnel should perform the calibration.

Note

Verify that the bed is on a level surface which does not have any slopes or inclines prior to entering into the calibration mode.

1. Unseat and reseat the footboard and wait until the main control screen is displayed.
2. Push and hold the Main Menu button located in the upper right corner of the footboard control panel (see Figure 1 below). Continue pressing on the Main Menu button while executing steps 3-5.
3. Push and hold the **Brake** button for 5 seconds and then release.
4. Push the **HOB 30°+** button once and release.
5. Push the **Drive** button once and release.
6. Release the Main Menu button and you will be taken into the Configuration Screen shown in Figure 2.

Figure 1: Footboard Control Panel

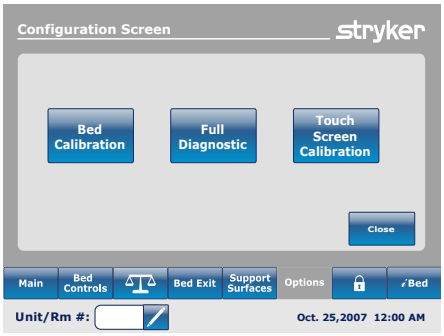

Figure 2: Configuration Screen

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CONFIGURATION SCREEN

The following are menu items available in the Configuration screen (Figure 3):

1. Bed Calibration
2. Full Diagnostic
3. Touch Screen Calibration

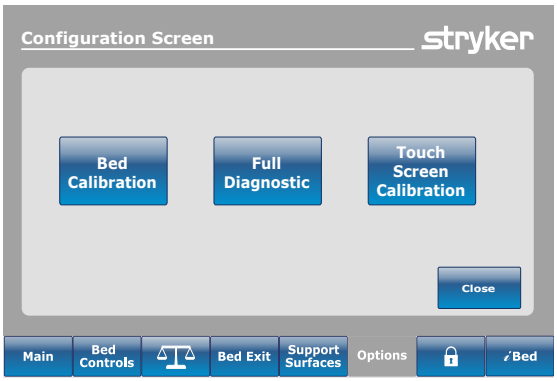

Figure 3: Configuration Screen Menu Items

Bed Calibration

Note: During calibration, if the backlight shuts off touch the screen to continue.

⚠ WARNING

Refer to Figure 4 for WARNING details

1. To start the bed calibration, press the Bed Calibration button on the Configuration Screen (refer to Figure 3).
2. After pressing the Bed Calibration button, Figure 4 will be displayed. Press 'YES" to continue with calibration.

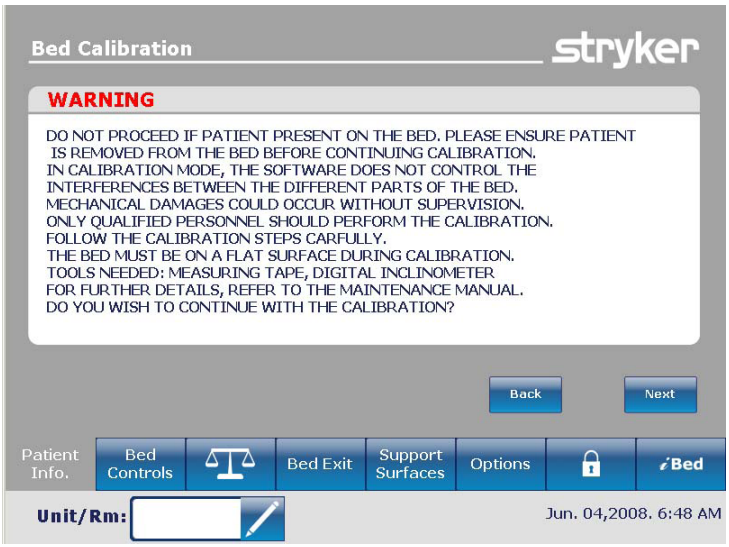

Figure 4: Bed Calibration - WARNING

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

3. After pressing “YES” to continue calibration, Figure 5 will appear.

Figure 5: Bed Calibration - Step #1 of 6

4. Place the Litter surface to a flat position by pressing simultaneously the **Foot Up**, **Fowler Down** and **Gatch Down** buttons as shown in Figure 6.

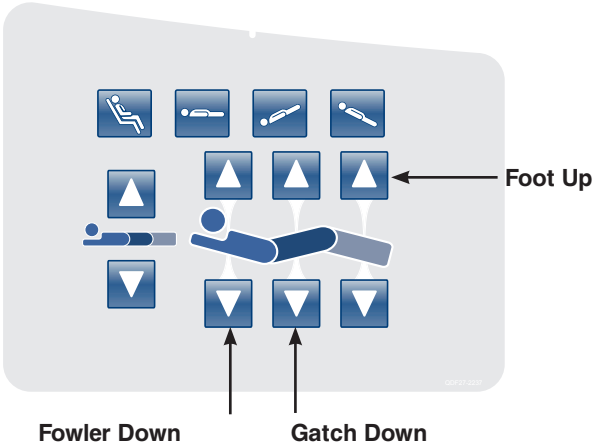

Figure 6: HE Siderail Control Panel - (Right Side Shown)

5. Lower the bed to the lowest position. Press the **Bed Height Down (Head Lift Down)** and **Reverse Trendelenburg (Foot Lift Down)** buttons simultaneously as shown in Figure 7.

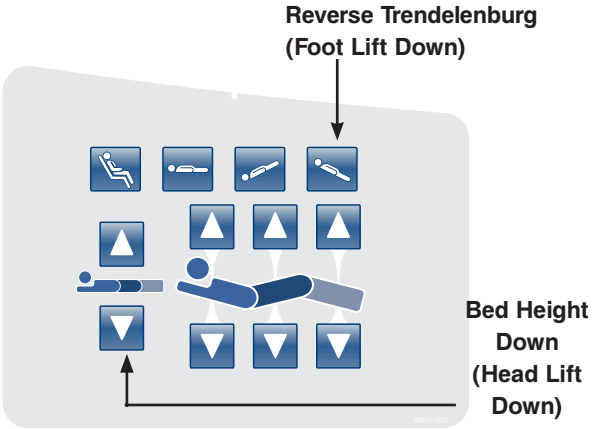

Figure 7: HE Siderail Control Panel - (Right Side Shown)

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

6. Press the Next button when done. The “Do Not Touch Bed” screen will appear as shown in Figure 8.

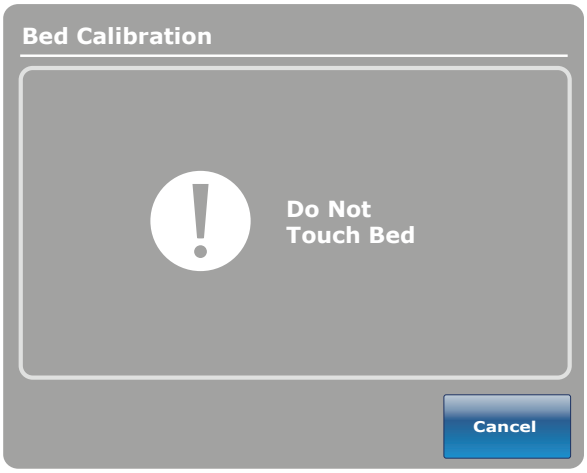

Figure 8

7. When step 1 of the calibration procedure has completed, step 2 of the calibration procedure will begin and Figure 9 will be displayed as shown below.

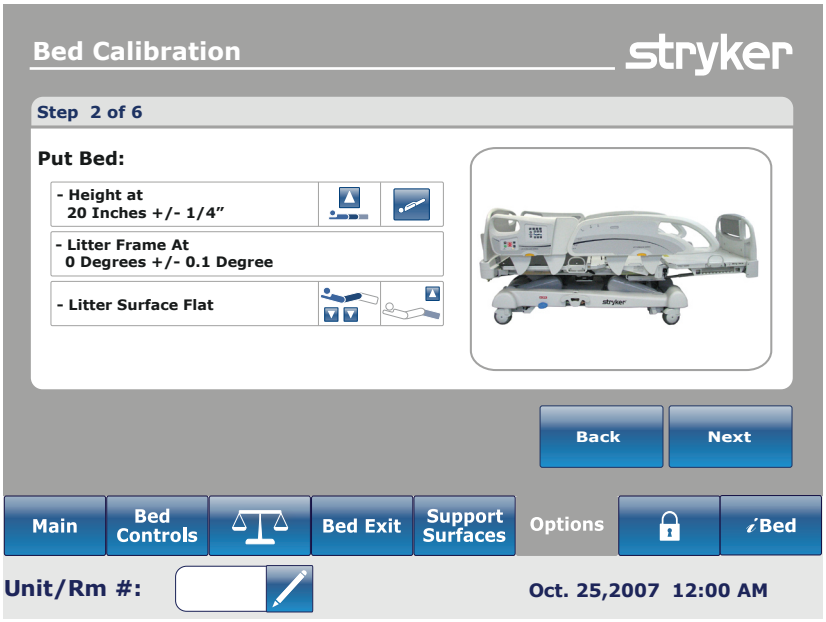

Figure 9: Bed Calibration - Step 2

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

8. Raise the bed height to 20 inches measuring from the top of the seat section to the floor. Press the **Bed Height Up (Head Lift Up)** and **Trendelenburg (Foot Lift Up)** buttons as shown in Figure 10.

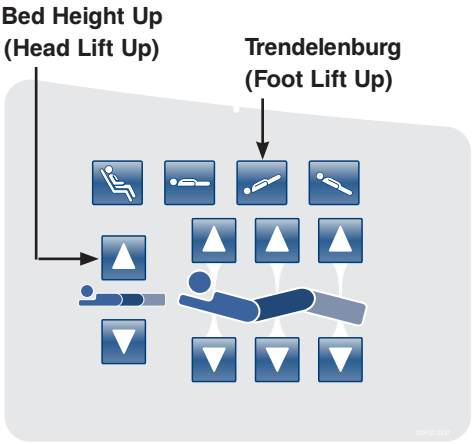

Figure 10: Head Siderail Control Panel (Right Side Shown)

9. Standing on either side of the bed at the fowler section, raise the foot siderail and then position the digital level/inclinometer on the bottom of the litter below the mattress retainer (refer to Figure 11). Using the digital level/inclinometer, verify the bed is level (0.0 +/- 0.2) when measuring 20 inches from the top of the gatch section to the floor.

   Note: Cycle power on the digital level/ inclinometer prior to placing it on the bottom of the litter frame and do not zero/calibrate the digital level/inclinometer.

Figure 11: Inclinometer placement

10. Press the Next button when done. The "Do Not Touch Bed" screen will appear as shown in Figure 12.

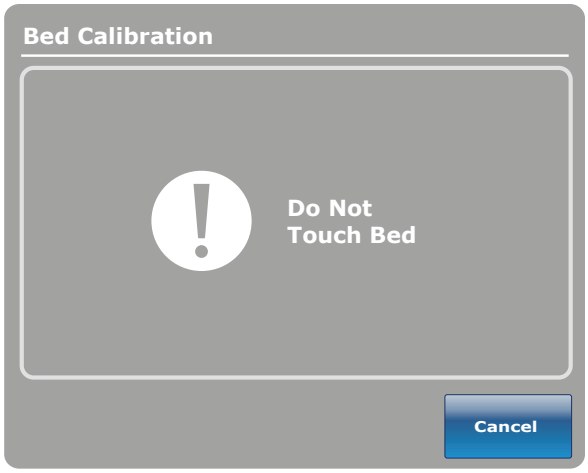

Figure 12: Do Not Touch Bed Screen

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Configuration Screen (Continued)

Bed Calibration (Continued)

11. When step 2 of the calibration procedure has completed, step 3 of the calibration procedure will begin and Figure 13 as shown below will appear on the screen.

Figure 13: Bed Calibration - Step 3

12. Place the bed at +12 degrees Trendelenburg by pressing the **Trendelenburg (Foot Lift Up)** button as shown in Figure 14. Verify +12 degrees +/- 0.1 with the inclinometer you previously placed on the litter frame in step 9.

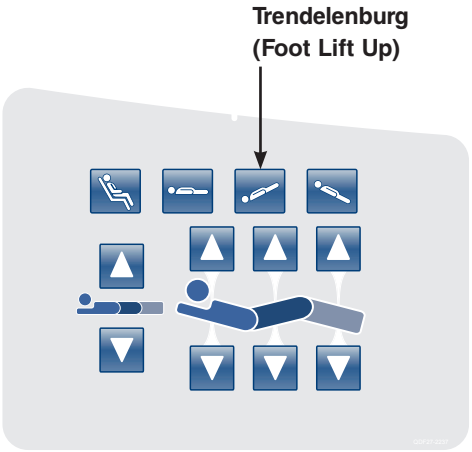

Figure 14: Head Siderail Control Panel

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

13. Press the Next button when done.

14. The “Do Not Touch Bed” screen will appear as shown in Figure 15.

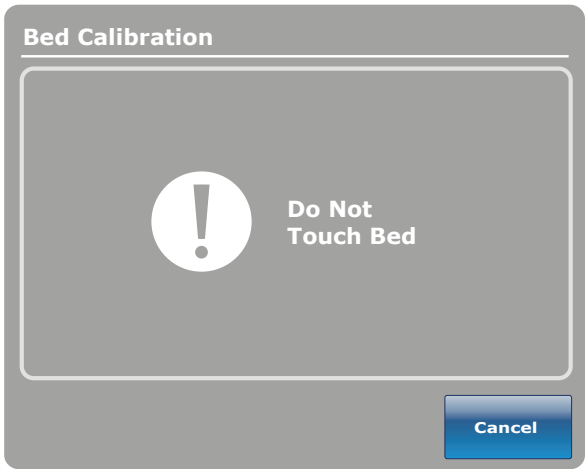

Figure 15: Do Not Touch Bed Screen

15. When step 3 of the calibration procedure has completed, step 4 of the calibration procedure will begin and Figure 16 will be displayed as shown below.

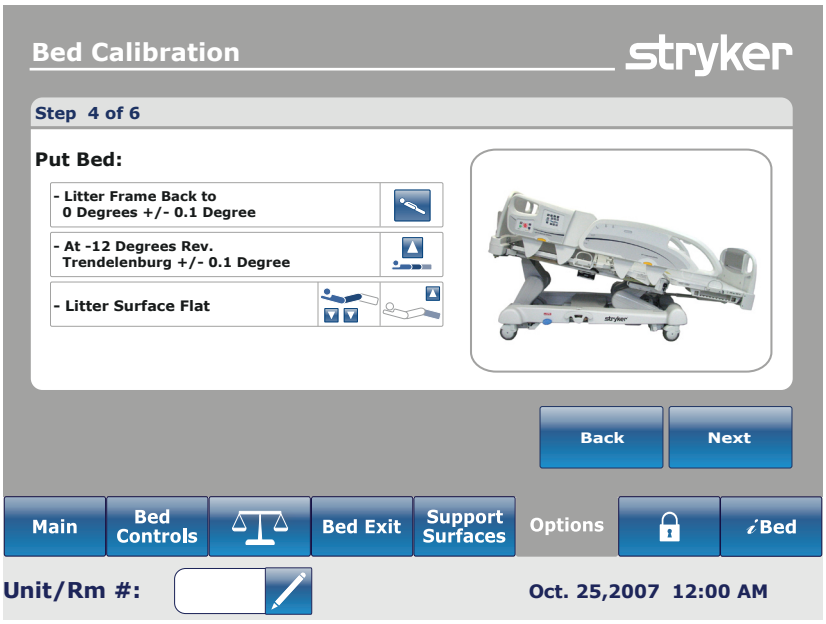

Figure 16: Bed Calibration - Step 4

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

16. Level the bed back out to zero degrees by pushing the Reverse Trendelenburg button until the litter is level while referencing the inclinometer. Note: Confirm inclinometer reads zero degrees.

17. Place the bed at -12 degrees Reverse Trendelenburg by pressing the **Bed Height Up (Head Lift Up)** button as shown in Figure 17 below. Verify -12 degrees +/- 0.1 with the inclinometer you previously placed on the bottom of the litter frame in step 9.

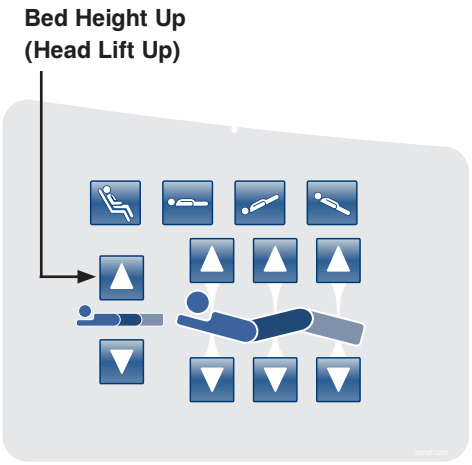

Figure 17: Head Siderail Control Panel - (Right Side Shown)

18. Press the Next button when done.

19. The “Do Not Touch Bed” screen will appear as shown in Figure 18.

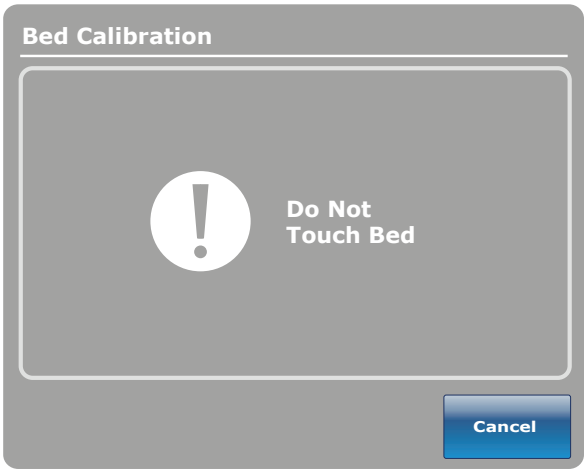

Figure 18: Do Not Touch Bed Screen

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

20. When step 4 of the calibration procedure has completed, step 5 of the calibration procedure will begin and Figure 19 will appear on the screen as shown below.

Figure 19: Bed Calibration - Step 5

21. Place the bed at the highest height by pressing simultaneously the **Trendelenburg (Foot Lift Up)** button and **Bed Height Up (Head Lift Up)** button as shown in Figure 20.

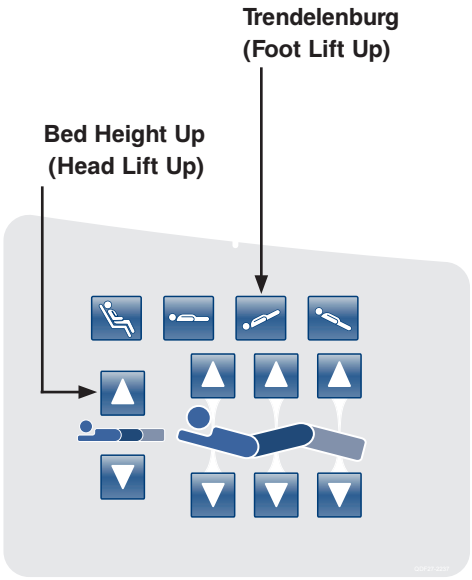

Figure 20: Head Siderail Control Panel - (Right Side Shown)

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

22. Press the **Fowler Up** button until the Fowler reaches the highest height, next press the **Gatch Up** button until the Gatch reaches its highest height, lastly press the **Foot Up** button until the foot section reaches its highest height (refer to Figure 21 below). The foot section should be at a flat position.

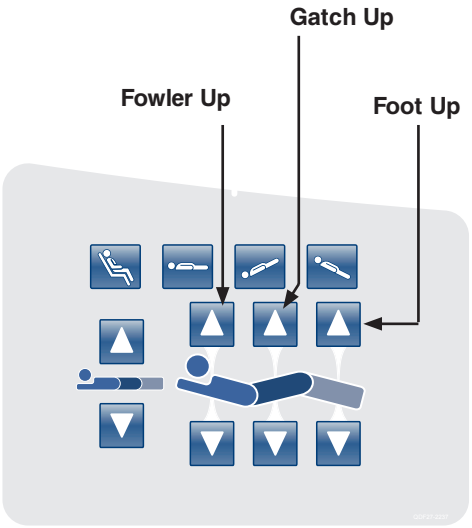

Figure 21: Head Siderail Control Panel - (Right Side Shown)

23. Press the  button when done.

24. The “Do Not Touch Bed” screen will appear as shown in Figure 22.

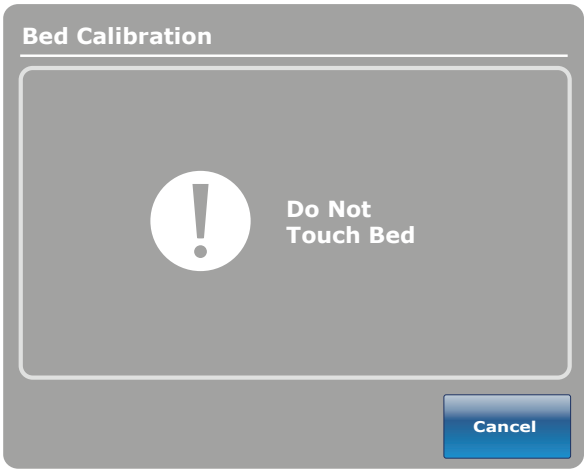

Figure 22: Do Not Touch Bed Screen

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

25. When step 5 of the calibration procedure has completed, step 6 of the calibration procedure will begin and Figure 23 will be displayed as shown below.

Figure 23: Bed Calibration - Step 6

26. Place the bed at the highest height by pressing simultaneously the **Trendelenburg (Foot Lift Up)** button and **Bed Height Up (Head Lift Up)** button (see Figure 24).
27. Place the Fowler and Gatch section of the bed at the highest height by first pressing the **Fowler Up** button then the **Gatch Up** button (See Figure 24).
28. Place the foot at the lowest position by pushing the **Foot Down** button until limit is met (see Figure 24) . **CAUTION: The Gatch must be raised to the highest height prior to running the Foot Down or damage could occur.**

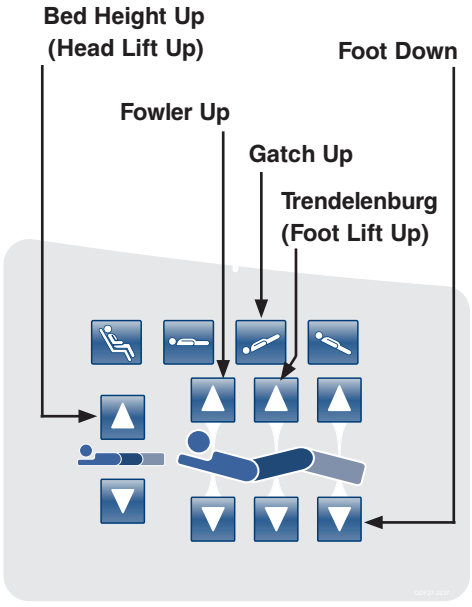

Figure 24: Calibration Complete

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CONFIGURATION SCREEN (CONTINUED)

Bed Calibration (Continued)

29. When the calibration procedure is completed, Figure 25 will be displayed as shown below.
30. Press the Close button to exit the Calibration Procedure Menu.
31. Level the litter flat using the CPR pedal. Verify all display readings are zero degrees while the bed is at 33” (84 cm) (highest height). Lower the bed to 16” (41 cm) (lowest height) and verify the display readings maintain a constant reading of zero degrees with no fluctuations. When the bed reaches it lowest height at 16”, verify the display readings are still at zero degrees.

Note: If readings are not all zero, you will need to recalibrate the bed by repeating steps 1-30.

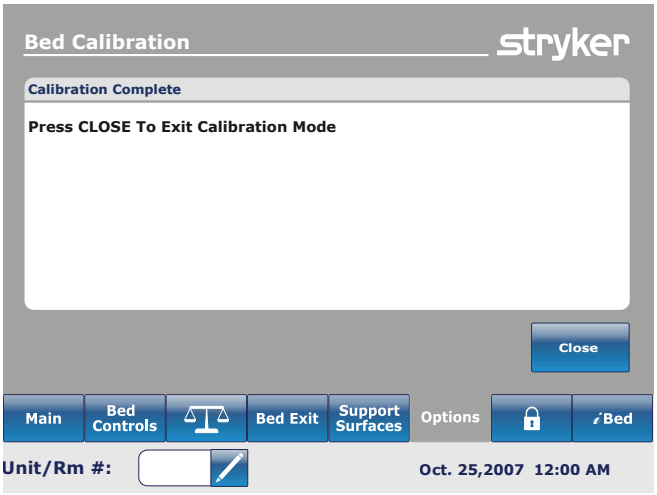

Figure 25: Calibration Complete

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CONFIGURATION SCREEN (CONTINUED)

Full Diagnostic

1. From the Configuration Screen, press the Full Diagnostic button. Figure 26 will appear.

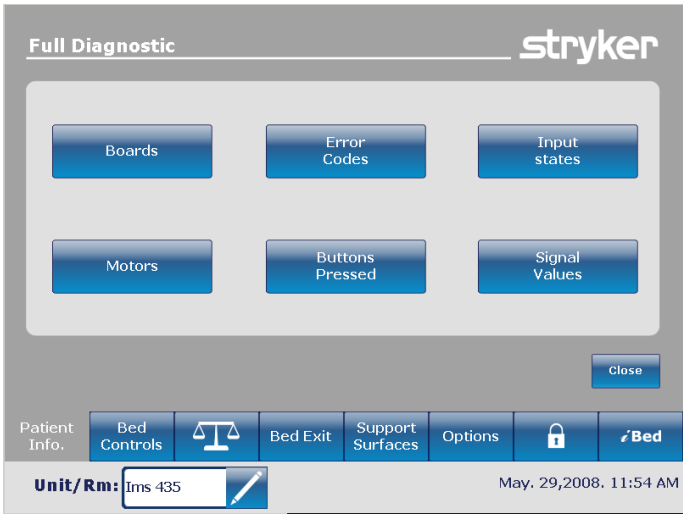

Figure 26: Full Diagnostic Screen

2. The following menu items may be selected by pressing their button.
   a. **BOARDS** (Figure 27a)
   Provides information on the switch boards and the touch screen's software version.
   b. **ERROR CODES** (Figure 27b)
   Provides information on errors which the CPU board has identified.
   c. **INPUT STATES** (Figure 27c)
   Provides information on the status of all switches and jumpers on the bed.
   d. **MOTORS** (Figure 27d)
   Provides information on what a motor is doing when a function button is pushed.
   Note: This requires assistance to press the buttons on the head siderails or at the head end control.
   e. **BUTTONS PRESSED** (Figure 27e)
   Provides information on when the CPU has detected a button being pressed.
   Note: This requires assistance to press the buttons on the head siderails or at the head end control.
   f. **SIGNAL VALUES** (Figure 27f)
   Provides information on CPU voltages, load cell values, and angle sensor values.

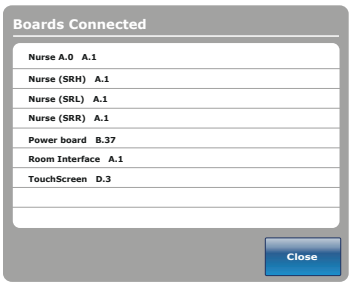

Figure 27a: Board

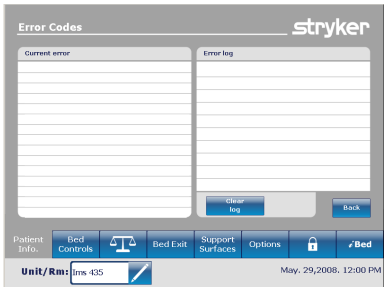

Figure 27b: Error Codes

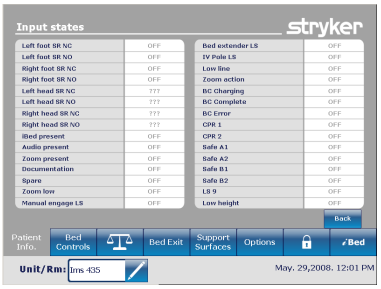

Figure 27c: Input States

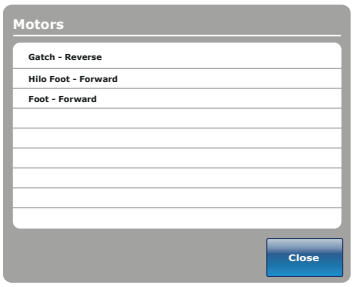

Figure 27d: Motor

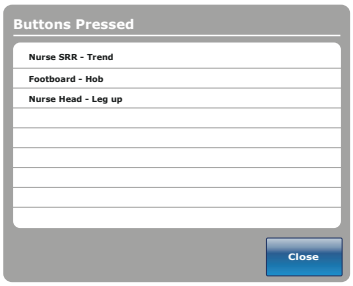

Figure 27e: Pressed Buttons

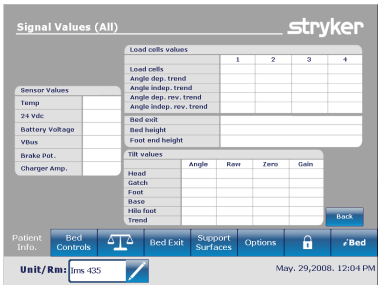

Figure 27f: Signal Values

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CONFIGURATION SCREEN (CONTINUED)

Touch Screen Calibration

1. From the Configuration Screen, press the Touch Screen Calibration button, Figure 28 will appear. **NOTE: If the touch screen will not respond, you will need to push the HOB 30^0+ and Drive buttons on the footboard at the same time (this will enable you to get directly into the touch screen calibration).**
2. The touch screen calibration is a five-step process.
3. Using your finger, touch the cross hair as it appears on the screen. **Note: Make sure to continue touching the the cross hair until it moves.** There will be four different locations to touch: upper center, lower center, center left and center right.
4. When the last cross hair has been touched, the screen will display the verification display as shown in Figure 29.

Figure 28: Touch Screen Calibration: Start

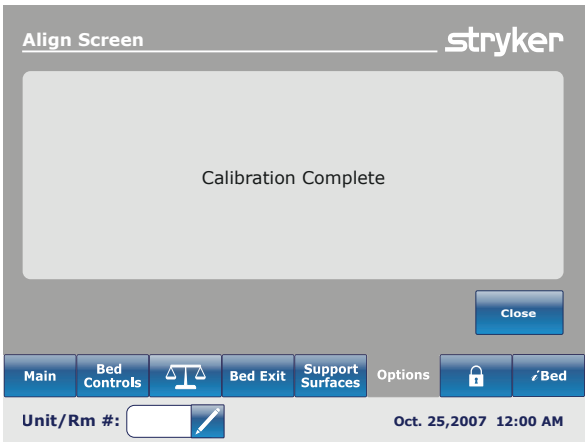

Figure 29: Touch Screen Calibration: Completed

NOTE:
The TOUCH SCREEN VERIFICATION SCREEN is a validation of the touch screen's calibration. When the user presses anywhere on the screen, the coordinates x and y are displayed on the lower part of the screen.

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Notes

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Preventative Maintenance

Beds require an effective maintenance program. We recommend checking these items annually. Use this sheet for your records. Keep on file.

CHECKLIST

_____ All fasteners secure (reference all assembly prints).
_____ Engage brake pedal and push on the bed to ensure all casters lock securely.
_____ "Brake Not Set" LED on the foot board and head end siderails when brakes are not engaged.
_____ Locking steer caster engages and disengages properly (2130 Model only).
_____ Siderails move, latch and stow properly.
_____ CPR release working properly.
_____ I.V. pole working properly (if on bed).
_____ No cracks or splits in head or foot boards.
_____ No rips or cracks in mattress cover.
_____ All functions on head end siderails working properly (including LED's).
_____ All functions on footboard working properly (including LED's).
_____ Scale and Bed Exit system calibrated properly.
_____ Night light working properly.
_____ Power cord not frayed.
_____ No cables worn or pinched.
_____ All electrical connections tight.
_____ All grounds secure to the frame.
_____ Ground impedance not more than 100 milliohms.
_____ Current leakage not more than 300 microamps.
_____ Engage drive wheel and ensure it is operating properly (ZOOM® option - 2140 model only).
_____ Motion release switches working properly (ZOOM® option - 2140 model only).
_____ Confirm Head End ZOOM handle functionality (2140 model only).
_____ Confirm battery powered functionality (ZOOM® option - 2140 model only).
_____ Ensure ground chains are clean, intact, and have at least two links touching the floor.
_____ Check Fowler angle for accuracy 0^0 - 70^0.
_____ Siderail switches working properly (*i*BED Awareness option).
_____ *i*BED Awareness Light Bar LED's on foot board and siderails working properly (*i*BED Awareness option).
_____ Inspect footboard control labeling for signs of degradation.

Bed Serial Number:		

Completed by: _____ Date: _____

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Cleaning

Hand wash all surfaces of the bed with warm water and mild detergent. Dry thoroughly. Do not steam clean or hose off the *In*Touch™ Critical Care Bed. Do not immerse any part of the bed. Some of the internal parts of the bed are electric and may be damaged by exposure to water.

Suggested cleaners for bed surfaces:

Quaternary Cleaners (active ingredients - ammonium chloride)
Phenolic Cleaners (active ingredient - o-phenylphenol)
Chlorinated Bleach Solution (5.25% - less than 1 part bleach to 100 parts water)

Avoid over saturation and ensure the product does not stay wet longer than the chemical manufacturer's guidelines for proper disinfecting.

⚠ CAUTION

Some cleaning products are corrosive in nature and may cause damage to the product if used improperly. If the products described above are used to clean Stryker patient care equipment, measures must be taken to insure the beds are wiped with a damp cloth soaked in clean water and thoroughly dried following cleaning. Failure to properly rinse and dry the beds will leave a corrosive residue on the surface of the bed, possibly causing premature corrosion of critical components. Failure to follow the above directions when using these types of cleaners may void this product's warranty.

For mattress cleaning instructions, please see the tag on the mattress, or contact the mattress manufacturer.

Clean Velcro® **after each use**. Saturate Velcro® with disinfectant and allow disinfectant to evaporate. (Appropriate disinfectant for nylon Velcro® should be determined by the hospital.)

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Note

See “Bed Circuit Boards” section for an outline of bed PCB’s and voltage test points.

Problem / Failure	Recommended Action
No Power to Bed. (On wall voltage 120VAC)	1. Verify the bed is plugged into a functional wall outlet. A. Check for 120VAC at wall outlet. I. If 120VAC is present, go to step 2. II. If 120VAC is not present, contact hospital maintenance staff and try another outlet. 2. Verify the Bed main power fuses are good, located in drawer where power cord plugs into the bed. A. Check for continuity of each 10A fuse. I. If each 10A fuse is good, go to step 3. II. If either 10A fuse does not have continuity, replace the fuse. 3. Verify there is power at the transformer connection (J11) on the CPU/Power at the foot end. A. Check for 24VAC at J11 between the blue and red wires. I. If 24VAC is present, go to step 4. II. If 24VDC is not present, check the 25 Amp fuse in the fuse holder on the red wire from the transformer. If bad, replace the fuse. III. If 24VDC is not present, check the power cable quick connection going to the transformer for 120 VAC. If no voltage, follow the cable and repair or replace the damaged component. IV. If 120 VAC is present, replace the transformer assembly. 4. A. Check for 30VAC at J11 between the yellow and orange wires for the transformer. I. If 30VAC is present, go to step 5. II. If 30VAC is not present, check the power cable quick connection going to the transformer for 120 VAC. If no voltage, follow the cable and repair or replace the damaged component. III. If 120 VAC is present, replace the transformer assembly. 5. A. Check fuse F1 on the CPU/Power board. I. If fuse is good, replace CPU/Power board. II. If fuse does not have continuity, replace the fuse (little fuse 215008.P).

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Problem / Failure		Recommended Action
No Bed Up Motion.	FOOT	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the trend button. I. If the foot lift motor runs up, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the litter angle sensor and recalibrate. II. If the foot lift motor does not run up, check for 24VDC at connector J6 while pressing the trend button. Black lead to pin 1, red lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
	HEAD	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push bed up button. I. If the head lift motor runs up, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the litter angle sensor and recalibrate. II. If the head lift motor does not run up, check for 24VDC at connector J4 while pressing the trend button. Black lead to pin 1, red lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
No Bed Down Motion.	FOOT	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the reverse trend button. I. If the foot lift motor runs down, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the litter angle sensor and recalibrate. II. If the foot lift motor does not run down, check for 24VDC at connector J6 while pressing the reverse trend button. Red lead to pin 1, black lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
	HEAD	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push bed down button. I. If the head lift motor runs down, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the litter angle sensor and recalibrate. II. If the head lift motor does not run down, check for 24VDC at connector J4 while pressing the trend button. Red lead to pin 1, black lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.

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Problem / Failure	Recommended Action
No Fowler Up Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the fowler up button. I. If the fowler motor runs up, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the fowler angle sensor and recalibrate. II. If the fowler motor does not run up, check for 24VDC at connector J5 while pressing the fowler up button. Black lead to pin 1, red lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
No Fowler Down Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the fowler down button. I. If the fowler motor runs down, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the fowler angle sensor and recalibrate. II. If the fowler motor does not run down, check for 24VDC at connector J5 while pressing the fowler down button. Red lead to pin 1, black lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.

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Problem / Failure	Recommended Action
No Gatch Up Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the gatch up button. I. If the gatch motor runs up, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the gatch angle sensor and recalibrate. II. If the gatch motor does not run up, check for 24VDC at connector J3 while pressing the gatch up button. Red lead to pin 1, black lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
No Gatch Down Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the gatch down button. I. If the gatch motor runs down, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the gatch angle sensor and recalibrate. II. If the gatch motor does not run down, check for 24VDC at connector J3 while pressing the gatch down button. Black lead to pin 1, red lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.

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Problem / Failure	Recommended Action
No Foot Up Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the foot up button. I. If the foot motor runs up, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the foot angle sensor and recalibrate. II. If the foot motor does not run up, check for 24VDC at connector J1 while pressing the foot up button. Red lead to pin 1, black lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.
No Foot Down Motion.	1. Put the bed into the Bed Calibration menu. A. Using one of the head siderails, push the foot down button. I. If the foot motor runs down, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the foot angle sensor and recalibrate. II. If the foot motor does not run down, check for 24VDC at connector J1 while pressing the foot down button. Black lead to pin 1, red lead to pin 2. a. If voltage is present, replace the motor. b. If voltage is not present, replace the CPU/Power board.

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Problem / Failure	Recommended Action
No Trendelenburg Motion.	1. Check the touch screen trend angle display for accuracy for the accuracy of the level of the litter. I. If not accurate, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the trend angle sensor and recalibrate. b. If replacement of the trend angle sensor did not resolve the problem, replace the CPU/Power board.
No Reverse Trendelenburg Motion.	1. Check the touch screen trend angle display for accuracy for the accuracy of the level of the litter. I. If not accurate, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the trend angle sensor and recalibrate. b. If replacement of the trend angle sensor did not resolve the problem, replace the CPU/Power board.
No Cardiac Chair Motion.	1. Check the touch screen fowler and foot section angle display for accuracy for the accuracy of the angle of the fowler and foot section. I. If not accurate, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the fowler or foot section angle sensor depending on the one which was not accurate, then recalibrate. b. If replacement of the fowler or foot section angle sensor did not resolve the problem, replace the CPU/ Power board.
HOB 30^0	1. Check the touch screen fowler angle display for accuracy of the angle of the fowler. I. If not accurate, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the fowler angle sensor and recalibrate. b. If replacement of the fowler angle sensor did not resolve the problem, replace the CPU/Power board.
No Vascular Motion	1. Check the touch screen fowler, gatch, foot, and trend/rev. trend display for accuracy of the angle of all. I. If not accurate, recalibrate the bed (refer to the Bed Calibration procedures located on page 18). a. If recalibration does not work, replace the angle sensor of the section that is not accurate and then recalibrate the bed (refer to the Bed Calibration procedures located on page 18). b. If replacement of the fowler angle sensor did not resolve the problem, replace the CPU/Power board.

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Problem / Failure	Recommended Action
No Electric Brake Motion.	1. Verify the Brake Not Set LED is flashing and the Brake Set LED is OFF. I. If the Brake Set LED is ON, check manual brake position. a. If manual brake pedal is in the brake position, the bed should not move and is okay; go to step 2. b. If manual brake is not in the brake position, check the switch on the patients left side in the middle below the base hood. 2. If the brake motor does not run down when the brake button is pushed, check for 24VDC at connector J7 while pressing the brake button. Black lead to pin 1, red lead to pin 2.

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SCALE TROUBLESHOOTING

When the Scale System is unable to correctly weigh the patient weight due to a problem with the electronics, Figure 40 will be displayed. It also appears when there is a problem with the Trendelenberg angle sensor; thus the value for the weight and the angle cannot be displayed.

When the weight exceeds 550 lbs., Figure 41 will be displayed. If the weight is less than 2 lbs., the screen will display “0 lb.”

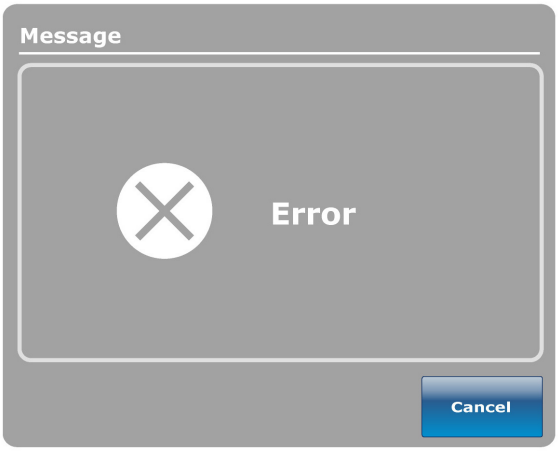

Figure 40

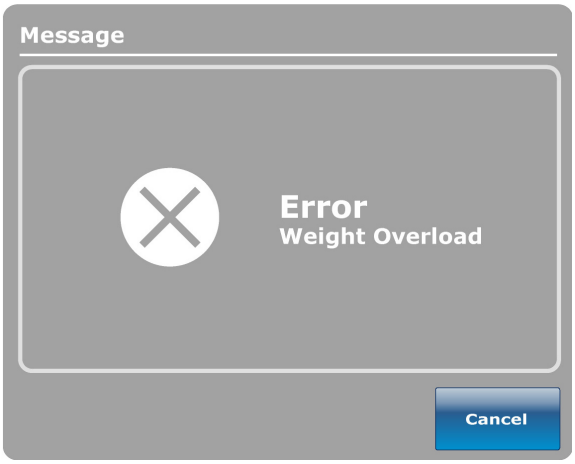

Figure 41

When the Trendelenburg or Reverse Trendelenburg angle is above 12^0 or below -12^0, Figure 42 will be displayed.

The display in Figure 43 will appear as long as the correct weight has not been taken and also when the patient moves too much for the weight to be taken properly.

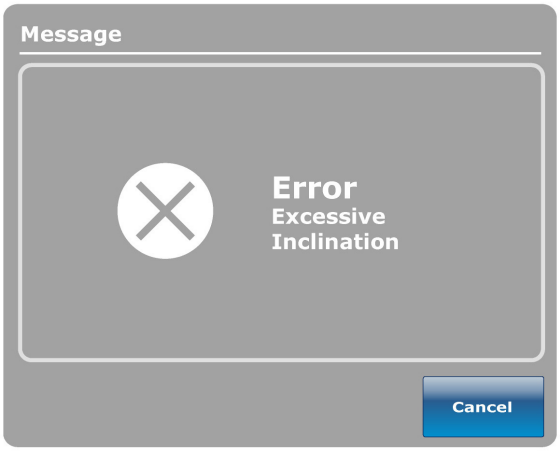

Figure 42

Figure 43

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ERROR HANDLING

- There are two different CAN networks; each of the networks is divided into two connectors.
- A safe error without command can be obtained when a bad connection is carried out on the Power Sensor Board when the control panel is defective (there is no message sent on the network when a button is pressed) or when the network is defective (short-circuit between the signals, open circuit or defective network circuit).
- A command error without safe is obtained when a bad connection is done on the Power Sensor board, when the control panel is defective (a message is sent over the network but not the safe signal) or when the safe signal is defective (short-circuit panel or open circuit or safe circuit on the Power Sensor board is broken).
- These errors can be present when a button is pressed, or at any time, and will thus cause the Call Maintenance LED to light up.
- There is a LED on the Power Sensor Board (DS2 SAFE) which is active when there is at least one safe signal which is active. There are also four LEDs on the Power Sensor board, which shows the activity of the network. Every time a message is sent on the network, the LEDs will flash. If the network is defective, the LEDs will remain on or remain off. If there is nothing connected to the network, the LEDs will remain on or off.
- A safe error can be obtained if a command button is pressed without having the Power Sensor Board receiving a safe signal or if a safe signal is received by the Power Sensor board without having any command button pressed.
- The control panel for the weighing scale of the Power Sensor board can also send errors to the micro-controller which will display them. An error of the weighing scale control panel will light on the Call Maintenance LED.

ERROR MESSAGES

Touch Screen Error Messages Name	Definition
Atd Invalid Values	Digital to analog converter is damaged (Replace the Control Board).
Brake pot bad range	Verify if potentiometer is still in place.
Brake unable to elec ctl	Verify wiring to Brake motor and limit switch for manual engage.
Brake pot Disconnected or short	Verify wiring to potentiometer and replace potentiometer. Ensure potentiometer is still in place.
Brake motor time out	Verify wiring to brake motor.
Calibration Error	Previous calibration step performed incorrectly, redo calibration procedure.
Cmd WO safe from nurse SRR	Right siderail outside board has a network communication error (Check network connections, dip-switch configuration of board or if a button is stuck).
Cmd WO safe from nurse SRL	Left siderail outside board has a network communication error (Check network connections, dip-switch configuration of board or if a button is stuck).
Cmd WO safe from nurse SRH	Head end board has a network communication error (Check network connections).
Cmd WO safe from pat pend R	Optional pendant control has a network communication error (Check network connections).
Cmd WO safe from pat pend L	Optional pendant control has a network communication error (Check network connections).
Cmd WO safe from pat pend H	Optional pendant control has a network communication error (Check network connections).
Cmd WO safe from TS	Touch screen has a network communication error (Check network connections).
Cmd WO safe from room	Communication board has a network communication error (Check network connections).

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ERROR MESSAGES (CONTINUED)

Touch Screen Error Messages Name	Definition
Cmd WO safe from room	Communication board has a network communication error (Check network connections).
GPIO Failure Init	Initialization of the PCA9555 (GPIO expansion chip) failed (Replace control board).
GPIO Failure Read	Reading from the PCA9555 (GPIO expansion chip) failed (Replace control board).
GPIO Failure Write	Writing to the PCA9555 (GPIO expansion chip) failed (Replace control board).
Limit switch head side rail right	Verify wiring to limit switch and replace limit switch.
Limit switch head side rail left	Verify wiring to limit switch and replace limit switch.
Limit switch foot side rail right	Verify wiring to limit switch and replace limit switch.
Limit switch foot side rail left	Verify wiring to limit switch and replace limit switch.
Load cell 0 over range	#0 load cell or cabling is damaged (Replace load cell).
Load cell 1 over range	#1 load cell or cabling is damaged (Replace load cell).
Load cell 2 over range	#2 load cell or cabling is damaged (Replace load cell).
Load cell 3 over range	#3 load cell or cabling is damaged (Replace load cell).
Motor Brake Overheat	Brake motor has ran too long (Leave motor stationary for 54 minutes).
Motor Brake Overload	Brake motor is drawing too many AMPS (remove restriction or replace motor).
Motor Foot Overheat	Foot motor has ran too long (Leave motor stationary for 54 minutes).
Motor Foot Overload	Foot motor is drawing too many AMPS (remove restriction or replace motor).
Motor Gatch Overheat	Gatch motor has ran too long (Leave motor stationary for 54 minutes).
Motor Gatch Overload	Gatch motor is drawing too many AMPS (remove restriction or replace motor).
Motor Head Overheat	Fowler motor has ran too long (Leave motor stationary for 54 minutes).
Motor Head Overload	Fowler motor is drawing too many AMPS (remove restriction or replace motor).
Motor HL Foot Overheat	Foot lift motor has ran too long (Leave motor stationary for 54 minutes).
Motor HL Foot Overload	Foot lift motor is drawing too many AMPS (remove restriction or replace motor).
Motor HL Head Overheat	Head lift motor has ran too long (Leave motor stationary for 54 minutes).
Motor HL Head Overload	Head lift motor is drawing too many AMPS (remove restriction or replace motor).
Motor ZOOM Overheat	ZOOM® motor has ran too long (Leave motor stationary for 54 minutes).
Motor ZOOM Overload	ZOOM® motor is drawing too many AMPS (remove restriction or replace motor).
No Error	No error detected by CPU
One Motor Drive Short	Short on drive motor detected.
Safe WO Cmd from A1	Network A1 has a wiring issue (Check cabling).
Safe WO Cmd from A2	Network A2 has a wiring issue (Check cabling).
Safe WO Cmd from B1	Network B1 has a wiring issue (Check cabling).
Safe WO Cmd from B2	Network B2 has a wiring issue (Check cabling).

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ERROR MESSAGES (CONTINUED)

Touch Screen Error Messages Name	Definition
Scale Chip Failure	Control board is bad (Replace Control Board).
Tilt base over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
Tilt Error Base	Angle sensor is damaged (Replace sensor).
Tilt Error Foot	Angle sensor is damaged (Replace sensor).
Tilt Error Gatch	Angle sensor is damaged (Replace sensor).
Tilt Error Head	Angle sensor is damaged (Replace sensor).
Tilt Error HiLo Foot	Angle sensor is damaged (Replace sensor).
Tilt Error Trend	Angle sensor is damaged (Replace sensor).
Tilt foot over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
Tilt gatch over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
Tilt head over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
Tilt hiLo foot over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
Tilt trend over range	Verify if tilt sensor is still in place. Inspect for a damaged or improperly assembled tilt sensor or recalibrate bed.
ZOOM time out for switch	Verify wiring to ZOOM® motor.

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Quick Reference Replacement Parts List

The parts and accessories listed on this page are all currently available for purchase. Some of the parts identified on the assembly drawing parts in this manual may not be individually available for purchase. Please call Stryker Customer Service USA: 1-800-327-0770 (Option 2), Canada: 1-888-233-6888 for availability and pricing.

Part Name	Part Number
Electrical Components	
Actuator, Brake	QDF27-1227
Actuator, Foot	QDF27-1216
Actuator, Fowler	QDF27-1214
Actuator, Gatch	QDF27-1215
Actuator, Lift, Foot End	QDF27-1251
Actuator, Lift, Head End	QDF27-1252
Angle Sensor, Foot, Fowler, Base, Gatch, Lift	27-1209
Batteries (Replace both at same time)	QDF9188
Board, CPU/Power	QDF75-0110
Board, Drive (2140 ZOOM® Only)	QDF27-1430
Board, Headwall	QDF21-1180
Board, Footboard, Brake Control	QDF27-1097
Board, Footboard, Function Section/LED's	QDF75-0010
Board, Siderail, Inside	QDF27-1526
Board, Siderail, Outside (Bed Motion)	QDF27-1099
Board, Siderail, Outside (Brake Control)	21-1097
Board, Touch Screen, Foot	QDF2125
Fuse, 8Amp Ceramic	QDF2120
Fuse, 10Amp, Main Power	QDF8078
Fuse, 25Amp Cartridge	QDF2119
IV Pole, Removable	FA61002-G
Load Cell	QDF27-1372
Motor, Drive (2140 ZOOM® Only)	QDF27-1445
Motor, Drive Actuator (2140 ZOOM® Only)	27-1683
Position Sensor, Brake/Brake Off/Drive	QDF27-2024
Power Cord	QDF8066
Touch Screen, Footboard	QDF27-2193
Transformer	QDF27-2038
Other Components	
Caster	R27-1970
Caster, Steer (2130 Model Only) (Both foot end)	R27-1971

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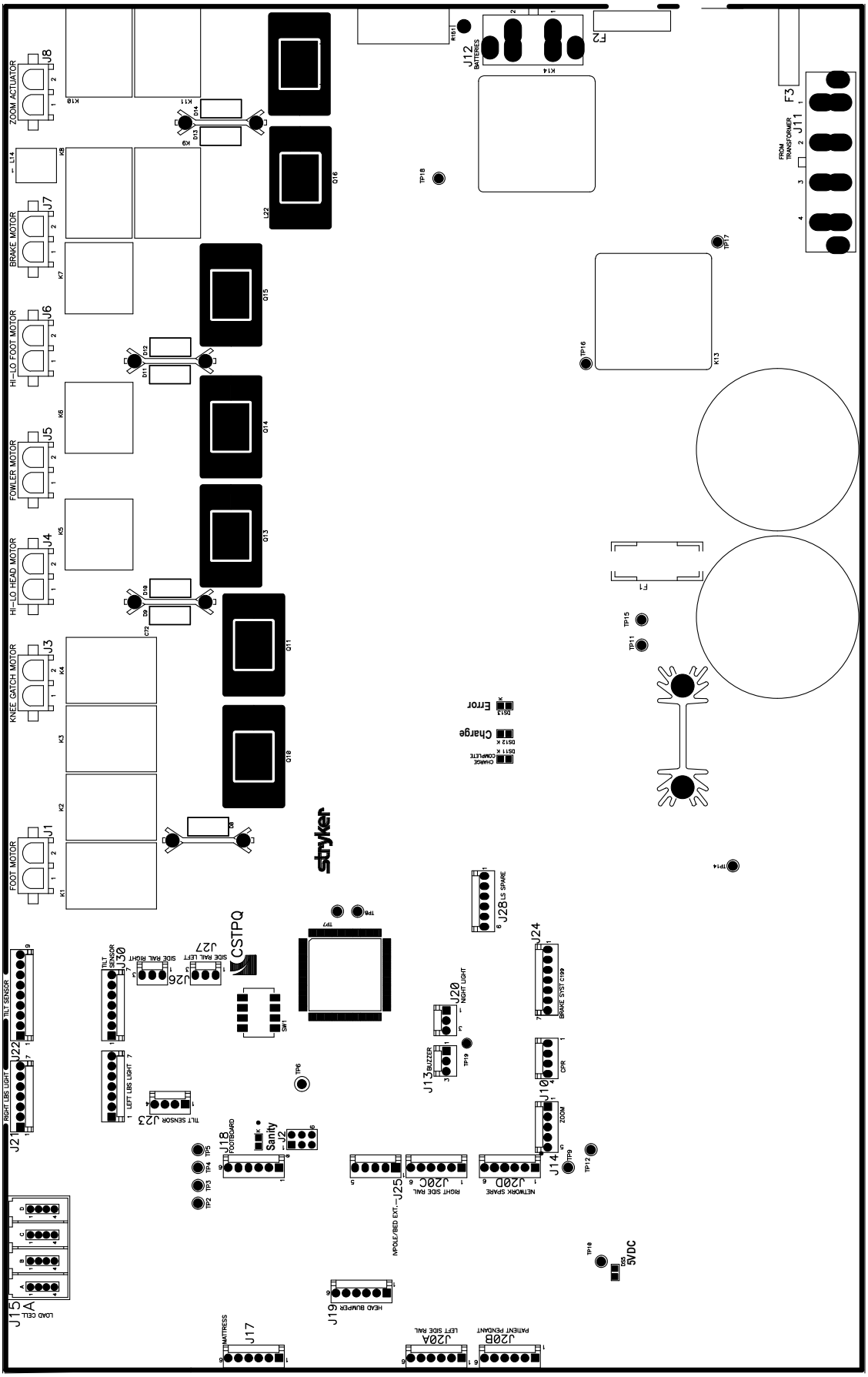
CPU/Power Board - QDF75-0110



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FUSE SPECIFICATION

Location	Description	Amp
F1	30VAC from transformer for the battery charger and the 5VDC / 12VDC supply	10 Amp - 215008.P
F2	24 VDC from batteries for power supply	40 Amp - 142.6185.5402
F3	24 VAC from transformer for power supply	40 Amp - 142.6185.5402

Cable Location	Voltage	Positive Lead	Negative Lead	Description
J11	24-31VAC	Blue	Red	Stepped down voltage from transformer for power supply
J11	30-39VAC	Yellow	Orange	Stepped down voltage from transformer from transformer for battery charger and power supply
J12	24-29DC	Pin 1 - Red	Pin 2 - Black	Battery/Charger
J1	24-28VDC	Pin 1 - Black	Pin 2 - Brown	Foot Actuator Up
J1	24-28VDC	Pin 2 - Brown	Pin 1 - Blue	Foot Actuator Down
J3	24-28VDC	Pin 1- White	Pin 2 - Black	Gatch Actuator Up
J3	24-28VDC	Pin 2 - Black	Pin 1 - White	Gatch Actuator Down
J6	24-28VDC	Pin 2 - White	Pin 1 - Black	Bed Lift-Foot Up
J6	24-28VDC	Pin 1 - Black	Pin 2 - White	Bed Lift-Foot Down
J4	24-28VDC	Pin 2 - White	Pin 1 - Black	Bed Lift-Head Up
J4	24-28VDC	Pin 1 - Black	Pin 2 - White	Bed Lift-Head Down
J5	24-28VDC	Pin 2 - White	Pin 1 - Black	Fowler Actuator Up
J5	24-28VDC	Pin 1 - Balck	Pin 2 - White	Fowler Actuator Down
J7	 24-28VDC 24-28VDC 24-28VDC	 Pin 1 - Black Pin 1 - Black Pin 1 - Black	 Pin 2 - White Pin 2 - White Pin 2 - White	Brake/Brake Off/Drive Actuator • Brake • Brake Off • Drive
J8	Bed Unplugged 25VDC 25VDC	 Pin 2 - White Pin 1 - Black	 Pin 1 - Black Pin 2 - White	ZOOM® Drive Actuator (Model 2140 Only)

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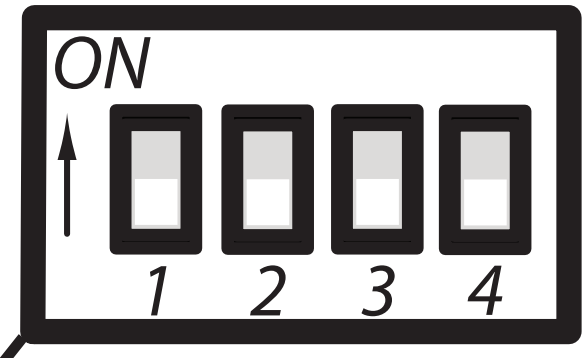
Software Configuration for CPU/Power Board SW1

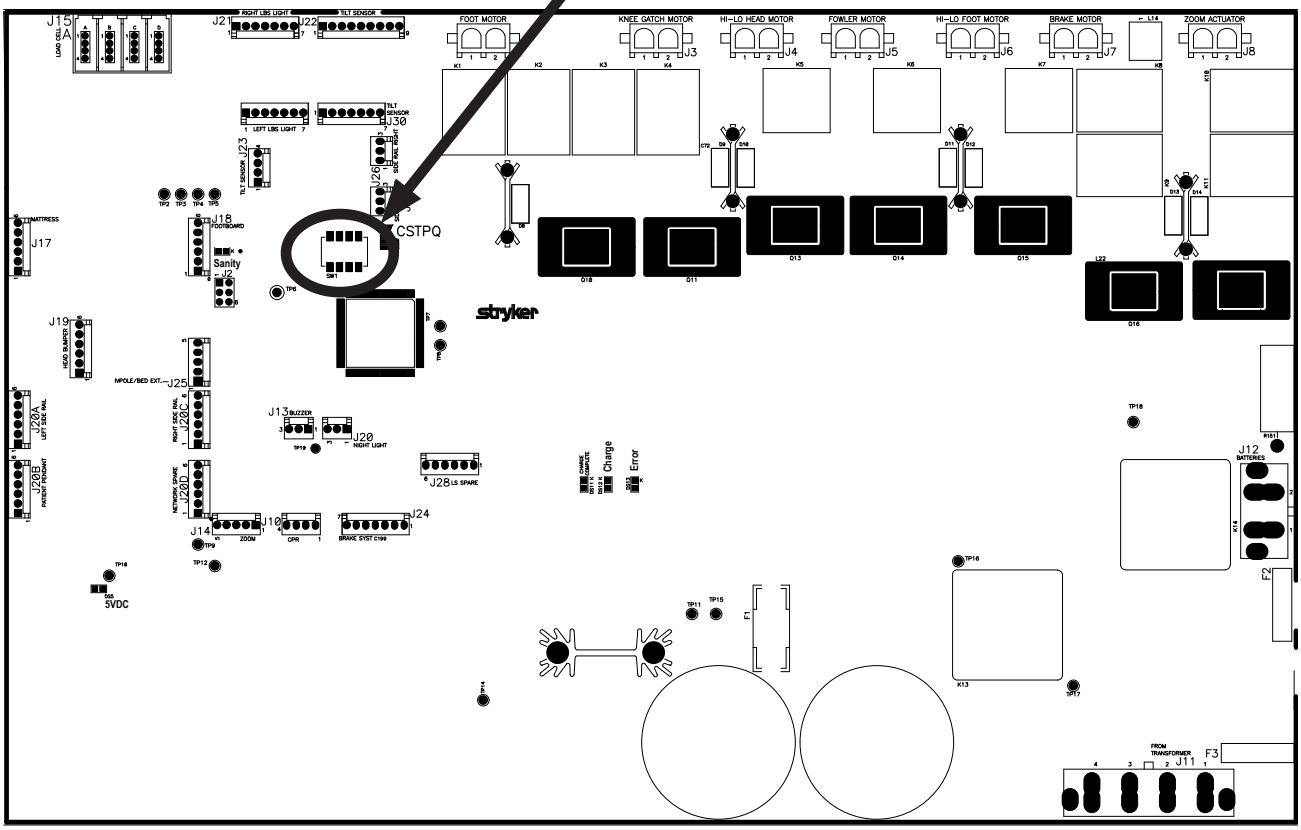
ON OFF 1 2 3 4	2130 without *i*Bed
ON OFF 1 2 3 4	2130 with *i*Bed and *i*Documentation

ON OFF 1 2 3 4	2140 without *i*Bed
ON OFF 1 2 3 4	2140 with *i*Bed and *i*Documentation

SW1 DIP-SWITCHES



CPU/POWER BOARD QDF75-0110



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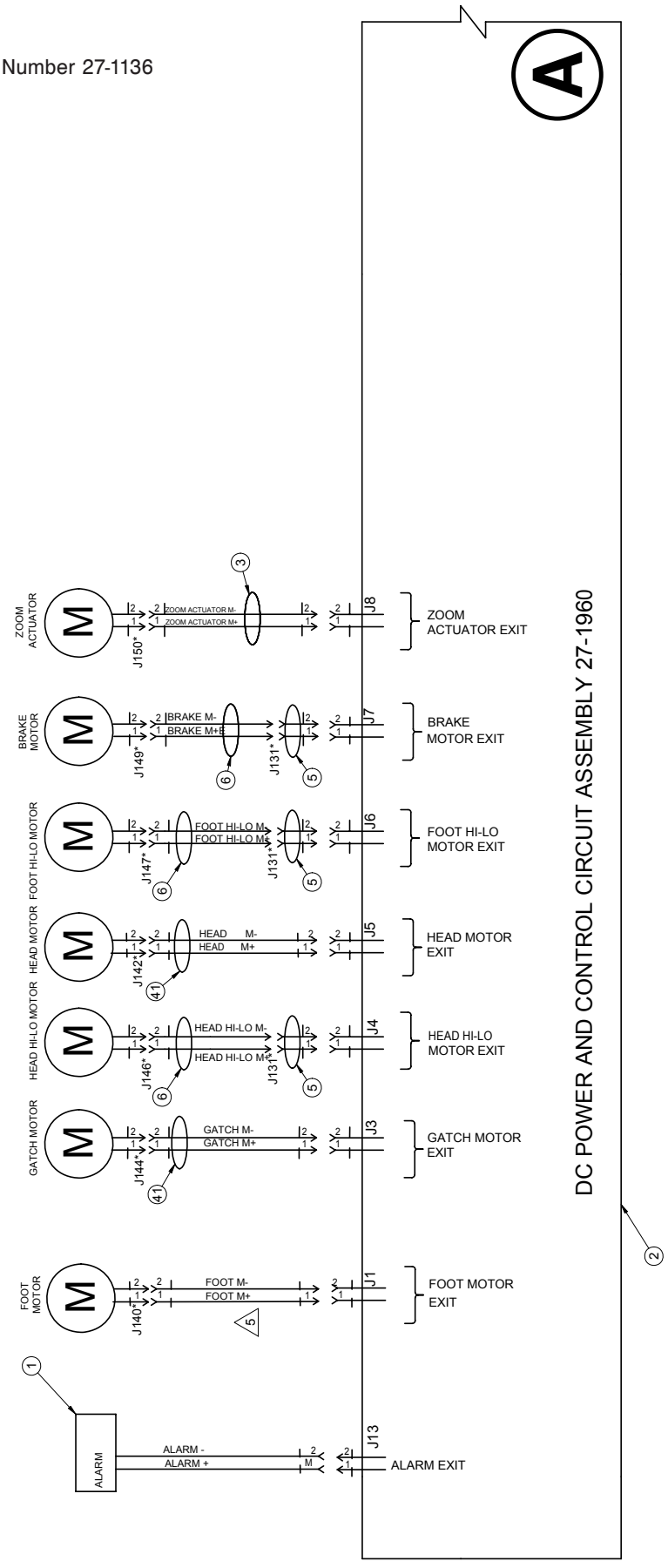
Bed Electrical Diagram

For Reference Only: Part Number 27-1136



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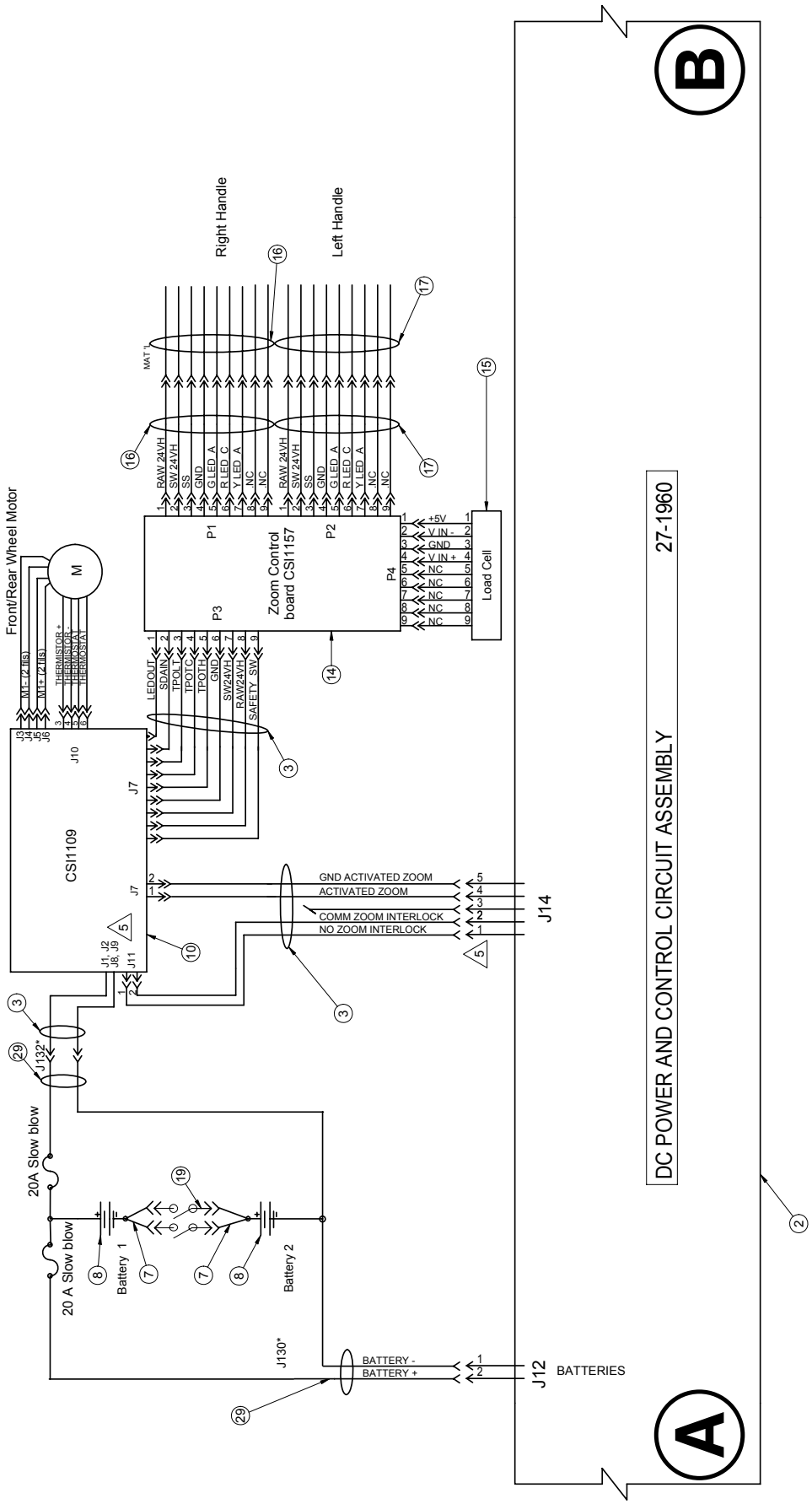

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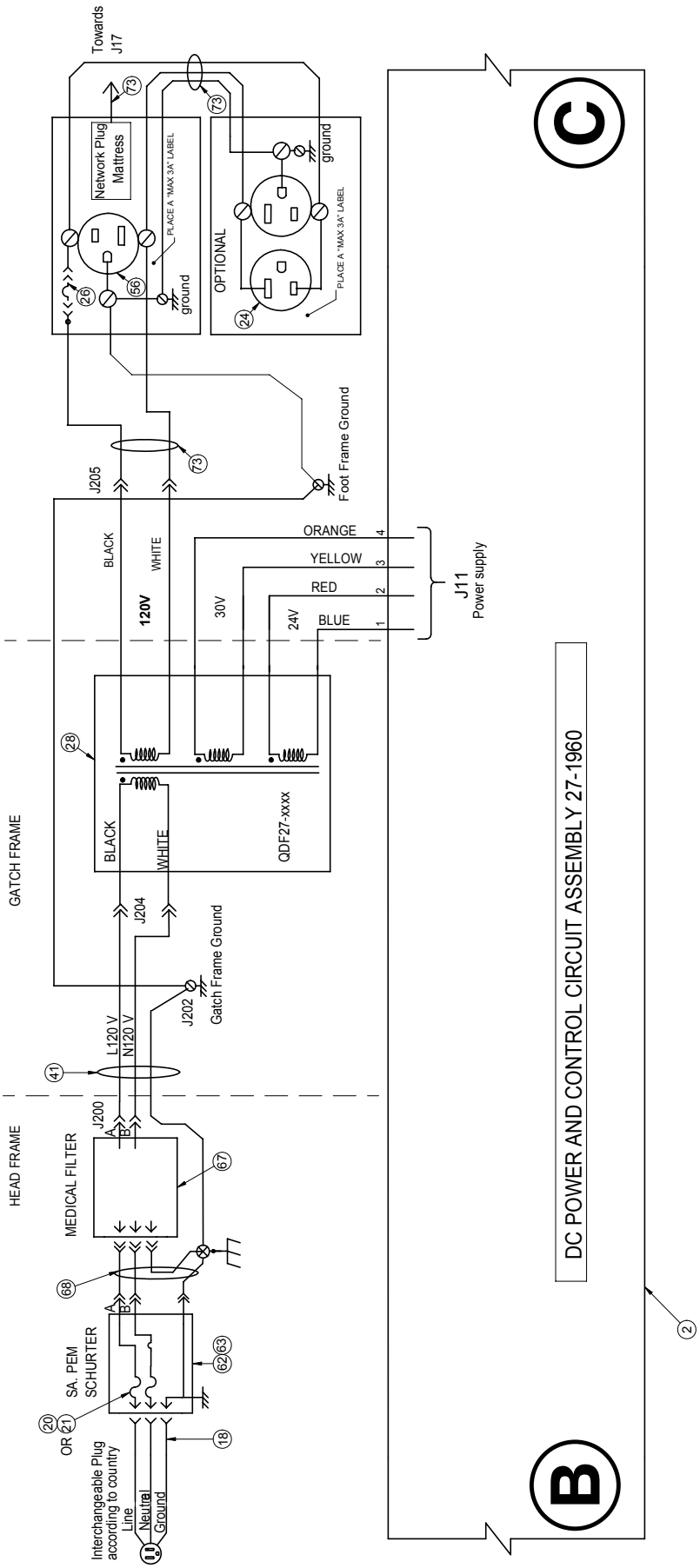

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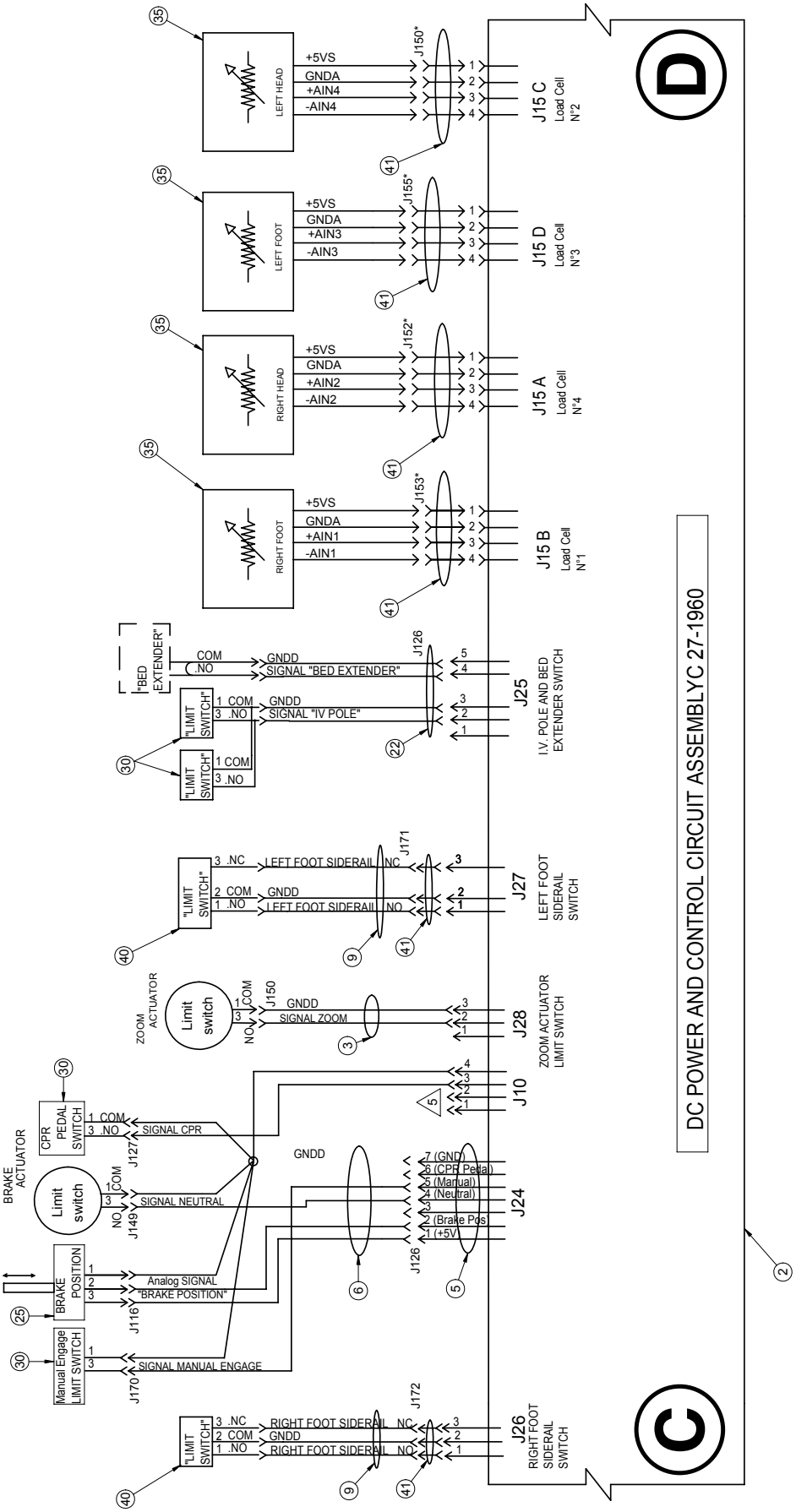
Bed Electrical Diagram



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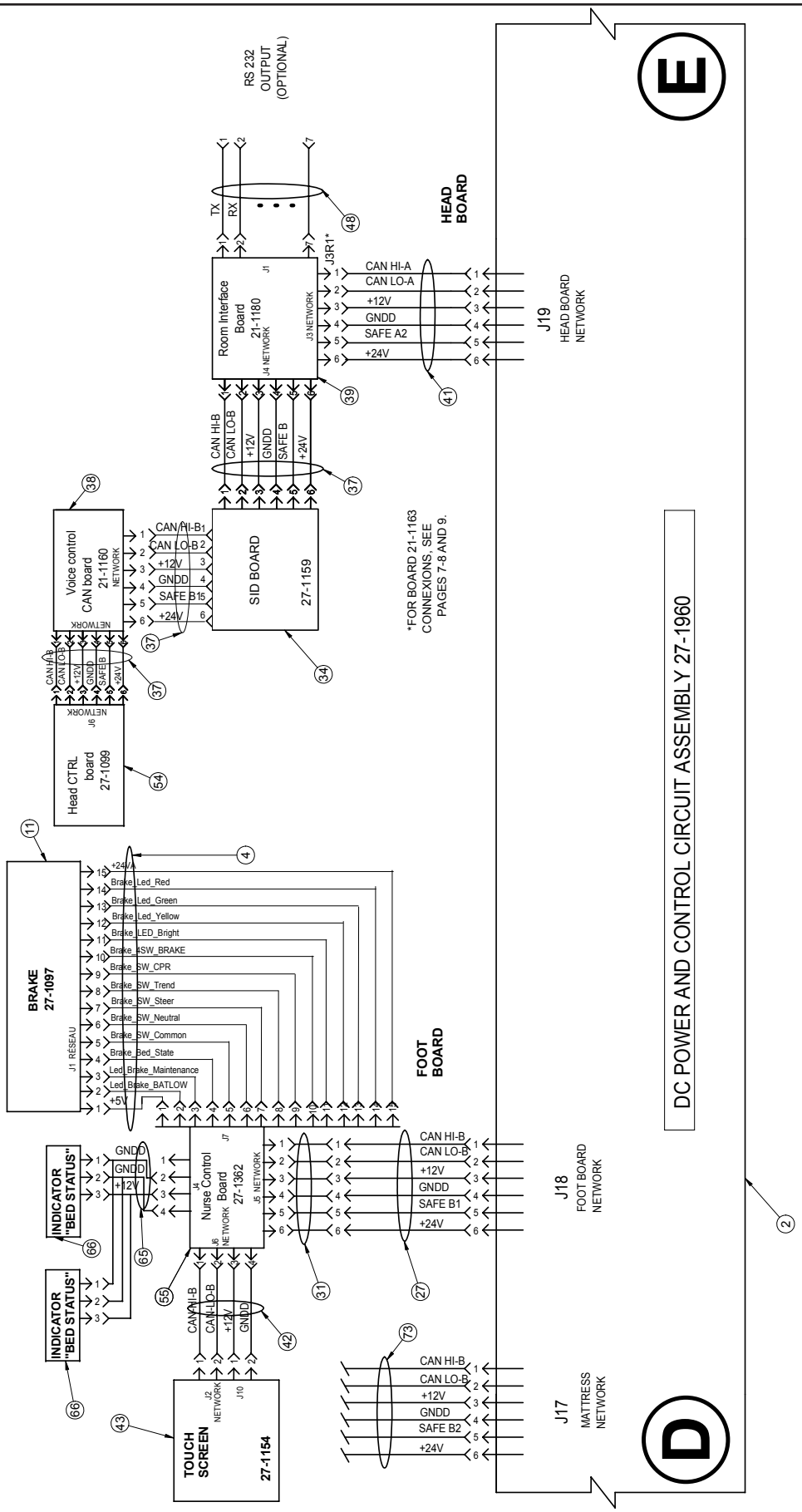

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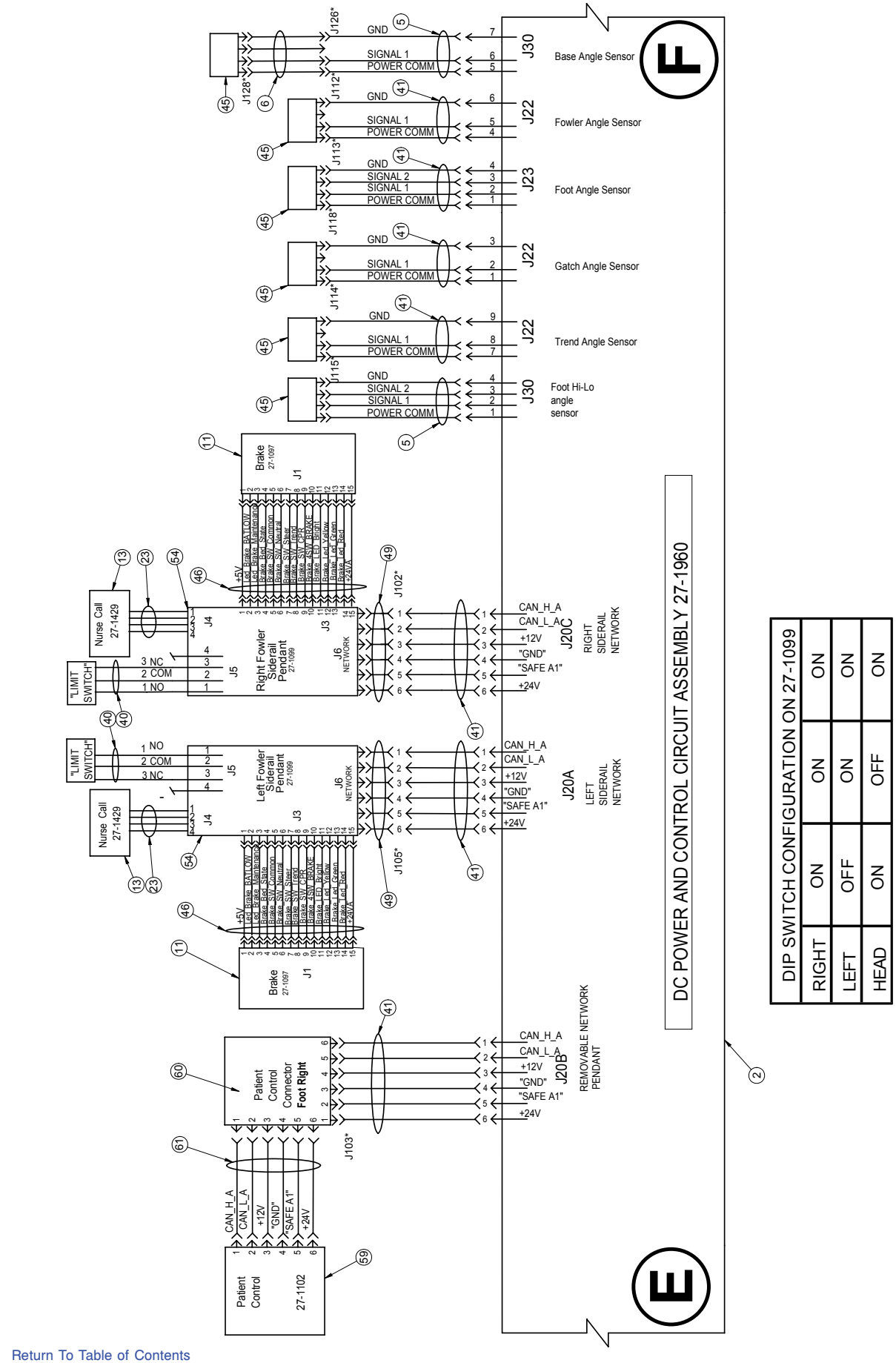

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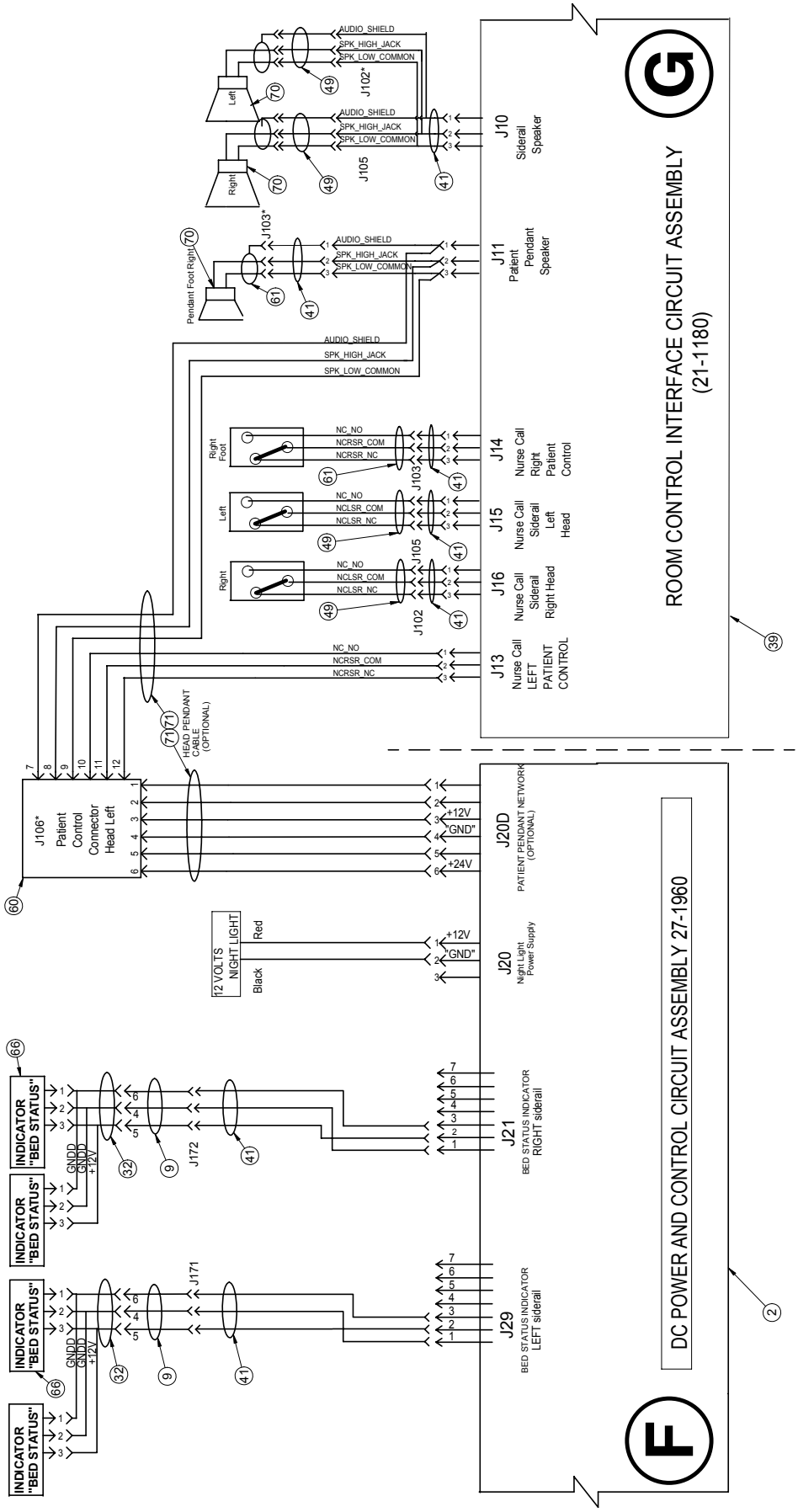

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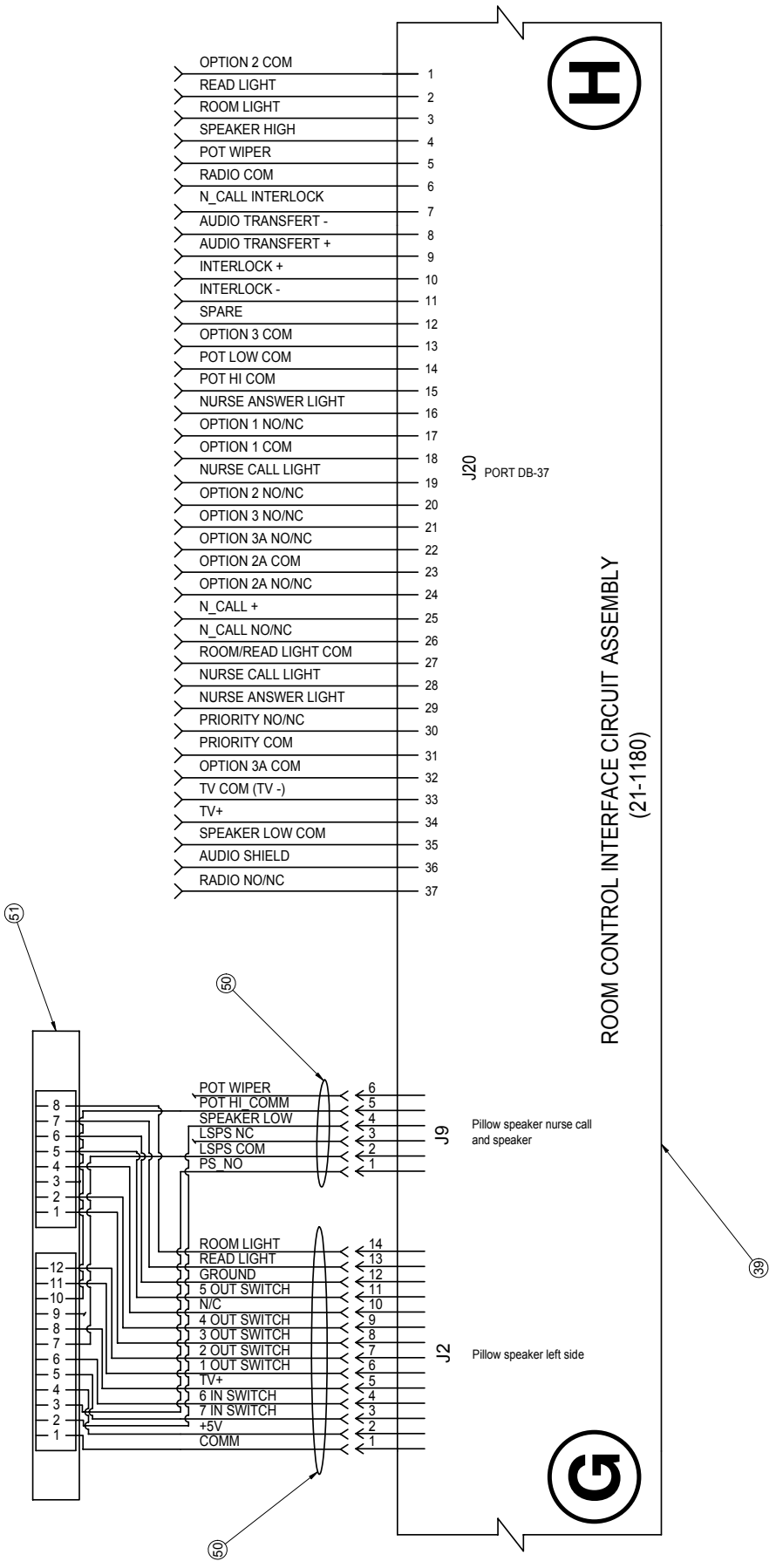
Bed Electrical Diagram



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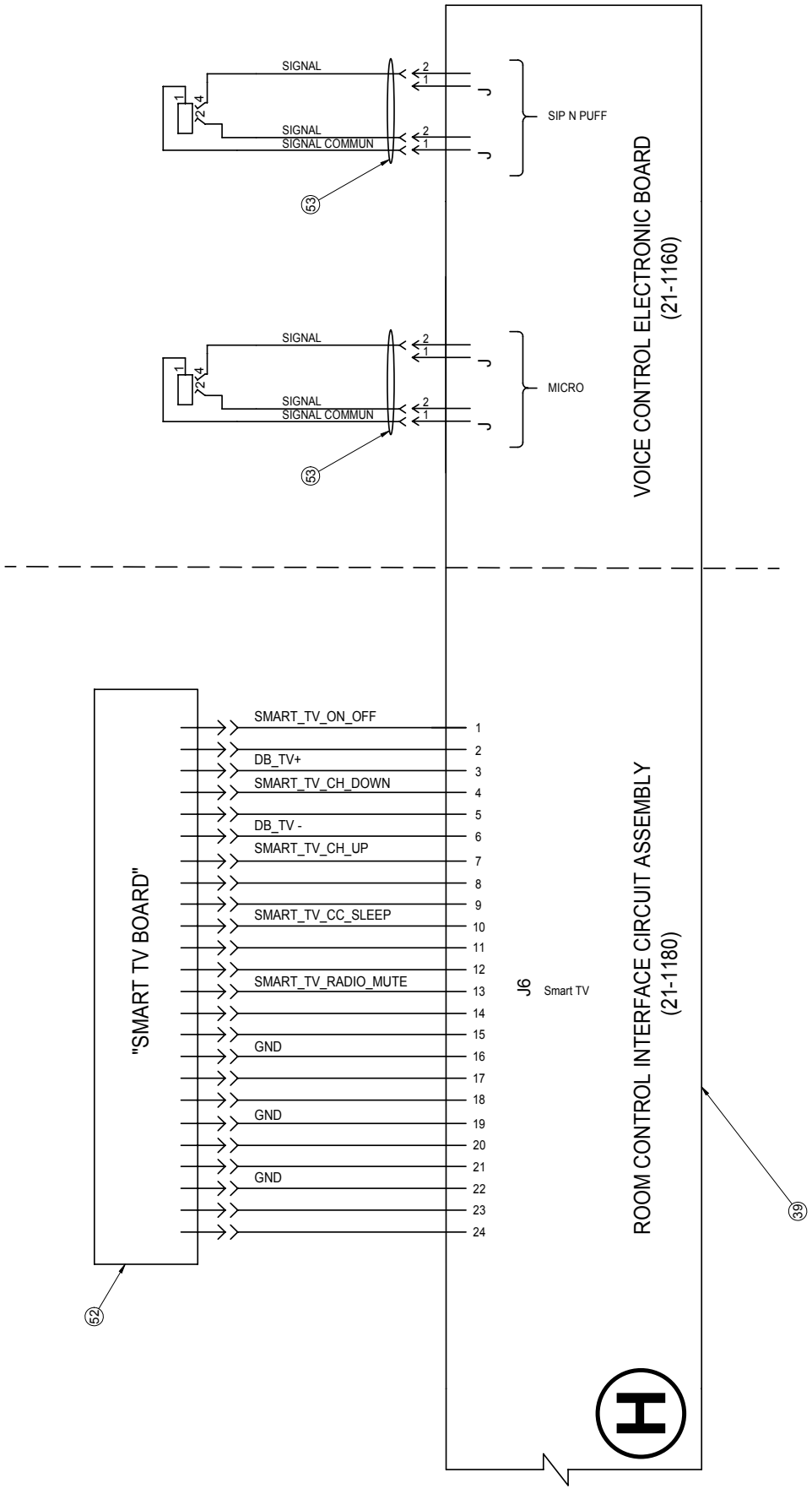
Bed Electrical Diagram



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Bed Electrical Diagram

Bed Electrical Diagram - 27-1136 (reference only)

Item	Part No.	Part Name	Qty.
1	QDF5095	Sound Alarm	1
2	QDF75-0110	DC Power Control	1
3	QDF27-1185	Number 3 Harness	1
4	QDF27-1380	Foot Board Brake Cable	1
5	QDF27-1184	Number 2 Harness	1
6	QDF27-1204	Base Structure Extension	1
7	QDF27-1381	Battery Switch Cable	2
8	QDF9188	12V, 17.9 Ah Battery	2
9	QDF27-1208	Limit Switch Siderail Cable	2
10	QDF27-1430	CSI 1109 Board	1
11	QDF27-1097	Brake / Neutral / Drive Board	3
12	QDF27-1382	Speaker	5
13	QDF27-1429	Nurse Call Board	2
14	QDF27-1431	CSI 1157 Board	1
15	QDF9136	Load Cell Handle	1
16	QDF9130	Right Handle	1
17	QDF9131	Left Handle	1
18	QDF8066	Power Cord	2
19	QDF2087	Rocker Switch	1
20	QDF8078	10A (100V, 120V) Fuse	2
21	QDF8068	6.3A (200V, 220V, 240V) Fuse	2
22	QDF27-1607	I.V. Pole and Bed Extender Cable	1
23	QDF27-1682	Nurse Call Board Cable	2
24	QDF8024	120V Auxiliary Outlet	1
25	QDF2084	Linear Position Sensor	1
26	QDF9025	Breaker	1
27	QDF27-1213	Foot Board Control Board Cable	1
28	QDF27-2038	Toroidal Transformer	1
29	QDF27-1646	Battery Cable	2
30	QDF9004	Micro-Switch	2
31	QDF27-1376	Foot Board Cable	1
32	QDF27-1834	Foot Board LBS Cable	2
33	---	(Double with item 27)	-
34	QDF27-1159	SID CAN Board	1
35	QDF27-1372	Load Cell	4
36	QDF21-1151	Exterior Side Head COM CAN-Mod Board	3
37	QDF21-2895	12” Network Cable	4
38	QDF21-1160	Voice Control CAN Board	1
39	QDF21-1180	Without GEN III/37 BRO CAB-CONN Board	1
40	QDF27-1521	Siderail Limit Switch	2
41	QDF27-1481	Number 1 Harness Wire	1
42	QDF27-1157	Touch Screen Cable	2
43	QDF27-1154	Touch Screen Board	1
44	---	---	-
45	QDF27-1551	Angle Sensor	6
46	QDF27-1156	Cable for Brake Board	2
47	QDF2088	12V 3 LEDS Night Light	1
48	QDF27-1161	Cable for Connector Serial Interface	1
49	QDF27-1206	Siderail “Y” Wire	2
50	QDF21-4109	20 PINS Auxiliary Cable Port	1
51	QDF9186	Stryker Pendant Port	1

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Bed Electrical Diagram - 27-1136 (reference only) (Continued)

Item	Part No.	Part Name	Qty.
52	QDF2060	Smart TV Board	1
53	QDF21-2901	SIP-N-PUFF Cable	2
54	QDF27-1099	Fowler Side COM CAN-MOD Board	3
55	QDF27-1362	Touch Screen CAN-MENU Board	1
56	QDF9573	XPRT Mattress Outlet	-
57	---	---	-
58	QDF27-1674	XPRT Outlet Protective Wire	1
59	QDF27-1102	Patient Pendant Control	2
60	---	Patient Pendant Connector	1
61	QDF27-1525	Patient Pendant Cable	2
62	QDF9574	PEM TY PE KEC Schurter #4303.0001	1
63	QDF9575	PEM Fuse Holder Schurter #4303.2001	1
64	---	---	-
65	QDF27-1608	LBS Cable	1
66	QDF27-1562	Local Bed Status Board	2
67	QDF9571	Medical Filter	1
68	QDF27-1524	Filter and Receptacle Connector	1
69	QDF27-1681	Interior Siderail Wire	2
70	QDF27-1526	Speaker	4
71	OL270046	Patient Pendant Cable (Optional)	1
73	QDF27-1976	Auxiliary Outlet Cable + Mattress	1
74	---	---	-

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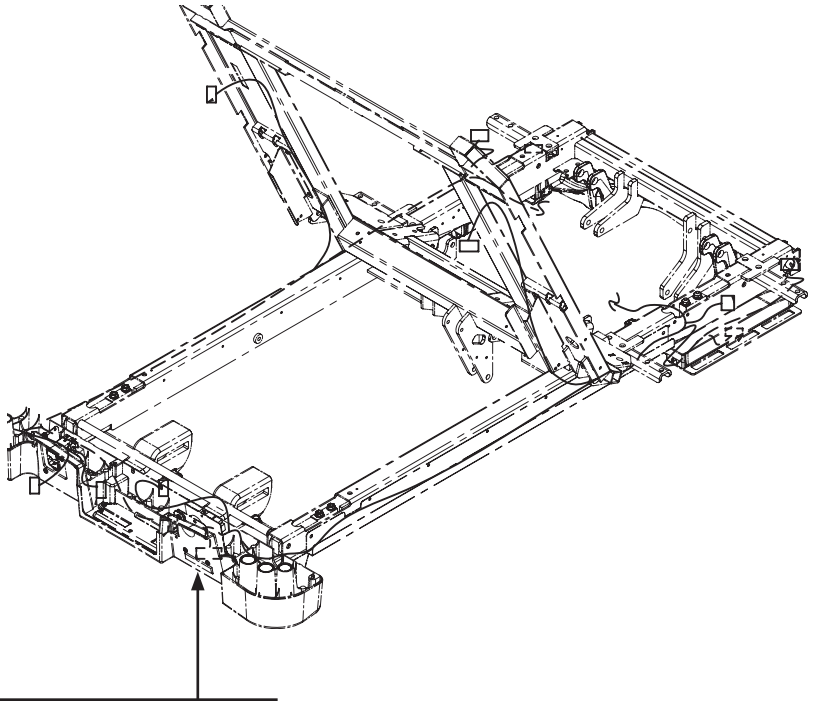
BED LIFT ACTUATOR (HEAD) REMOVAL AND REPLACEMENT - (BASE)

Tools Required:

- Needle-Nose Pliers
- Diagonal Pliers
- Jack (if needed)
- 2 x 4 (20” recommended)



Step #8:
Locate Jack Stand between floor and underside of Foot Frame.

Floor

Procedure:

1. Plug bed into wall outlet.
2. Raise the head end siderails to the full up position and set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Remove head end base cover by pulling up and out.
4. Remove center base cover by pulling up and out.
5. Using diagonal pliers, cut the zip tie securing the actuator cable to the base frame.
6. Using needle-nose pliers, remove the rue clips from the clevis pins securing the actuator.
   CAUTION: Do not remove the clevis pins.
7. If the bed will lower down, run it all the way down so the litter is supported by the base litter stop.
8. If the bed will not lower all the way down; using a jack and a 2 x 4, take tension off of the actuator clevis pins by placing the jack and 2 x 4 between the bottom of the right side of the litter and the floor and jack up just enough to take the litter weight off of the base frame (reference picture below).
   CAUTION: Make sure that prior to jacking, the 2 x 4 is perpendicular to the floor.
9. Using the bed up/down controls, tap the up or down button to remove tension on the clevis pins and remove clevis pins.
10. Unplug the cable quick connect and remove the actuator.
11. Reverse the steps to install the new actuator.
12. Test all bed functionality prior to putting bed back in service.

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BED LIFT ACTUATOR (FOOT) REMOVAL AND REPLACEMENT - (BASE)

Tools Required:

- Needle-Nose Pliers
- Diagonal Pliers

Procedure:

1. Plug bed into wall outlet.
2. Raise head end siderails to full up position and ensure brakes are activated.
3. Remove head end base cover by pulling up and out.
4. Remove center base cover by pulling up and out.
5. Using diagonal pliers, cut the zip tie securing the actuator cable to the base frame.
6. Using needle-nose pliers, remove the rue clips from the clevis pins securing the actuator.

   CAUTION: Do not remove the clevis pins.
7. Lower the bed all of the way down so the litter is supported by the base litter stops.
8. Using the bed up/down controls, tap the up or down button to remove tension on the clevis pins and remove clevis pins.
9. Unplug the cable quick connect and remove the actuator.
10. Reverse the steps to install the new actuator.
11. Test all bed functionality prior to putting bed back in service.

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FOWLER ACTUATOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Needle-Nose pliers
- Diagonal Pliers
- Regular Screwdriver
- Phillips Screwdriver #2
- 3/8” Combination Wrench

Procedure:

1. Plug bed into wall outlet.
2. Raise bed to the full up position.
3. Raise the head end siderails to the full up position and set the brakes using one of the brake control locations or by using the manual brake pedal.
4. Working from the right side of the bed, step on the CPR pedal to lower the fowler all the way down.
5. Raise the gatch to the full up position.
6. Remove the three center base hoods (head, center, foot), then remove the right base hood.
7. Using needle-nose pliers, remove the two rue clips from the clevis pins holding the actuator.
8. Using diagonal pliers, cut the zip ties securing the CPR cable to the actuator and the litter frame. Also cut the zip ties securing the actuator cable to the wire harness.
9. Unplug the actuator from the quick connect.
10. Holding the actuator with one hand remove the clevis pins from the actuator and carefully lower the actuator down.
11. Using a Phillips screwdriver and a 3/8” combination wrench, remove the CPR cable retaining screw from the right CPR pedal.
12. Using a regular screwdriver, loosen the CPR cable retainer on the actuator just enough so it will move.
13. Slide the gray cable retainer lock towards the CPR cable retainer and unclip the CPR cable from the red actuator release activator.
14. Remove actuator.
15. Reverse these steps to reinstall.
16. When actuator is back in place use needle-nose pliers to reattach spring to center of clevis pin.
17. Test all bed functionality prior to putting bed back into service.

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GATCH ACTUATOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Needle-Nose Pliers

Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Remove the mattress and set aside.
4. Raise bed to the full up position.
5. If the actuator will run, lower the gatch down to take the tension off of the actuator mounting pins. If the actuator will not run, support the gatch section to take tension off of the actuator mounting pins.
6. Unplug the actuator cable from the quick connect near the actuator.
7. Using needle-nose pliers, remove the two rue clips from the clevis pins holding the actuator in place.
8. Holding the actuator with one hand, remove the clevis pins securing the actuator to the bed then remove the actuator.
9. Reverse these steps to reinstall.

   Note: If new actuator shaft does not line up with mounting holes, mount the base of the actuator then plug the actuator in and run it electrically in or out until lined up.
10. Test all bed functionality prior to putting bed back in service.

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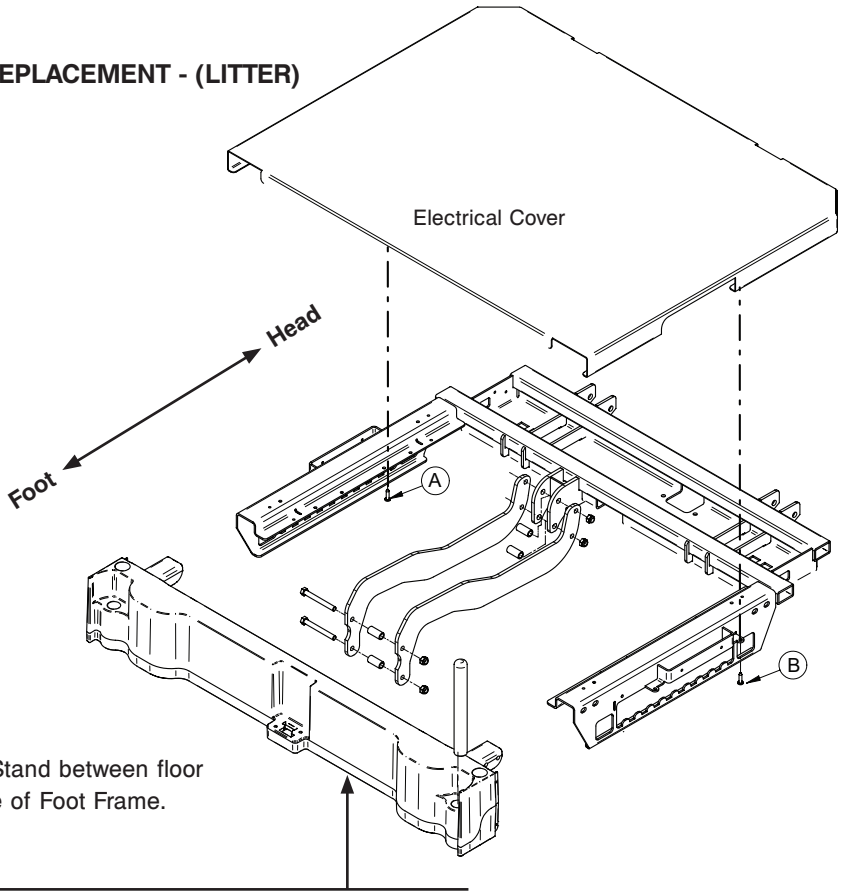
FOOT ACTUATOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Needle-Nose pliers
- Diagonal Pliers
- Phillips Screwdriver #2
- Jack Stand



Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Remove the mattress and set aside.
4. Using a jack stand, support the foot section by lowering the bed height down enough to take the tension off the actuator mounting pins (reference drawing above).
5. Using diagonal pliers, cut the zip ties securing the actuator cable to the bed.
6. Remove the mattress assembly or fold back to expose the foot section.
7. Using a Phillips screwdriver, remove the two screws (reference drawing above, item A and B) securing the electrical cover from the foot section and remove the cover.

   Note: Use caution as the cover is large and heavy.
8. Unplug the actuator from J1 and feed cable down to actuator.
9. Using needle-nose pliers, remove the two rue clips from the clevis pins holding the actuator in place.
10. Holding the actuator with one hand, remove the clevis pins securing the actuator to the bed then remove the actuator.
11. Reverse these steps to reinstall.

    Note: If new motor shaft does not line up with mounting holes, mount the base of the actuator then plug the actuator in and run it electrically in or out until lined up.
12. Test all bed functionality prior to putting bed back in service.

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ZOOM® DRIVE ACTUATOR REMOVAL AND REPLACEMENT (2140 MODEL ONLY) - (BASE)

Tools Required:

- Needle-Nose Pliers
- Pry Bar or 2 x 4
- Diagonal Pliers

Procedure:

1. Plug bed into wall outlet.
2. Position the bed height in the middle range.
3. Remove the center base cover then remove the ZOOM drive actuator cover and set aside.
4. Using needle-nose pliers, remove the two rue clips from the clevis pins securing the actuator to the base frame.
5. Using diagonal pliers, cut the zip ties securing the actuator cable and then unplug the actuator from the quick connect.
6. Using a pry bar or a 2 x 4, pry upward on the ZOOM® drive actuator frame and push the actuator clevis pins out.
7. Remove actuator.
8. Reverse steps to install new actuator.
9. Test all bed functionality prior to putting bed back into service.

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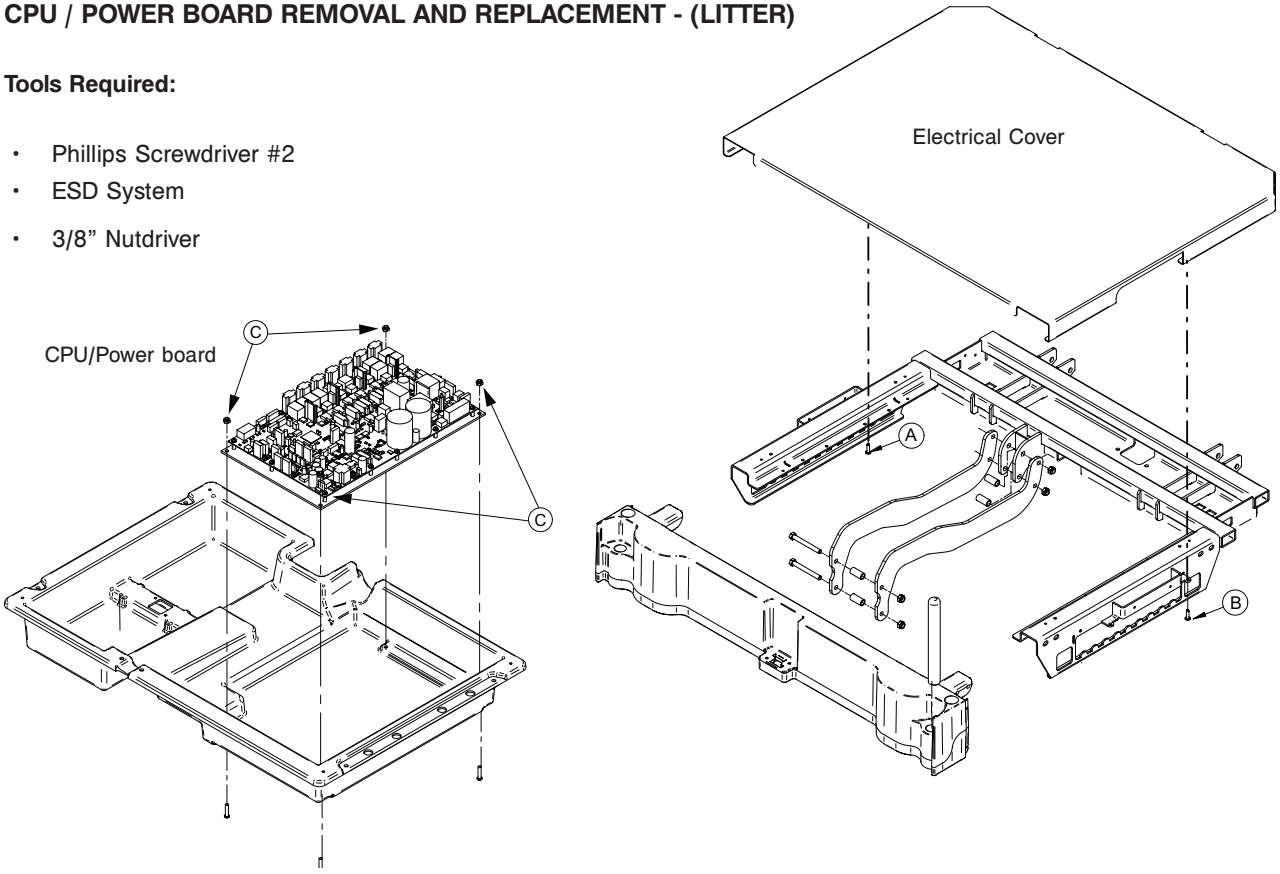
CPU / POWER BOARD REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- ESD System
- 3/8” Nutdriver



Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Raise the bed to the full upright position.
4. Remove the mattress assembly or fold back to expose the foot section.
5. Using a Phillips screwdriver, remove the two screws (reference drawing above, item A and B) securing the electrical cover and remove the cover.

   Note: Use caution as the cover is large and heavy.
6. Unplug the bed from the wall outlet and turn battery switch OFF. The bed should now have no power.
7. Using an ESD system, properly ground yourself.
8. Unplug all cable connections from the CPU/Power board.
9. Using a 3/8” nutdriver and a Phillips screwdriver, unscrew the four screws securing the metal CPU/Power board mounting plate to the electrical tray (reference drawing above).
10. Remove CPU/Power board and set aside.
11. Reverse the steps to install new CPU/Power board. Make sure to reference old board for proper configuration of SW1 dip-switches.
12. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
13. Test all bed functionality prior to putting bed back into service.

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LOAD CELL (HEAD END) REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- Needle-Nose Pliers
- 3/8” Drive Ratchet
- 1/2” Socket
- 1/2” Combination Wrench

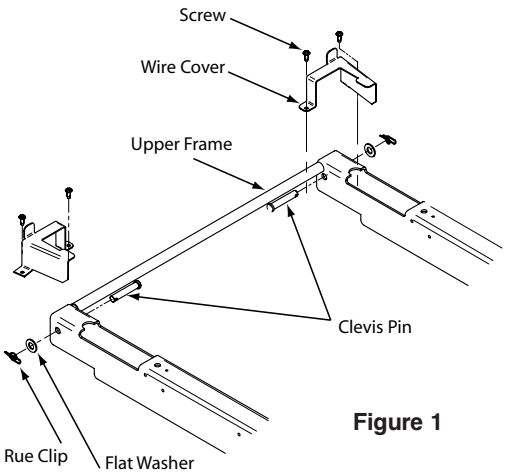
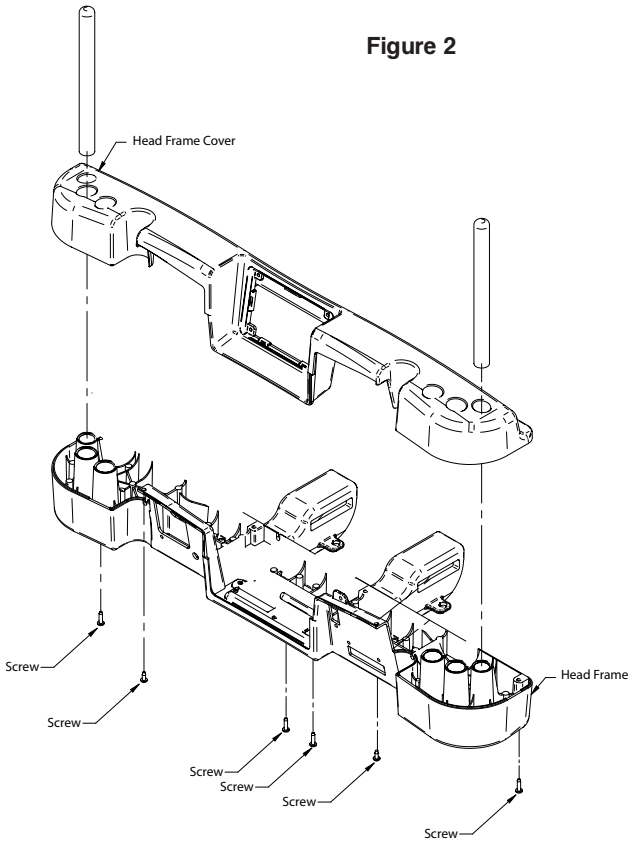


Figure 1

Figure 2



Procedure: (procedure the same for left and right sides)

1. Plug bed into wall outlet.
2. Raise bed and fowler to full up position, gatch down and foot up.
3. Raise head end siderails.
4. Using a Phillips screwdriver, remove the two screws securing the wire cover to the head frame (Figure 1).
5. Using a Phillips screwdriver, remove the six screws from the head frame cover, lift up on the cover and lay it on the litter (Figure 2)
6. Unscrew the load cell connection and feed the connection back towards the cell.
7. Using needle-nose pliers, remove the rue clip and the flat washer.
8. Using one hand, grab the upper frame cross bar to remove tension on the litter then push the clevis pin out.
9. Using a ratchet with a 1/2” socket and a 1/2 combination wrench, remove the two bolts securing the load cell then remove the load cell.
10. Reverse procedures to install the new load cell.

    CAUTION: Ensure cables do not get pinched when securing the head end fame cover together.
11. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
12. Test all bed functionality prior to putting bed back into service.

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LOAD CELL (FOOT END) REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- Needle-Nose Pliers
- 1/2” Combination Wrench
- 3/8” Ratchet
- 1/2” Shallow Well Socket
- Diagonal Pliers
- Jack
- 2 x 4 (20” recommended)

Procedure: (procedure the same for left and right sides)

1. Plug bed into wall outlet.
2. Raise bed to around 24” (reference the footboard display) and gatch to full up position.
3. Remove the mattress assembly.
4. Using a 1/2” combination wrench, remove the four bolts securing the gatch section cover and remove by lifting up on the foot end and then pushing backwards on the cover.
5. Raise the foot end siderails up.
6. Using needle-nose pliers, remove the rue clip and flat washer.
7. Remove the foot end base cover.
8. Using a Phillips screwdriver, remove the four screws securing the foley bag bracket.
9. Using a jack and 2 x 4, take the tension off of the load cell clevis pin and remove.
10. Unscrew load cell cable connector.
11. Using diagonal pliers, cut the two cable ties securing the main wire harness and the siderail cable located just behind the load cell.
12. Using a ratchet and 1/2” socket, remove the two nuts and bolts securing the load cell to the litter frame.
13. Remove the load cell by pulling back and upward towards the middle of the bed while feeding the cable through the litter frame.
14. Reverse procedures to install the new load cell.

    CAUTION: When installing new load cell do not pinch the cable with the load cell.
15. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
16. Test all bed functionality prior to putting bed back into service.

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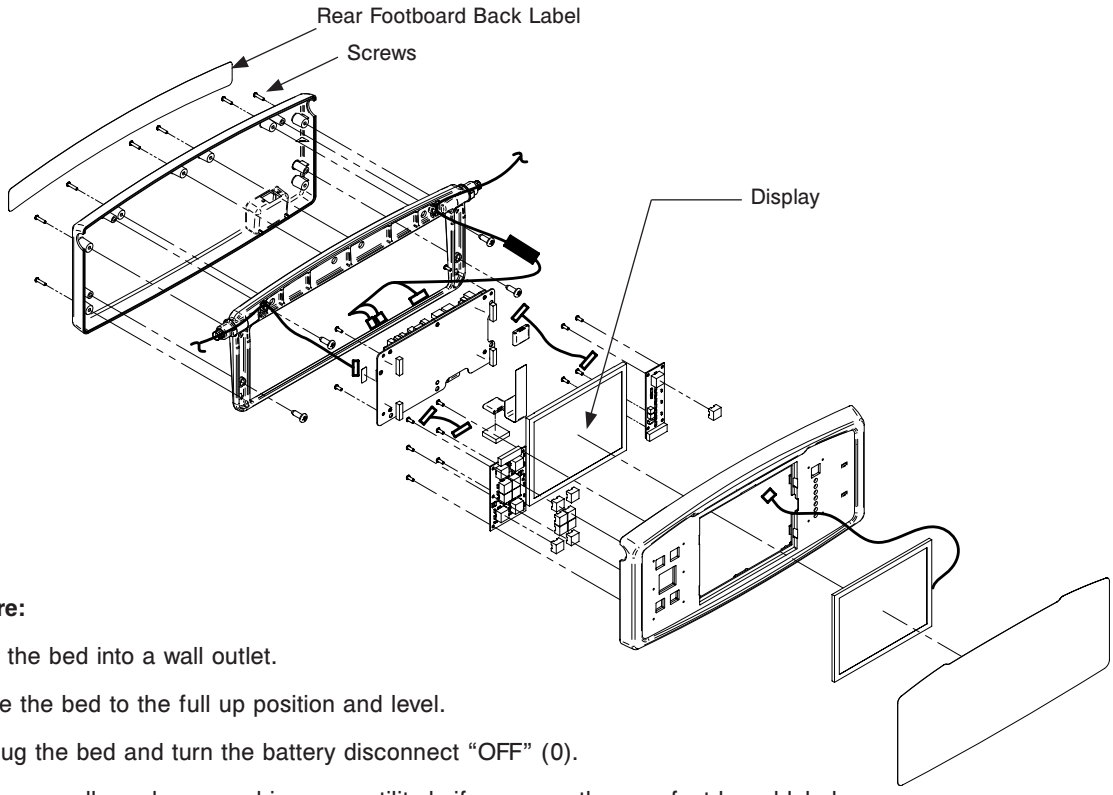
DISPLAY REMOVAL AND REPLACEMENT - (FOOT BOARD)

Tools Required:

- Phillips Screwdriver #2
- Stubby Phillips Screwdriver #2
- Small Regular Screwdriver
- Utility Knife



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level.
3. Unplug the bed and turn the battery disconnect “OFF” (0).
4. Using a small regular screwdriver or a utility knife, remove the rear foot board label.

   NOTE: You will need to replace this label QDF27-1768.
5. Using a Phillips screwdriver, remove the six screws from the top of the control panel which the label was covering.
6. Raise the display up and using a stubby Phillips screwdriver, remove the three screws on the bottom.
7. Remove the display housing and unplug the two cables from the function control board and set the display assembly on a bench to work on.
8. Using a Phillips screwdriver, remove the four screws securing the display to the display housing.
9. Unplug the ribbon cable going to the touch screen by pulling outward on the black locking tab and then pulling out on the ribbon cable.
10. Unplug the two cables going to the display making note of their location and orientation.
11. Carefully work your way around the support bracket display pulling upward evenly then remove the display.
12. Reverse the procedures to install the new display.
13. Recalibrate the touch screen (refer to Touch Screen Calibration procedures on page 30).
14. Test all bed functionality prior to putting the bed back into service.

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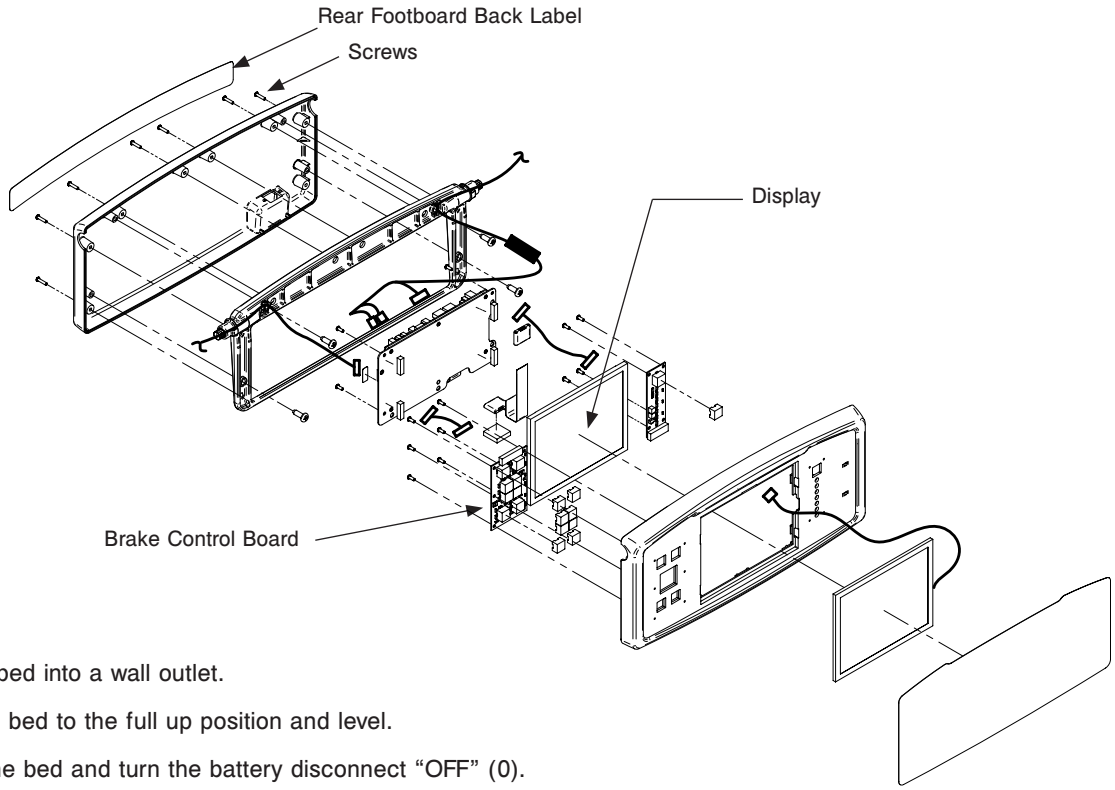
BRAKE CONTROL BOARD REMOVAL AND REPLACEMENT - (FOOT BOARD)

Tools Required:

- Phillips Screwdriver #2
- Stubby Phillips Screwdriver #2
- Small Regular Screwdriver
- Utility Knife



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level.
3. Unplug the bed and turn the battery disconnect “OFF” (0).
4. Using a small regular screwdriver or a utility knife, remove the rear foot board label.

   NOTE: You will need to replace this label QDF27-1768.
5. Using a Phillips screwdriver, remove the six screws from the top of the control panel which the label was covering.
6. Raise the display up and using a stubby Phillips screwdriver, remove the three screws on the bottom.
7. Remove the display housing and unplug the two cables from the function control board and set the display assembly on a bench to work on.
8. Using a Phillips screwdriver, remove the six screws securing the brake control board.
9. Unplug the cable going to the brake control board.
10. Reverse the procedures to install the new brake control board.
11. Test all bed functionality prior to putting the bed back into service.

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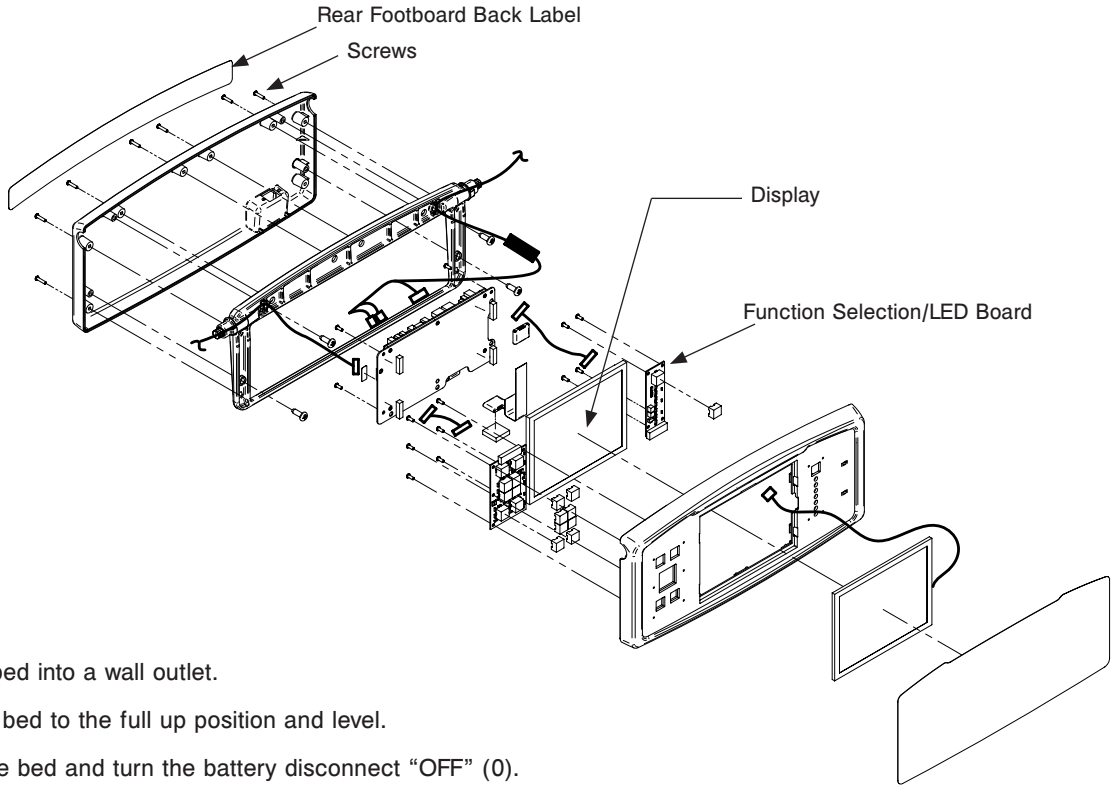
FUNCTION SELECTION/LED BOARD REMOVAL AND REPLACEMENT - (FOOT BOARD)

Tools Required:

- Phillips Screwdriver #2
- Stubby Phillips Screwdriver #2
- Small Regular Screwdriver
- Utility Knife



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level.
3. Unplug the bed and turn the battery disconnect “OFF” (0).
4. Using a small regular screwdriver or a utility knife, remove the rear foot board label.

   NOTE: You will need to replace this label QDF27-1768.
5. Using a Phillips screwdriver, remove the six screws from the top of the control panel which the label was covering.
6. Raise the display up and using a stubby Phillips screwdriver, remove the three screws on the bottom.
7. Remove the display housing and unplug the two cables from the function control board and set the display assembly on a bench to work on.
8. Using a Phillips screwdriver, remove the four screws securing the function selection/LED board.
9. Unplug the three cables going to the display making note of their location and orientation.
10. Reverse the procedures to install the new function selection/LED board.
11. Test all bed functionality prior to putting the bed back into service.

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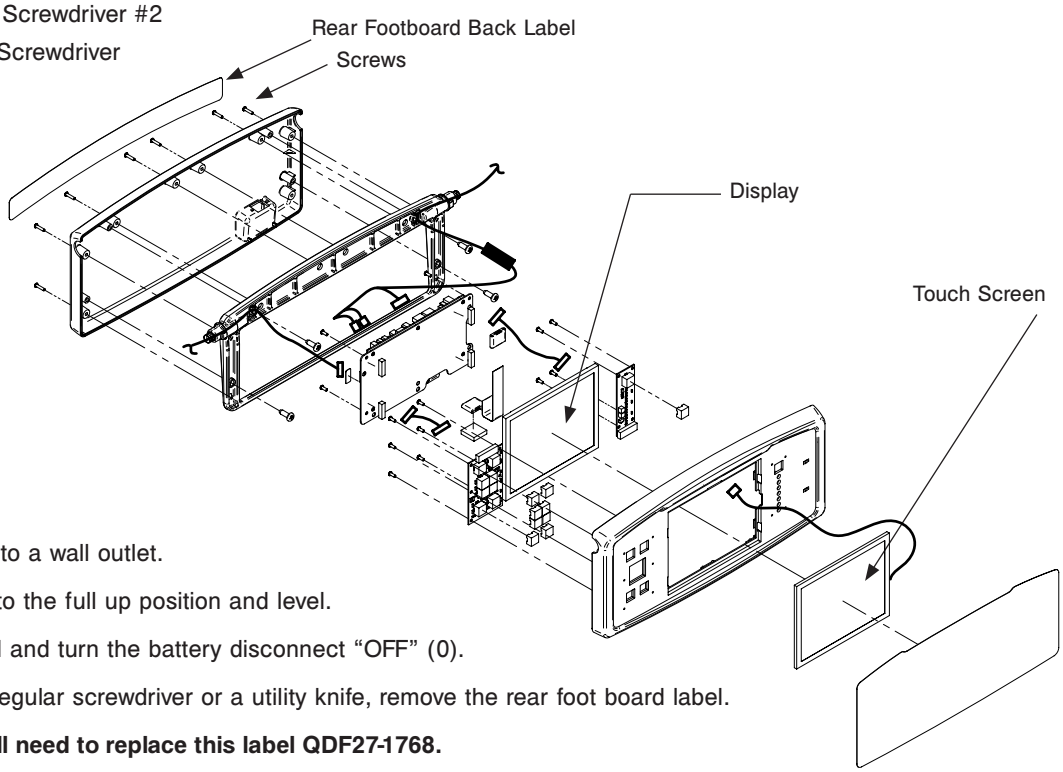
TOUCH SCREEN REMOVAL AND REPLACEMENT - (FOOT BOARD)

Tools Required:

- Phillips Screwdriver #2
- Stubby Phillips Screwdriver #2
- Small Regular Screwdriver
- Utility Knife



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level.
3. Unplug the bed and turn the battery disconnect “OFF” (0).
4. Using a small regular screwdriver or a utility knife, remove the rear foot board label.

   NOTE: You will need to replace this label QDF27-1768.
5. Using a Phillips screwdriver, remove the six screws from the top of the control panel which the label was covering.
6. Raise the display up and using a stubby Phillips screwdriver, remove the three screws on the bottom.
7. Remove the display housing and unplug the two cables from the function control board and set the display assembly on a bench to work on.
8. Using a Phillips screwdriver, remove the four screws securing the display to the display housing.
9. Unplug the ribbon cable going to the touch screen by pulling outward on the black locking tab and then pulling out on the ribbon cable.
10. Unplug the two cables going to the display making note of their location and orientation.
11. Carefully work your way around the support bracket display pulling upward evenly then remove the display.
12. Using a small regular screwdriver or utility knife, remove the foot control label.

    NOTE: You will need to replace the following labels.

    *** Without *i*Bed Awareness** - QDF27-1303; *** With *i*Bed Awareness** - QDF27-2083
13. From the back of the display housing push out on the touch screen and remove.
14. Reverse the procedures to install the new touch screen.
15. Recalibrate the touch screen (refer to Touch Screen Calibration procedures on page 30).
16. Test all bed functionality prior to putting the bed back into service.

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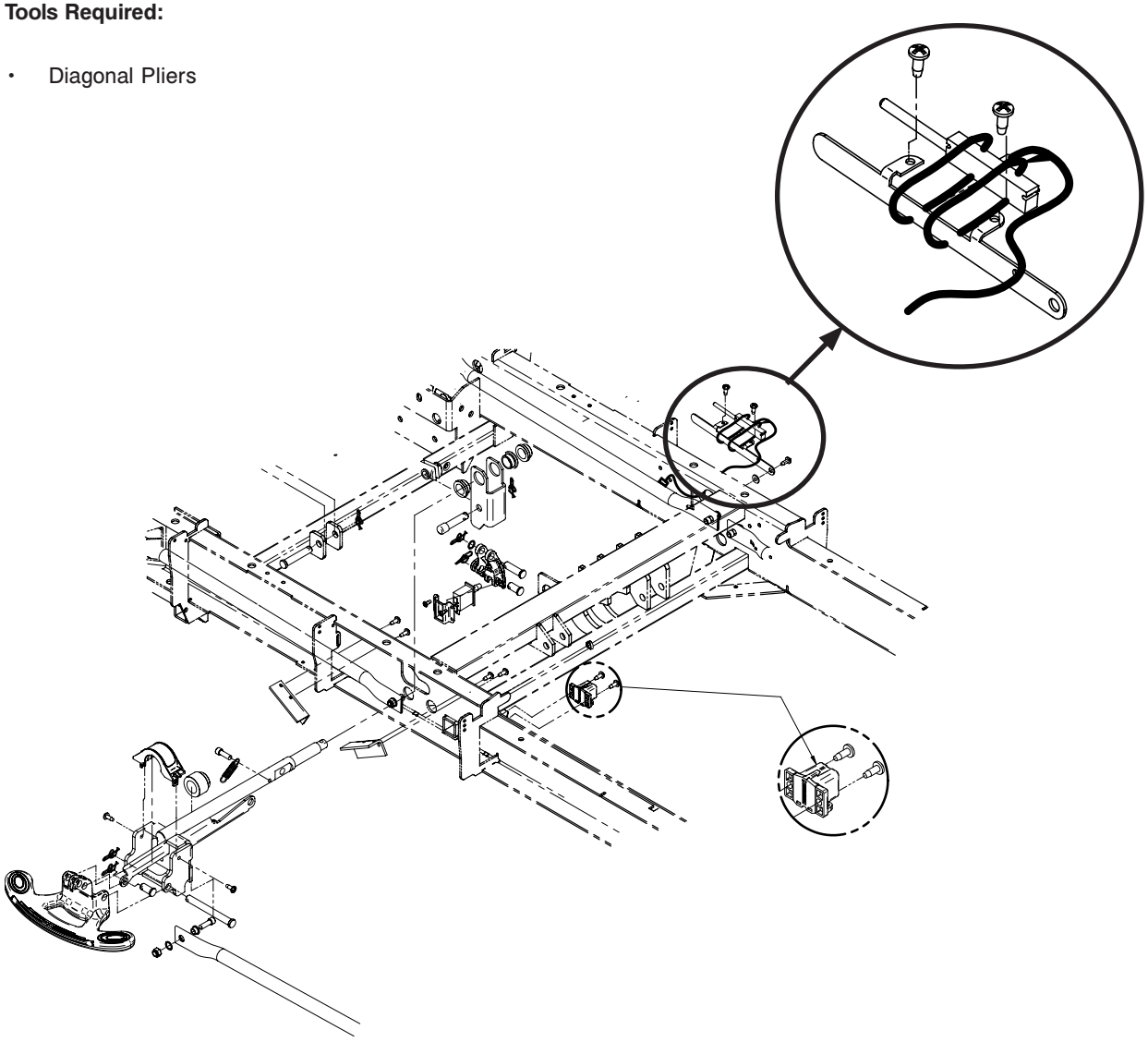
BRAKE / NEUTRAL / DRIVE POTENTIOMETER REMOVAL AND REPLACEMENT - QDF27-2024

Tools Required:

- Diagonal Pliers



Procedure:

1. Plug bed into wall outlet.
2. Raise the bed lift and patient's left siderails all the way up.
3. Remove the base center covers (foot, center, and head).
4. Remove the patient's left base frame cover.
5. Cut the two wire ties securing the potentiometer to the potentiometer bracket, then cut the two wire ties securing the potentiometer wires to the frame.
6. Remove the electrical tape holding the quick connection together.
7. Reverse the above procedures for installation of the new potentiometer.
8. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
9. Test all bed functionality prior to putting the bed back into service.

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BATTERY REMOVAL AND REPLACEMENT - (TOUCH SCREEN)

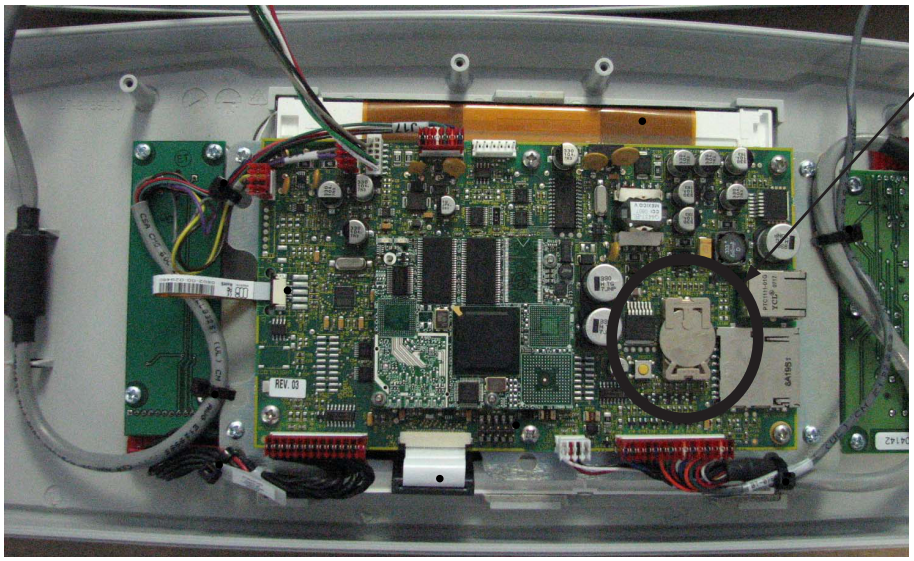
Tools Required:

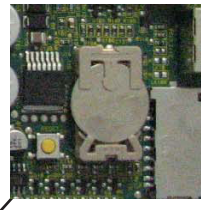
- Phillips Screwdriver #2
- Stubby Phillips Screwdriver #2
- Small Regular Screwdriver
- Utility Knife

Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level.
3. Unplug the bed and turn the battery disconnect switch to the “OFF” (0) position.
4. Using a small regular screwdriver or a utility knife, remove the rear footboard label.

   NOTE: You will need to replace this label: QDF27-1768.
5. Using a Phillips screwdriver remove the six screws from the top of the control panel which the label was covering.
6. Raise the display up and using a stubby Phillips screwdriver, remove the three screws on the bottom.
7. Remove the display housing and unplug the two cables from the function control board and set the display assembly on a bench to work on.
8. Remove the battery and replace with new battery (see figure below).
9. Reverse the above steps to reassemble.
10. Referencing the operation manual complete the Time / Date Setup procedure.





Battery

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BATTERY REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- 5/16” Nutdriver
- 5/16” Combination Wrench

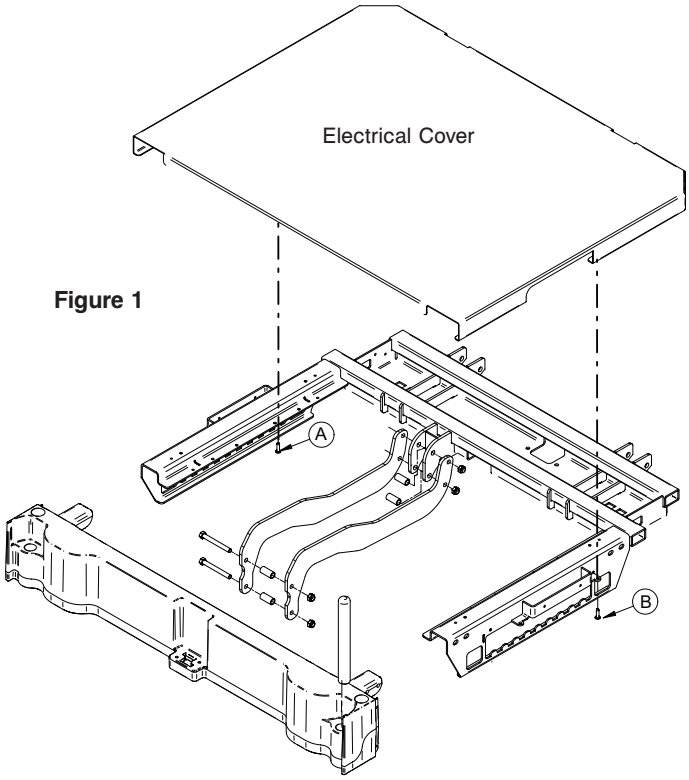

Figure 1

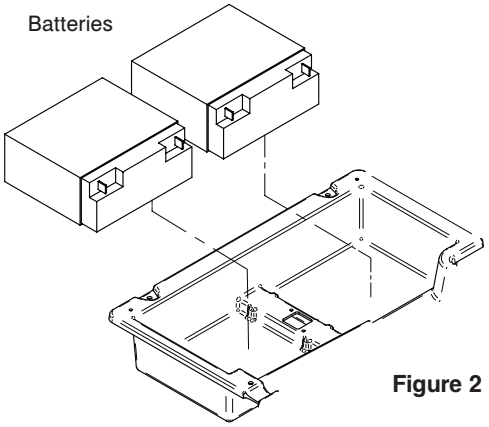

Figure 2

Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Raise the bed to the full up position.
4. Remove the mattress assembly or fold back to expose the foot section.
5. Using a Phillips screwdriver, remove the two screws securing the electrical cover and remove the cover (reference Figure 1 above, item A and B).

   Note: Use caution as the cover is large and heavy.
6. Unplug the bed from the wall outlet and turn battery switch “OFF” (0). The bed should now have no power.
7. Unplug J12 connector from the CPU/Power board.
8. Lift up on both batteries and stand them upright (reference Figure 2 above).
9. Using a 5/16” nutdriver and a 5/16” combination wrench, unbolt the wires from the battery posts.
10. Reverse the steps to install new batteries.

    Note: New battery information should be facing the right side when installing and upright when installed.
11. Test all bed functionality while plugged into wall outlet and when unplugged prior to putting back into service.

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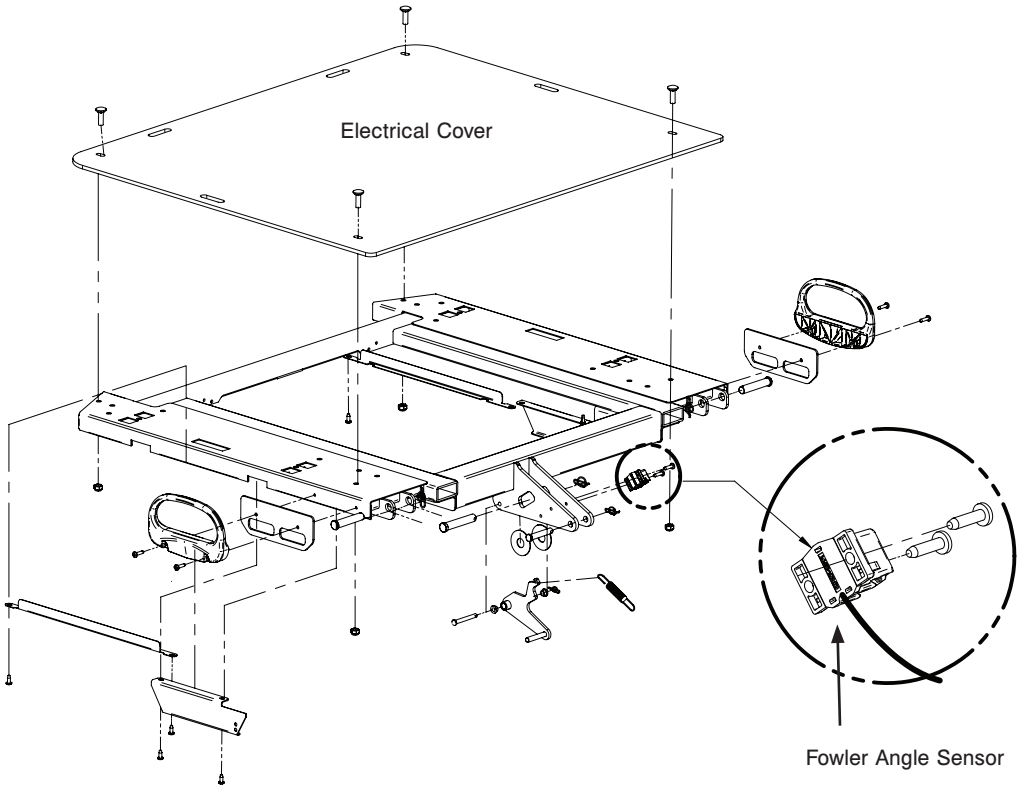
FOWLER ANGLE SENSOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Stubby Phillips Screwdriver #2
- ESD System



Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Raise the bed to the full up position and raise the patient left siderails (head end and foot end).
4. If fowler motor will run, raise fowler up to approximately 20 degrees. If the fowler motor will not run, put the bed into the calibration mode step one as shown on page 18. Run the Fowler up to approximately 20 degrees.
5. Working form the left side of the bed, use a stubby Phillips screwdriver and remove the two screws securing the fowler angle sensor to the bottom of the fowler frame.
6. Using an ESD system, properly ground yourself.
7. Unclip the three clips holding the board cover on.
8. Unplug the cable from the board.
9. Reverse the steps to install the new fowler angle sensor.

   Note: Do not over tighten the two screws.
10. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
11. Test all bed functionality prior to putting the bed back into service.

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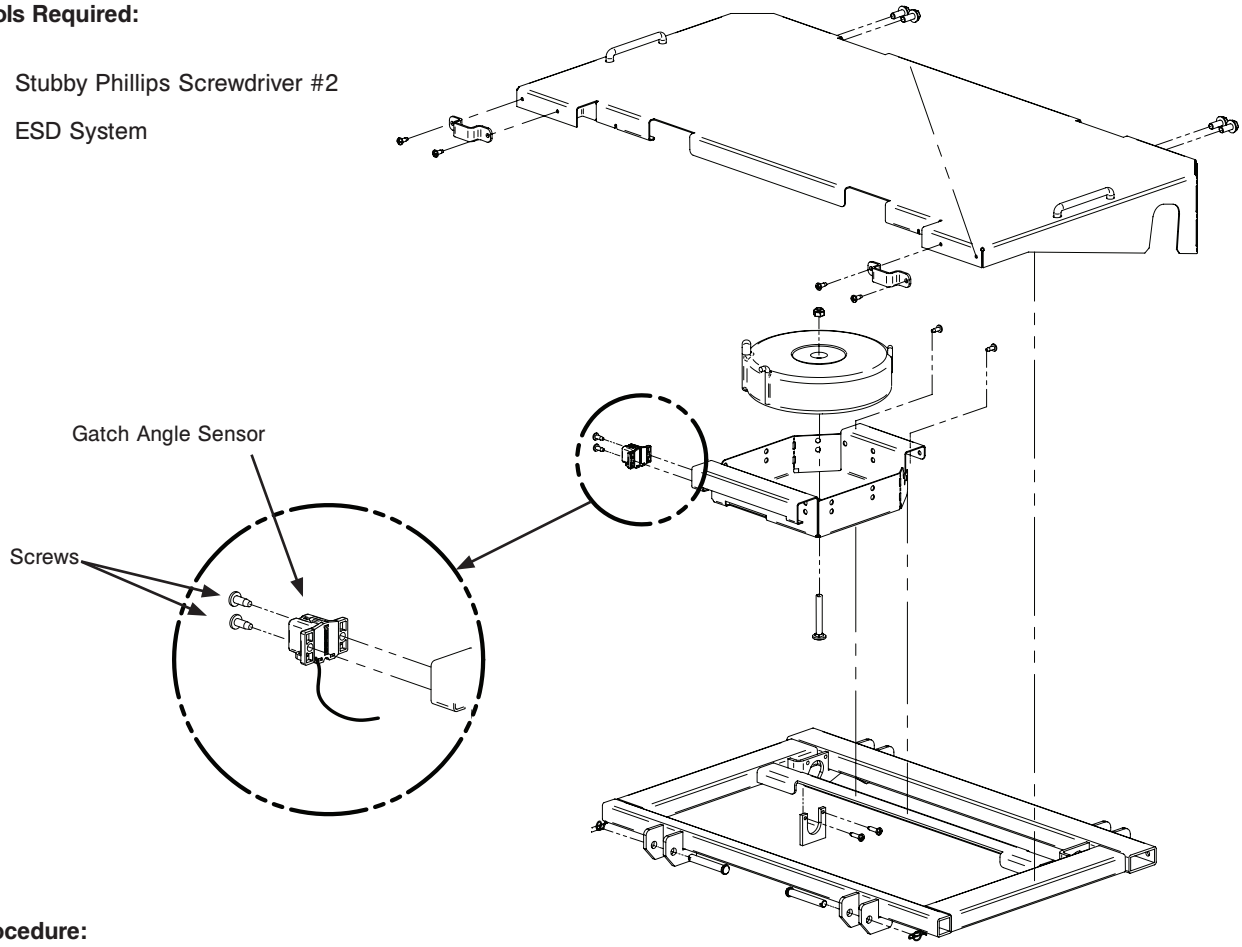
GATCH ANGLE SENSOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Stubby Phillips Screwdriver #2
- ESD System



Procedure:

1. Plug bed into wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Raise the bed to the full up position.
4. If gatch motor will run, raise gatch up to approximately 20 degrees. If the gatch motor will not run, then put the bed into the calibration mode step one as shown on page 18.
5. Working from the bottom left side of the litter, under the gatch section, use a stubby Phillips screwdriver and remove the two screws securing the gatch angle sensor to the bottom of the fowler frame.
6. Using an ESD system, properly ground yourself.
7. Unclip the three clips holding the board cover on.
8. Unplug the cable from the board.
9. Reverse the steps to install new gatch angle sensor.

   Note: Do not over tighten the two screws.
10. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
11. Test all bed functionality prior to putting the bed back into service.

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FOOT ANGLE SENSOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- ESD System

Figure 2

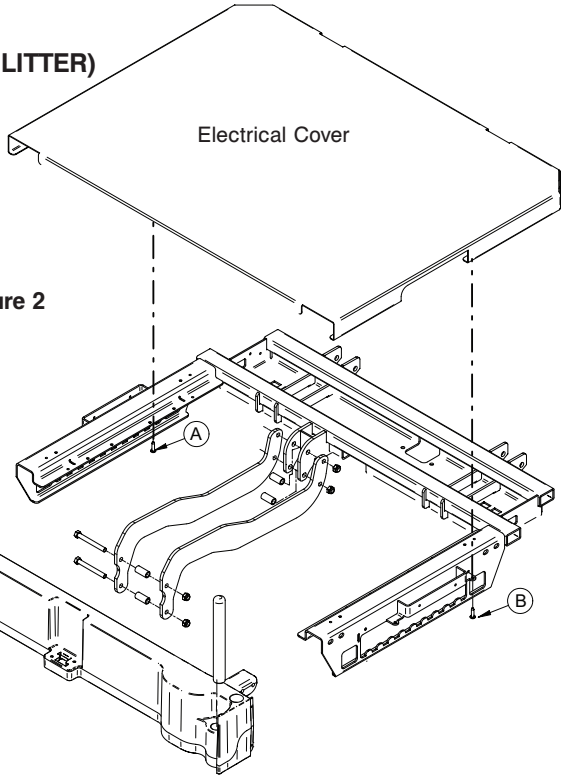
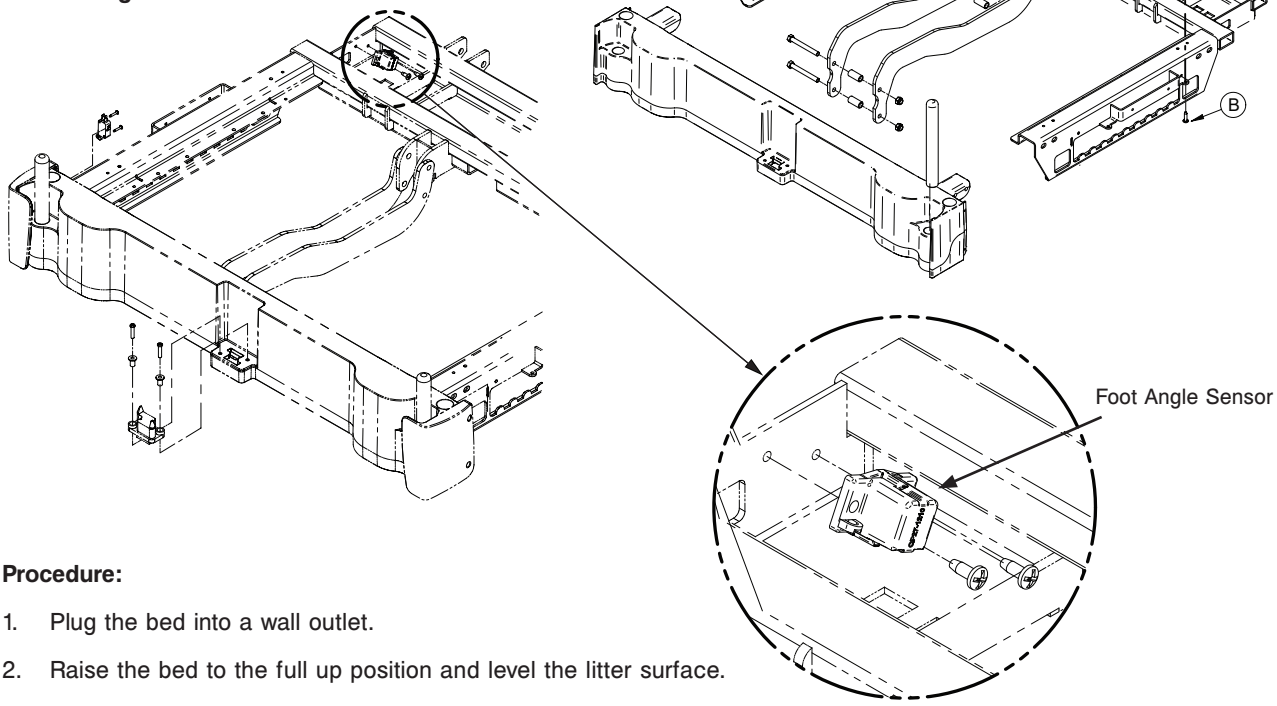


Figure 1



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and level the litter surface.
3. Remove or fold back the mattress exposing the foot section.
4. Using a Phillips screwdriver, remove the two screws securing the electrical cover and then remove the cover (refer to Figure 1 above, item A and B).
5. Using a Phillips screwdriver, remove the two screws securing the angle sensor to the foot frame (refer to Figure 2 above). **Note: Use caution as the cover is large and heavy.**
6. Using an ESD system, properly ground yourself.
7. Unclip the three clips holding the board cover on.
8. Unplug the cable from the board.
9. Reverse the steps to install the new foot angle sensor.

   Note: Do not over tighten the two screws.
10. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
11. Test all bed functionality prior to putting the bed back into service.

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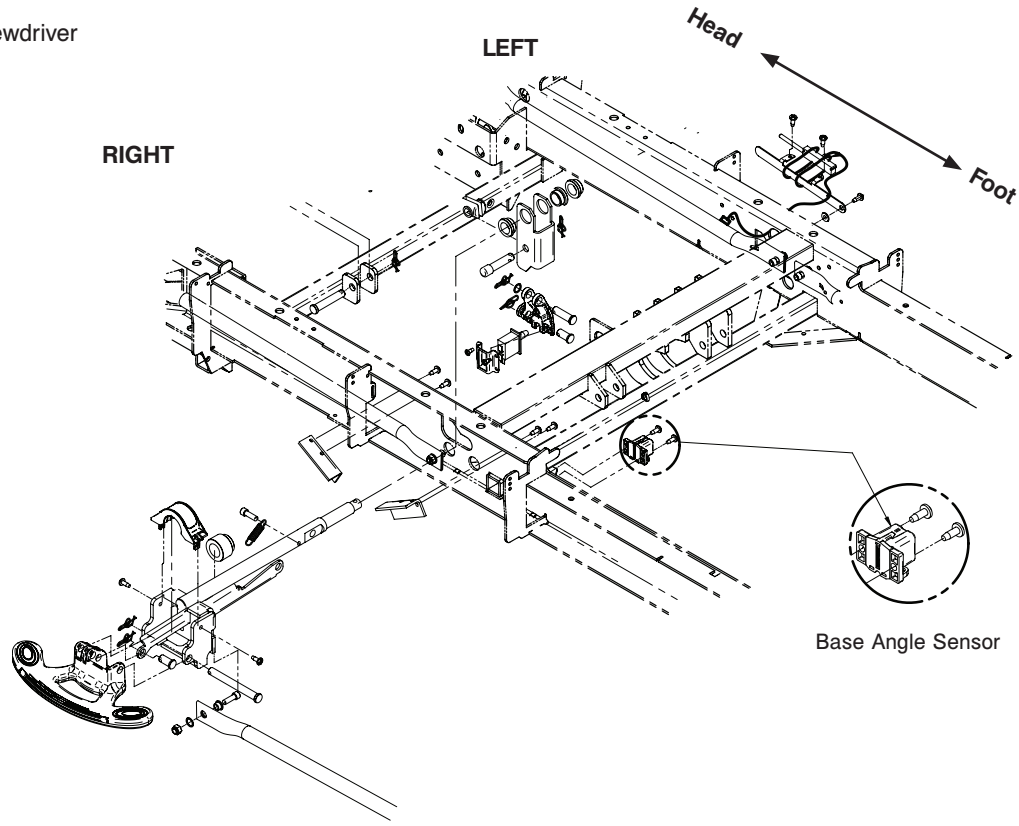
BASE ANGLE SENSOR REMOVAL AND REPLACEMENT - (BASE)

Tools Required:

- Stubby Phillips Screwdriver
- ESD System



Base Angle Sensor

Procedure:

1. Plug the bed into a wall outlet.
2. Set the brakes using one of the brake control locations or by using the manual brake pedal.
3. Raise the bed to the full up position and raise the patient right siderails (foot end and head end).
4. Remove the head end, enter, foot end, and right base cover.
5. Using a Phillips screwdriver, remove the two screws securing the base angle sensor to the base frame (reference Figure above).
6. Using an ESD system, properly ground yourself.
7. Unclip the three clips holding the board cover on.
8. Unplug the cable from the board.
9. Reverse the steps to install new base angle sensor.

   Note: Do not over tighten the two screws.
10. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
11. Test all bed functionality prior to putting the bed back into service.

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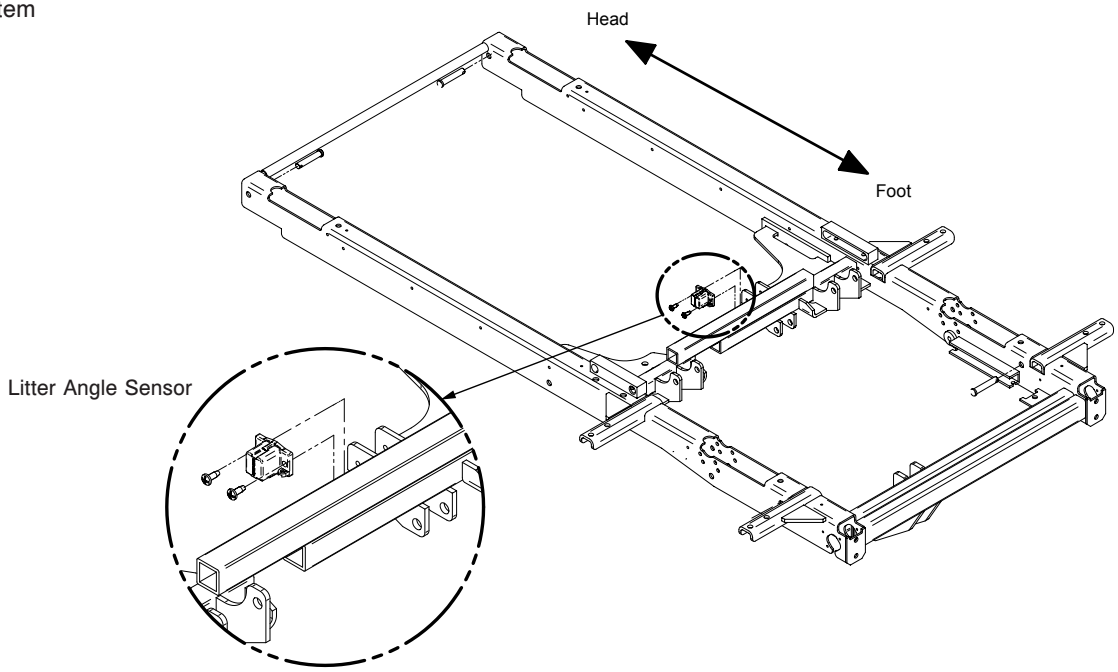
TREND ANGLE SENSOR REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- ESD System



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position and raise the patient right siderail.
3. Working from the patient's right side, use a Phillips screwdriver and remove the two screws securing the trend angle sensor to the litter frame (refer to Figure above),
4. Using an ESD system, properly ground yourself.
5. Unclip the three clips holding the board cover on.
6. Unplug the cable from the board.
7. Reverse the steps to install new trend angle sensor.

   Note: Do not over tighten the two screws.
8. Recalibrate the bed (refer to Bed Calibration procedures on page 18).
9. Test all bed functionality prior to putting the bed back into service.

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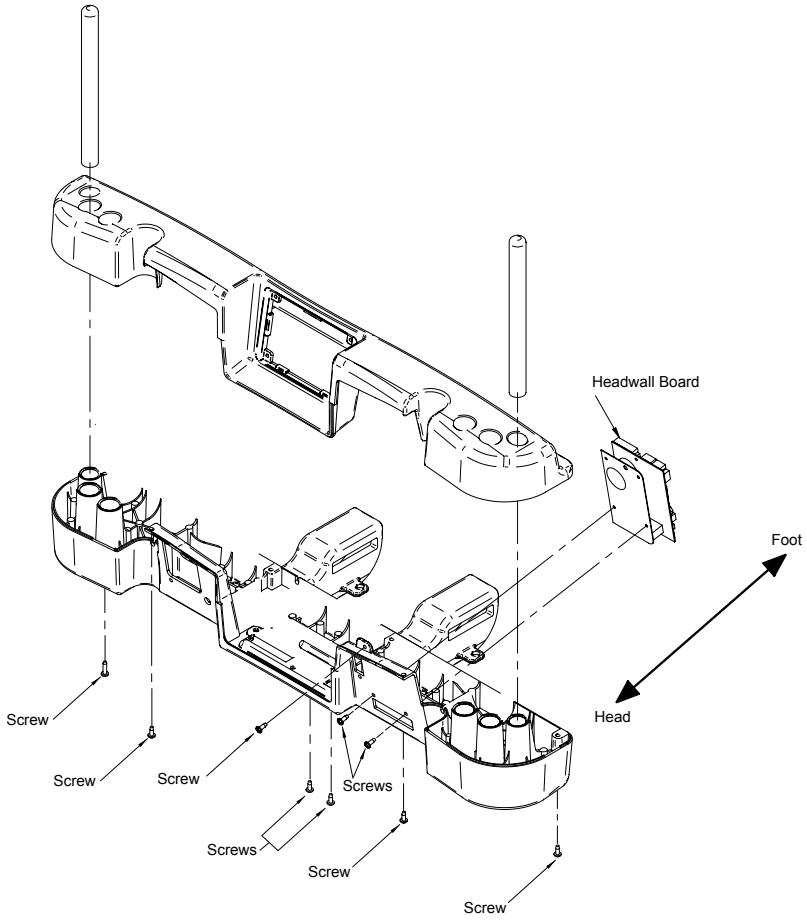
HEADWALL COMMUNICATION BOARD REMOVAL AND REPLACEMENT - (LITTER)

Tools Required:

- Phillips Screwdriver #2
- ESD System



Procedure:

1. Plug the bed into a wall outlet.
2. Raise the bed to the full up position.
3. Remove the head board and any accessories located on the head end.
4. Using a Phillips screwdriver, remove the four screws securing the head frame cover (reference Figure above).
5. Using a Phillips screwdriver, remove the three screws securing the headwall board to the head frame (reference Figure above).
6. Using an ESD system, unplug the seven cables making note of their location due to they are not all labeled. Compare the old board and new board and mirror all of the dip-switch settings from the old board to the new board. Verify if any jumpers need to be moved.
7. Reverse procedures to install new headwall communication board.
8. Test all bed functionality prior to putting the bed back into service.

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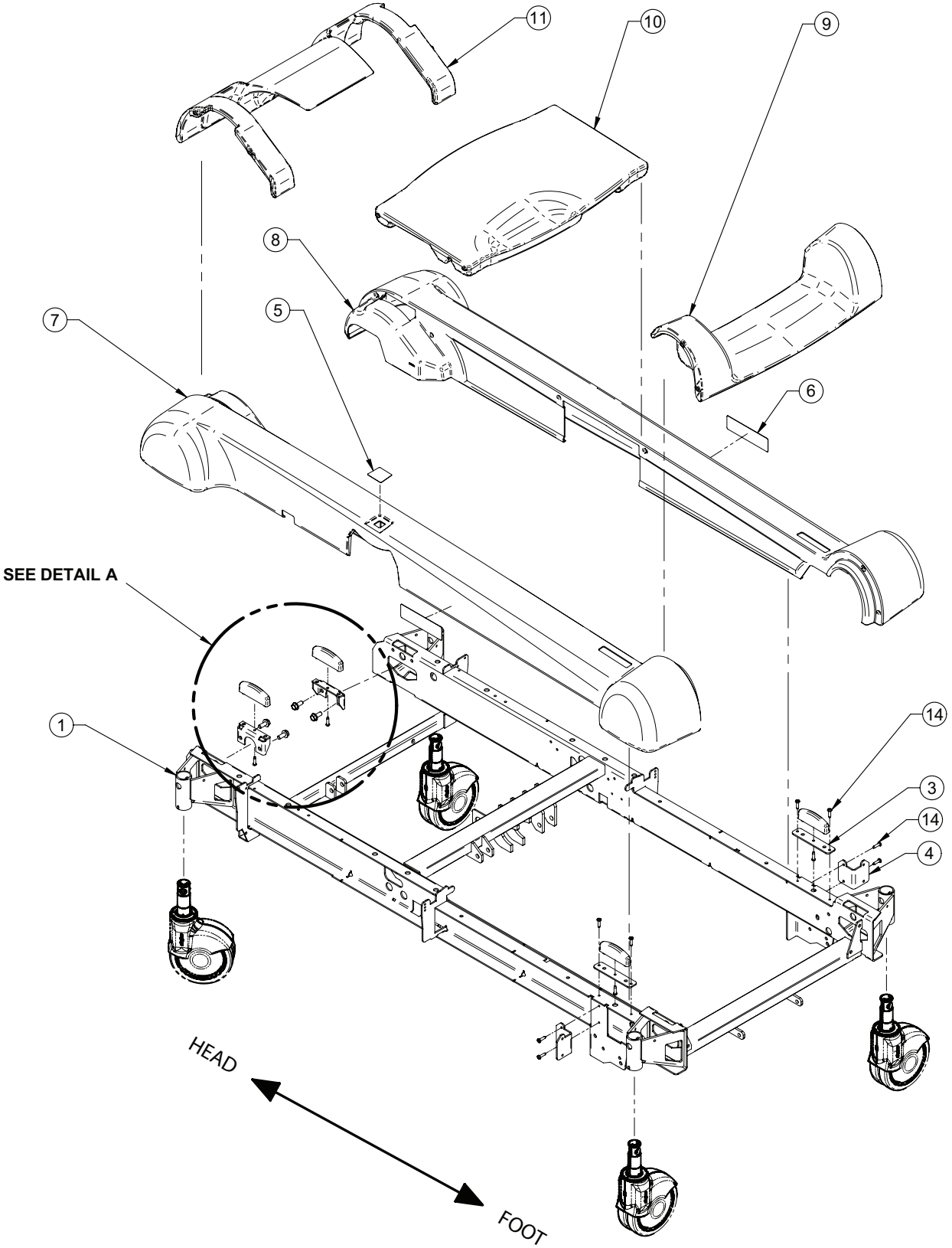
Base Assembly, Casters/Hood

For Reference Only: Part Number L27-026



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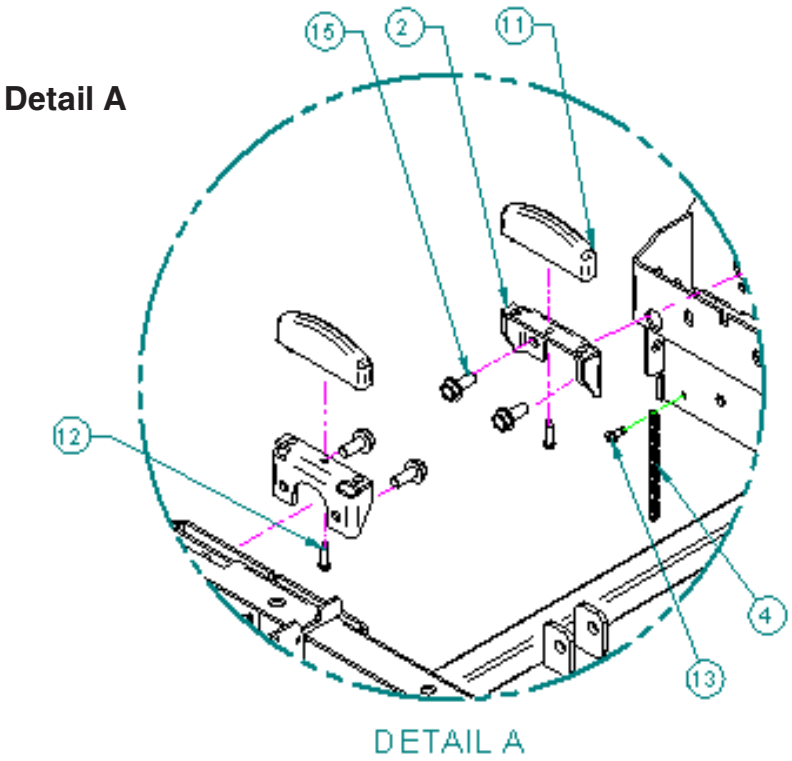
Base Assembly, Casters/Hood



Base Assembly, Casters/Hood - Common Components - L27-026 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-0758W	Base	1
2	27-1462W	Stop Support	2
3	27-1628W	Foot Stop Support	2
4	27-2123	Ground Chain	1
5.	QDF27-1419	Base Transparent Plate	1
6.	QP27-1008	Right Base Cover	1
7.	QP27-1009	Left Base Cover	1
8.	QP27-1087	Base Foot Cover	1
9.	QP27-1093	Base Centre Cover	1
10.	QP27-1105	Base Head Cover	1
11.	QP27-1461	Stopper in Base	4
12.	VV23A1G24HL	Phillips Head Tapping Screw, # 10 x 3/4”	4
13.	VV83A9G16	Phillips Head Tapping Screw, # 10 x 1/2”	1
14.	VV83A9G24	Phillips Head Tapping Screw, # 10 x 3/4”	4
15.	VVB4A1024	Bolt Thread Rolling 5/16-18 x 3/4”	4

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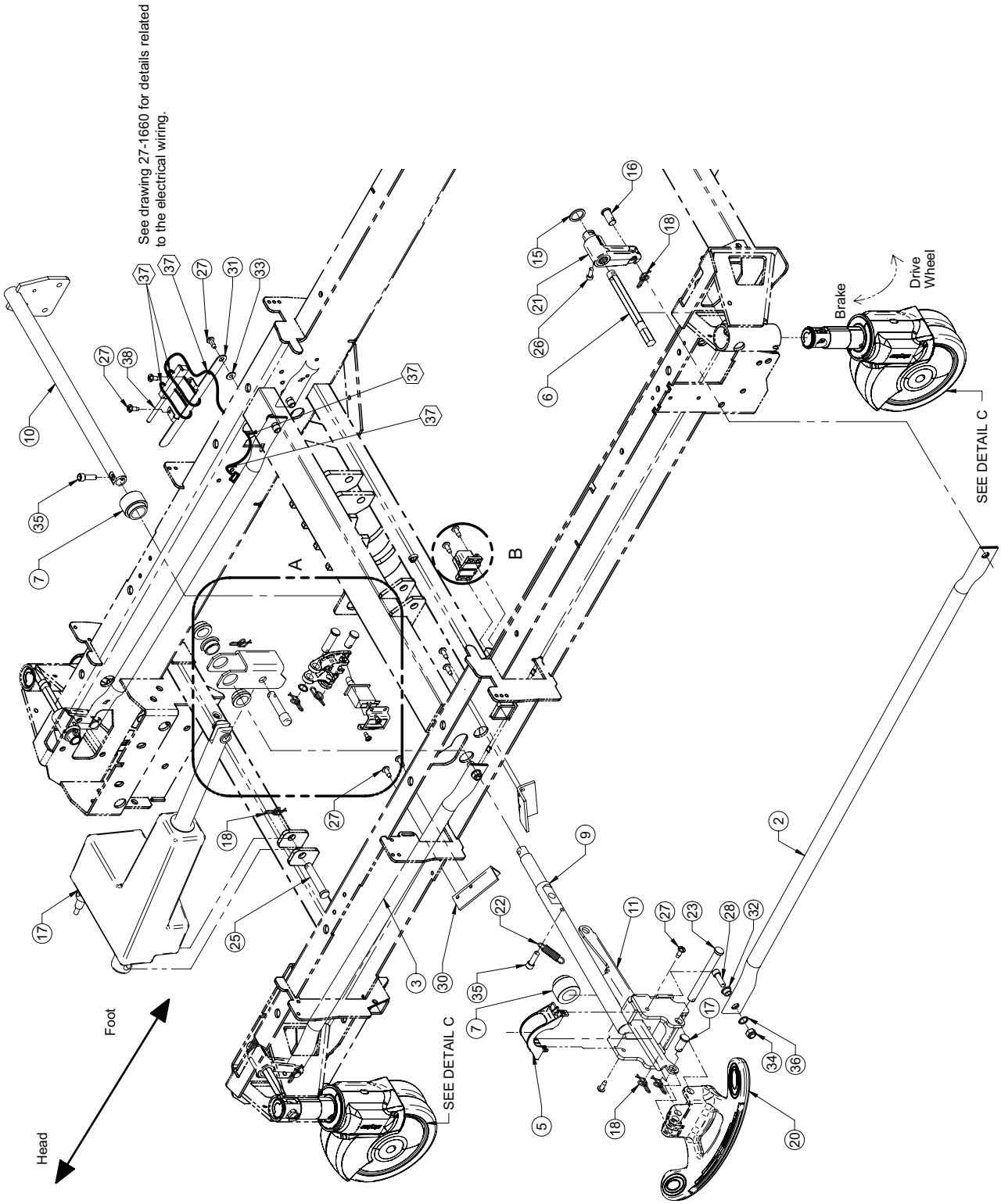
Notes

Base Assembly, Brake

For Reference Only: Part Number L27-020



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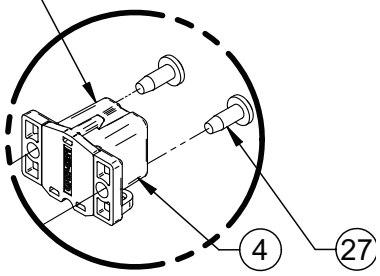
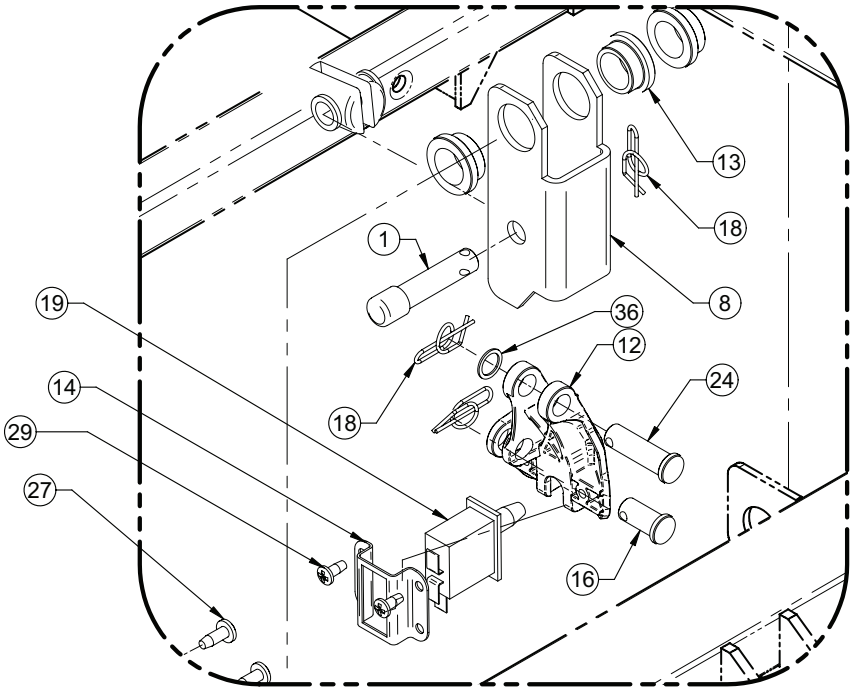
Base Assembly, Brake

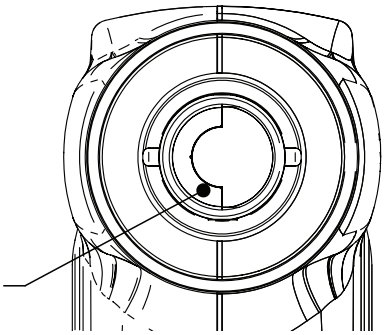
The angle sensor orientation is important. Wire should exit towards the bottom.



Detail B

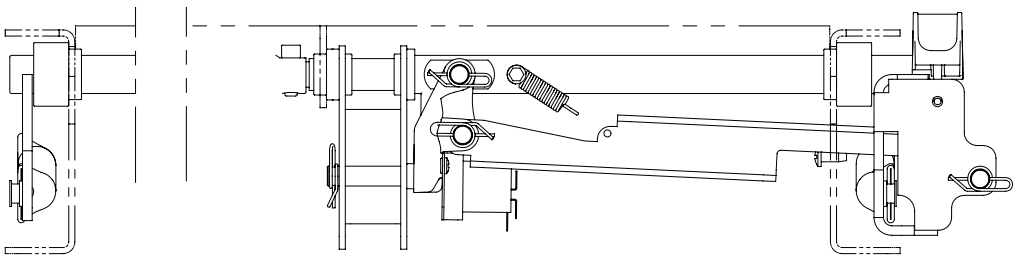


Detail A



Place wheel axis with biggest hole towards head of bed when the cam is in neutral.

Detail C



View of Assembled Brake System

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Base Assembly with Brake - Common Components - L27-020 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-1402Z	Brake Clevis pin	1
2	27-0772Z	Foot Brake Tube	2
3	27-0773Z	Head Brake Tube	2
4	27-1209	Angle Sensor	1
5	27-1255	Brake Indicator	1
6	27-1336Z	Casters Activation Roller Strike	4
7	27-1354	Brake Bearing	2
8	27-1391Z	Brake Actuator Pivot	1
9	27-1405Z	Right Brake Cross Member	1
10	27-1406Z	Left Brake Cross Member	1
11	27-1411Z	Brake Shift Control Stem	1
12	27-1448	Brake Trigger	1
13	27-1449	Braking Bearing	3
14	27-1452Z	Microswitch Bracket	1
15	VW10C202802	Washer 656 x 844 x 060	4
16	VG50A1224	Clevis Pin, 3/8” x 3/4”	6
17	QDF27-1227	Brake Actuator	1
18	QDF7878	Fastener Pin, 3/8”	10
19	QDF9159	Cherry Limit Switch	1
20	QPA27-1165	Emergency Pedal	1
21	QPA27-1335	Brake Lever	4
22	QRE27-1844	Extension Spring 3/8” x 1-5/8”	1
23	VG50A1259	Clevis Pin, 3/8” x 3-3/8”	1
24	VG50B1236	Clevis Pin, 3/8” x 1-1/4”	1
25	VG50B1248	Clevis Pin, 3/8” x 2”	1
26	VV10A0G16-S	Hexagon Cylinder Hd., #10-32 x 1/2”	4
27	VV83A9G16	Tapping Screw, #10 x 1/2”	11
28	VV10A1N24	Hexagon Cylinder Hd., 1/4-20 x 3/4”	4
29	VV83A9E12	Tapping Screw, #8 x 3/8”	2
30	27-1745Z	Head Brake Microswitch Stop	2
31	27-1946Z	Potentiometer Support	1
32	QDF2066	Copper Sleeve Spacer	4
33	27-1948	Copper Sleeve Spacer	1
34	VE30A1N	Nylon Locknut, 1/4-20	4
35	VV10A1N24-S	Cylinder Head Hex Screw 1/4-20 x 3/4”	2
36	VW10C121601	Nylon Washer	5
37	QDF9518	Cable Tie	1
38	QDF27-2024	Position Sensor	1

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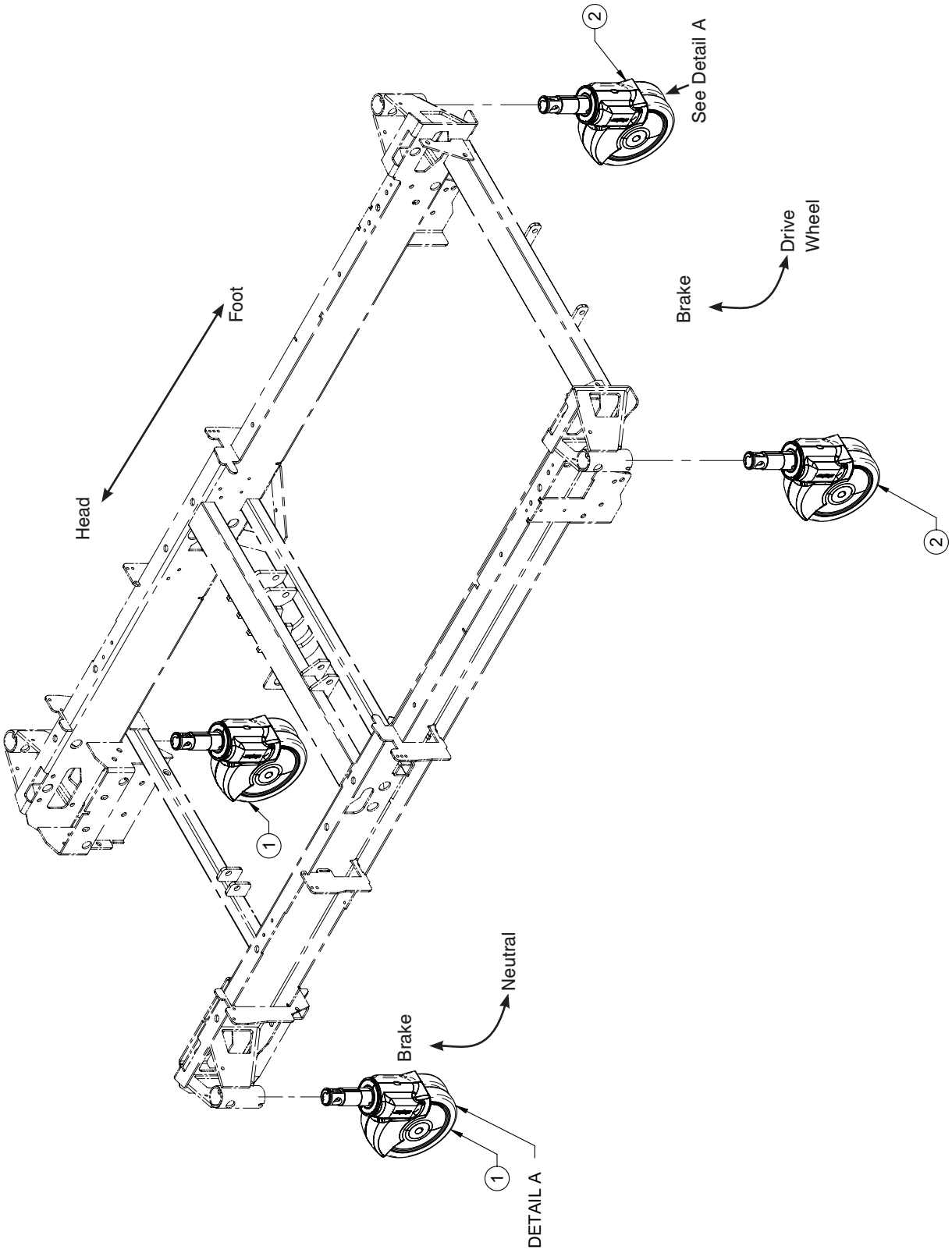
Base Assembly, Caster Lock (2130 Model Only)

For Reference Only: Part Number OL270006-01



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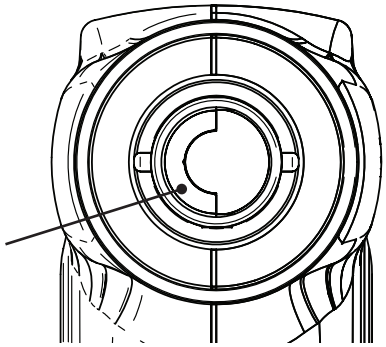
Base Assembly, Caster Lock (2130 Model Only)

To assemble casters, direct the smile (chromed part) toward the left side of the bed.



DETAIL A

Base Assembly, Caster Lock Option (No Zoom®) - Common Components - OL270006-01 (Reference only)

Item	Part No.	Part Name	Qty.
1	RD27-1970	5.5” Caster Brake/Neutral/Neutral	2
2	RD27-1971	5.5” Caster Brake/Neutral/Drive	2

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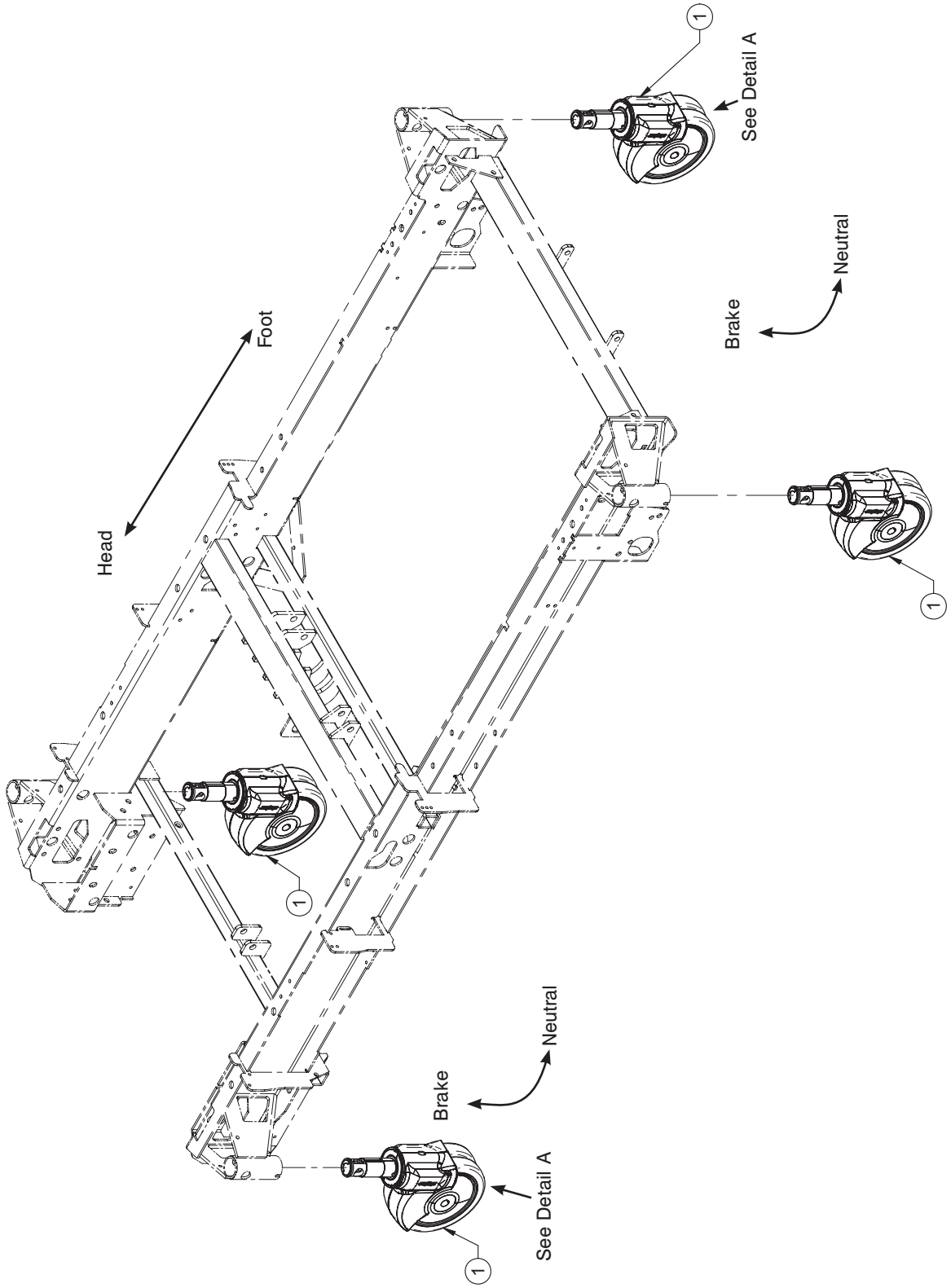
Base Assembly, Caster Lock (2140 Model Only)

For Reference Only: Part Number OL270005-02



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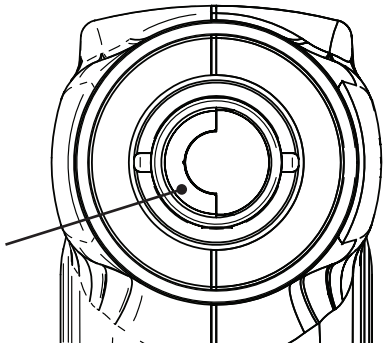
Base Assembly, Caster Lock (2140 Model Only)

To assemble casters, direct the smile (chromed part) toward the left side of the bed.



DETAIL A

Base Assembly, Caster Non-Lock Option - Common Components - OL270005-02 (Reference only)

Item	Part No.	Part Name	Qty.
1	RD27-1970	5.5” Caster Brake/Neutral/Neutral	4

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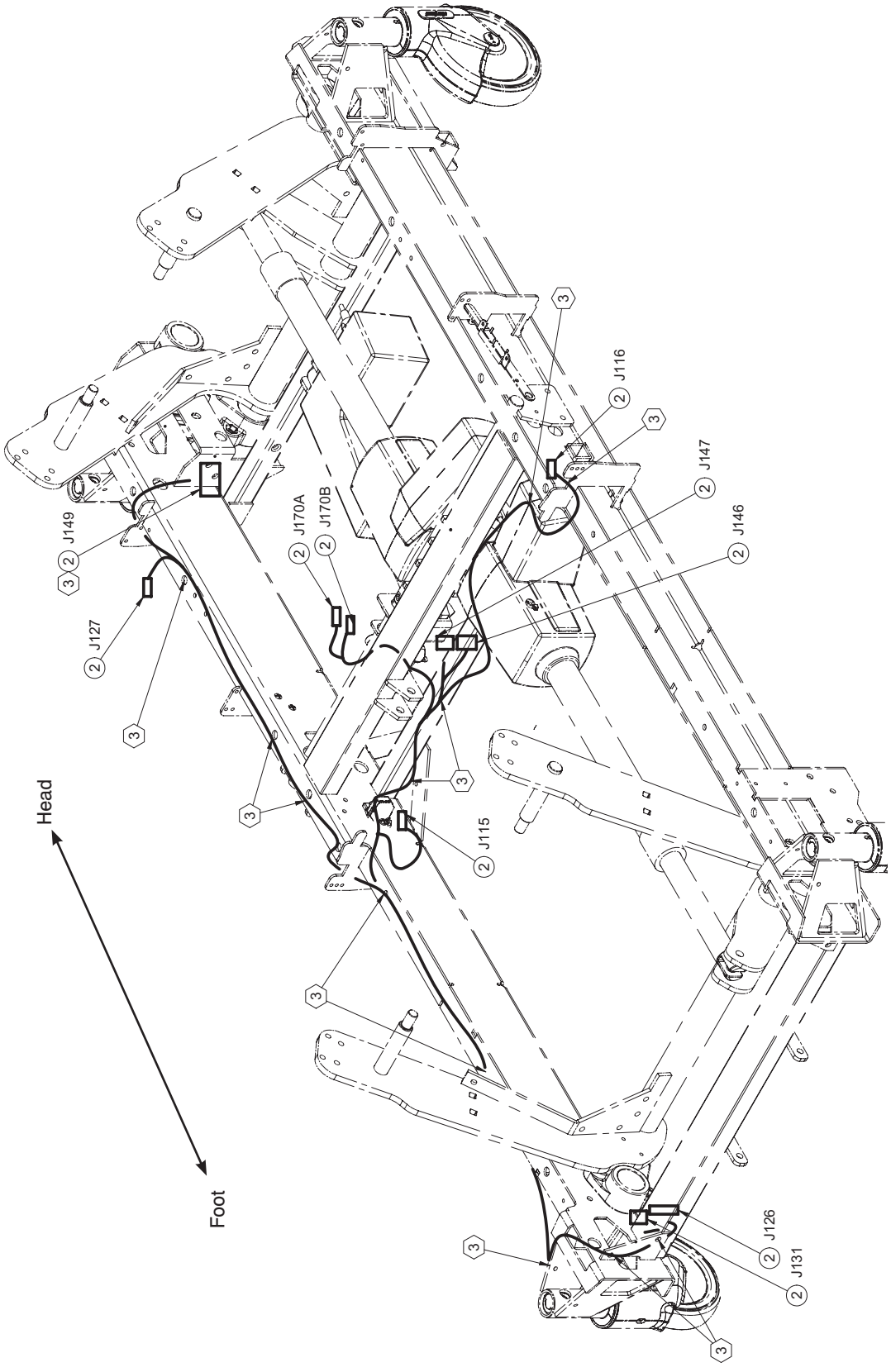
Notes

Base Assembly, Electrical

For Reference Only: Part Number 27-1660



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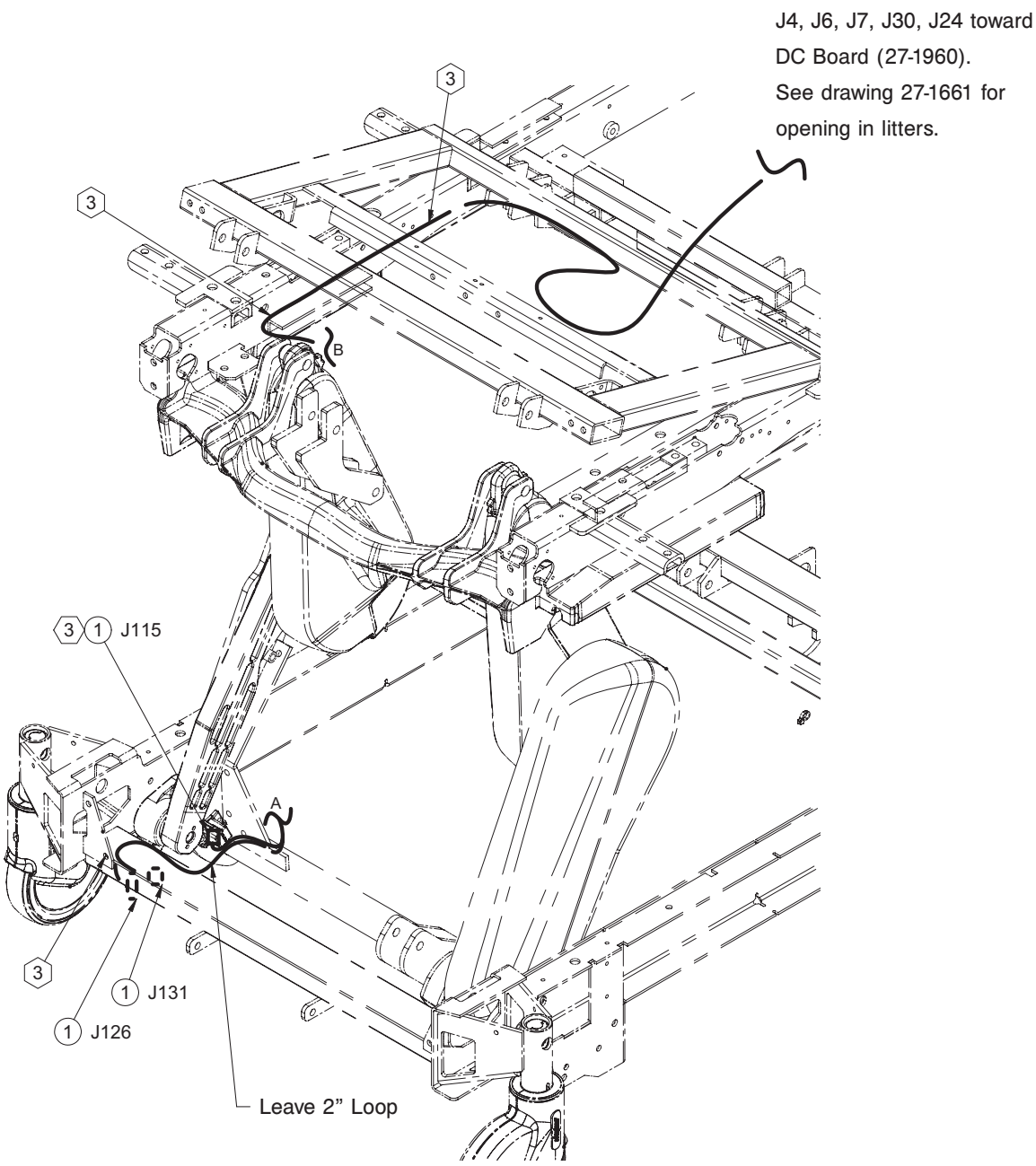
Base Assembly, Electrical



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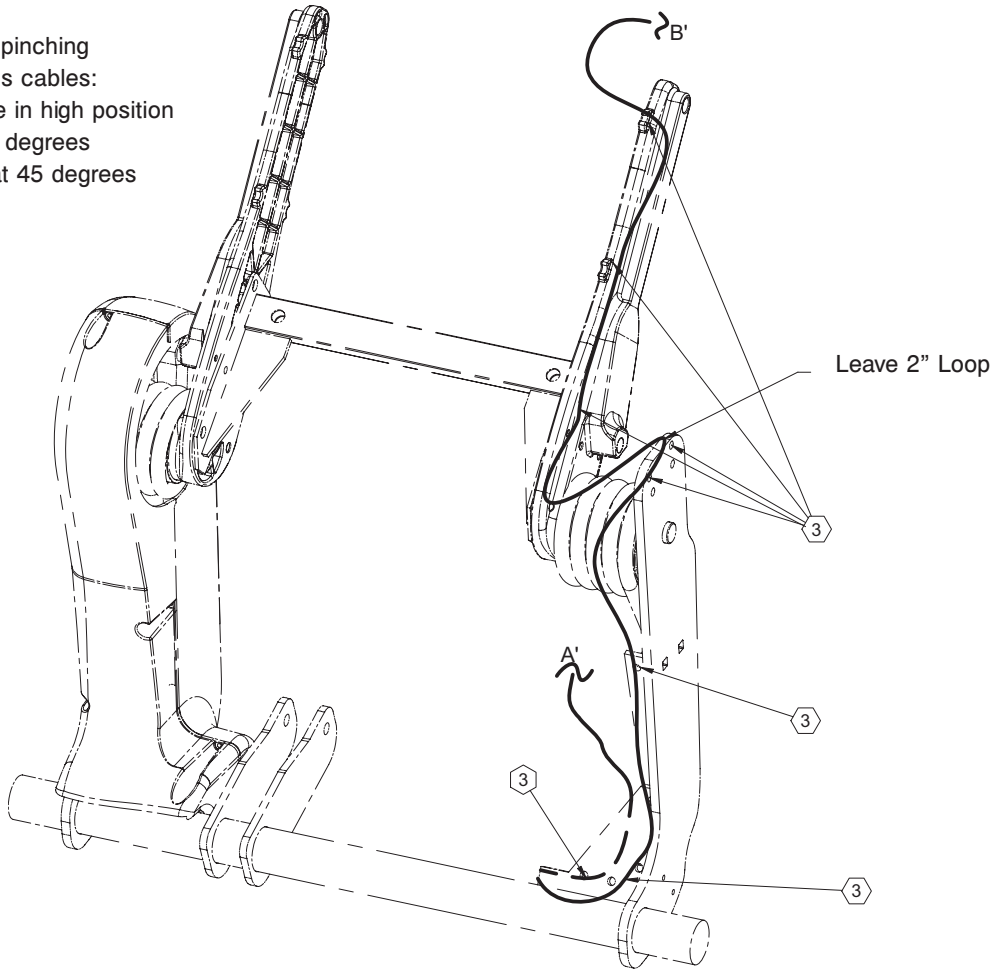
Base Assembly, Electrical

Note
To avoid any risk of pinching when assembling this cables:

- the bed must be in high position
- the Gatch at 15 degrees
- the Foot Litter at 45 degrees



CABLE QDF27-1445 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
J126	QDF27-1204	J126 Base Harness
J131	QDF27-1204	J131 Base Harness
J115	27-1209	Lever Sensor (L27-027)
J7	QDF75-0110	J7 DC Board (27-1200)
J6	QDF75-0110	J6 DC Board (27-1200)
J4	QDF75-0110	J4 DC Board (27-1200)
J30	QDF75-0110	J30 DC Board (27-1200)
J24	QDF75-0110	J24 DC Board (27-1200)

Base Assembly, Electrical - Common Components - 27-1660 **(Reference only)**

Item	Part No.	Part Name	Qty.
1	QDF27-1184	Wires Harness #2	1
2	QDF27-1204	Base Structure Extender	1
3	QDF9518	Wire Tie	12

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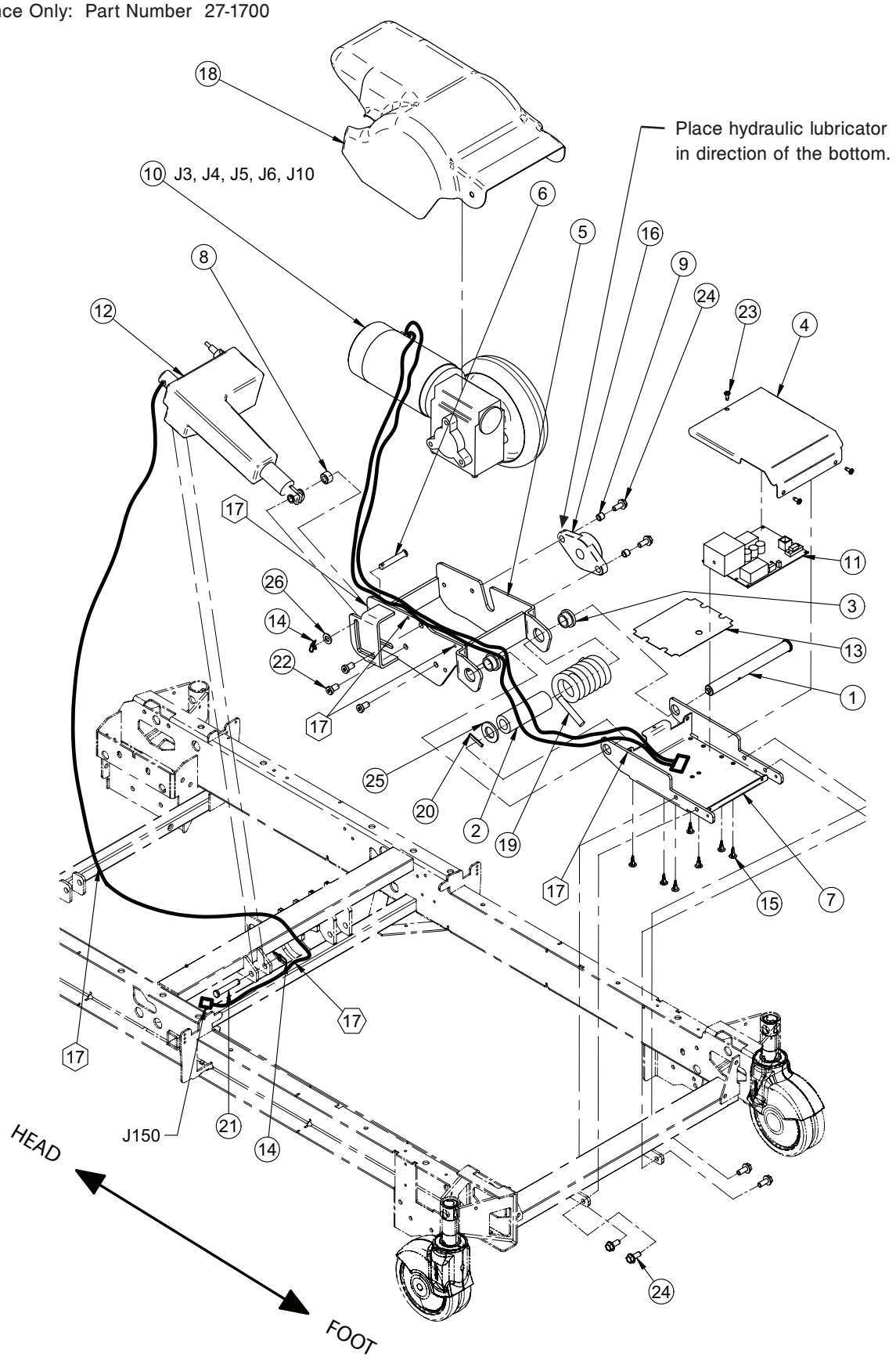
Base Assembly, ZOOM® Drive (2140 Model Only)

For Reference Only: Part Number 27-1700



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Base Assembly, ZOOM® Drive (2140 Model Only)

ACTUATOR CONNECTION QDF27-1445 TABLE		
Connector No.	**Cable No**	**Connector No.**
Con. 2 Positions	QDF27-1185	J150 (OL270002)

MOTOR REDUCER CONNECTION 27-1683 TABLE		
Connector No.	**Cable No**	**Connector No.**
Con. 2 Positions Red	QDF27-1430	J3, J4
Con. 2 Positions Black	QDF27-1430	J5, J6 (CSI 1109)
MTA 4 Positions	QDF27-1430	J10 (CSI 1109)

Base Assembly, ZOOM® Drive Option - Common Components - 27-1700 **(Reference only)**

Item	Part No.	Part Name	Qty.
1	27-0804Z	Long 5th Wheel Axle	1
2	27-0898	Motorized 5th Wheel Pivot Spring	1
3	27-0915	5th Wheel Bearing Flange	2
4	27-0961W	“CSI1109” Box Cover	1
5	27-1059W	Motorized Wheel Structure	1
6	27-1138	5th Wheel Actuator Axis	1
7	27-1140W	5th Wheel Structural Box	1
8	27-1150	5th Wheel Actuator Spacer	1
9	27-1636	Motorized 5th Wheel Sleeve	2
10	27-1683	ZOOM® Drive	1
11	QDF27-1430	“CSI1109” ZOOM® Board	1
12	QDF27-1445	5th Wheel Actuator	1
13	QDF27-1684	5th Wheel Protector Board	1
14	QDF7878	Fastener Pin, 3/8”	2
15	QDF8011	Board Support	7
16	QDF9162	5th Wheel Flange Bearing, 3/4”	1
17	QDF9518	Cable Fastener	5
18	QP27-1916-10	Motorized Wheel Cover	1
19	QRT27-0796	5th Wheel Torsion Spring	1
20	VG10B0636	Spring Pin, 3/16 x 1-1/4”	1
21	VG50B1248	Jaw Pin, 3/8” x 2”	1
22	VV10A1P20-S	Cylinder Hexagon Head Screw, 3/8”	3
23	VV83A9G16	Tapping Screw, #10x1/2”	3
24	VVB4A1024	Bolt, 5/16-18 x 3/4”	6
25	VW10B264004	Washer	1
26	VW10C122402	Nylon Washer	1

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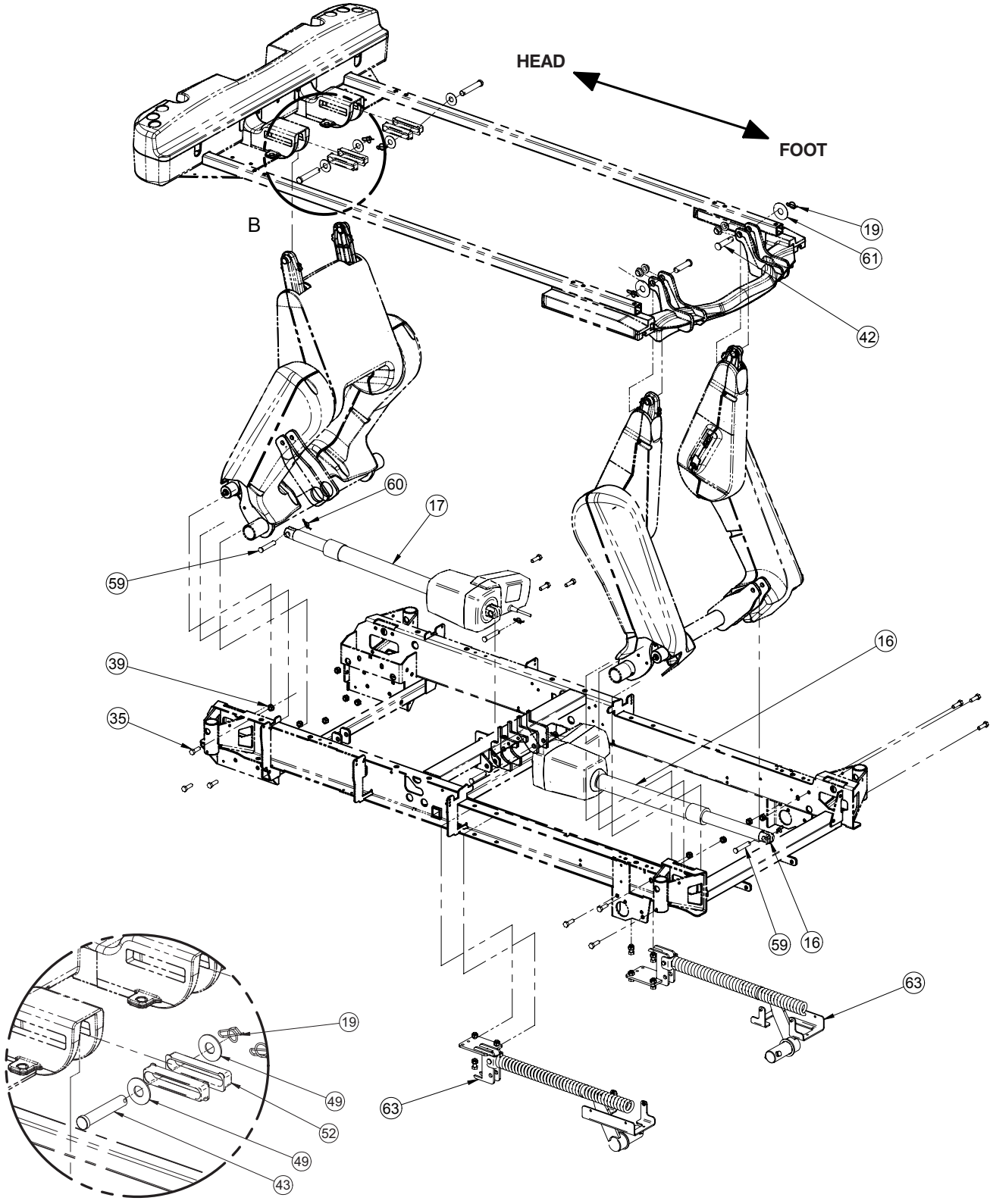
Lift Assembly

For Reference Only: Part Number L27-027



DETAIL B

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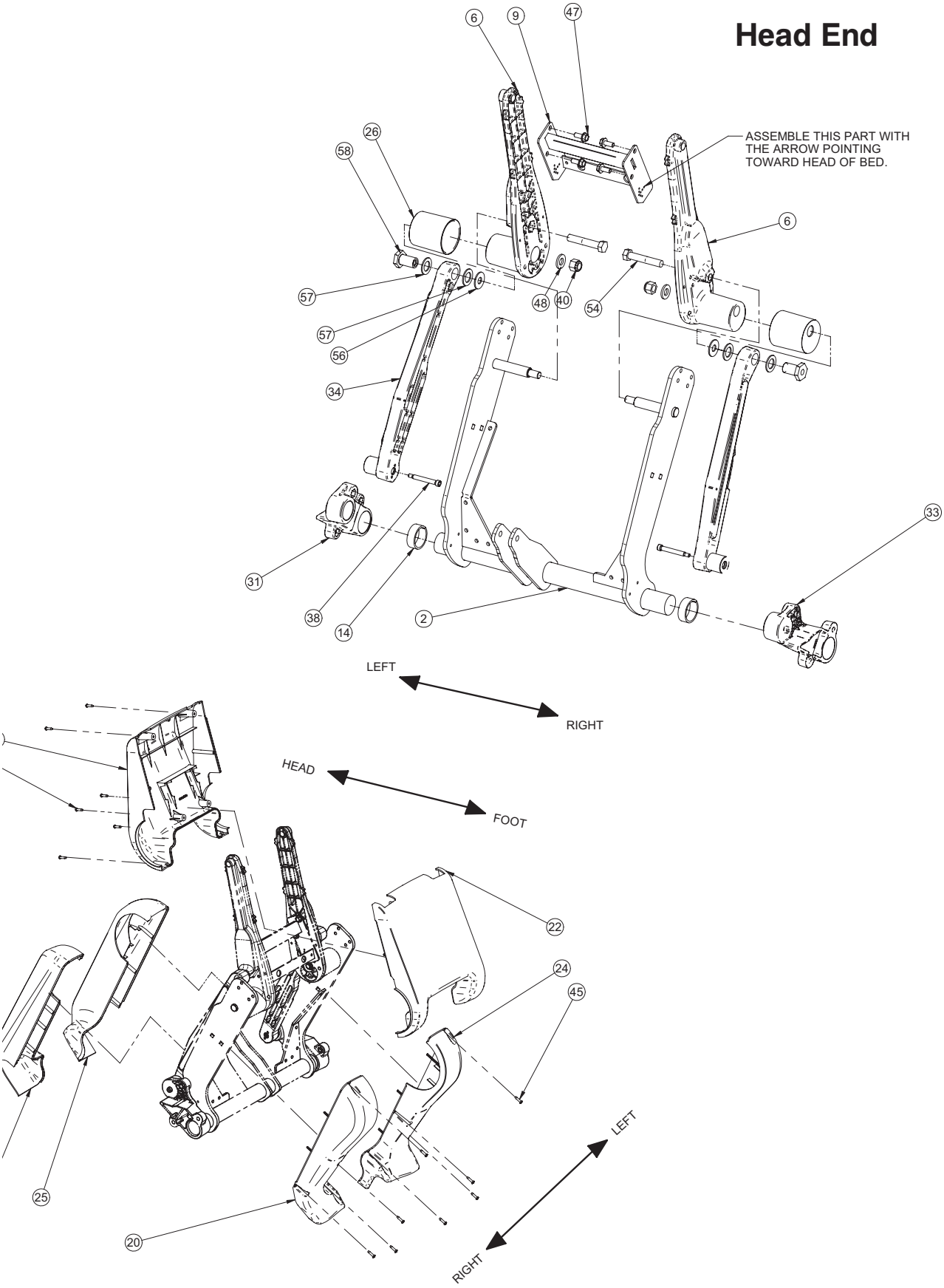
Lift Assembly



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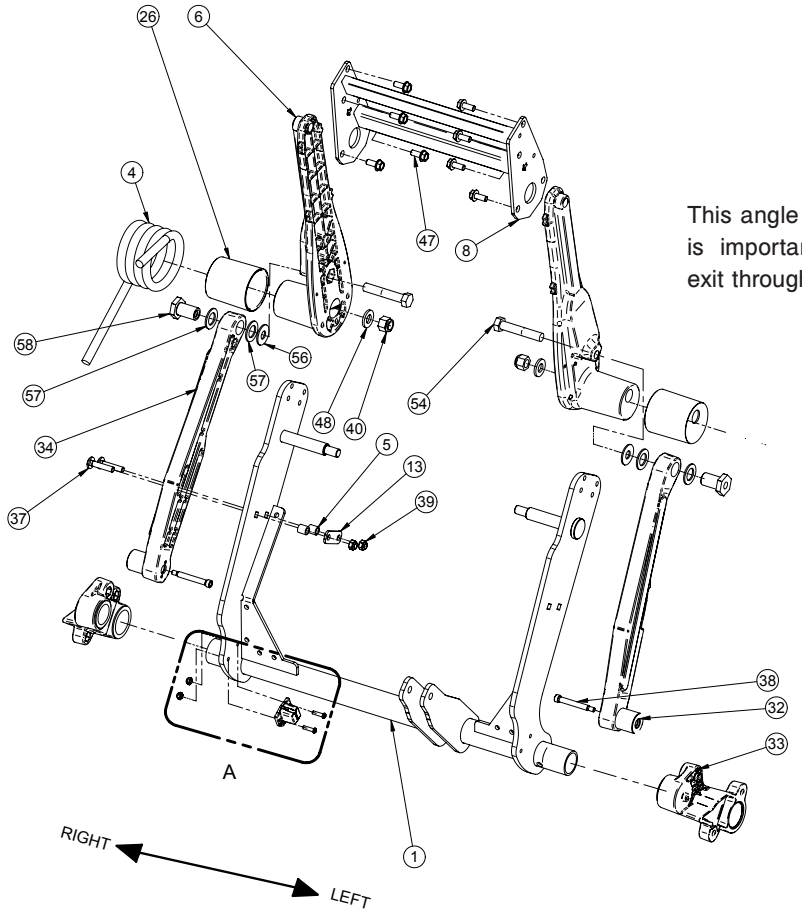
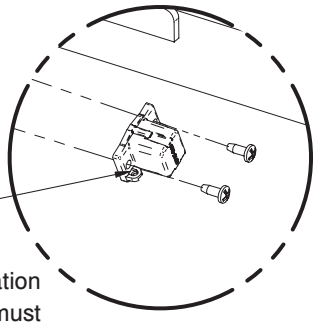
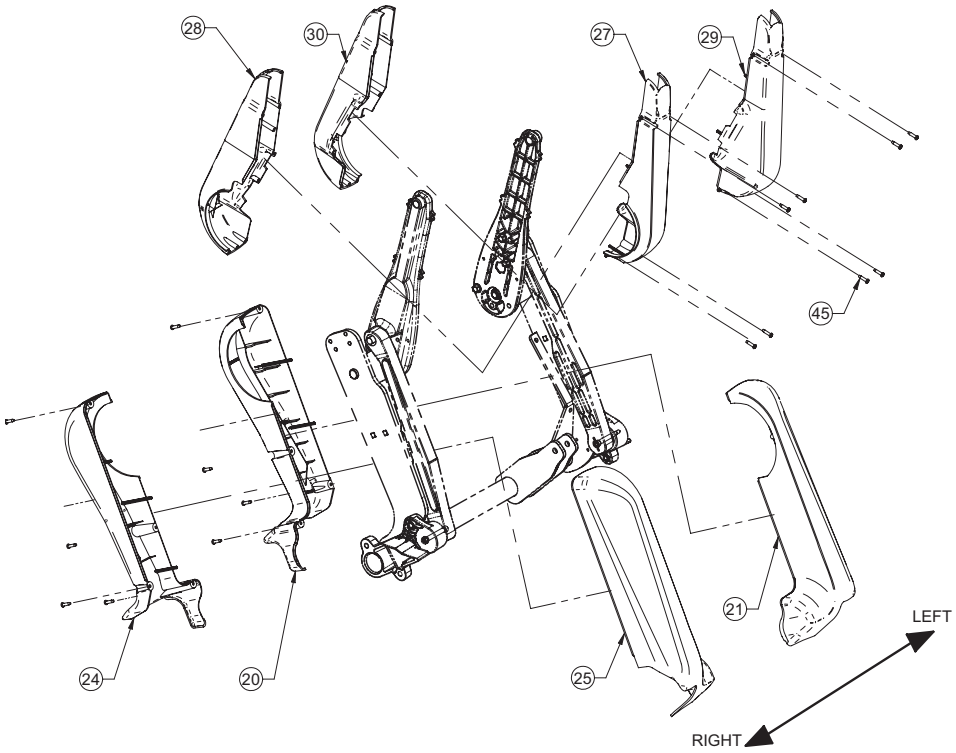
Foot End





This angle sensor orientation is important (the sire must exit through the bottom).

DETAIL A



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Lift Assembly

Lift Assembly - Common Components - L27-027 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-0992W	Foot Main Lift	1
2	27-0993W	Head Main Lift	1
3	QRT27-1002	Bed Lift System Left Spring	1
4	QRT27-1011	Bed Lift System Right Spring	1
5	27-1012	Spring Stop	4
6	QPA27-1013	Molded Bed Lift System Arm	4
8	27-1977W	Foot Reinforcement	1
9	27-1089W	Head Transverse Reinforcement	1
12	27-1209	Angle Sensor	1
13	27-1243Z	Spring Retention Plate	2
14	27-1623	Lift Spacer	4
16	QDF27-1251	Foot Lift Actuator	1
17	QDF27-1252	Head Lift Actuator	1
19	QDF7899	Hitch Pin Diameter 1/2”	4
20	QP27-0982-10	Exterior Right Low Lift Cover	2
21	QP27-0983-10	Interior Right Low Lift Cover	2
22	QP27-098-10	Interior Head High Lift Cover	1
23	QP27-0985-10	Exterior Head High Lift Cover	1
24	QP27-0986-10	Exterior Left Low Lift Cover	2
25	QP27-0987-10	Interior Left Low Lift Cover	2
26	QP27-1065	Spring Sleeve	4
27	QP27-1236-10	Exterior Right Foot High Lift Cover	1
28	QP27-1237-10	Interior Right Foot High Lift Cover	1
29	QP27-1238-10	Exterior Left Foot High Lift Cover	1
30	QP27-1239-10	Interior Left Foot High Lift Cover	1
31	QPA27-1024	Right Lever Support	2
32	QPA27-1030	Right Stiffener Arm	2
33	QPA27-1036	Left Lever Support	2
34	QPA27-1040	Left Stiffener Arm	2
35	VB18A1O32	Bolt 5/16”-18 x 1” LG	12
37	VB35A1O40	Carriage Bolt 5/16-18 x 1.5”	4
38	VD60B1O48	Shoulder Screw 5/16” x 2 x 1/4-20	4
39	VE30A1O	Nylon Locknut 5/16”-18	16
40	VE30A1R	Nylon Locknut Diameter 1/2-13	4
42	VG50A1648	Clevis Pin Diameter 1/2” x 2	2
43	VG50A1654	Clevis Pin Diameter 1/2” x 2.750” LG	2
45	VV23A1G24HL	Pan Head Tapping Screw, #10 x 3/4” P.Z.	32
46	VV83A9G16	Pan Head Tapping Screw, #10 x 1/2”	2
47	VVB4A1024	Bolt 5/16-18 x 3/4 Thread Rolling	12
48	VW10A173308	Flat Washer AA 1/2” P.Z.	4
49	VW10C173602	Nylon Washer	4
52	QP27-1830-00	Glider	4
54	VB18A1R54-5	Hexagon Bolt 1/2-13 UNC x 2 3/4”	4
56	27-2022	Stiffener Arm Steel Washer	4
57	27-2019	Stiffener Arm Acetal Washer	8
58	27-2018	Stiffener Arm Bearing	4
59	27-2053Z	Clevis Pin Diameter 10 mm x 50 mm	4
60	QDF7878	Hitch Pin Diameter 3/8”	4
61	VW10C432002	Nylon Washer	2
62	VE30A0G	Nylon Locknut #10-32	2
63	27-2117	Spring in Base	1
64	QDF2100	Round IGUS Wi 500x594x3125 .par	4

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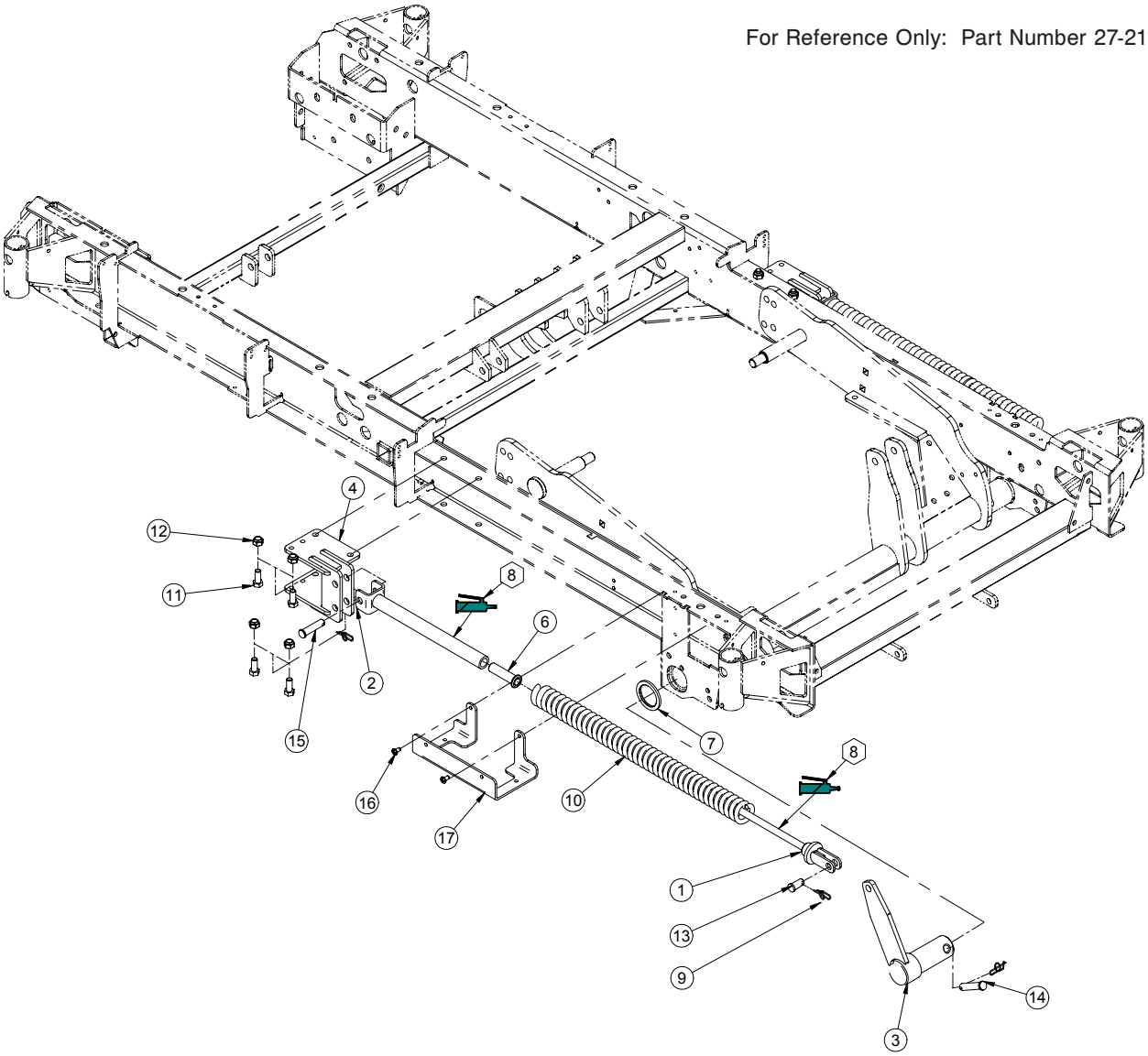
Spring Assembly

For Reference Only: Part Number 27-2117



Spring Assembly - Common Components - 27-2117 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-2096P	Hi-Lo Spring Support	2
2	27-2099P	Hi-Lo Spring Support Tube	2
3	27-2102P	Spring Tie	2
4	27-2107P	Spring Support Assembly	2
6	27-2115	Hi-Lo Spring Support Glider	2
7	27-2116	Acetal Washer 1.75 X 1.31 X 0.125	2
8*	M0019	OG2 Grade Grease	1
9	QDF7878	Clevis Pin Diameter 3/8”	6
10	QRC27-2114	Base Compression Spring 0.79ID	2
11	VB15A1O24	Bolt 5/16-18 x 3/4” LG Grade 5	8
12	VE30A1O	Nylon Locknut 5/16”-18	8
13	VG50A1224	Clevis Pin Diameter 3/8” x 3/4”	2
14	VG50A1244	Clevis Pin Diameter 3/8” x 1-3/4”	2
15	VG50B1240	Clevis Pin Diameter 3/8” x 1-1/2”	2
16	VV83A9G12	Phillips Head Tapping Screw #10 x 3/8”	4
17	27-2139P	Base Wiring Routing	2

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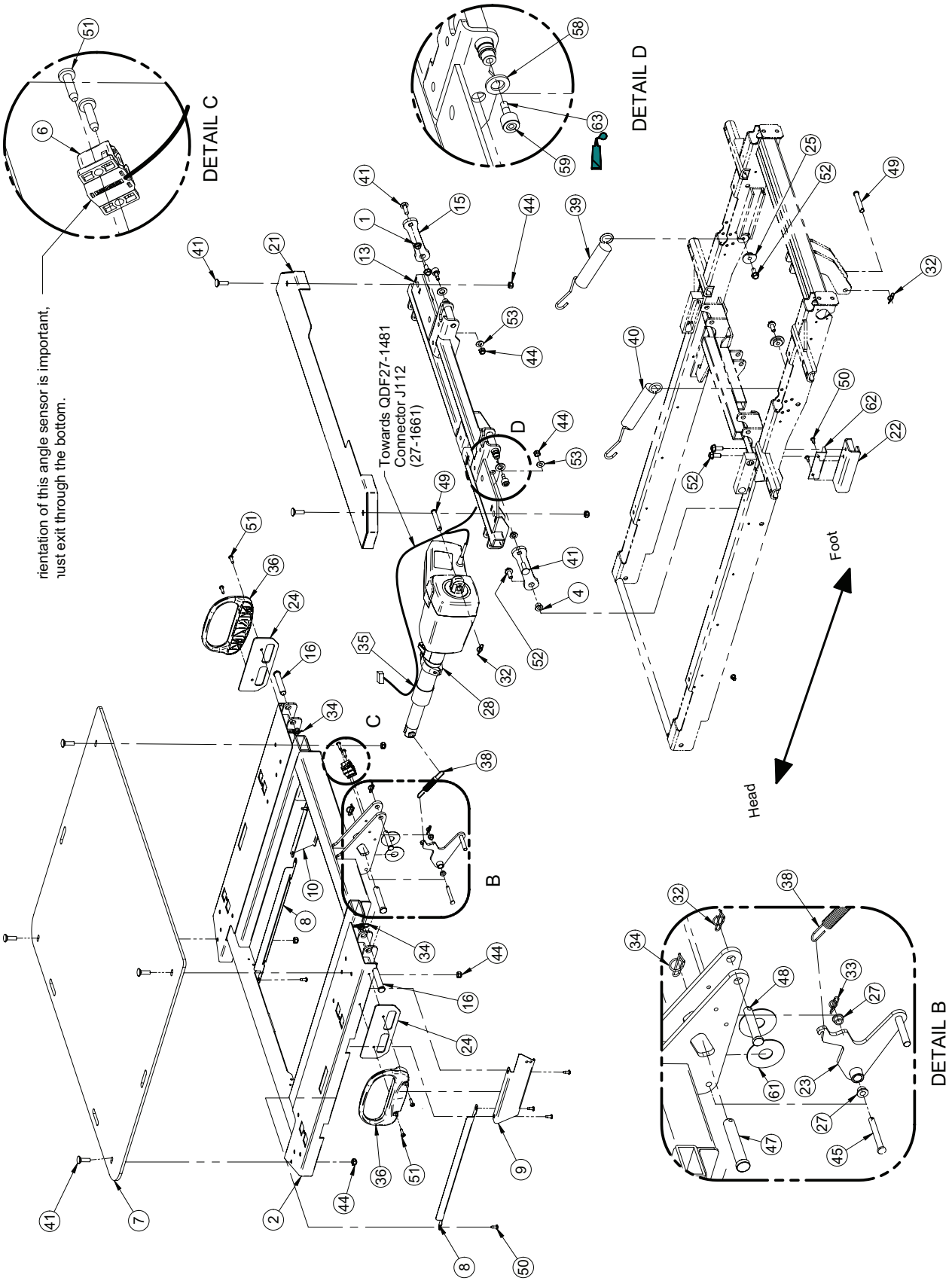
Notes

Litter Assembly

For Reference Only: Part Number L27-019



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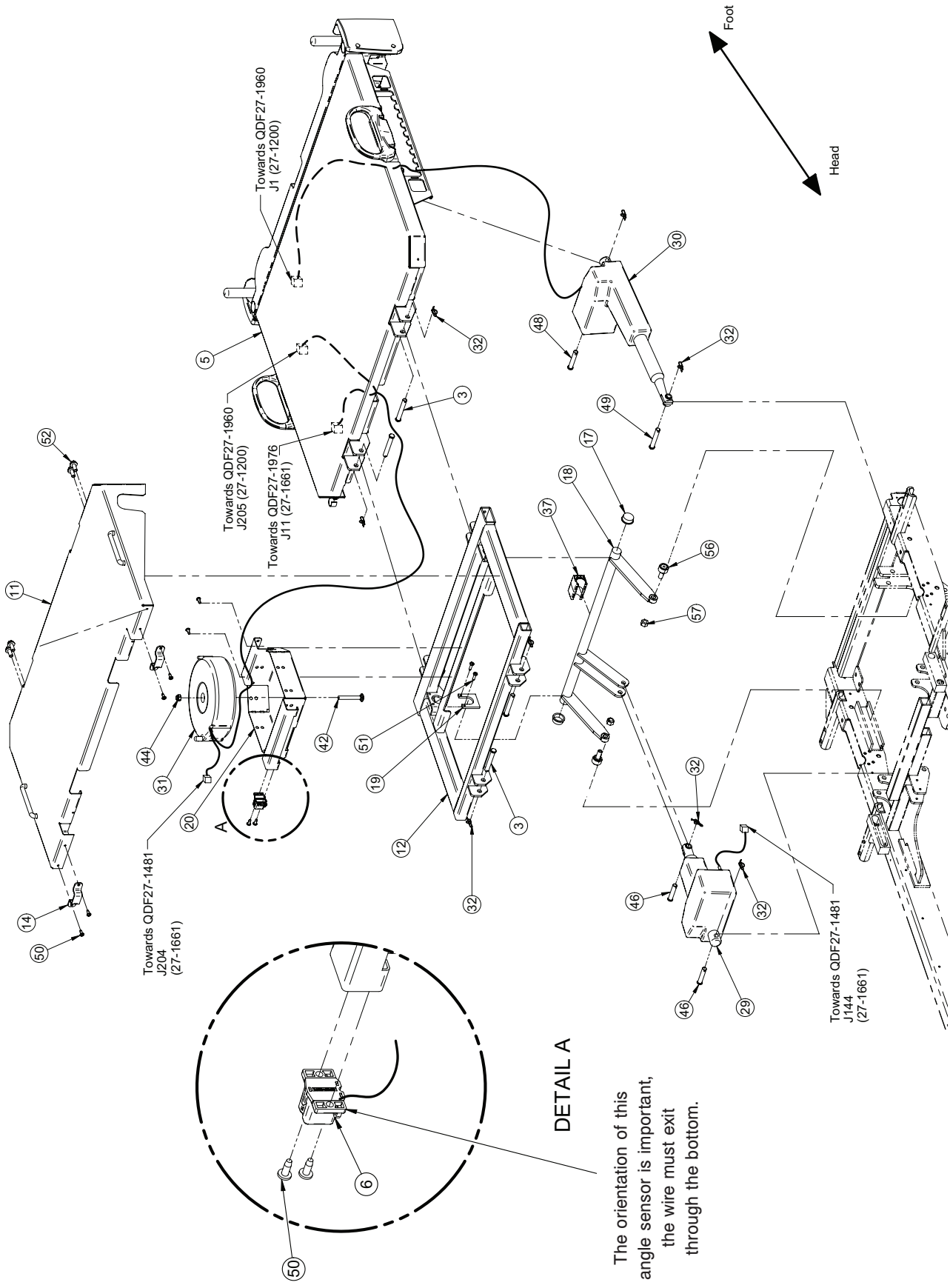
Litter Assembly



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Litter Assembly - Common Components - L27-019 (Reference only)

Item	Part No.	Part Name	Qty.
1	21-3613	5/16” Sleeve for 3/16	2
2	27-0054W	Head Section	1
3	27-0485	Clevis Pin Diameter 3/8”	4
4	27-0919	5/16” Sleeve for 5/16	2
5	27-1200	Bolted Foot Litter	1
6	27-1209	Angle Sensor	2
7	27-1397	Head Litter	1
8	27-1634Q	Siderail Cable Channel	2
9	27-1652W	Right Siderail Cable Channel	1
10	27-1667W	Left Siderail Cable Channel	1
11	27-1825W	Thigh Section Cover	1
12	27-1862W	Gatch	1
13	27-1888W	Intermediate Head Section	1
14	27-1908W	Retaining Plate	2
15	27-1919W	Lever Arm	2
16	27-1920	Clevis Pin Diameter 3/8”	2
17	27-1925	Gatch Bushing	2
18	27-1932Z	Gatch Pivot	1
19	27-1935Z	Upper Pivot Support	1
20	27-1940P	Transformer Box	1
21	27-1973P	Intermediate Section Cover	1
22	27-2001Z	Activation Limit Stop	1
23	27-2007Z	Finger	2
24	27-2015P	Head Contention Support	2
25	27-2023	Frame Spring Support Post	2
27	QB2938T1	Spacer	1
28	QDF27-1214	Head Section Cylinder	1
29	QDF27-1215	Gatch Section Cylinder	1
30	QDF27-1216	Foot Section Cylinder	1
31	QDF27-2038	Medical Toroidal Transformer	10
32	QDF7878	Clevis Pin Diameter 3/8”	1
33	QDF7898	Clevis Pin Diameter 1/4”	3
34	QDF7899	Clevis Pin Diameter 1/2”	1
35	QDF9518	Cable Tie	1
36	QP27-1435	Mattress Stop	2
37	QP27-1958	Gatch Pivot Limit Stop	1
38	QRE27-2000	Lock Spring	1
39	QRT27-2020	Head Litter Spring	2
40	QRT27-2026	Right Upper Frame Spring Rod	1
41	VB35A1O32	Carriage Bolt 5/16-18 x 1”,	8
42	VB35A1O50	Carriage Bolt 5/16-18 x 2 1/4”	1
44	VE30A1O	Nylon Locknut 5/16”-18	9
45	VG50A0848	Clevis Pin Diameter 1/4” x 2”	1
46	VG50A1244	Clevis Pin Diameter 3/8” x 1 3/4”	2
47	VG50A1654	Clevis Pin Diameter 1/2” x 2.750” LG	1
48	VG50B1248	Clevis Pin Diameter 3/8” x 2”	2
49	VG50B1250	Clevis Pin Diameter 3/8” x 2 1/4”	2
50	VV83A9G16	Pan Head Tapping Screw, #10 x 1/2”	18
51	VV83A9G24	Pan Head Tapping Screw, #10 x 3/4”	8

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Litter Assembly (Continued) - Common Components - L27-019 (Reference only) (Continued)

Item	Part No.	Part Name	Qty.
52	VVB4A1024	Bolt 5/16-18 x 3/4”	10
53	VW10A10	Flat Washer Diameter 5/16”	2
56	crs14	CAM Follower CRSB 14 NTL	2
57	VE30A1P	Nylon Locknut, 3/8-16	2
58	27-2063	Intermediate Pivot Washer	2
59	QDF2110	Cam Follower S20LW	2
61	VW10C432002	Nylon Washer	2
62	27-2064	Glider	1
63	M0008	Threadlocker Merdium Strength (Blue)	-

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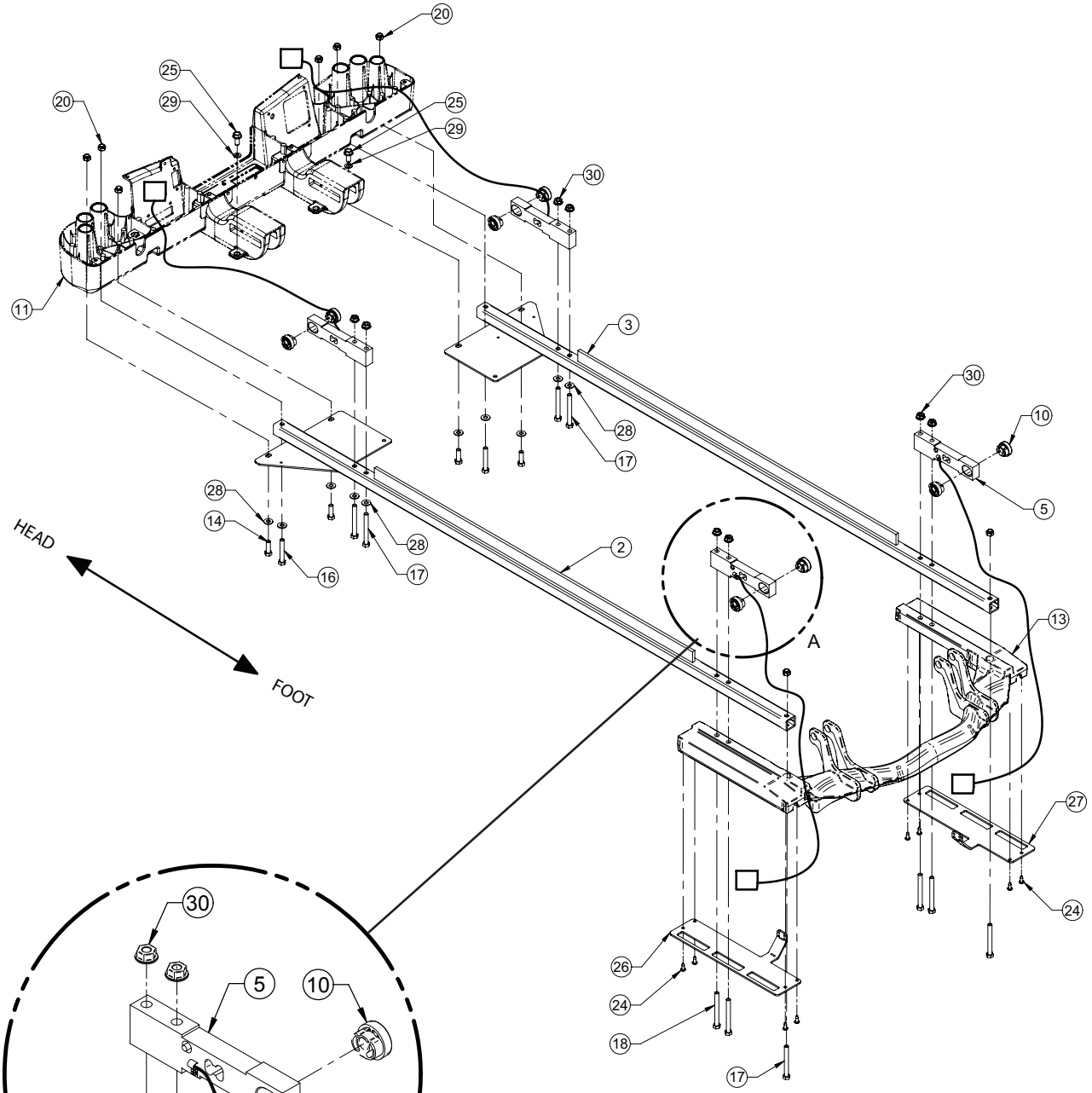
Notes

Litter Assembly, Interior Frame

For Reference Only: Part Number L27-014



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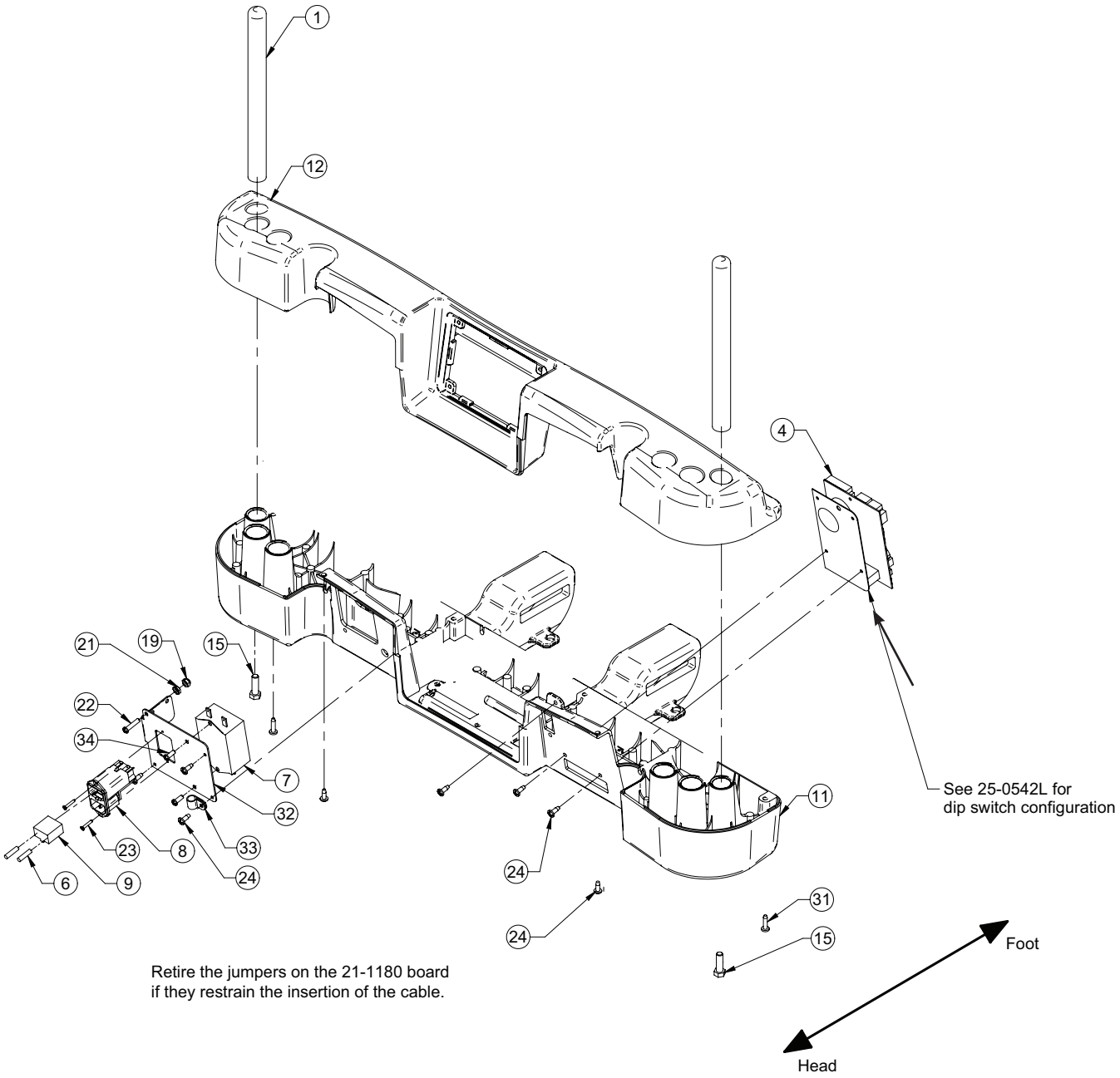
Litter Assembly, Interior Frame



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Litter Assembly, Interior Frame

Litter Assembly, Frame - Common Components - L27-014 **(Reference only)**

Item	Part No.	Part Name	Qty.
1	27-1180C	Head Board Anchoring	2
2	27-1310W	Right Lower Frame Support	1
3	27-1368W	Left Lower Frame Support	1
4	QDF21-1180	CAN Board Conn. without Gen III/37	1
5	QDF27-1372	Symmetrical Load Cell	4
6	QDF8078	10A 250V Fuse	2
7	QDF9571	Medical Filter	1
8	QDF9574	Power Entry Module	1
9	QDF9575	Fuseholder	1
10	QP27-1469-00	Elastomer Sleeve	8
11	QPA27-1290	Frame Head	1
12	QPA27-1291	Frame Head Cover	1
13	QPA27-1426	Foot Frame Support	1
14	VB15A1O32	Bolt 5/16”-18 x 1”	4
15	VB15A1O32-S	Bolt 5/16”-18 x 1”	2
16	VB15A1O48	Bolt 5/16”-18 x 2”	2
17	VB15A1O54	Bolt 5/16”-18 x 2-3/4”	6
18	VB15A1O56	Hexagon Bolt 5/16-18 x 3”	4
19	VE30A0G	Nylon Locknut #10-32	1
20	VE30A1O	Nylon Locknut 5/16”-18	8
21	VE80A0G	Hexagon Locknut “K-lok” #10-32	1
22	VV33A0G28	Pan Head Screw, 10-32 x 7/8”	1
23	VV41A1A20	Tapping Screw, #4-40 x 5/8”	2
24	VV83A9G16	Tapping Screw, #10 x 1/2”	18
25	VVB4A1024	Bolt 5/16-18 x ¾	2
26	27-1806W	Right Frame Support Cover	1
27	27-1385W	Left Frame Support Cover	1
28	VW10A10	Flat Washer 5/16”	10
29	VW20A10	Spring Washer 5/16”	2
30	VE78A10	Flanged Nut, 5/16-18	8
31	VV83A9G24	Tapping Screw, #10 x 3/4”	2
32	27-1723W	Head Plate without Auxiliary Outlet	1
33	QDF9520	Cable Tie Diameter 3/8”	1
34	VV33A0G16	Pan Head Machine Screw, #10-32 x 1/2”	2
35	M0019	Grease	1

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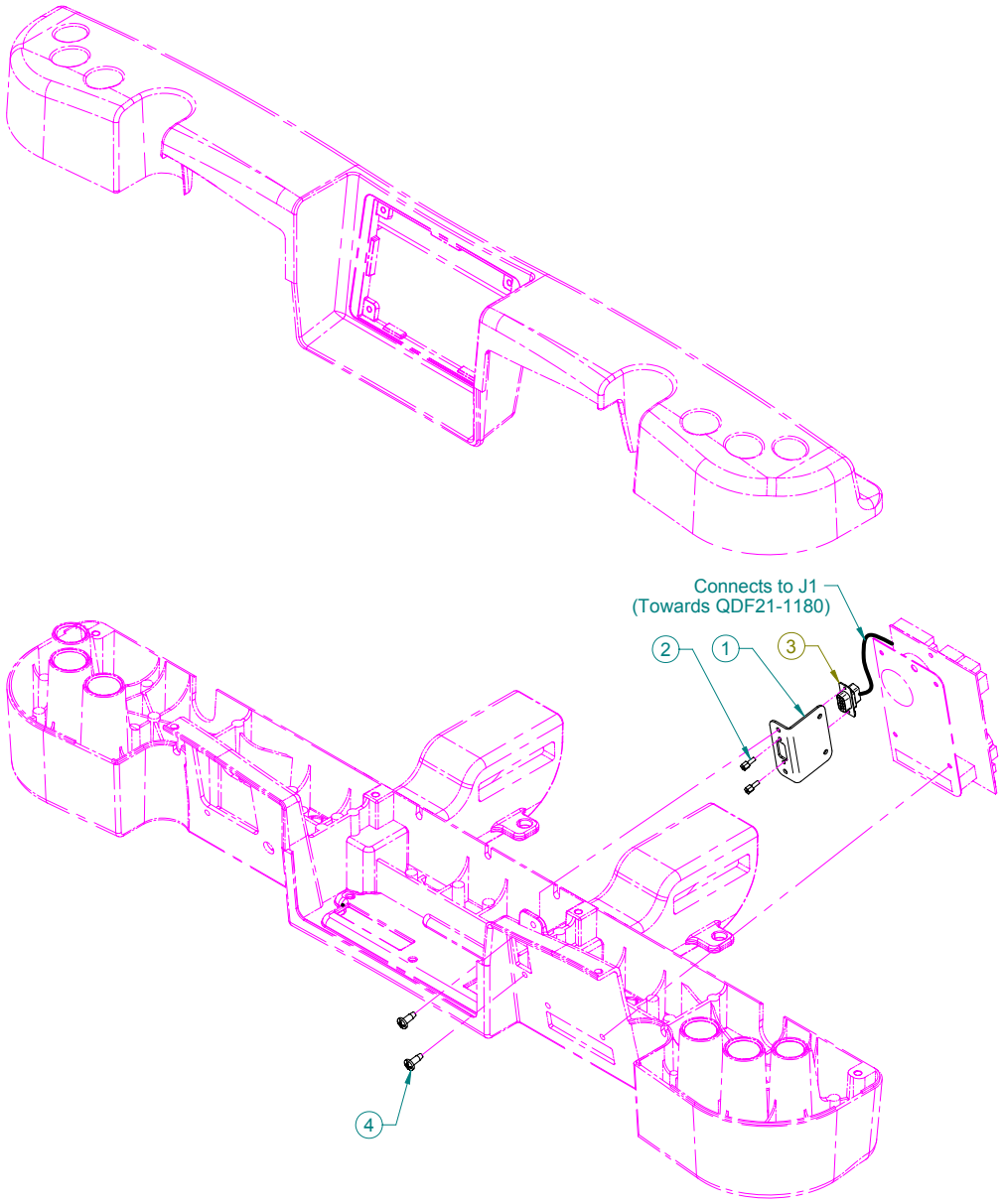
Litter Assembly with Serial Port

For Reference Only: Part Number OL270221



Litter Assembly with Serial Port - Common Components - OL270221 (Reference Only)

Item	Part No.	Part Name	Qty.
1	27-1520P	Support Connector	1
2	QDF2056	#4 x 3/16” Standoff	2
3	QDF27-2432	Serial Interconnection Cable	1
4	VV83A9G16	#10 x 1/2” Pan Head Phillips Screw	2

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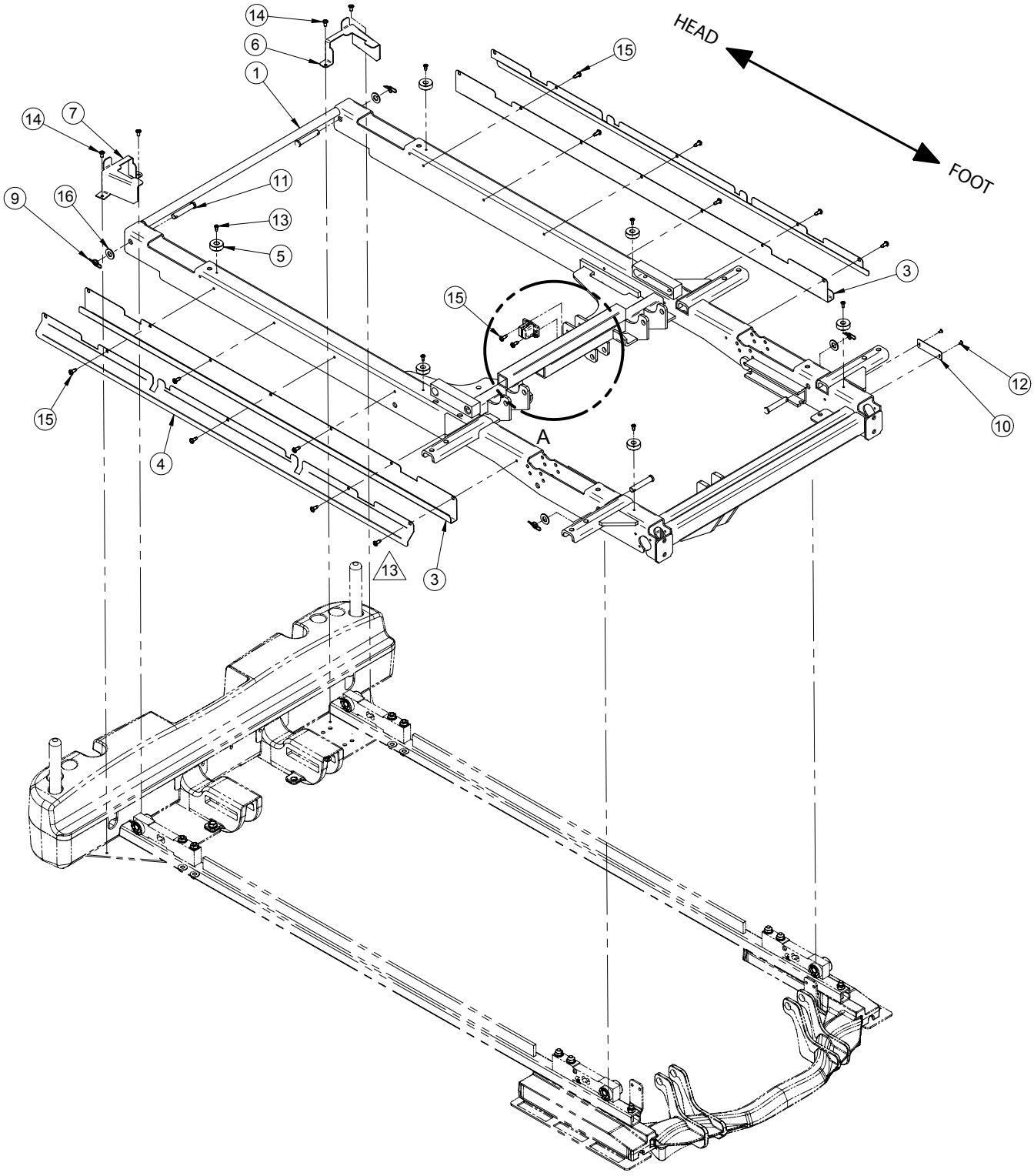
Notes

Litter Assembly, Upper Frame

For Reference Only: Part Number L27-021



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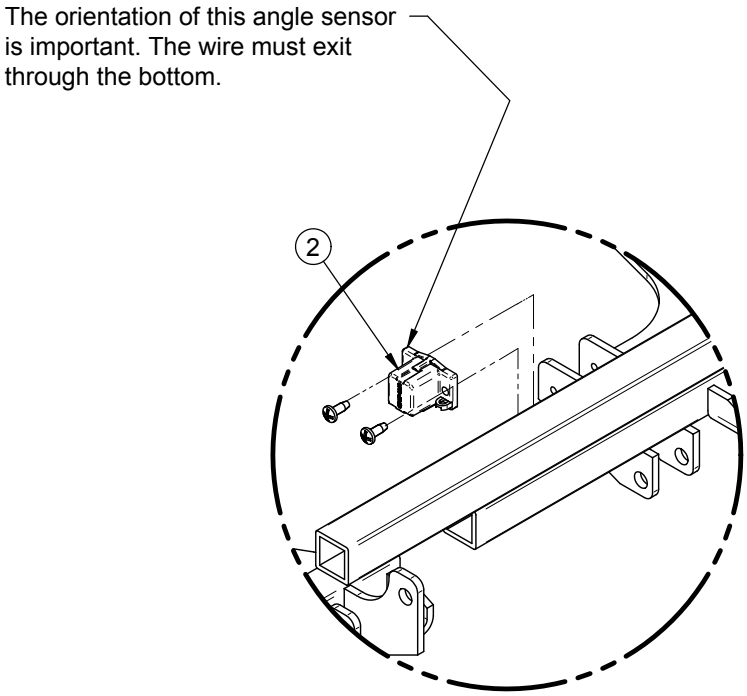
Litter Assembly, Upper Frame



DETAIL A

Litter Assembly, Frame - Common Components - L27-021 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-0264W	Upper Frame	1
2	27-1209	Angle Sensor	1
3	27-1433W	Wire Channel	1
4	27-1434W	Wire Cover	2
5	27-1760	Stopper	6
6	27-1850W	Left Head Frame Wire Cover	1
7	27-1851W	Right Head Frame Wire Cover	1
9	QDF7878	Coupling Pin Diameter 3/8”	4
10	QE71-0869	Serial Number Plate	1
11	VG50B1248	Clevis Pin, Diameter 3/8” x 2”	4
12	VR11H43	Pop Rivet	2
13	VV83A9E12	Pan Head Tapping Screw, #8 x 3/8”	7
14	VV83A9G12	Pan Head Tapping Screw, #10 x 3/8”	4
15	VV83A9G161	Pan Head Tapping Screw, #10 x 1/2”	4
16	VW10A12	3/8” Washer	4

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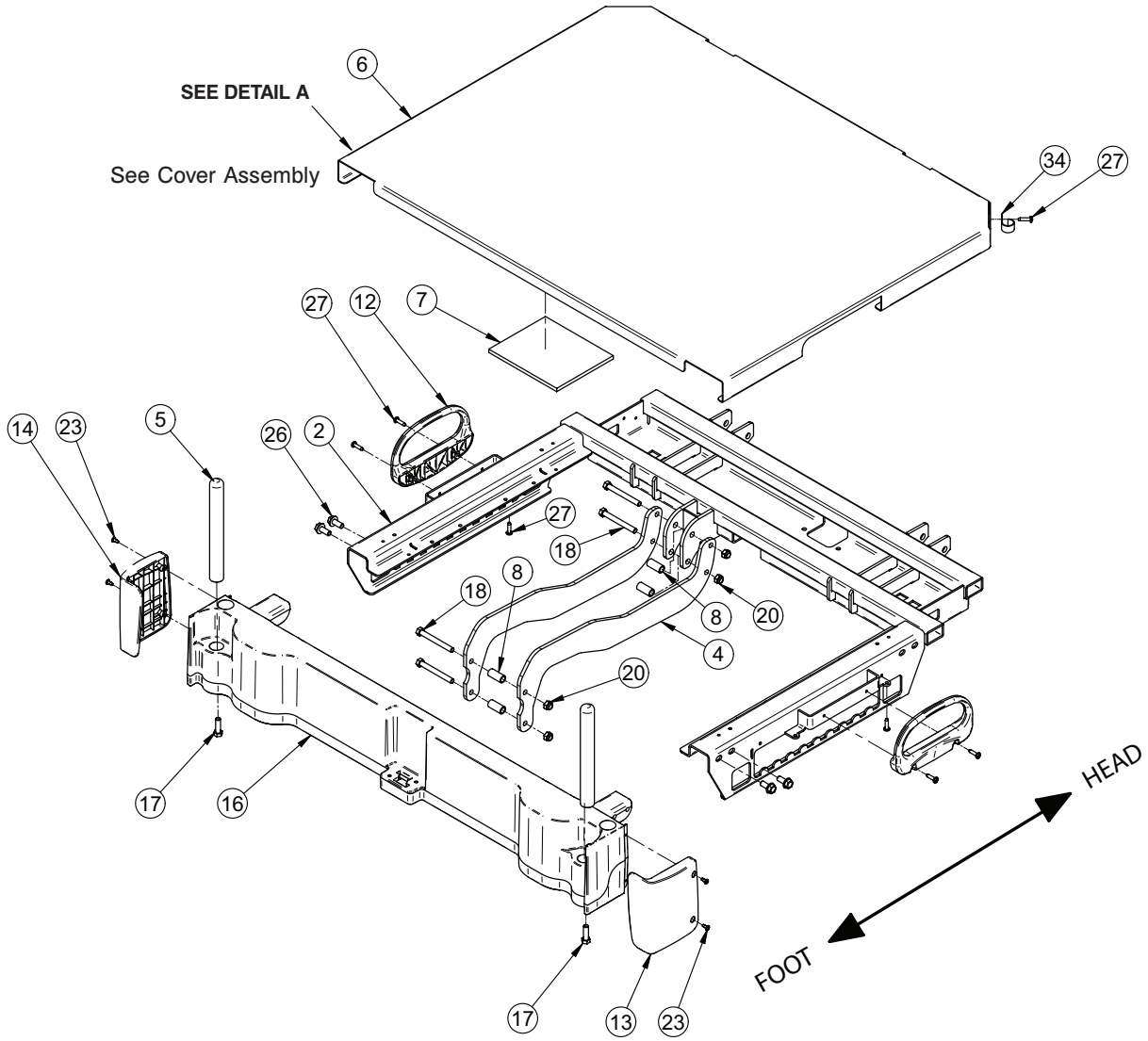
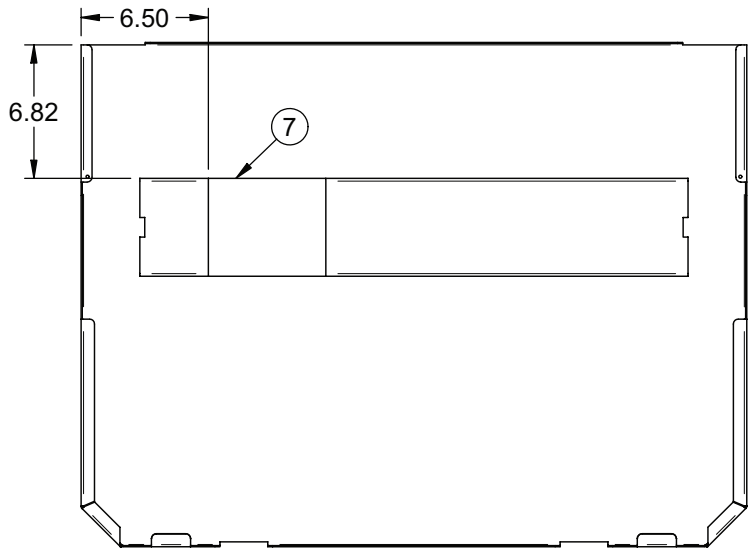
Litter Assembly, Foot End

For Reference Only: Part Number 27-1200





Detail A

Cover Assembly

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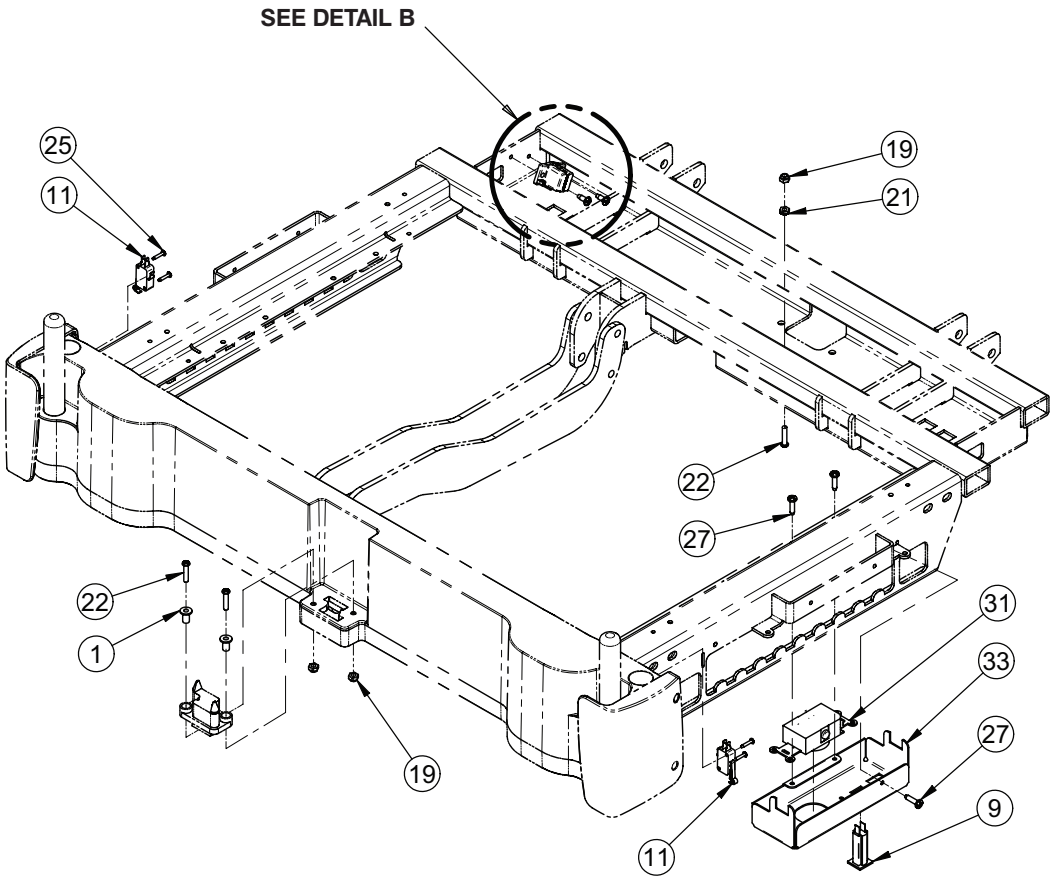
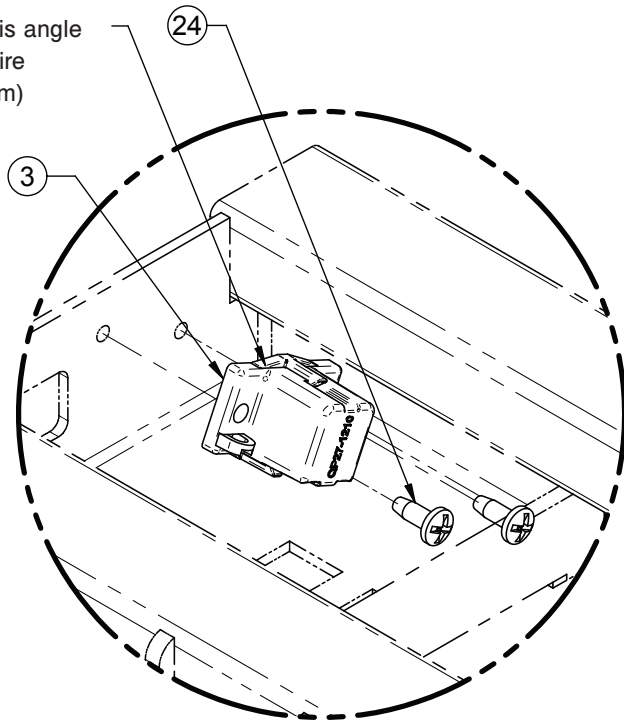
Litter Assembly, Foot End



Note: Orientation of this angle sensor is important (wire must exit toward bottom)



Detail B

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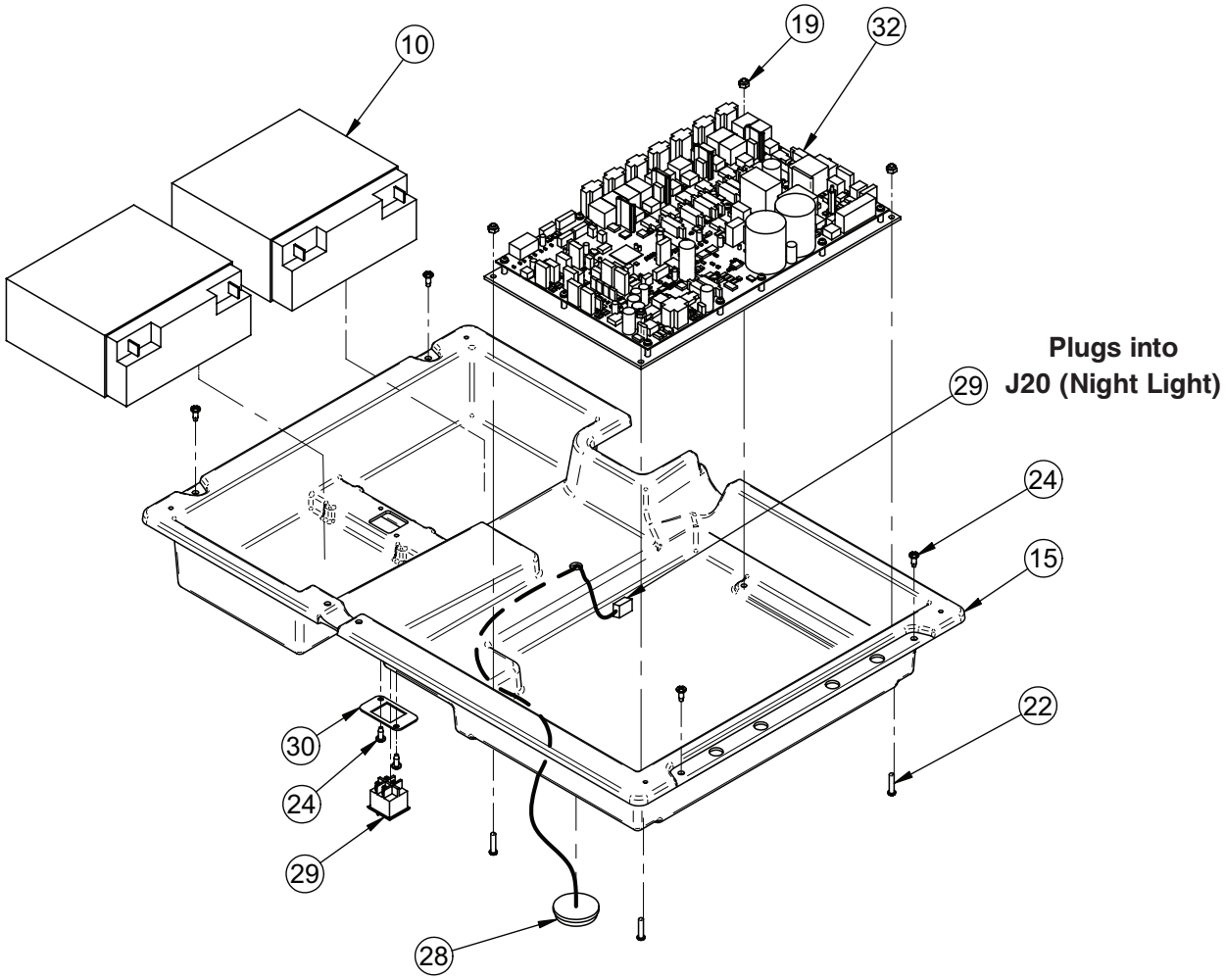
Litter Assembly, Foot End



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Litter Assembly, Foot End

Litter Assembly, Foot End - Common Components - 27-1200 **(Reference only)**

Item	Part No.	Part Name	Qty.
1	25-0527Z	Connector Sleeve	2
2	27-0112W	Foot Section	1
3	27-1209	Angular Sensor	1
4	27-1579W	Central Plate Foot Litter	2
5	27-1584C	Foot Board Pin	2
6	27-1606W	Mattress Support	1
7	27-1639	Isolator	1
8	27-1710Z	Spacer	4
9	QDF9025	5A Circuit Breaker	1
10	QDF9188	12V 18AH Battery	2
11	QDF9535	Microswitch	2
12	QP27-1435-10	Mattress Stopper	2
13	QP27-1439-05	Left Foot Bumper	1
14	QP27-1440-05	Right Foot Bumper	1
15	QP27-1597	Molded Electronic Box	1
16	QPA27-1576	Molded Foot Litter End	1
17	VB15A1O32-S	Bolt, 5/16”-18 x 1”	2
18	VB15A1O54	Bolt, 5/16-18 x 2-3/4”	4
19	VE30A0G	Nylon Locknut, #10-32	7
20	VE30A1O	Nylon Locknut, 5/16”-18	4
21	VE80A0G	“K-LOK” Hexagon Locknut, #10-32	1
22	VV33A0G28	Machine Screw, 10-32 x 7/8”	7
23	VV83A9E12	Tapping Screw, #8 x 3/8”	4
24	VV83A9G16	Tapping Screw, #10 x 1/2”	8
25	VV87A9A20	Tapping Screw, #4 x 5/8”	4
26	VVB4A1024	Bolt, 5/16-18 x 3/4”	4
27	VV83A9G24	Tapping Screw, #10 x 3/4”	10
28	QDF27-2025	Night Light	1
29	QDF2087	Battery Switch	1
30	27-1972Z	Switch Support Plate	1
31	QDF9573	Leviton 8310-G Single Receptacle	1
32	QDF75-0110	Main Board	1
33	27-1967W	Auxiliary Receptacle Box	1
34	QDF2091	Wiring Clip	1

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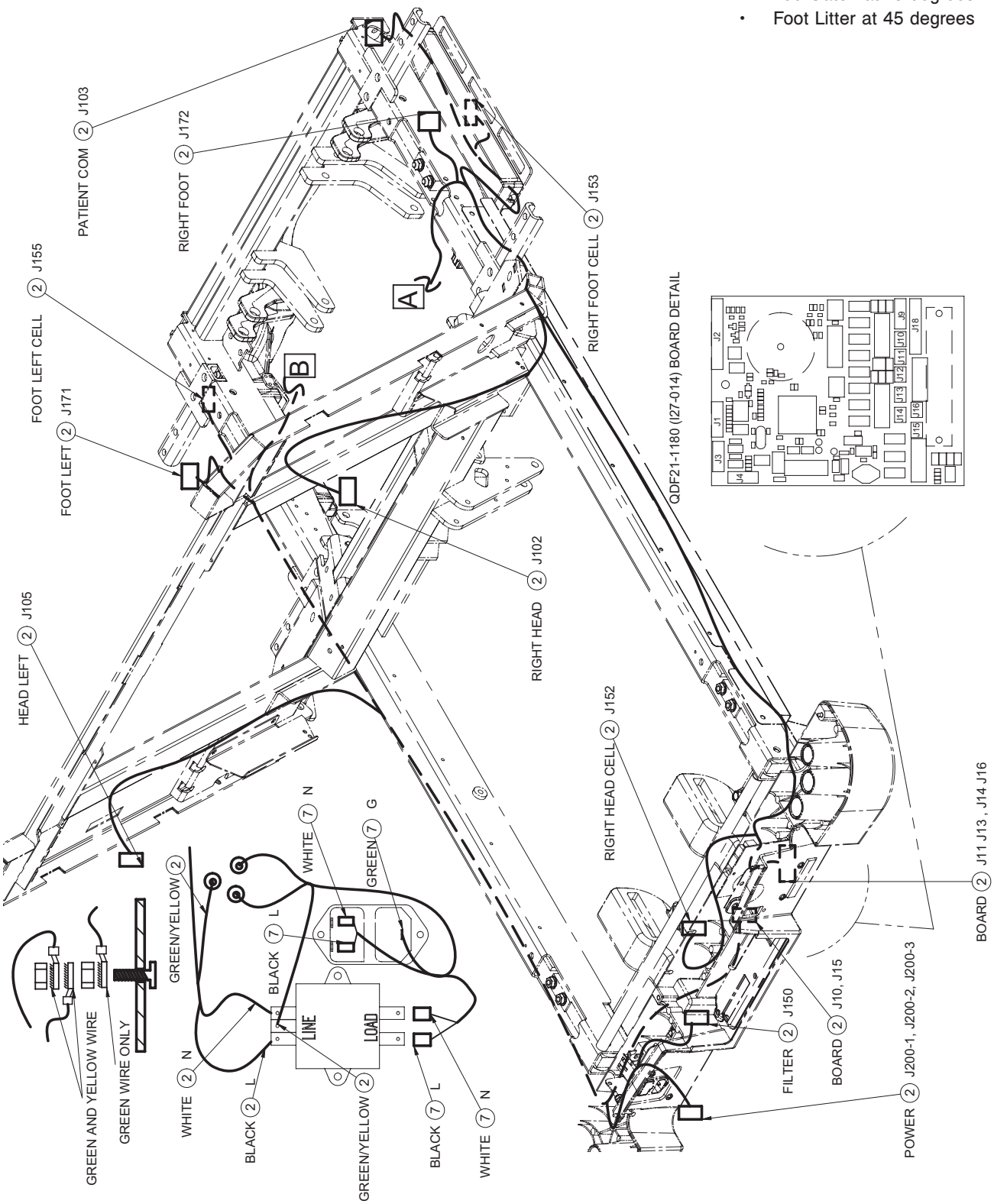
Litter Assembly, Electrical

For Reference Only: Part Number 27-1661

Note: To avoid any binding risk when assembling these cables, the bed must be in high position.

- Fowler at 70 degrees
- Knee Gatch at 15 degrees
- Foot Litter at 45 degrees



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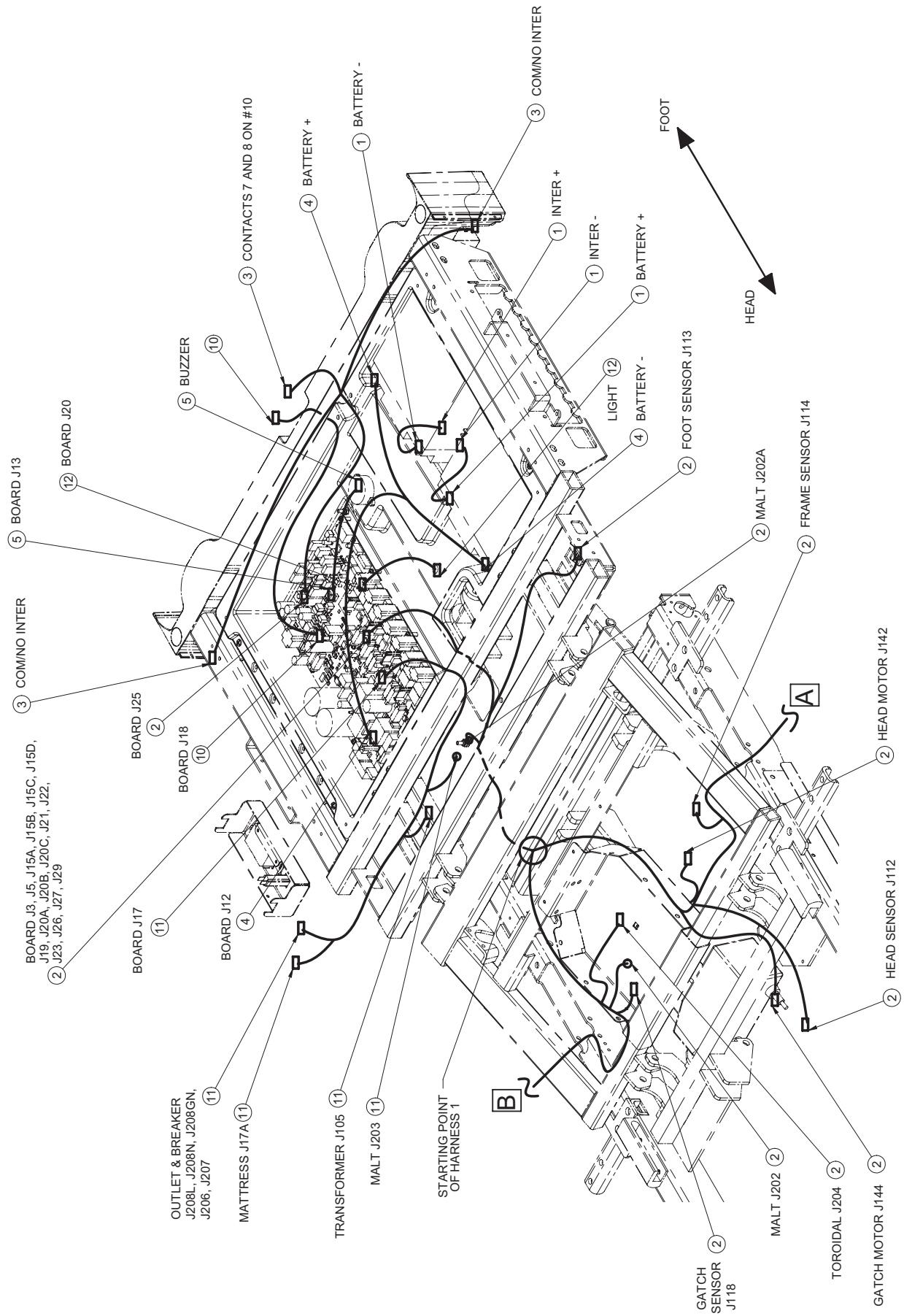
Litter Assembly, Electrical



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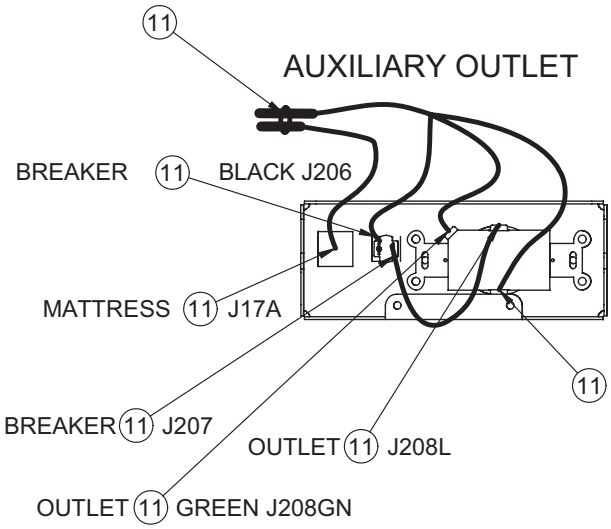
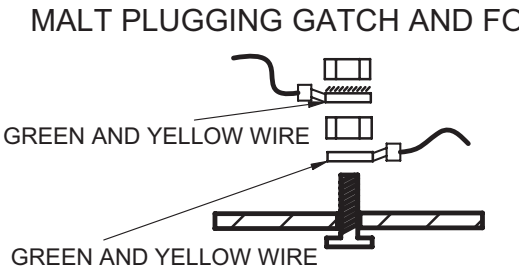
Litter Assembly, Electrical





QDF27-1381 CABLES #1 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
Red Grommet	QDF9188	A" Battery + (27-1200)
Teriminal	QDF9188	Switch (27-1200)
Terminal	QDF9188	Switch (27-1200)

QDF27-1481 CABLES #2 CONNECTION TABLE		
Connector No	**Cable No.**	**Connector No.**
J22	QDF75-0110	DC Board J22
J21	QDF75-0110	DC Board J21
J20A	QDF75-0110	DC Board J20A
J20B	QDF75-0110	DC Board J20B
J20C	QDF75-0110	DC Board J20C
J19	QDF75-0110	DC Board J19
J29	QDF75-0110	DC Board J29
J15A	QDF75-0110	DC Board J15A
J15B	QDF75-0110	DC Board J15B
J15C	QDF75-0110	DC Board J15C
J15D	QDF75-0110	DC Board J15D
J204	QDF27-2038	Transformer J204
J27	QDF75-0110	DC Board J27
J3	QDF75-0110	DC Board J3
J5	QDF75-0110	DC Board J5
J113	QDF27-1209	Foot Sensor (27-1200)
J202	QDF75-0110	Gatch Ground

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QDF27-1481 CABLES #2 CONNECTION TABLE (CONTINUED)		
J114	QDF27-1209	Trend Sensor (L27-021)
J153	QDF27-1372	Right Foot Cell
J103	27-0264	Removalbe Pendant (L27-021)
J172	QDF27-1208	Right Head Side 27-0389
J102	QDF27-1206	Right Head Side 27-0387
J152	QDF27-1372	Right Head Cell
J202A	-	Foot Ground
J16	QDF21-1180	J16
J15	QDF21-1180	J15
J14	QDF21-1180	J14
J13	QDF21-1180	J13
J10	QDF21-1180	J10
J11	QDF21-1180	J11
J144	QDF27-1215	Gatch Motor (L27-019)
J142	QDF27-1214	Head Motor (L27-019)
J112	QDF27-1209	Head Sensor (L27-019)
J118	QDF27-1209	Gatch Sensor (L27-019)
J155	QDF27-1372	Left Foot Cell
J171	QDF27-1208	Left Foot Side 27-0390
J105	QDF27-1206	Left Head Side 27-0388
J150	QDF27-1372	Left Head Cell
J23	QDF75-0110	DC Board J23
J26	QDF75-0110	DC Board J26
J200A Black	QDF9571	Line “L” (L27-014 Filter)
J200B White	QDF9571	Line “N” (L27-014 Filter)
J200C Green	MALT	Head Screw (L27-014)

QDF27-1607 CABLES #3 CONNECTION TABLE		
Connector No	**Cable No.**	**Connector No.**
5-Pos MTA Con.	QDF75-0110	DC Board J25
Contact	QDF27-1213	Contact 7 or 8
Contact	QDF27-1213	Contact 7 or 8
Terminal	QDF9535	NO/COM Right Limit Switch (L.S.) (27-1200)
Terminal	QDF9535	COM/NO Right L.S. (27-1200)
Terminal	QDF9535	NO/COM Left L.S. (27-1200)
Terminal	QDF9535	COM/NO Left L.S. (27-1200)

QDF27-1646 CABLES #4 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
Mini Fit	QDF75-0110	DC Board J12
Black Grommet	QDF91880	“B” Battery + (27-1200)
White Grommet	QDF9188	“A” Battery - (27-1200)

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QDF5095 CABLES #5 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
MTA Con.	QDF75-0110	DC Board J13
Buzzer	Elect Box	See Position on Drawing

QDF27-1524 CABLES #7 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
Black 90^0 Terminal	QDF9571	Line “L” (L27-014 Filter)
White 90^0 Terminal	QDF9571	Line “N” (L27-014 Filter)
Green 90^0 Terminal	QDF9571	Line “E” (L27-014 Filter)
Black Right Terminal	QDF9574	“L” (Power L27-014)
White Right Terminal	QDF9574	“N” (Power L27-014)
Green Right Terminal	QDF9574	“E” (Power L27-014)
Star Grommet	Head Ground	Screw (L27-014)
Star Grommet	Head Ground	Screw (L27-014)

QDF27-1213 CABLES #10 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
6 Pos MTA Con.	QDF75-0110	DC Board J18
Metrimate Con.	QDA27-1576	Panel (27-1277)

QDF27-1976 CABLES #11 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
J17	QDF75-0110	DC Board J17
J205	QDA27-2038	Transformer (27-1200)
J203 Grommet	-	Foot Litter Ground
J208L (Black)	QDF9573	Simple Outlet (27-1200)
J17A Mattress Outlet	Box Hole	(27-1200)
J207 Terminal	QDF9025	Breaker (27-1200)
J206 Terminal	QDF9025	Breaker (27-1200)
J208N (White)	QDF9573	White Outlet (27-1200)
J208GN (Green/Yellow)	QDF9573	Ground Outlet (27-1200)

QDF27-2025 CABLES #12 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
Light	QDF75-0110	DC Board J20

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Litter Assembly, Cabling - Common Components - 27-1661 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF27-1381	Battery Switch Wire	2
2	QDF27-1481	Wire Harness #1	1
3	QDF27-1607	Bed Extender and I.V. Pole Cable	1
4	QDF27-1646	Battery Wires	1
5	QDF5095	Buzzer	1
6	QDF9518	Cable Tie	1
7	QDF27-1524	Filter and Receptacle Connector	1
10	QDF27-1213	Control Board Cable – Panel	1
11	QDF27-1976	Auxiliary 120V Outlet Cable	1
12	QDF27-2025	Nightlight 12V	1

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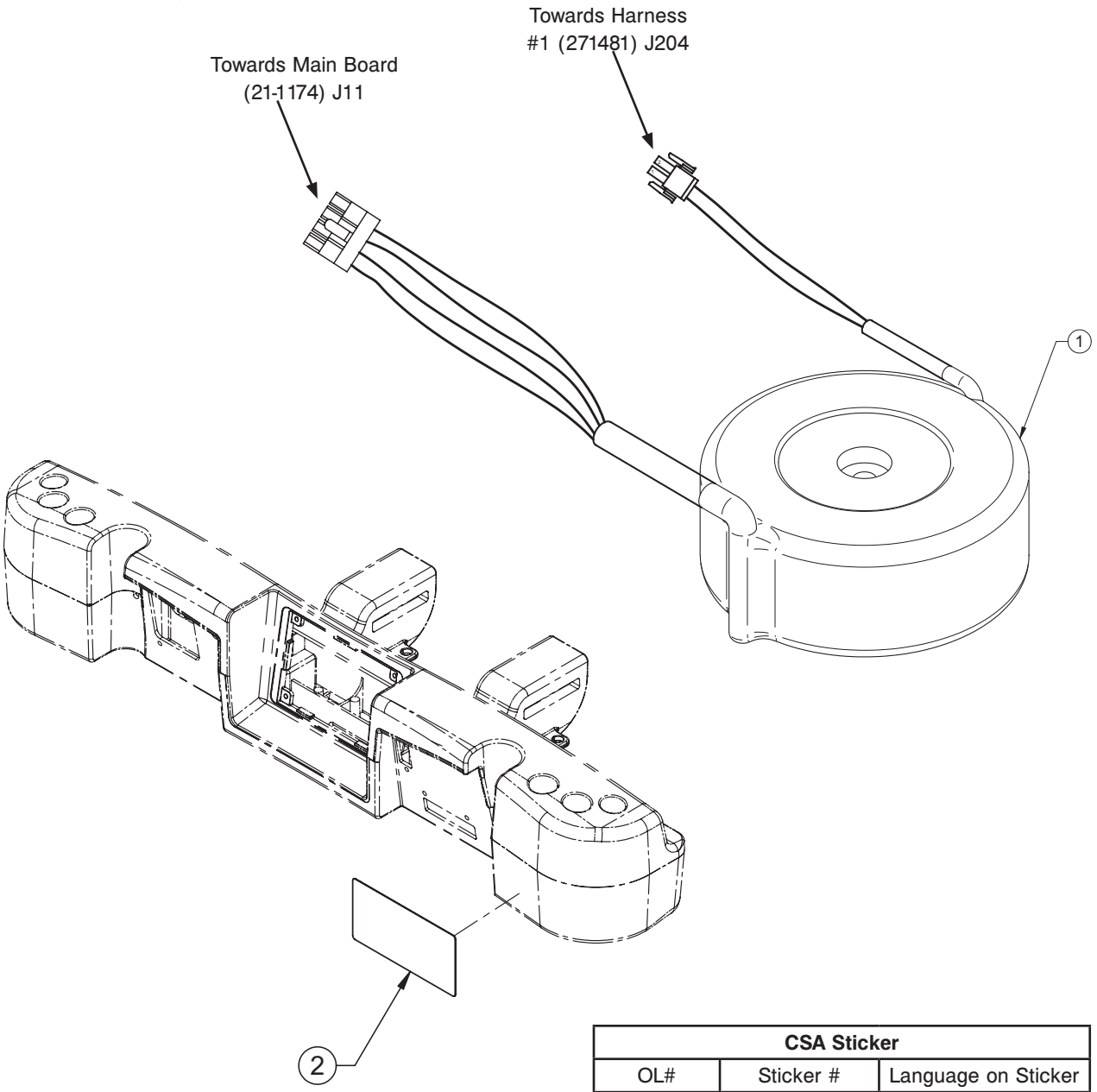
120V Electric System

For Reference Only: Part Number OL270009



CSA Sticker		
OL#	Sticker #	Language on Sticker
OL270035	QE71-0942-F	English/French
OL270036	QE71-0942-E	English/Spanish

Optional 120V Electrical System - Common Components - OL270009 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF27-1459	Medical Toroidal Transformer	1
2	See Table	CSA 120V Sticker	1

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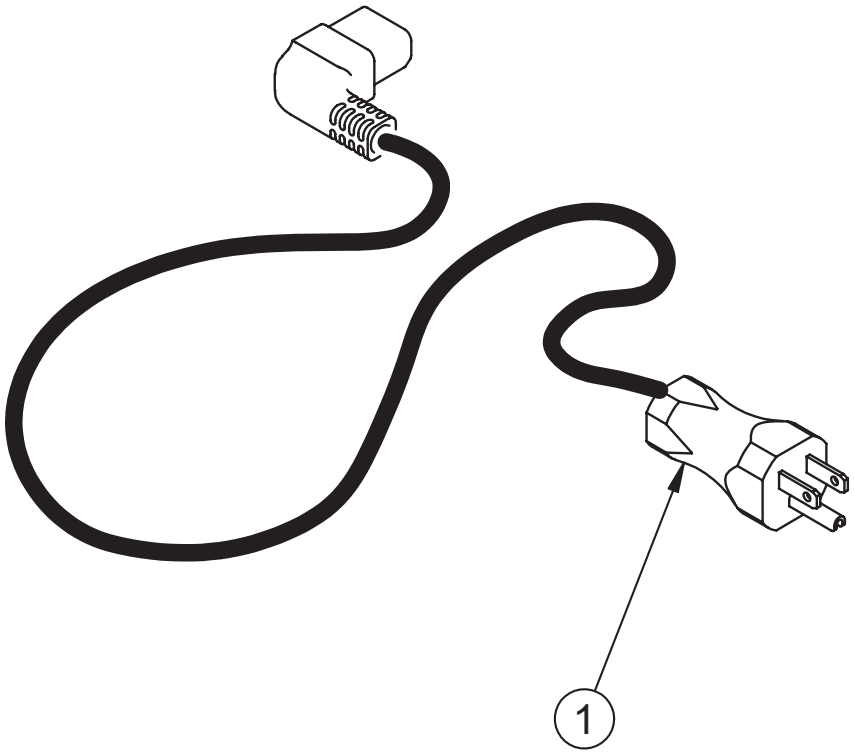
120V Straight Plug

For Reference Only: Part Number OL250053



Optional 120V Straight Cable - Common Components - OL250053 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF8066	North American Straight Plug	1

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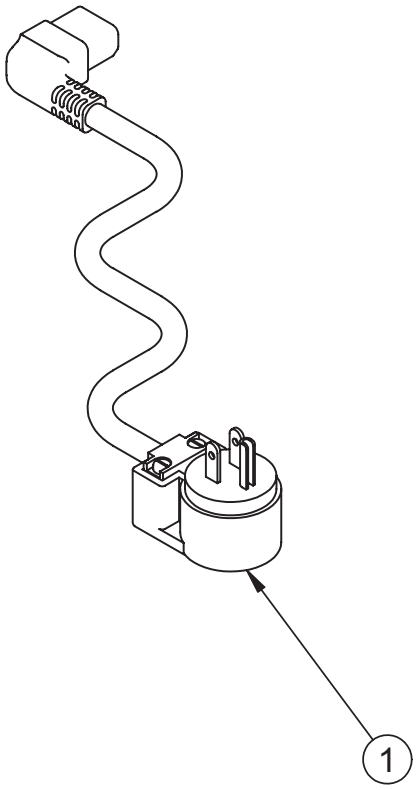
Optional 120V 90 Degree Plug

For Reference Only: Part Number OL250055



Optional 120V 90 Degree Cable - Common Components - OL250055 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF8066-90D	North American 90 Degree Plug	1

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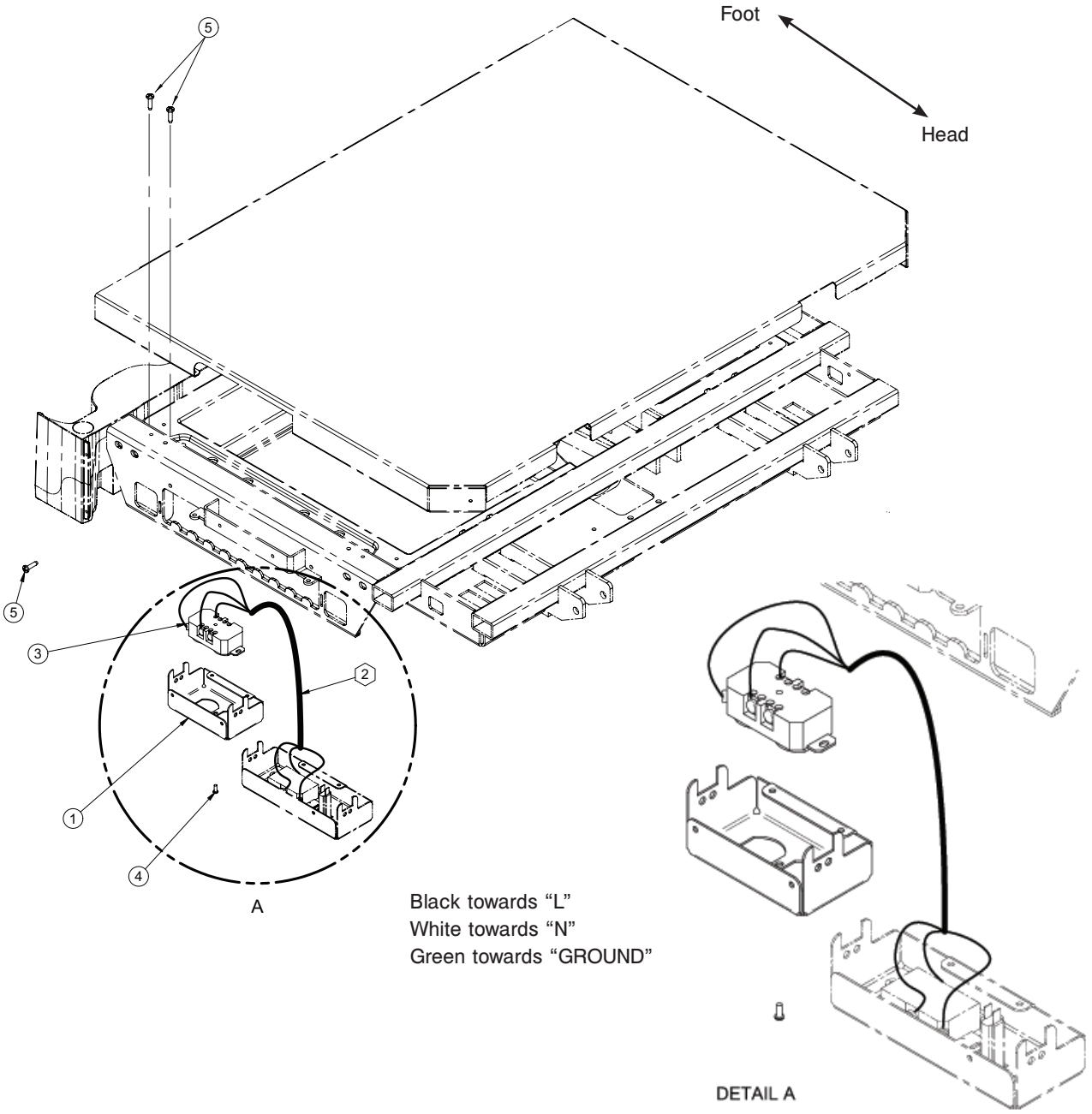
Notes

Litter Assembly, Optional Dual 120V Outlet

For Reference Only: Part Number OL270013



QDF27-1996 CABLE CONNECTION TABLE			
Cable No	**Connector No.**	**Cable No**	**Connector No.**
QDF27-1996	Bare (Black)	QDF9573	“L”
QDF27-1996	Bare (White)	QDF9573	“N”
QDF27-1996	Bare (Green)	QDF9573	“GROUND”
QDF27-1996	Bare (Black)	QDF8024	“L”
QDF27-1996	Bare (White)	QDF8024	“N”
QDF27-1996	Bare (Green)	QDF8024	“GROUND”

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Litter Assembly, Optional Dual 120V Outlet

Litter Assembly, Optional 120V Outlet - Common Components - 270013 (Reference Only)

Item	Part No.	Part Name	Qty.
1	27-1978W	Optional Auxiliary Outlet Box	1
2	QDF27-1996	Auxiliary Outlet Cable	1
3	QDF8024	Leviton 8200-w Double Outlet	1
4	VV37A1C12	Truss Head Machine Screw, #6-32 x 3/8”	1
5	VV83A9G24	Tapping Screw, #10 x 3/4”	3

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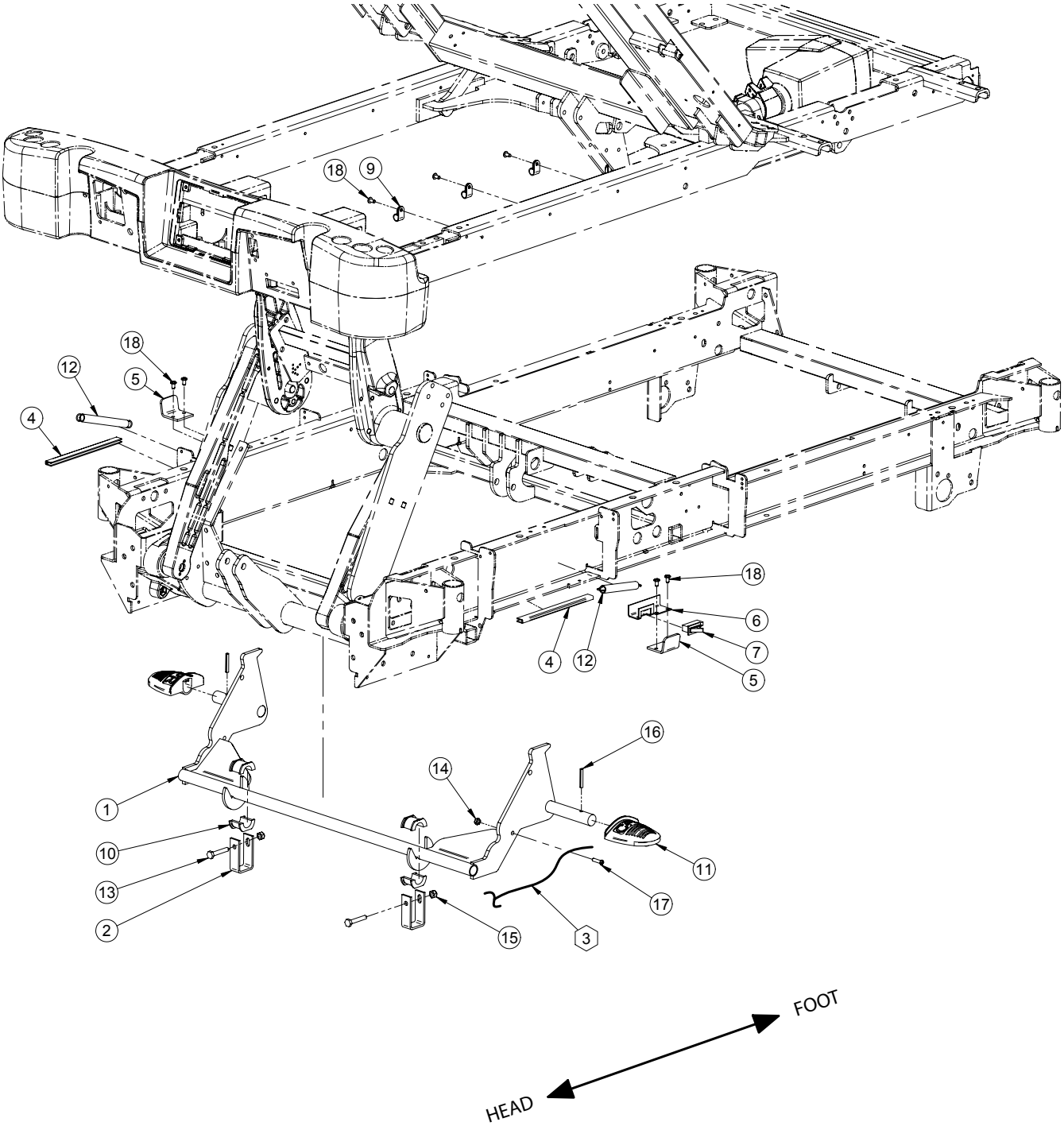
CPR Assembly, Mechanical

For Reference Only: Part Number L27-033



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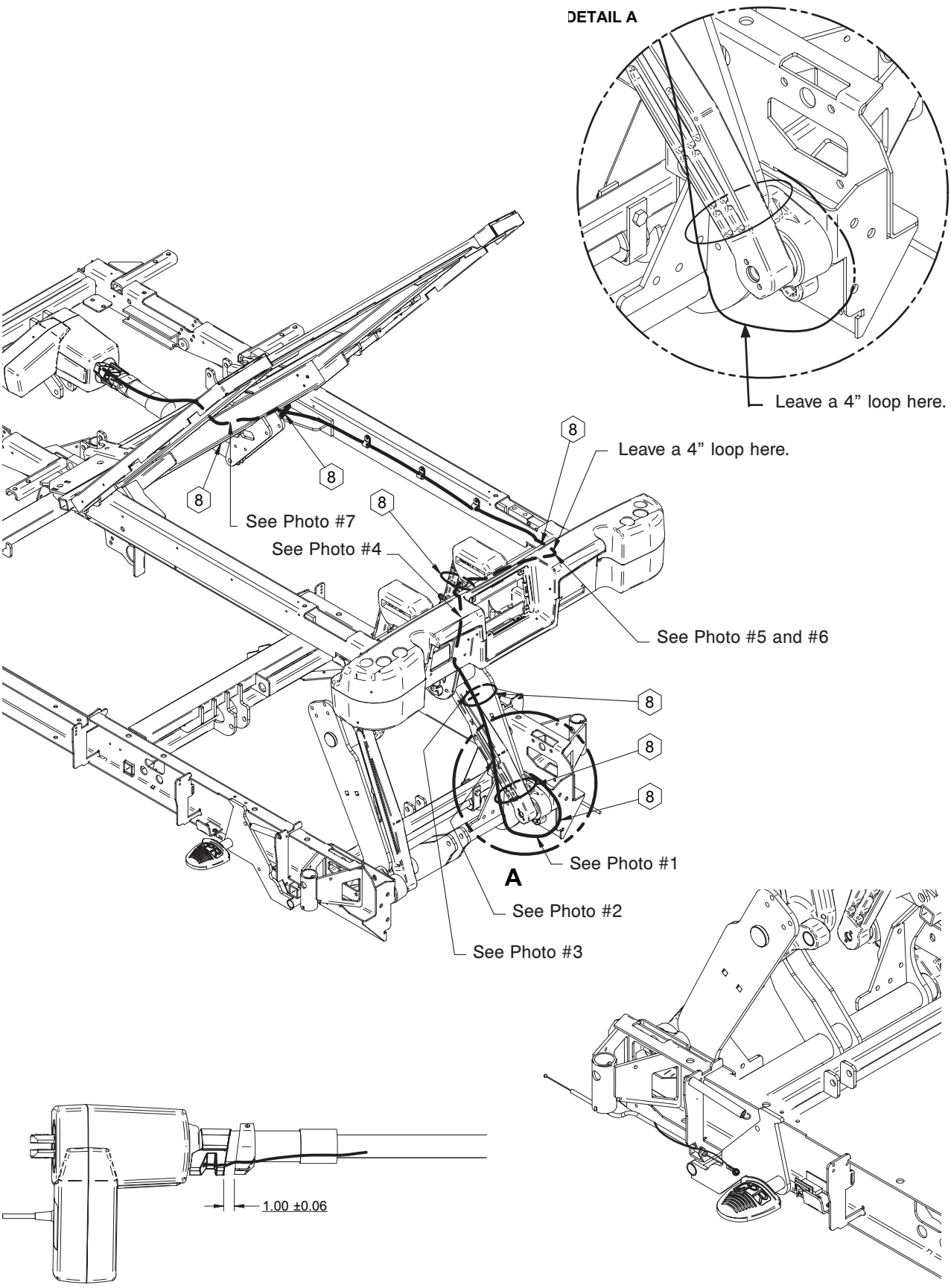

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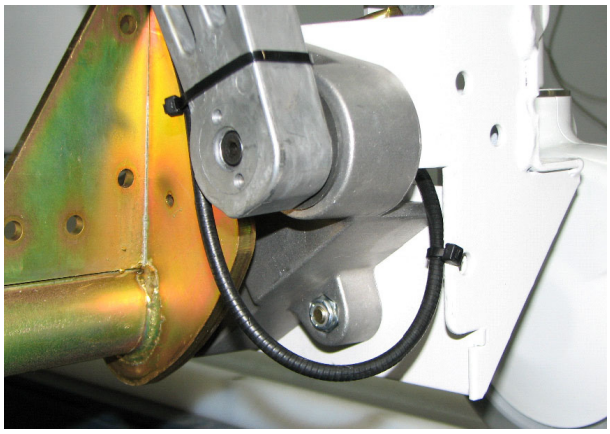

Photo #1

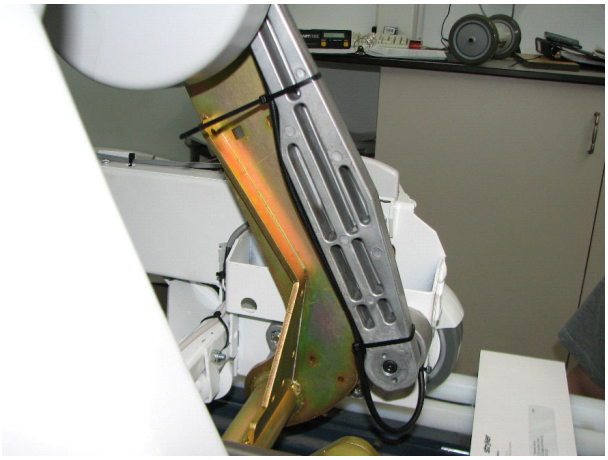

Photo #2

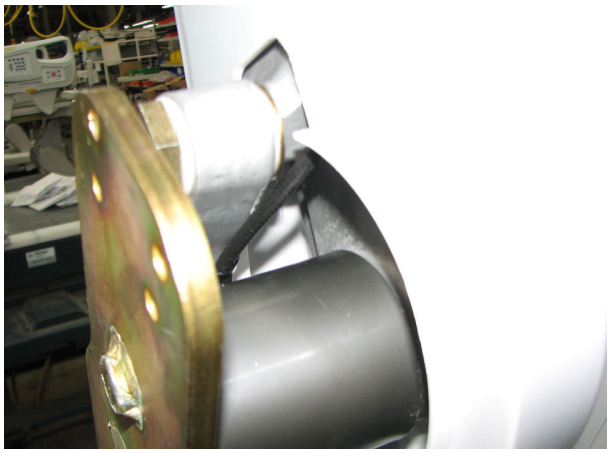

Photo #3

Photo #4

Photo #5

Photo #6

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CPR Assembly, Mechanical

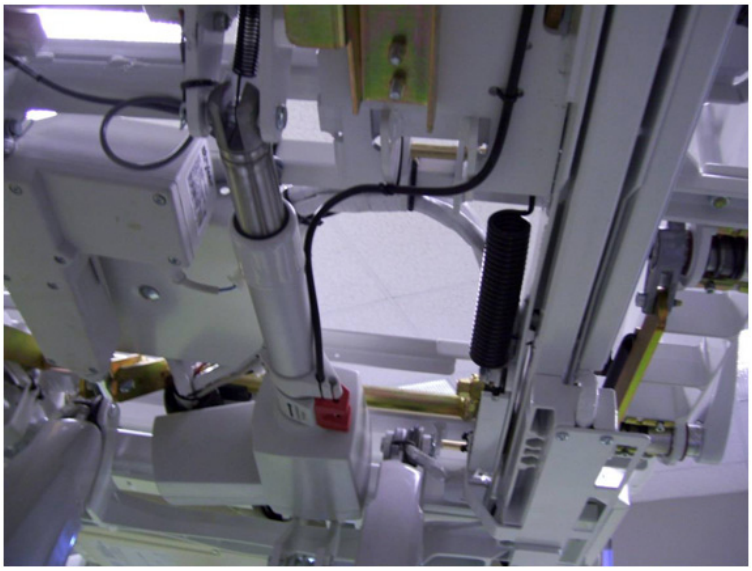

Photo #7

CABLE CONNECTION TABLE			
Cable No.	**Connector No.**	**Cable No.**	**Connector No.**
QDF2083	CPR Switch	QDF27-1204	J127

CPR Assembly, Mechanical - Common Components - L27-033 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-1897W	CPR Pedal	1
2	27-1917Z	CPR Support	2
3	QDF27-1966	CPR Cable	1
4	27-2036	CPR Lateral Stop	2
5	27-2062W	CPR Pedal Stopper	2
6	27-2086Z	CPR Switch Support	1
7	QDF2083	Lever Switch	1
8	QDF9518	Cable Tie	7
9	QDF9520	Cable Tie Diameter 3/8”	3
10	QP19-0270	Shaft Support Bearing	4
11	QP27-2065	CPR Pedal	2
12	QRE23-0438	Siderail Spring	3
13	VB15A1N40	Bolt 1/4”-20 x 1-1/2”	2
14	VE30A0G	Nylon Locknut, #10-32	1
15	VE30A1N	Nylon Locknut, 1/4”-20	2
16	VG10B0642	Spring Pin 3/16” x 1-5/8”	2
17	VV33A0G24	Pan Head Machine Screw, 10-32 x 3/4”	1
18	VV83A9G16	Pan Head Tapping Screw, 10 x 3/8”	7

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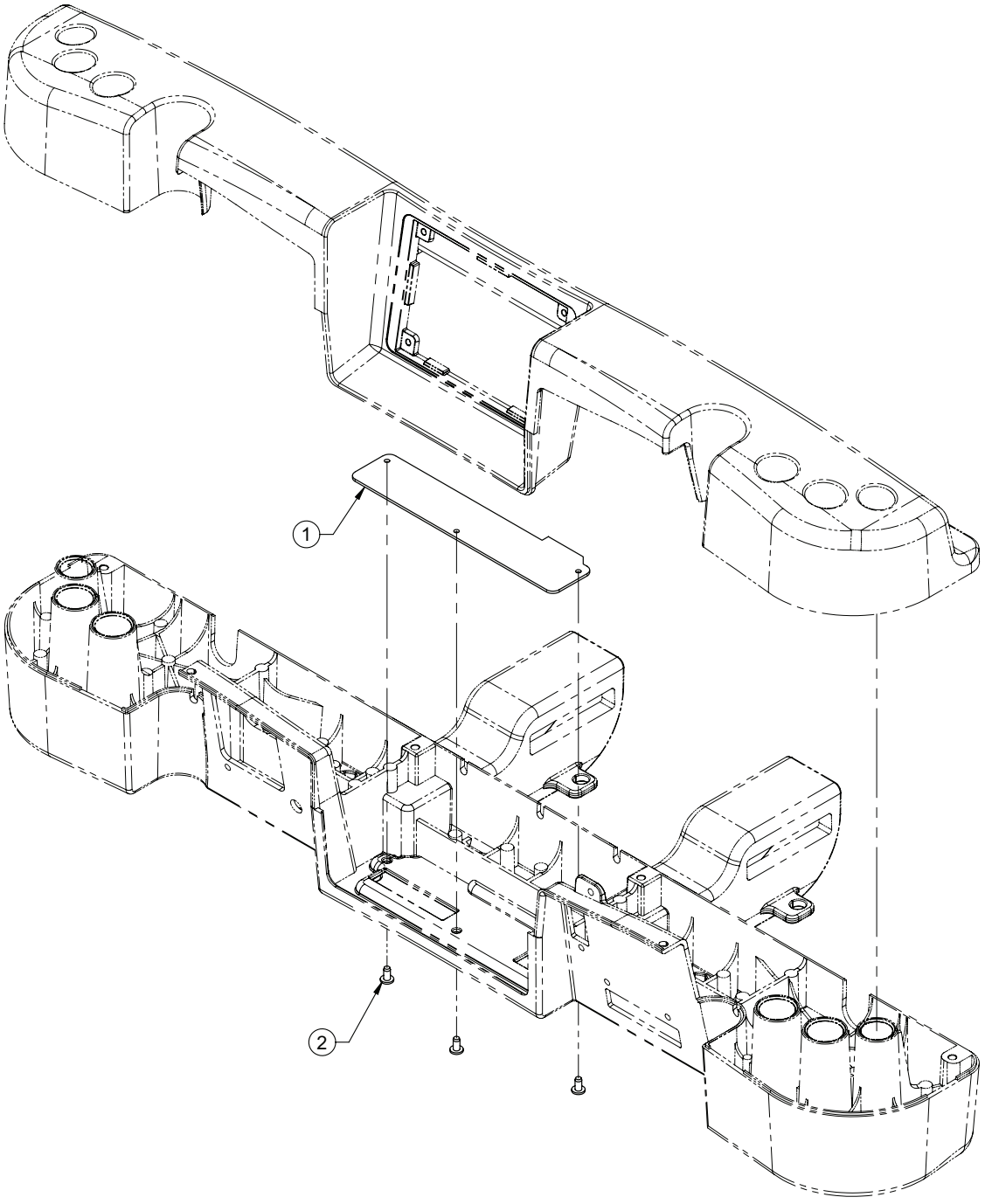
Handle Assembly (Model 2130 Only)

For Reference Only: Part Number OL270058



Non-ZOOM® Handle Assembly - Common Components - OL270058 (Reference Only)

Item	Part No.	Part Name	Qty.
1	27-1651W	Plate - without Motorized ZOOM® Drive Connector	1
2	VV83A9G12	Tapping Screw, 10 x 3/8”	3

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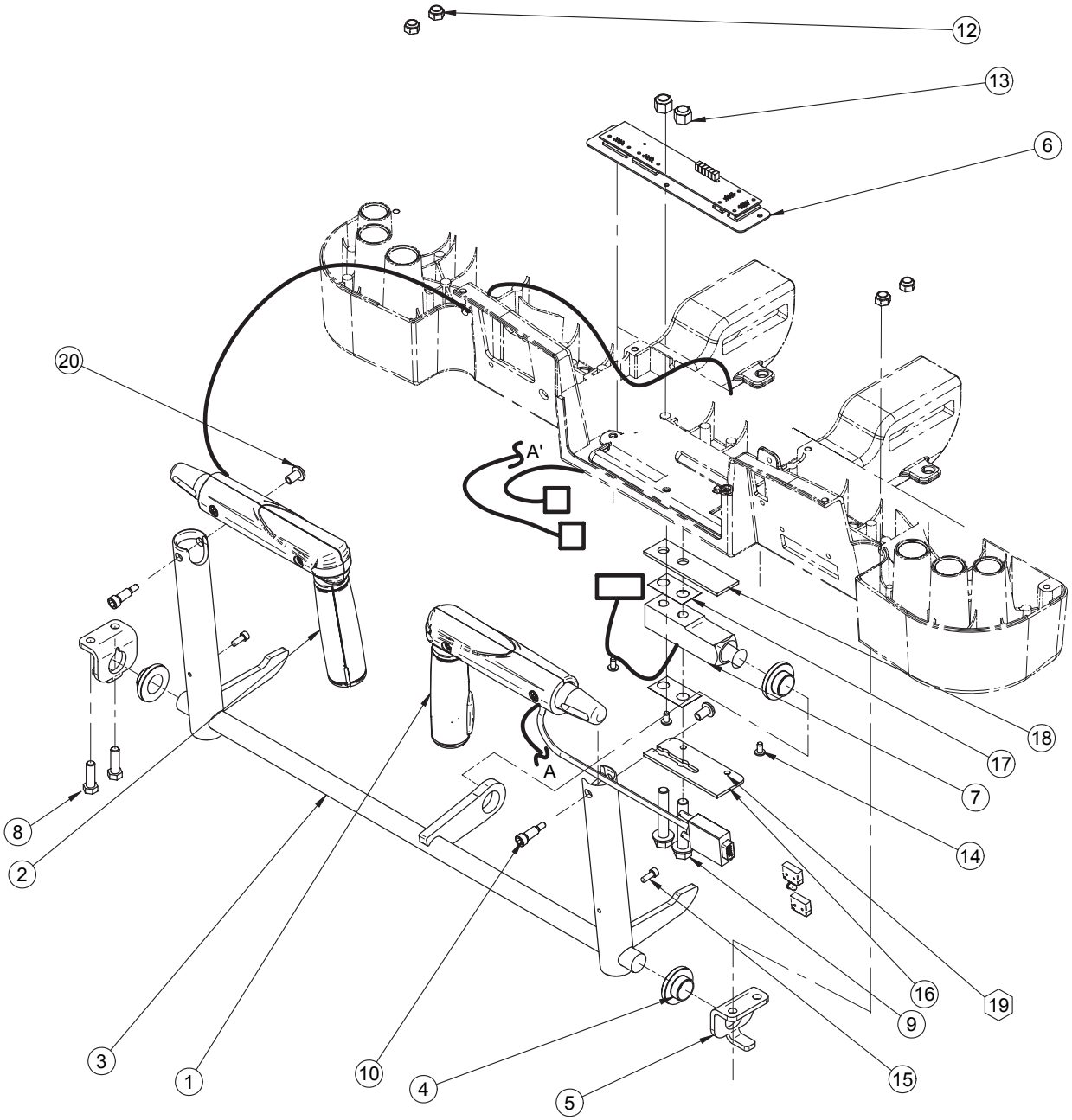
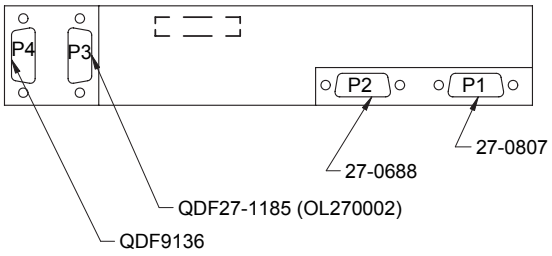
Handle Assembly (ZOOM® Model 2140 Only)

For Reference Only: Part Number 27-0900



Board CSI 1157 Connection



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Handle Assembly (ZOOM® Model 2140 Only)

ZOOM® Handle Assembly - Common Components - 27-0900 (Reference Only)

Item	Part No.	Part Name	Qty.
1	27-0688	Right ZOOM® Handle	1
2	27-0807	Left ZOOM® Handle	1
3	27-0880C	Tie Bus	1
4	27-1181	ZOOM® Handle Bushing	3
5	27-1357Z	ZOOM® Handle Bushing	2
6	27-1371	Board CSI 1157	1
7	QDF9136	250 lbs Load Cell	1
8	VB15A1O32	Bolt 5/16”-18 x 1”	4
9	VB95A1P48	Hexagone Neck Bolt 3/8-16 x 2”	2
10	VD60B1N1014	Shoulder Screw 5/16” x 5/8” x 1/4-20	2
12	VE30A1O	Nylon Locknut 5/16”-18	4
13	VE30A1P	Nylon Locknut 3/8-16	2
14	VV83A9G12	Phillips Head Tapping Screw, #10 x 3/8”	3
15	VV10A0G16-S	Hex Head Screw, #10-32 X 1/2”	2
16	27-1857Z	Bottom ZOOM® Load Cell Stopper	1
17	27-1780	Load Cell Spacer	2
18	27-1775Z	ZOOM® Load Cell Stopper	1

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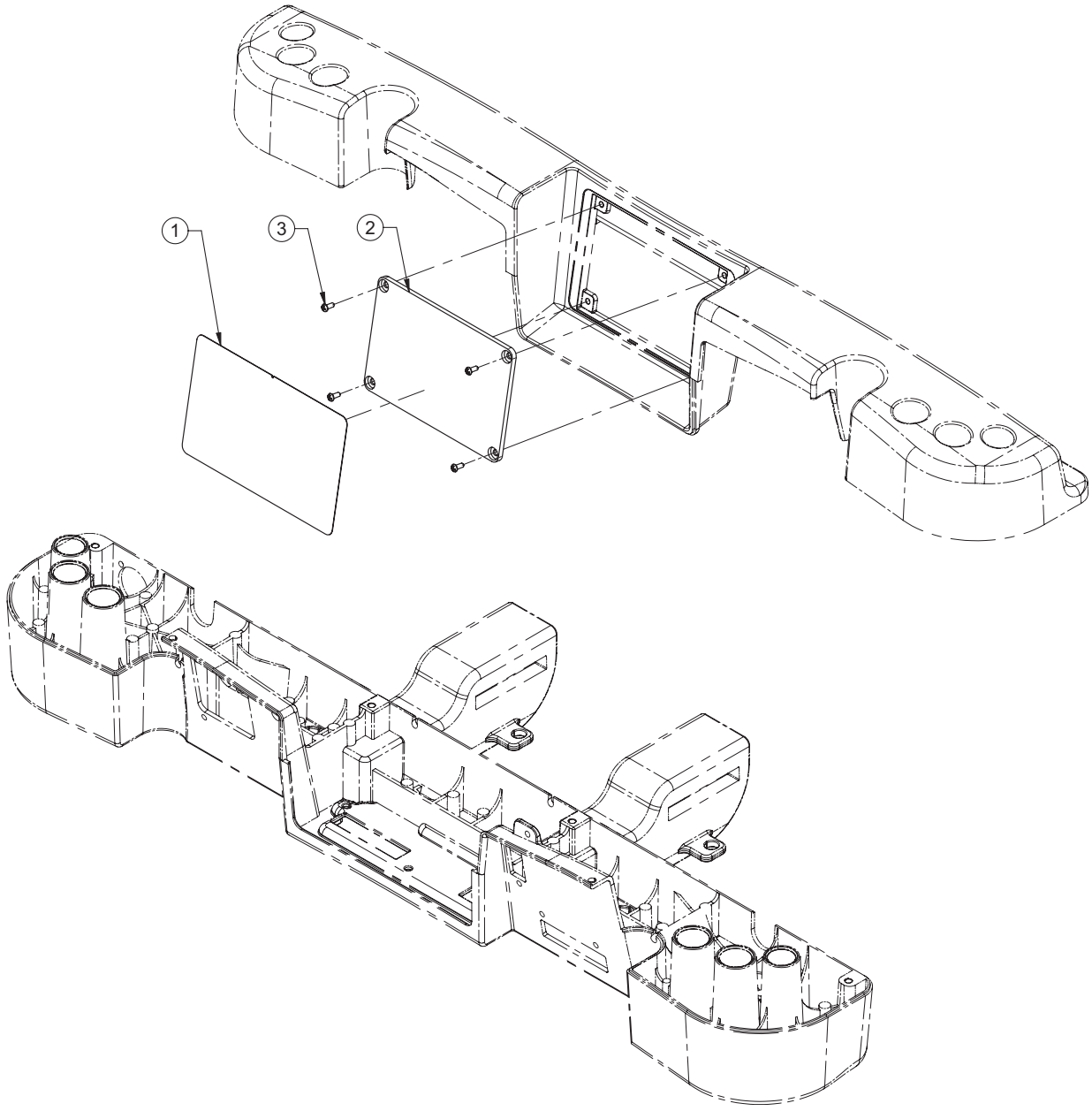
Optional No Head End Control Panel

For Reference Only: Part Number OL270019



Optional No Head End Control Panel Assembly - Common Components - OL270019 (reference only)

Item	Part No.	Part Name	Qty.
1	QDF27-1649	Head End Control Fascia without motorized ZOOM® Drive	1
2	QP27-1650	Head Frame Plate	1
3	VV23A9C12HL	Pan Head Screw #6 x 3/8”	4

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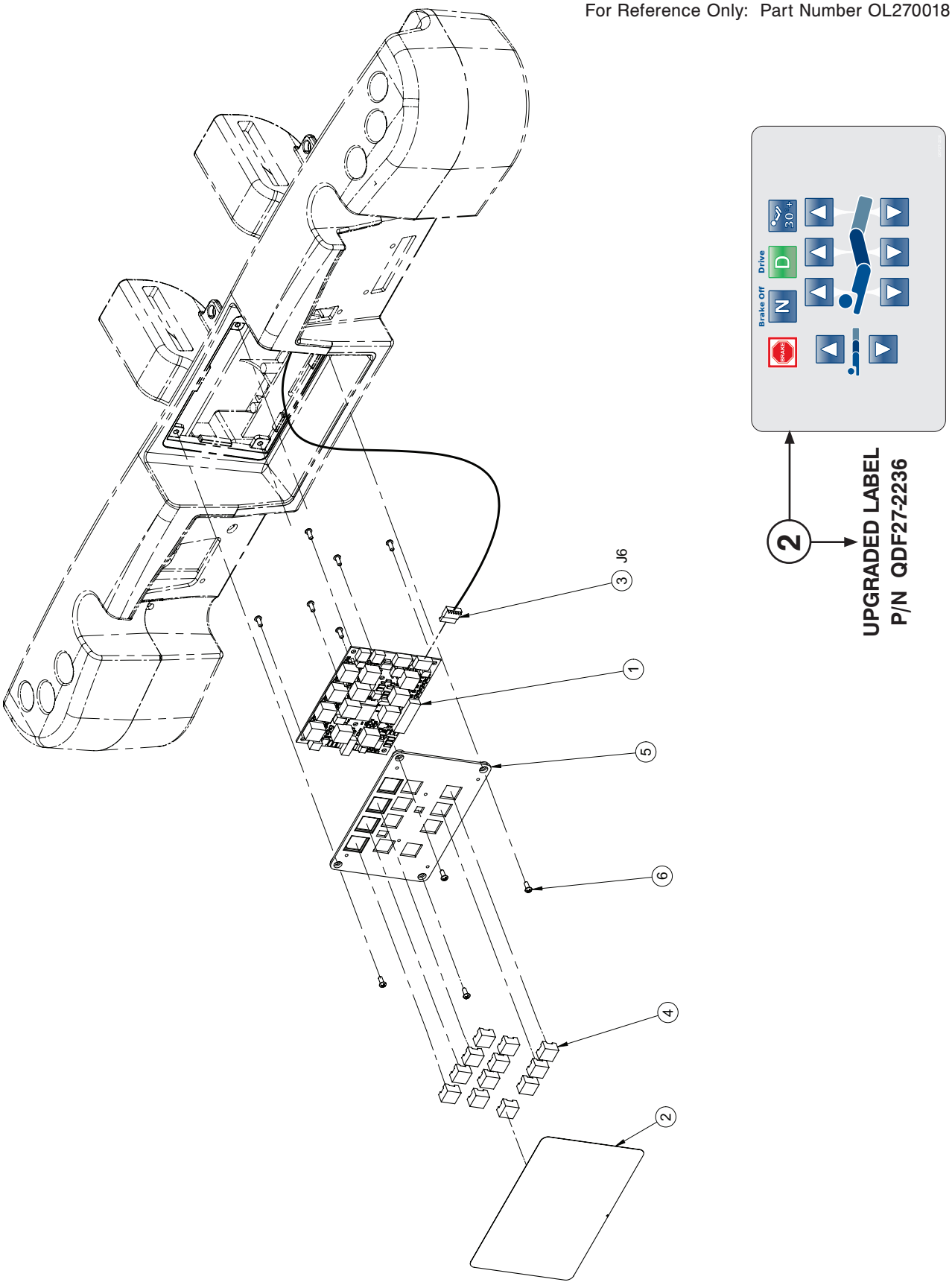
Notes

Optional Head End Control Panel Assembly

For Reference Only: Part Number OL270018



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Optional Head End Control Panel Assembly

QDF21-2895 CONNECTION TABLE		
Connector No.	**Cable No**	**Connector No.**
MTA6	QDF27-1099	J6 (27-1098)
MTA6	QDF21-1180	J1 (L27-014)

DIP SWITCH CONFIGURATION ON QDF27-1099			
SW13	ON	OFF	ON
SW14	ON	ON	-

Optional Head End Control Panel Assembly - Common Components - OL270018 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF27-1099	Siderail Nurse Control Board	1
2	QDF27-1201	Fascia Control Head of Bed	1
	QDF27-2236	***UPGRADED LABEL***	1
3	QDF27-2895	Network Cable	1
4	QDF9183	Electronic Board Button	12
5	QP27-1111	Nurse Control Board Support	1
6	VV23A9C12HL	Pan Head Screw #6 x 3/8	10

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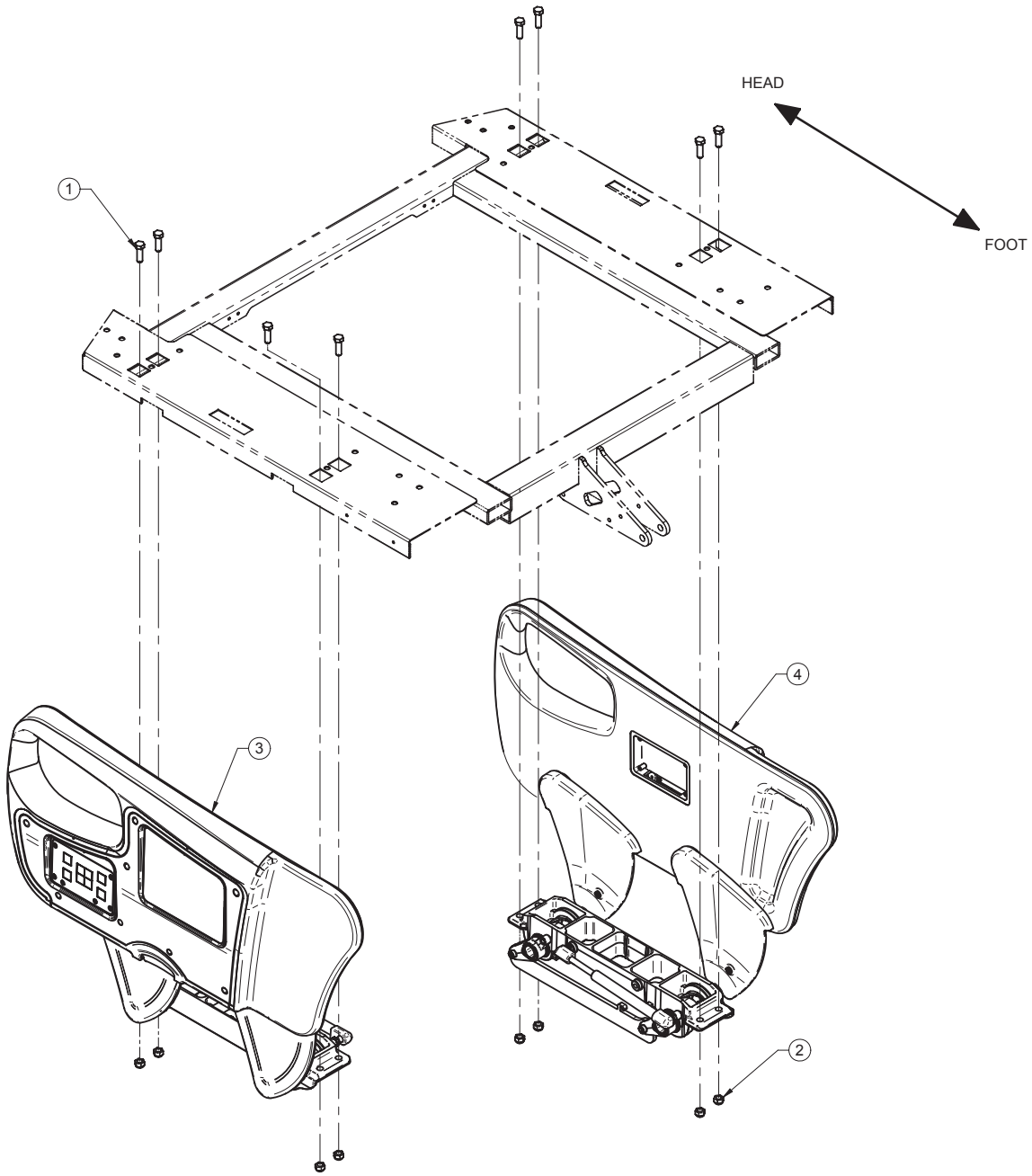
Head End Siderail Mounting Assembly

For Reference Only: Part Number L27-022



Head End Siderail Mounting Assembly - Common Components - L27-022 (Reference Only)

Item	Part No.	Part Name	Qty.
1	VB18A1O32	Bolt 5/16-18 x 1” LG	8
2	VE30A1O	Nylon Locknut 5/16-18	8
3	27-0387	Right Head Siderail (pg. 146)	1
4	27-0388	Left Head Siderail (pg. 150)	1

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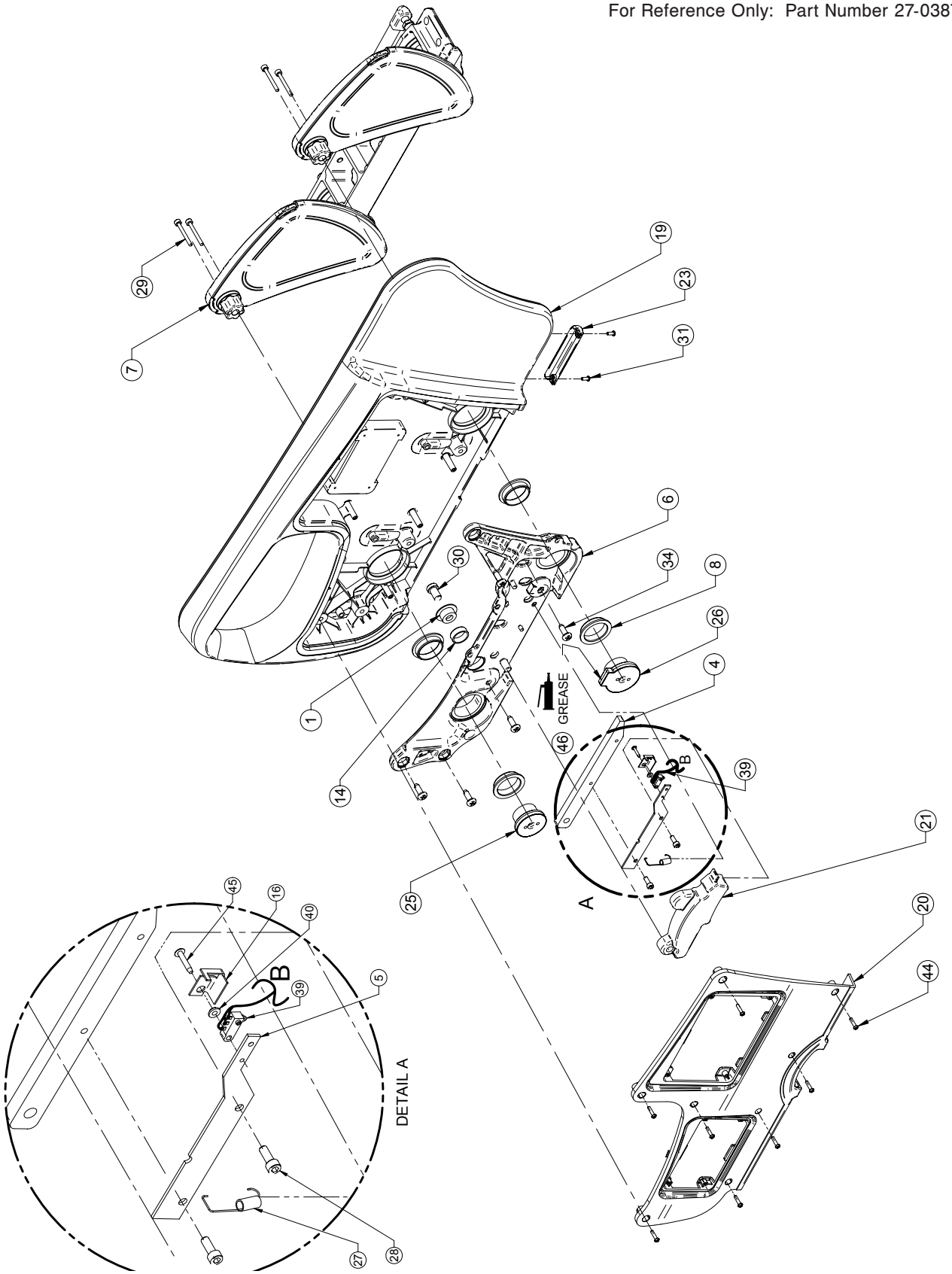
Standard Siderail Assembly, Head End, Right

For Reference Only: Part Number 27-0387



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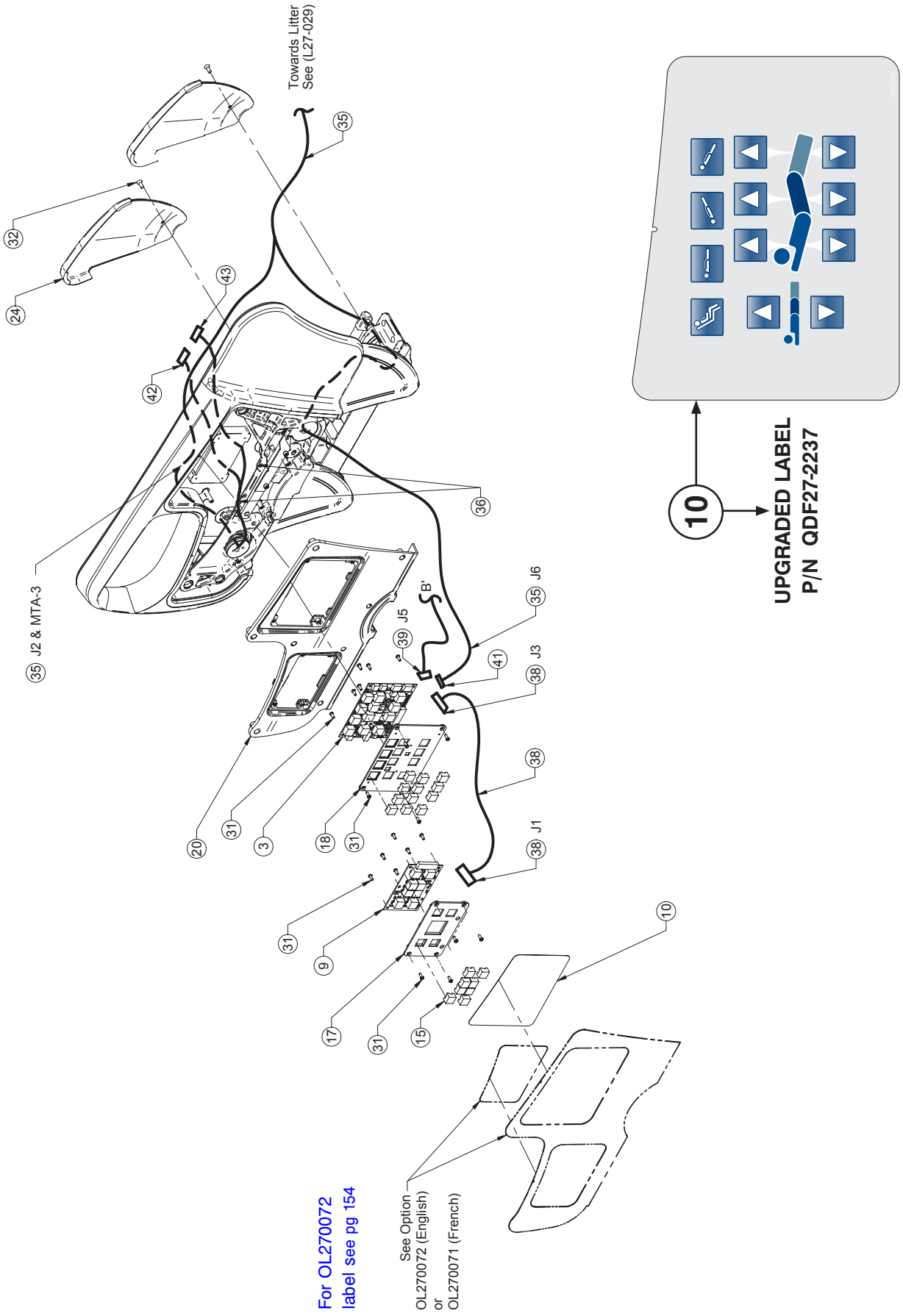
Standard Siderail Assembly, Head End, Right



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Standard Siderail Assembly, Head End, Right

POSITION ON CONNECTOR					
Cable 35	Position on Connector 41	Position on Connector 43	Position on Connector 42	Signal	Color
1	1	-	-	“CAN H”	Black/Red
2	2	-	-	“CAN L”	Red
3	3	-	-	+12V	Black/White
4	4	-	-	“GND”	White
5	5	-	-	“SAFE”	Black/Green
6	6	-	-	+24V	Green
-	-	-	-	AUDIOSHIELD	-
1	-	1	-	“SPK HIGH”	Black
2	-	2	-	SPK COM”	White
1	-	-	1	N.O.	Red
2	-	-	2	COM	Green
3	-	-	3	N.C.	Brown

DIPSWITCH SETUP ON QDF27-1099			
SW13	ON	ON	ON
SW14	ON	ON	-

CABLES CONNECTION TABLE			
Cable No.	Connector No.	Cable No.	Connector No.
QDF27-1681	MTA - 3 Positions	QDF27-1521	MTA - 4 Positions
QDF27-1156	MTA - 6 Positions	QDF27-1099	J3
QDF27-1156	MTA - 6 Positions	QDF27-1097	J1
QDF27-1784	MTA - 3 Positions	QDF27-1206	MTA - 2 Positions
QDF27-1206	Mate N Lock 12 Positions	QDF27-1481	J102 (L27-029)
QDF27-1206	MTA - 6 Positions	QDF27-1099	J6
QDF27-1206	MTA - 3 Positions	QDF27-1429	J2
QDF27-1206	MTA - 2 Positions	See OL270051 and OL270052	
QDF27-1521	MTA - 4 Positions	See OL270051 and OL270052	

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Standard Siderail Assembly, Head End, Right

Standard SIderail Assembly, Head End, Right - Common Components - 27-0387 (Reference only)

Item	Part No.	Part Name	Qty.
1	QPA28-0493	Siderail Sleeve	1
3	QDF27-1099	Siderail Nurse Control Board	1
4	QDB27-1141Z	Siderail Lock	1
5	27-1142Z	Siderail Switch Support	1
6	27-1269	Right Head Siderail Structure	1
7	27-2061	Inverted Siderail Mechanics S.A.	1
8	QDF2049	Spacer ID 1.25 OD 1.406 WI 3/8	4
9	QDF27-1097	Brake Control Board	1
10	QDF27-1316	Right Head Nurse Control Fascia	1
	QDF27-2237	***UPGRADED LABEL***	1
14	28-0491	Machining Spacer QDF9191	1
15	QDF9183	Electronic Board Button	20
16	27-1739Z	Siderail Plate 2	1
17	QP27-1109	Brake Board Support	1
18	QP27-1111	Nurse Control Board Support	1
19	QP27-1261	Right Head Siderail	1
20	QP27-1265	Right Head Siderail Cover	1
21	QP27-1273	Right Siderail Handle	1
23	QP27-1496	Head Siderail Cap	1
24	QP28-0040	Inverted Siderail Arm Cover	2
25	QPA28-0015	Siderail Sleeve	1
26	QPA28-0016	Sleeve with Lock	1
27	QRE27-1736	Spring Balance	1
28	VV10A0G16-S	Hexagon Socket Hd. Screw, #10-32 x 1/2”	2
29	VV10A0G40-S	Hexagon Socket Hd. Screw, #10-32 x 1-1-2”	4
30	VV10A1P20-S	Hexagon Socket Hd. Screw 3/8-16 x 5/8”	1
31	VV23A9C12HL	Pan Hd. Screw Type Hi-Lo #6 x 3/8	22
32	VV31A0G16	Flat Hd. Machine Screw #10 x 1/2”	2
34	VVB3A9N24PF	Bosscrew Screw 1/4” x 3/4”	5
35*	QDF27-1206	Head Siderail Wire	1
36*	QDF9518	Cable Tie	1
38*	QDF27-1156	Brake Board Cable	1
39*	QDF27-1521	Siderail Limit Switch	1
40	27-1839	Side Ring	1
41*	QDF2088	Polarized 6-Position Connector	1
42*	QDF9028	3-Position Connector	1
43*	QDF2087	2-Position Connector	1
44	VV23A9C20HL	Truss Head Tapping Screw #6 x 5/8	8
45	VV87A9A20	Truss Head Tapping Screw #4 x 5/8”	1
46*	M0019	OG2 Grade Grease	1

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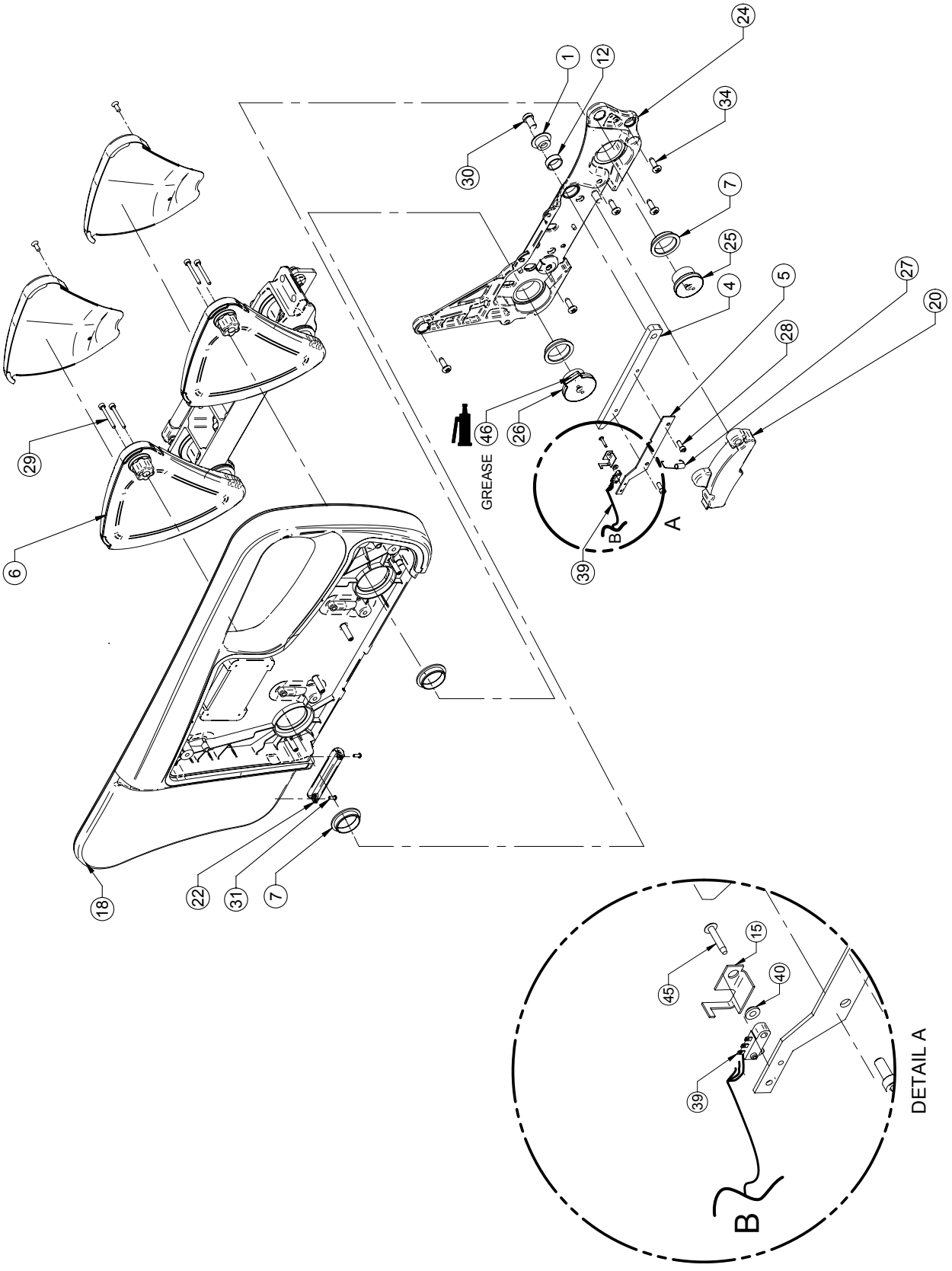
Standard Siderail Assembly, Head End, Left

For Reference Only: Part Number 27-0388



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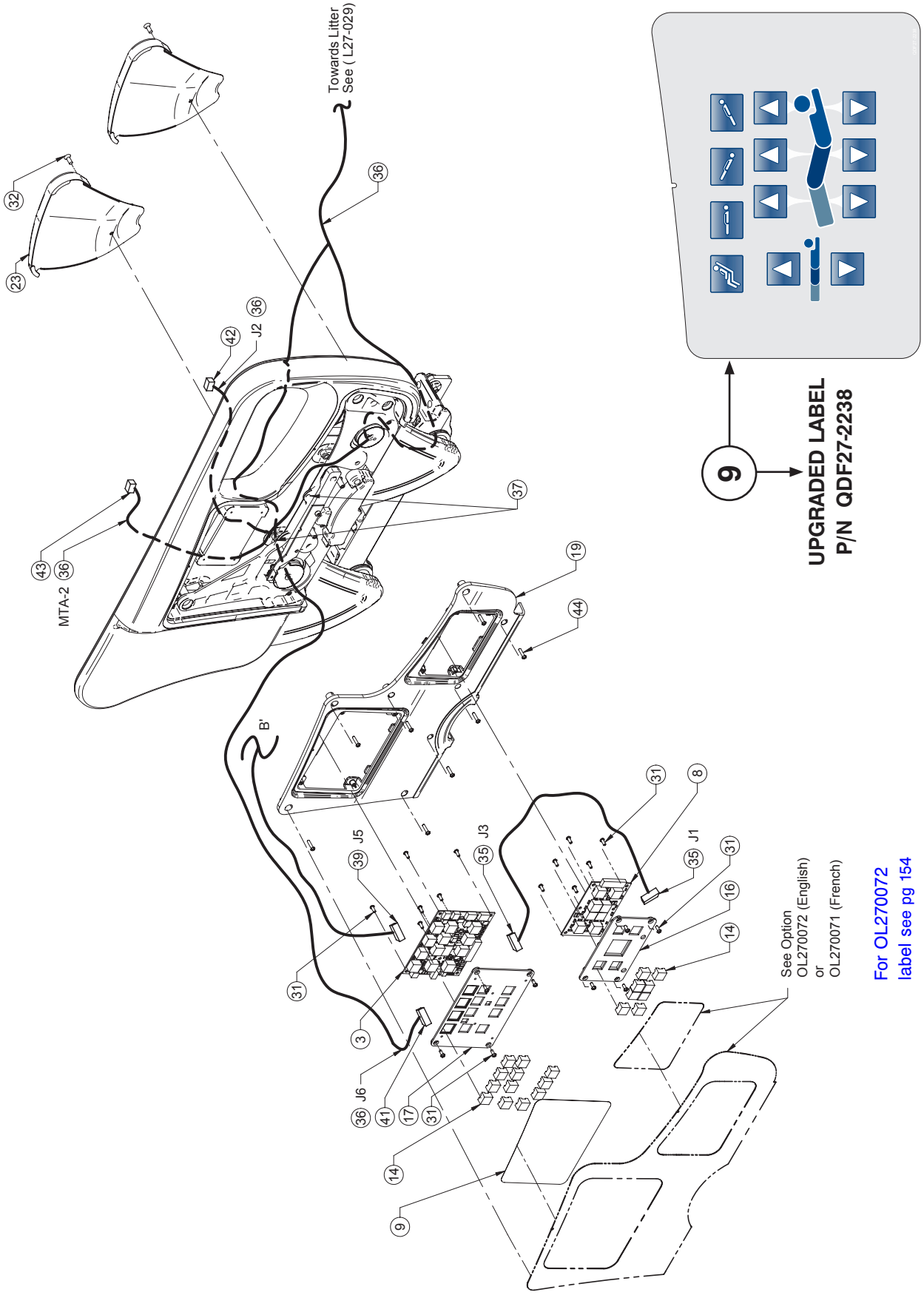
Standard Siderail Assembly, Head End, Left



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Standard Siderail Assembly, Head End, Left

POSITION ON CONNECTOR					
Cable 36	Position on Connector 41	Position on Connector 43	Position on Connector 42	Signal	Color
1	1	-	-	“CAN H”	Black
2	2	-	-	“CAN L”	Red
3	3	-	-	+12V	Black
4	4	-	-	“GND”	White
5	5	-	-	“SAFE”	Black
6	6	-	-	+24V	Green
-	-	-	-	AUDIOSHIELD	-
1	-	1	-	“SPK HIGH”	Black
2	-	2	-	SPK COM”	White
1	-	-	1	N.O.	Red
2	-	-	2	COM	Green
3	-	-	3	N.C.	Brown

DIPSWITCH SETUP ON QDF27-1099			
SW13	OFF	ON	ON
SW14	OFF	OFF	-

CABLES CONNECTION TABLE			
Cable No.	Connector No.	Cable No.	Connector No.
QDF27-1681	MTA - 3 Positions	QDF27-1099	J5
QDF27-1156	MTA - 6 Positions	QDF27-1099	J3
QDF27-1156	MTA - 6 Positions	QDF27-1097	J1
QDF27-1784	MTA - 3 Positions	QDF27-1206	MTA - 2 Positions
QDF27-1206	Mate N Lock 12 Positions	QDF27-1481	J105 (L27-029)
QDF27-1206	MTA - 6 Positions	QDF27-1099	J6
QDF27-1206	MTA - 3 Positions	See OL270051 and OL270052	
QDF27-1206	MTA - 2 Positions	See OL270051 and OL270052	

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Standard Siderail Assembly, Head End, Left

Standard SIderail Assembly, Head End, Left - Common Components - 27-0388 (Reference only)

Item	Part No.	Part Name	Qty.
1	QPA28-0493	Siderail Sleeve	1
3	QDF27-1099	Siderail Nurse Control Board	1
4	QDB27-1141Z	Siderail Lock	1
5	27-1142Z	Siderail Switch Support	1
6	27-2060	Siderail Mechanics S.A.	1
7	QDF2049	Spacer ID 1.25 OD 1.406 WI 3/8	4
8	QDF27-1097	Brake Control Board	1
9	QDF27-1317	Left Head Nurse Control Fascia	1
	QDF27-2238	***UPGRADED LABEL***	1
12	28-0491	Machining Spacer QDF9191	1
14	QDF9183	Electronic Board Button	20
15	27-1740Z	Siderail Plate 1	1
16	QP27-1109	Brake Board Support	1
17	QP27-1111	Nurse Control Board Support	1
18	QP27-1262	Left Head Siderail	1
19	QP27-1266	Left Head Siderail Cover	1
20	QP27-1274	Left Siderail Handle	1
22	QP27-1496	Head Siderail Cap	1
23	QP28-0039	Siderail Rotation Lever Cover	2
24	QPA27-1270	Left Head Siderail Structure	1
25	QPA28-0015	Siderail Sleeve	1
26	QPA28-0016	Sleeve with Lock	1
27	QRE27-1736	Spring Balance	1
28	VV10A0G16-S	Hexagon Socket Hd. Screw, #10-32 x 1/2”	2
29	VV10A0G40-S	Hexagon Socket Hd. Screw,#10-32 x 1-1-2”	4
30	VV10A1P20-S	Hexagon Socket Hd. Screw 3/8-16 x 5/8”	1
31	VV23A9C12HL	Pan Hd. Screw Type Hi-Lo #6 x 3/8	22
32	VV31A0G16	Flat Hd. Machine Screw #10 x 1/2”	2
34	VVB3A9N24PF	Bosscrew Screw 1/4” x 3/4”	5
35*	QDF27-1156	Brake Board Cable	1
36*	QDF27-1206	Head Siderail Wire	1
37*	QDF9518	Cable Tie	1
39*	QDF27-1521	Siderail Limit Switch S.A.	1
40	27-1839	Side Ring	1
41*	QDF2088	Polarized 6-Position Connector	1
42*	QDF9028	3-Position Connector	1
43*	QDF2087	2-Position Connector	1
44	VV23A9C20HL	Pan Head hi-Low Screw #6 x 5/8	8
45	VV87A9A20	Truss Head Tapping Screw #4 x 5/8”	1
46*	M0019	OG2 Grade Grease	1

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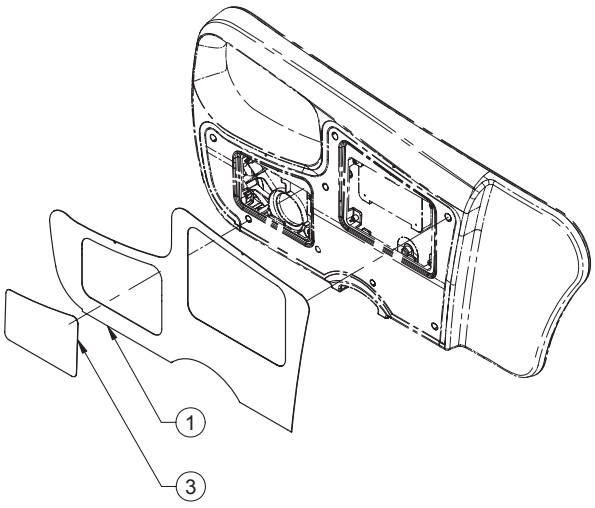
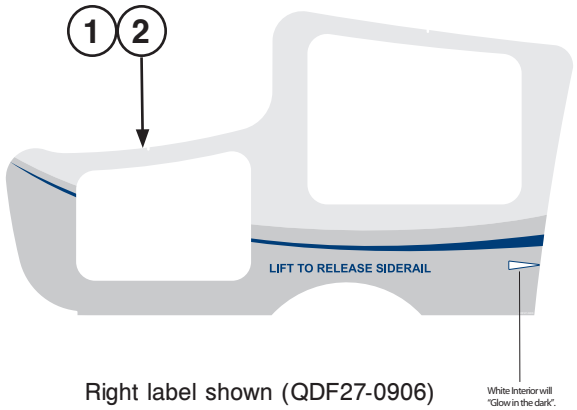
Standard Siderail Assembly, Labeling

For Reference Only: Part Number OL270072

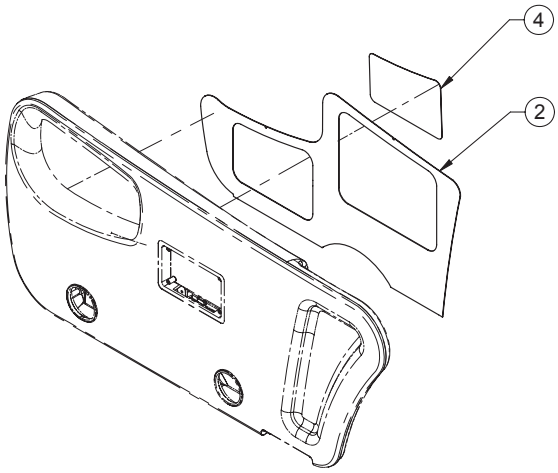
Head End Right



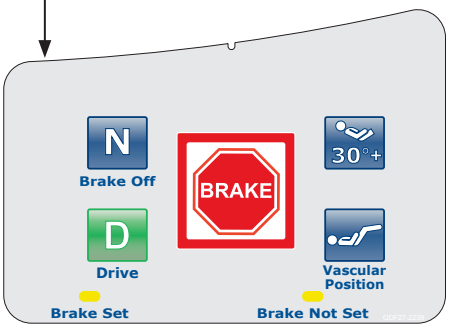


Right label shown (QDF27-0906)

Head End Left



3 → **UPGRADED LABEL**
4 **P/N QDF27-2239 (Right Label)**
P/N QDF27-2238 (Left Label)



Standard Siderail Assembly, Labeling - OL270072 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF27-0906	Nurse Control Label, HE, Right	1
2	QDF27-0907	Nurse Control Label, HE, Left	1
3	QDF27-1318	Brake Control Label, HE, Right	1
4	QDF27-1319	Brake Control Label, HE, Left	1

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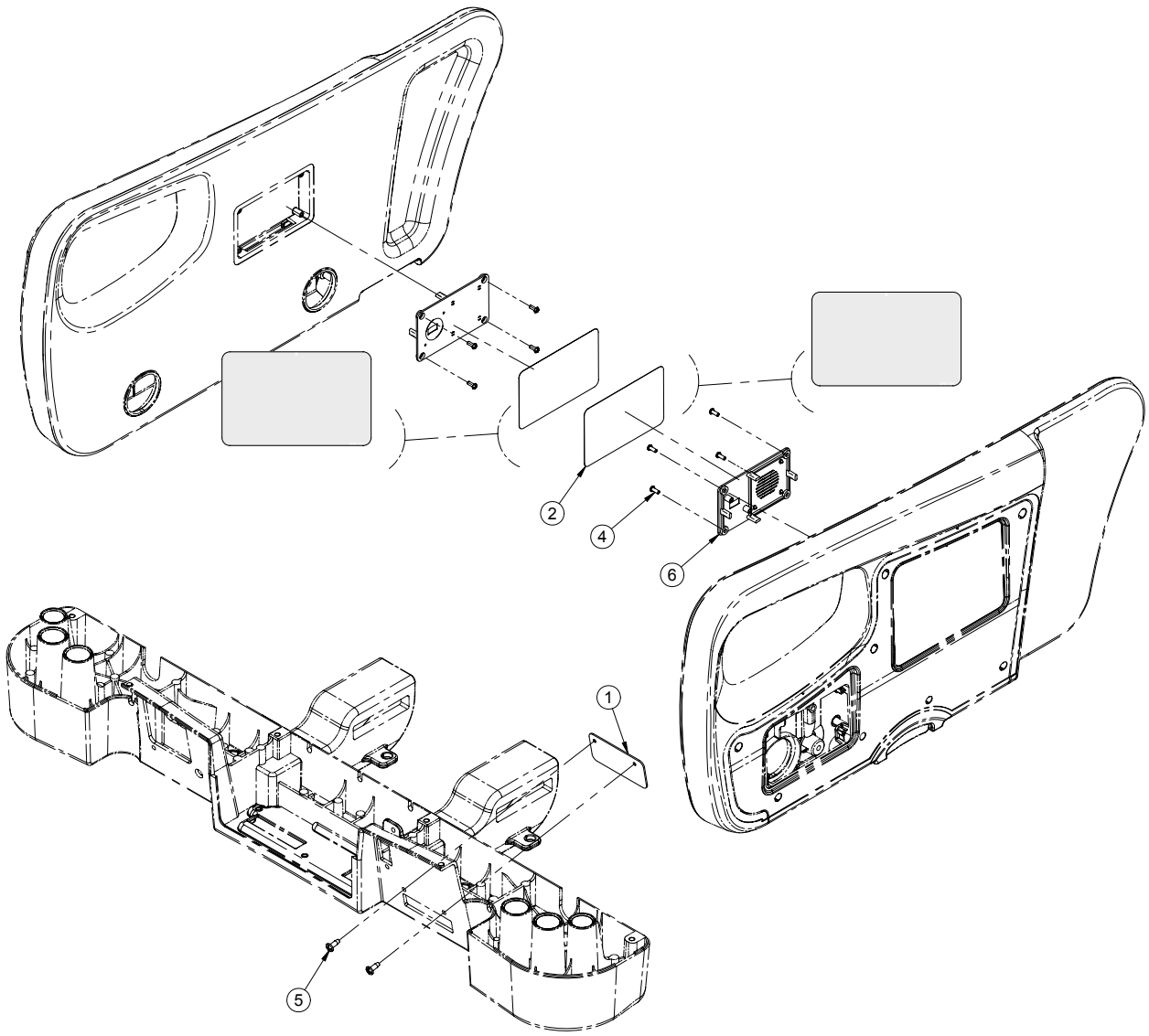
Optional Siderail Ass'y, HE, without Speaker/without NC - OL270052



Optional SIderail Assembly, HE, without Speaker/NC - OL270052 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-2137P	Plate without Nurse Call	1
2	QDF27-2033	Empty Patient Control Membrane	2
4	VV23A9C12HL	#6 x 3/8" Hi-Low Screw	8
5	VV83A9G16	#10 x 1/2" Tapping Screw	2
6	QP27-2136	Nurse Call Support	2

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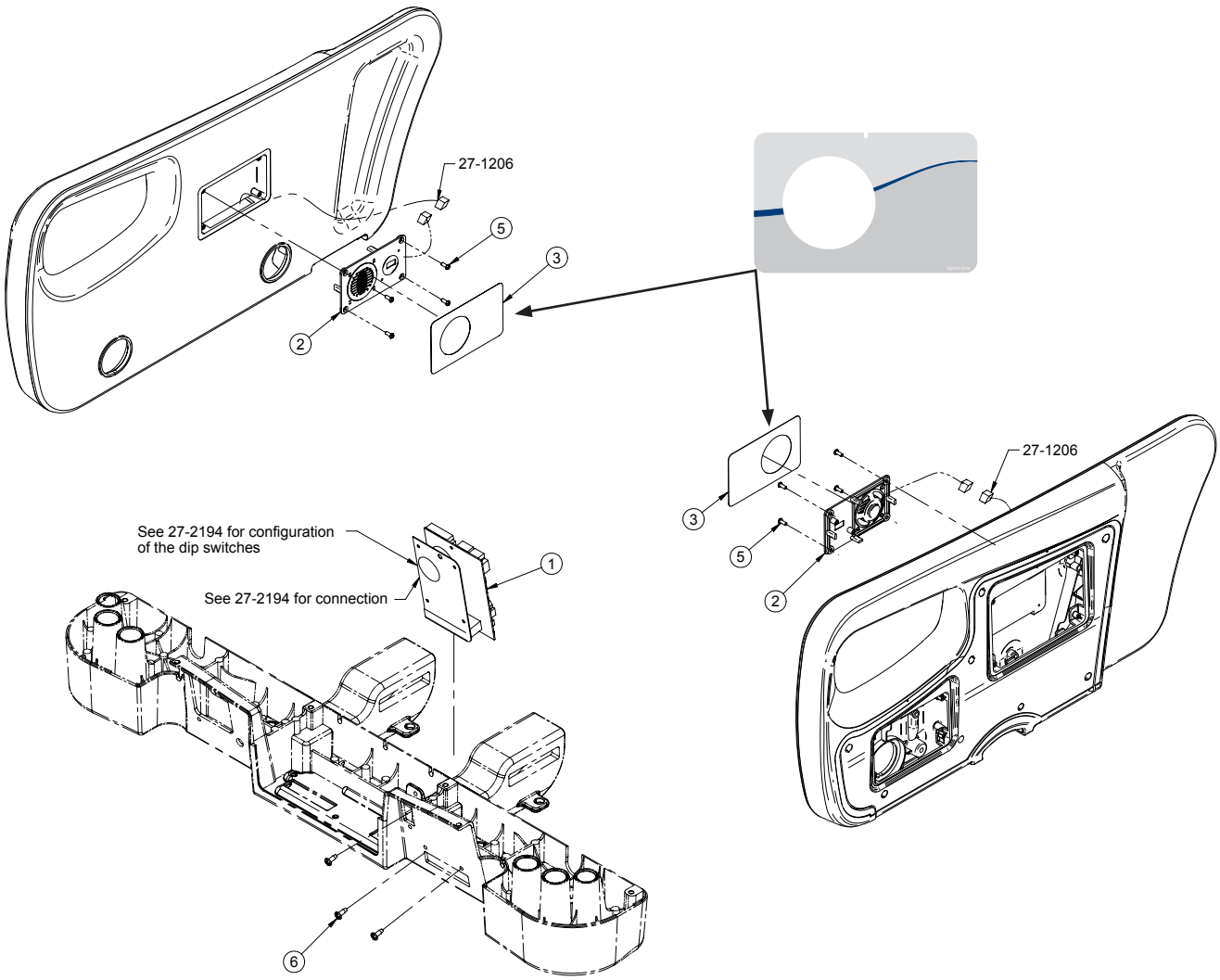
Optional Siderail Ass'y, HE, with Speaker/without NC - OL270065



Nº Cable	Nº Connector	Towards	Nº Cable	Nº Connector
QDF27-2175	MTA-2 POS	Towards	QDF27-1206	MTA-2 POS (27-0387, 27-0388)

Optional SIderail Assembly, HE, with Speaker - OL270065 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF21-1180	CAN Board - GEN III without Connector/37-Pin	1
2	QDF27-2175	Siderail Speaker	2
3	QDF27-2174	Fascia without Nurse Control and without Right Head Speaker	2
5	VV23A9C12HL	#6 x 3/8" Hi-Low Screw	8
6	VV83A9G16	#10 x 1/2" Tapping Screw	3

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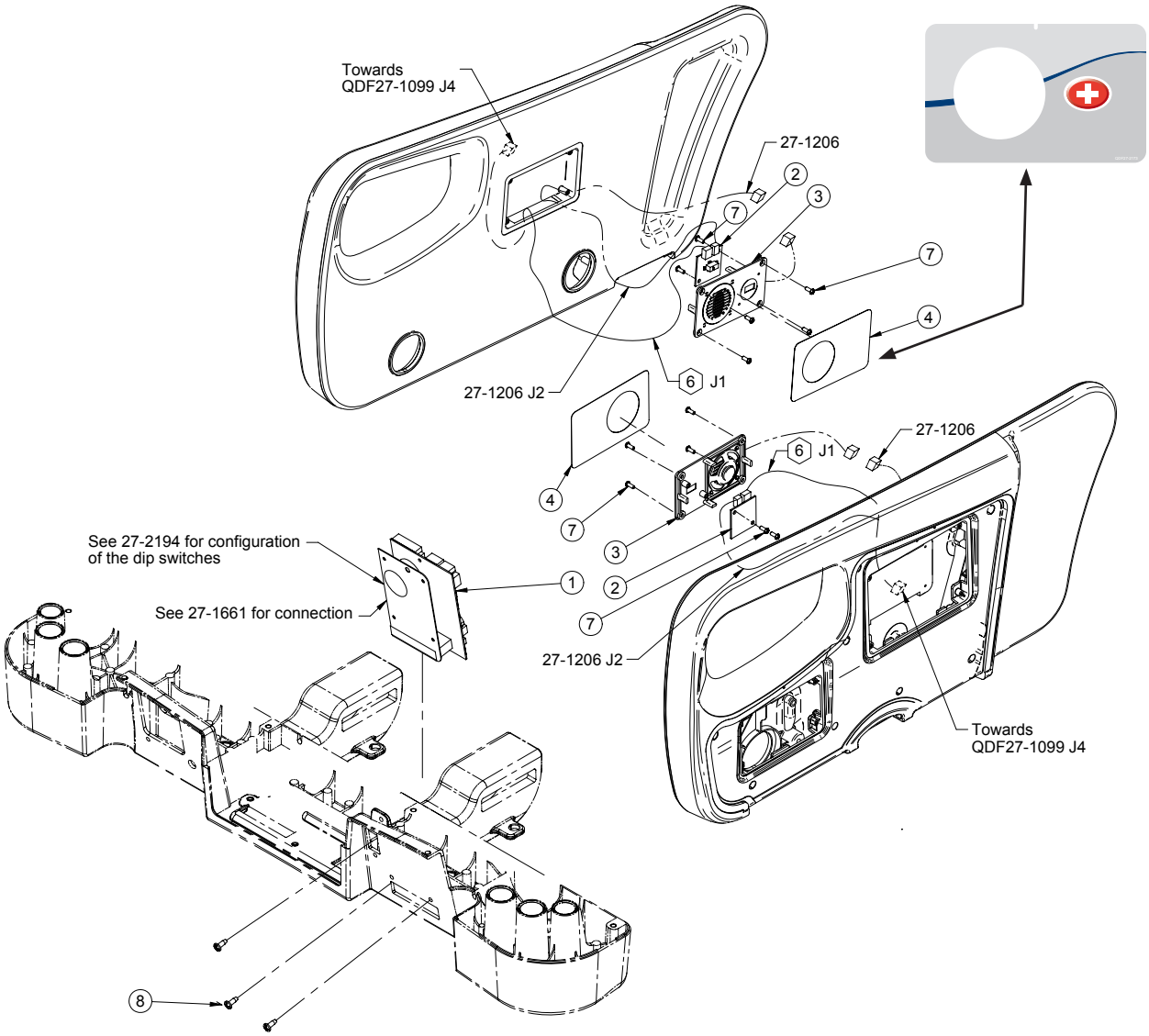
Optional Siderail Ass'y, HE, with Speaker/with NC - OL270051



N⁰ Cable	N⁰ Connector	Towards	N⁰ Cable	N⁰ Connector
QDF27-2175	MTA-2 POS	Towards	QDF27-1206	MTA-2 POS (27-0387, 27-0388)
QDF27-1429	J1	Towards	QDF27-1682	MTA-3 POS
QDF27-1429	J2	Towards	QDF27-1206	MTA-3 POS (27-0387, 27-0388)
QDF27-2682	MTA-3 POS	Towards	QDF27-1429	J1
QDF27-1682	MTA-3 POS	Towards	QDF27-1099	J4 (27-0387, 27-0388)

Optional SIderail Assembly, HE, with Speaker/NC - OL270051 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF21-1180	CAN Board - GEN III w/out Conn./37-Pin	1
2	QDF27-1429	Nurse Call Board	2
3	QDF27-2175	Siderail Speaker	2
4	QDF27-2173	Fascia Speaker and Nurse Call Head	2
6	QDF27-1682	Siderail Nurse Call Wires	2
7	VV23A9C12HL	#6 x 3/8" Hi-Low Screw	12
8	VV83A9G16	#10 x 1/2" Tapping Screw	3

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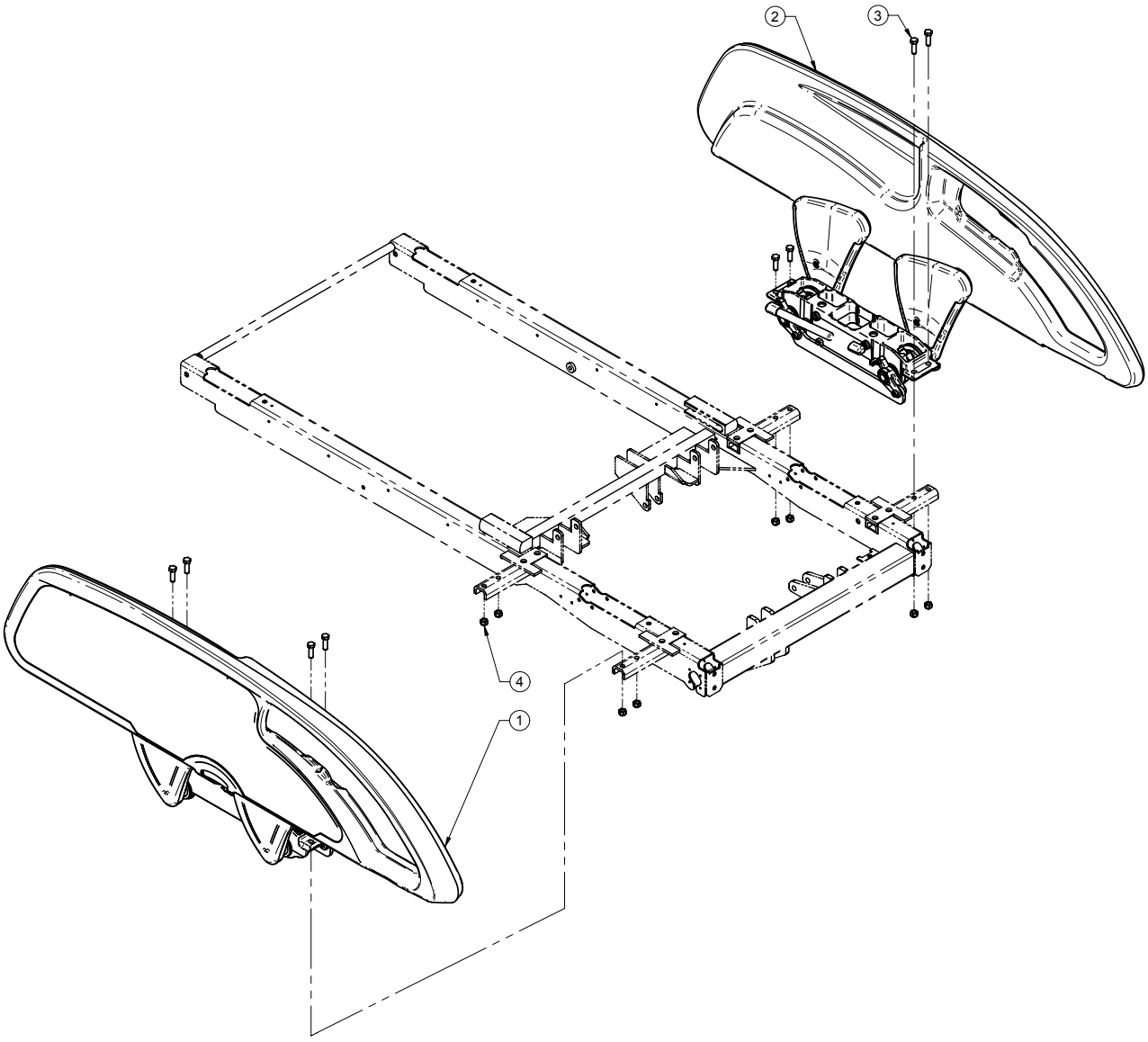
Notes

Foot End Siderail Mounting Assembly

For Reference Only: Part Number L27-032



Foot End Siderail Mounting Assembly - Common Components - L27-032 (Reference Only)

Item	Part No.	Part Name	Qty.
1	27-0389	Right Foot Siderail Assembly (pg. 163)	1
2	27-0390	Left Foot Siderail Assembly (pg. 160)	1
3	VB18A1032	5/16”-18 x 1” LG Bolt	8
4	VE30A10	5/16”-18 Nylon Locknut	8

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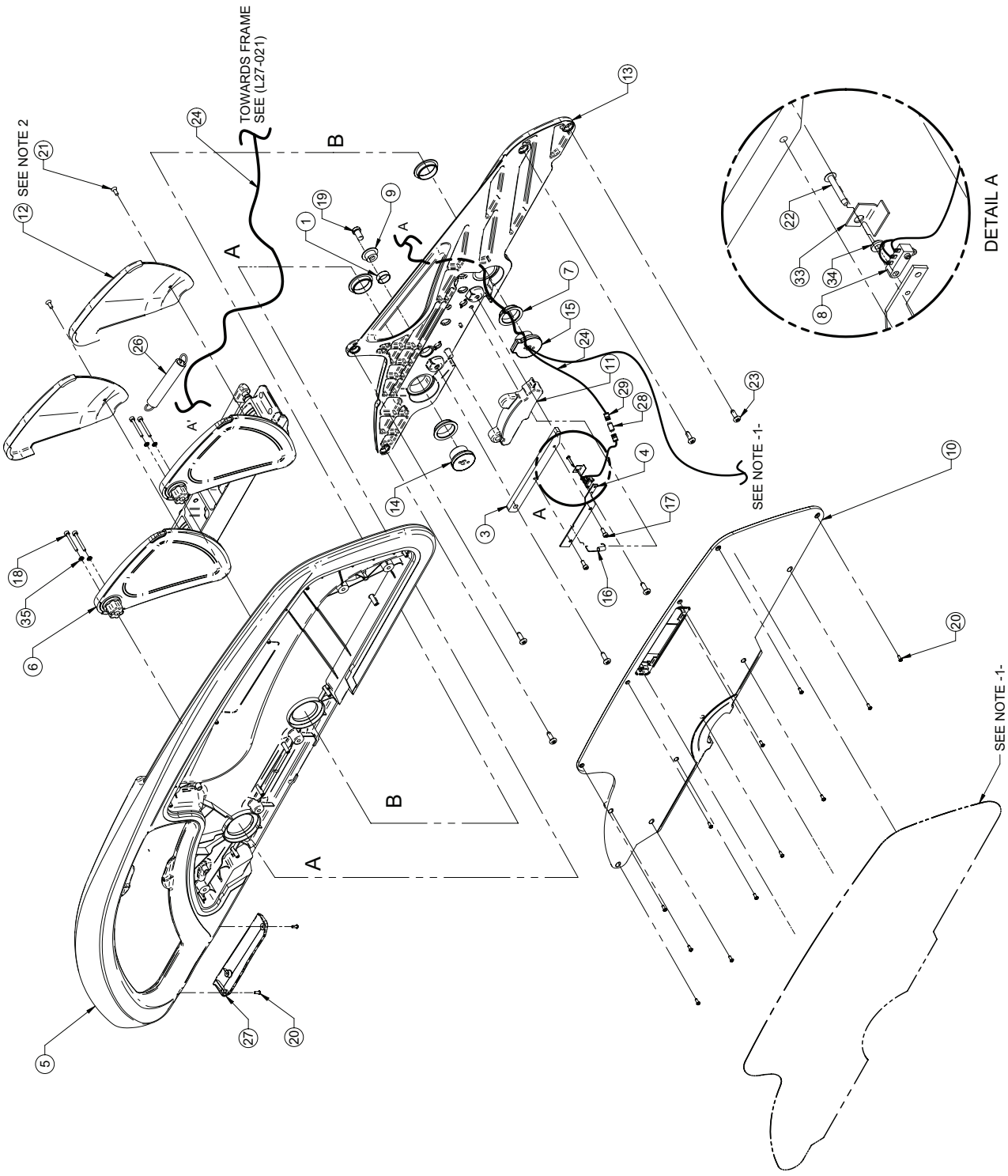
Standard Siderail Assembly, Foot End, Left - Common

For Reference Only: Part Number 27-0390



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POSITION ON CONNECTOR			
Cable No.	**Connector No.**	**Cable No.**	**Connector No.**
QDF27-1521	MTA-100 3 Positions	QDF27-1208	MTA-100 3 Positions
QDF27-1208	MTA-100 3 Positions	QDF27-1521	MTA-100 3 Positions
QDF27-1208	Mate N Lock 3 Positions	QDF27-1481	J171 (L27-029)

POSITION ON CONNECTOR		
Position on Connector 29	**Signal**	**Color**
1	“NO”	White
2	“COM”	Black
3	“NC”	Green

Note 1:

Siderail **without *i*Bed** option - See OL270059 (page 166).

Siderail **with *i*Bed** option - See OL270060 (page 168).

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Standard Siderail Assembly, Foot End, Left - Common

Standard SIderail Assembly, Foot End, Left - Common Components - 27-0390 (Reference only)

Item	Part No.	Part Name	Qty.
1	28-0491	Machining Spacer	1
3	27-1141Z	Siderail Lock	1
4	27-1142Z	Siderail Switch Support	1
5	QP27-1264	Left Foot Siderail	1
6	27-2061	Inverted Siderail Mechanics	1
7	QDF2049	Spacer	4
8	QDF27-1521	Siderail Switch	1
9	QPA28-0493	Siderail Sleeve	1
10	QP27-1268	Left Foot Siderail Cover	1
11	QP27-1273	Right Siderail Handle	1
12	QP28-0040	Inverted Siderail Arm Cover	2
13	QPA27-1272	Left Foot Siderail Structure	1
14	QPA28-0015	Siderail Sleeve	1
15	QPA28-0016	Sleeve with Lock	1
16	QRE27-1736	Spring Balance	1
17	VV10A0G16-S	Hex Socket Head Screw #10-32 x 1/2”	2
18	VV10A0G40-S	Hex Socket Head Screw #10-32 x 1-1-2”	4
19	VV10A1P20-S	Hex Socket Head Screw 3/8-16 x 5/8”	1
20	VV23A9C12HL	Hi-Lo Screw, #6 x 3/8”	17
21	VV31A0G16	Machine Screw, #10 x 1/2”	2
22	VV87A9A24	Truss head Tapping Screw n˚4 x 5/8”	1
23	VVB3A9N24PF	Bosscrew Screw, 1/4” X 3/4”	6
24*	QDF27-1208	Foot Limit Switch Siderail Cable	1
25*	QDF9518	Cable Tie	1
26	QRE28-0293	Siderail Tension Spring, K11	1
27	QP27-1509	Left Foot Siderail Cap	1
28*	QDF2080	Inline Splice (ITW MWTZ 100-3-D)	1
29*	QDF2099	Female Connector mta-100 3 Positions	1
33	27-1739	Siderail Plate 2	1
34	27-1839	Side Ring	1
35	VW20A06	Spring Washer Diameter 3/16”	4

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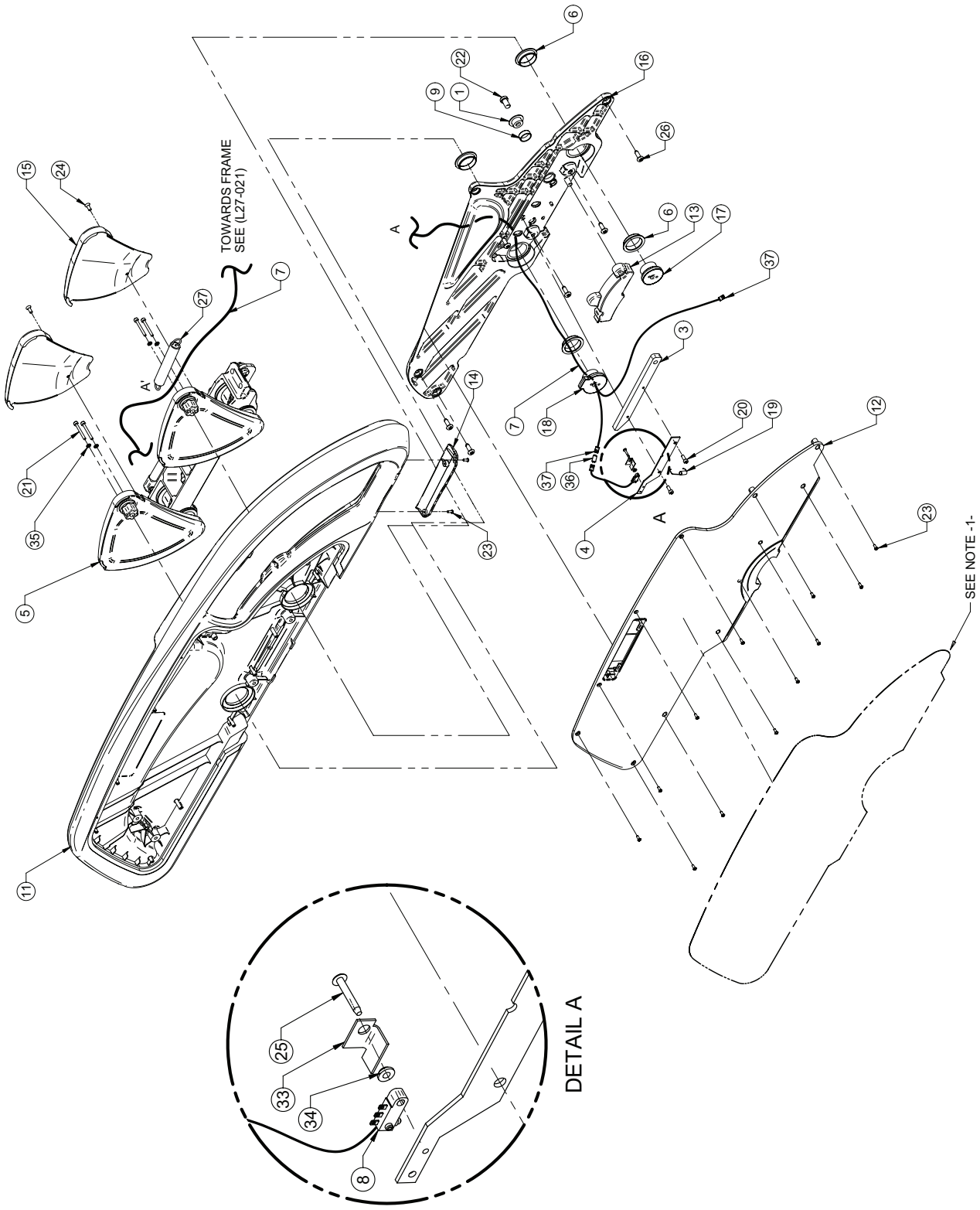
Standard Siderail Assembly, Foot End, Right - Common

For Reference Only: Part Number 27-0389



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POSITION ON CONNECTOR			
Cable No.	**Connector No.**	**Cable No.**	**Connector No.**
QDF27-1521	MTA-100 3 Positions	QDF27-1208	MTA-100 3 Positions
QDF27-1208	MTA-100 3 Positions	QDF27-1521	MTA-100 3 Positions
QDF27-1208	Mate N Lock 3 Positions	QDF27-1481	J172 (L27-029)

POSITION ON CONNECTOR		
Position on Connector 29	**Signal**	**Color**
1	“NO”	White
2	“COM”	Black
3	“NC”	Green

Note 1:

Siderail **without *i*Bed** option - See OL270059 (page 166).

Siderail **with *i*Bed** option - See OL270060 (page 168).

Standard Siderail Assembly, Foot End, Right - Common

Standard Siderail Assembly, Foot End, Right - Common Components - 27-0389 (Reference only)

Item	Part No.	Part Name	Qty.
1	QPA28-0493	Siderail Sleeve	1
3	27-1141Z	Siderail Lcok	1
4	27-1142Z	Siderail Switch Support	1
5	27-2060	Siderail Mechanics	1
6	QDF2049	Spacer, 3/8	4
7	QDF27-1208	Foot Limit Switch Siderail Cable	1
8	QDF27-1521	Siderail Switch	1
9	28-0491	QDF9191 Spacer Tooling	1
10	QDF9518	Cable Tie	1
11	QP27-1263	Right Foot Siderail	1
12	QP27-1267	Left Foot Siderail Cover	1
13	QP27-1274	Left Siderail Trigger	1
14	QP27-1508	Right Foot Siderail Cap	1
15	QP28-0039	Siderail Rotation Arm Cover	2
16	QPA27-1271	Right Foot Siderail Structure	1
17	QPA29-0015	Siderail Sleeve	1
18	QPA28-0016	Sleeve with Lock	1
19	QRE27-1736	Spring Return	1
20	VV10A0G16-S	Hexagon Cylinder Head Screw	2
21	VV10A0G40-S	Hexagon Cylinder Head Screw	4
22	VV10A1P20-S	Hexagon Cylinder Head Screw	1
23	VV23A9C12HL	Pan Head Scew	15
24	VV31A0G16	Flat Head Machine Screw	2
25	VV87A9A24	Truss Head Tapping Screw	1
26	VVB3A9N24PF	Screw Bosscrew	6
27	QRE28-0293	Siderail Tension Spring, K11	1
33	27-1740Z	Siderail Plate 1	1
34	27-1839	Spacer Washer	1
35	VW20A06	Spring Washer Diameter 3/16”	4
36	QDF2080	Inline Splice (ITW MWTZ 100-3-D)	1
37	QDF2099	Female Connector MTA-100 3 Positions	2

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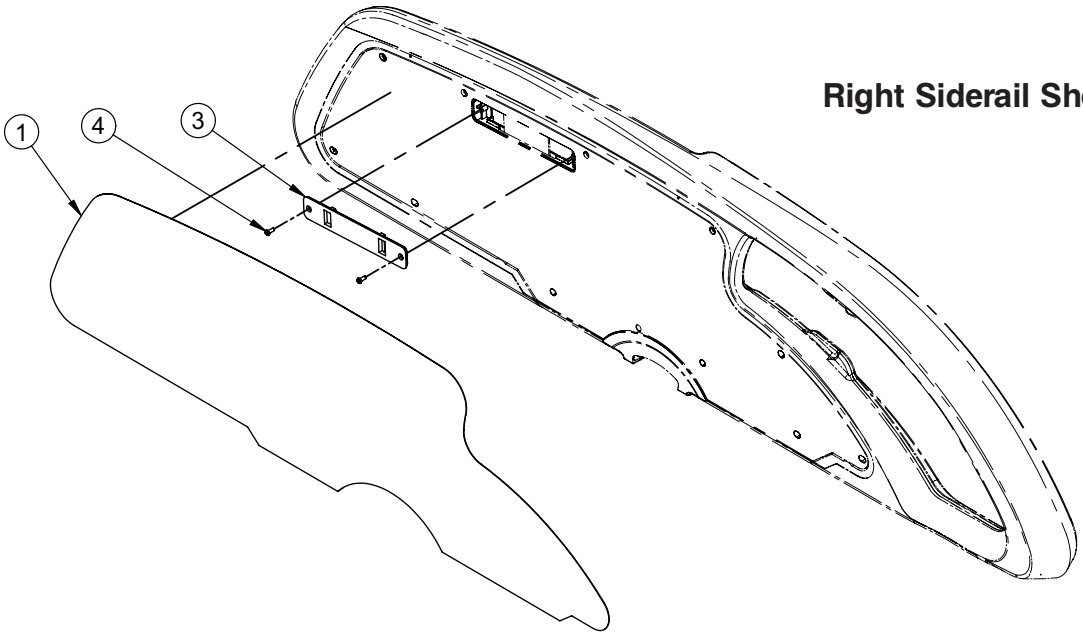
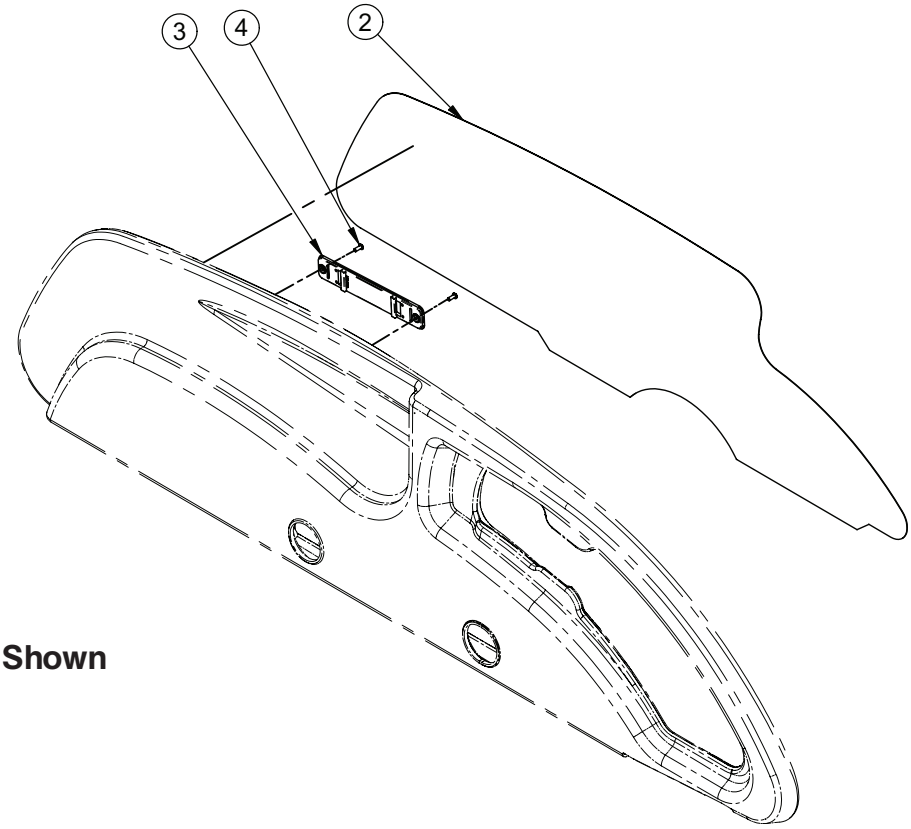
Standard Siderail Assembly, without *i*Bed

For Reference Only: Part Number OL270059



Right Siderail Shown



Left Siderail Shown

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Standard Siderail Assembly, without *i*Bed - Common Components - OL270059 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF27-0909	Right Foot Siderail Cover Fascia	1
2	QDF27-0910	Left Foot Siderail Cover Fascia	1
3	QP27-1831	LBS Lens Foot Siderail	2
4	VV23A9C12HL	Phillips Pan Head Screw	4

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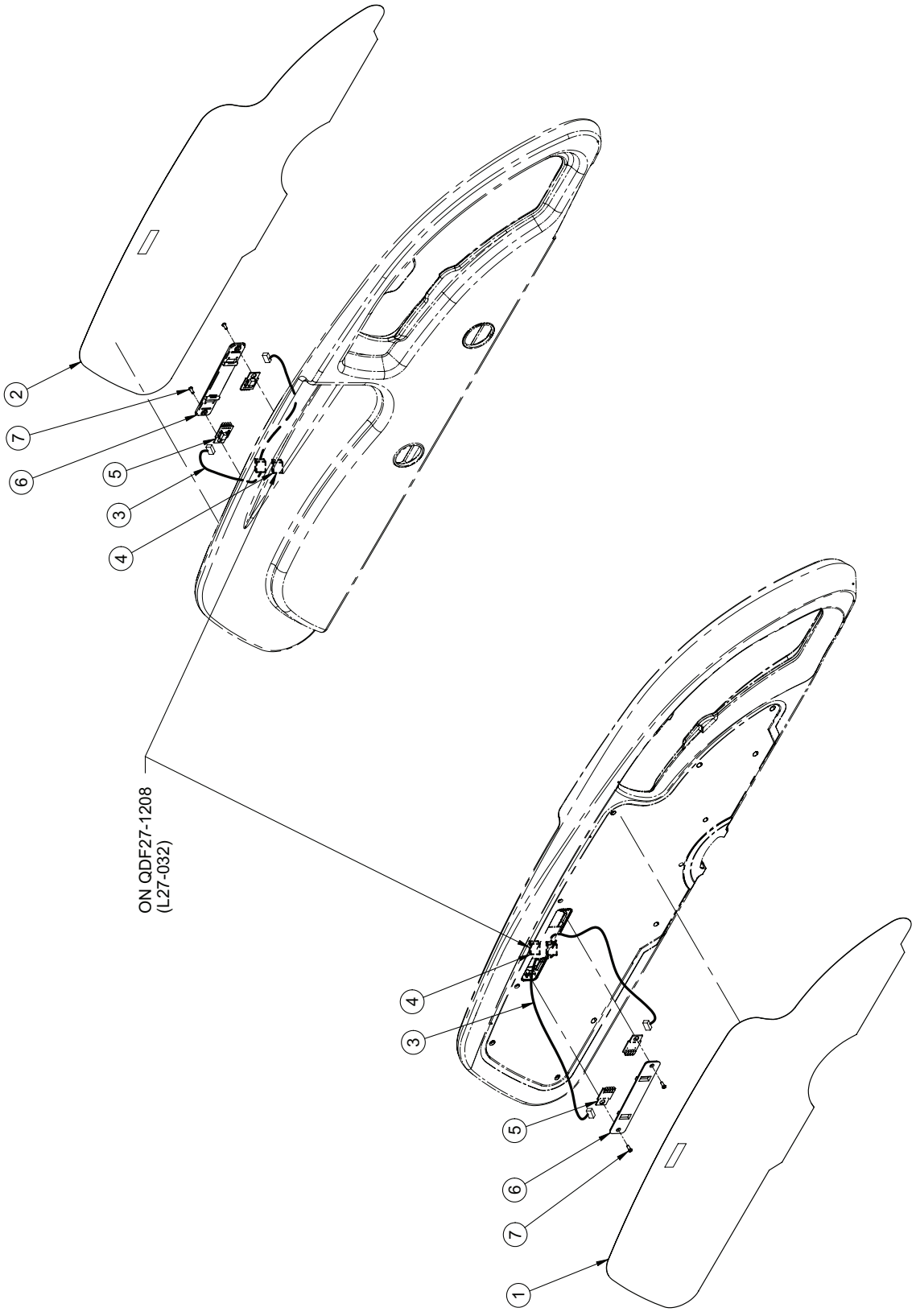
Optional Siderail Assembly with *i*Bed

For Reference Only: Part Number OL270060



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Optional Siderail Assembly with *i*Bed

Optional Siderail Assembly with *i*Bed - Common Components - OL270060 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF27-2030	Right Foot Siderail Fascia with iBED	1
2	QDF27-2031	Left Foot Siderail Fascia with iBED	1
3	QDF27-1834	LBS Cable Foot Siderail	2
4	QDF2080	Inline Splice (ITW MWTZ 100-3-D)	2
5	QDF27-1562	iBED Electronic Board Lens	4
6	QP27-1831	LBS Foot Siderail Lens	2
7	VV23A9C12HL	Pan Head Screw, #6 x 3/8	4

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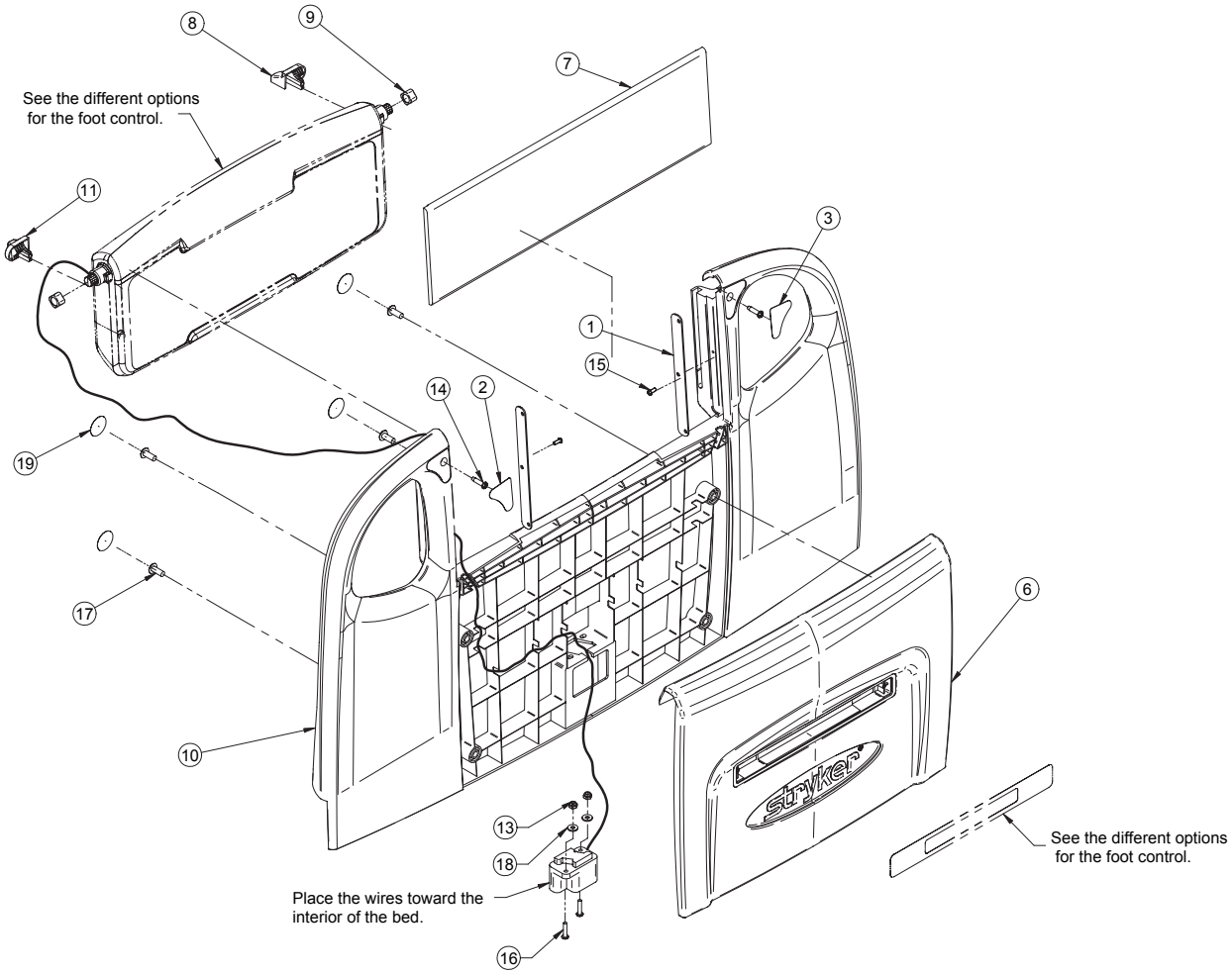
Standard Footboard Assembly - Common

For Reference Only: Part Number 27-1547



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Footboard Assembly - Common Components - 27-1547 (Reference only)

Item	Part No.	Part Name	Qty.
1	27-1595P	Board Wire Cover	2
2	QDF27-1601	Right Footboard Screw Cover Sticker	1
3	QDF27-1602	Left Footboard Screw Cover Sticker	1
6	QP27-1026	Footboard Cover S.A.	1
7	QP27-1359	Foot Support	1
8	QP27-1493	Right Foot Control Support	1
9	QP27-1511	Foot Control Pivot Bushing	2
10	QP27-1538	Main Footboard	1
11	QP27-1569	Left Foot Control Support	1
13	VE30A1E	Nylon Locknut #8-32	2
14	VV23A1G24HL	Phillips Screw #10 x ¾”	2
15	VV23A9C12HL	Phillips Screw #6 x 3/8”	2
16	VV33A1E24	Phillips Machine Screw 8-32 x ¾”	2
17	VV37A1N20-S	Phillips Machine Screw ¼-20 x 5/8”	4
18	VW11A9E	Flat Washer #8	2
19	QDF21-3943	Screw Cover	4

Note 1:

Footboard **without *i*Bed/without USB** - See OL270079 (page. 172).

Footboard **with *i*Bed /without USB** - See OL270167 (page. 176).

Footboard **with USB** - See OL270193 (page. 179).

Footboard **without USB** - See OL270194 (page. 180).

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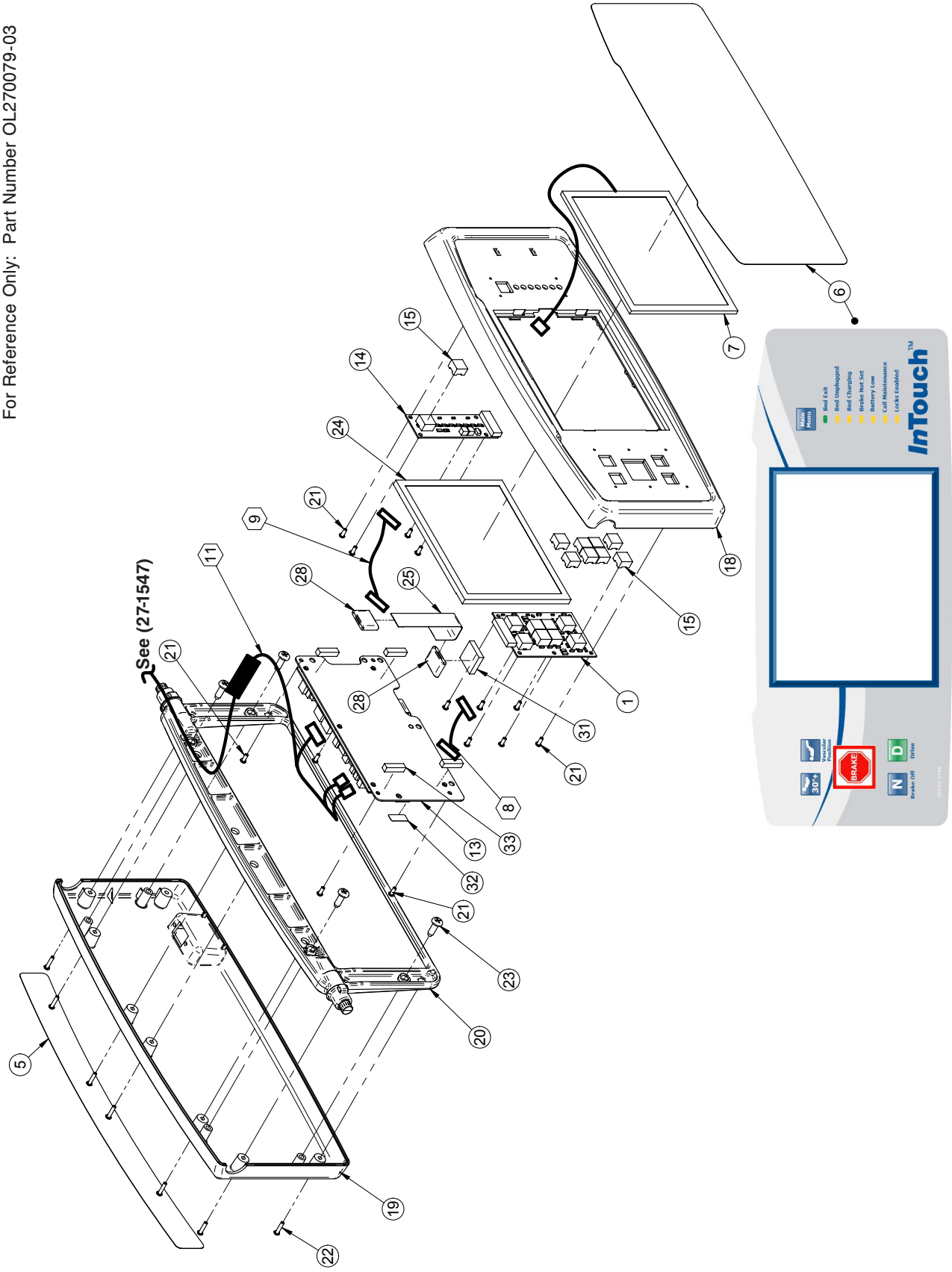
Footboard Assembly without *i*Bed/without USB

For Reference Only: Part Number OL270079-03



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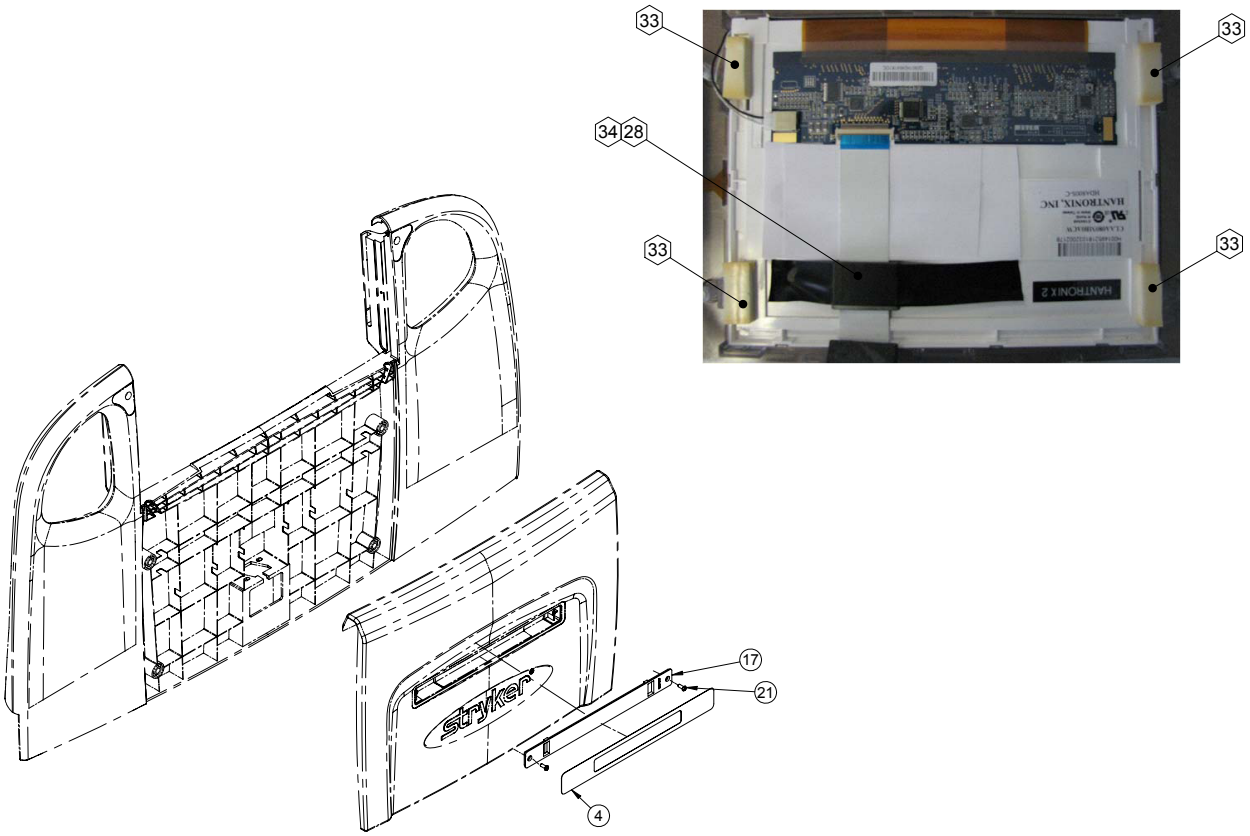
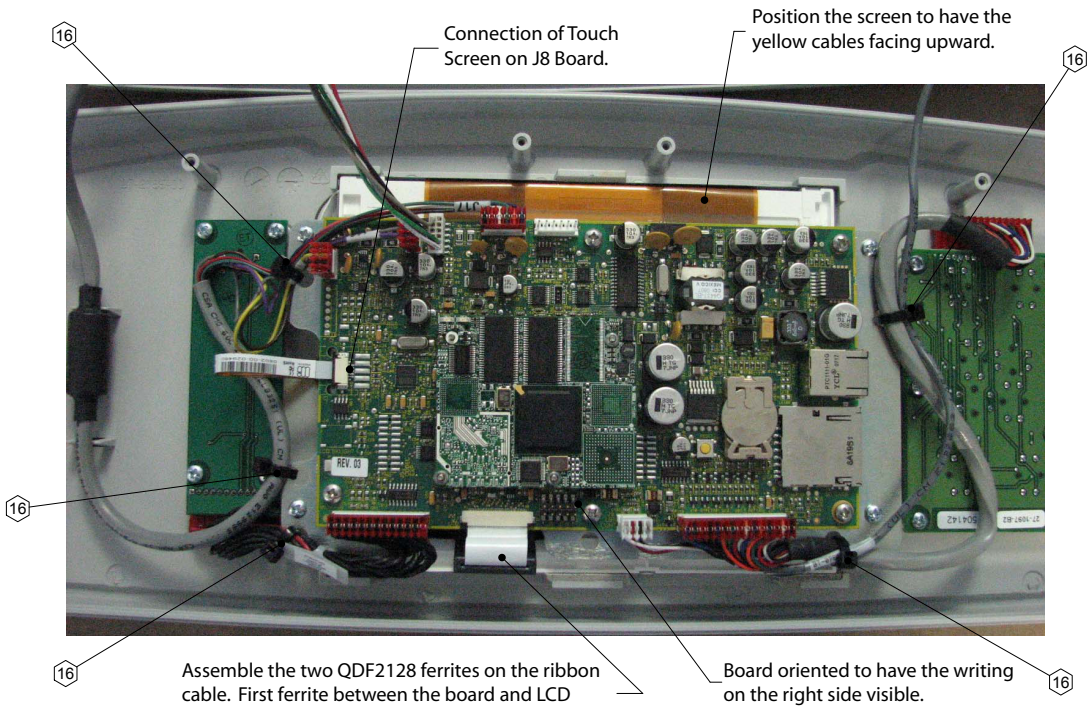
Footboard Assembly without *i*Bed/without USB



QDF75-0000 Board Assembly



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Footboard Assembly without *i*Bed/without USB

CABLE CONNECTION TABLE				
Cable No.	**Connector No.**	**To**	**Cable No.**	**Connector No.**
QDF27-2229	Connector MTA 15 Positions	To	QDF75-0000	J12 (Interface Board)
QDF27-2229	Connector MTA 15 Positions	To	QDF27-1097	J1 (Brake Board)
QDF27-2230	Connector MTA 13 Positions	To	QDF75-0000	J6 (Interface Board)
QDF27-2230	Connector MTA 13 Positions	To	QDF75-0010	J1 (Menu Board)
QDF27-2232	Connector Metrimate 19 Pos.	To	QDF27-1213	Con. Metrimate (27-1661)
QDF27-2232	Connector MTA 4 Positions J1	To	QDF75-0000	J1 (Interface Board)
QDF27-2232	Connector MTA 4 Positions J19	To	QDF75-0000	J19 (Interface Board)
QDF27-2232	Connector MTA 6 Positions	To	QDF75-0000	J17 (Interface Board)
QDF27-2193	Touch Screen	To	QDF75-0000	J3 (Interface Board)
QDF2129	Flat Connector	To	QDF75-0000	J7 (Interface Board)
QDF2129	Flat Connector	To	QDF2125	(LCD Screen)

Footboard without *i*Awareness Assembly - Common Components - OL270079-03 (reference only)

Item	Part No.	Part Name	Qty.
1	QDF27-1097	Brake Control Board	1
4	QDF27-2054	iBed without Lens Sticker	1
5	QDF27-1768	Foot Control Rear Fascia	1
6	QDF27-2188	Foot Control Fascia	1
7	QDF27-2193	8” Touch Screen	1
8*	QDF27-2229	Brake Cable with Interface	1
9*	QDF27-2230	Menu Cable with Interface	1
11*	QDF27-2232	Footboard Cable	1
13	QDF75-0000	LCD Interface Board	1
14	QDF75-0010	Main Menu Board	1
15	QDF9183	Electronic Board Button	9
16*	QDF9518	Cable Tie	1
17	QP27-1609	iBed Lens	1
18	QP27-2185-10	Foot End Nurse Control Front	1
19	QP27-2186-10	Footboard Control Rear	1
20	QPA27-1494	Foot Control Reinforcement	1
21	VV23A9C12HL	#6 x 3/8” Screw	16
22	VV23A9C20HL	#6 x 5/8” Screw	8
23	VVB3A9N24PF	Bosscrew Screw ¼” x ¾”	4
24	QDF2125	LCD Screen	1
25	QDF2129	Ribbon Cable	1
28	QDF2128	LCD Ferrite	2
31	QDF5101	Protective Foam 1” x 1 1/4”	1
32	QDF27-2279	Windows CE License Sticker	1
33	QDF5101	Protective Foam 1” x 1 1/4”	4
34*	QDF2053	Red Electric Tape	1
35*	75-0004	Software Interface Board	1

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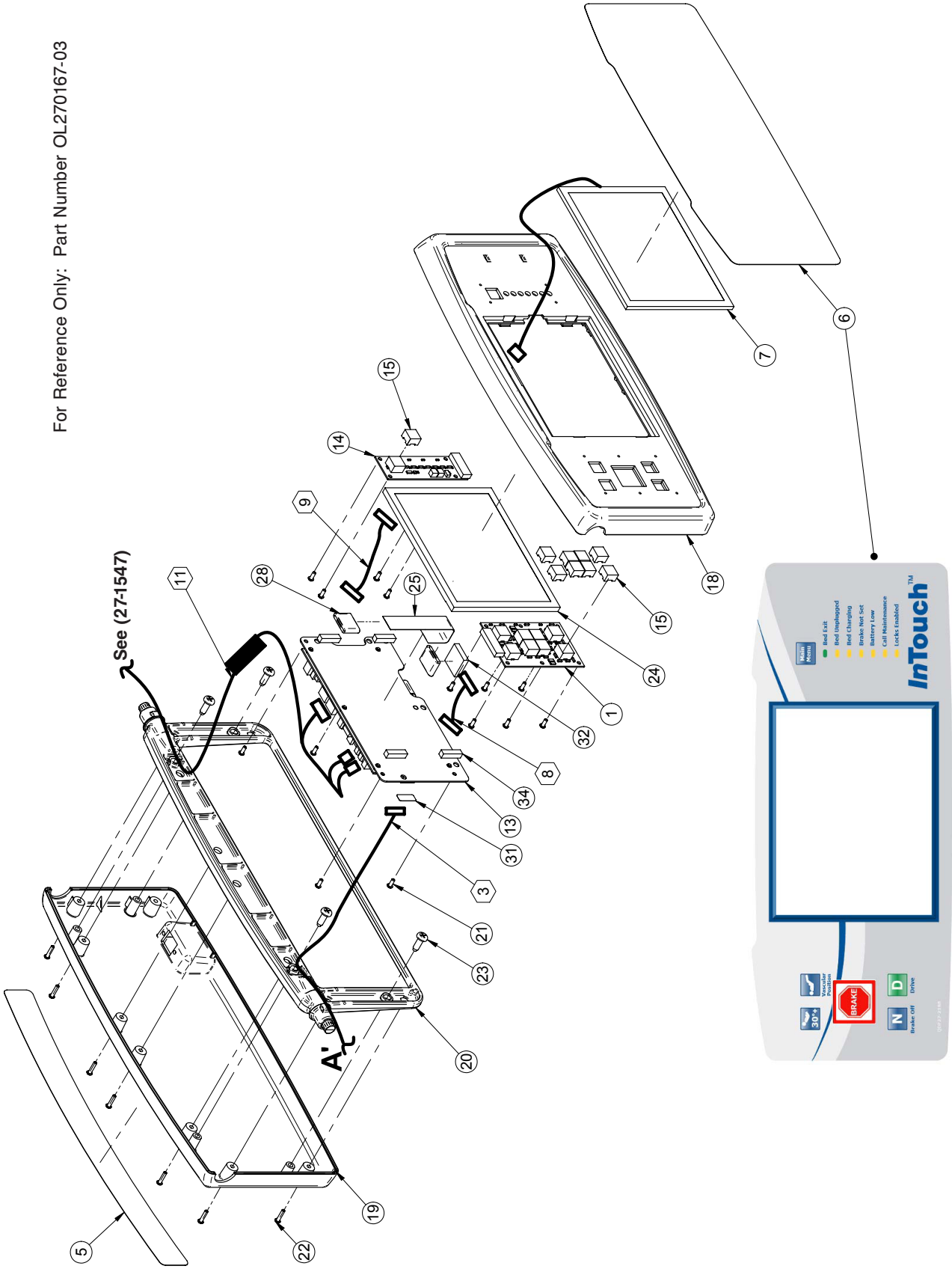
Footboard Assembly with *i*Bed/without USB



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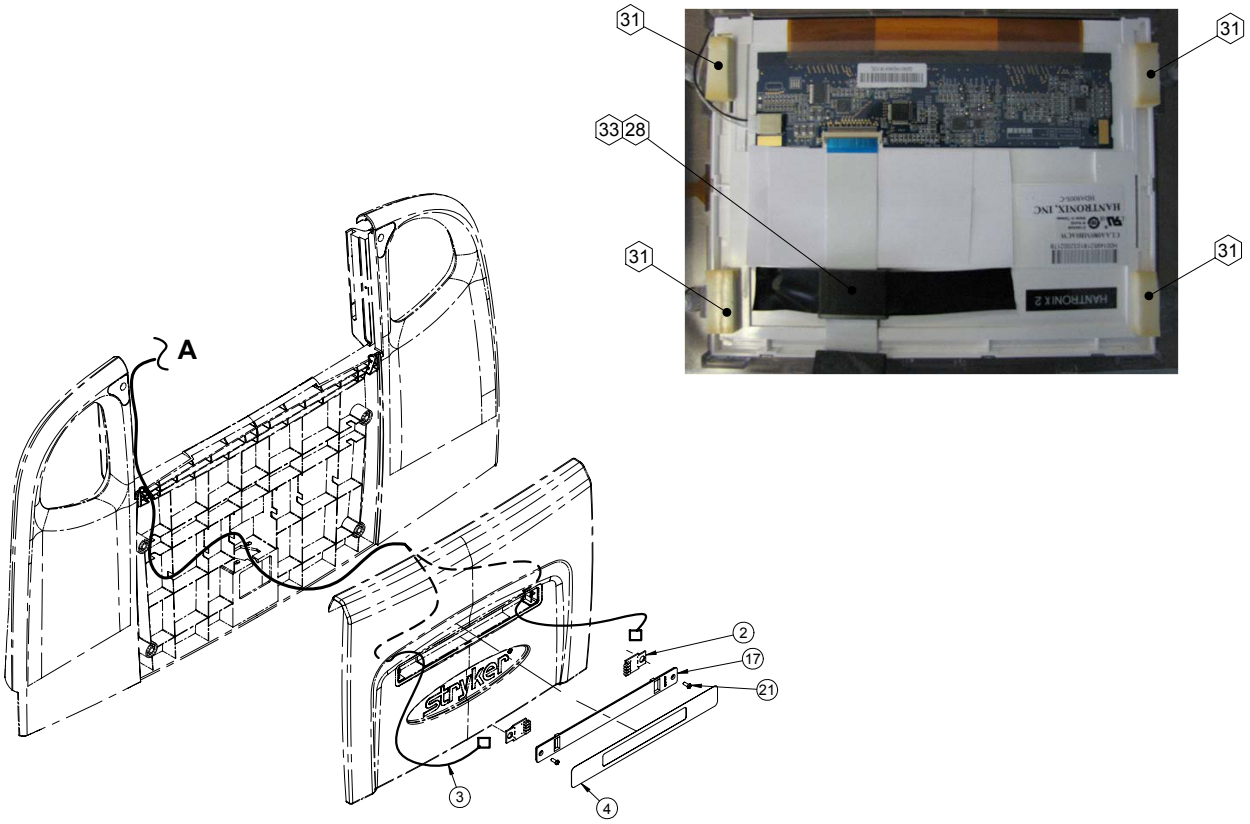
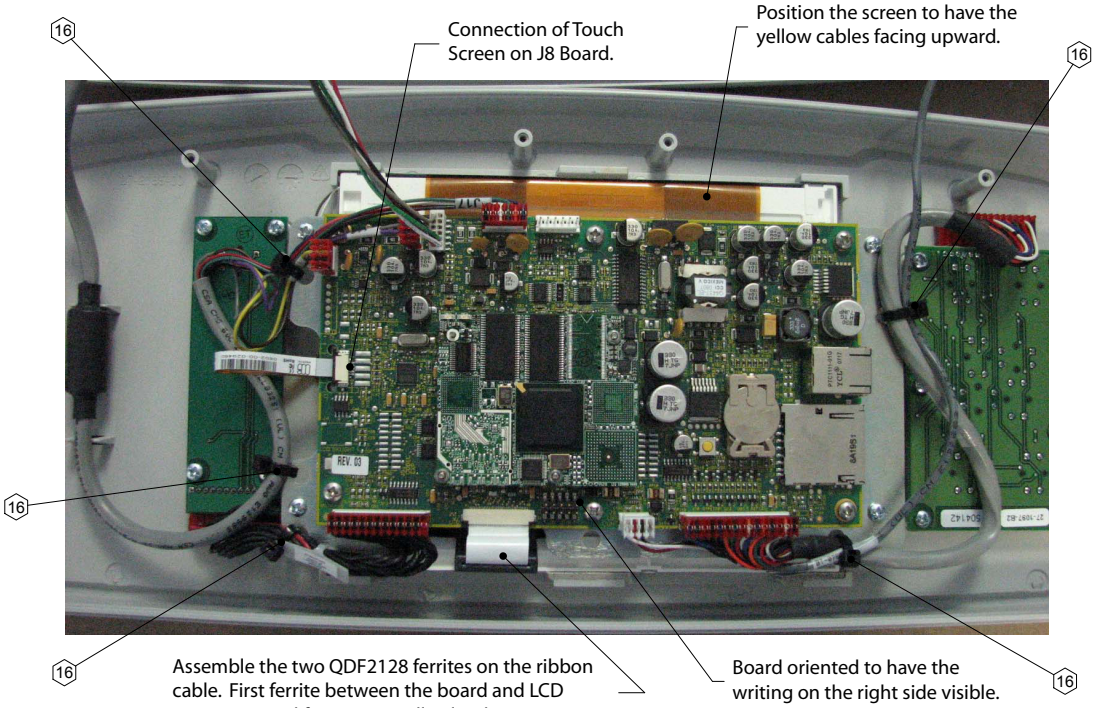
Footboard Assembly with *i*Bed/without USB



QDF75-0000 Board Assembly



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Footboard Assembly with *i*Bed/without USB

CABLE CONNECTION TABLE				
Cable No.	**Connector No.**	**To**	**Cable No.**	**Connector No.**
QDF27-2253	Connector MTA	To	QDF27-1562	Left Side
QDF27-2253	Connector MTA	To	QDF27-1562	Right Side
QDF27-2253	Con. MTA 4 Pos.	To	QDF75-0000	J9 (Interface Board)
QDF27-2229	Con. MTA 15 Pos.	To	QDF75-0000	J12 (Interface Board)
QDF27-2229	Con. MTA 15 Pos.	To	QDF27-1097	J1 (Brake Board)
QDF27-2230	Con. MTA 13 Pos.	To	QDF75-0000	J6 (Interface Board)
QDF27-2230	Con. MTA 13 Pos.	To	QDF75-0010	J1 (Menu Board)
QDF27-2232	Con. Metrimate 19 Pos.	To	QDF27-1213	Con. Metrimate (27-1661)
QDF27-2232	Con. MTA 4 Pos. J1	To	QDF75-0000	J1 (Interface Board)
QDF27-2232	Con. MTA 4 Pos. J19	To	QDF75-0000	J19 (Interface Board)
QDF27-2232	Con. MTA 6 Pos.	To	QDF75-0000	J17 (Interface Board)
QDF27-2193	Touch Screen	To	QDF75-0000	J3 (Interface Board)
QDF2129	Flat Connector	To	QDF75-0000	J7 (Interface Board)
QDF2129	Flat Connector	To	QDF2125	(LCD Screen)

Footboard with *i*Bed/without USB Assembly - Common Components - OL270167-03 (Reference Only)

Item	Part No.	Part Name	Qty.
1	QDF27-1097	Brake Control Board	1
2	QDF27-1562	iBed Lens Electronic Board	2
3*	QDF27-2253	LBS Cable Foot Panel	1
4	QDF27-1610	iBed Lens Sticker	1
5	QDF27-1768	Foot Control Rear Fascia	1
6	QDF27-2188	Foot Control Fascia	1
7	QDF27-2193	8” Touch Screen	1
8*	QDF27-2229	Brake Cable with Interface	1
9*	QDF27-2230	Menu Cable with Interface	1
11*	QDF27-2232	Footboard Cable	1
13	QDF75-0000	LCD Interface Board S.A.	1
14	QDF75-0010	Main Menu Board	1
15	QDF9183	Electronic Board Button	9
16*	QDF9518	Cable Tie	1
17	QP27-1609	iBed Lens	1
18	QP27-2185-10	Foot End Nurse Control Front	1
19	QP27-2186-10	Footboard Control Rear	1
20	QPA27-1494	Foot Control Reinforcement	1
21	VV23A9C12HL	#6 x 3/8” Screw	16
22	VV12A8C20HL	#6 x 5/8” Screw	8
23	VVB3A9N24PF	¼” x ¾” Bosscrew Screw	4
24	QDF2125	LCD Screen	1
25	QDF2129	Flat Cable	1
28	QDF2128	LCD Ferrite	2
31	QDF27-2279	Windows CE License Sticker	1
32	QDF5101	Protective Foam, 1” x 1 1/4”	1
33*	QDF2053	Red Electric Tape	4
34	QDF5101	Protective Foam, 1” x 1 1/4”	1
35*	75-0004	Software Interface Board	1

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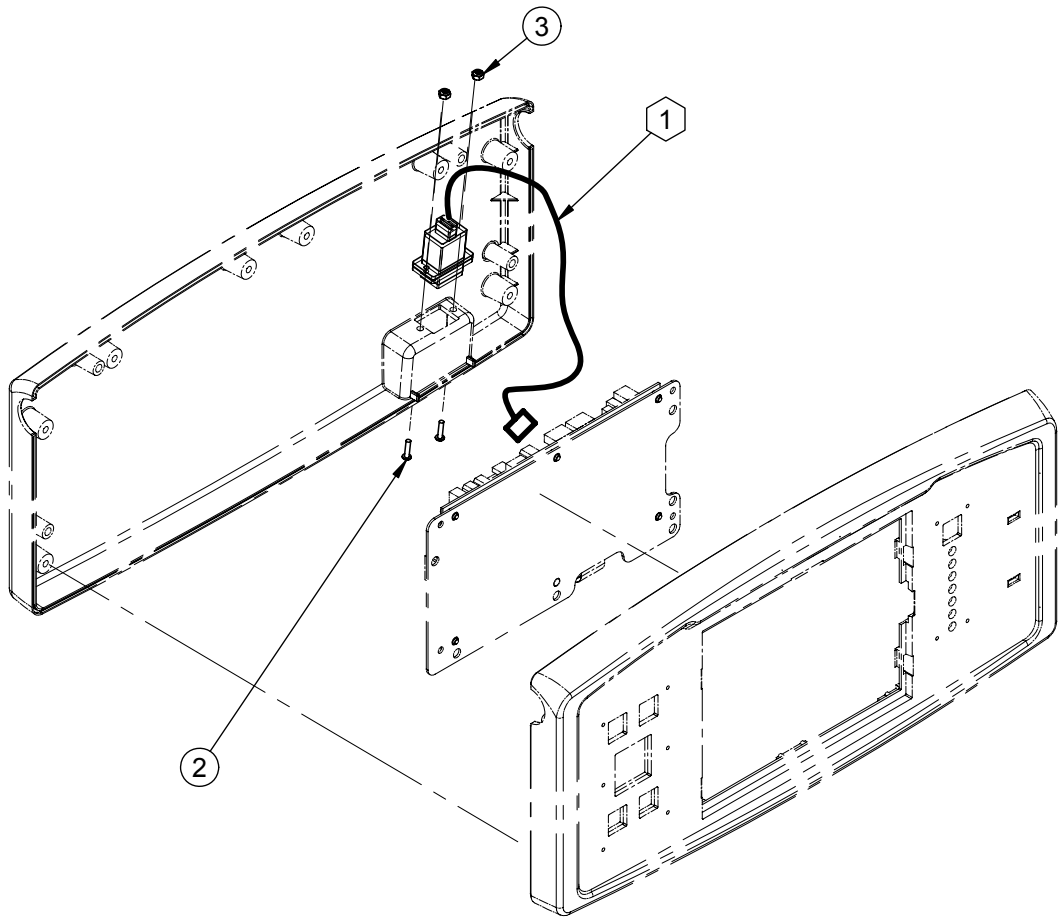
Footboard Assembly, with USB Option - OL270193-00



POSITION ON CONNECTOR			
Cable No.	**Connector No.**	**Cable No.**	**Connector No.**
QDF27-2231	USB connector	QDF27-2186	N/A
QDF27-2231	CON. 16POS 2mm	QDF75-0000	J18

Footboard Assembly with USB Option - OL270193-00 (Reference only)

Item	Part No.	Part Name	Qty.
1	QDF-272331	USB Cable interface	1
2	VV33AOA16	Pan Head Phillips Screw, 4-40 x 1/2”	2
3	VE39AOA	Hex Nylon Locknut	2

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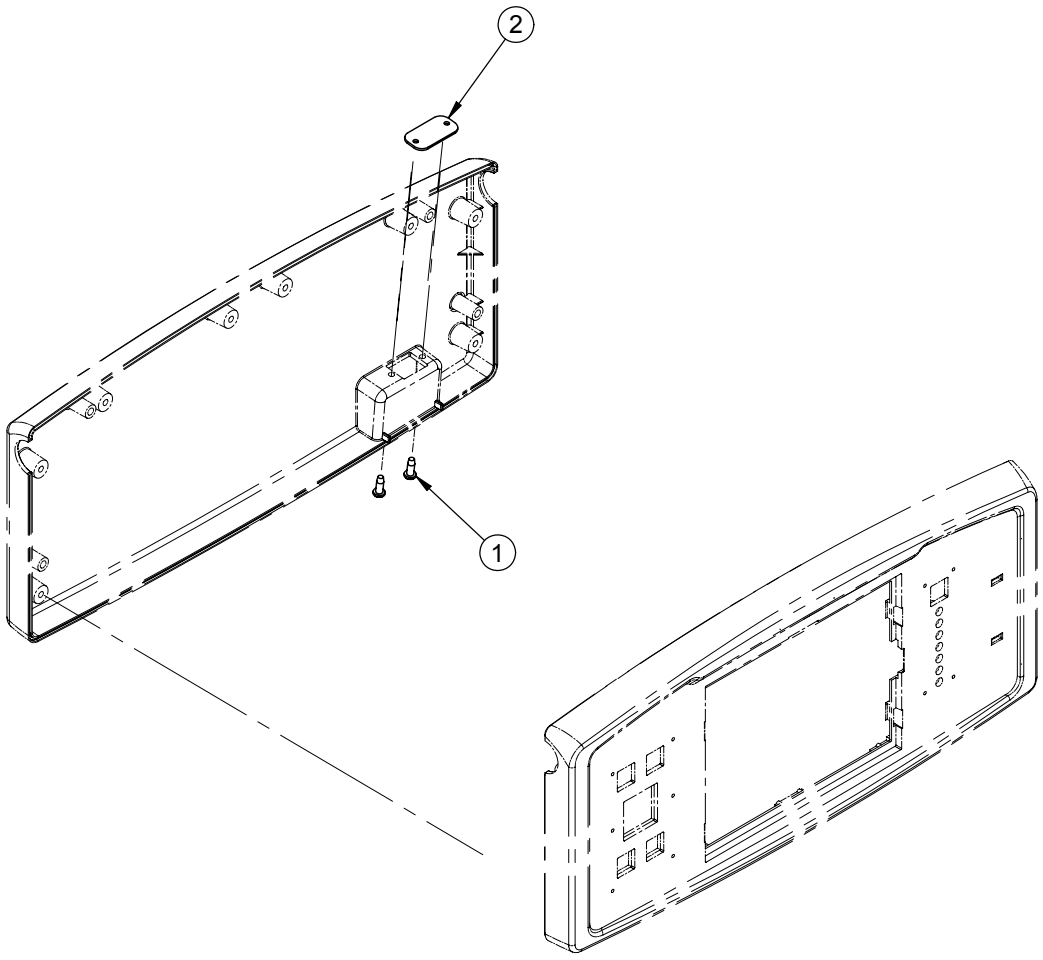
Footboard Assembly, without USB Option - OL270194-00



Footboard Assembly without USB Option - OL270194-00 (Référence only)

Item	Part No.	Part Name	Quantity
1	VV83A9E16	Pan Head Phillips Screw, #8 x 1/2”	2
2	27-2233G	Plate option without USB	1

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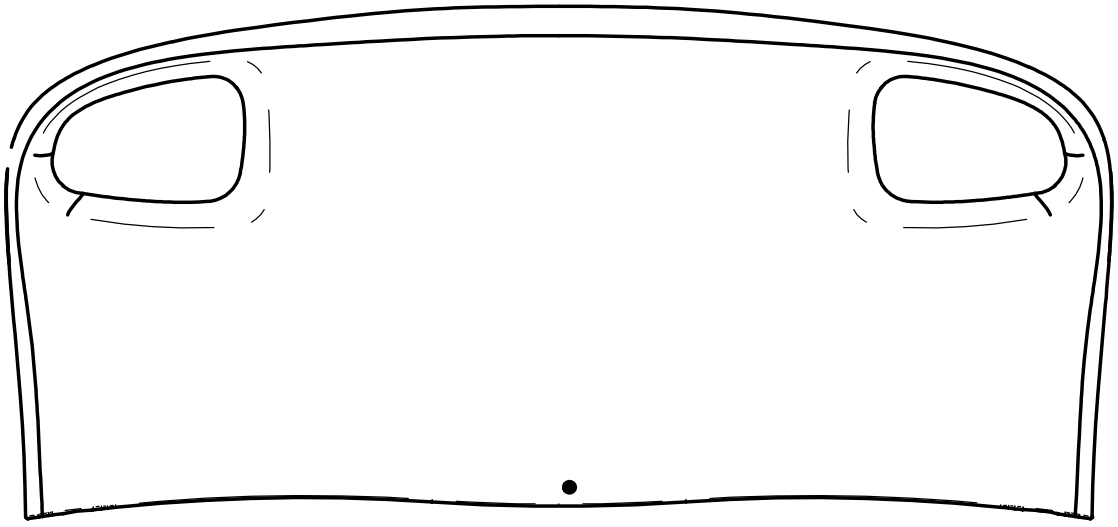
Headboard - QP27-1077-05

For Reference Only: Part Number QP27-1077



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Optional Bed Accessories

Accessory	Part Number	Page Reference
Bed Extender	FA64204	See page 183
Bed Extender Mattress (2920 PositionPRO only)	DM64196	See page 184
Bed Extender Mattress (2950 XPRT only)	DM64197	See page 184
I.V. Pole, Permanent	FA64221	See page 185
I.V. Pole, Dual Head End Permanently Attached	FA64202	See page 186
Line Management System	FA64210	See page 188
Monitor Tray	FA64214	See page 189
Oxygen Bottle Holder, Upright	FA64187	See page 190
Oxygen Bottle Holder, Right Fit	FA64203	See page 191
Pendant with Motion Control Only	FA64209	See page 192
Pendant with Motion Control & Nurse Call	FA64194	See page 193
Pendant with Motion Control & Smart TV	FA64195	See page 194
Pendant with Motion Control, Nurse Call & Smart TV	FA64193	See page 195
Pendant Clip	FA64186	See page 196
Traction Sleeve 4” x 1/2”	FA64215	See page 197
Traction Sleeve 4” x 3/4”	FA64216	See page 198
Traction Sleeve 8” x 1/2”	FA64217	See page 199
Traction Sleeve 8” x 3/4”	FA64218	See page 200
Traction Sleeve 6-1/2” x 3/4”	FA64219	See page 201
Wall Saver Cable	FA64208	See page 202
X-Ray Cassette Holder	FA64205	See page 203

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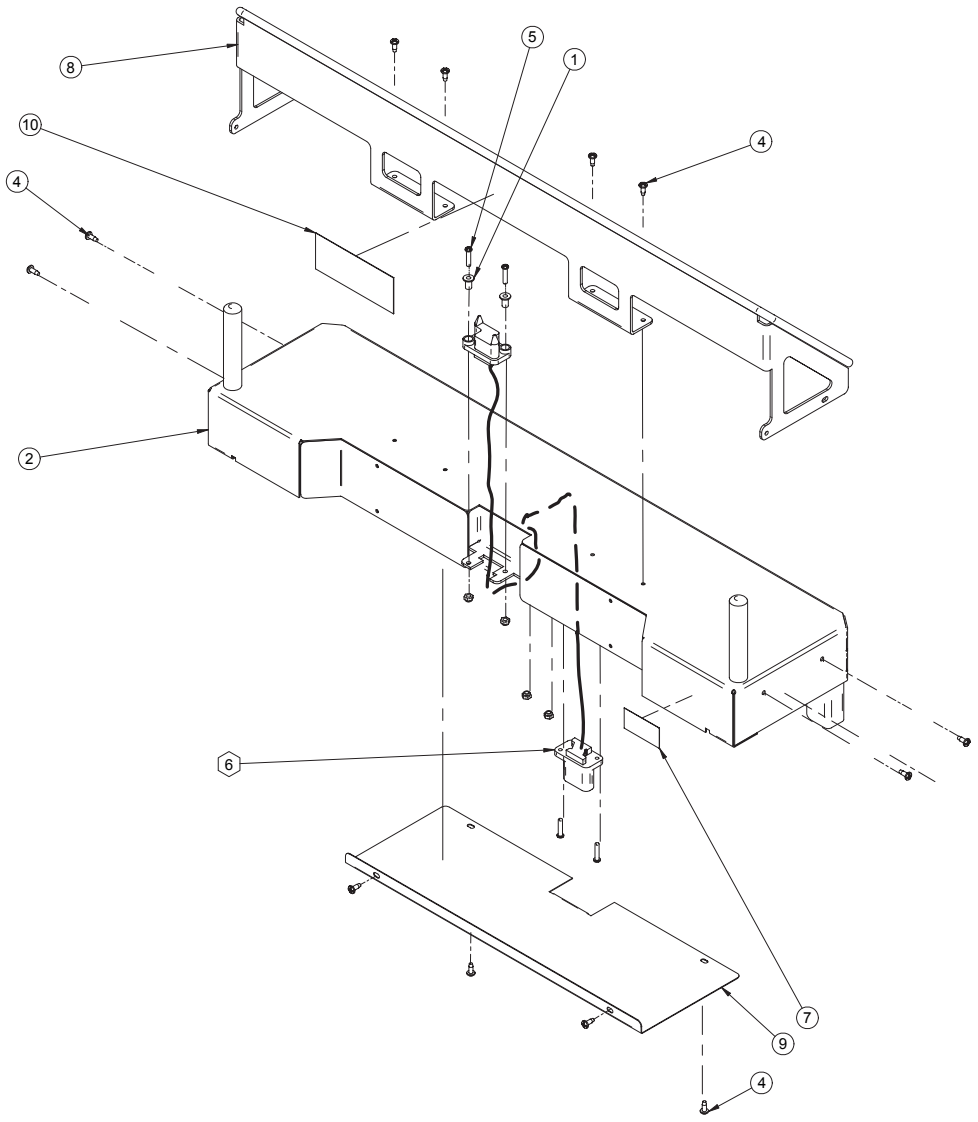
Bed Extender - FA64204

For Reference Only: Part Number L64-120



Item	Part No.	Part Name	Qty.
1	25-0527Z	Connector's Sleeve	2
2	64-1158P	Bed Extender	1
3	VE30A0G	Nylon Locknut #10-32	4
4	VV83A9G16	Phillips Head Tapping Screw, #10 x 1/2"	12
5	VV33A0G28	Phillips HeadMachine Screw, 10-32 x 7/8"	4
6	QDF27-1832	Bed Extender Extension	1
7	QE14399-T	Manufacturer Sticker	1
8	64-1271P	Bed Extender Protection	1
9	64-1278P	Bed Extender Cover	1
10	QE71-1112-F	Bed Extender Warning Sticker	1

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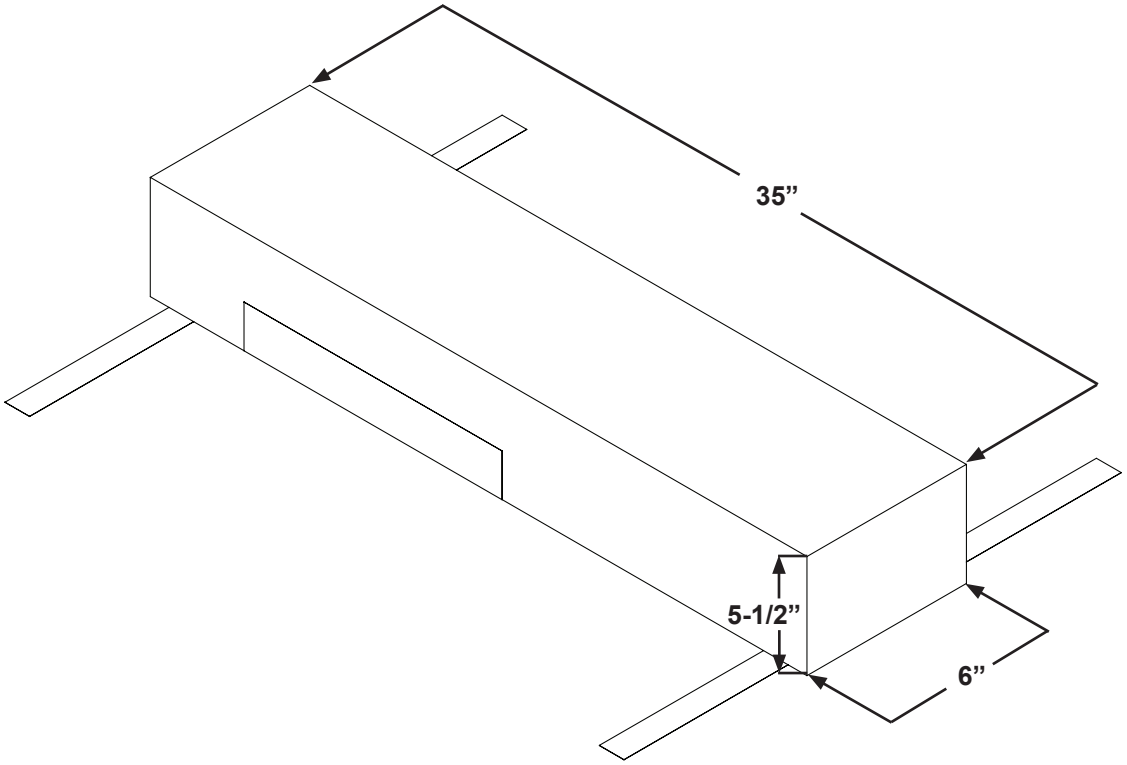
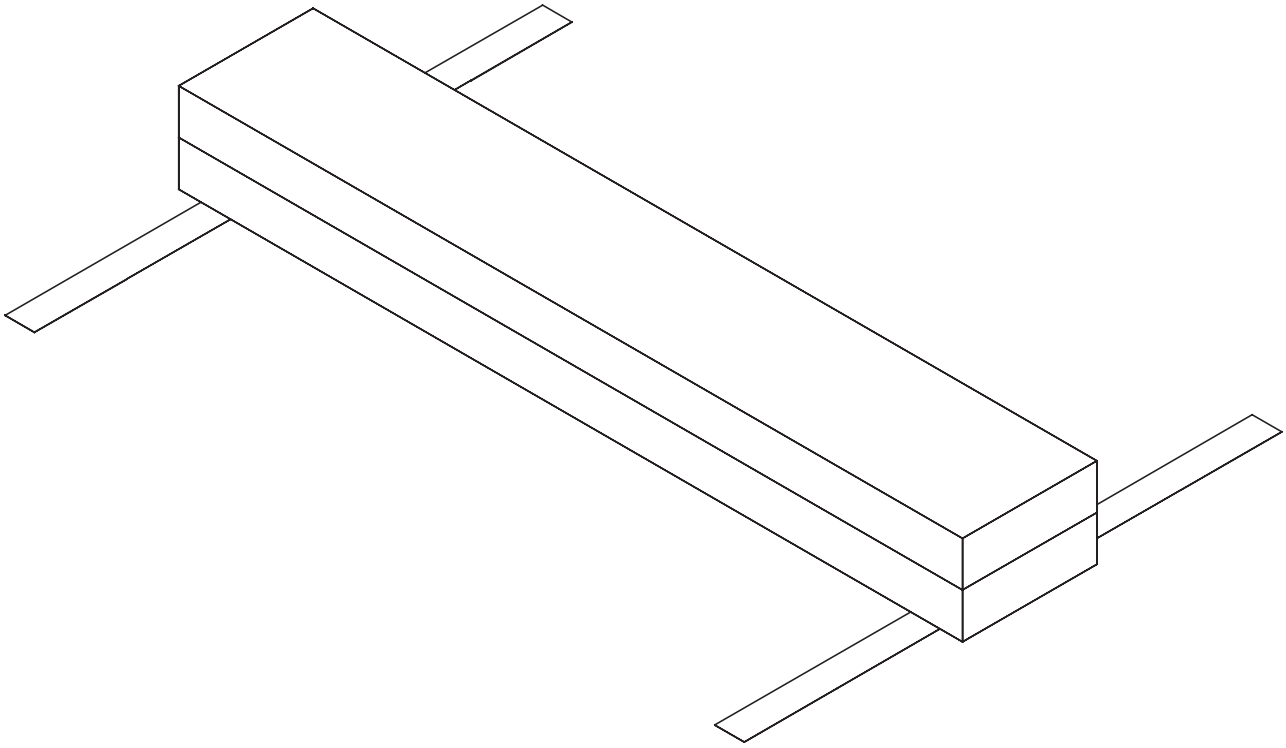
Bed Extender, XPRT Mattress - DM64197



Bed Extender, Position Pro Mattress - DM64196



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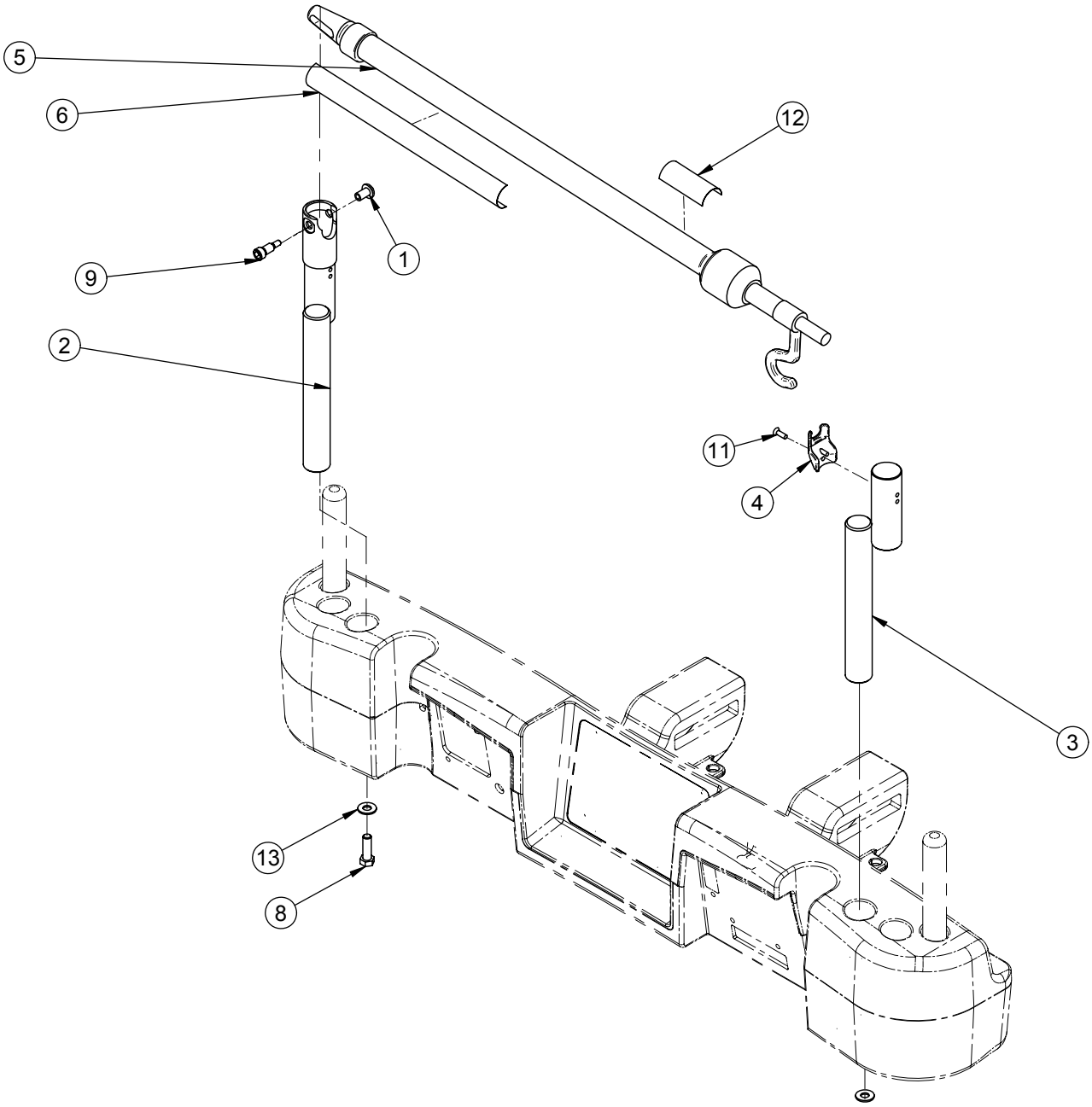
I.V. Pole Assembly, Permanent - FA64221



Item	Part No.	Part Name	Qty.
1	QDF2121	1/4-20 x 1/2” Barrel Nut	1
2	QDB64-1207C	I.V. Pole Assembly, Left	1
3	QDB64-1280C	I.V. Pole Assembly, Single	1
4	QP64-1225-10	I,V, Pole Plastics Support	1
5	QDF5073	2-Stage I.V. Pole	1
6	QE71-1246-T	“Warning” Sticker	1
8	VB15A1032-S	5/16-18 x 1” Hex Bolt	2
9	VD60A1N1016-S	5/16” x 1/2” x 1/4-20 Shoulder Bolt	1
11	VV81A9E16-10	Tapping Screw	1
12	QE14399-T	Manufacturer’s Nameplate	1
13	VW10A10	5/16” Flat Washer	2

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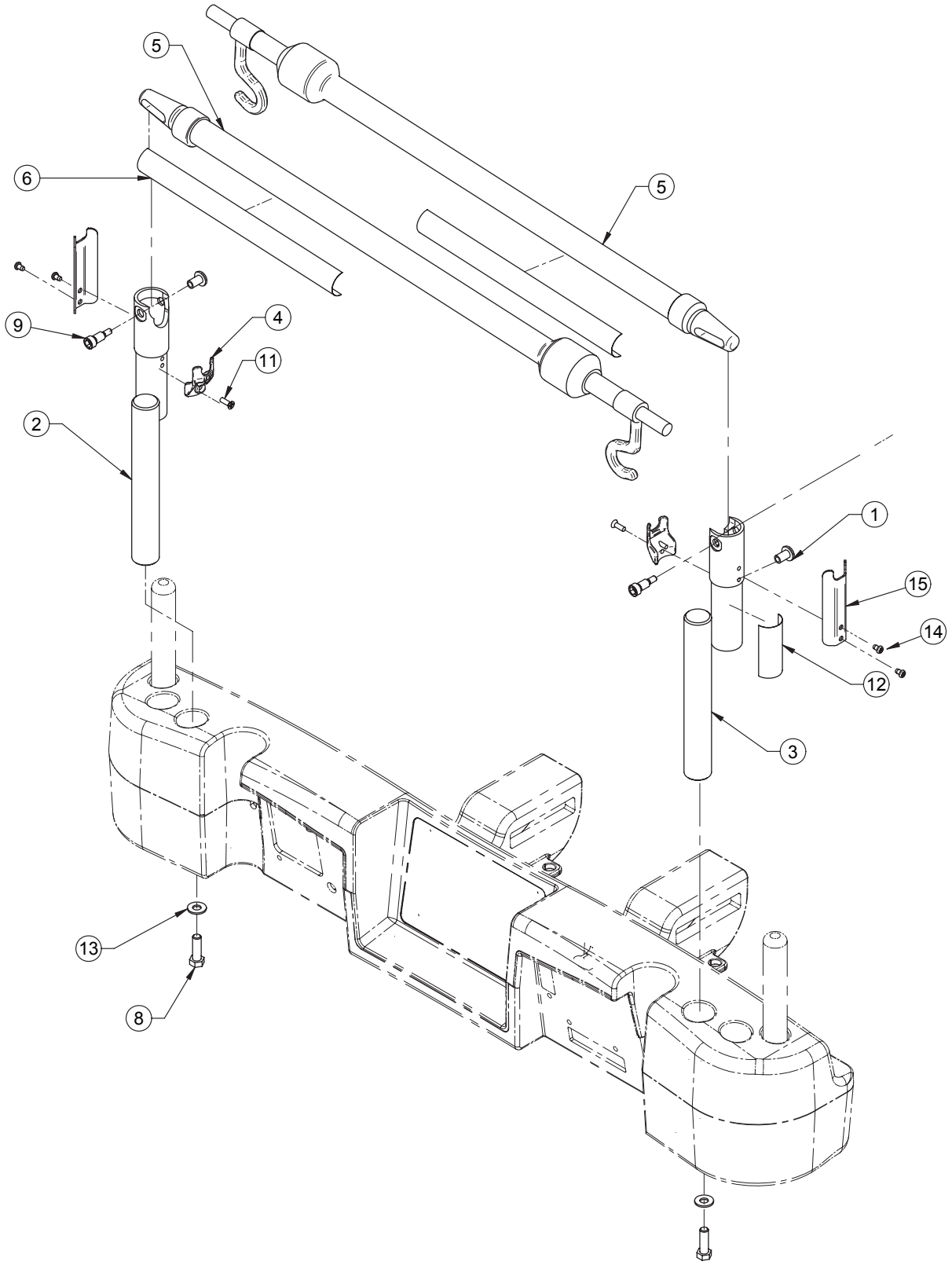
I.V. Pole Ass’y, Dual Head End, Permanent - FA64202

For Reference Only: Part Number L64-107



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I.V. Pole Ass'y, Dual Head End, Permanent (Continued) - FA64202

Item	Part No.	Part Name	Qty.
1	QDF2121	Tapped Sleeve 1/4-20 x 1/2"	2
2	64-1207C	Left IV Pole Support	1
3	64-1208C	Right IV Pole Support	1
4	64-1225	IV Pole Plastic Support	2
5	QDF5073	2-Stage IV Pole	2
6	QE71-0246-T	Warning Sticker	2
8	VB15A1O32-S	Bolt, 5/16"-18 x 1"	2
9	VD60A1N1016-S	Shoulder Bolt, 5/16"x 1/2"x 1/4-20	2
11	VV81A9E16-10	Phillips Head Tapping Screw #8 x 1/2"	2
12	QE14399-T	Manufacturer Sticker	1
13	VW10A10	Flat Washer, Diameter 5/16"	2
14	VV83A9E08	Phillips Head Tapping Screw #8 X 1/4"	4
15	64-1269C	Double IV Pole Support	2

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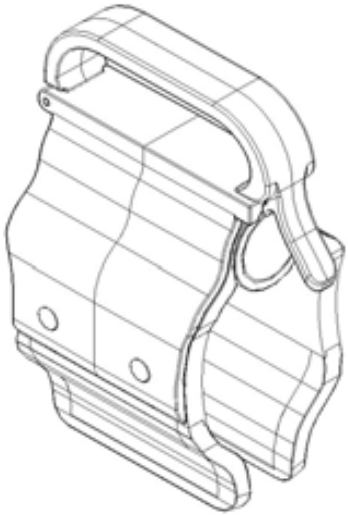
Line Management System Assembly - FA64210



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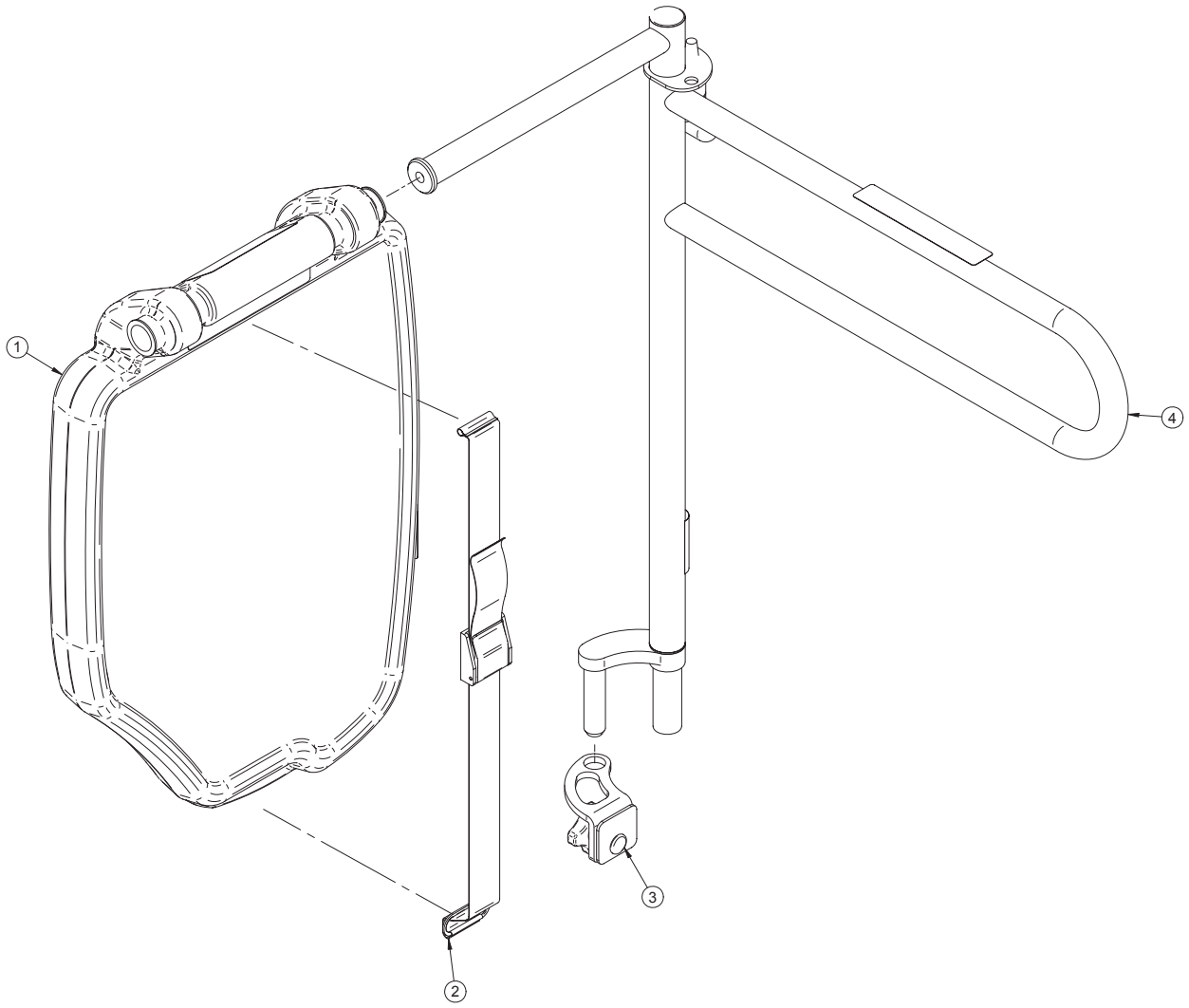
Monitor Tray Assembly - FA64214



Item	Part No.	Part Name	Qty.
1	QDF64-1300	Tray	1
2	QDF64-1301	Transport Strap	1
3	QDF64-1302	Fastener Sleeve	1
4	QDF64-1303T	Tray Support Pole	1

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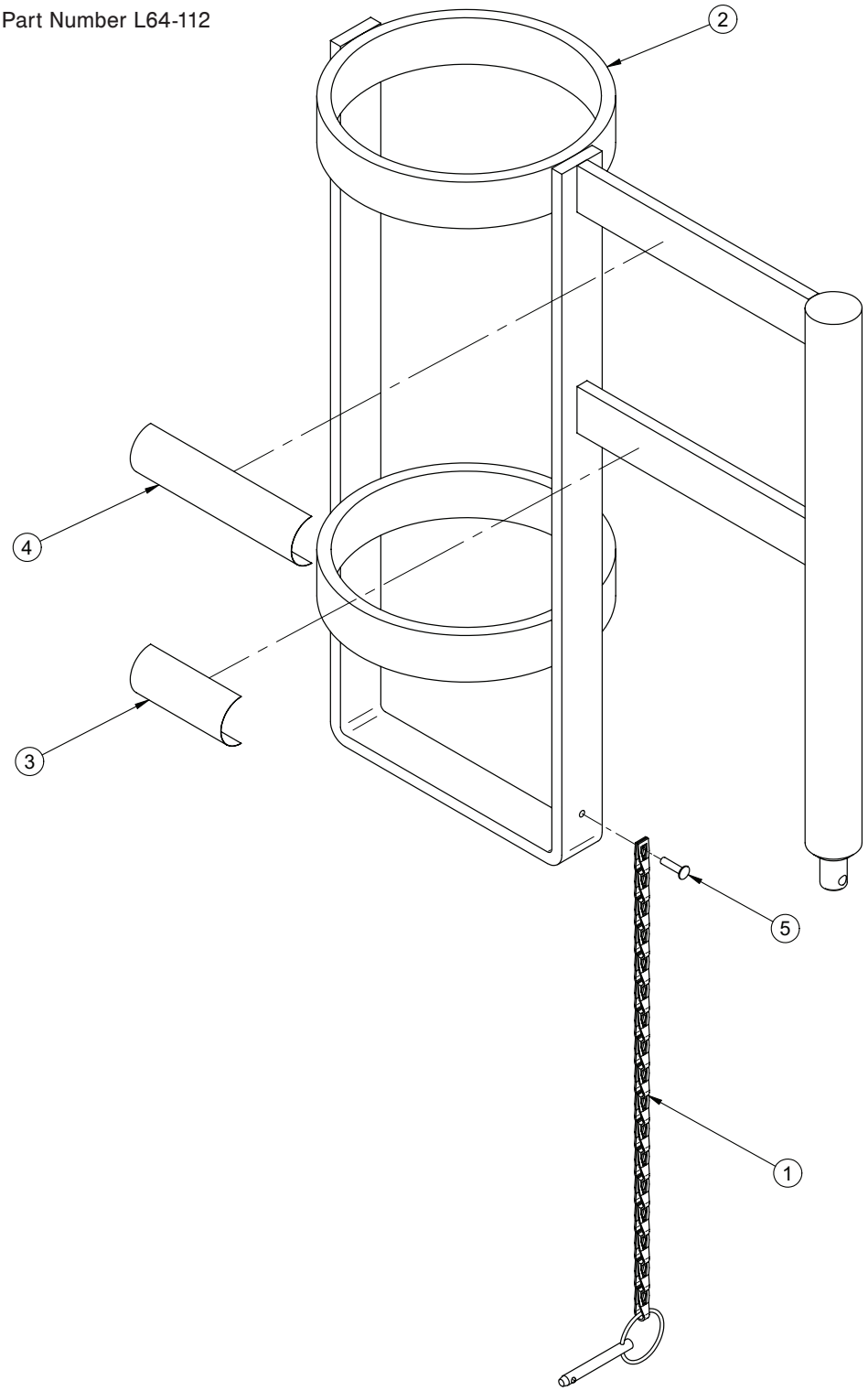
Upright Oxygen Bottle Holder Assembly - FA64187

For Reference Only: Part Number L64-112



Item	Part No.	Part Name	Qty.
A	64-0647	Security Chain	1
B	QDF64-1059	Bottle Holder	1
C	QE14399-T	Manufacturer Sticker	1
D	QE71-0601	Maximum Load Sticker	1
E	TBD	POP Rivet Diameter 1-8 Length .515 Dome Head	1

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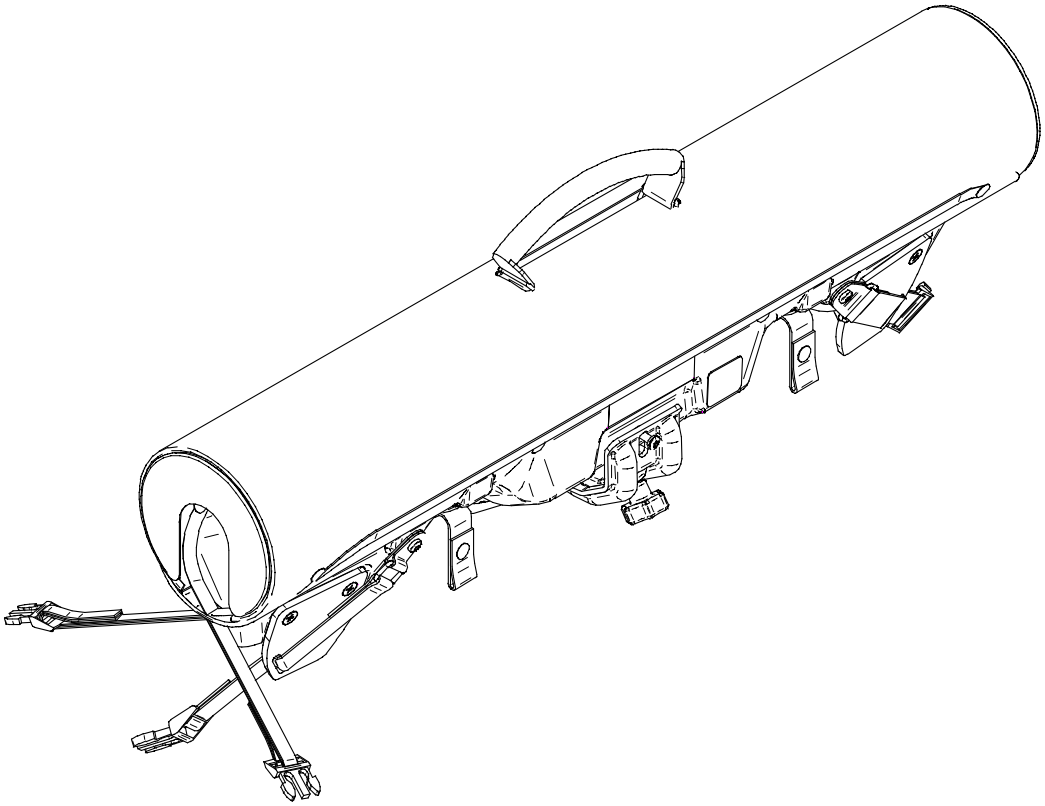
Right-Fit Oxygen Bottle Holder Assembly - FA64203



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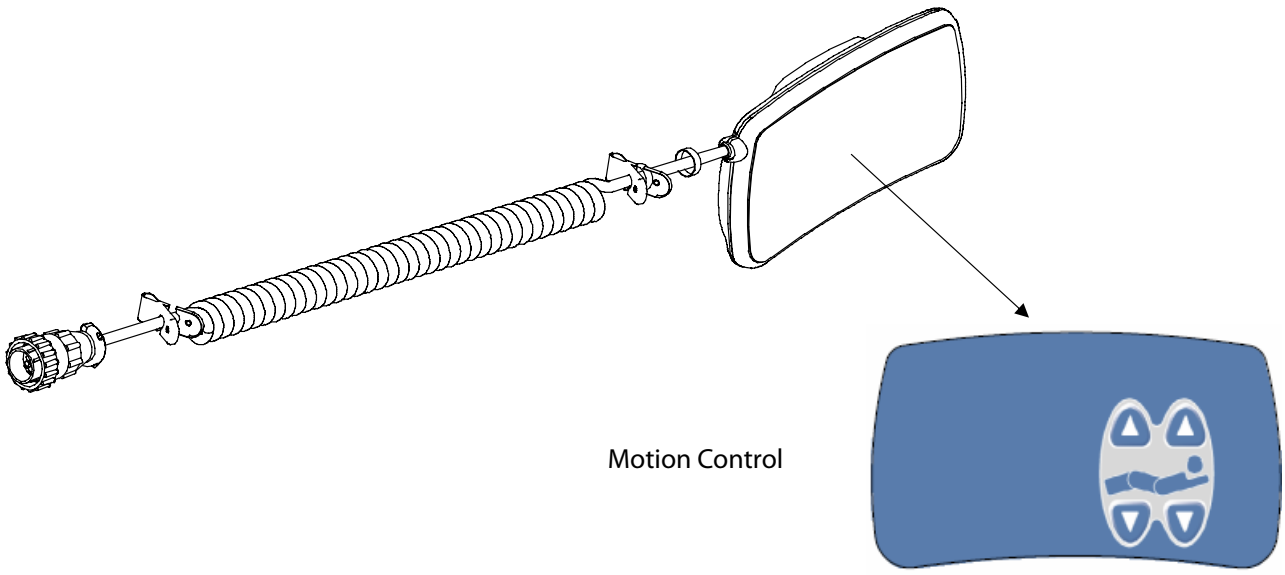
Pendant Assembly with Motion Control - FA64209

For Reference Only: Part Number L64-125



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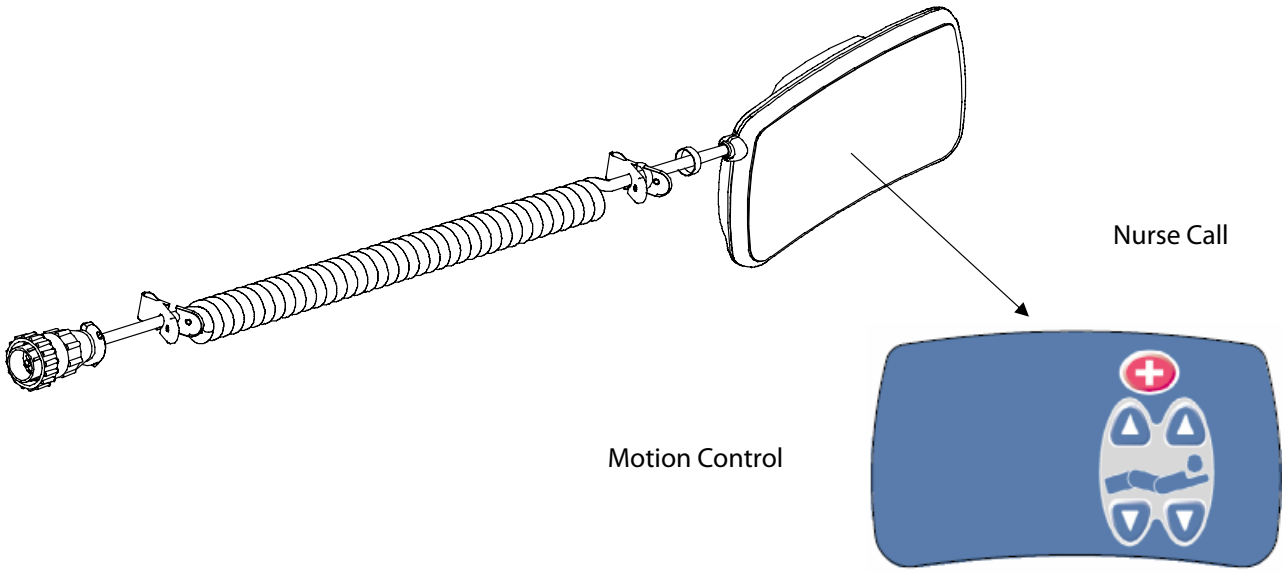
Pendant Assembly with Motion Control/NC - FA64194

For Reference Only: Part Number L64-118



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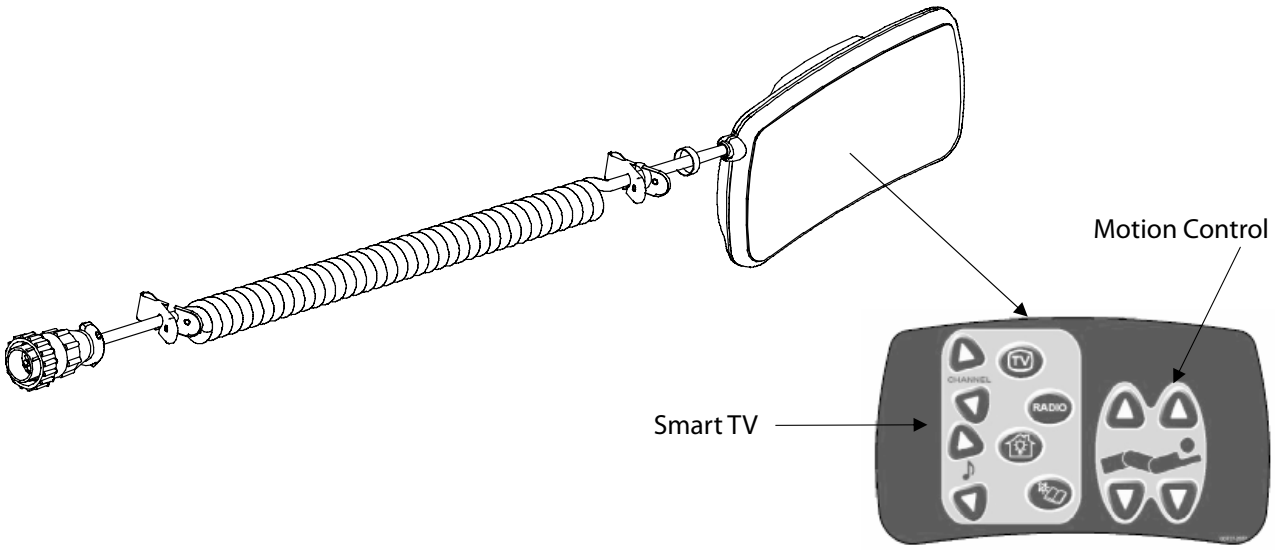
Pendant Assembly with Motion Control/Smart TV - FA64195

For Reference Only: Part Number L64-119



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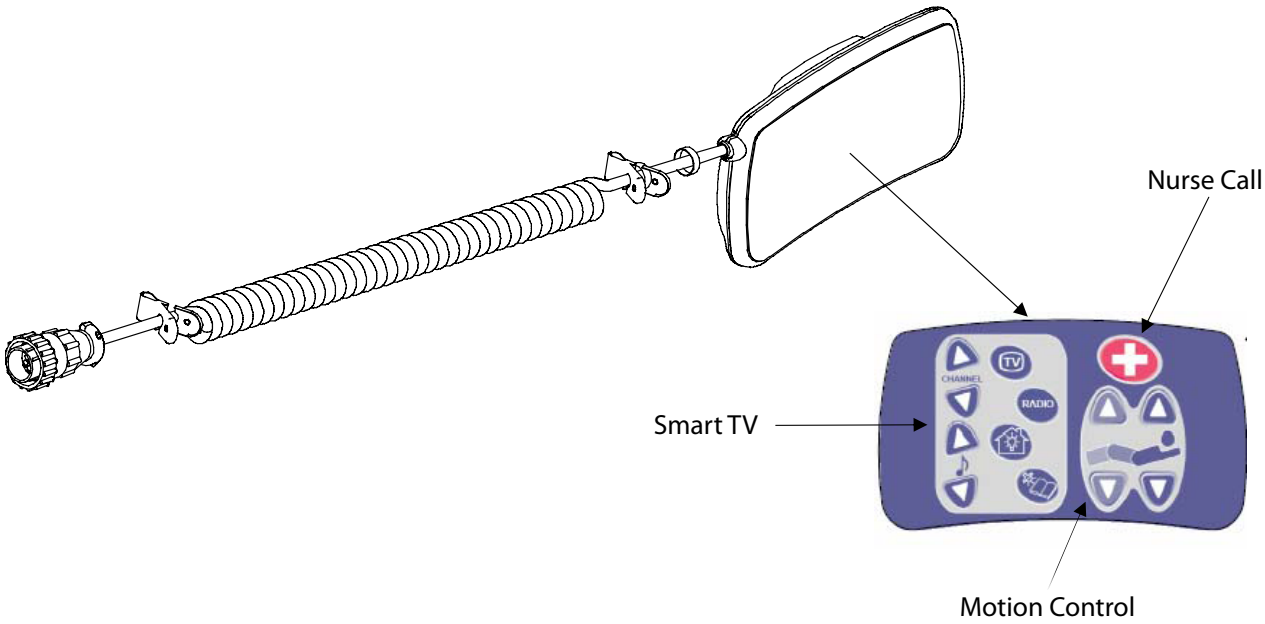
Pendant Assembly with Motion Control/NC/Smart TV - FA64193

For Reference Only: Part number L64-117



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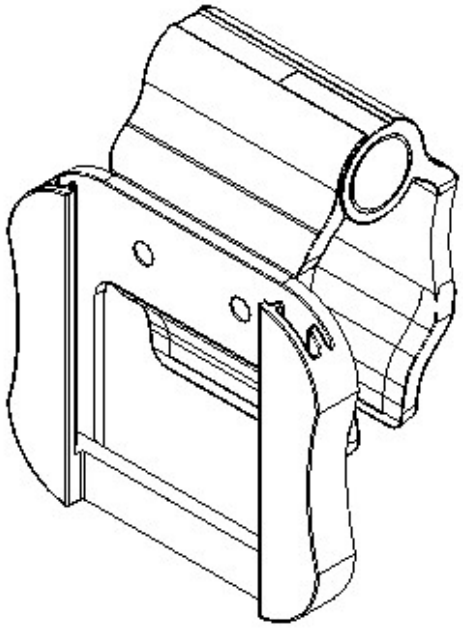
Pendant Clip Assembly - FA64186

For Reference Only: Part Number L64-111



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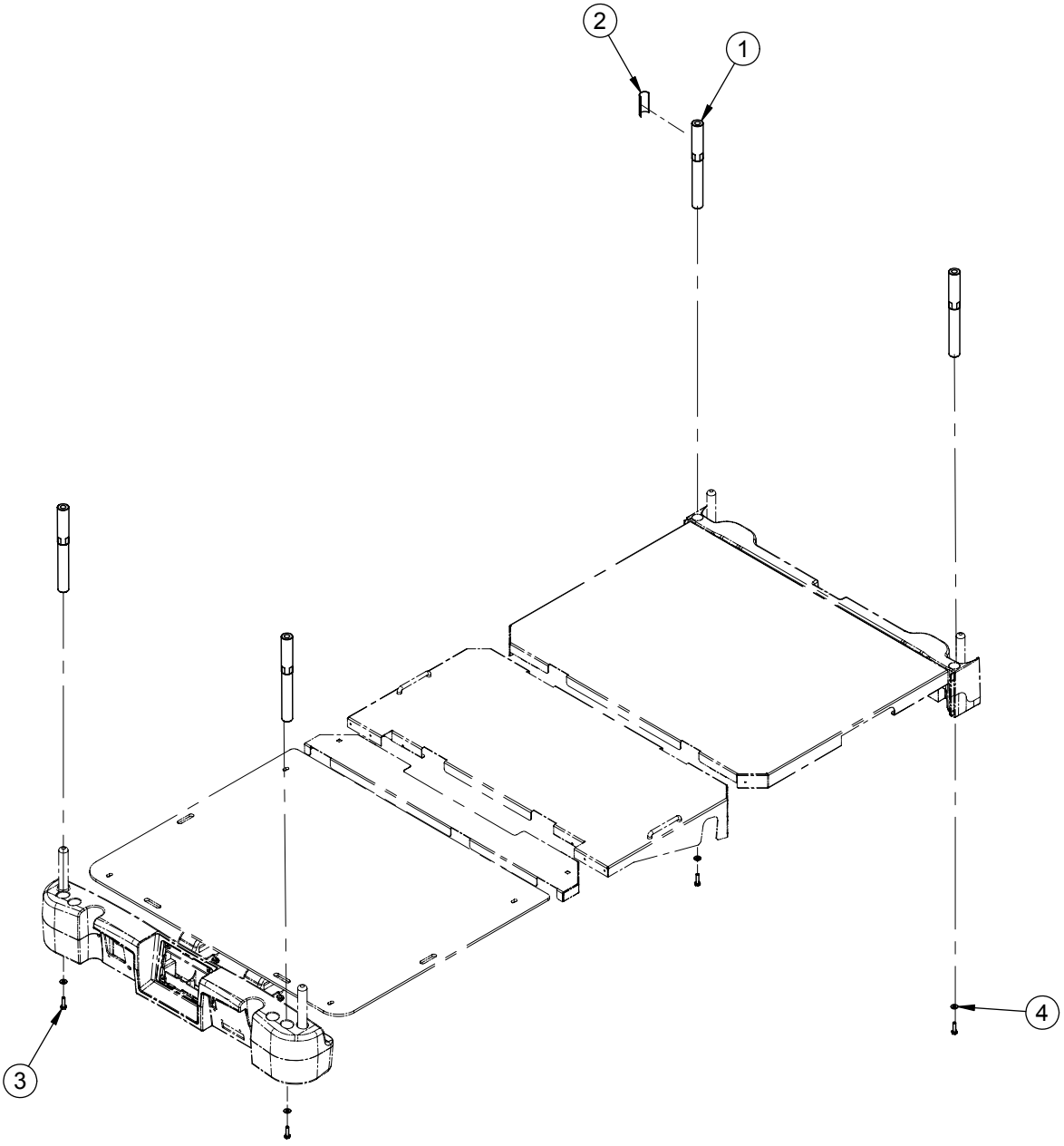
Traction Sleeve Assembly, 4” x 1/2” - FA64215



Item	Part No.	Part Name	Qty.
1	64-1262C	Traction Sleeve 4” x 1/2”	4
2	QE14399-T	Manufacturer’s Nameplate	1
3	VB15A1N32-S	1/4-20 x 1” Hex Bolt	4
4	VW10A08	1/4” Flat Washer	4

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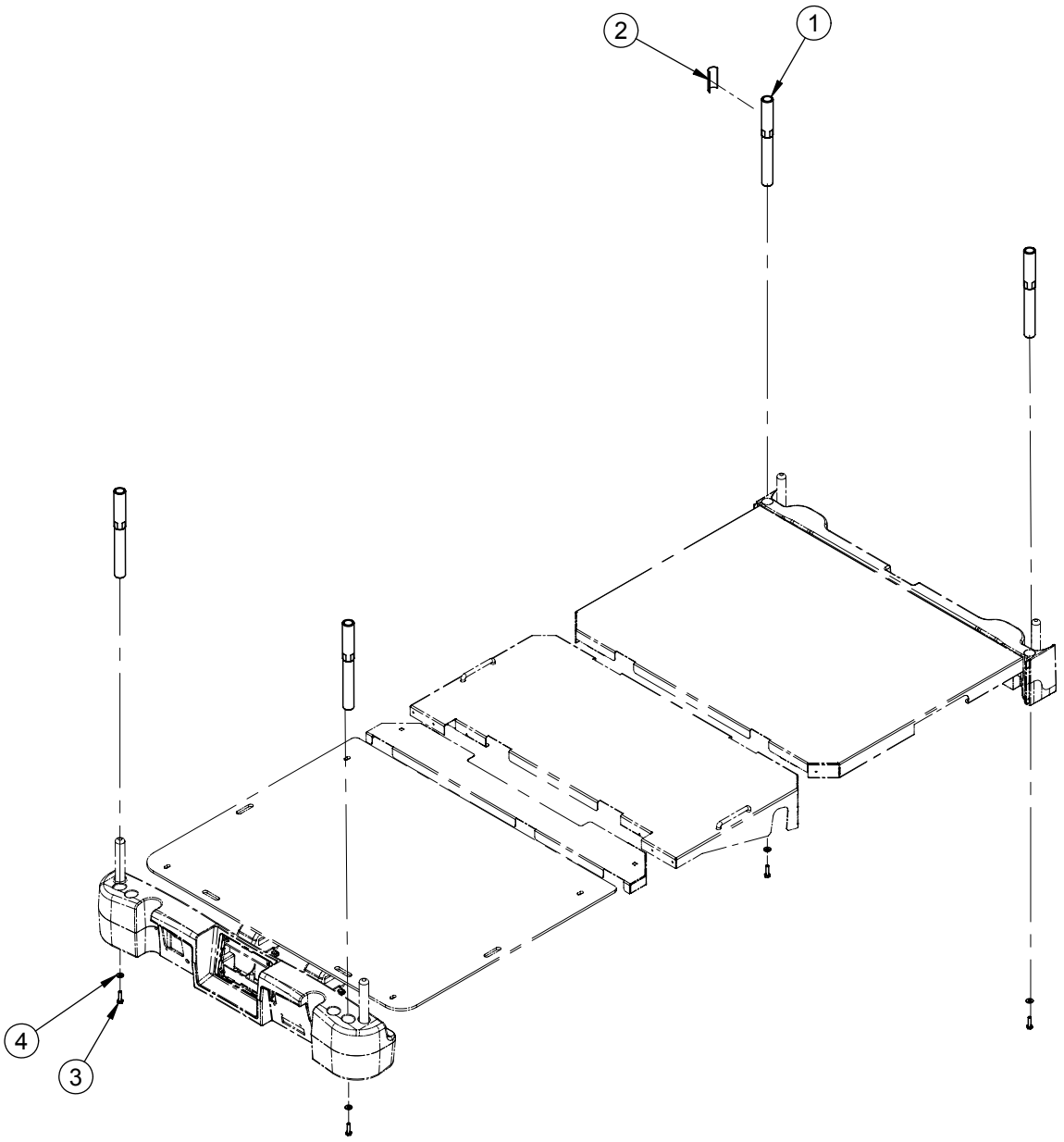
Traction Sleeve Assembly, 4” x 3/4” - FA64216



Item	Part No.	Part Name	Qty.
1	64-1263C	Traction Sleeve 4” x 3/4”	4
2	QE14399-T	Manufacturer’s Nameplate	1
3	VB15A1N32-S	1/4-20 x 1” Hex Bolt	4
4	VW10A08	1/4” Flat Washer	4

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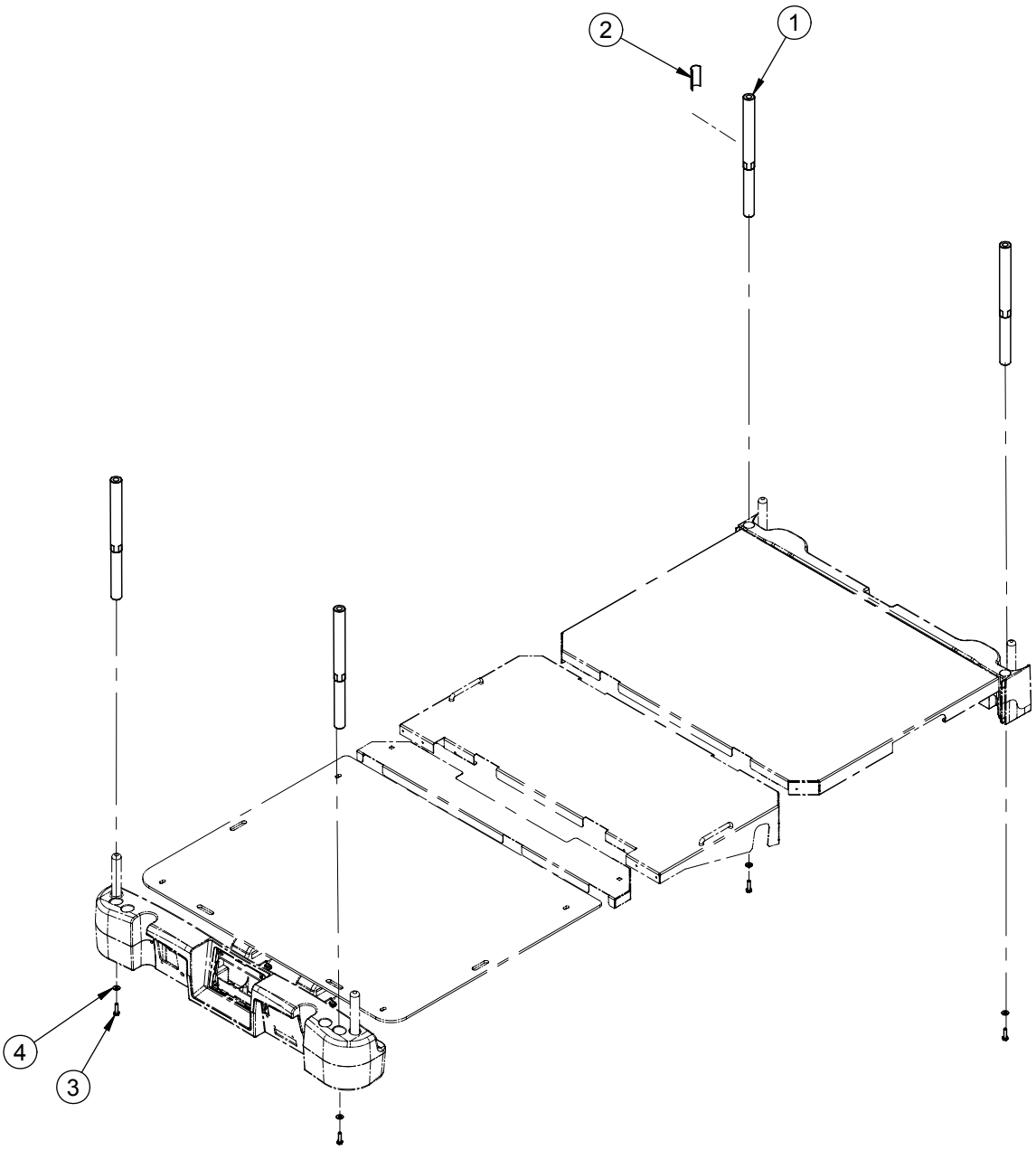
Traction Sleeve Assembly, 8” x 1/2” - FA64217



Item	Part No.	Part Name	Qty.
1	64-1264C	Traction Sleeve 8” x 1/2”	4
2	QE14399-T	Manufacturer’s Nameplate	1
3	VB15A1N32-S	1/4-20 x 1” Hex Bolt	4
4	VW10A08	1/4” Flat Washer	4

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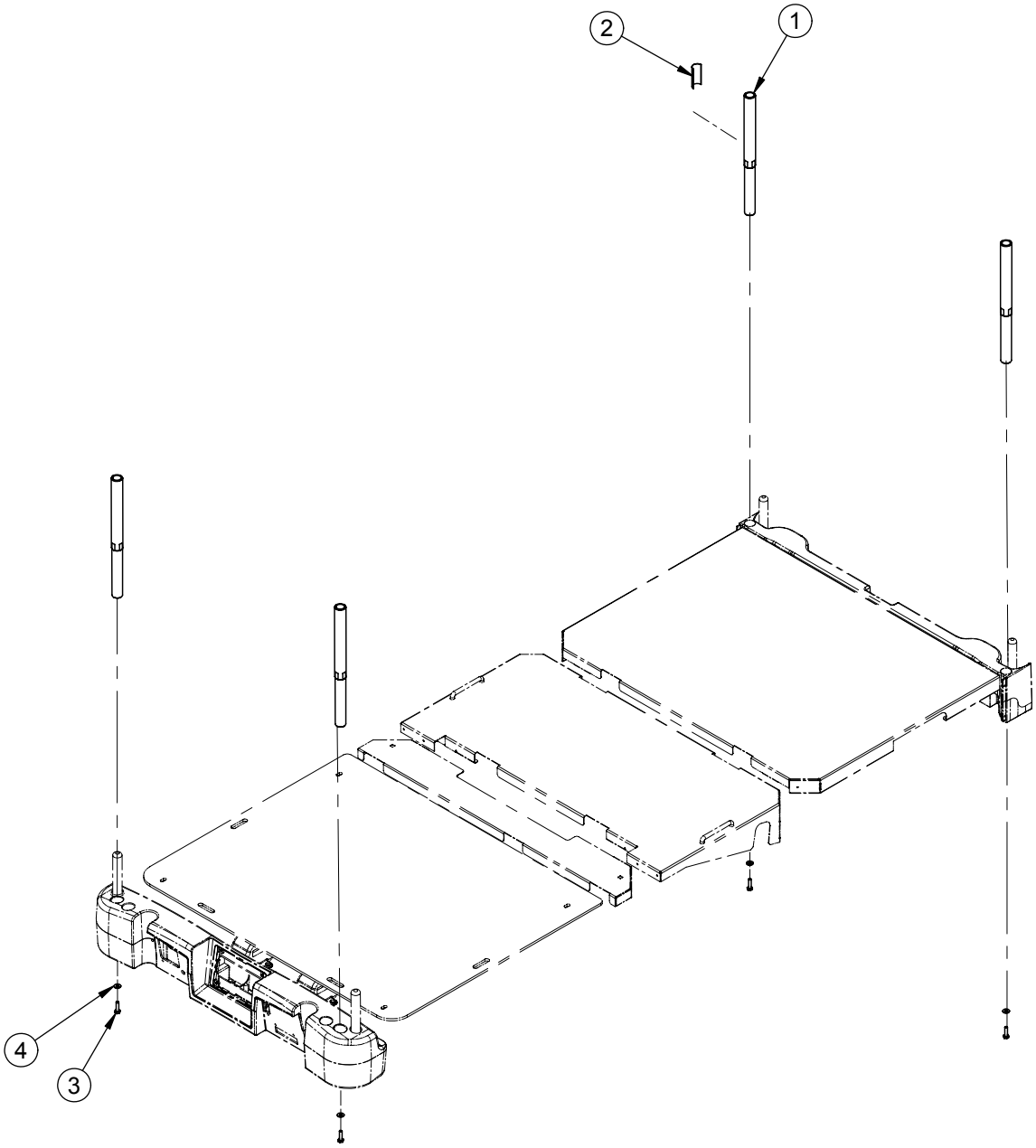
Traction Sleeve Assembly, 8” x 3/4” - FA64218



Item	Part No.	Part Name	Qty.
1	64-1265C	Traction Sleeve 8” x 3/4”	4
2	QE14399-T	Manufacturer’s Nameplate	1
3	VB15A1N32-S	1/4-20 x 1” Hex Bolt	4
4	VW10A08	1/4” Flat Washer	4

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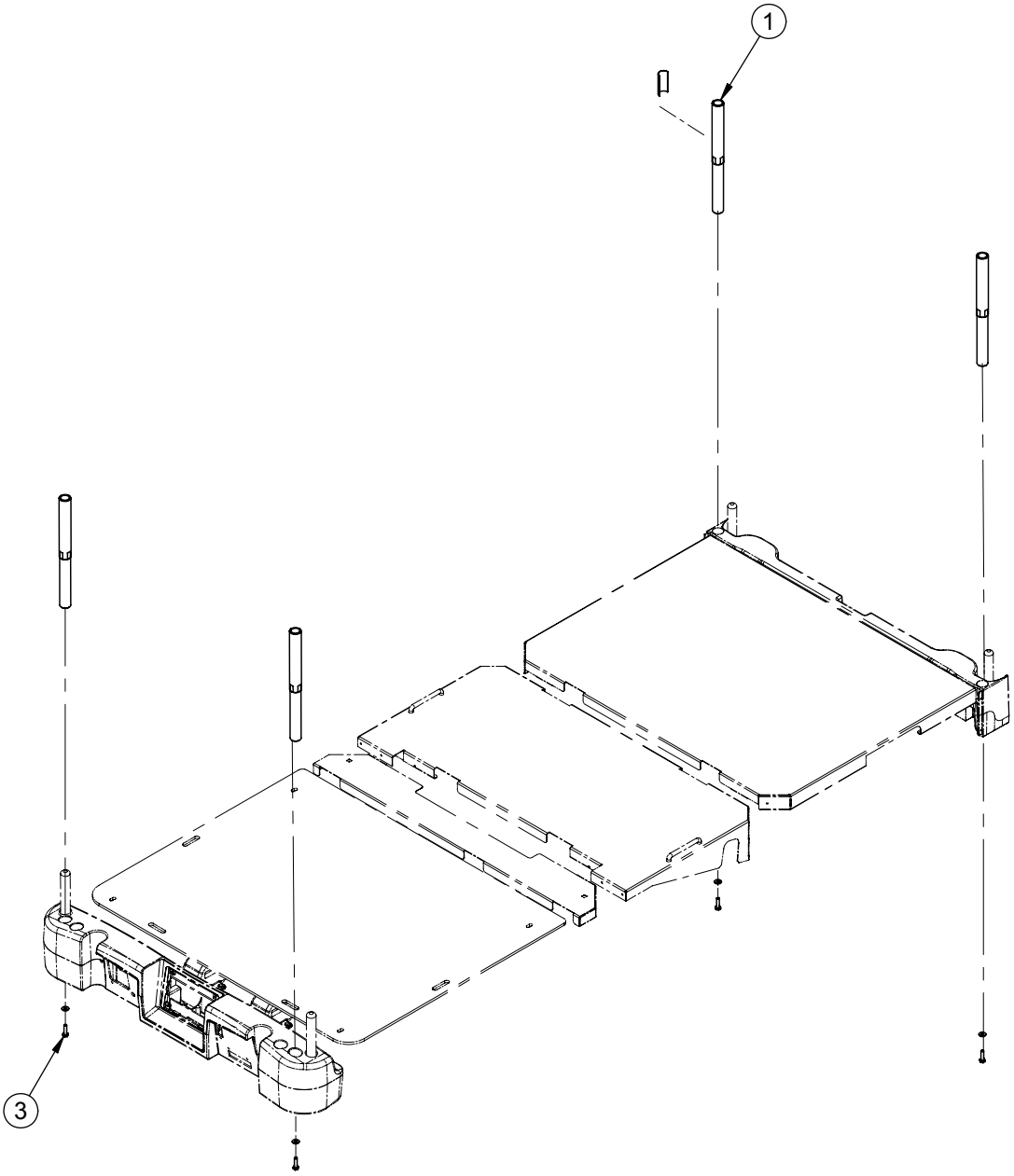
Traction Sleeve Assembly, 6-1/2” x 3/4” - FA64219



Item	Part No.	Part Name	Qty.
1	64-1266C	Traction Sleeve 6-1/2” x 3/4”	4
2	QE14399-T	Manufacturer’s Nameplate	1
3	VB15A1N32-S	1/4-20 x 1” Hex Bolt	4
4	VW10A08	1/4” Flat Washer	4

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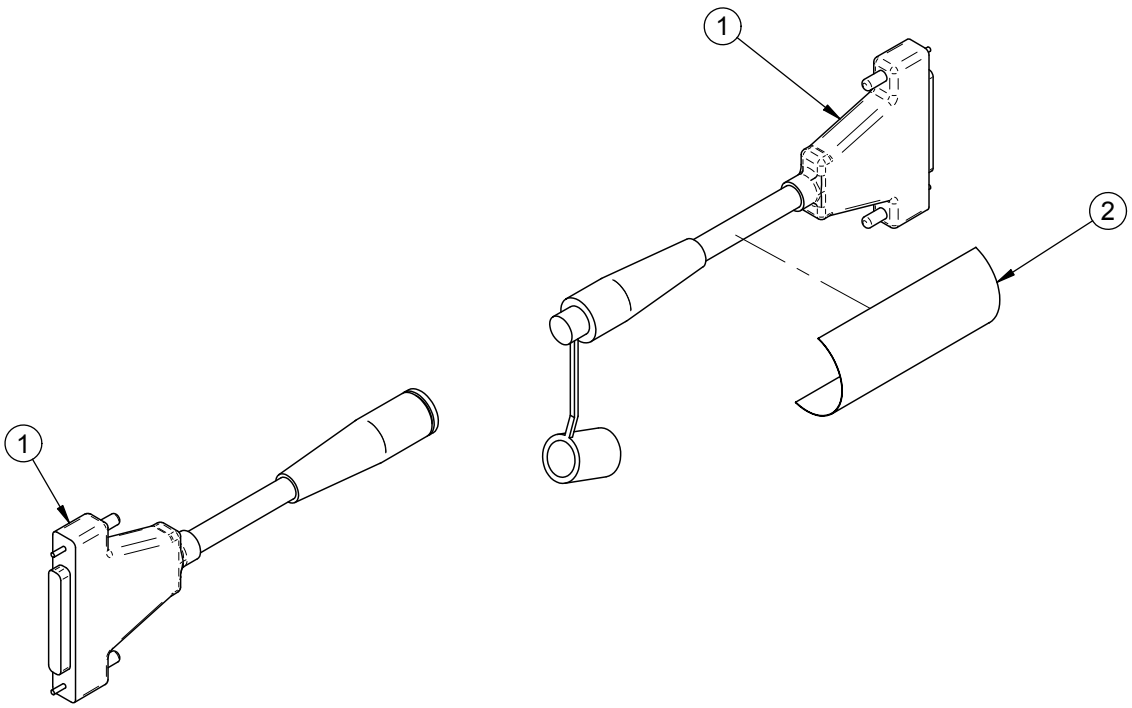
Wall Saver Cable Assembly - FA64208



Item	Part No.	Part Name	Qty.
1	QDF2111	Wall Saver	1
2	QE14399-T	Manufacturer's Nameplate	1

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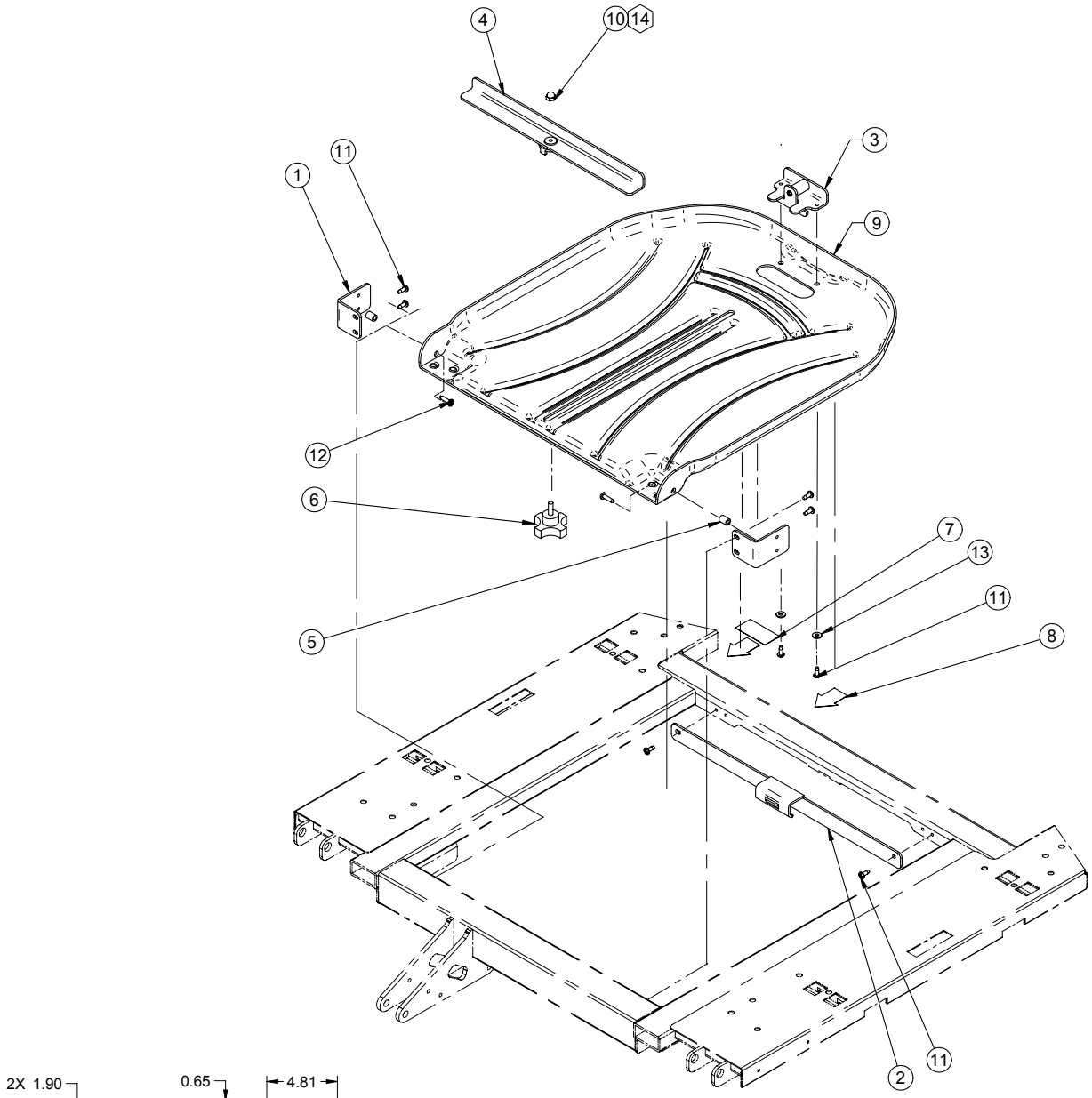
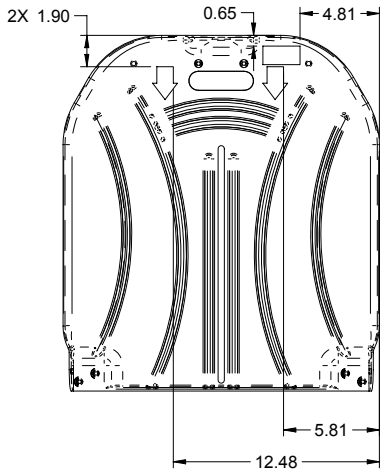
X-Ray Cassette Holder Assembly - FA64205

For Reference Only: Part Number L64-123





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Optional Fowler X-Ray Cassette Holder - FA64205

Item	Part No.	Part Name	Qty.
1	64-1199Z	Right Cassette Holder Pivot Point	2
2	64-1251P	Fastener	1
3	64-1255	Plunger	1
4	64-1260Z	Cassette Support	1
5	64-1276	X-Ray Cassette Support Spacer	2
6	QDF2093	X-Ray Cassette Manual Tightening Screw	1
7	QE14399-T	Manufacturer Sticker	1
8	QE71-1080	X-Ray Cassette Handle Sticker	2
9	QP64-1185	X-Ray Cassette for Plate	1
10	VE40A1N	Cap Nut 1/4-20	1
11	VV83A9G16	Phillips Head Tapping Screw, #10 x 1/2”	8
12	VV83A9G24	Phillips Head Tapping Screw, #10 x 3/4”	2
13	VW10A06	Flat Washer #10	2
14*	M0008	Threadlocker – Medium Strength (Blue)	-

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LIMITED WARRANTY

Stryker Medical Division, a division of Stryker Corporation, warrants to the original purchaser the *In*Touch™ Critical Care Bed, Model FL27 (2130/2140) be free from defects in material and workmanship for a period of one (1) years after date of delivery. Stryker's obligation under this warranty is expressly limited to supplying replacement parts and labor for, or replacing, at its option, any product which is, in the sole discretion of Stryker, found to be defective. If requested by Stryker, products or parts for which a warranty claim is made shall be returned prepaid to the factory. Any improper use or any alteration or repair by others in such manner as in Stryker's judgment affects the product materially and adversely shall void this warranty. Any repair of Stryker products using parts not provided or authorized by Stryker shall void this warranty. No employee or representative of Stryker is authorized to change this warranty in any way.

Stryker Medical bed products are designed for a 10 year expected service life under normal use, conditions, and with appropriate periodic maintenance as described in the maintenance manual for each device. Stryker warrants to the original purchaser that the welds on its bed products will be free from structural defects for the expected 10 year life of the bed product as long as the original purchaser owns the product.

This statement constitutes Stryker's entire warranty with respect to the aforesaid equipment. **Stryker makes no other warranty or representation, either expressed or implied, except as set forth herein. There is no warranty of merchantability and there are no warranties of fitness for any particular purpose. In no event shall Stryker be liable here under for incidental or consequential damages arising from or in any manner related to sales or use of any such equipment.**

TO OBTAIN PARTS AND SERVICE

Stryker products are supported by a nationwide network of dedicated Stryker Field Service Representatives. These representatives are factory trained, available locally, and carry a substantial spare parts inventory to minimize repair time. Simply call your local representative, or call Stryker Customer Service USA at 1-800-327–0770, Canada 1-888-233-6888.

SERVICE CONTRACT COVERAGE

Stryker has developed a comprehensive program of service contract options designed to keep your equipment operating at peak performance at the same time it eliminates unexpected costs. We recommend that these programs be activated before the expiration of the new product warranty to eliminate the potential of additional equipment upgrade charges.

A Service Contract helps to:

- Ensure equipment reliability
- Stabilize maintenance budgets
- Diminish downtime
- Establish documentation for JCAHO
- Increase product life
- Enhance trade-in value
- Address risk management and safety

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SERVICE CONTRACT PROGRAMS

Stryker offers the following service contract programs:

Service Agreement Options *	Gold	Silver	Parts	Labor	PM
Annually scheduled preventative maintenance	X				X
All parts	X	X	X		
All labor and travel	X	X		X	
Unlimited emergency service calls	X	X		X	
Priority one contact: two hour phone response	X	X	X	X	
Most repairs completed within 3 days	X	X		X	
JCAHO documentation	X	X		X	X
On-site record of PM & emergency service	X				X
Factory-trained Stryker service technician	X	X		X	X
Stryker authorized parts used	X	X	X	X	X
Service during regular business hours (8–5)	X	X	X	X	X

* Does not include maintenance due to abuse or for any disposable items. Stryker reserves the right to change options without notice.

Stryker Medical also offers personalized service contracts.
Pricing is determined by age, location, model and condition of product.

For more information on our service contracts,
please call your local representative.

RETURN AUTHORIZATION

Merchandise cannot be returned without approval from the Stryker Customer Service Department. An authorization number will be provided which must be printed on the returned merchandise. Stryker reserves the right to charge shipping and restocking fees on returned items. Special, modified, or discontinued, items not subject to return.

DAMAGED MERCHANDISE

ICC Regulations require that claims for damaged merchandise must be made with the carrier within fifteen (15) days of receipt of merchandise. **Do not accept damaged shipments unless such damage is noted on the delivery receipt at the time of receipt.** Upon prompt notification, Stryker will file a freight claim with the appropriate carrier for damages incurred. Claim will be limited in amount to the actual replacement cost. In the event that this information is not received by Stryker within the fifteen (15) day period following the delivery of the merchandise, or the damage was not noted on the delivery receipt at the time of receipt, the customer will be responsible for payment of the original invoice in full. Claims for any short shipment must be made within thirty (30) days of invoice.

INTERNATIONAL WARRANTY CLAUSE

This warranty reflects U.S. domestic policy. Warranty outside the U.S. may vary by country. Please contact your local Stryker Medical representative for additional information.

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