DEL MEDICAL

VS300
Vertical Wallstand
Installation, Operation & Service Manual

P/N 8000-VS300

Revision: A, February 29, 2012

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Attention: Consult Accompanying Documents - As Applicable

Revision: A, February 29, 2012

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Safety Information

1.1 Introduction

The policy of Del Medical Inc. is to manufacture X-ray equipment that meets high standards of performance and reliability. We enforce strict quality control techniques to eliminate the potential for defects and hazards in our products.

This equipment provides a vertically adjustable film bucky or digital receptor carriage that positions a patient near an X-ray source to acquire X-ray images of the desired parts of a patient's anatomy. Use of this equipment in any other fashion may lead to serious personal injury.

The safety guidelines provided in this section of the manual are intended to educate the operator on all safety issues necessary to operate and maintain the wallstand in a safe manner.

1.2 Statement of Liability

To prevent excess radiation exposure to patient and operator from either primary or secondary radiation, this wallstand must be operated and serviced by trained personnel who are familiar with the safety precautions required. While this wallstand has been designed for safe operation, improper operation or carelessness may result in serious injury or damage to equipment. The manufacturer or its agents and representatives assume no responsibility for the following:

1. Injury or danger to any person from X-ray exposure.
2. Overexposure due to poor technique selection.
3. Injury or danger from improper use of the vertically adjustable carriage.
4. Problems or hazards resulting from failure to maintain the equipment as specified in the Periodic Maintenance chapter.
5. The wallstand has an estimated life of 10 years from point of purchase. This may vary depending on the (1) product use, (2) product maintenance, and (3) environmental conditions.
6. Equipment which has been tampered with or modified. Del Medical Inc. is not liable for any damage or injury arising from failure to follow the instructions and procedures provided within the manuals or associated informational material, or from user failure to use caution when installing, operating, adjusting, or servicing this equipment. Del Medical Inc. is not liable for damage or injury arising from the use of this product for any other use than that intended by the manufacturer.

1.3 Definitions

The table below defines the meaning of various symbols found on equipment labels.

	This warning symbol indicates a potential hazard to operators, service personnel or equipment. It indicates a requirement to refer to the accompanying documentation for details.
	This symbol indicates there is accessible dangerous voltage.
	This symbol identifies a protective earth terminal, or ground.
	This symbol states that this product is categorized as Type B. Type B is defined as: Equipment providing a particular degree of protection against electric shock, particularly regarding allowable leakage currents and reliability of the protective earth connection (if present).
	This symbol indicates that you must dispose of the VS300 Wallstand properly according to local laws and regulations. Because the VS300 contains electronic components, it must be disposed of separately from household waste. When the VS300 reaches its end of life, contact local authorities to learn about disposal and recycling options.

Table i-1: Definition of symbols found on device labels.

1.4 Safety Conventions Used in this Manual

Specific safety information is listed in this manual in the form of WARNING and CAUTION statements. Pay close attention to these statements - they contain important information on avoiding potential hazards to you or the equipment.

1.4.1 Warning Statements:

- Indicate hazards or unsafe practices which COULD result in severe personal injury or death.
- Appear in **bold** type.
- Have a triangular symbol with an exclamation point above the text.
- Are preceded by the word **Warning**.
- Are always found before the step or piece of information to which they refer to.
- Look like the following example:

Warning

This text will describe special safety precautions to follow in order to avoid unsafe practices that COULD result in severe personal injury or death.

1.4.2 Caution Statements:

- Indicate hazards or unsafe practices which could result in minor personal injury or product/property damage.
- Appear in **bold** type.
- Have a triangular symbol with an exclamation point above the text.
- Are preceded by the word **Caution.**
- Are always found before the step or piece of information to which they refer
- Look like the following example:

Caution

This text will describe special safety precautions to follow in order to avoid unsafe practices that could result in personal injury or product or property damage.

1.5 Equipment Safety Guidelines

The following warnings and cautions are specific to the VS300 Wallstand. Read them carefully - some of them **are not obvious** to typical equipment use.

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside of the wallstand have power sources outside of the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

Warning

Do not operate the wallstand in an explosive atmosphere (such as anesthetic gas). Doing so can cause an explosion or fire hazard causing serious injury.

Warning

All of the movable assemblies and parts of this equipment should be operated with care and routinely inspected in accordance with the manufacturer's recommendations contained in this manual.

Only properly trained and qualified personnel should be permitted access to any internal parts. Live electrical terminals are deadly; be sure line disconnect switches are opened and other appropriate precautions are taken before opening access doors, removing enclosure panels, or attaching accessories.

Do not remove flexible high tension cables from X-ray tube housing or high-tension generator and/or access covers from X-ray generator until the main and auxiliary power supplies have been disconnected.

For all components of the equipment, protective earthing means must be provided in compliance with the national regulations.

Warning

This wallstand is intended to be used as part of a system for the intended generation of X-rays for medical diagnosis.

X-rays generate a potential risk for both patients and operators.

For this reason, the application of X-rays for a given medical purpose must aim at the minimization of radiation exposition to any persons.

Those persons responsible for the application must have the specific knowledge according to legal requirements and regulations and must establish safe exposure procedures for this kind of system.

Those persons responsible for the planning and installation of this equipment must observe the national regulations.

1.6 Identification Labels

The VS300 components have manufacturing and certification information affixed. The manufacturing label contains:

- The full name and address of the manufacturer of the component
- The place, month, and year of manufacture
- The model number and serial number of the component

The certification label also states that the component complies with either "21CFR, Sub chapter J" or the applicable DHHS standards under the Radiation Control for Health and Safety Act of 1968 (or its equivalent).

A label may combine both manufacturing and certification information.

1.6.1 VS300 Label

The location of the VS300 identification label is shown in Figure i-1.

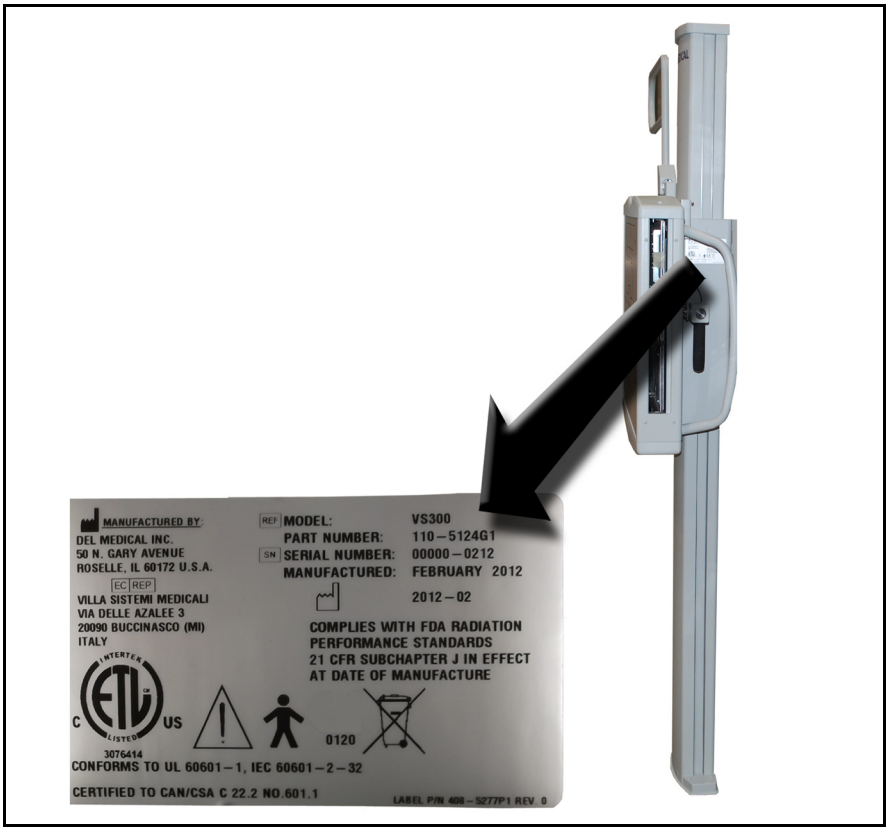

Figure i-1. VS300 Identification Label is located on the lower front of the wallstand.

Record of Revisions

2.1 Revision History

REV	Date	Reason for Change
A	**1-2-2012**	Original

Table ii-1. Revision History

2.2 List of Affected Pages

Number	Rev Level	Number	Rev Level	Number	Rev Level
All	**A**	**All**	**B**	**All**	**E**
All	**C**	**All**	**D**		

Table ii-2. List of Affected Pages

Introduction

1

1.1 Introduction

This manual provides installation, operation, and service information for the VS300 Wallstand equipped with casette tray.

This manual also includes a spare parts list for the wallstand.

The VS300 Wallstand is designed for general purpose radiography and is ideally suited for modern hospitals, urgent care centers, clinics, and private practices.

The VS300 features a smoothly counterbalanced cassette tray holder (bucky) that can be easily moved and locked into place manually. The VS300 offers a full range of motion, from standing knee exposures to standing head and neck exposures on the tallest of patients.

The VS300 also features a new"fail safe" lock release brake that allows the user to move the receptor vertically in the desired position.

The VS300 also offers the following options:

VS300 Wallstand with regular bucky, 110-5124G1

- True Speed Bucky
- Del Medical 17" X 17" (43 cm X 43 cm) Grid
- Automatic Exposure Control
- Positive Beam Limitation (Auto Cassette Size Sensing)
- Patient Hand Grip (Overhead Lateral)
- Full Line of High Quality Grids
- Floor Mount Kit
- Auto Tracking Kit

1.2 VS300 Wallstand Description

The VS300 Wallstand is designed for general purpose radiography and is ideally suited for modern hospitals, urgent care centers, clinics, and private practices.

The VS300 features a smoothly counterbalanced cassette tray holder (bucky) or digital receptor holder that can be easily moved and locked into place manually. The VS300 offers a full range of motion, from standing knee exposures to standing head and neck exposures on the tallest of patients.

The VS300 also offers the following options:

VS300 Wallstand with regular bucky, 110-5124G1

- True Speed Bucky
- Del Medical 17″ X 17″ (43 cm X 43 cm) Grid
- Automatic Exposure Control
- Positive Beam Limitation (Auto Cassette Size Sensing)
- Patient Hand Grip (Overhead Lateral)
- Full Line of High Quality Grids
- Floor Mount Kit
- Any 14x17 Tethered or Wireless Panels
- Auto Tracking Kit

VS300 Wallstand with digital receptor Varian Paxscan 4343R 110-5124G9

- Automatic Exposure Control
- Patient Hand Grip (Overhead Lateral)
- Full Line of High Quality Grids
- Floor Mount Kit
- Auto Tracking Kit

VS300 Wallstand with digital receptor Toshiba FDX 43412R 110-5124G9

- Automatic Exposure Control
- Patient Hand Grip (Overhead Lateral)
- Full Line of High Quality Grids
- Floor Mount Kit
- Auto Tracking Kit

1.3 VS300 Wallstand Overview

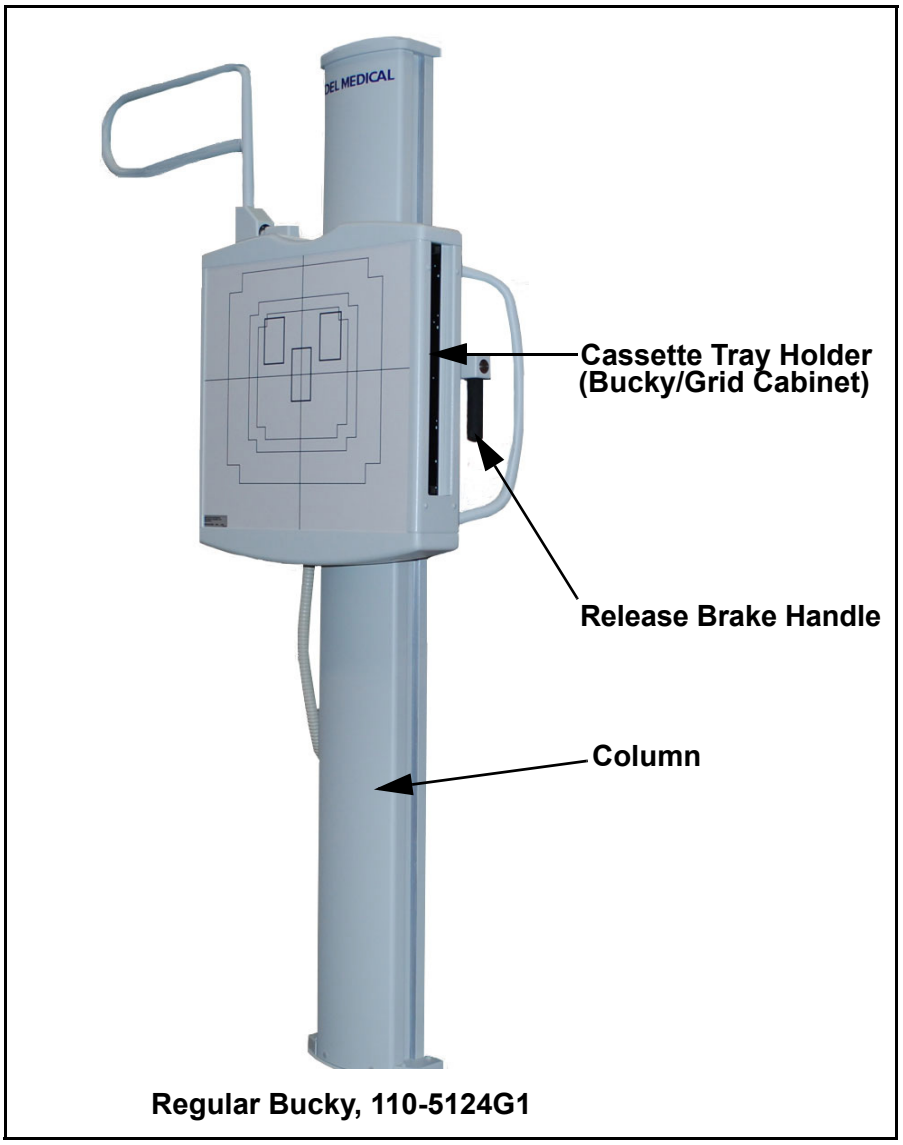

Figure 1-1. VS300 Wallstand

1.4 Dimensions

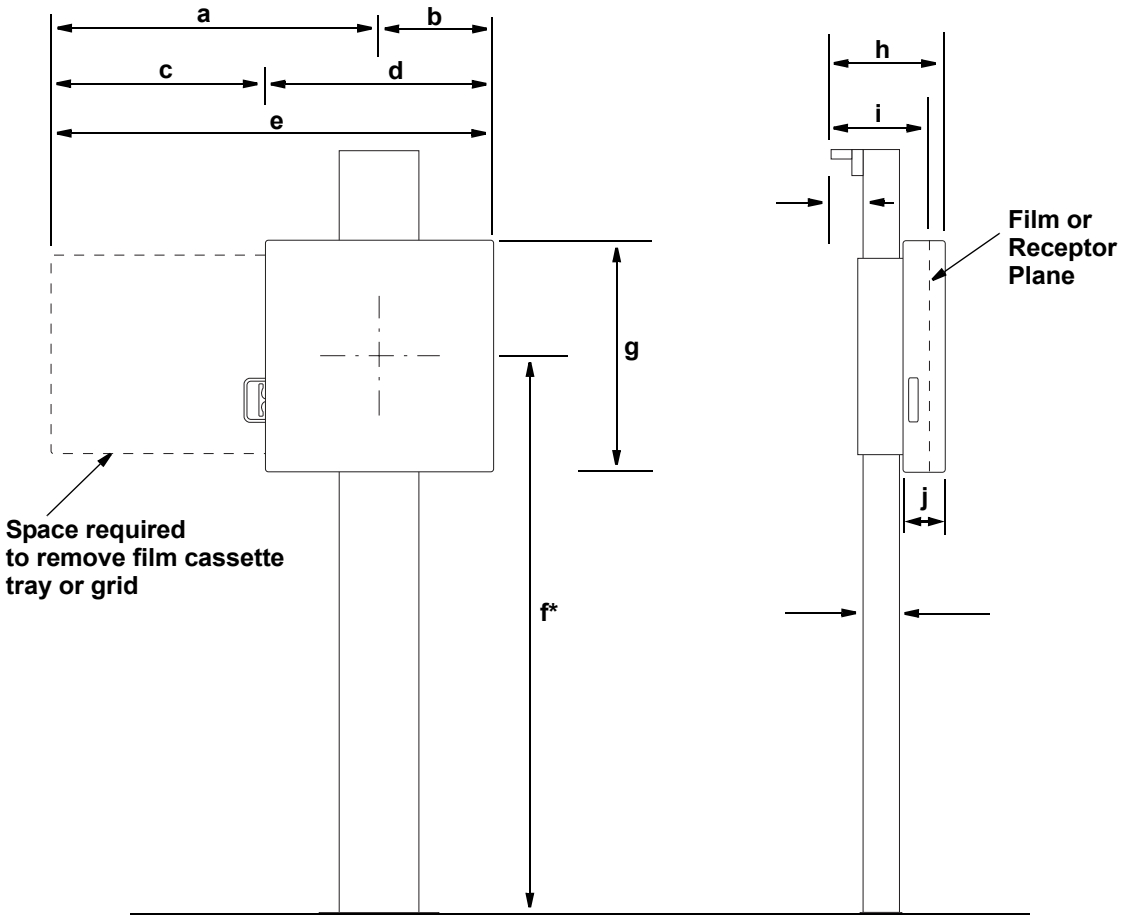

Figure 1-2. Film bucky/Digital receptor Space Requirements

Measure	Film bucky
a	40” (1020 mm)
b	12 3/16” (310 mm)
c	27 1/2” (699 mm)
d	24 3/8” (619 mm)
e	52” (1321 mm)
f *) see next page	15 7/8”-73 1/2” (403-1868 mm)
g	26 1/2” (673.1 mm)
h	13 3/8” (340 mm)
i	11 2/5” (289 mm)
j	5” (127 mm)

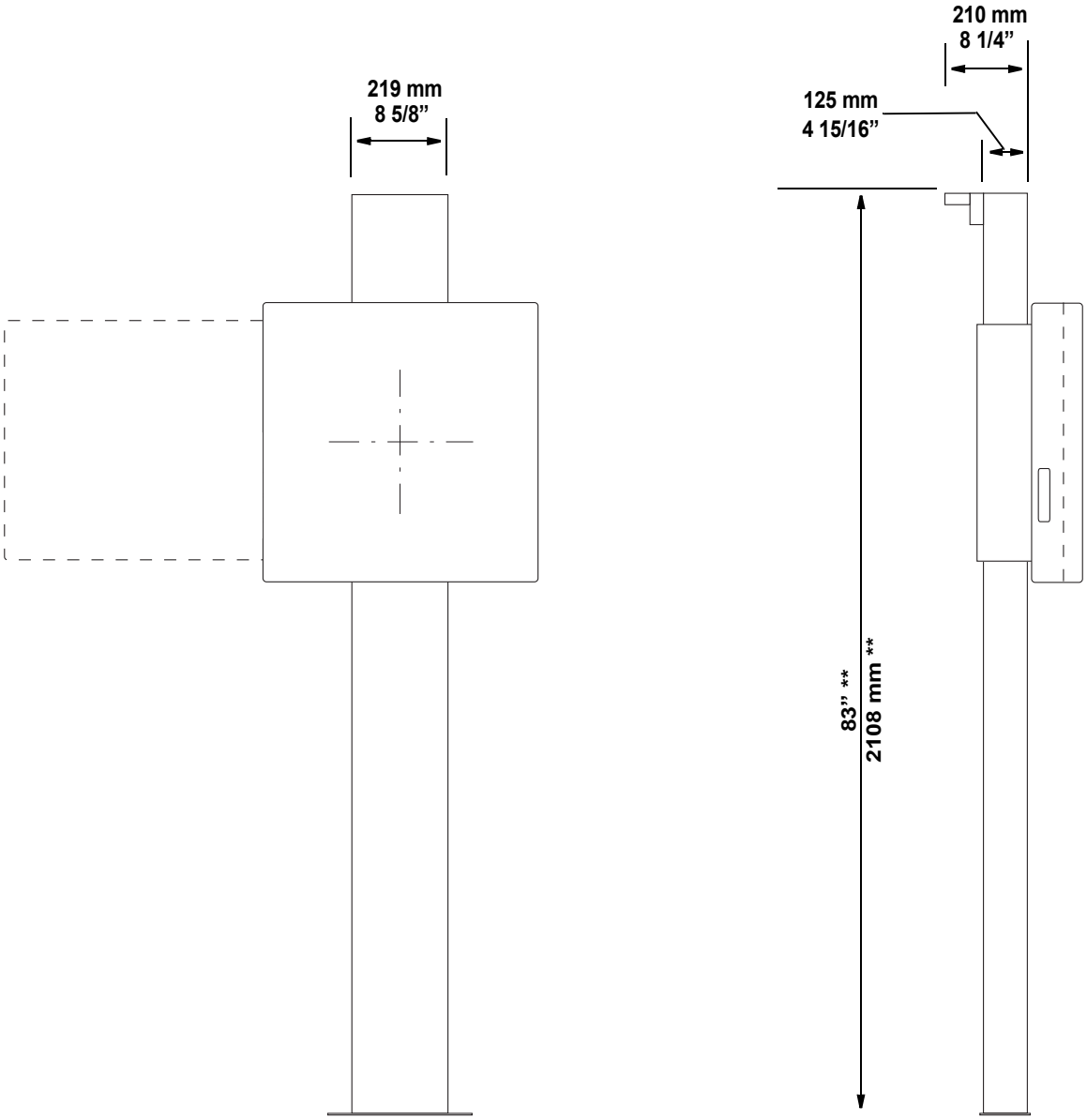

Figure 1-3. Wallstand Dimensions

** The overhead hand grip will increase the lowest position with the same measure as the thickness of the additional counterweights needed to compensate for the extra weight of the hand grip assembly.*

*** The overhead hand grip will increase the required height of the room. With the handle in its uppermost position the required free height will be 101” (2566 mm).*

1.5 Mounting Dimensions

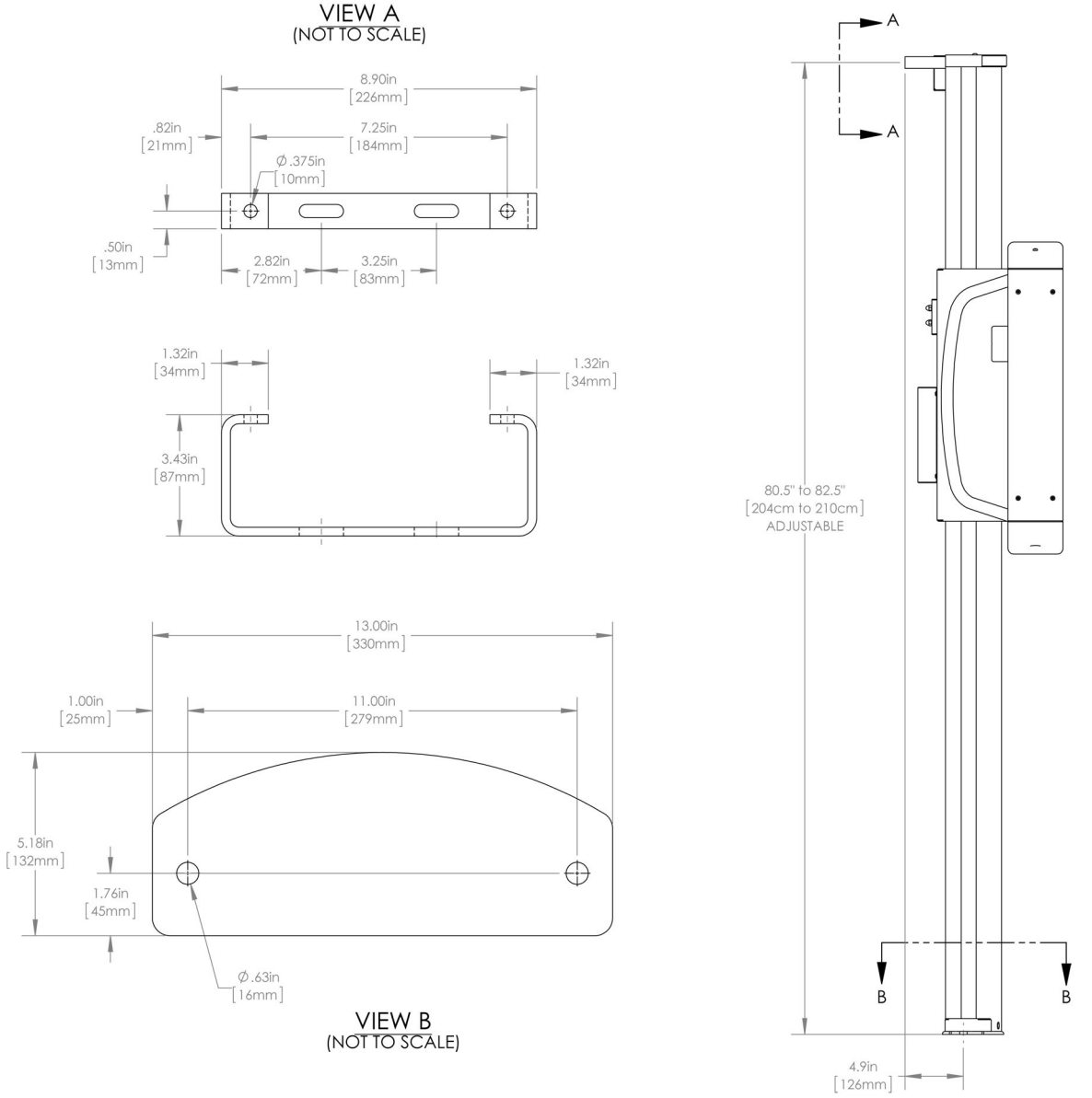

Figure 1-4. Mounting Dimensions

1.6 Specifications

Specifications*	
Compatibility	The VS300 wallstand is compatible with a wide variety of generators and tubestands. It is intended to be used in a stationary diagnostic X-ray configuration.
External Heat Generation	Minimal
Classification	Class 1 Type B
Aluminum Equivalent	Beam Attenuation of the wallstands front panel is 0.4 mm Aluminum Equivalent or Less
Temperature Limits	Transit/Storage Operating – 40° F to +158° F +50° F to +95° F – 40° C to +70° C +10° C to +35° C
Relative Humidity Limits	Transit/Storage 10% to 100% Operating 10%-80% Non-Condensing
Atmospheric Limits	14.5 inHg to 30.74 inHg 500 hPa to 1060 hPA
Weight (wallstand with regular bucky)	250 lbs (91 Kg)
Degree of protection against the ingress of water:	Ordinary
Power Requirements	24 V DC at 1.2 Amps
Certifications:	Classified To UL 60601-1,IEC60601-1, EN60601-1, IEC 60601-2-32, EN60601-2-32, IEC60601-1-3, EN60601-1-3. Certified To CAN/CSA C22.2 NO. 601.1.
Equipment not suitable for use in the presence of flammable anesthetic mixtures with air, oxygen or nitrous oxide.	
No user serviceable parts	

Table 1-1: Specifications

* Refer to the Digital Image Receptor Documentation for specifications on that portion of the VS300 Wallstand System.

1.7 Abbreviations

%	Percent
AWG	American Wire Gauge
Btu	British Thermal Unit
° C	Degree Celsius
CE	Communautés Européennes
cm	Centimeter
C.R.S.	Cold Rolled Steel
° F	Degree Fahrenheit
ga	Gauge
hPa	Hecto Pascal
inHg	Inches Mercury
Kg	Kilogram
Lb	Pound
M	Meter
max.	Maximum
min.	Minimum
mm	Millimeter
PBL	Positive Beam Limitation
Sq/Ft	Square Foot
Sq/M	Square Meter
UL	Underwriters Laboratories

1.8 Installation of Optional Kits

Optional kits are shipped with separate installation instructions; incorporate these installation instructions into this manual for future reference. Chapter 9, “Illustrated Parts List” lists the part numbers for the kit installation instructions should you need a copy.

1.8.1 Floor Mount Kit

The VS300 Floor Mount Kit enables a free standing VS300 wallstand mounted to the floor with no need for additional mounting to the wall.

Figure 1-5. Floor Mount Kit

1.8.2 Auto-Tracking Kit

The Auto-Tracking option allows an automatic alignment of the X-ray tube with the vertical movement of the wallstand. This option is only available with the motorized ceiling tube holders.

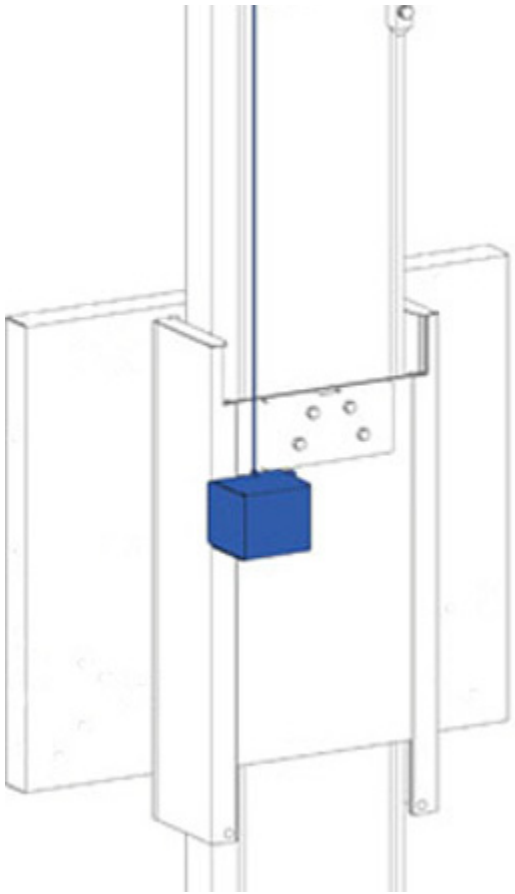

Figure 1-6. *Auto-Tracking*

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Installation

2

2.1 Pre-installation/ Pre-planning

2.1.1 Tools required

Installation of digital imaging receptors may require electronic equipment and tools not listed here. (See the digital receptor documentation for additional list of tools.)

- Diagonal cutters (side cutters)
- Four anchor inserts and bolts (for mounting base to floor) (size determined by installer)
- Medium phillips screwdriver
- Pencil
- Power drill and masonry bit (size determined by installer)
- Set of hex wrenches
- Set of open-end wrenches
- Small flat square or rectangular mirror
- Small flat-tip screwdriver

Note
Two people are required to perform wallstand installation procedures. This procedure assumes that your overhead crane or tubestand is already installed and its collimator can be turned on.

2.1.2 X-ray Room Pre-planning

Consult with the client and/or client physical plant superintendant prior to beginning installation to verify that the site has sufficient power, utility, Local Area Network, and infrastructure.

Use shipping order and any statement of work, job orders, client room drawings, or special written/unwritten requirements before beginning installation to determine site-specific requirements and client requests, or room workflow considerations that will need to be accommodated in the installation.

2.1.3 Planning / Orienting Release Brake Handle, Grid Door, and Imaging Cable

The X-ray room operators should be able to use the wallstand release brake handle and grid /receptor door from the same side, and there should always be sufficient space for the grid door /removable digital imaging receptor to be easily removed during normal room operation.

The left-right orientation of all the above should be appropriate for room workflow and consistent with the following planning considerations:

- Plan direction of power and signal cable, so that during normal workflow movements, persons or equipment in the room do not obstruct, impinge, kink, or crush cable.
- Avoid possible cable interference with wallstand movements.
- Provide sufficient cable slack to allow wallstand vertical movement.

2.1.4 Digital Imaging Receptor Door and Grid Positioning

Do not locate a wallstand near a corner where a wall or other obstructions would prevent an X-ray room operator from fully removing a grid or removable digital receptor.

When the uncrating procedure has been completed, examine the shipped wallstand and the digital receptor parts to determine if the wallstand release brake handle, grid door opening, and any removable digital receptors are directionally-oriented appropriate for the room workflow. If any of their orientation needs to be changed, see the manufacturer's specifications and installation manuals regarding whether left-right re-orientation changes can be made.

The VS300 wallstand Vertical Carriage and Frame assembly rear panels are designed symmetrically-mirrored to allow reversal of left-right orientation (See Section "Converting Left-Right/Right-Left Configurations" on page 5-4).

From room plans, client requests, or order specifications determine the left-right functional orientation requirements of the wallstand release brake handle and the digital receptor grid door opening. The release brake handle and grid door opening should be on the same side for the convenience of the operator.

If the received parts are oriented differently change their orientation to achieve the optimum room workflow efficiency, or ask permission from the client to move the wallstand mounting location.

Refer to the digital image receptor documentation for instructions on how to reverse receptor door and grid positions (if possible).

2.1.5 Uncrating / Shipment Checking

1 Use diagonal cutters to cut the steel straps (1 in Figure 2-1). Remove the straps and the top cover (2).

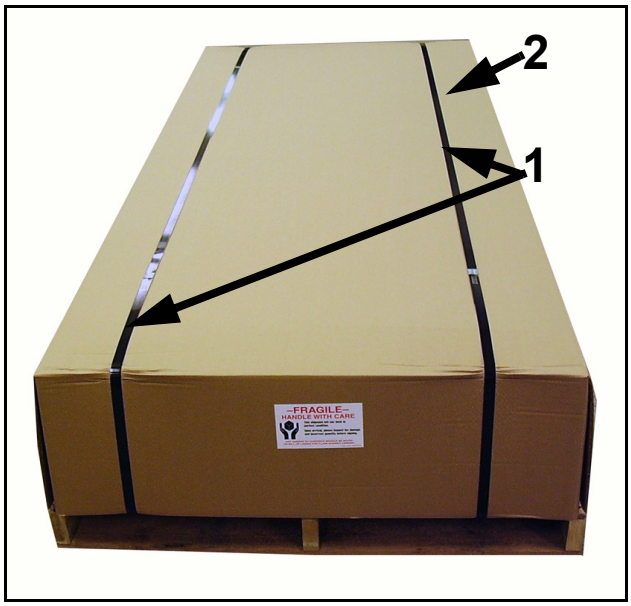


Figure 2-1. Steel Shipping Straps

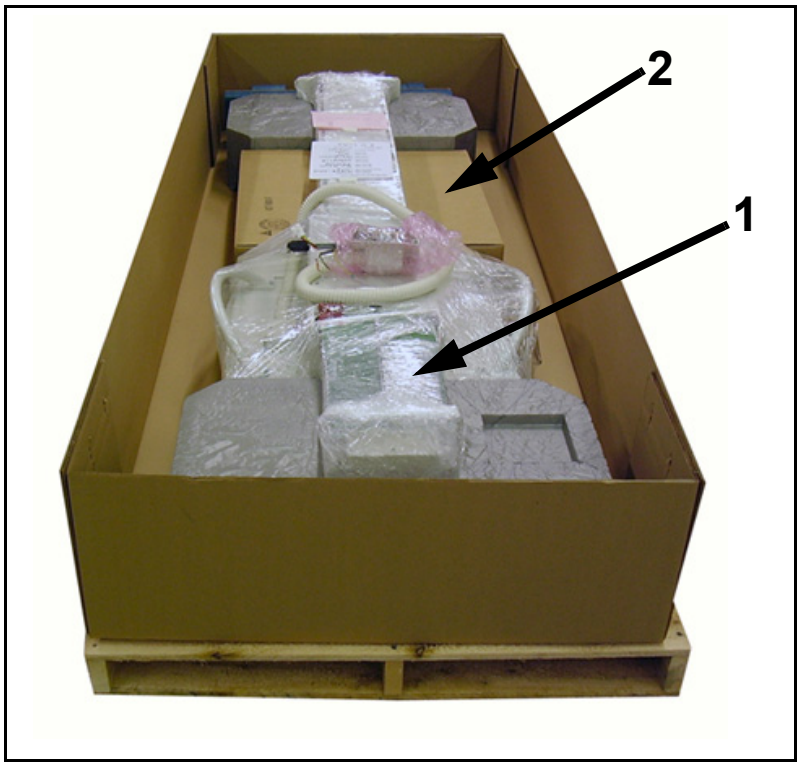


Figure 2-2. Unpacking Crate

2.2 Installation

1 Move the wallstand pallet to the approximate position where the wallstand will be installed.

Caution

The wallstand is heavy (250 lbs)[91 kg.] Two people are required to lift the wallstand.

2 Lift the wallstand (1 in Figure 2-2) out of the crate and lean it against the wall where you intend to install it.

3 Remove the shrink wrap plastic from the wallstand.

Note
If this wallstand is being installed as a free standing wallstand (installing with no support from a back wall), proceed with the installation instruction enclosed with the "VS300 Floor Mount Kit" before continuing.

4 Remove the accessories box (2 in Figure 2-2) from the crate. The crate contains the manuals and the bucky cable (for film-based systems). The digital receptor system is packaged separately.

Note
If this wallstand is being equipped with the VS300 Auto Tracking Kit, proceed with the installation instruction enclosed with the "VS300 Auto Tracking Kit" before continuing.

5 Move the wallstand to its final installation location. Have a second person hold the tubestand while the final alignment steps are being made.

6 Point the collimator towards the wallstand and turn the collimator's light on.

7 Insure the collimator beam alignment has been completed prior to final mounting of the wallstand.

8 Move the crane or tubestand so that the collimator's cross hairs of light align with the center line axis of the wallstand, and the crane or tubestand is approximately at its in-out mid-point from the wallstand. Release the positioning buttons to lock the crane into place. The collimator light will automatically shut off after 30 seconds - turn it back on as required.

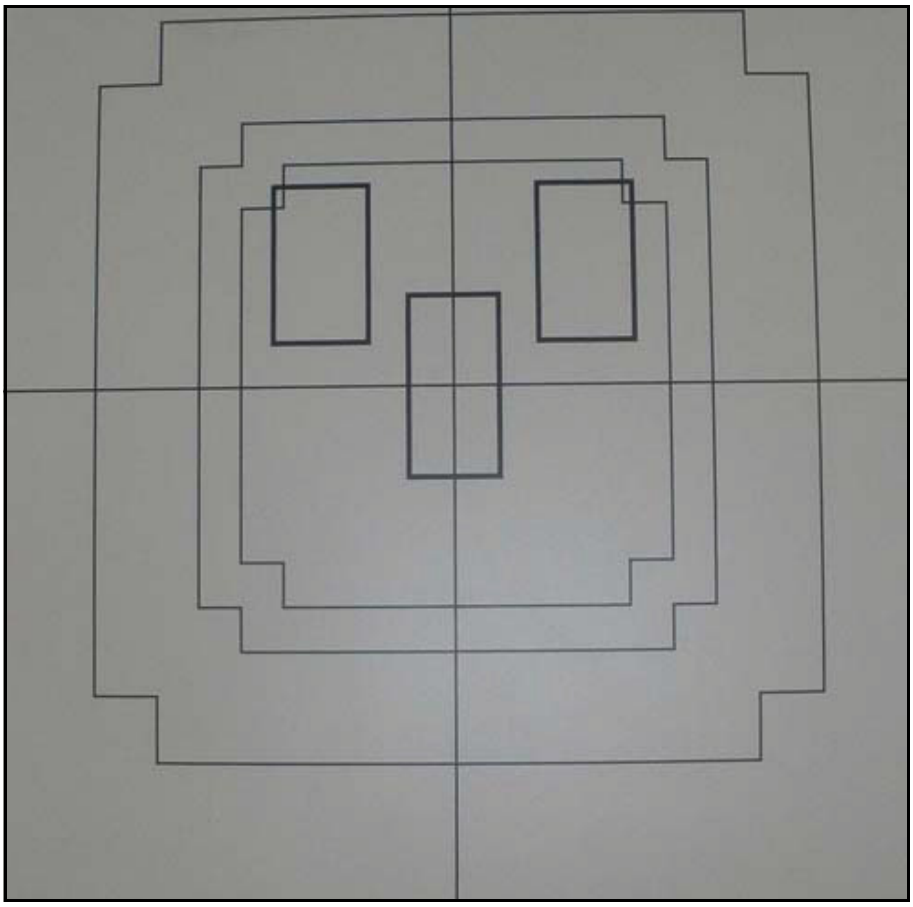


Figure 2-3. Typical Wallstand Alignment

9 If the pattern is tilted as shown below, add shims to the bottom of the wallstand until it is correct.

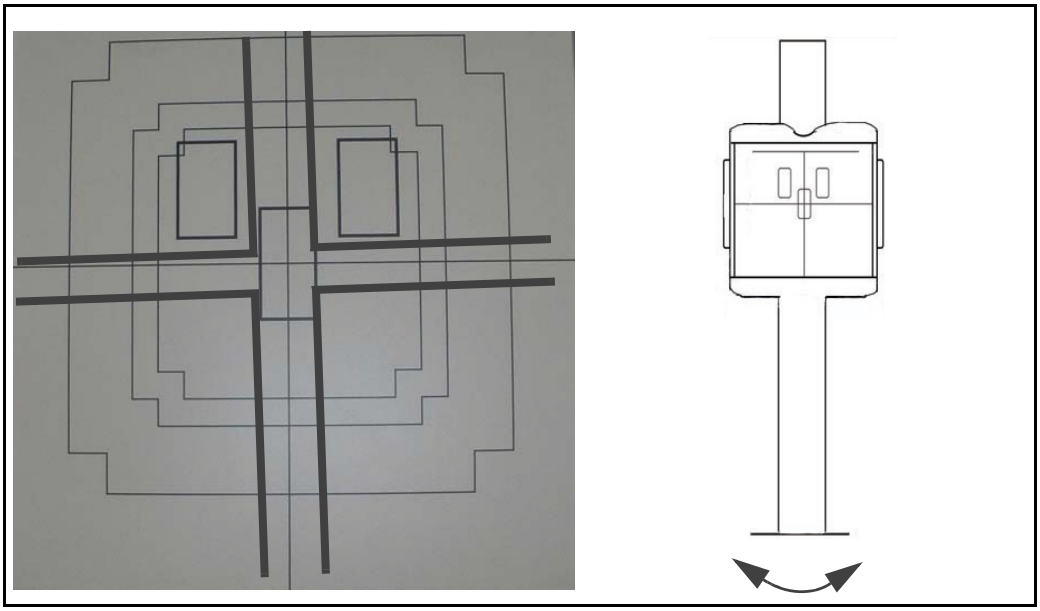


Figure 2-4. Tilted Pattern

10 With the collimator still pointed towards the wallstand, move the crane through its full in-out range of motion. If the collimator pattern shifts up and down as shown below, adjust the angle of the wallstand until this effect goes away.

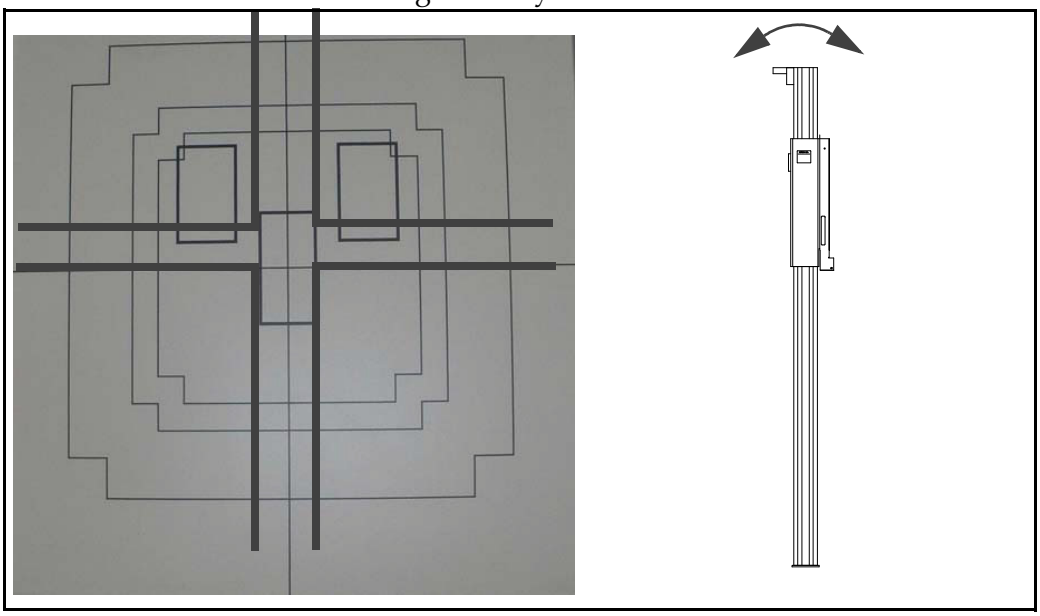


Figure 2-5. Up-Down Adjustment

Caution

It is very important that you do the following steps thoroughly and accurately or the grid in the wallstand will not work correctly. If the wallstand is not properly rotationally aligned with the x-ray tube, dark bands will appear on the film after exposure as shown below.

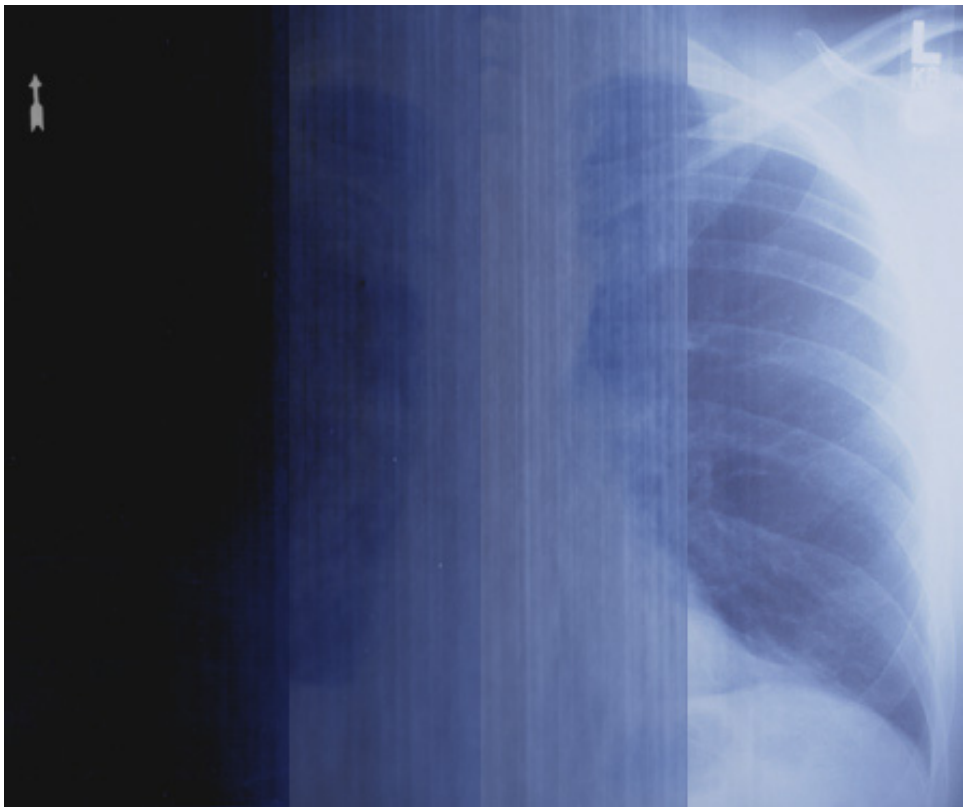


Figure 2-6. Effects of Improperly Aligned Wallstand

Read steps 11-15 before doing them.

11 Turn off room lights.

12 Turn on collimator light. Make sure the collimator pattern is centered on wallstand.

13 Place a mirror on the face of the wallstand just above its center line as shown in Figure 2-7. Make sure that the bottom of the mirror is parallel with the centerline and not crooked as shown in Figure 2-8.

Figure 2-7. Mirror Placement

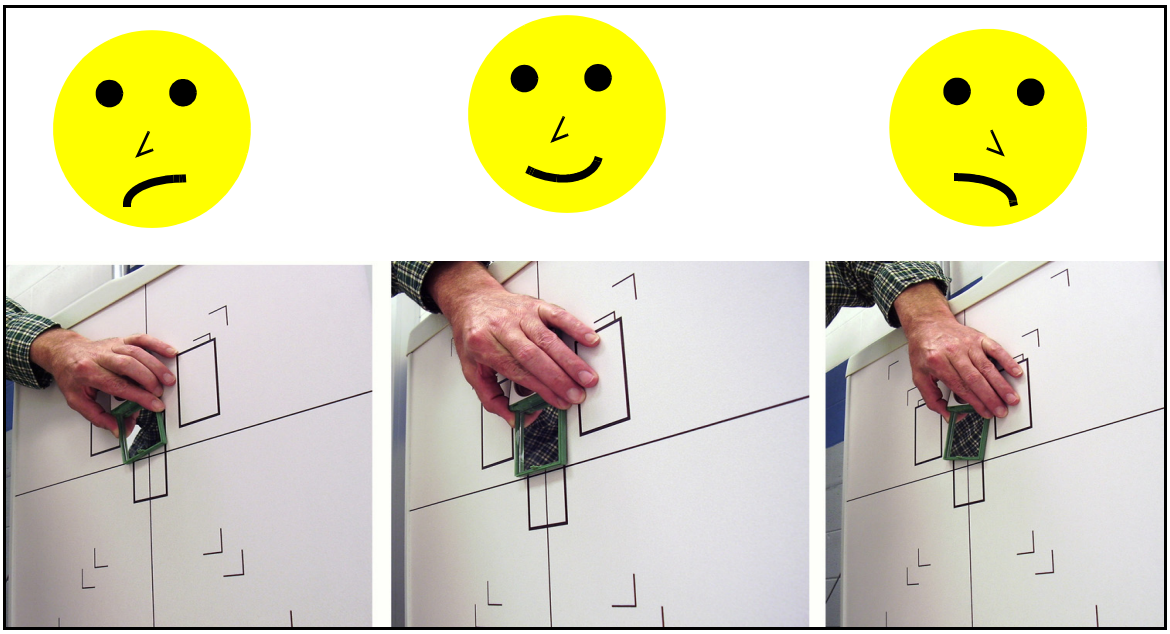


Figure 2-8. Proper Mirror Alignment

14 Observe the pattern reflection on face of collimator as shown in Figure 2-9. Adjust rotational position of wall stand until pattern is centered right- -to-left on collimator.

Figure 2-9. Pattern reflection

15 Adjust rotational position of the wallstand until the pattern is centered right-to-left on collimator.

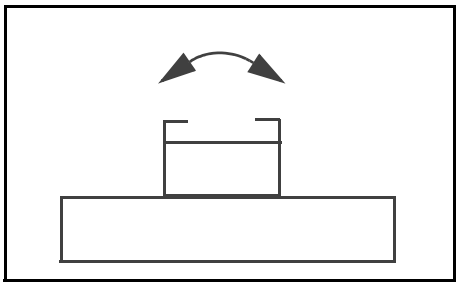


Figure 2-10. Rotational Adjustment

16 With the wallstand aligned in all of its axes, mark the mounting hole positions with pencil.

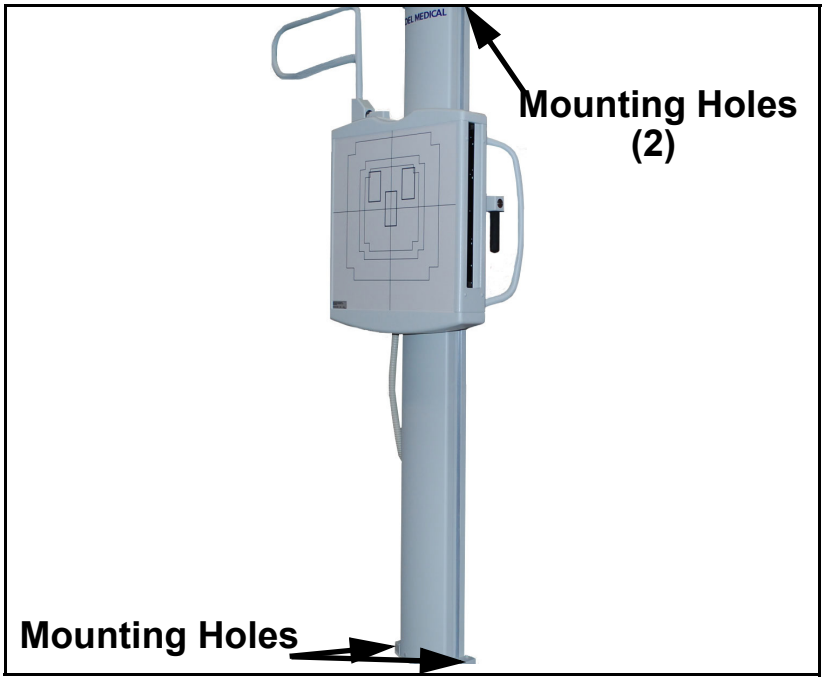


Figure 2-11. Mounting Holes

Caution

It is up to the installer and the customer to determine the best method for mounting the wallstand to the floor and wall. Before mounting the wallstand, consult with the building maintenance supervisor about drilling holes in floor and wall. Make sure that there are no hazards under the floor or behind the wall such as pipes, conduits, or structural cables that can be damaged by drilling holes in floor or wall.

17 Move wallstand out of the way.

Note
If this wallstand is being installed as a free standing wallstand (mounted with no support from a back wall), refer to the enclosed "VS300 Floor Mount Kit" Installation Instructions (chapter "Floor and Floor Fitting Requirements" on page 1-3).

18 Drill mounting holes and fit anchors into place.

19 Move the wallstand back into position.

20 Loosely install the mounting bolts.

21 Redo steps 7-15 and then securely tighten the mounting bolts.

22 Remove the shipping bolts (1 in Figure 2-12).

Figure 2-12. Shipping Bolts

23 Unscrew the bracket screw (1 in Figure 2-13) and remove the shipping bracket (2).

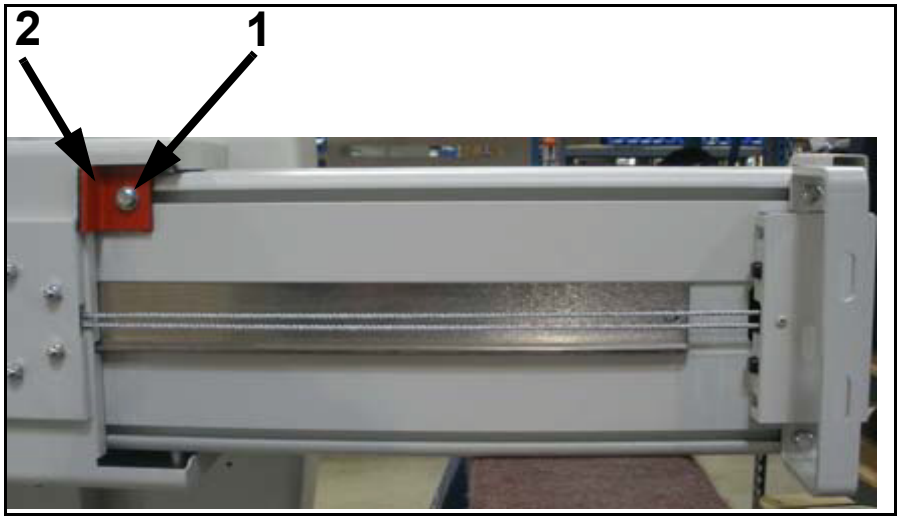


Figure 2-13. Shipping bracket

Vertical carriage locking bolt/bracket

24 If your wallstand does not have any options (no bucky, automatic exposure control, casette size sensing, or overhead lateral handgrip), then you are done. If your wallstand does have the mentioned options/ Digital Receptors Used on Wallstand, refer to Table 2-1 for guidance.

Option/ Digital Receptor	Refer to Section/Addendum:
Bucky	"Bucky Installation Instructions on page 2-12
Automatic Exposure Control	"Automatic Exposure Control Installation Instructions" on page 2-16
Automatic Cassette Size Sensing	"Automatic Cassette Size Sensing Installation Instructions" on page 2-19

Table 2-1: Options/ Digital Receptors Used on Wallstand

2.3 Bucky Installation Instructions

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Connect the wallstand bucky cable (1 in Figure 2-14) to the system bucky cable (2).

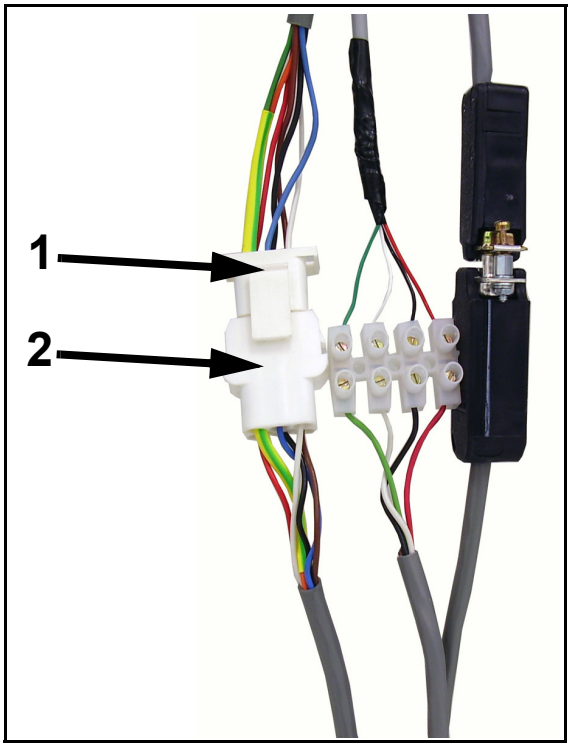


Figure 2-14. Bucky Cables

2 Connect other end of the bucky cable to the generator according to Table 2-2 below.

		Generator Terminal Connections		
Origin	**Color**	**Anthem**	**CPI CMP** **See Figure 2-15 on page 2-14**	***CPI Indico** **See Figure 2-16 on page 2-15**
1	Brown	TB4-2	J4-5	TB2-4
2	Black	TB4-4	J4-6	TB2-5
3	Red	TB4-1	J4-1	TB3-12
N	White	TB4-5	J4-4	TB7-2
B6 (Ground)	Yellow w/Green Stripe (Wires in Tubing are Green & Orange)	Ground	J4-3	Ground
B8 (L)	Blue	TB4-3	J4-2	TB2-1
*For CPI Indico generators, place a jumper between TB9-3 and TB11-2 and TB9-2 to TB 11-1. Also, place the jumper plug on JW3 and JW5 between terminals 4 and 6.				

Table 2-2: Bucky - Generator Connections

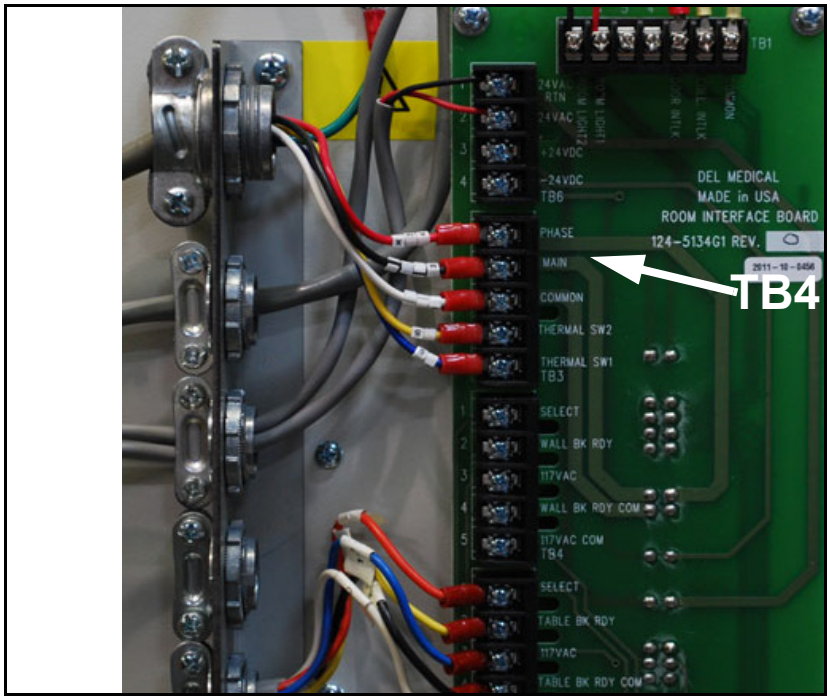


Figure 2-15. Anthem Terminals

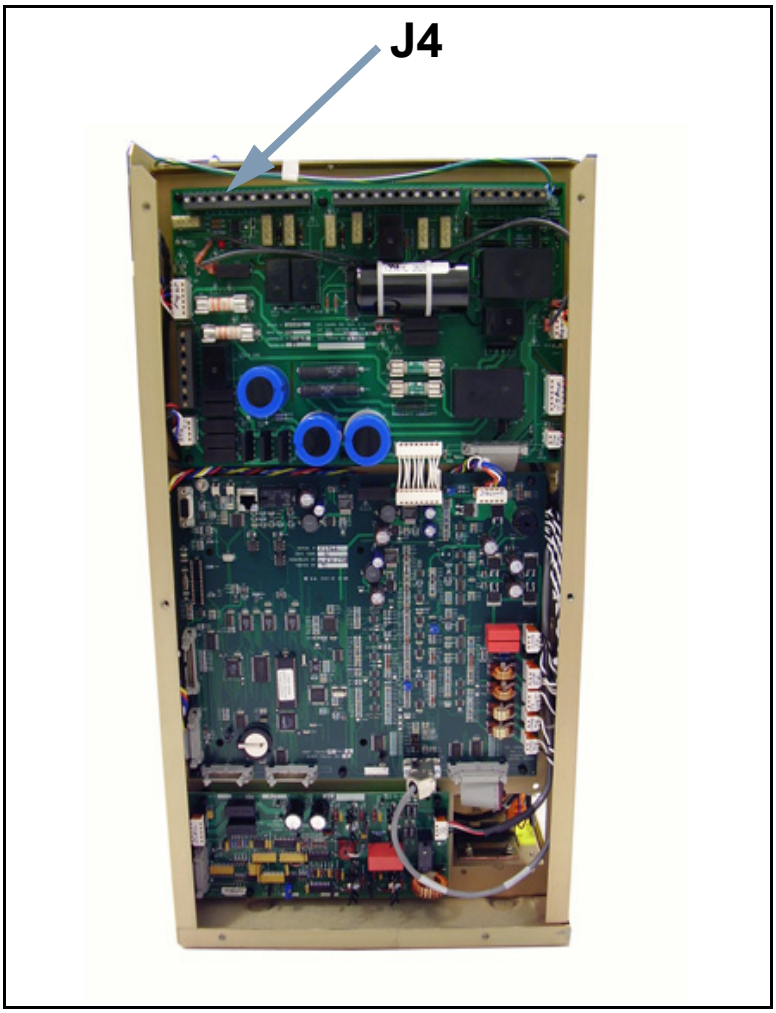
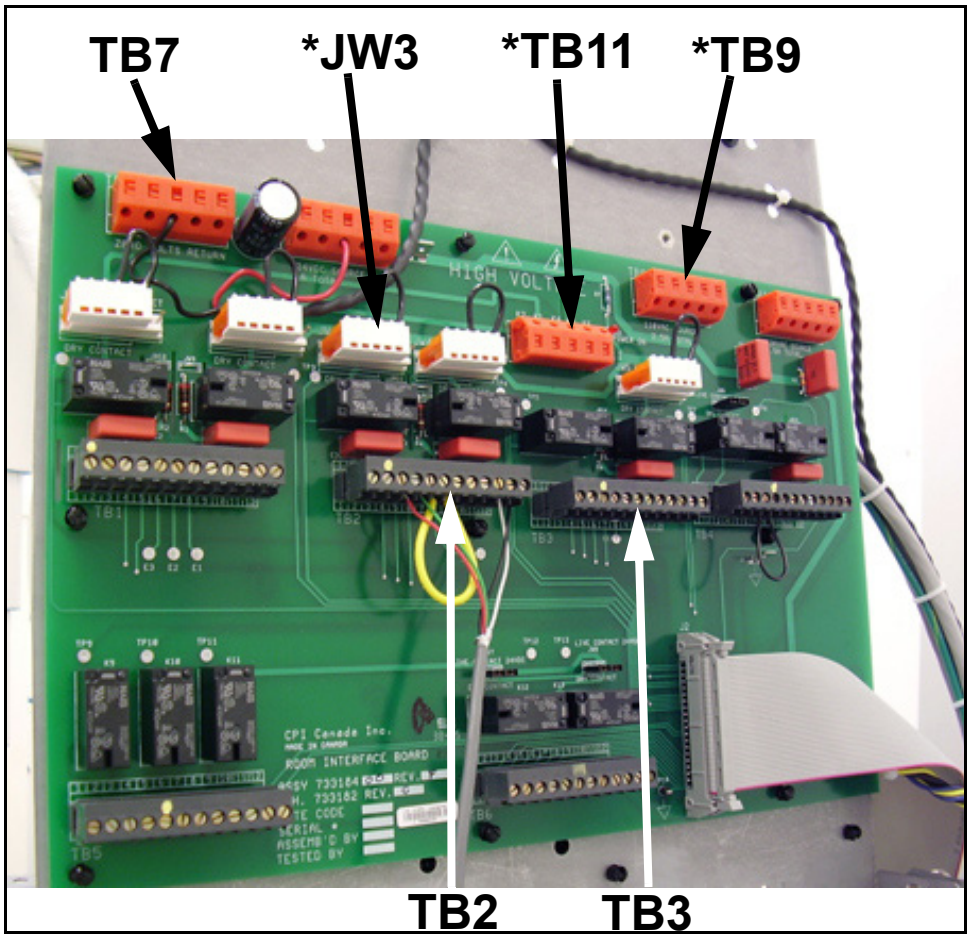


Figure 2-16. CPI CMP Terminals



*For CPI Indico generators, place a jumper between TB9-3 and TB11-2 and TB9-2 to TB 11-1. Also, place the jumper plug on JW3 and JW5 between terminals 4 and 6.

Figure 2-17. CPI Indico Terminals

2.4 Automatic Exposure Control Installation Instructions

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Connect the AEC cable (1 in Figure 2-18) to the system AEC cable (2).

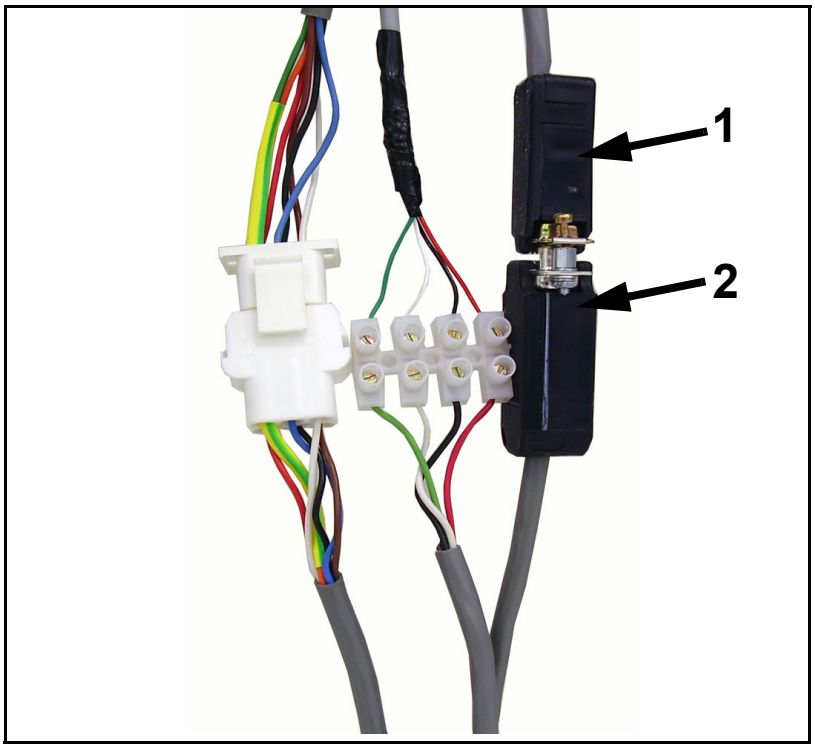


Figure 2-18. AEC Cable

2 Connect other end of the AEC cable to J2 of the generator in locations shown in Figure 2-19 through Figure 2-21.

3 After installing any remaining options, calibrate the ION chamber according to the ION chamber manual included in Chapter 8 of this manual and according to the generator manual.

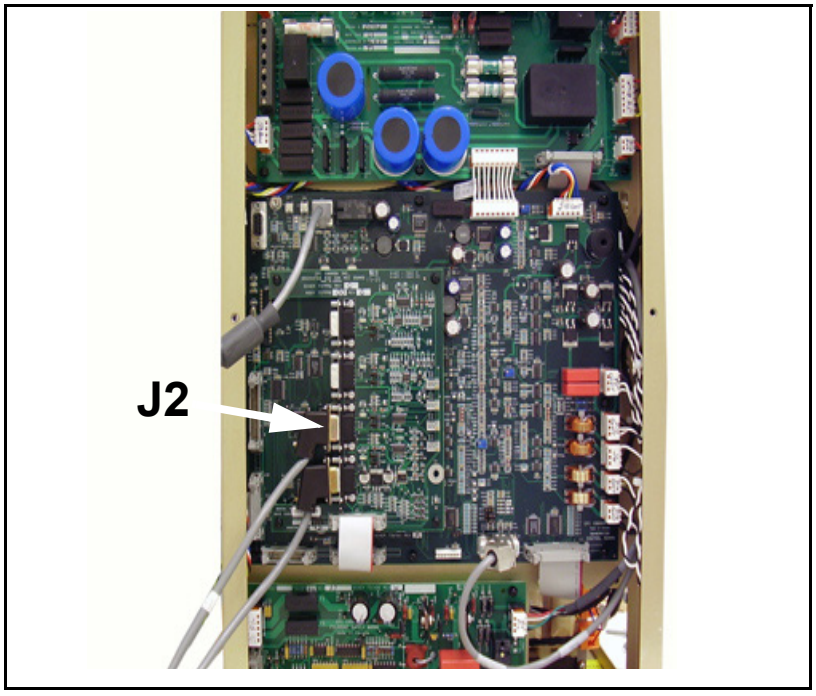


Figure 2-19. CPI CMP AEC Cable Hookup Point

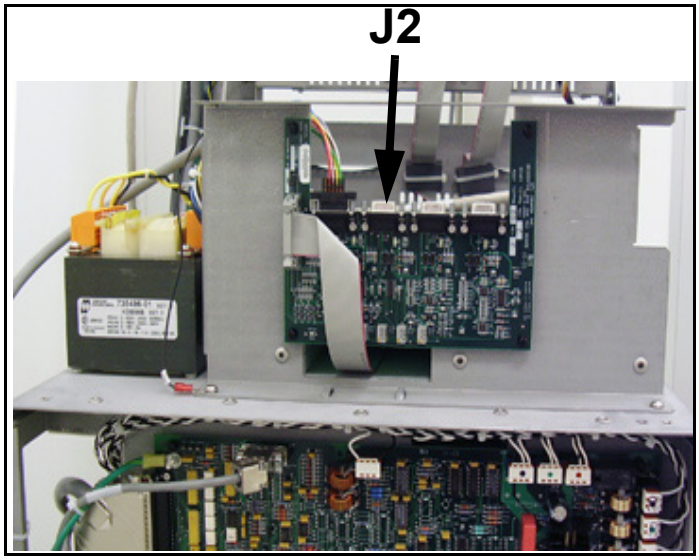


Figure 2-20. CPI Indico AEC Cable Hookup Point

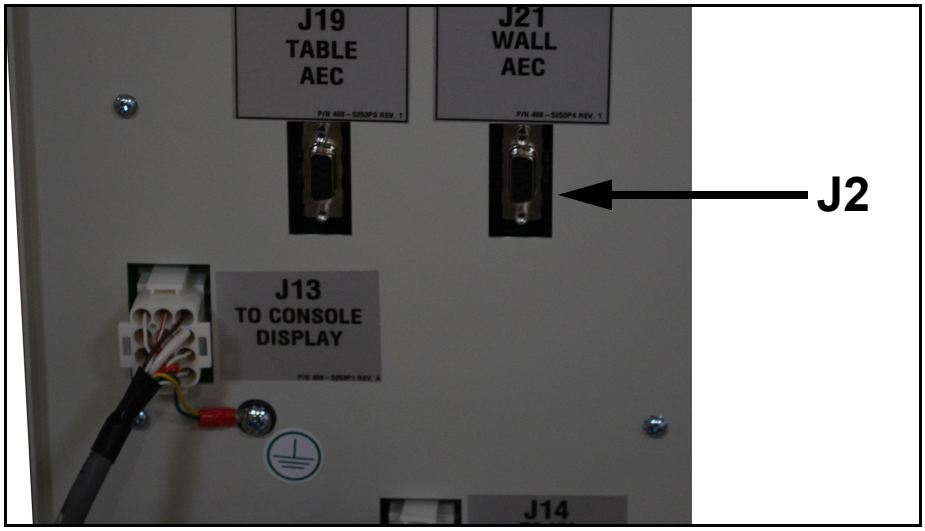


Figure 2-21. Anthem Hookup Point

2.5 Automatic Cassette Size Sensing Installation Instructions

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Connect the wallstand PBL cable (1 in Figure 2-23) to the system PBL cable (2). The green wire goes to green wire, white to white, etc. The figure shows a terminal block (3) connecting the two cables. This terminal block is not provided with the wallstand.

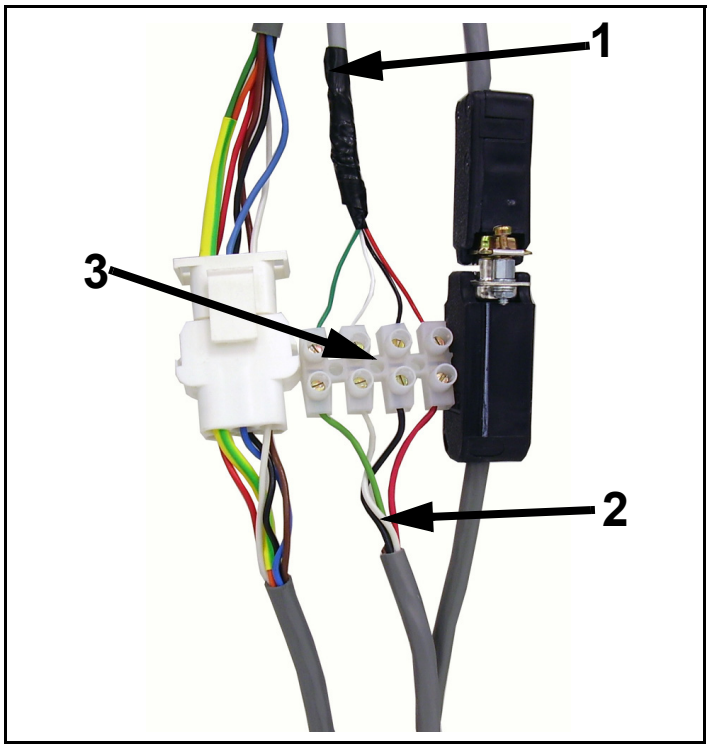


Figure 2-22. PBL Cable

2 Connect other end of bucky cable to generator according to Table 2-3 below.

Collimator Power Supply Connections		
Wire Color	**Linear II** **See Figure 2-23 on page 2-20**	**Linear IV** **See Figure 2-24 on page 2-21**
White	TS2-20	TS4-6
Green	TS2-21	TS4-8
Black	TS2-19	TS4-9
Red	TS2-22	TS4-7
Jumper(s)	TS2-1 to TS2-4 TS-2 to TS-3 to TS2-6 TS2-5 to TS2-10	TS6-12 to TS6-13

Table 2-3: Bucky - Generator Connections

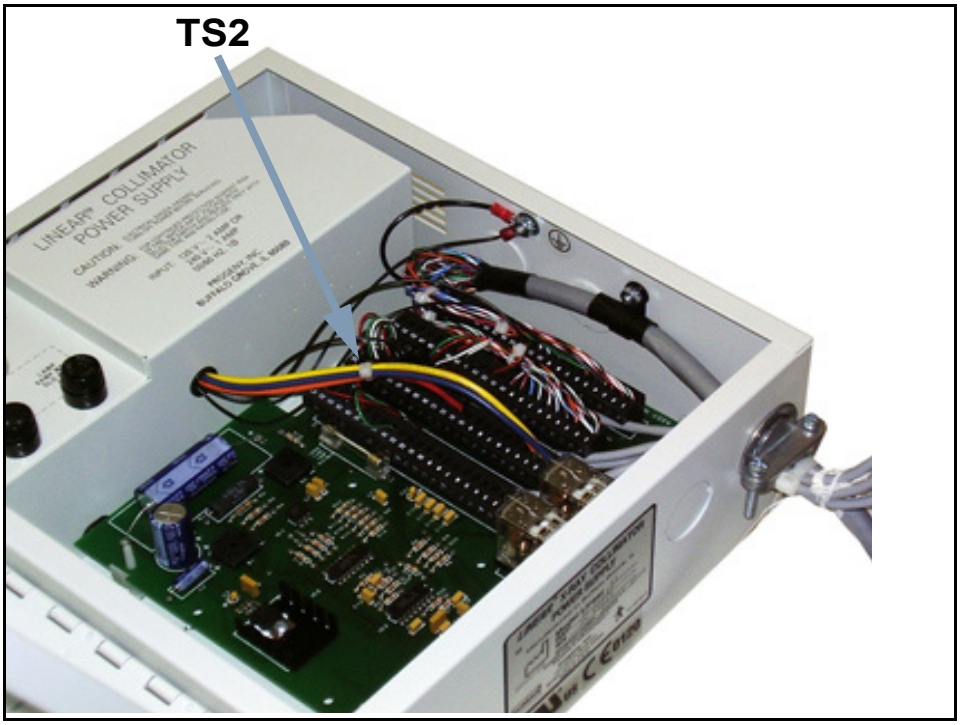


Figure 2-23. Linear II

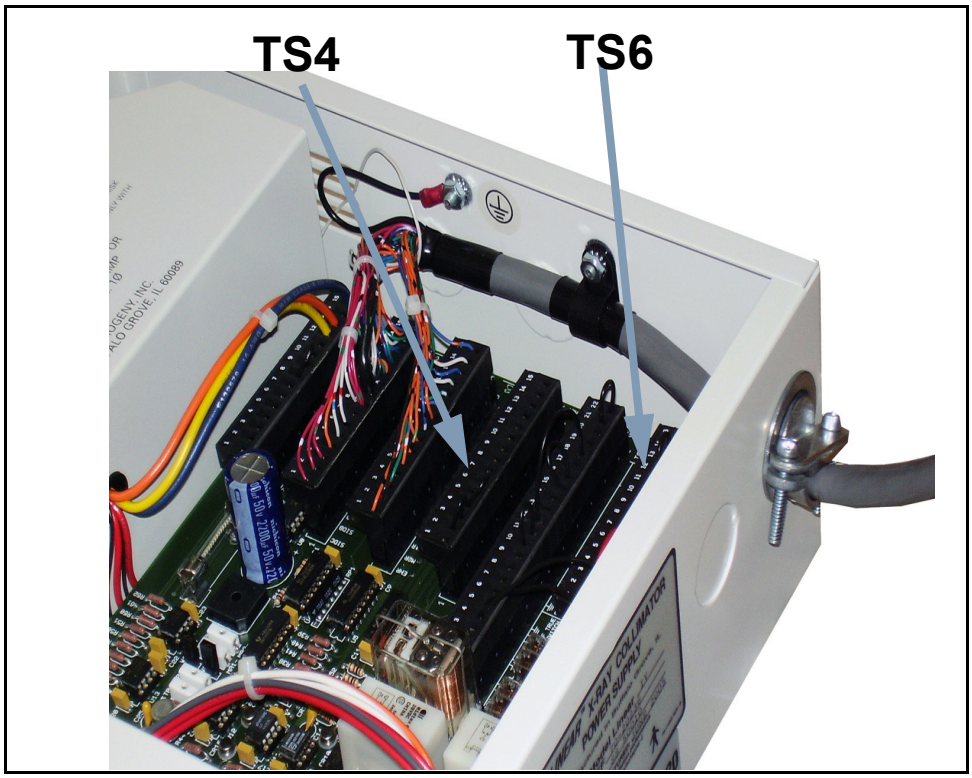


Figure 2-24. Linear IV

2.6 Using Overhead Lateral Handgrip

The overhead lateral handgrip provides patients with extra support. Use as follows:

Insert the handgrip post (1 in Figure 2-25) into the socket (2) on the back of the wallstand. There are two sockets available - either can be used.

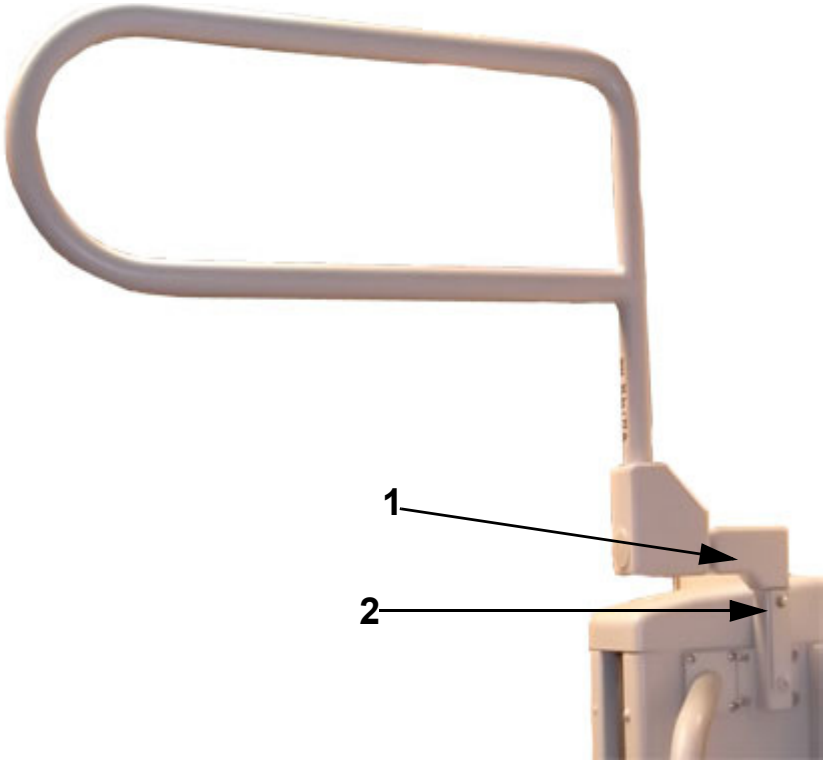


Figure 2-25. Handgrip Insertion

Installation Complete.

Addendum

Image Receptor Installation

D

Varian Paxscan 4343R Image Receptor Installation

This Addendum describes the Varian Paxscan 4343R Digital Imaging Receptor installation on the VS300 Wallstand.

Tools Required:

- 11/32″ Nut Driver
- Diagonal (Side) Cutters
- Medium Phillips Tip Screwdriver
- Metric Hex Wrench Set
- Miniature Flat Tip Screwdriver

1 Unscrew the top cover screws (1 in Figure Addendum D-1) and remove top cover (2).

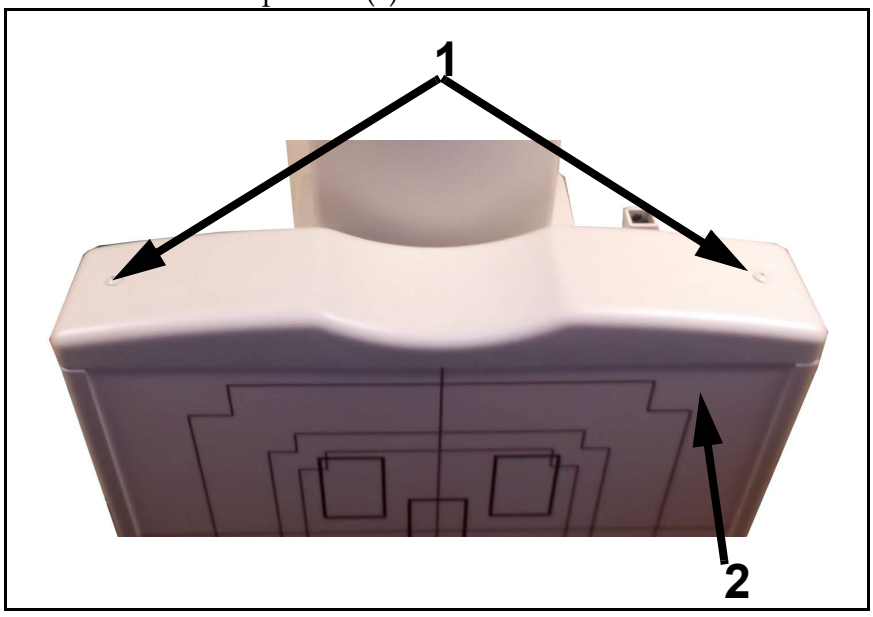


Figure Addendum D-1. Top Cover Removal

2 Unscrew the bottom screws (1 in Figure Addendum D-2) and the remove bottom cover up and off the wallstand.

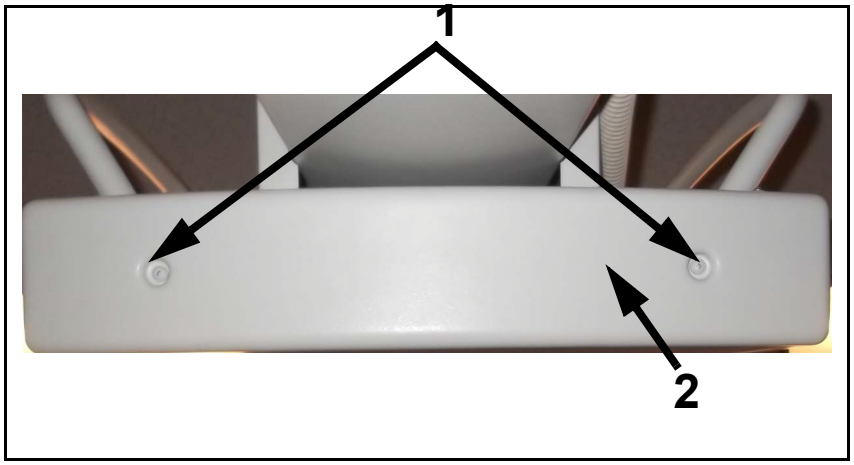


Figure Addendum D-2. Bottom Cover Removal

3 Unscrew the two left side cover screws (1 in Figure Addendum in D-3) and the remove side cover (2).

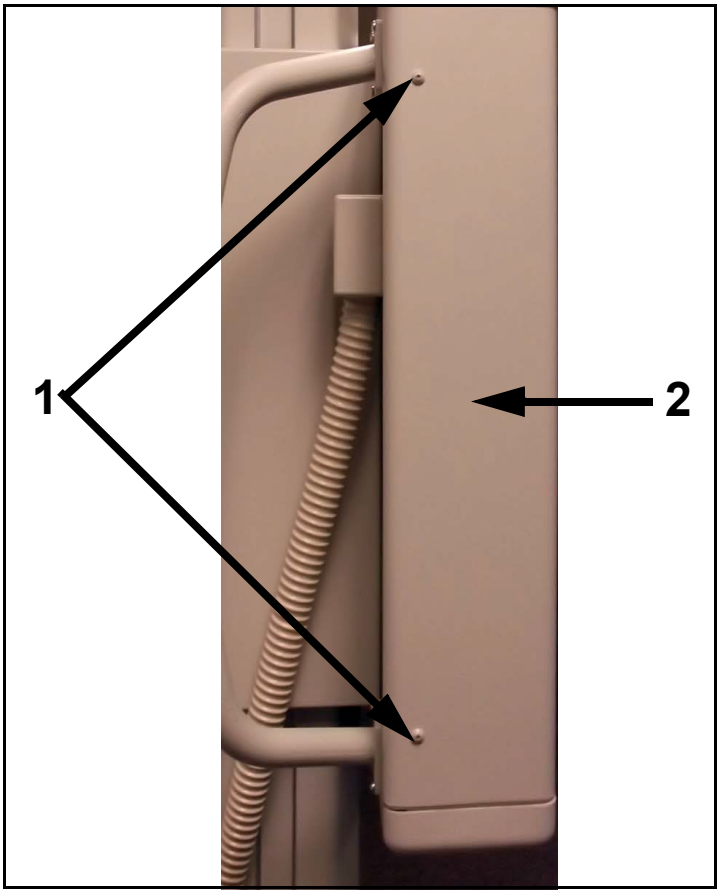


Figure Addendum D-3. : Side Cover Removal

4 Unscrew the two right side cover screws (1 in Figure Addendum D-4) and the remove side cover (2).

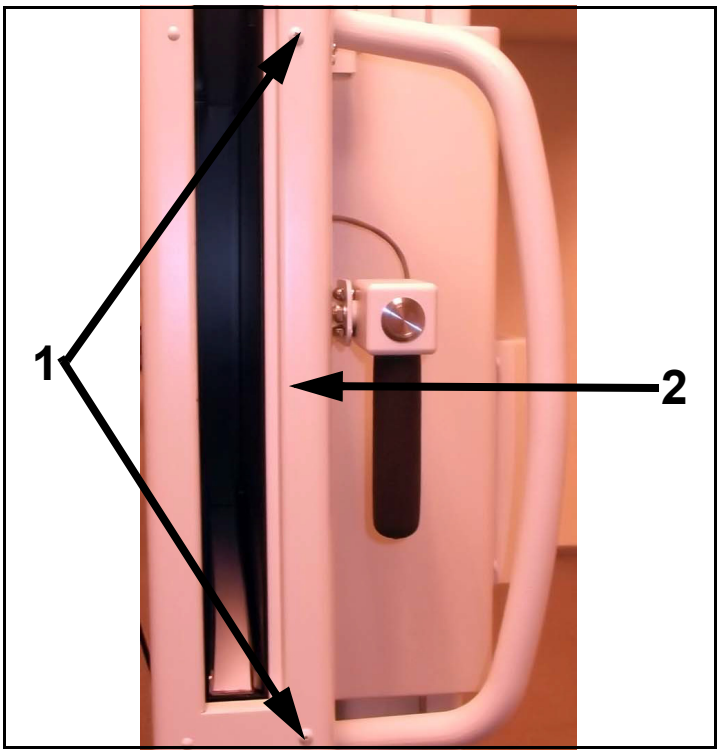


Figure Addendum D-4. Side Cover Removal

5 Pull the velcro-backed panel (1 in Figure Addendum D-5) off the wallstand and set it to the side.

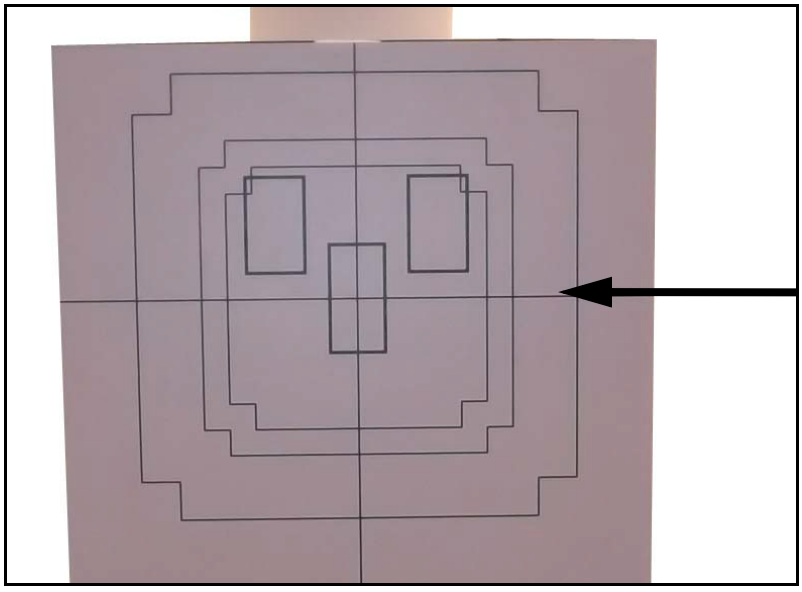


Figure Addendum D-5. Velcro-Backed Panel

Only do steps 6-10- if your wallstand has an optional ION chamber (automatic exposure control).

6 Unscrew the four cover screws (1 in Figure Addendum D-6) and remove ION cover (2). Save screws and cover.

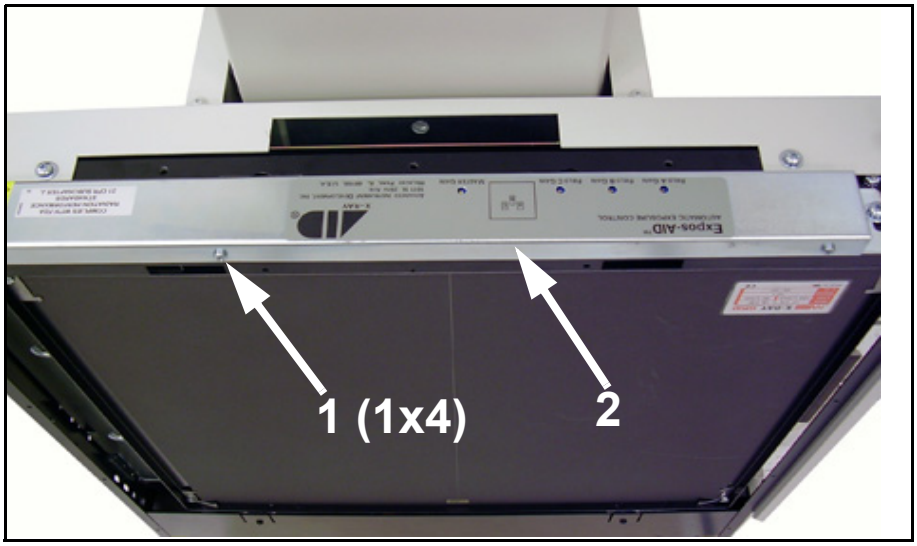


Figure Addendum D-6. ION Chamber Cover Screws

7 Unscrew the cable clamp nuts (1 in Figure Addendum D-7) and remove the clamp (2).

8 Unscrew the two connector screws (3) and unplug the connector (4).

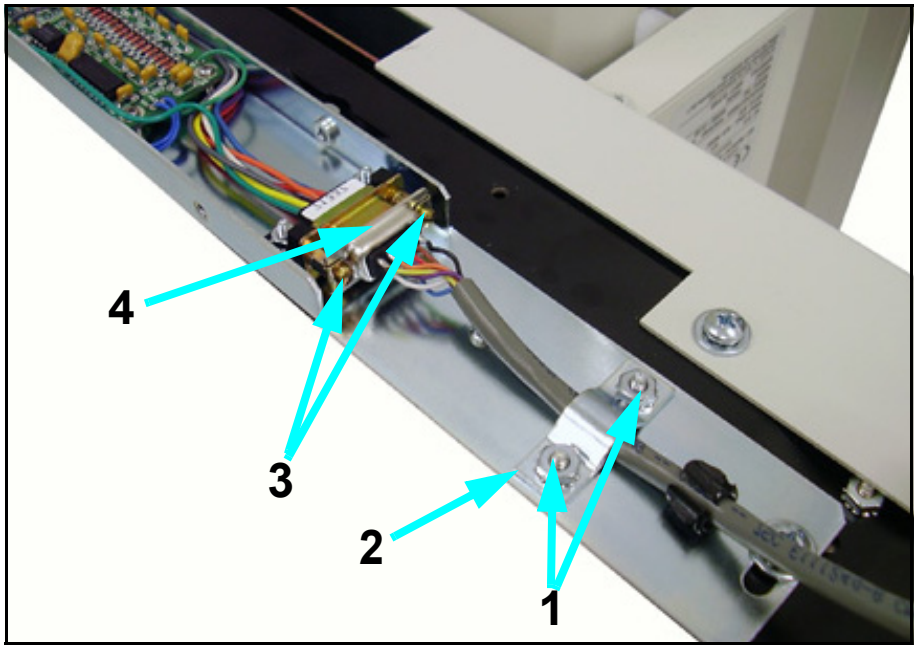


Figure Addendum D-7. ION Chamber Screws

9 Unscrew the ion chamber mounting screws (1 in Figure Addendum D-8) and save.

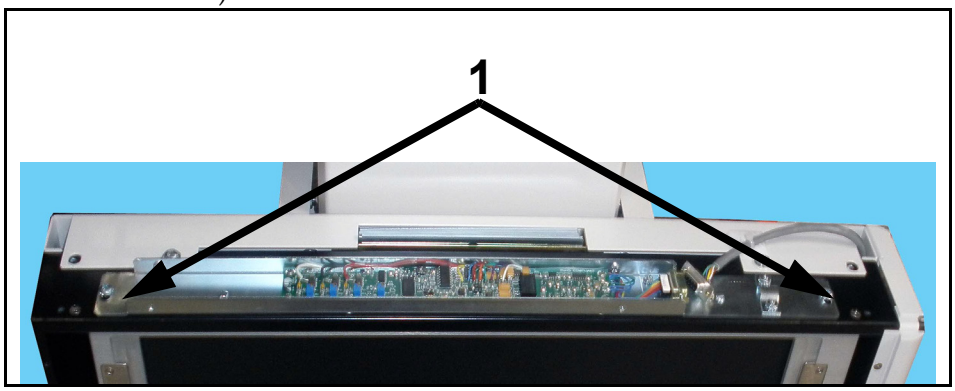


Figure Addendum D-8. IONChamber Mounting Screws

10 Slide ion chamber (1 in Figure Addendum D-9) out as shown below.

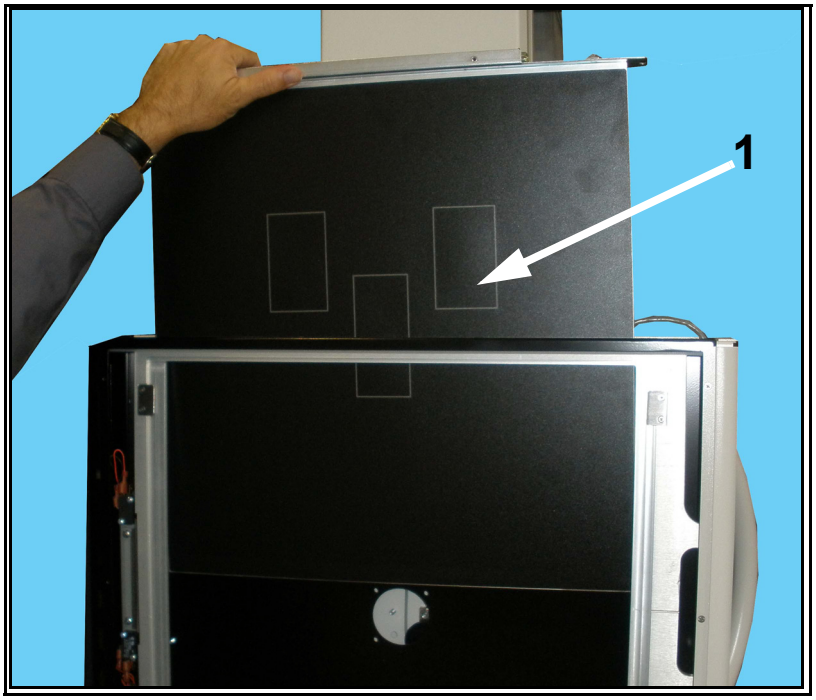


Figure Addendum D-9. ION Chamber Removal

11 Remove the grid tray (1 in Figure Addendum D-10).

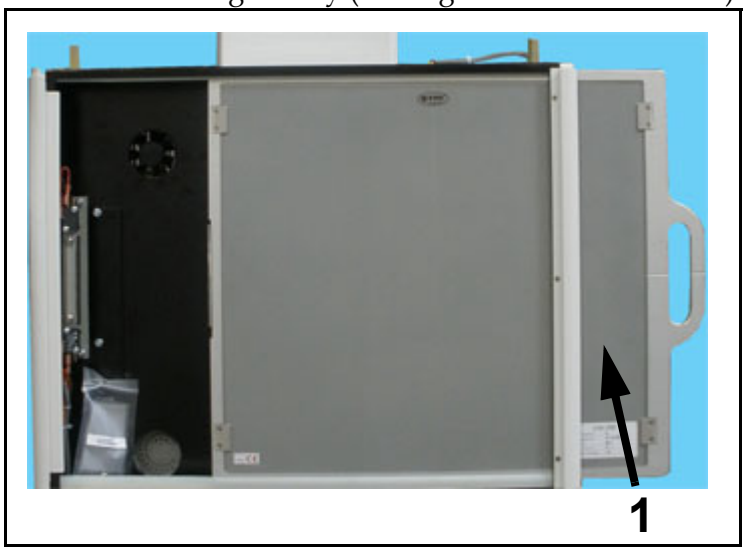


Figure Addendum D-10. Grid Removal

12 Remove and save bag (1 in Figure Addendum D-11).

13 Unscrew nuts (2) and remove handles (3). Save nuts and handles.

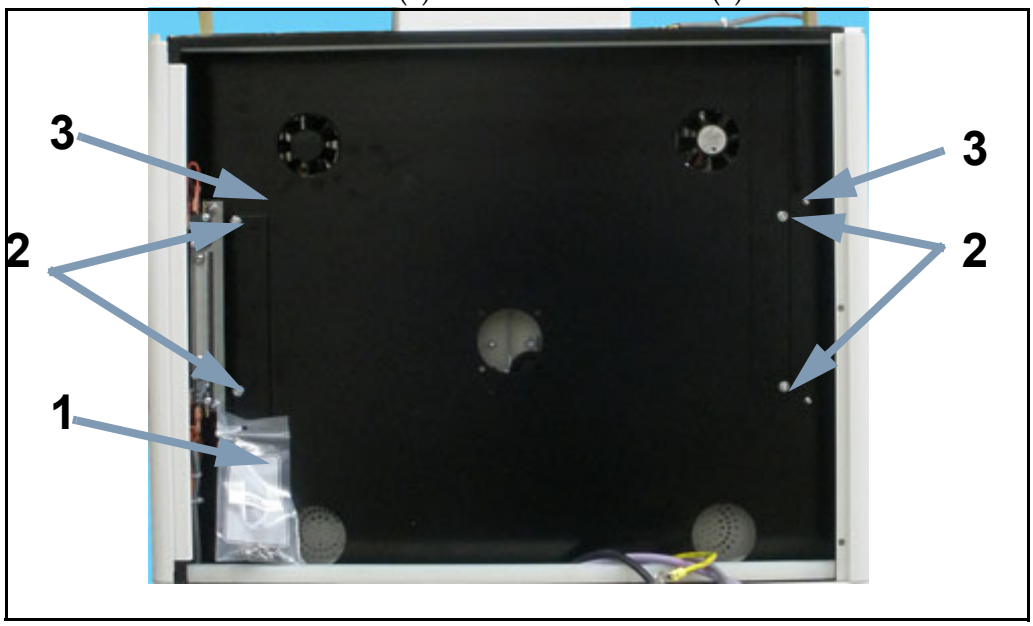


Figure Addendum D-11. Handle Removal

Caution

Handle the receptor with great care in the following steps. It is very fragile and very expensive.

14 Mount handles (1 in Figure Addendum D-12) on receptor (2) with screws (3) from bag removed in step 2.

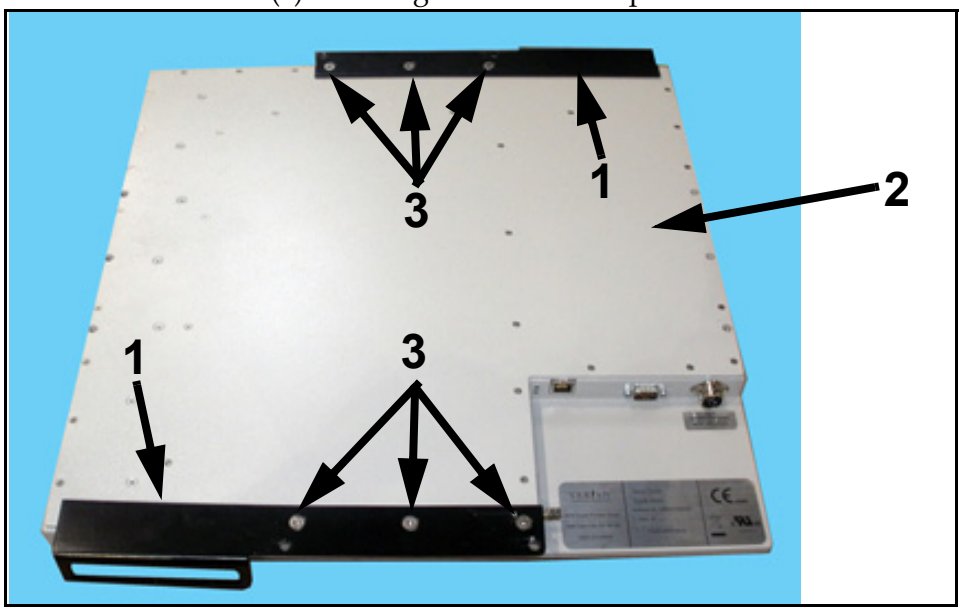


Figure Addendum D-12. Mounting Handles on Receptor

15 Place the receptor on the cart or stand in front of the wallstand (Figure 1 Addendum D-13) exactly as shown below.

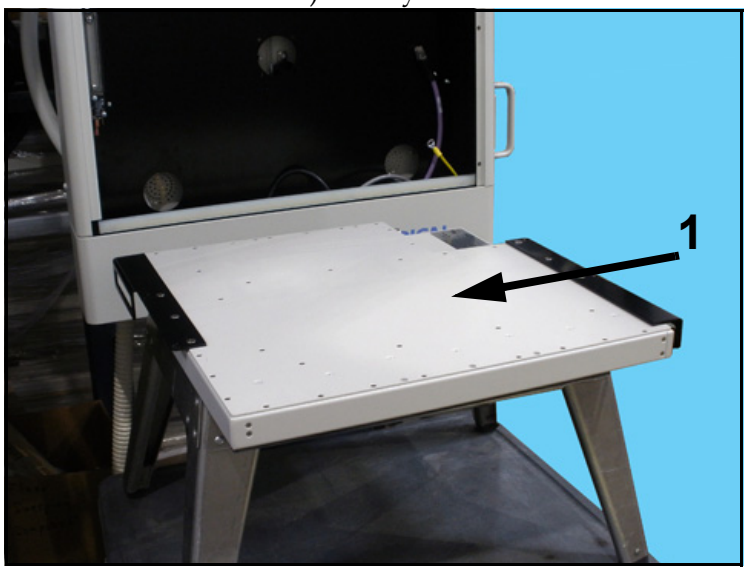


Figure Addendum D-13. Receptor in Front of Wallstand

16 Connect cables from the wallstand to the receptor as shown below.

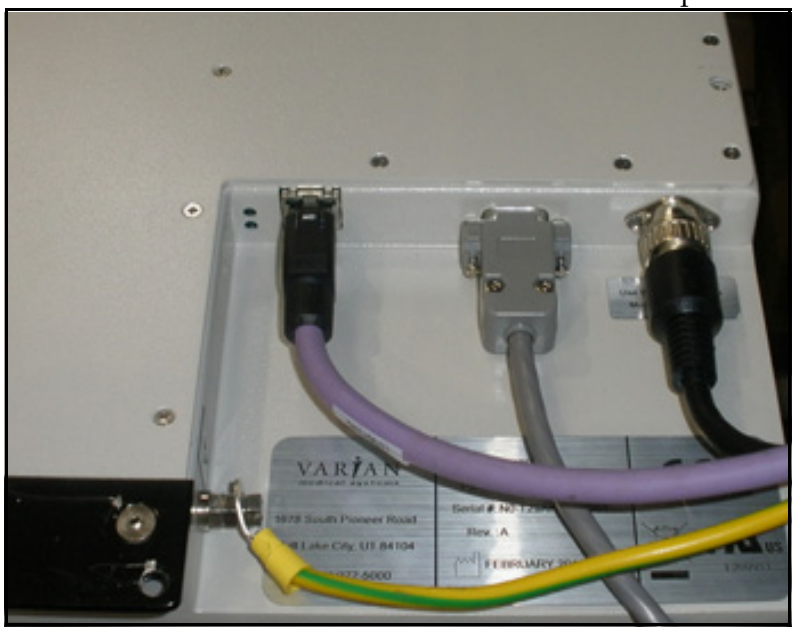


Figure Addendum D-14. Receptor Cable Connections

17 Very carefully lift the receptor by handles and place it on the studs of the wallstand. Secure it in place with nuts (1 in Figure Addendum D-15) removed in step 13.

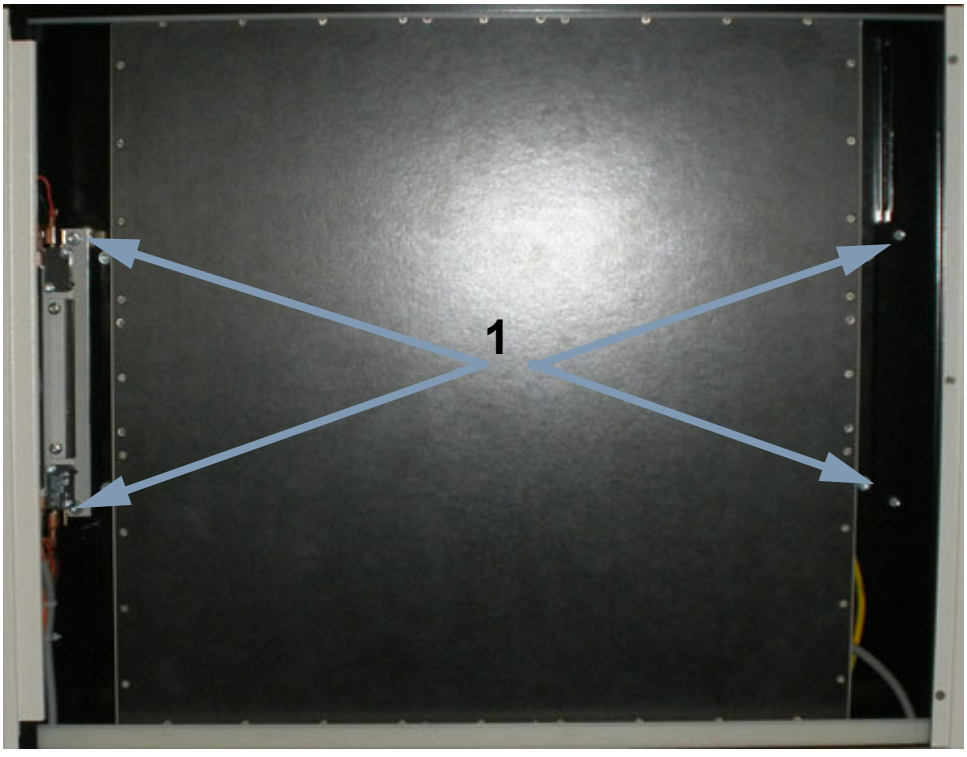


Figure Addendum D-15. Receptor Mounting

18 If the optional ion chamber was removed, reinstall it as shown below.

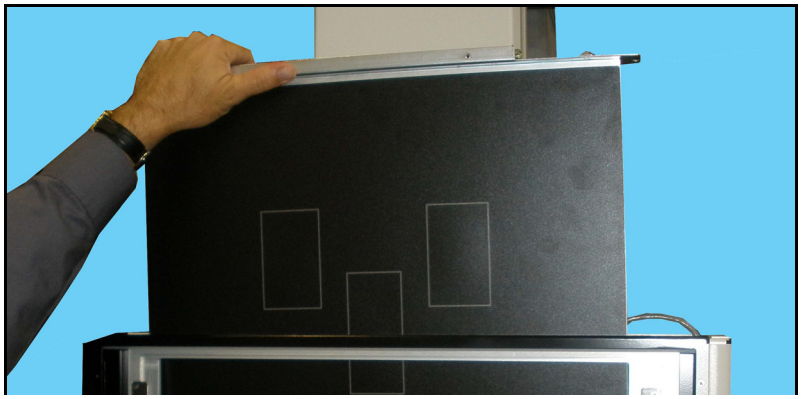


Figure Addendum D-16. Ion Chamber Installation

19 For the optional ion chamber, secure the chamber in place with mounting screws (1 in Figure Addendum D-17) saved from step 9.

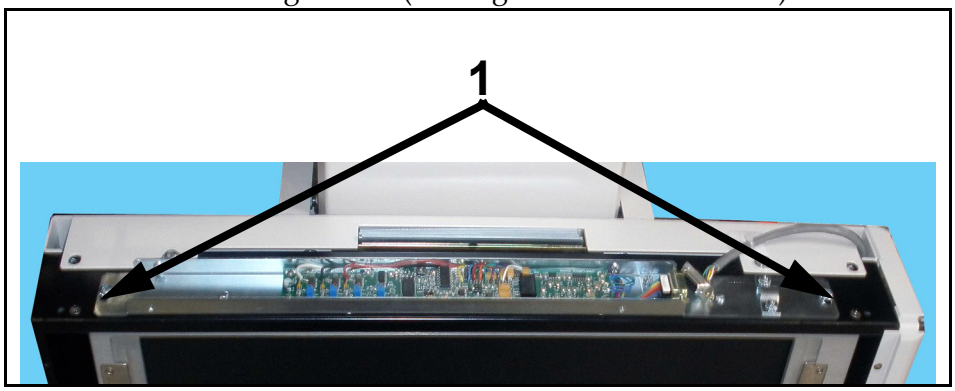


Figure Addendum D-17. Ion Chamber Mounting Screws

20 For the optional ion chamber, reconnect the cable and hardware as shown below.

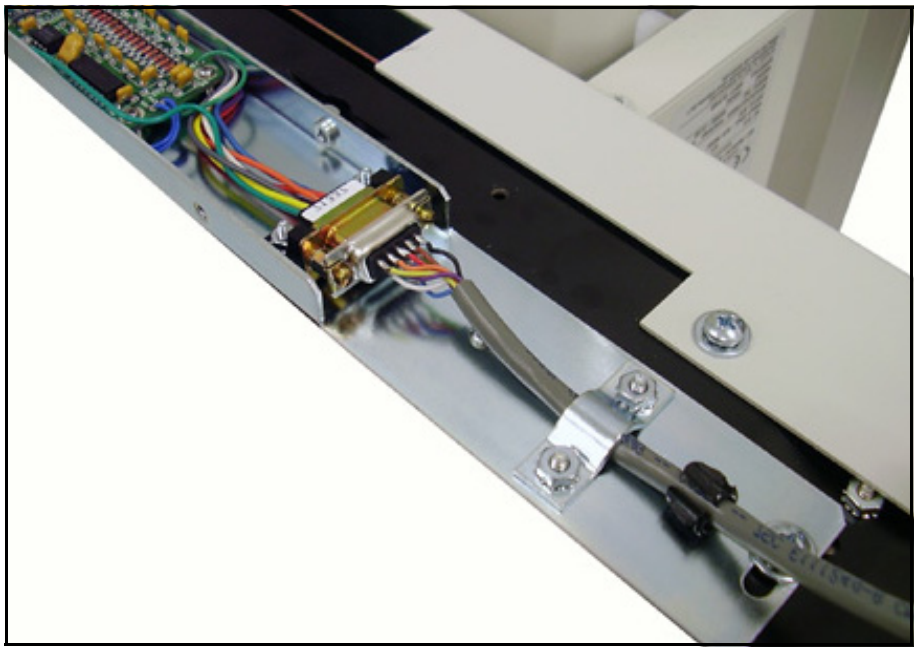


Figure Addendum D-18. ION Chamber Screws

21 For the optional ion chamber, reinstall the cover (1 in Figure Addendum D-19) with the screws (2) saved from step 6.

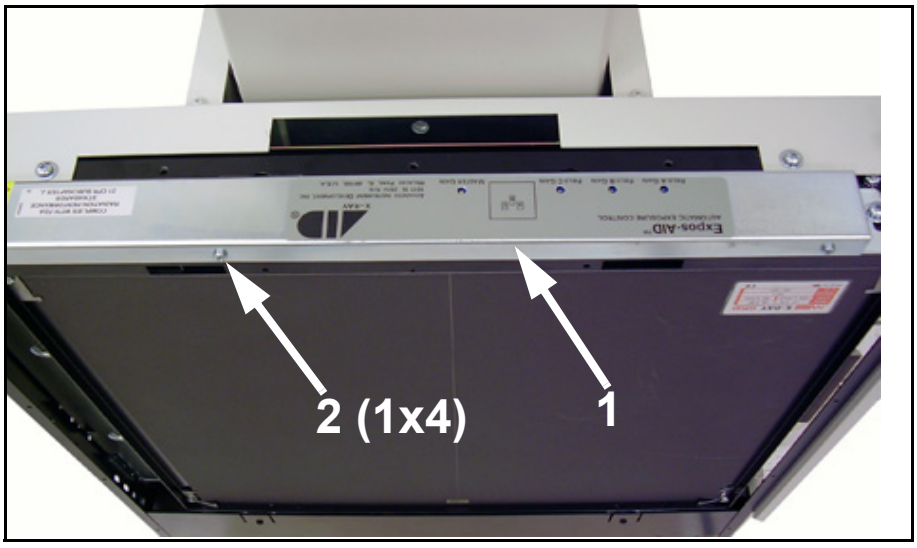


Figure Addendum D-19. ION Chamber Cover Screws

22 Reinstall grid tray(1 in Figure Addendum D-20).

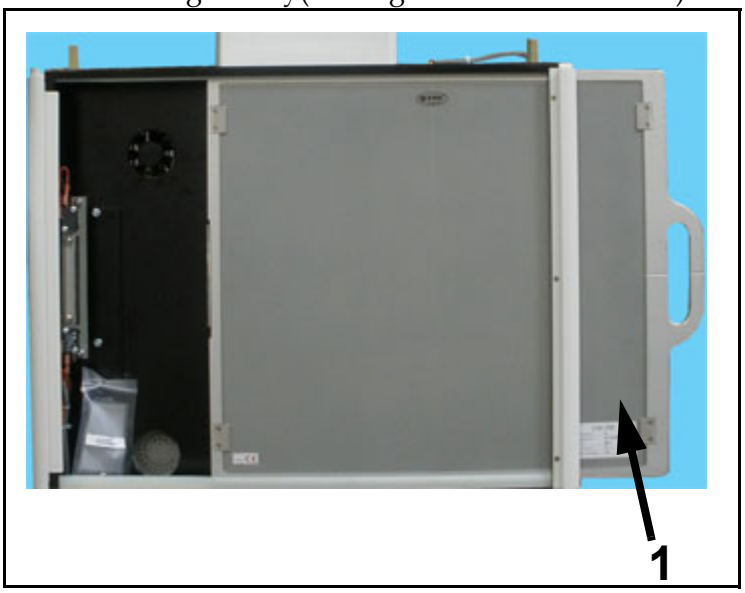


Figure Addendum D-20. Grid Installation

23 Reinstall the front cover (1 in Figure Addendum D-21).

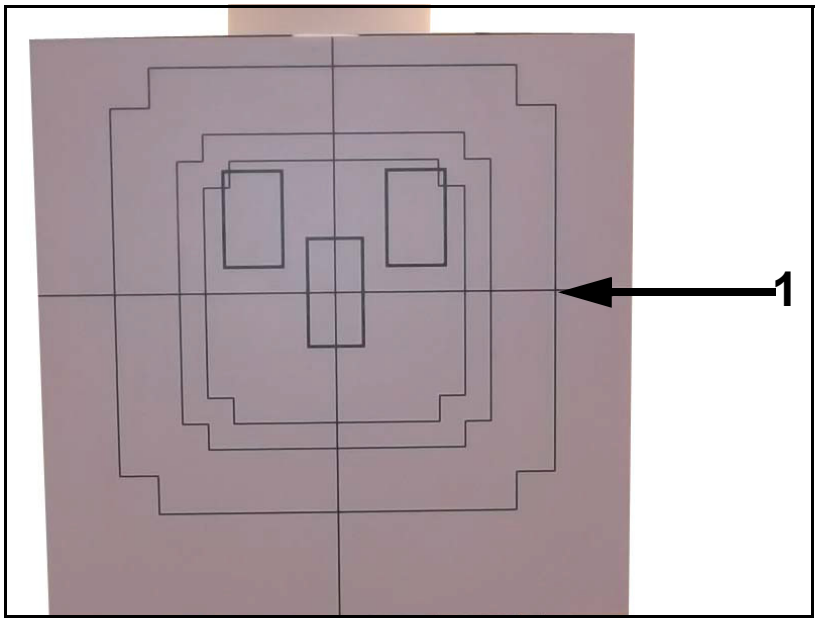


Figure Addendum D-21. Front Cover

24 Add counterweights (1 in Figure Addendum D-22) to balance the wallstand movement.

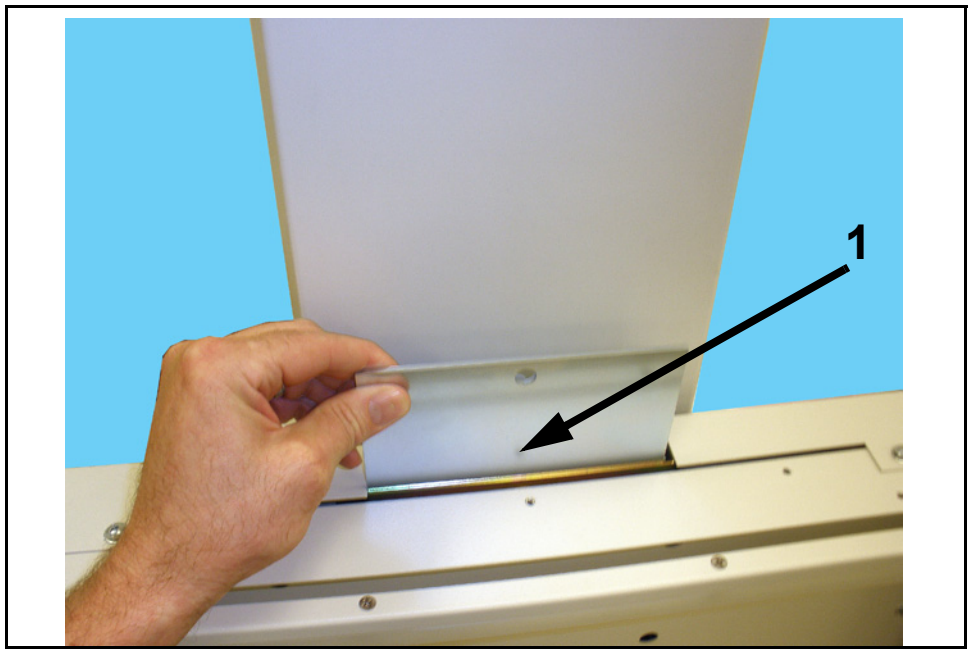


Figure Addendum D-22. Front Cover Installation

25 Reinstall the top cover (1 in Figure Addendum D-23).

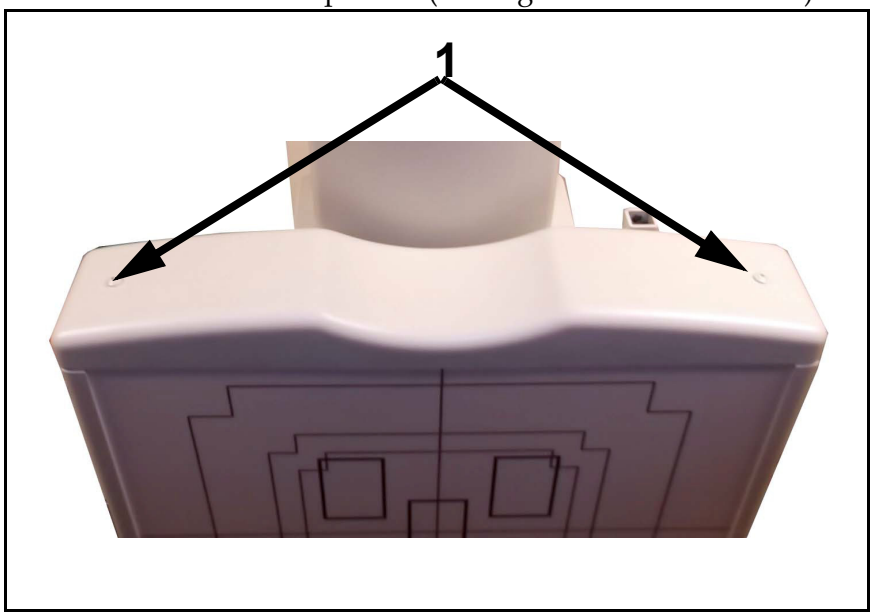


Figure Addendum D-23. Top Cover Installation

26 Remove the junction box cover (1 in Figure Addendum D-24).

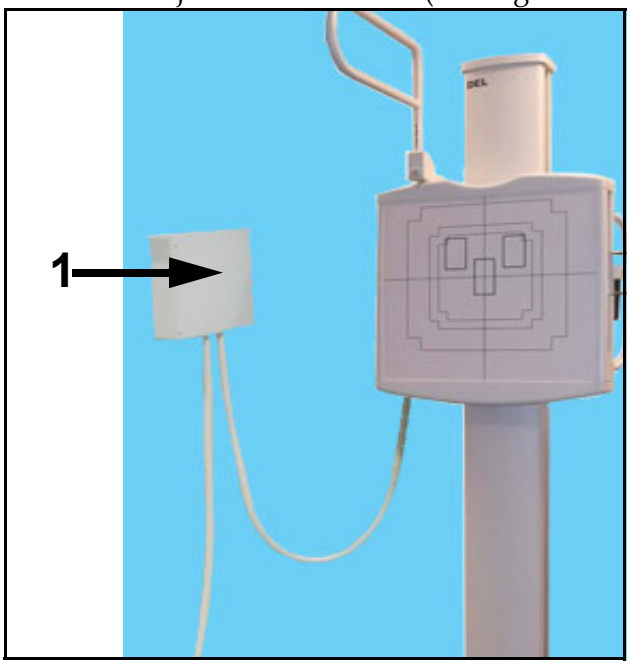


Figure Addendum D-24. Junction Box Cover

Note

All cables can be routed either through the wall conduit port (1 in Figure Addendum D-25) or conduit tubing (2).

27 Connect the power cable (3) to the power supply (4).

28 If applicable, connect the optional ion chamber cable from the generator to the ion chamber cable (5).

29 Connect the Varian detector cable from Varian control unit to Varian detector cable (6).

30 Route comm cable (7) through the conduit to the Varian control unit.

31 Connect the ground cable from the generator to the ground terminal (8).

Figure Addendum D-25. Junction Box Connections

32 Connect the cooling fan cable wires (1 in Figure Addendum D-26) to the terminals on TB1 (2). The red wire connects to 24VDC on TB1. The black wire connects to 24VDC COM, which is connected to the appropriate generator or 24VDC power supply.

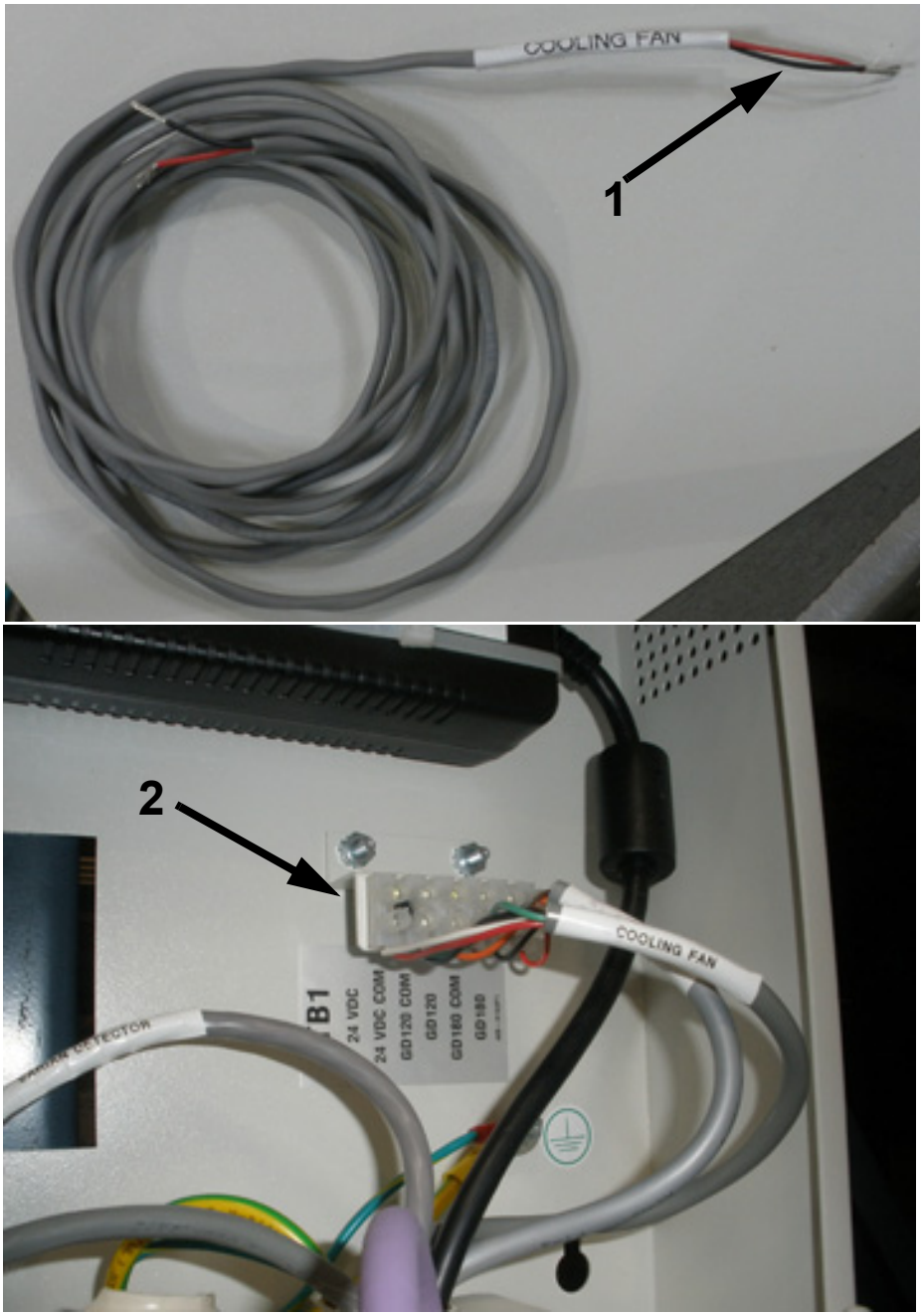


Figure Addendum D-26. Cooling Fan Cable Hookup

33 Connect the sensor cable wires (1 in Figure Adddendum D-27) to terminals on TB1 (2). Each wire is tagged with the corresponding terminal connection.

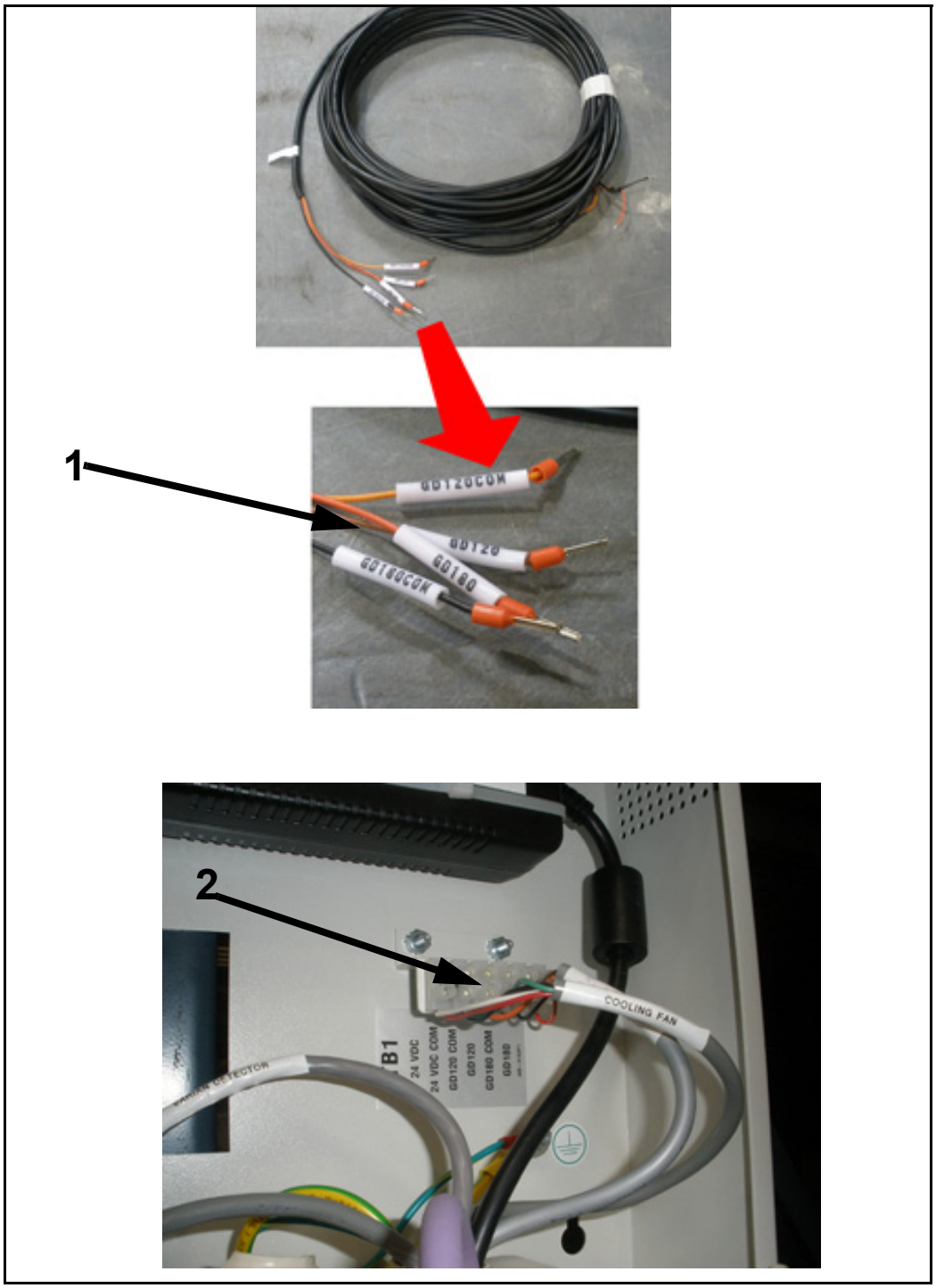


Figure Addendum D-27. Sensor Cable Hookup

34 Reattach the junction box cover (1 in Figure Addendum D-28).

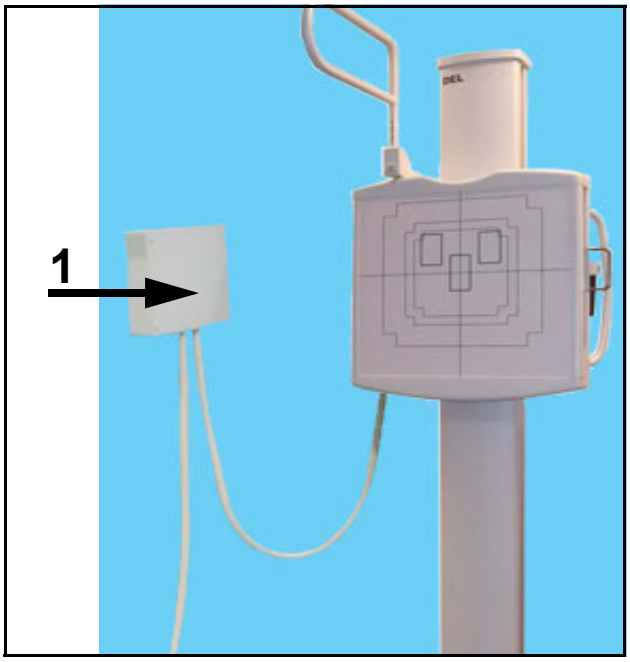


Figure Addendum D-28. Junction Box Cover

The following steps describe how to switch configurations on the VS300 wallstand. To remove the top, bottom, and sides of the VS300 wallstand refer to steps 1-5 on pages D1-D3.

1 Cut all cable ties (1 in Figure Addendum D-29) on sensor cable.

2 Remove screws (2).

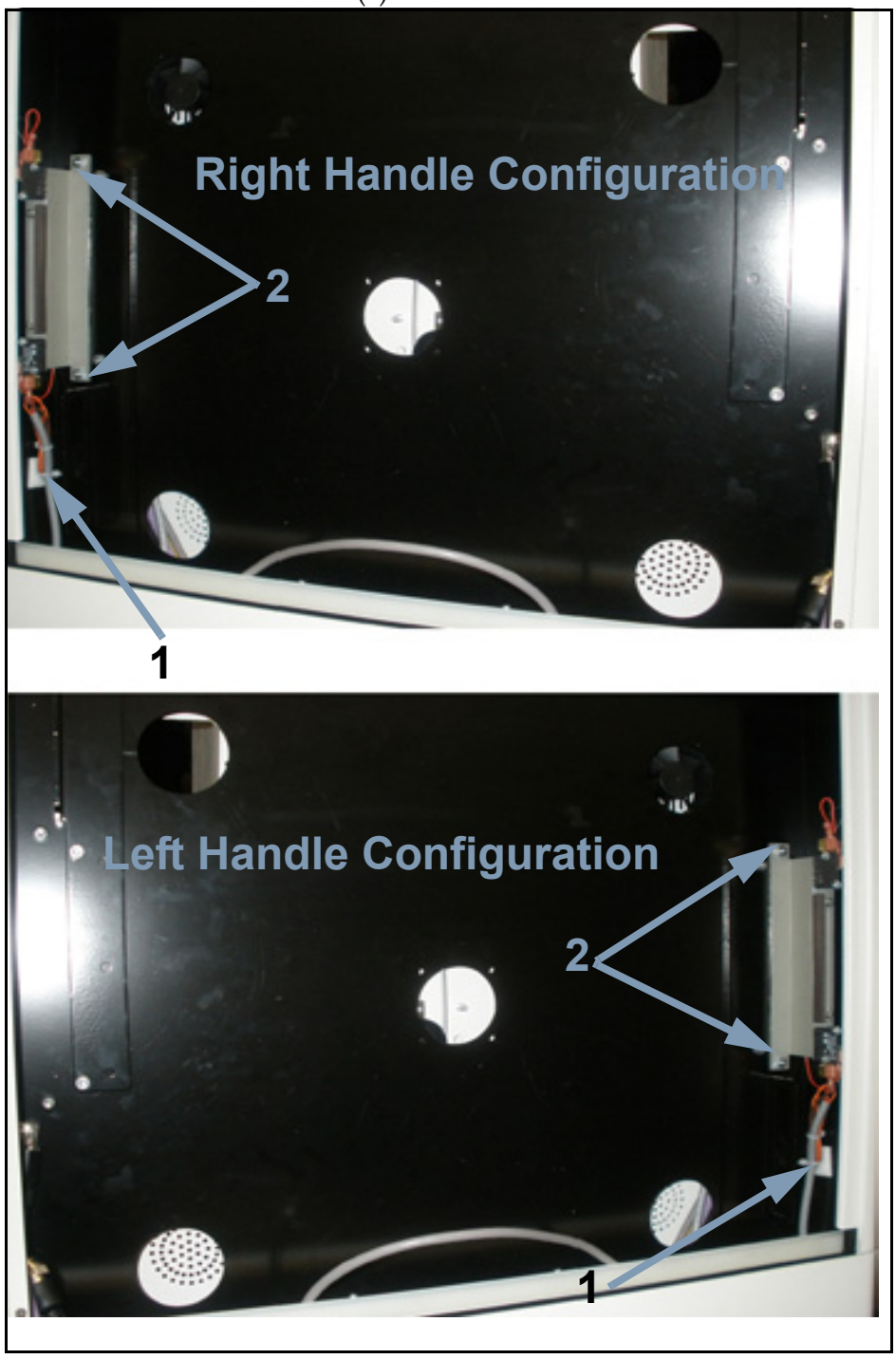


Figure Addendum D-29. Grid Sensor

3 Remove screws (1 in Figure Addendum D-30) and remove cover (2).

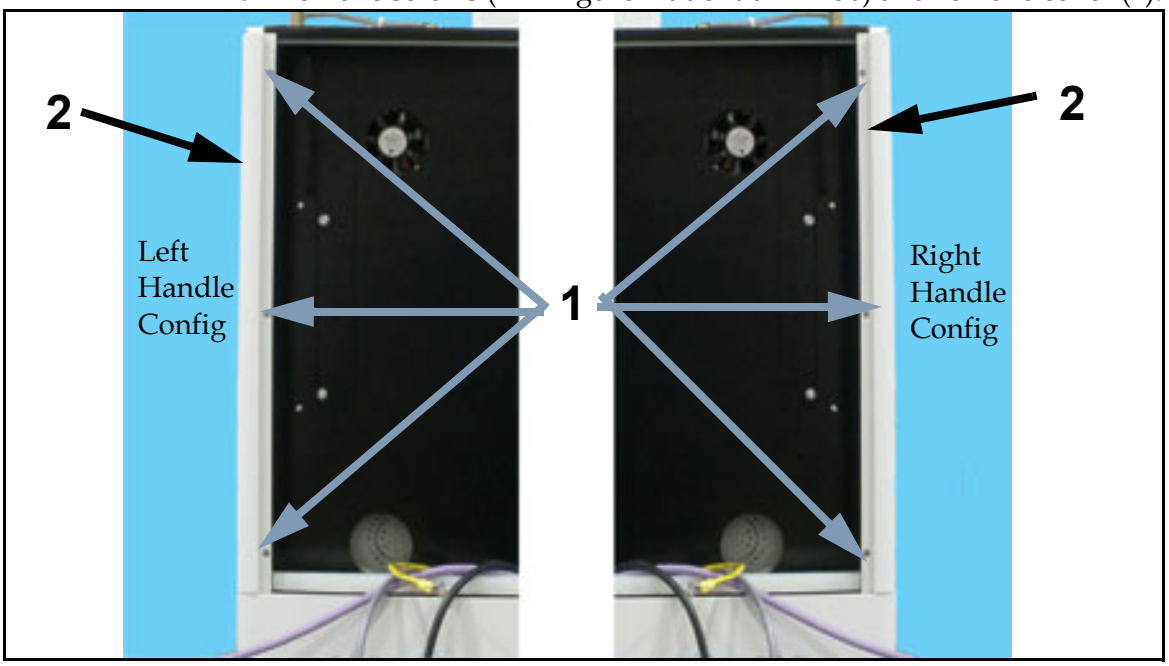
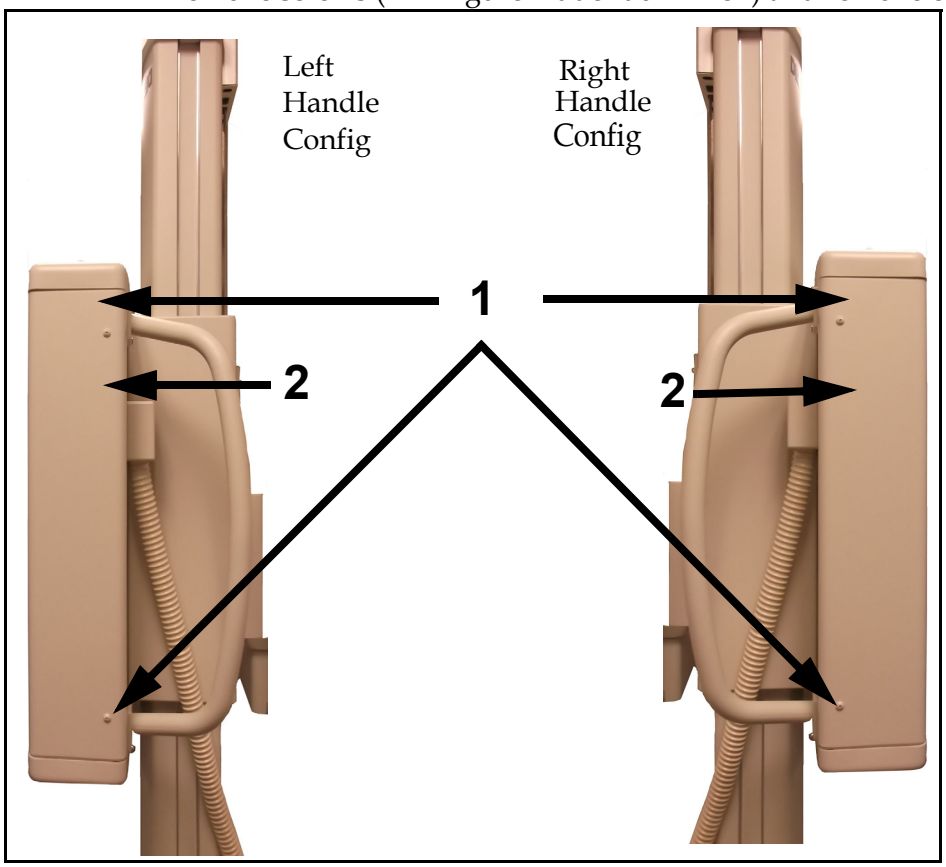


Figure Addendum D-30. Handle Front Cover Removal

4 Remove screws (1 in Figure Addendum D-31) and remove cover (2).



5 Remove standoffs (1 in Figure Addendum D-31).

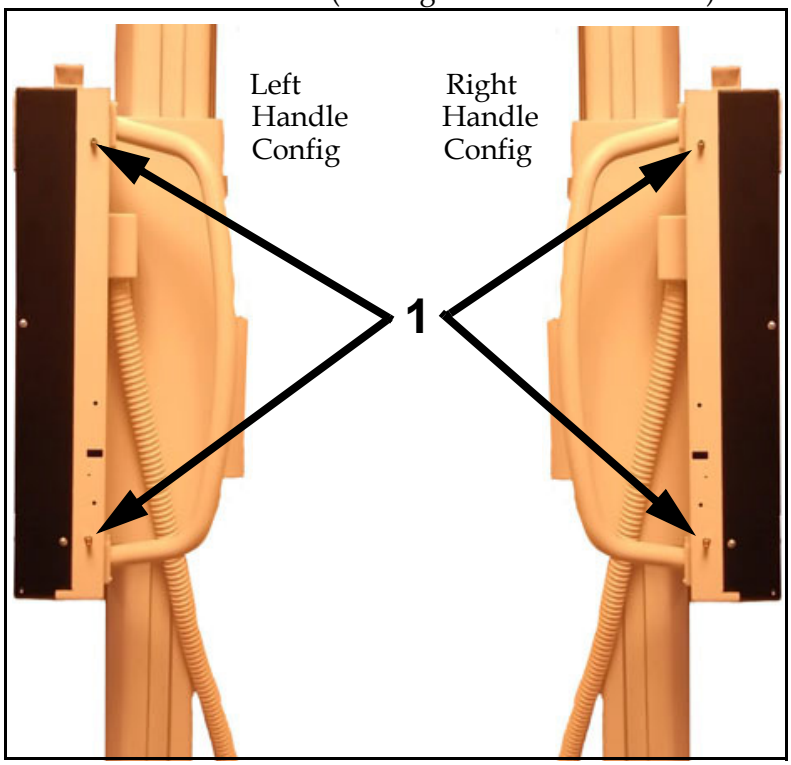


Figure Addendum D-31. Standoff Removal

6 Remove screws (1 in Figure Addendum D-35) and cabinet frame (2).

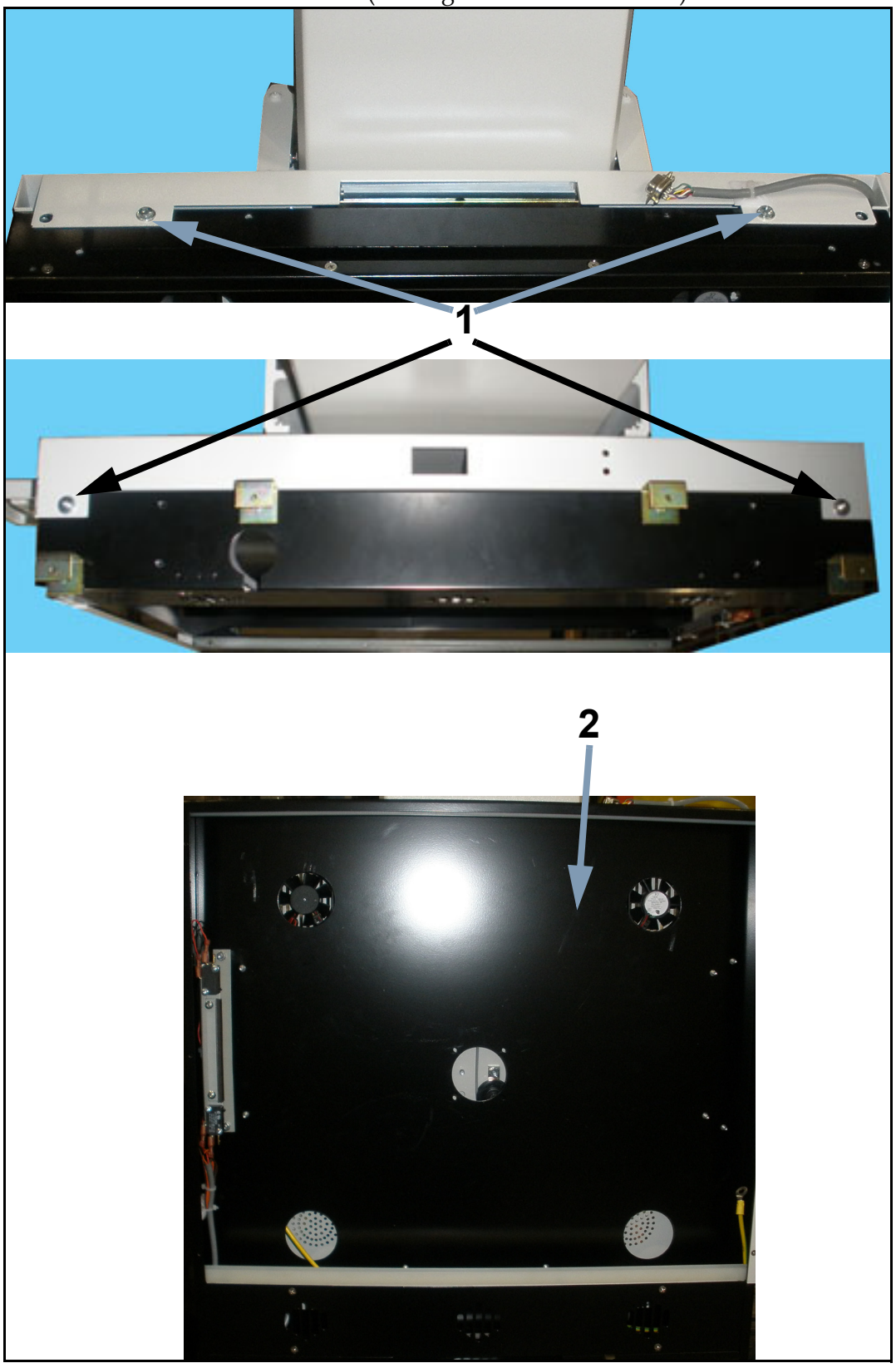


Figure Addendum D-32. Frame Removal

7 Disconnect the wires (1 in in Figure Addendum D-36) from the terminal (2).

8 Disconnect the ground wire (3).

9 Unscrew the conduit box screws (4 in Figure Addendum D-36) and remove the conduit box (5).

10 Reconfigure the conduit and brake wiring harnesses as shown below.

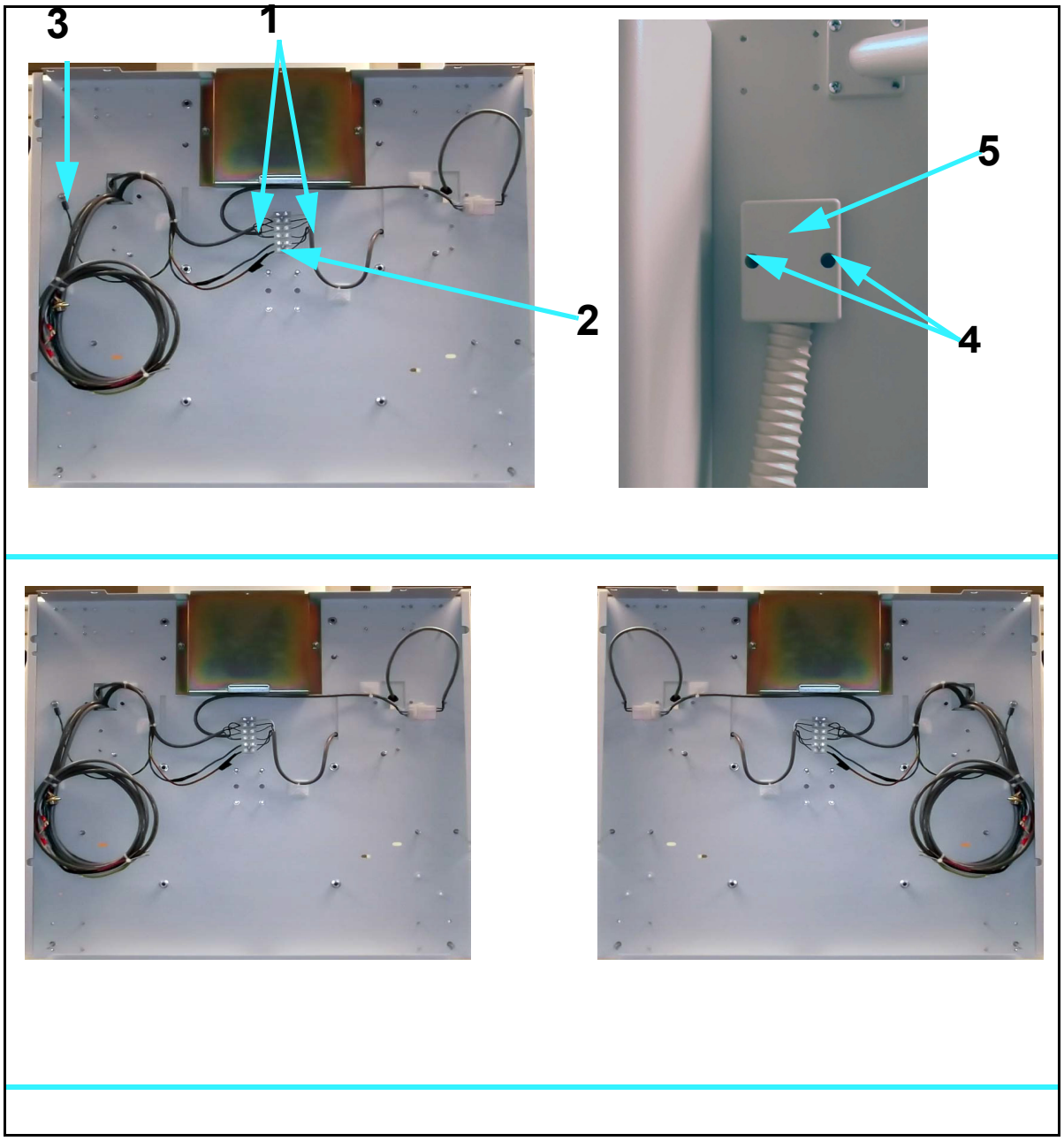


Figure Addendum D-33. Terminal Wires

Figure Addendum D-34. Lock Mechanism Assembly (Left & Right Shown)

11 Unscrew the brake plate screw (1 in Figure Addendum in D-38) and remove the brake plate (2).

12 Unscrew the brake handle mounting screws (3) and remove the brake handle (4).

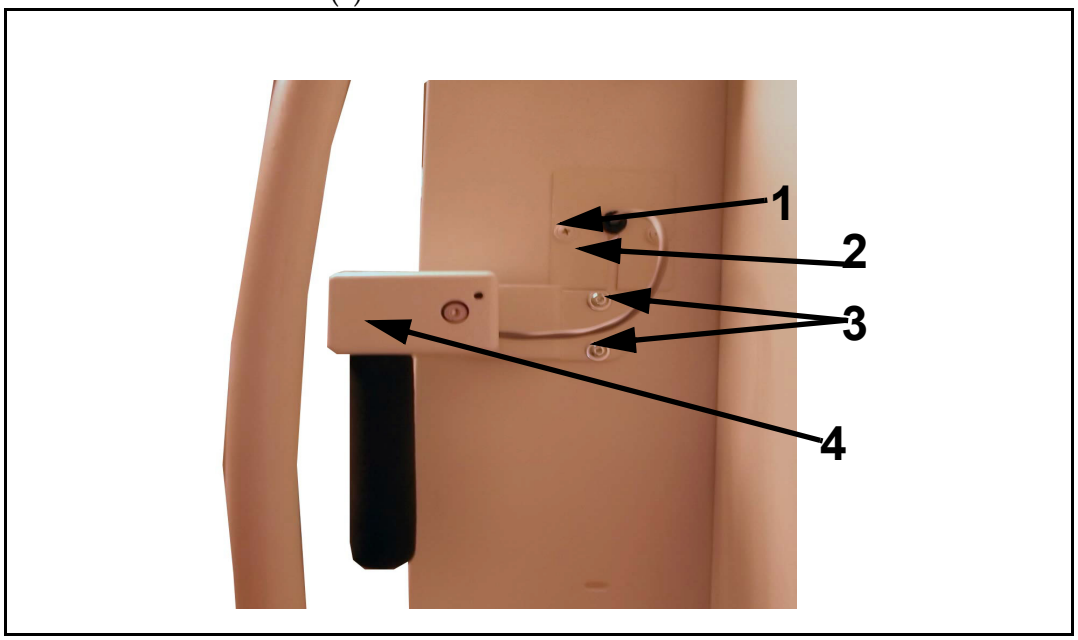


Figure Addendum D-35. Brake Plate

13 Disconnect the cable harness (1 in Figure Addendum in D-36) and remove the brake handle.

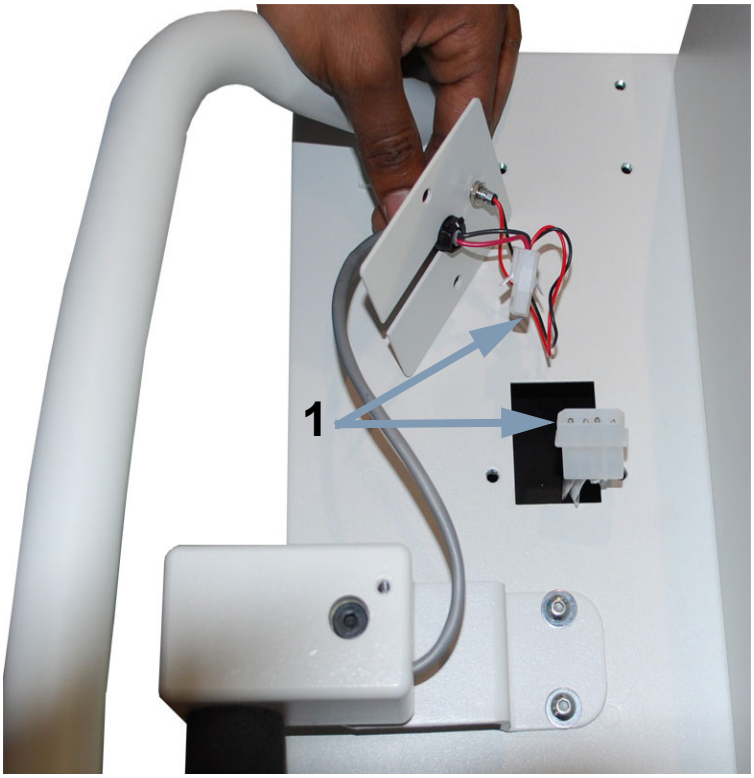


Figure Addendum D-36. Brake Handle Connections

14 Reinstall the grid sensor cable. (1 in Figure Addendum D-37).

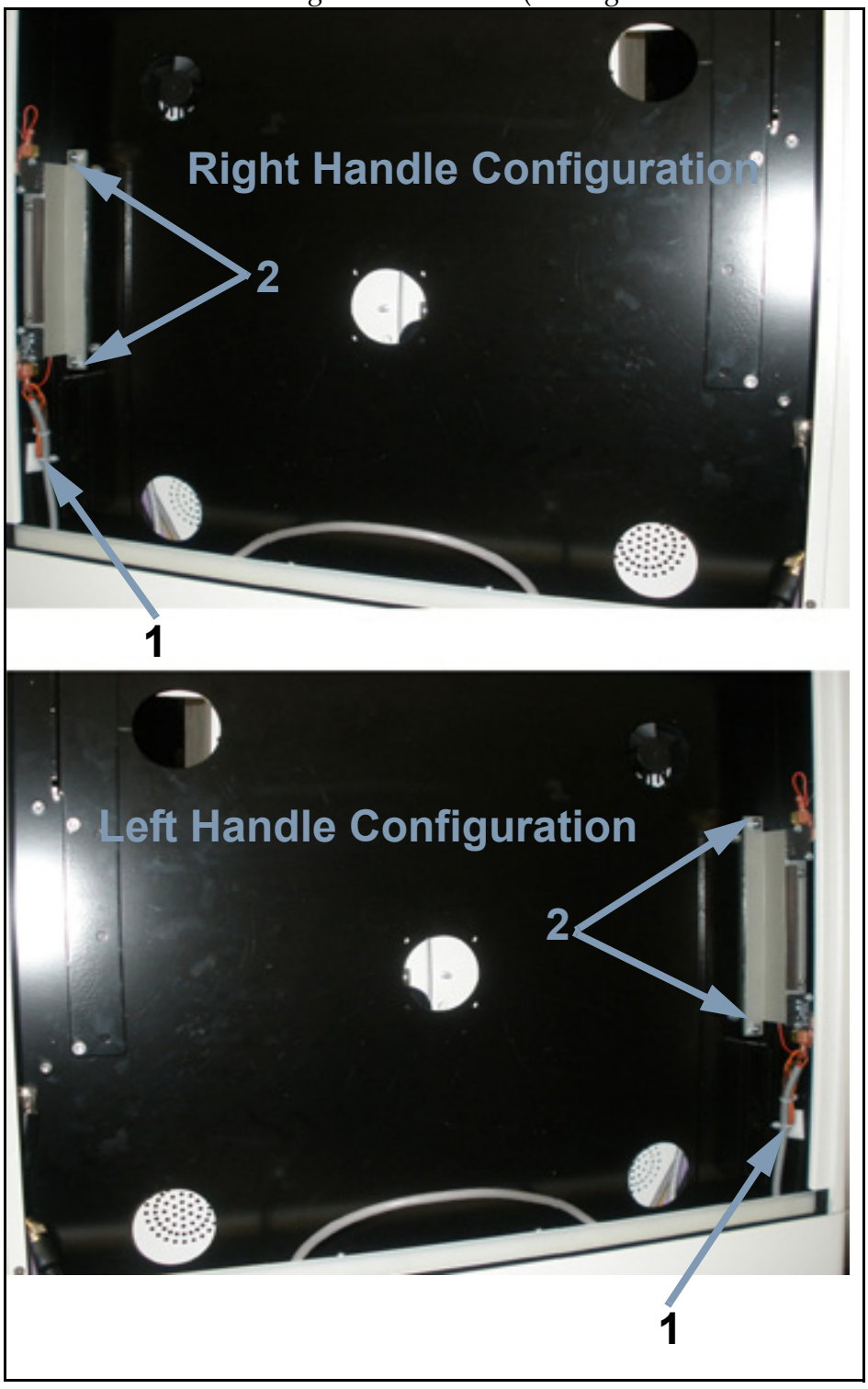


Figure Addendum D-37. Grid Sensor Cable

15 Reinstall the frame (1 in Figure Addendum D-38) with mounting screws (2).

Figure Addendum D-38. Frame Installation

16 Install the standoffs (1 in Figure Addendum D-39).

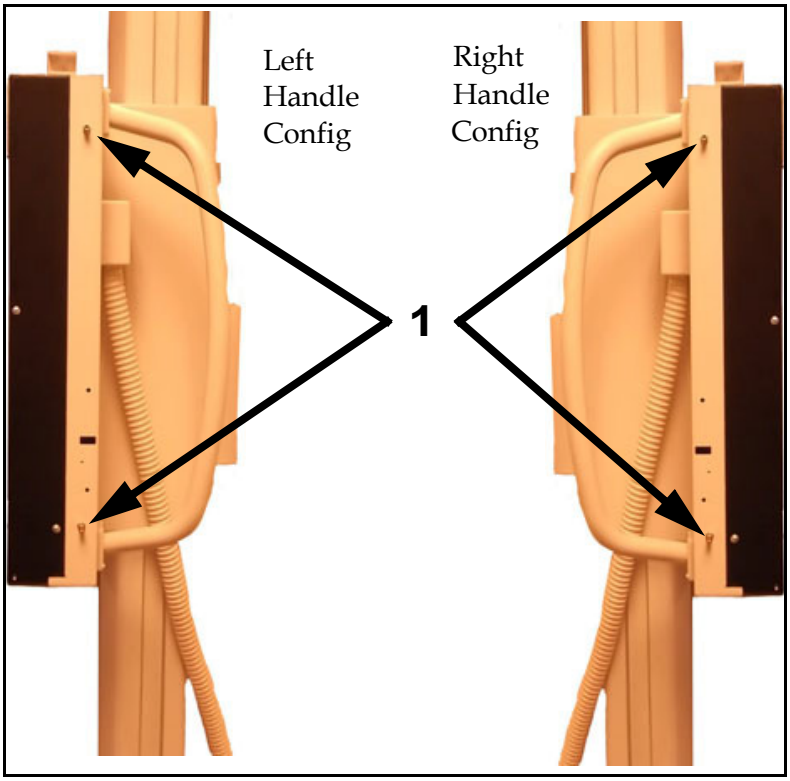


Figure Addendum D-39. Standoff Installation

17 Install the side covers (1 in Figure Addendum D-40).

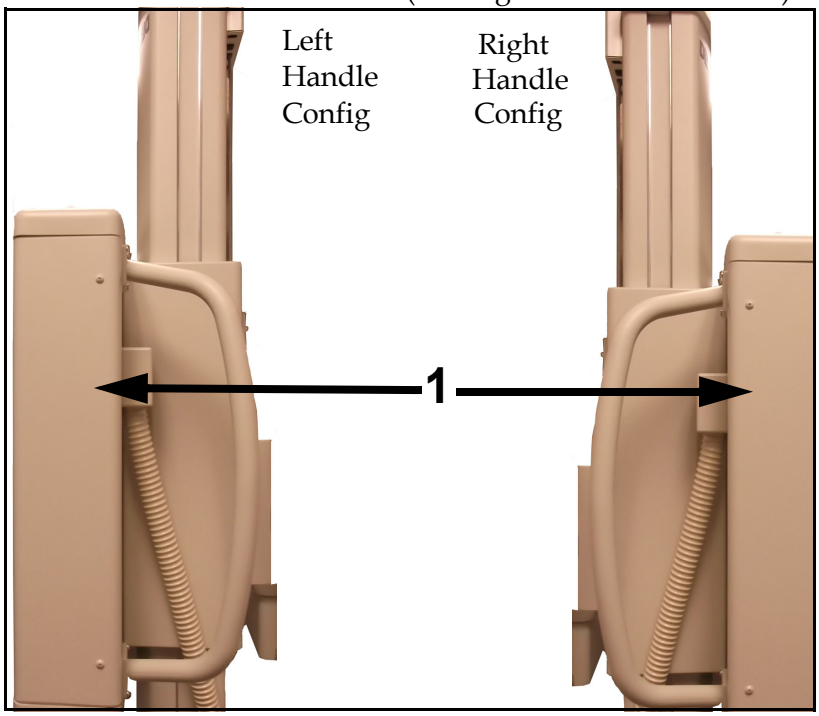


Figure Addendum D-40. Side Cover Installation

18 Install the cover (1 in Figure Addendum D-41).

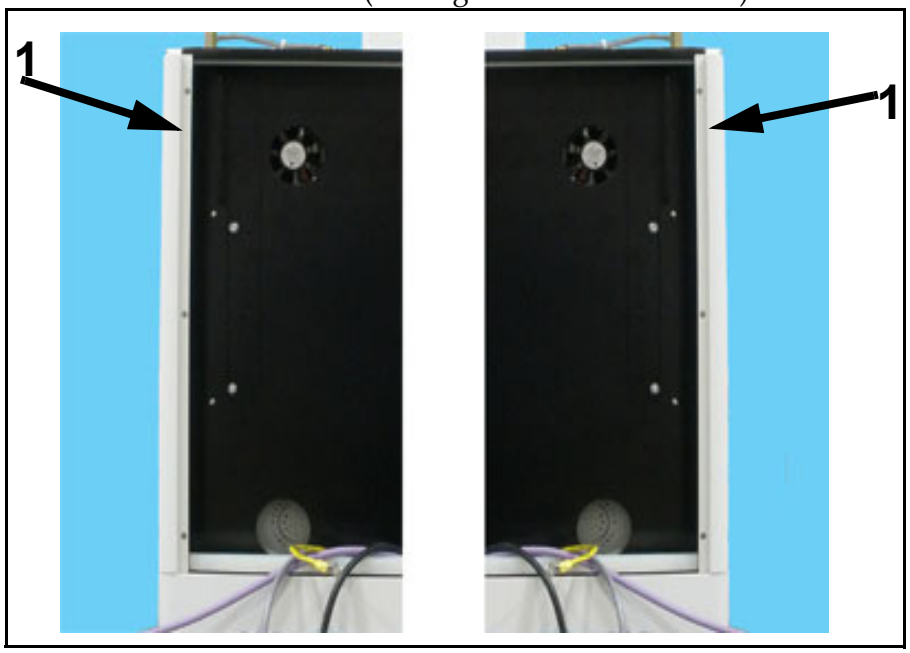


Figure Addendum D-41. Handle Front Cover Installation

19 Reinstall the front cover (1 in Figure Addendum D-42).

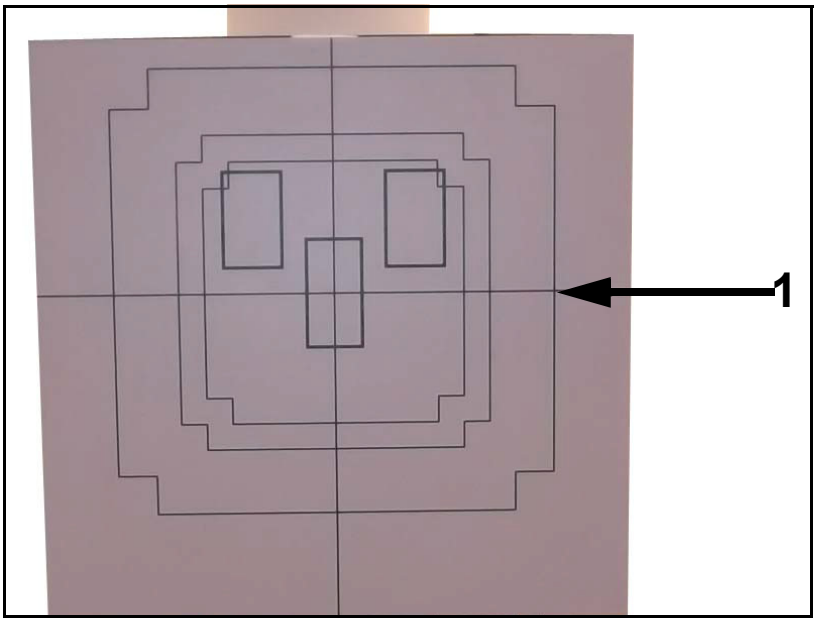


Figure Addendum D-42. Front Cover

20 Reinstall the top cover (1 in Figure Addendum D-43).

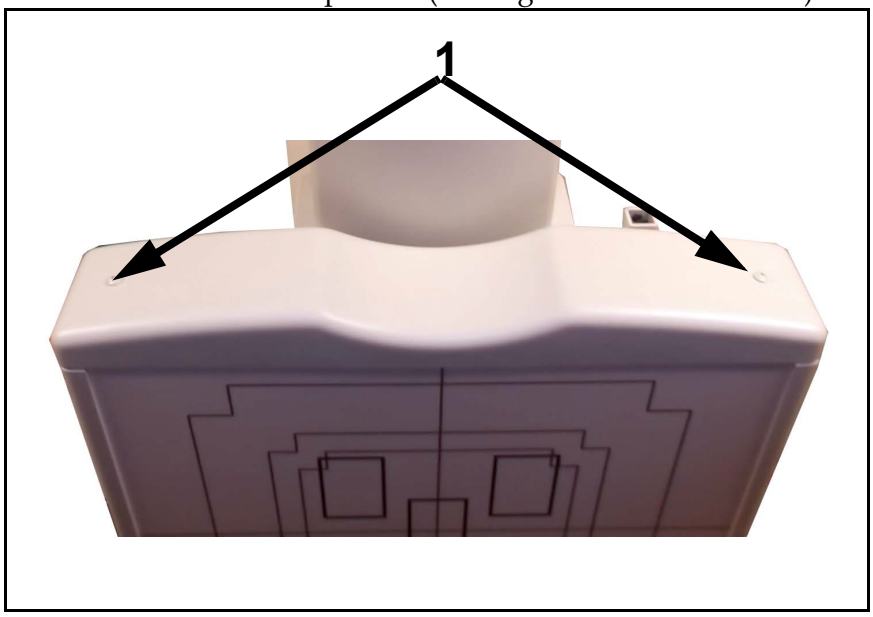


Figure Addendum D-43. Top Cover Installation

21 Reinstall the bottom cover (2 in Figure Addendum D-44) with mounting screws (1).

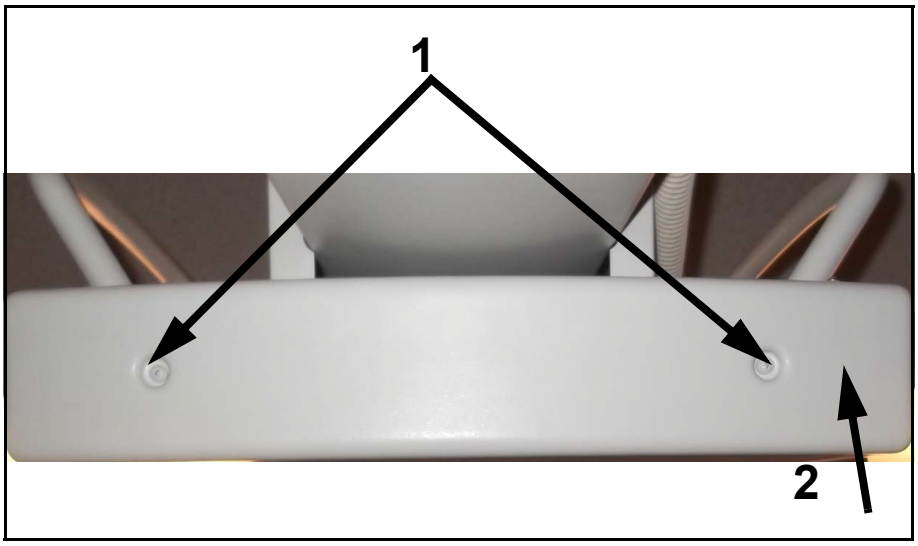


Figure Addendum D-44. Bottom Cover Screws

Installation Complete.

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Addendum

E

Image Receptor Installation

Toshiba FDX4343R Image Receptor Installation

This Addendum describes the Toshiba FDX4343R Digital Imaging Receptor installation on the VS300 wallstand.

Tools Required:

- 3/16″ Nut Driver
- 11/32″ Nut Driver
- Diagonal (Side) Cutters
- Medium Phillips Tip Screwdriver
- Metric Hex Wrench Set

1 Unscrew the top cover screws (1 in Figure E-1) and remove top cover (2).

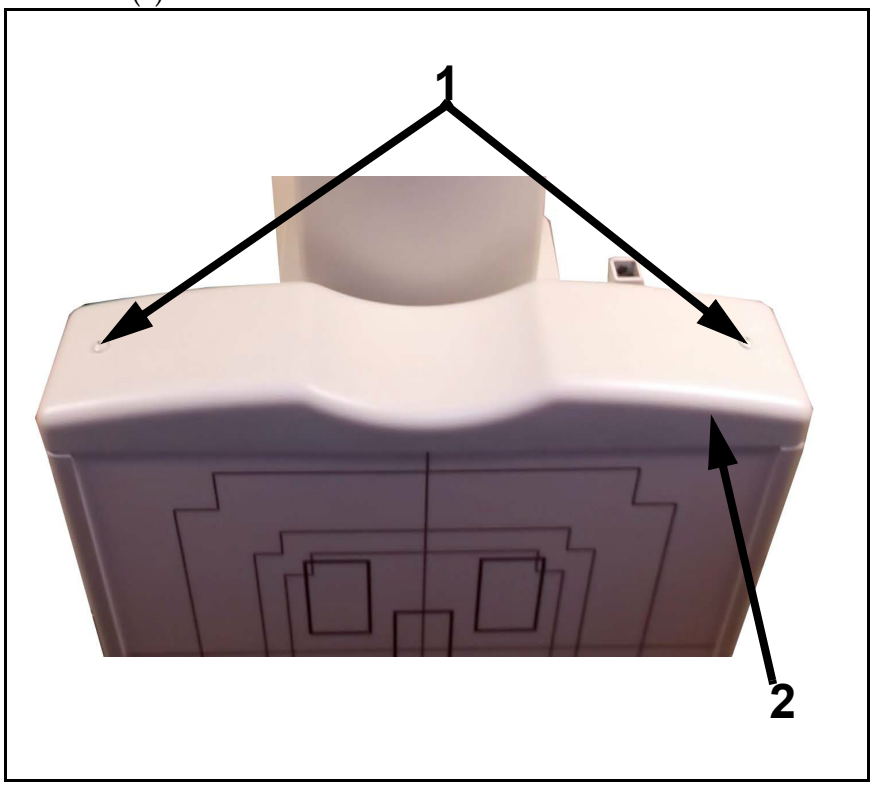

Figure E-1. Top Cover Removal

2 Unscrew the bottom cover screws (1 in Figure E-2) and remove bottom cover (2).

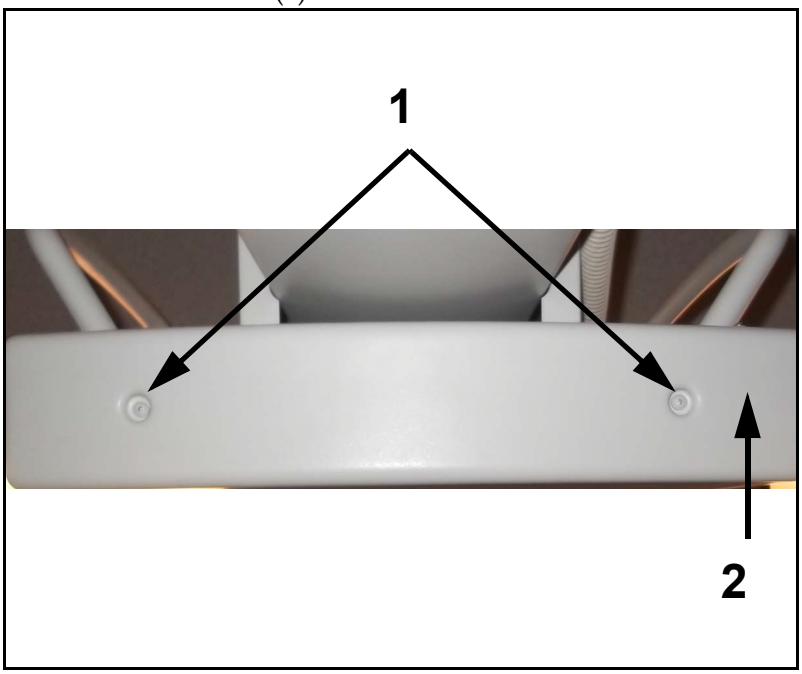

Figure E-2. Bottom Cover Removal

3 Unscrew the side cover screws (1 in Figure E-3) and remove the side cover (2).

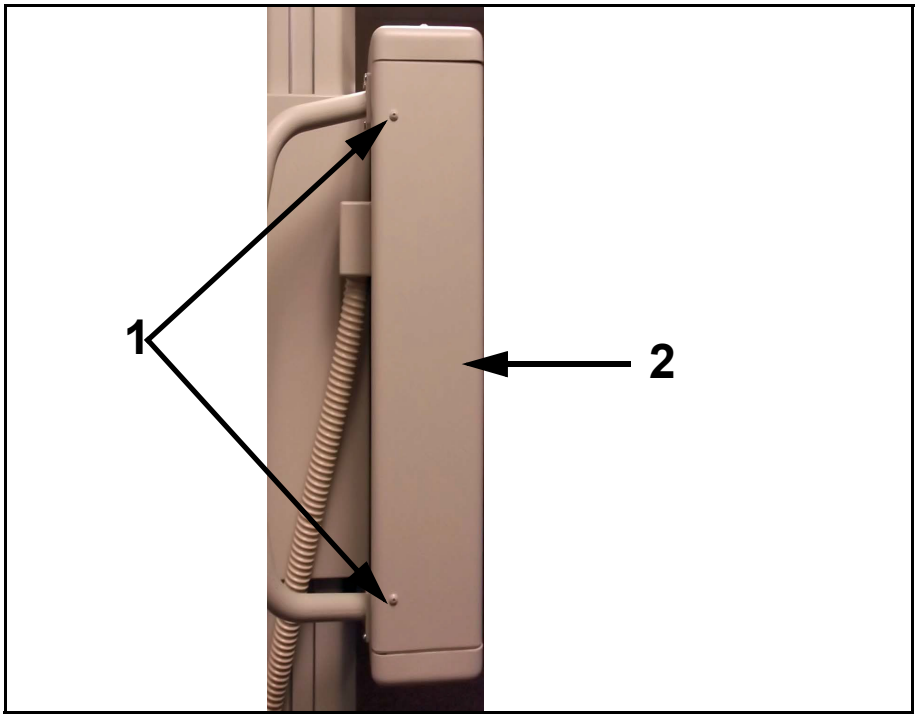

Figure E-3. Side Cover Screws

4 Unscrew two right side cover screws (1 in Figure E-4) and remove side cover (2).

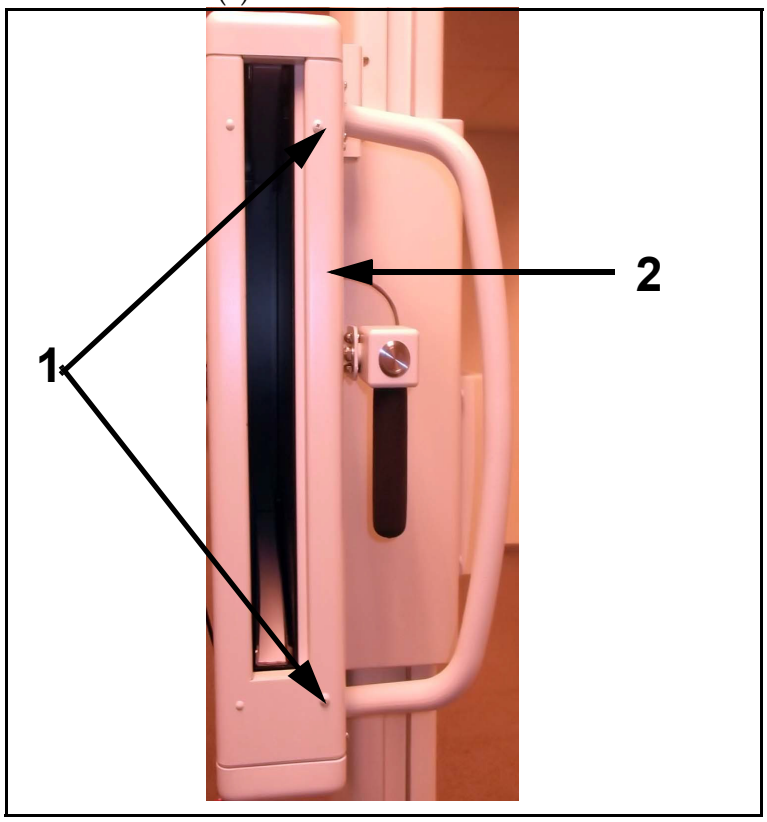

Figure E-4. Side Cover Screws

5 Pull velcro-backed panel (1 in Figure E-5) off the wallstand.

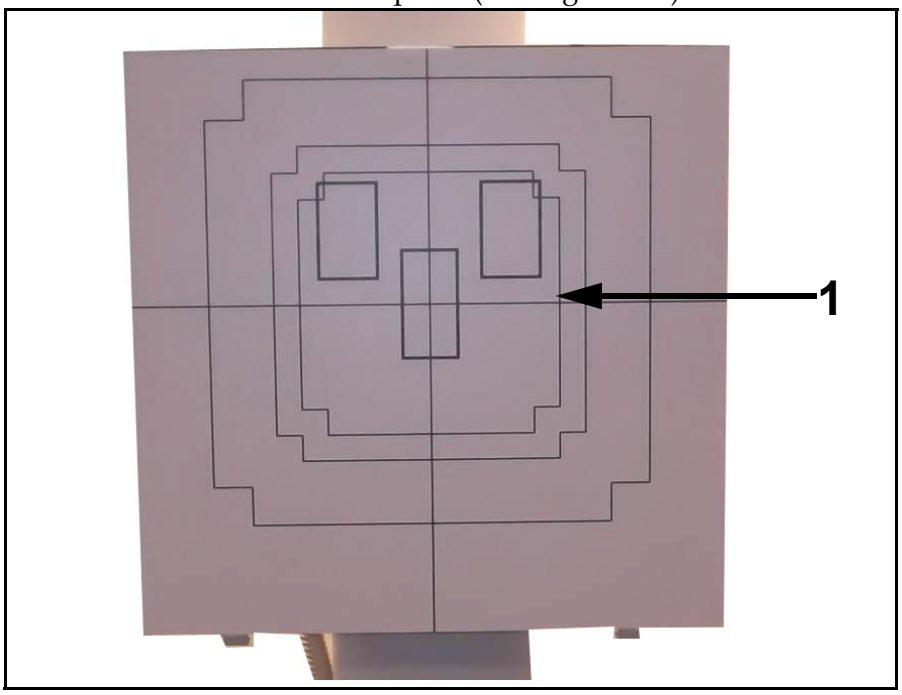

Figure E-5. Panel Removal

6 If installed, remove grid tray (1 in Figure E-6).

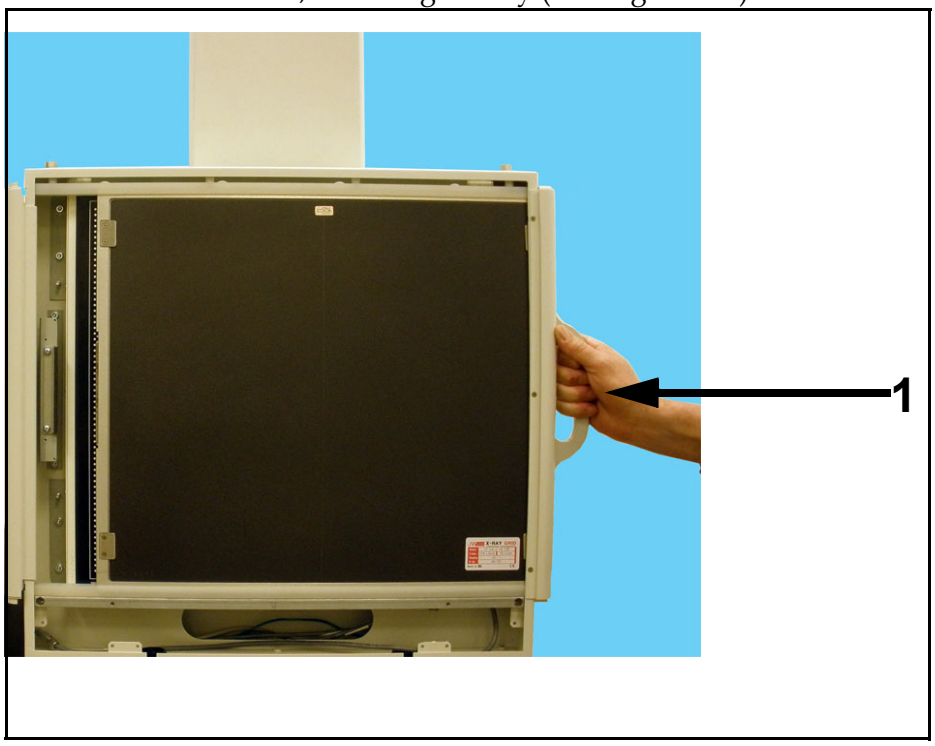

Figure E-6. Grid Removal

7 Remove and save bag (1 in Figure Addendum E-7).

Figure E-7. Handle Removal

8 Unscrew eight base plate mounting nuts (1 in Figure Addendum E-8) and remove base plate (2).

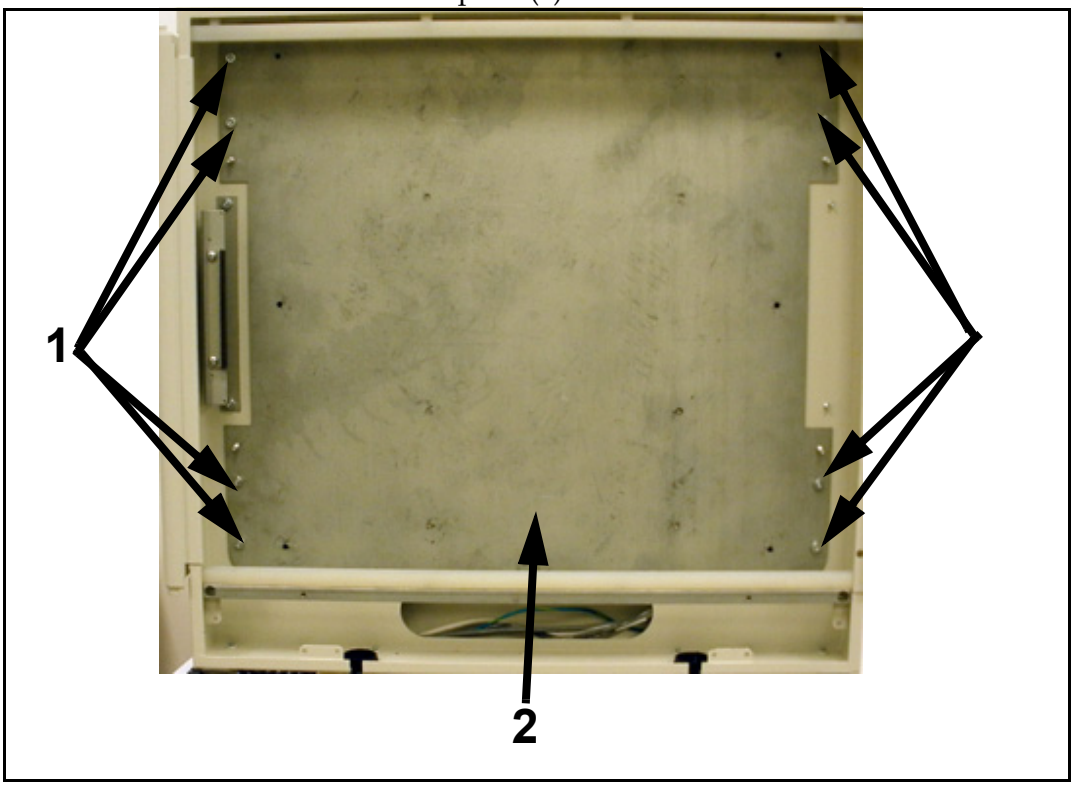

Figure E-8. Base Plate Mounting Nuts

Caution

Handle the receptor with great care in the following steps. It is very fragile and very expensive.

9 Mount plate (1 in Figure E-9) on receptor (2) with screws (3).

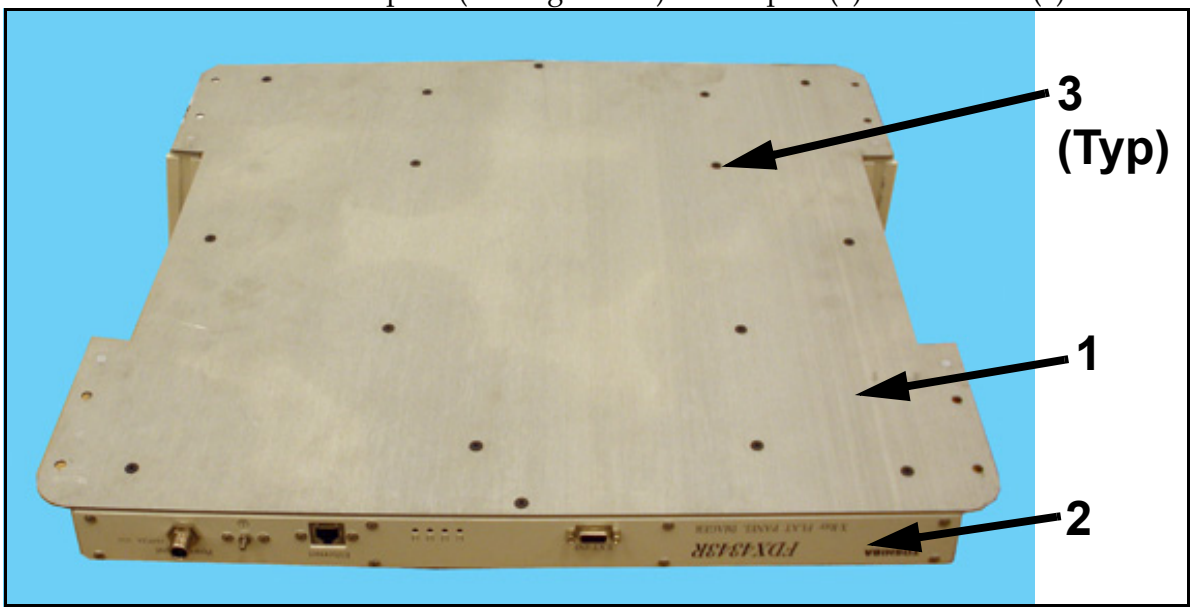

Figure E-9. Mounting Handles on Receptor

10 Mount handles (1 in Figure E-10) on plate (2) with screws (3).

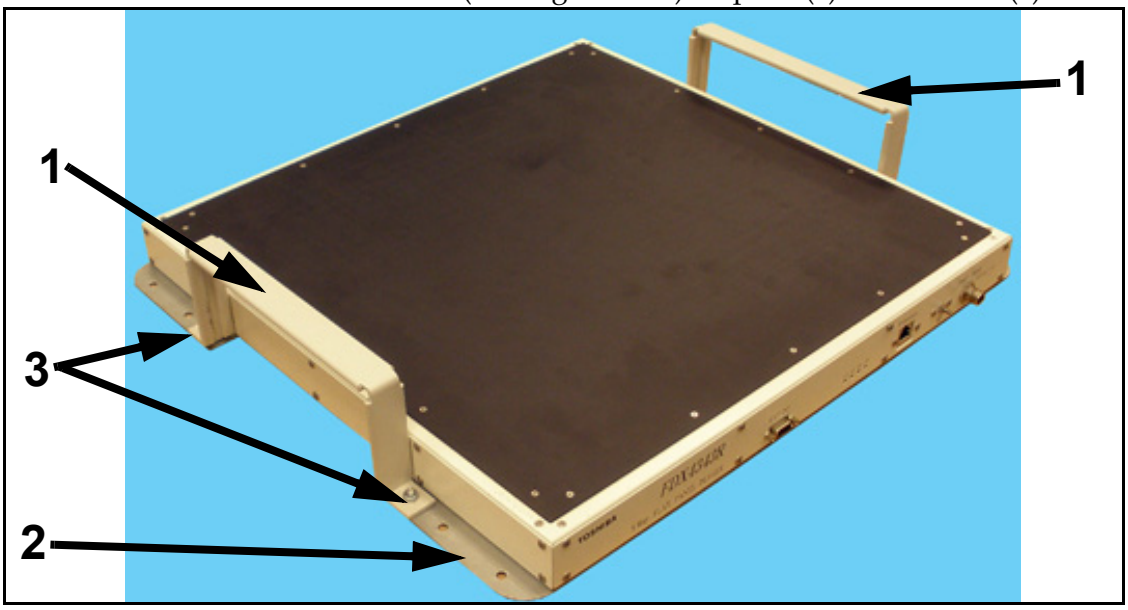

Figure E-10. Mounting Handles on Receptor

11 Unscrew screws (1 in Figure E-11) and remove bar (2).

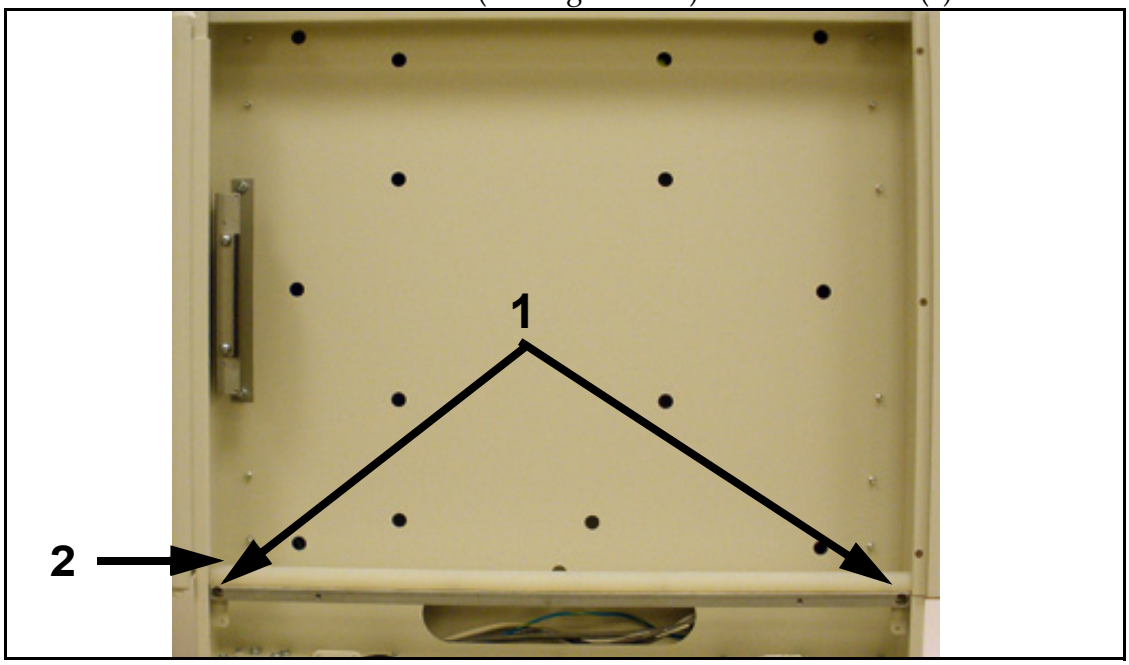

Figure E-11. Bar Removal

12 Very carefully lift receptor by handles and place it on the studs on the wallstand. Secure in place with four nuts (2 in Figure E-12)

13 Remove handles (1).

14 Reattached grid bar (3).

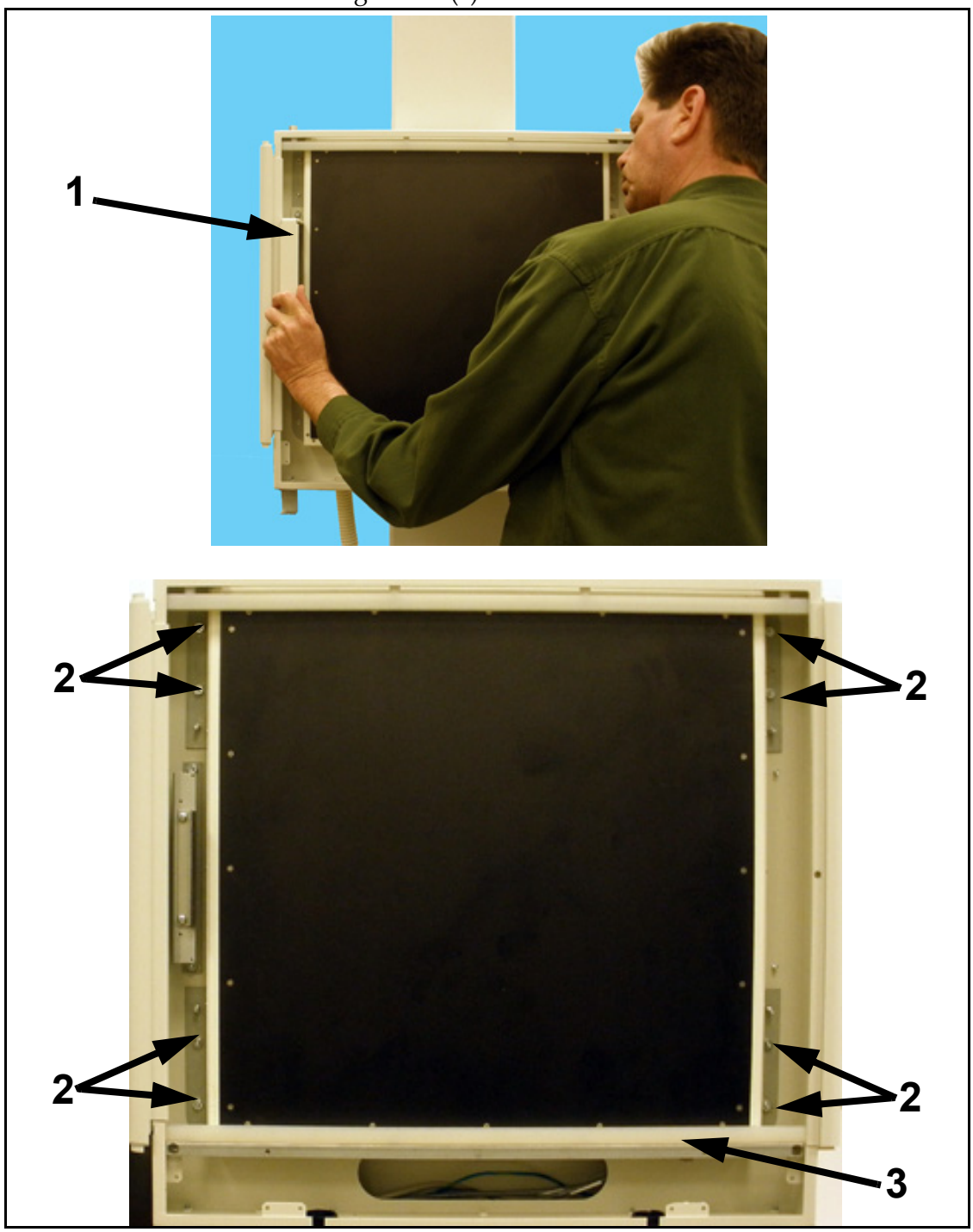

Figure E-12. Receptor Mounting

15 For optional ion chamber, install it as shown below.

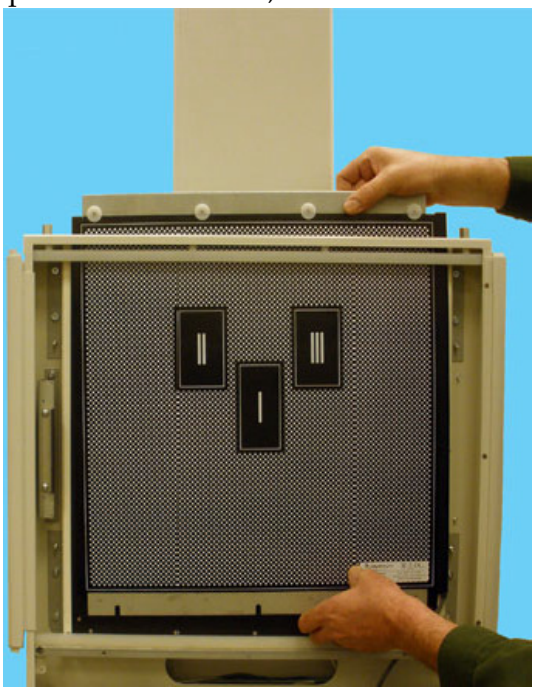

Figure E-13. Ion Chamber Installation

16 For optional ion chamber, secure chamber in place with mounting screws (1 in Figure E-14).

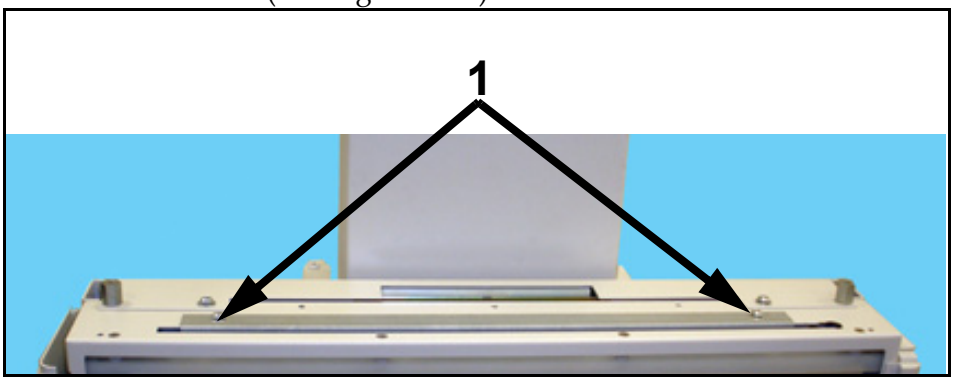

Figure E-14. Ion Chamber Mounting Screws

17 For optional ion chamber, mount pre-amp (1 in Figure E-15) with screws (2).

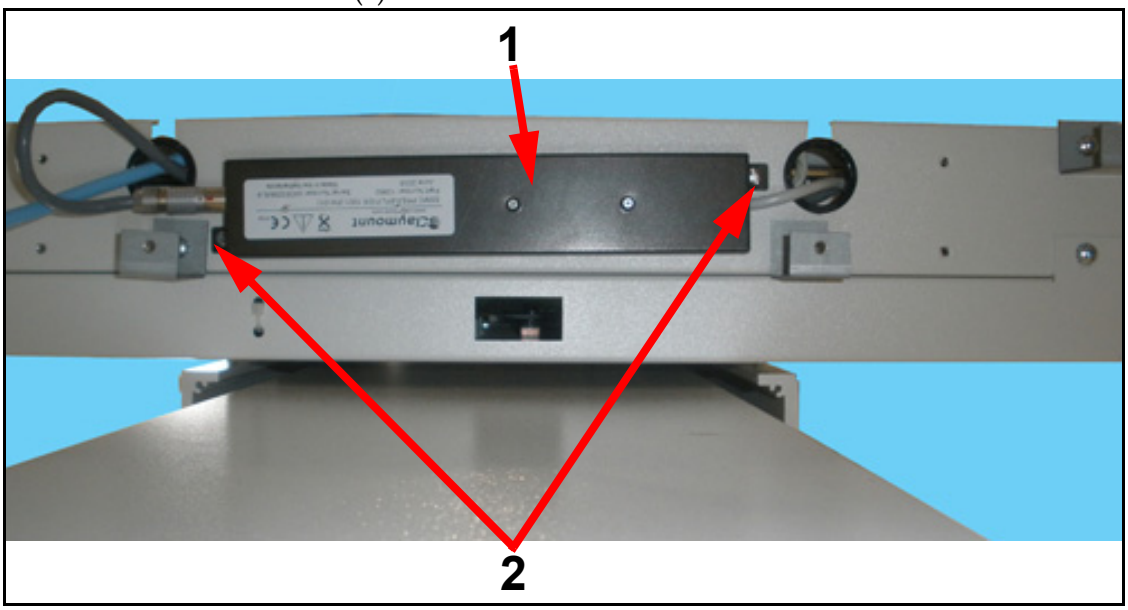

Figure E-15. Pre-amp Mounting

18 Connect cables (1 - 6 in Figure E-16) from wallstand to receptor as shown below.

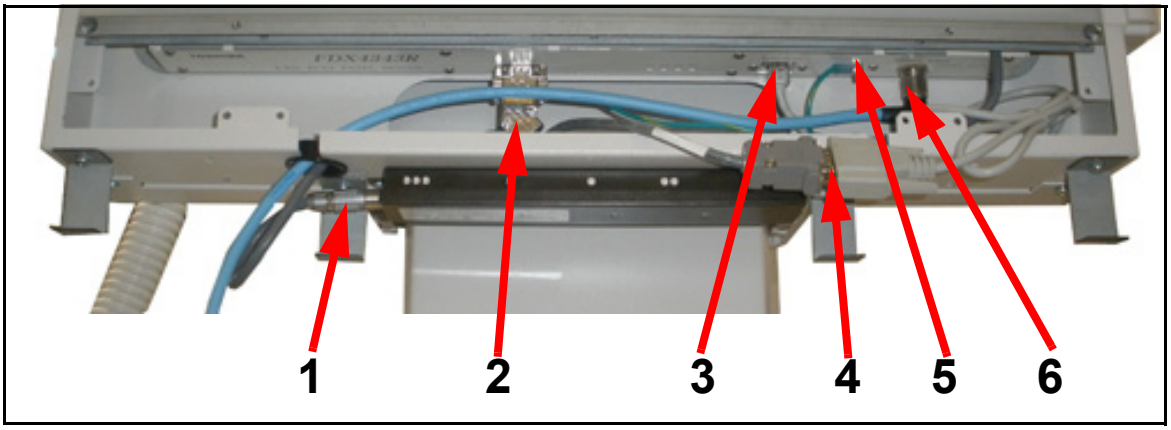

Figure E-16. Receptor Cable Connections

19 Reinstall grid tray (1 in Figure E-17). Reinstall cabinet tower cover.

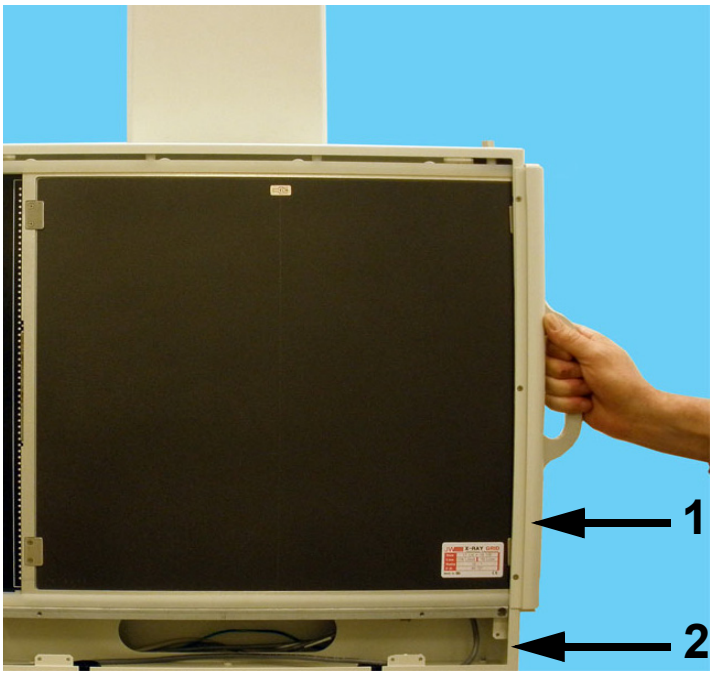

Figure E-17. Grid Installation

20 Reattach front panel (1 in Figure E-18).

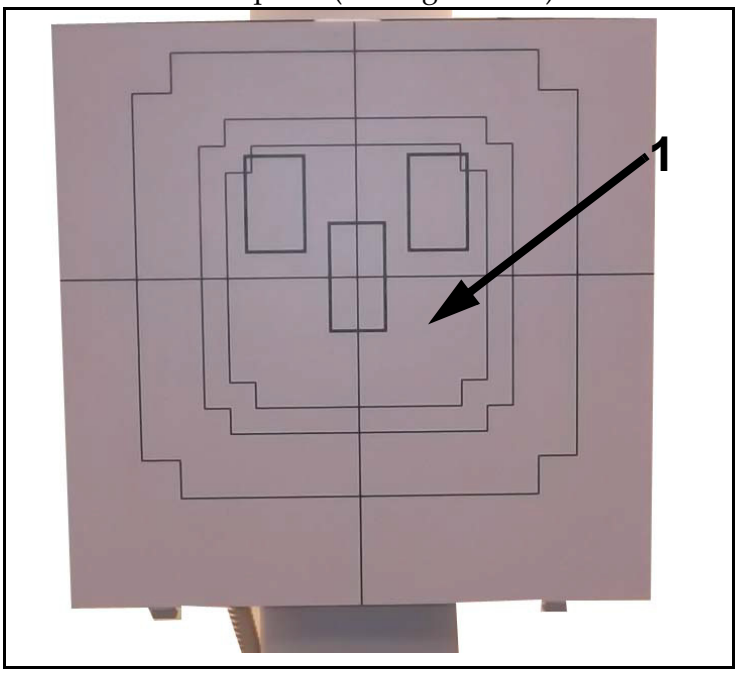

Figure E-18. Front Panel Installation.

21 Add counterweights (1 in Figure E-19) to balance wall stand movement.

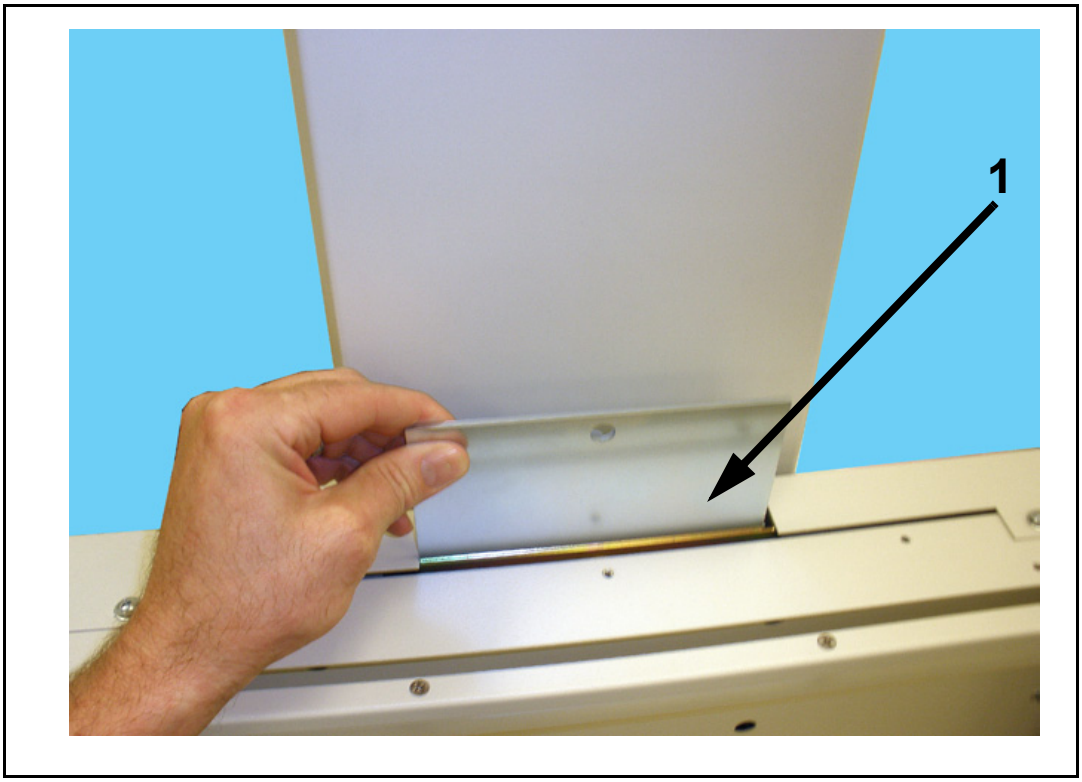

Figure E-19. Counterweights

22 Reattach the left side cover (1 in Figure E-20) by mounting the screws on the side cover (2).

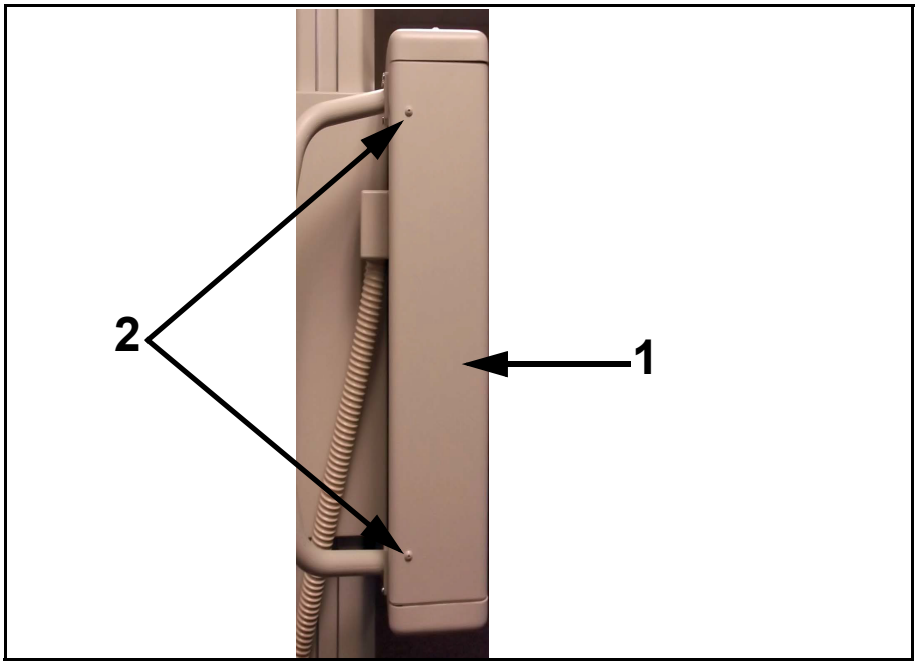

Figure E-20. Side Cover Screws

23 Reattach the right side cover (1 in Figure E-21) with two right side cover screws (2).

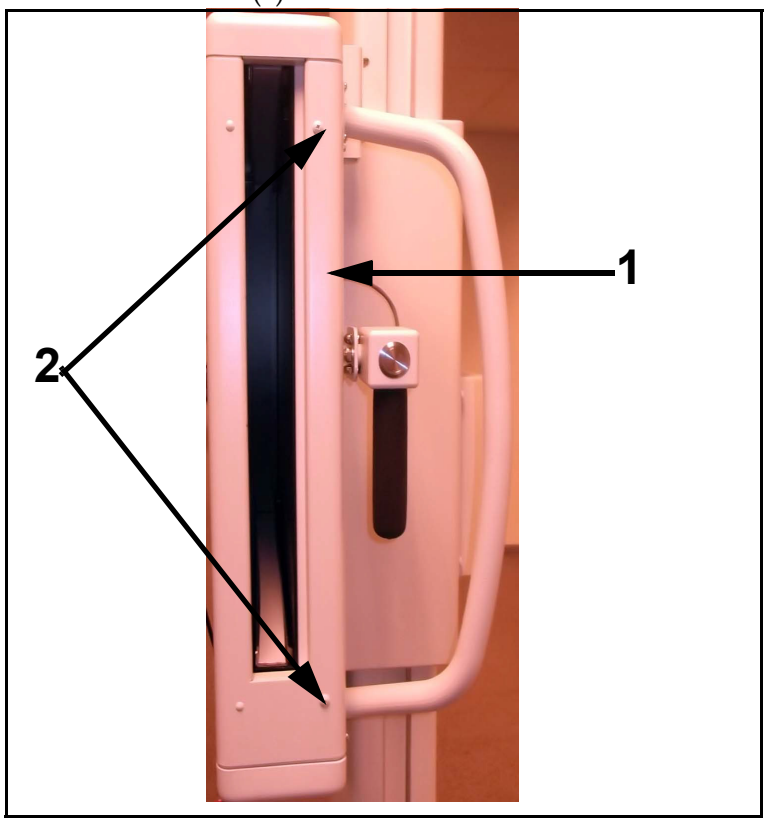

Figure E-21. Side Cover Screws

24 Reinstall bottom cover (1 in Figure E-22) with mounting screws (1).

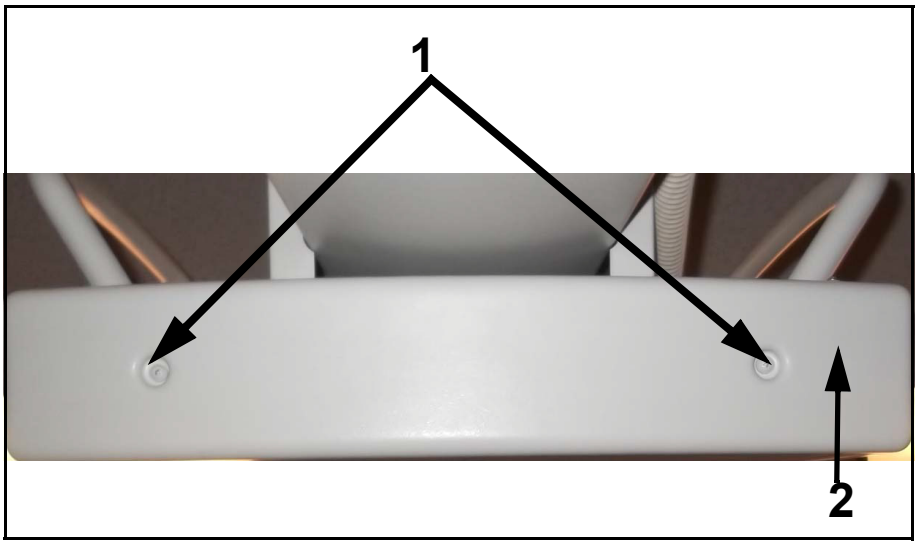

Figure E-22. Bottom Cover Screws

25 Reinstall top cover (2 in Figure E-23) with mounting screws (1).

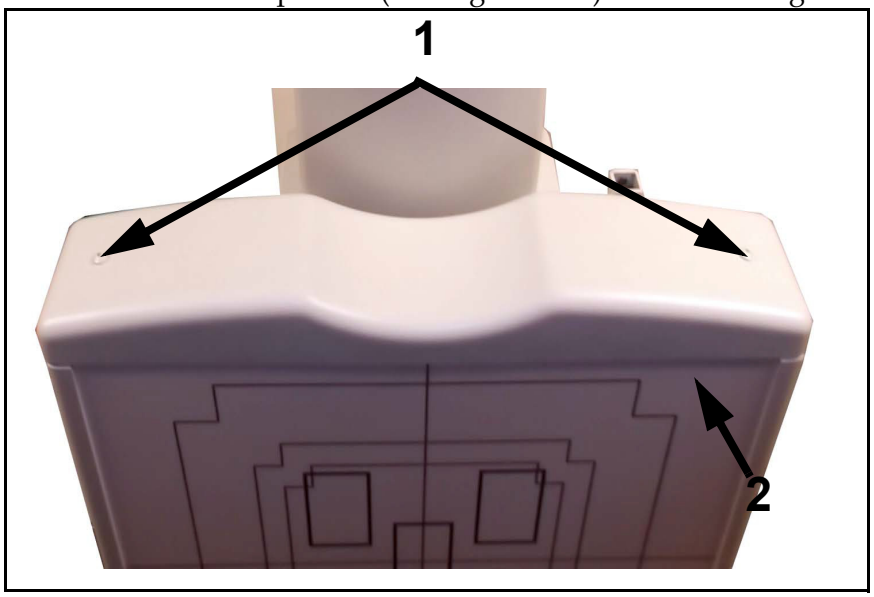

Figure E-23. Top Cover Reattachment

26 Remove junction box cover (1 in Figure E-24).

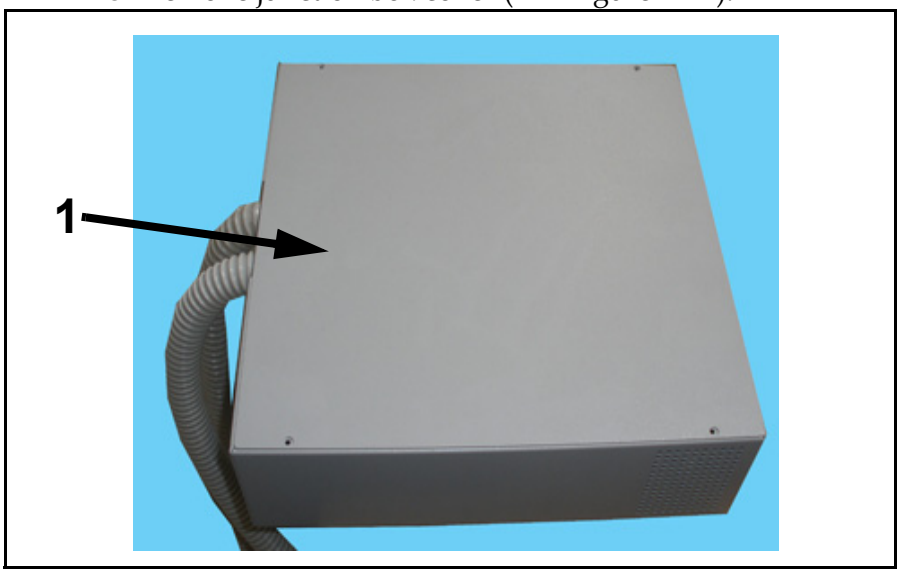

Figure E-24. Junction Box Cover

Note

All cables can be routed either through wall conduit port (1 in Figure E-25) or conduit tubing (2).

27 Connect power cable (3) to power supply (4).

28 If applicable, connect AEC cable from generator to ion chamber cable (5).

29 Connect detector cable from control unit to detector cable (6).

30 Route comm cable (7) through conduit to control unit.

31 Connect ground cable from generator to ground terminal (8).

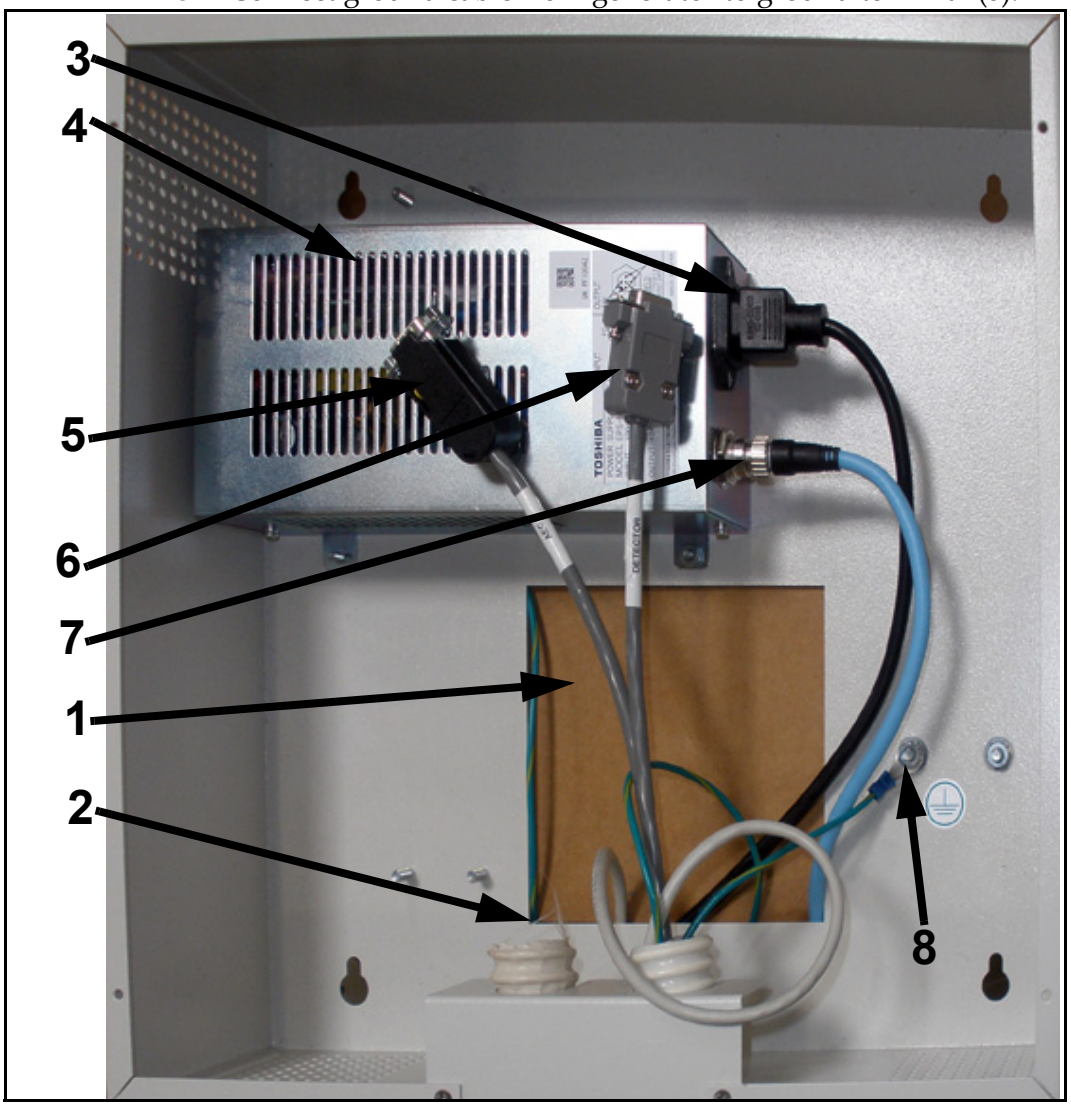

Figure E-25. Junction Box Connections

32 (Optional, for future use) Mount detector handles in junction box as shown below.

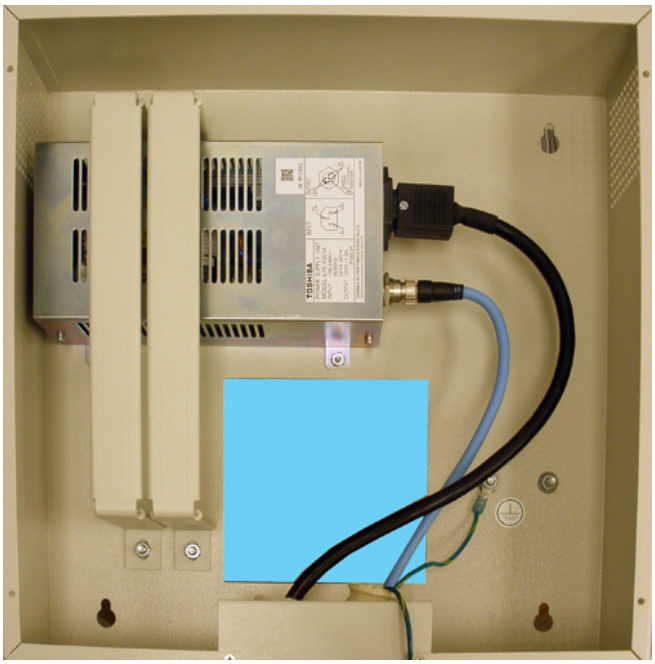

Figure E-26. Detector Handle Storage

33 Reattach junction box cover (1 in Figure E-27)

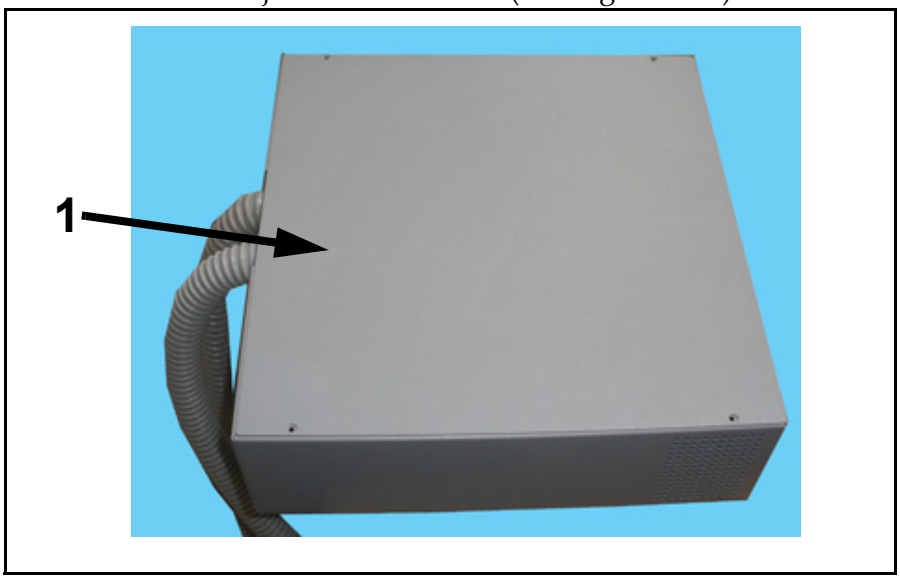

Figure E-27. Junction Box Cover

Remove nuts (2 in Figure E-28) and bracket. Remount bracket on opposite side (1).

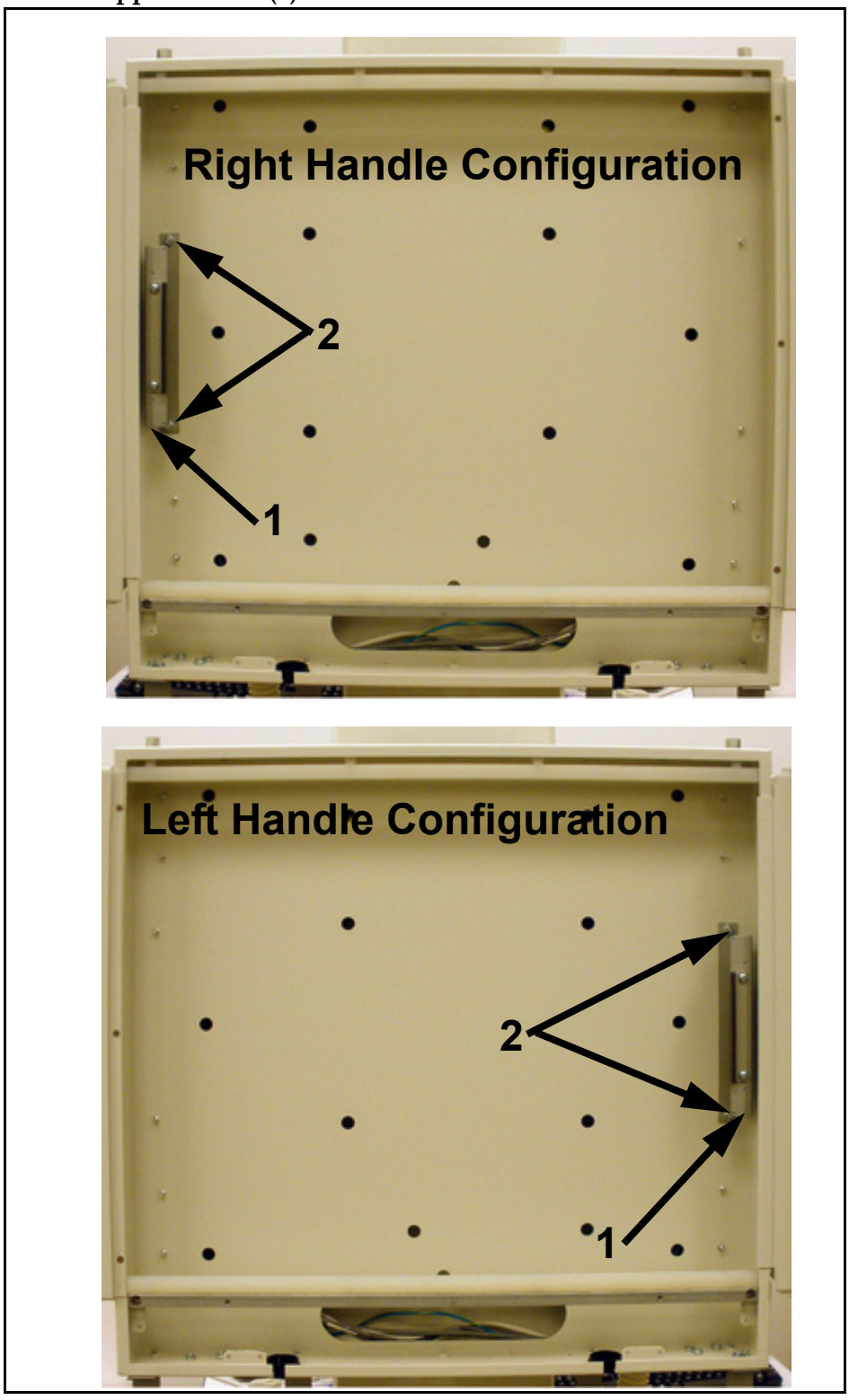

Figure E-28. Grid Bracket

34 Remove screws (1 in Figure E-29) and remove cover (2).

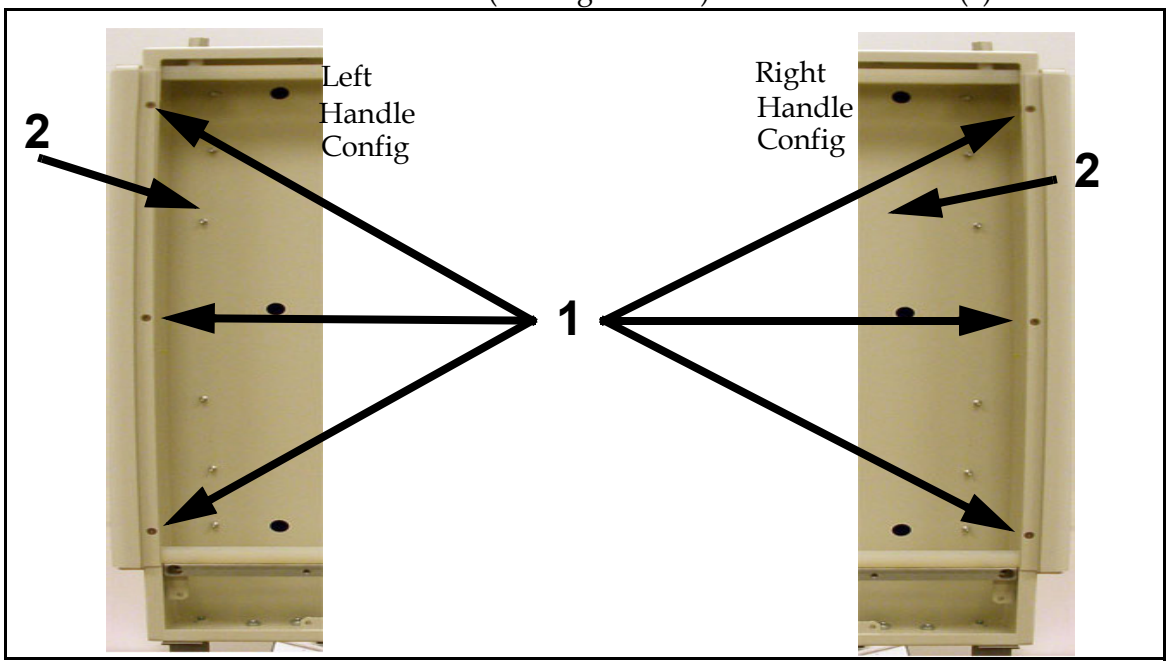

Figure E-29. Front Cover Removal

35 Remove screws (1 in Figure E-30) and remove cover (2).

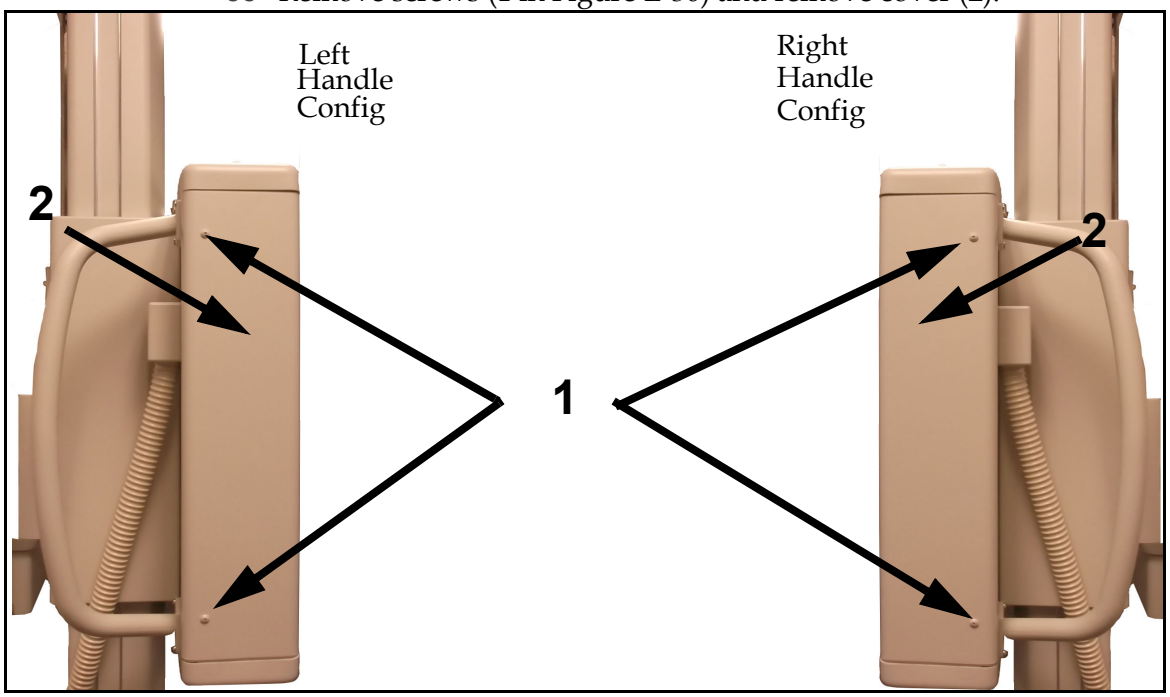

Figure E-30. Side Cover Removal

36 Remove standoffs (1 in Figure E-31).

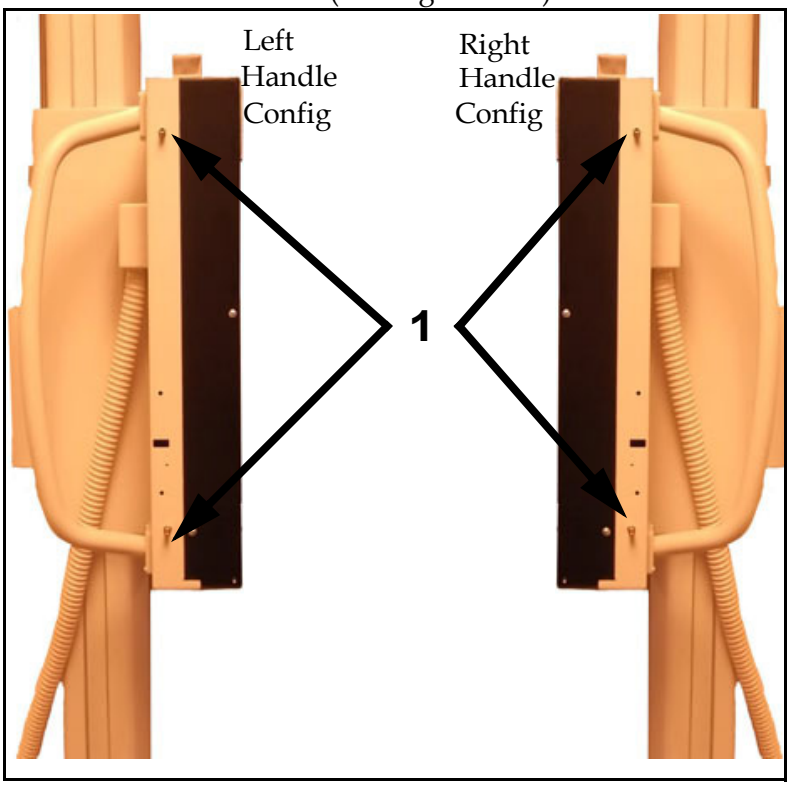

Figure E-31. Standoff Removal

37 Remove screws (1 in Figure E-32) and frame (2).

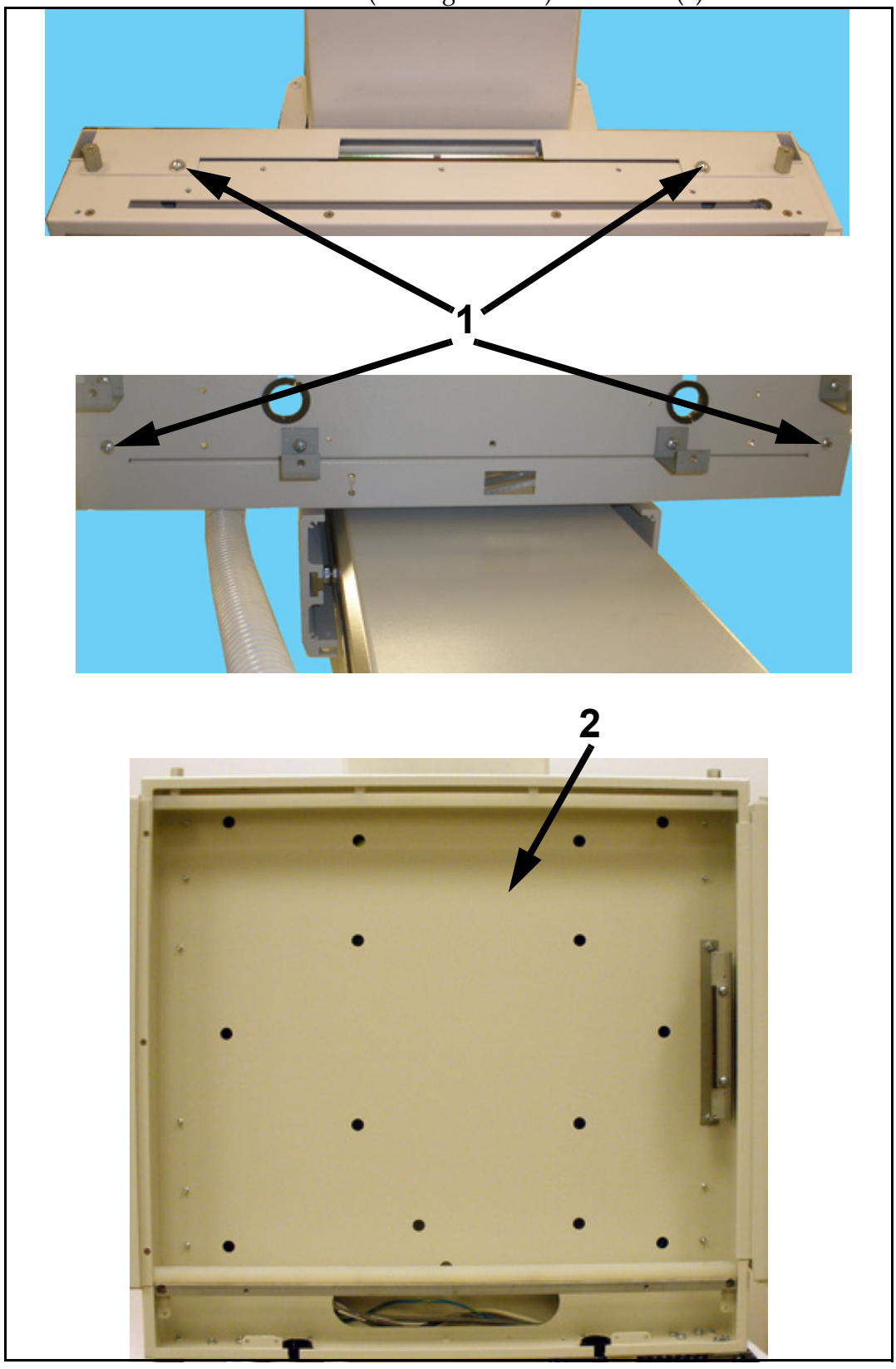

Figure E-32. Frame Removal

38 Disconnect wires (1 in Figure E-33)from terminal (2).

39 Disconnect ground wire (3).

40 Unscrew conduit box screws (4 in Figure E-33) and remove conduit box (5).

41 Reconfigure conduit and brake wiring harnesses on the opposite side as shown below.

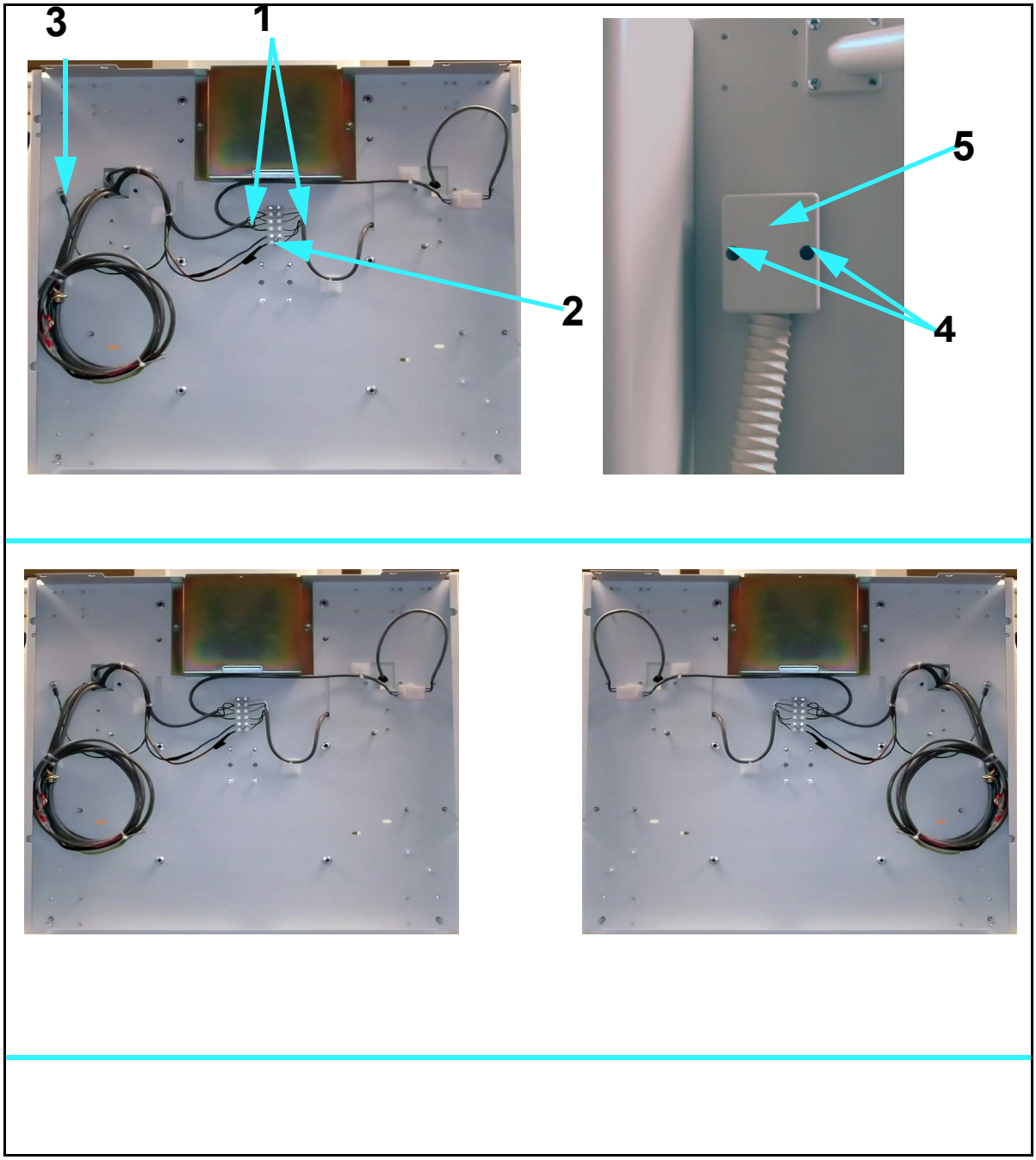

Figure E-33. Lock Mechanism Assembly (Left & Right Shown)

42 Unscrew brake plate screw (1 in Figure E-34) and remove brake plate (2)

43 Unscrew brake handle mounting screws (3) and remove brake handle (4) and then reassemble on the opposite side.

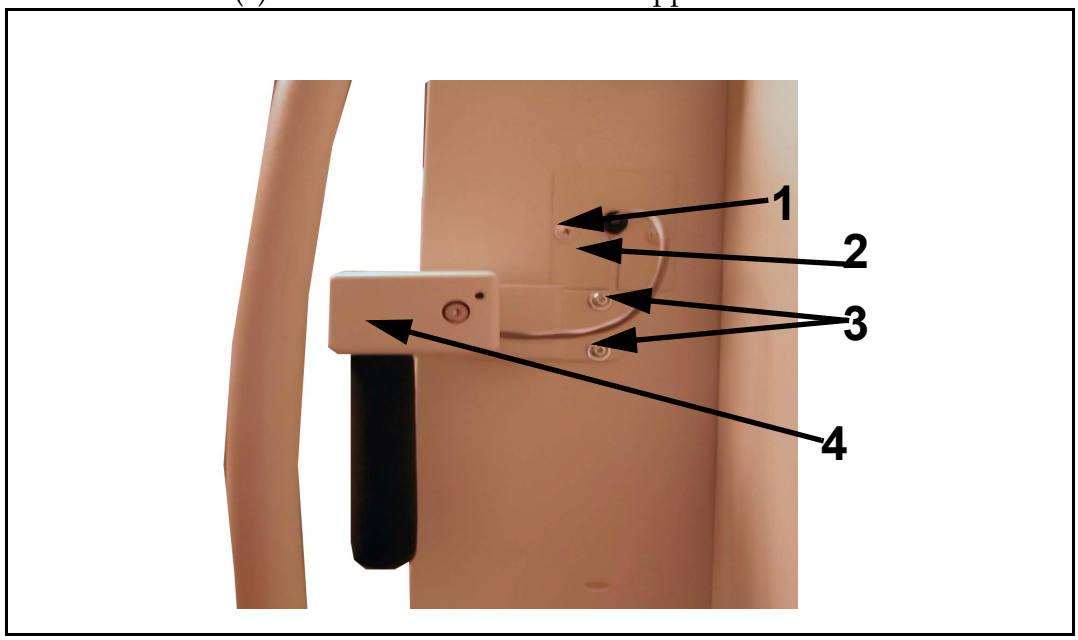

Figure E-34. Brake Handle Mounting Screws

44 Reinstall frame (1 in Figure E-35) with mounting screws (2).

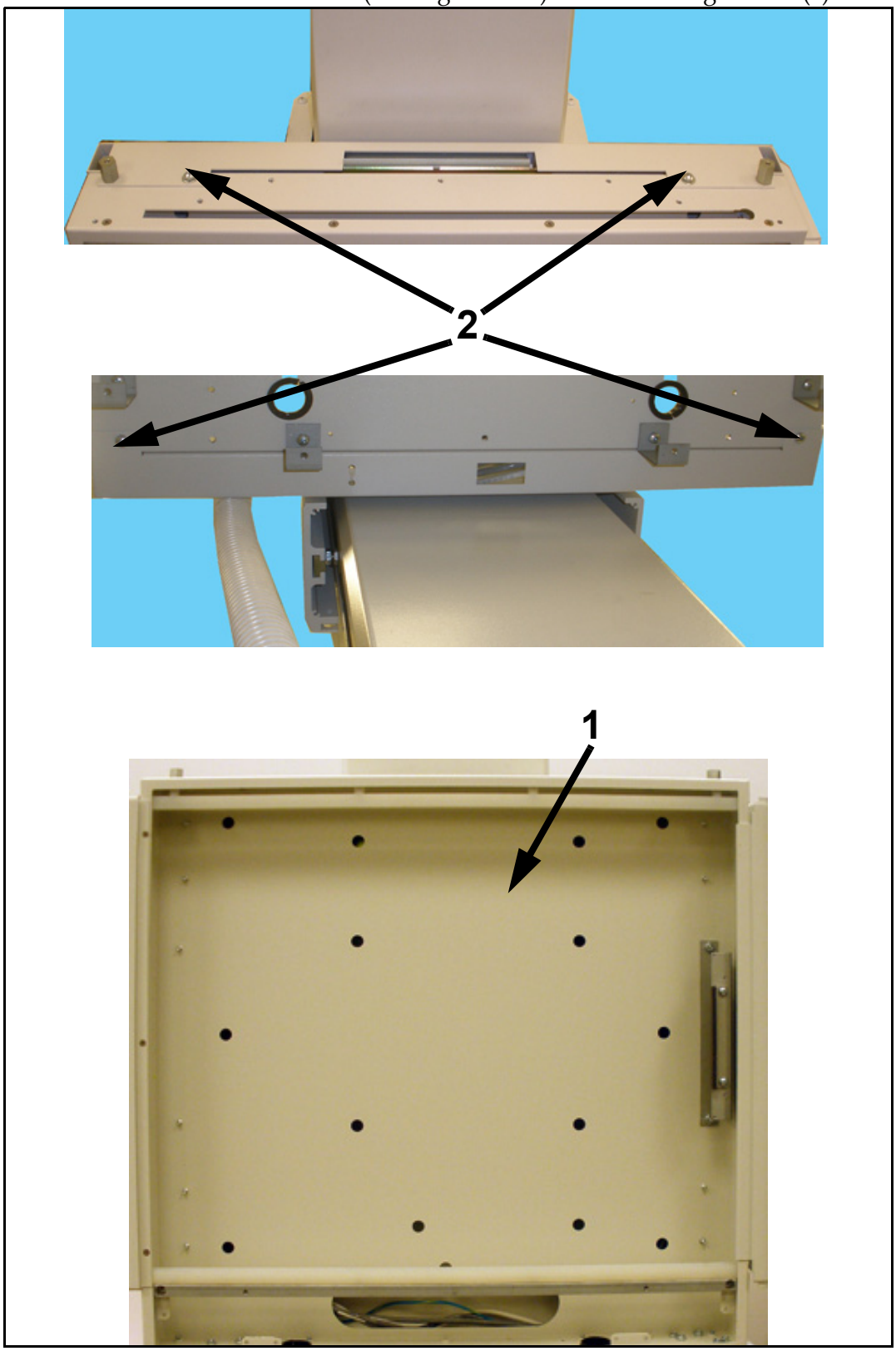

Figure E-35. Frame Installation

45 Install standoffs (1 in Figure E-36).

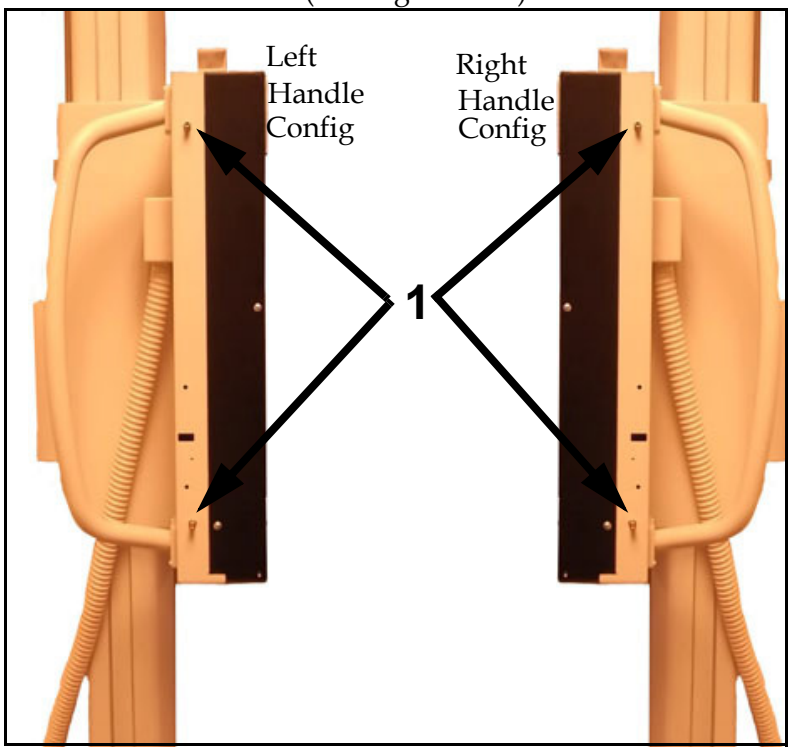

Figure E-36. Standoff Installation

46 Reinstall covers (1 in Figure E-37).

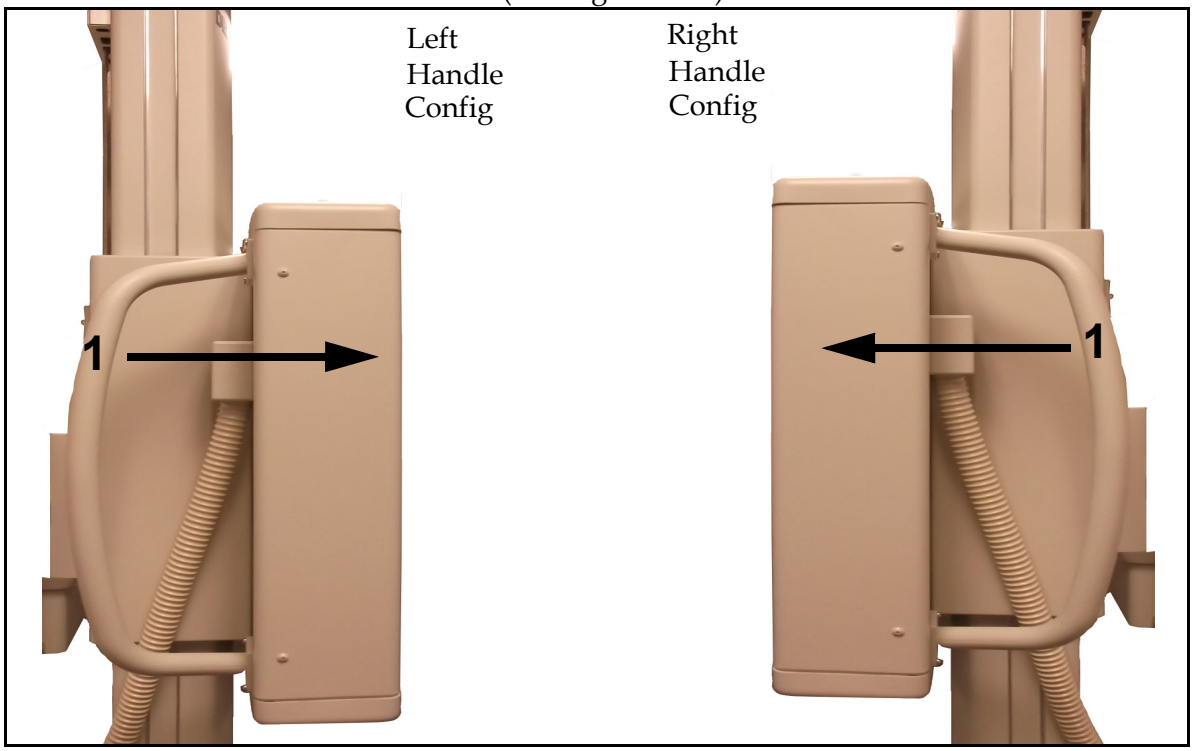

Figure E-37. Side Cover Installation

47 Install cover (2 in Figure E-38) with screws (1).

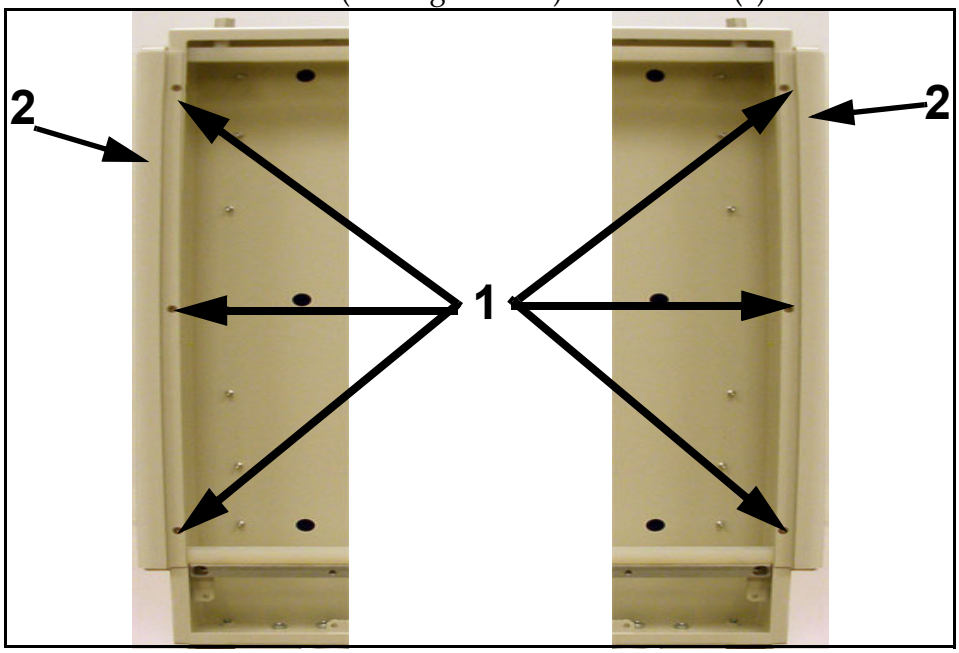

Figure E-38. Front Cover Installation

48 Reattach front panel (1 in Figure E-39).

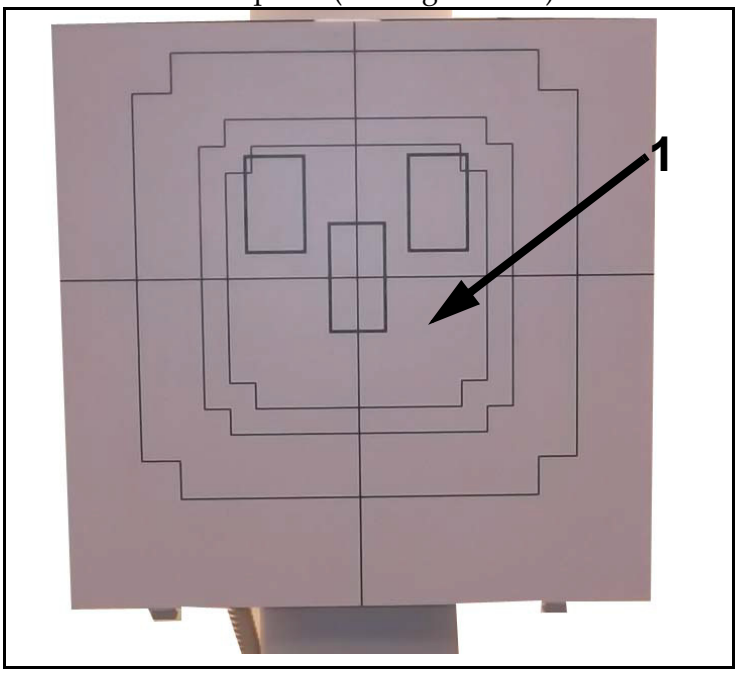

Figure E-39. Front Panel Installation.

49 Reinstall bottom cover (1 in Figure E-40) with mounting screws(1).

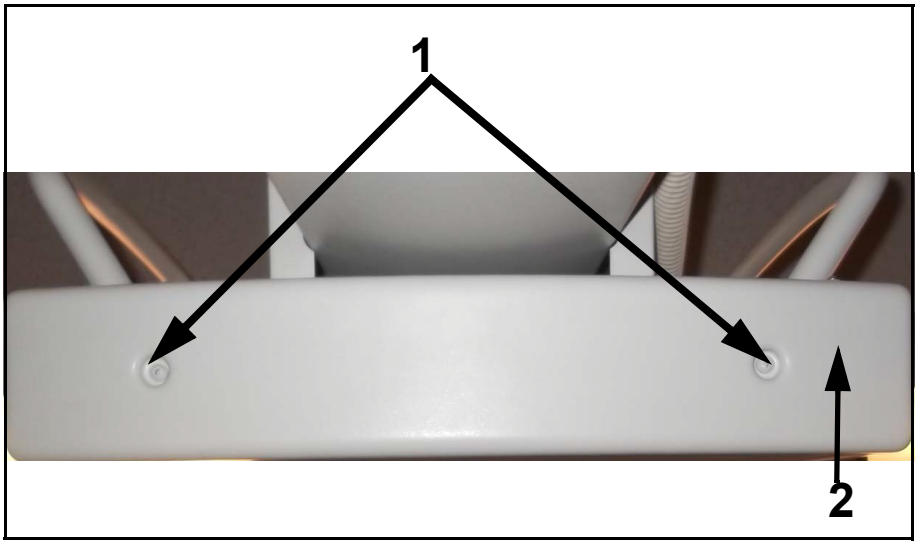

Figure E-40. Bottom Cover Screws

50 Reinstall top cover (2 in Figure E-41) with mounting screws (1).

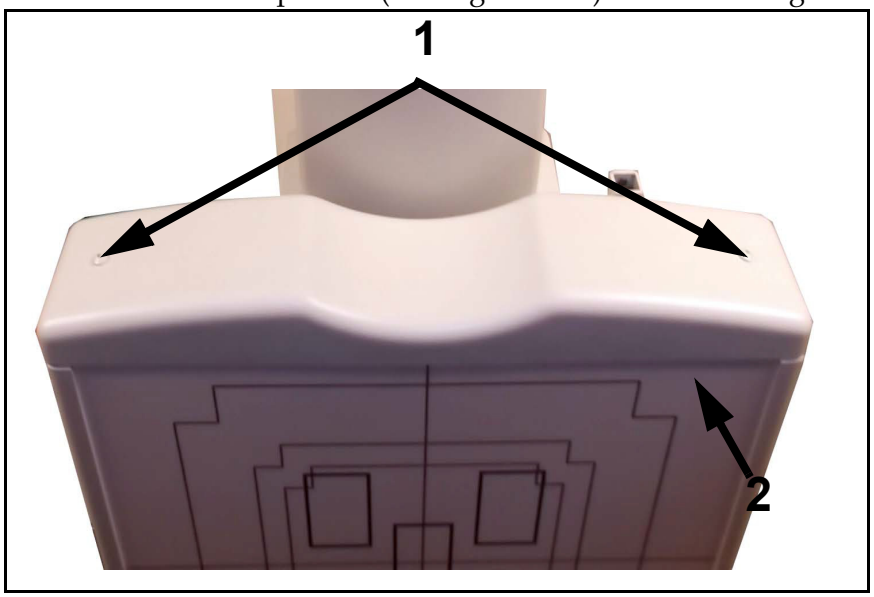

Figure E-41. Top Cover Reattachment

Installation Complete.

Operation

3

3.1 Safety Precautions

Warning

No foreign objects which can attenuate or scatter the X-ray beam are allowed between the X-ray tube and the wallstand during exposure. Failure to follow this may result in serious injury.

Warning

This wallstand is intended to be used as part of a system for the intended generation of X-rays for medical diagnosis.

X-rays generate a potential risk for both patients and operators.

For this reason, the application of X-rays for a given medical purpose must aim at the minimization of radiation exposure to any persons.

Those persons responsible for the application must have the specific knowledge according to legal requirements and regulations and must establish safe exposure procedures for this kind of system.

Those persons responsible for the planning and installation of this equipment must observe the national regulations.

Note
If the wallstand is equipped with one of the optional digital receptors, refer to the corresponding documentation for controls and operation information on that part of the system.

3.2 Specifications

Specifications*	
Compatibility	The VS300 wallstand is compatible with a wide variety of generators and tubestands. It is intended to be used in a stationary diagnostic X-ray configuration.
External Heat Generation	Minimal
Classification	Class 1 Type B 
Aluminum Equivalent	Beam Attenuation of the wallstands front panel is 0.4 mm Aluminum Equivalent or Less
Temperature Limits	Transit/Storage Operating – 40° F to +158° F +50° F to +95° F – 40° C to +70° C +10° C to +35° C
Relative Humidity Limits	Transit/Storage 10% to 100% Operating 10%-80% Non-Condensing
Atmospheric Limits	14.5 inHg to 30.74 inHg 500 hPa to 1060 hPA
Weight	250 lbs (91 Kg)
Degree of protection against the ingress of water:	Ordinary
Power Requirements	24 V DC at 1.2 Amps
Certifications:	 Classified To UL 60601-1,IEC60601-1, EN60601-1, IEC 60601-2-32, EN60601-2-32, IEC60601-1-3, EN60601-1-3. Certified To CAN/CSA C22.2 NO. 601.1.
Equipment not suitable for use in the presence of flammable anesthetic mixtures with air, oxygen or nitrous oxide.	
No user serviceable parts	

Table 3-1: Specifications

* Refer to the Digital Image Receptor Documentation for specifications on that portion of the VS300 Wallstand System.

3.3 Controls

This section describes the controls of the wallstand with a regular bucky. Figure 3-1 below shows the controls of the wallstand.

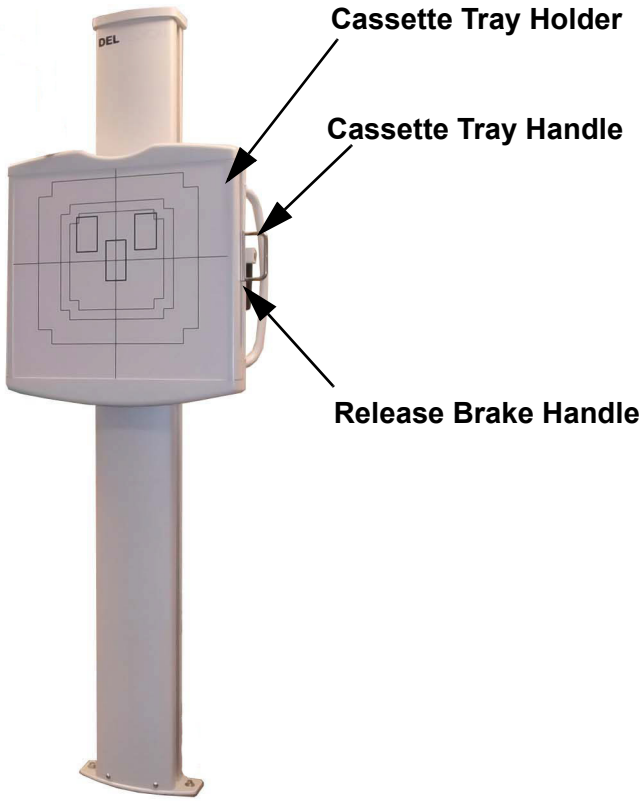

Figure 3-1. Wallstand Controls

3.3.1 Cassette Tray Handle (regular bucky)

Pull the cassette tray handle to pull the film cassette tray out of its holder. For safety reasons, the cassette tray will not come completely out. The cassette tray can be completely removed according to Section "Completely Removing the Cassette Tray" on page 3-7.

3.3.2 Release Brake Handle (digital receptors and regular bucky)

Press the button to release the locks.This will allow you to move the cassette tray holder to the desired position.

3.4 Operating Instructions (regular bucky)

Operate the Wallstand as follows:

1. Manually pull the cassette tray (1 in Figure 3-2) out as far as it will go.

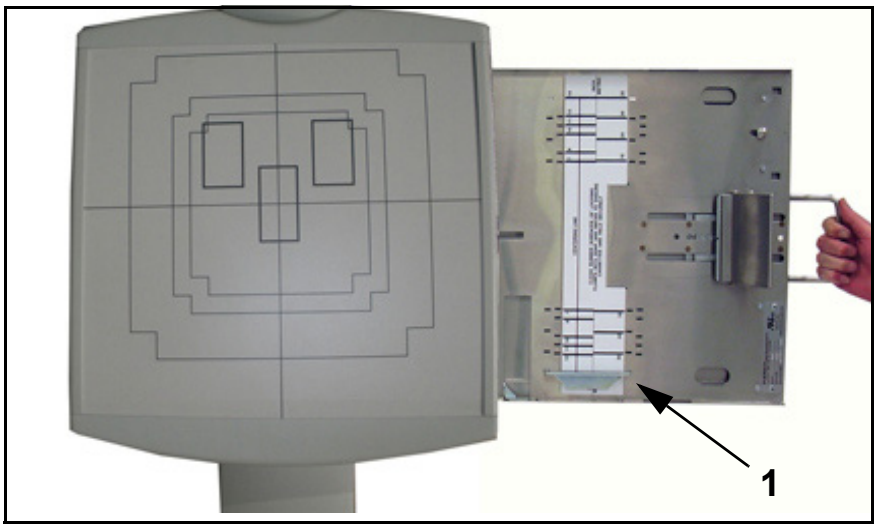

Figure 3-2. Cassette Tray

2. Lift clamp (1 in Figure 3-3) up.
3. If necessary, move bracket (2) to the position that matches the size of your cassette.

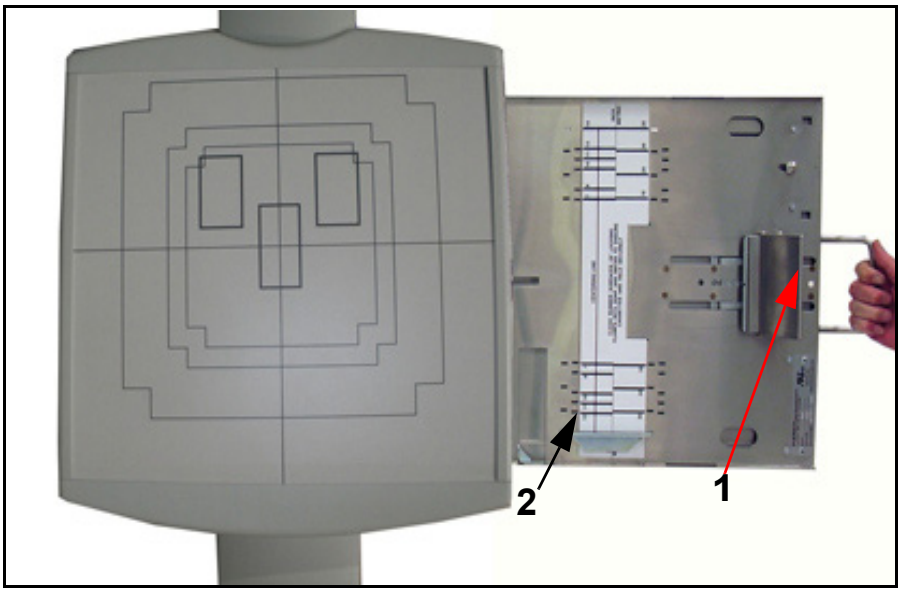

Figure 3-3. Clamp & Bracket

4 Insert cassette (1 in Figure 3-4) into tray.

5 Slide the clamp (2) up to cassette and close the clamp.

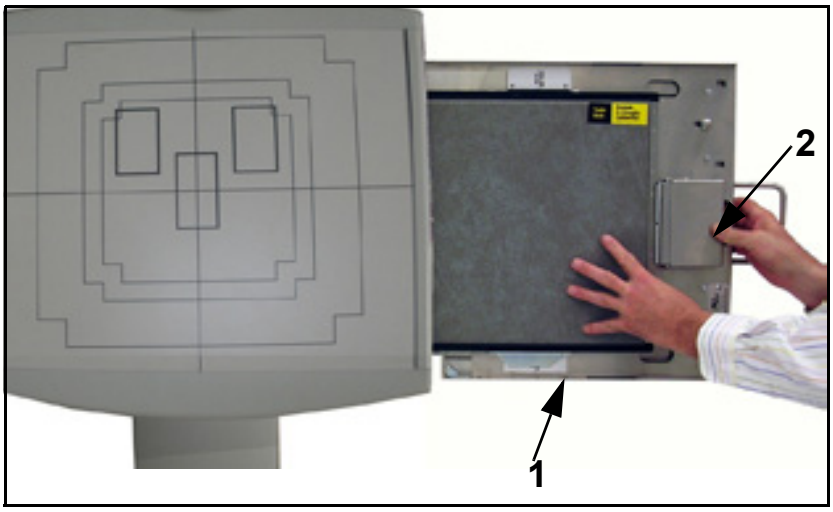

Figure 3-4. Cassette & Clamp

6 Push the cassette tray all the way in.

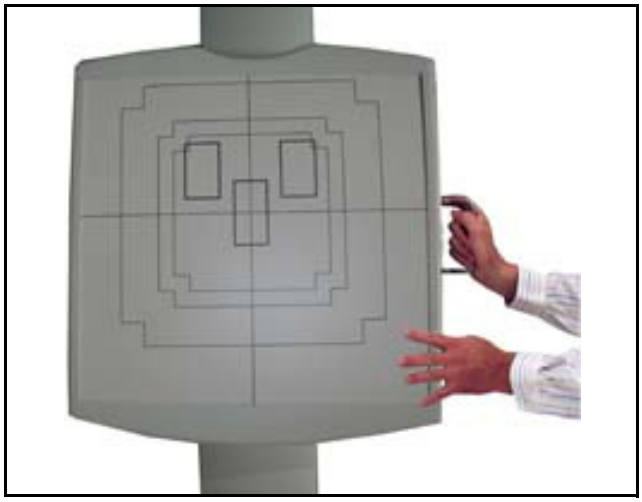

Figure 3-5. Cassette Tray In

7 Press the button to release the locks (1 in Figure 3-6).

8 Move the cassette holder to the desired position and let go of the release brake handle.

9 Make exposure and remove the cassette.

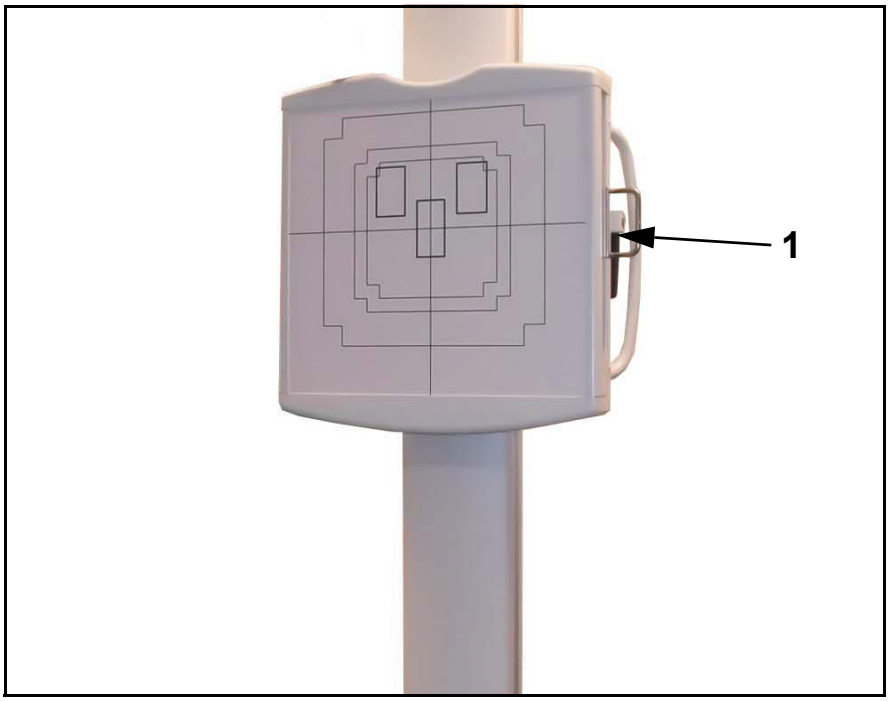

Figure 3-6. Release Brake Handle

3.5 Completely Removing the Cassette Tray

To completely remove the cassette tray, do the following:

1 Manually pull the cassette tray out as far as it will go.

Caution

The cassette tray is heavier than it looks (15 lbs, 7 kg). Use care when removing it.

2 While firmly pressing the cassette tray release latch (1 in Figure 3-7), pull the cassette tray completely out of the bucky.

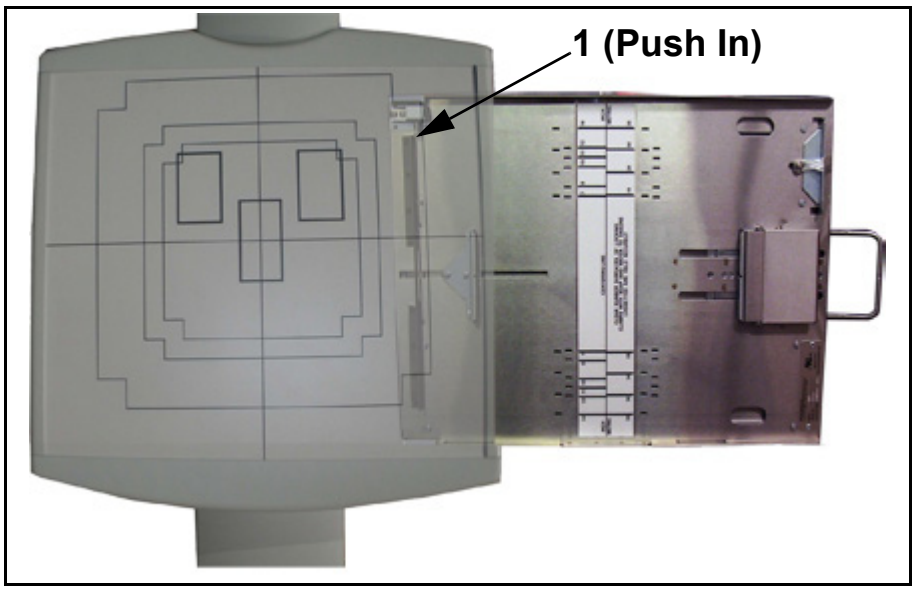

Figure 3-7. Cassette Tray Removal

3.6 Using Overhead Lateral Handgrip Option

The overhead lateral handgrip provides patients with extra support. Use this option as follows:

Insert the handgrip post (1 in Figure 3-8) into the socket (2) on the back of the wallstand. There are two sockets available, either can be used.

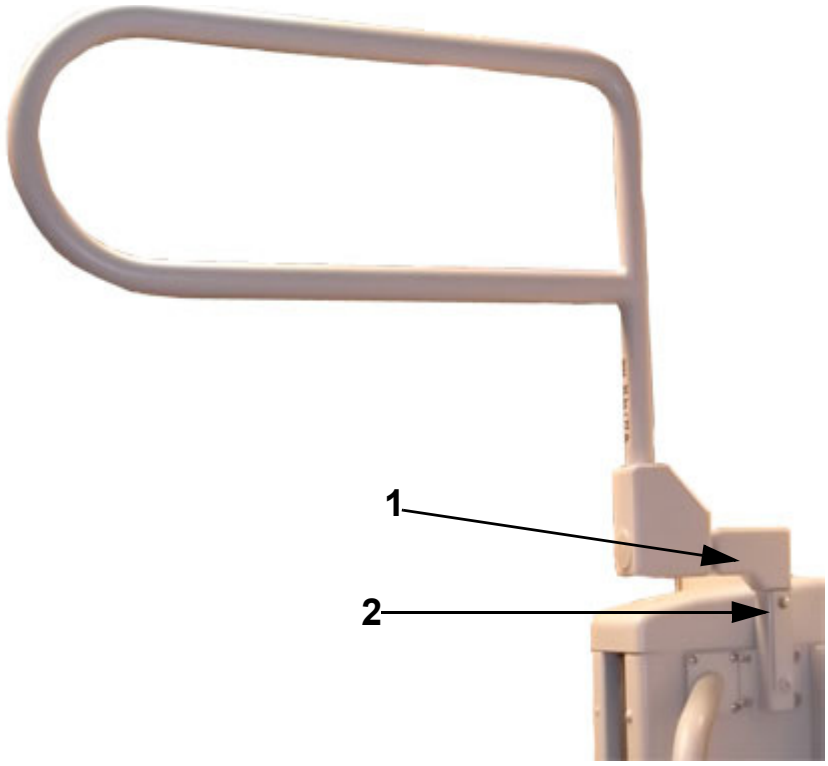

Figure 3-8. Handgrip Insertion

Periodic Maintenance

4

4.1 Periodic Maintenance Schedule

Refer to the schedule below for information on when to perform periodic maintenance on the wallstand. If the wallstand is equipped with one of the optional digital receptors, also refer to the corresponding documentation for maintenance information on that part of the system.

Note:
Due to varying operating conditions, the procedures listed below may have to be performed at greater or lesser intervals. You may have to adjust intervals according to your wallstand's performance.

What to Do	When to Do It	Refer to Section
Clean External Surfaces	Every Week or as Required	"Cleaning External Surfaces" on page 4-2
Inspect Counterweight Cable	Every 6 Months	"Checking Counterweight Cables" on page 4-3
Checking Brake Performance	Every 6 Months	"Checking Brake Performance" on page 4-4
Check Fasteners for Tightness	Every 6 Months	"Checking Fasteners for Tightness" on page 4-5

Table 4-1: Periodic Maintenance Schedule

4.2 Cleaning External Surfaces

Tools Required

- Cleaning wipes
- Non-abrasive, hospital-grade cleaner

Warning

If the wallstand is equipped with a bucky, AEC, PBL or digital receptor make sure that the power source to these components is locked out and tagged "Wallstand Being Serviced" before servicing the wallstand. You could get seriously injured if you not.

Use cleaning wipes and non-abrasive, hospital-grade cleaner to clean external surfaces of the wallstand.

4.3 Checking Counterweight Cables

Tools Required

- Cotton balls

1 Move the cassette tray holder (1 in Figure 4-1) to its lowest position.

Warning

If the wallstand is equipped with a bucky, AEC, PBL or digital receptor make sure that the power source to these components is locked out and tagged "Wallstand Being Serviced" before servicing the wallstand; you could get seriously injured if you not.

2 Run a cotton ball up and down the length of the two counterweight cables (2).

3 If the cable is frayed or damaged, fibers from the cotton ball with stick to the damaged part of the cable. If you see any presence of fibers on the cable, replace the affected cable according to Section "Replacing Counterweight Cable" on page 6-2.

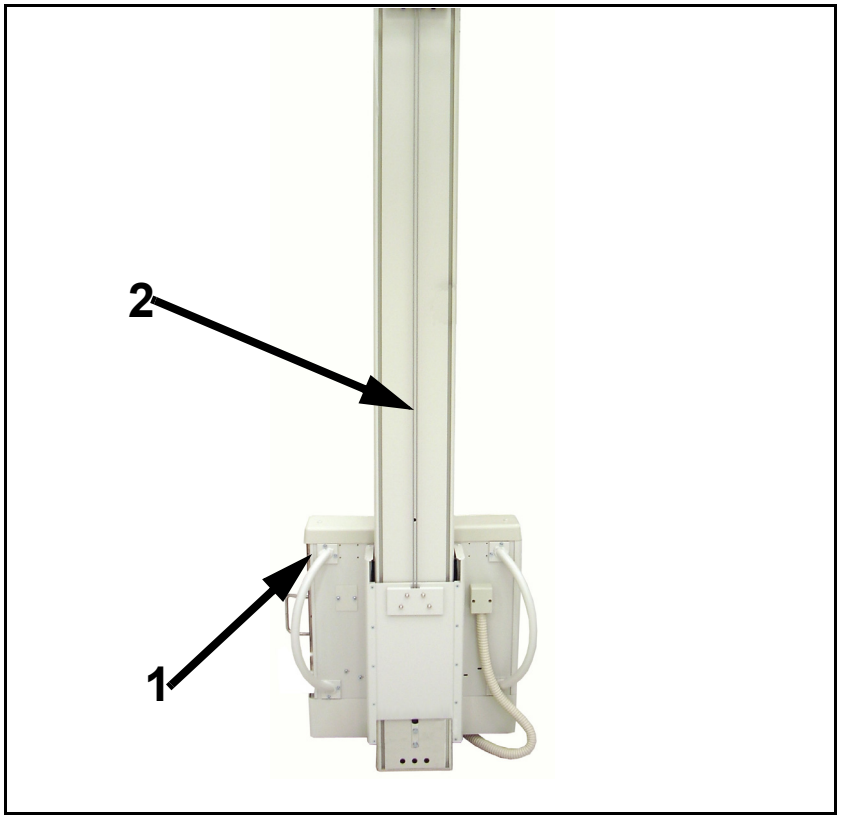

Figure 4-1. Counterweight Cable (Typical)

4.4 Checking Brake Performance

Tools Required:

- None

1 Press the lock release button (1 in Figure 4-2) to release the brake. This will allow the user to move the receptor vertically to the desired position.

4.5 Checking Fasteners for Tightness

Tools Required

- Phillips screw driver
- Set of open end-wrenches

1 Check each exposed fastener for tightness and tighten accordingly.

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Calibration & Adjustment

5

5.1 Introduction

This chapter provides the maintenance and adjustment procedures for the wallstand.

5.2 Calibration

Calibration not applicable for this product.

For calibration of the Digital Imaging System, refer to the Digital Imaging Receptor documentation.

5.3 Converting Left-Right/Right-Left Configurations

The VS300 Wallstand Vertical Carriage and Frame assembly rear panels are designed symmetrically-mirrored to allow reversal of left-right orientation of the cassette holder.

For wallstands with digital receptor, refer to the manufacturer's specifications and installation manuals for instructions on how to reverse receptor door and grid positions (if possible).

Tools Required:

- 3/8" nut driver
- Diagonal cutters
- Medium phillips head screwdriver
- Rug or soft surface to lay wallstand down on
- Set of hex wrenches
- Small flat-tip screwdriver

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Manually pull the cassette tray out as far as it will go.

Caution

The cassette tray is heavier than it looks (15 lbs, 7 kg). Use care when removing it.

2 While firmly pressing the cassette tray release latch (1 in Figure 5-1), pull the cassette tray completely out of the bucky.

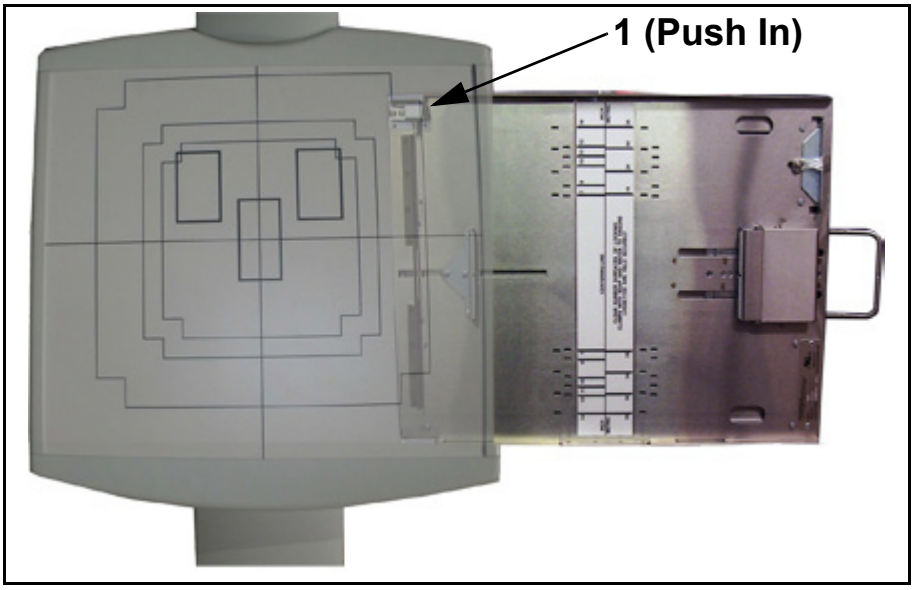

Figure 5-1. Cassette Tray Removal

1 To remove the handle (1 in Figure 5-2), unscrew handle screws (2) and lift handle.

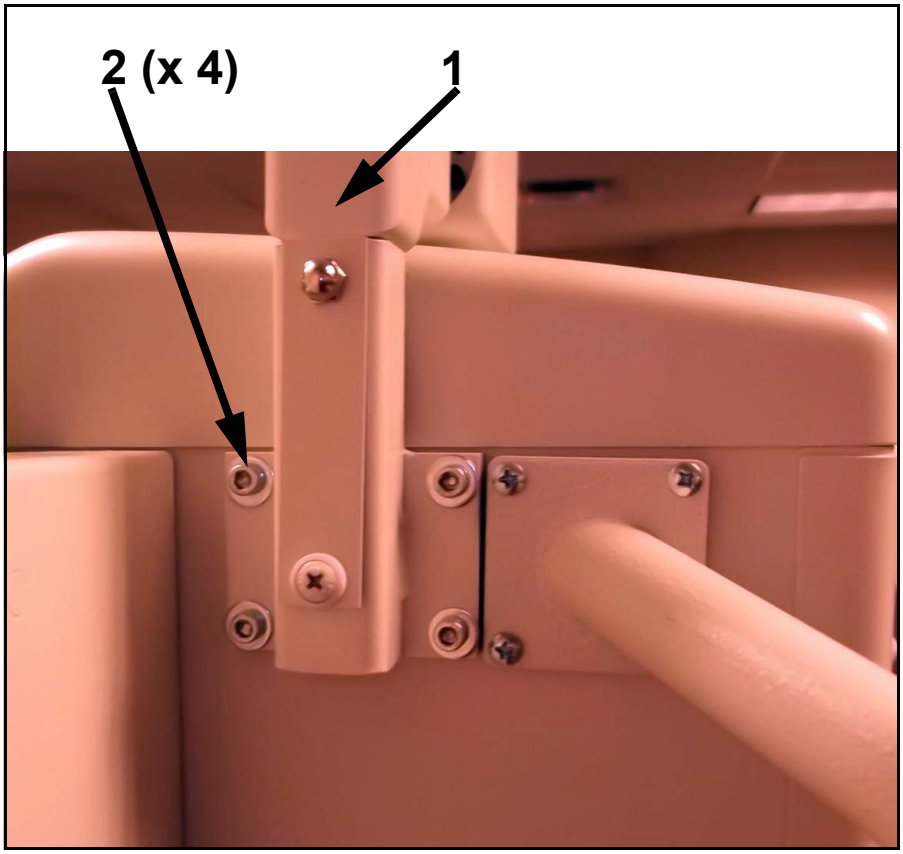

Figure 5-2. Handle Removal

2 Unscrew the two top cover screws (1 in Figure 5-3) and remove the top cover (2).

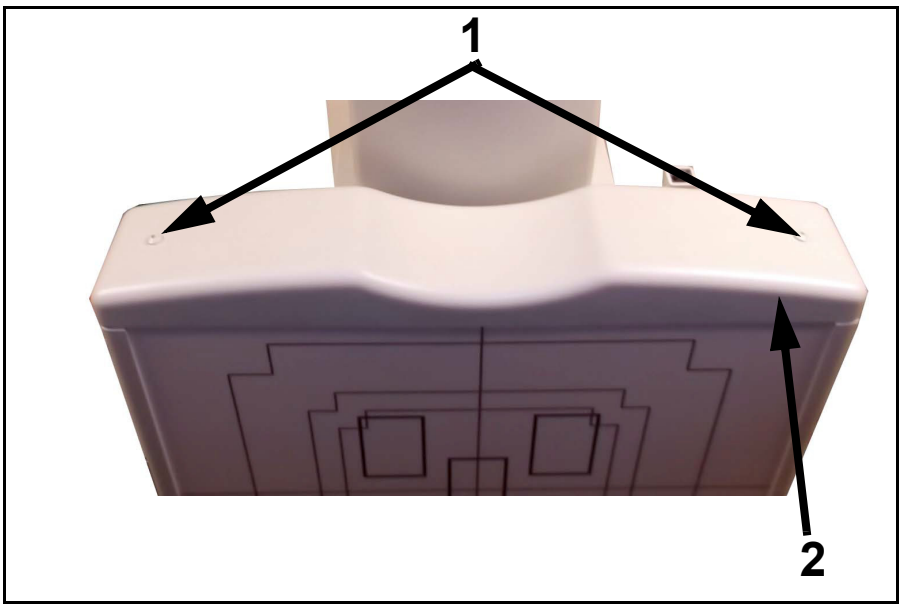

Figure 5-3. Top Cover Screws

3 Unscrew the two bottom cover screws (1 in Figure 5-4) and the remove bottom cover (2).

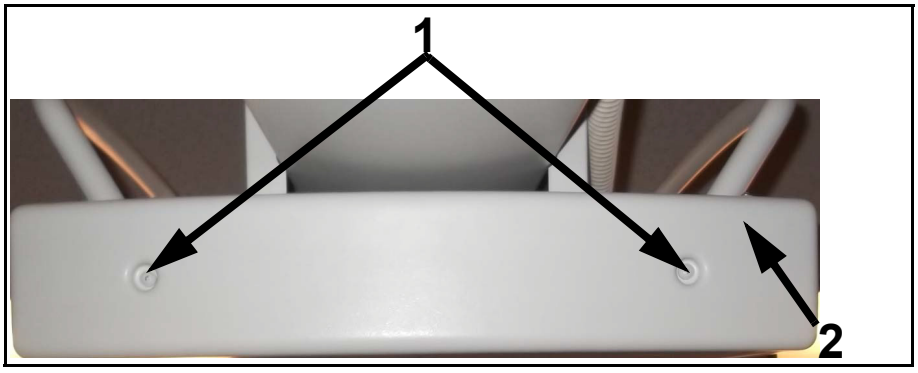

Figure 5-4. Bottom Cover Screws

4 Unscrew the two left side cover screws (1 in Figure 5-5) and remove the side cover (2).

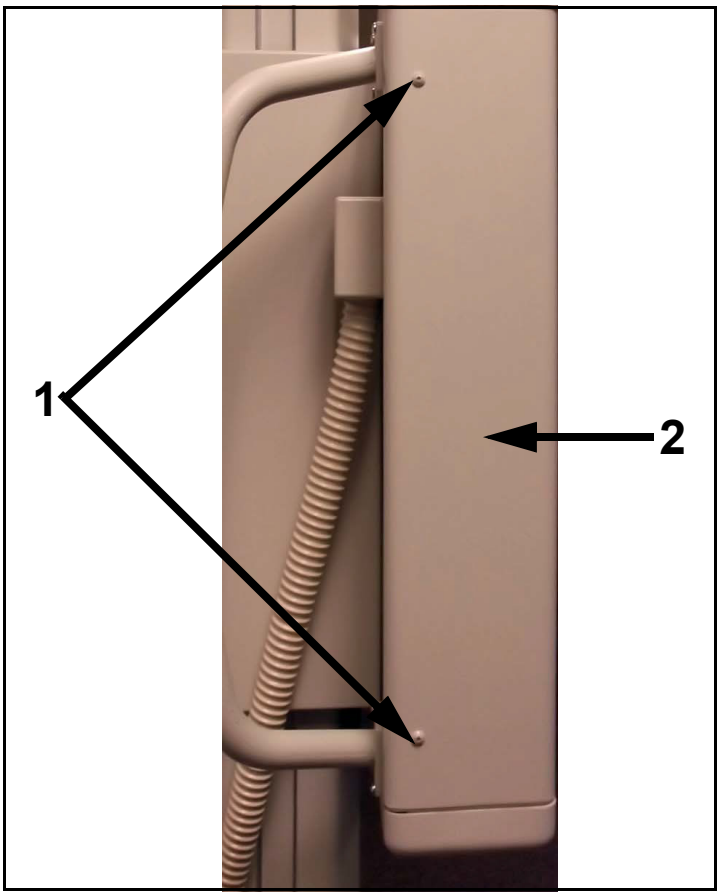

Figure 5-5. Left Side Panel & Front Panel

5 Unscrew the two right side cover screws (1 in Figure 5-6) and remove the side cover (2).

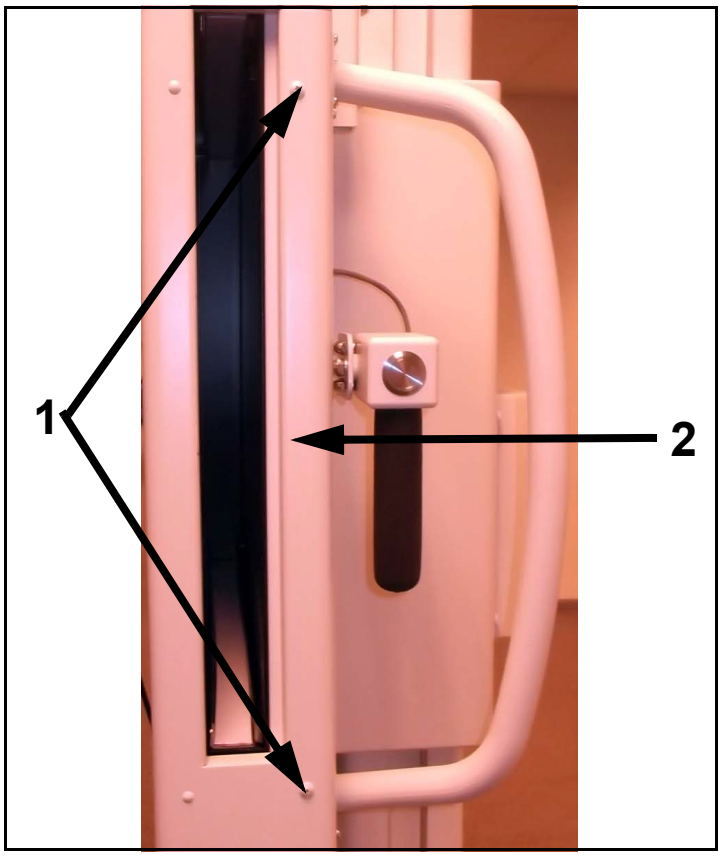

Figure 5-6. Right Side Panel & Front Panel

6 Pull the velcro-backed panel (1 in Figure 5-7) off the wallstand.

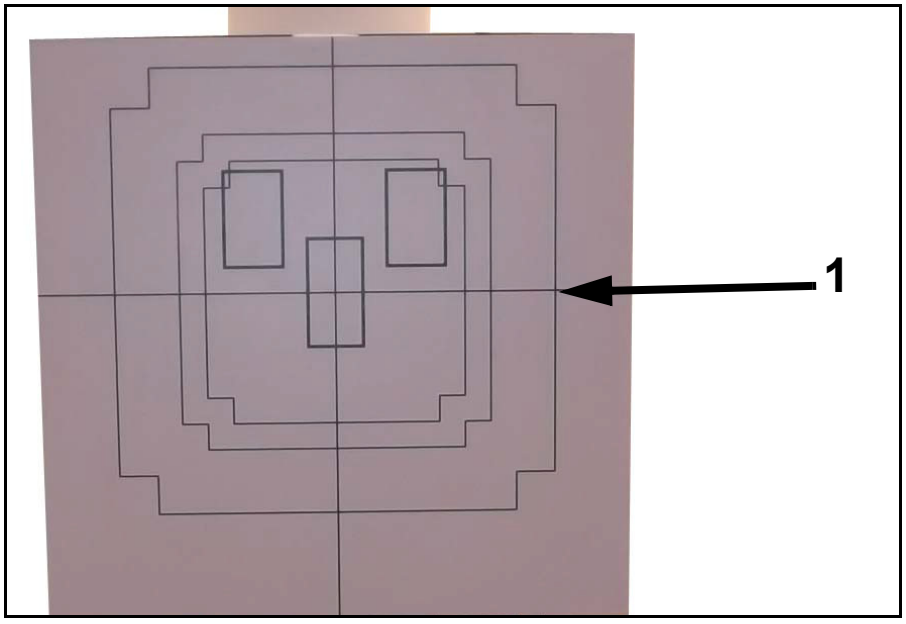

Figure 5-7. Front Panel

Only do steps 7 & 8 if your wallstand has an optional PBL (cassette size sensing kit).

7 Cut cable ties (1 in Figure 5-8).

8 Disconnect wires (2) from the terminal (3).

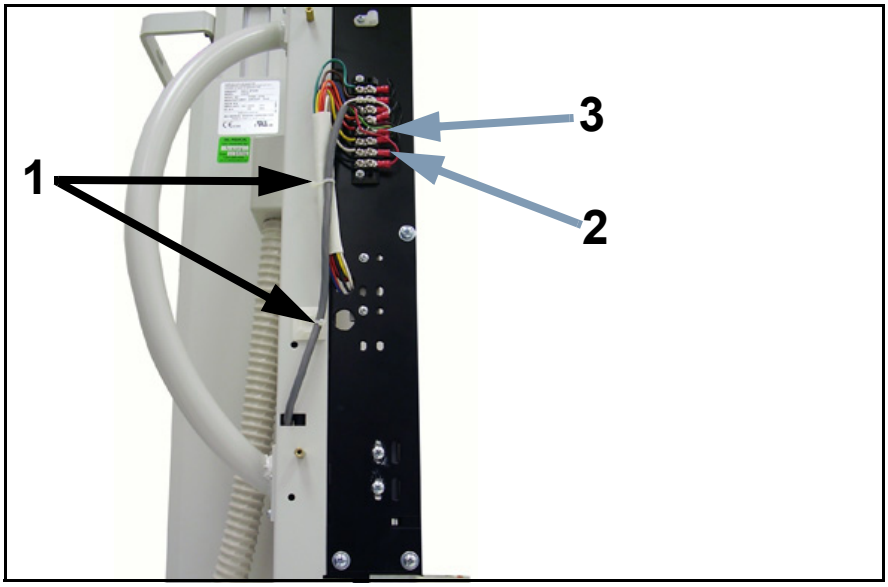

Figure 5-8. PBL Bracket Screws

Only do steps 9-13 if your wallstand has an optional ION chamber (automatic exposure control).

9 Unscrew the four cover screws (1 in Figure 5-9) and remove the ION cover (2).

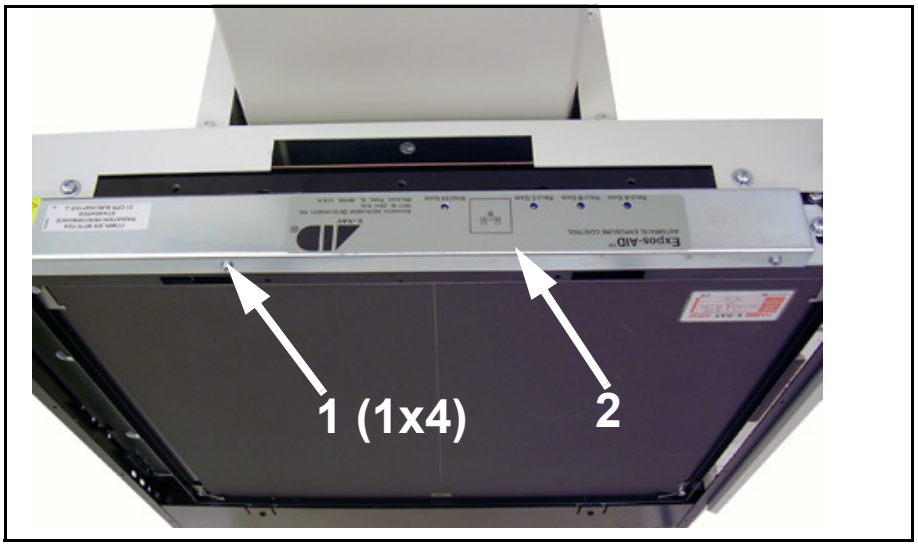

Figure 5-9. ION Chamber Cover Screws

10 Unscrew the cable clamp nuts (1 in Figure 5-10) and remove the clamp (2).

11 Unscrew the two connector screws (3) and unplug the connector (4).

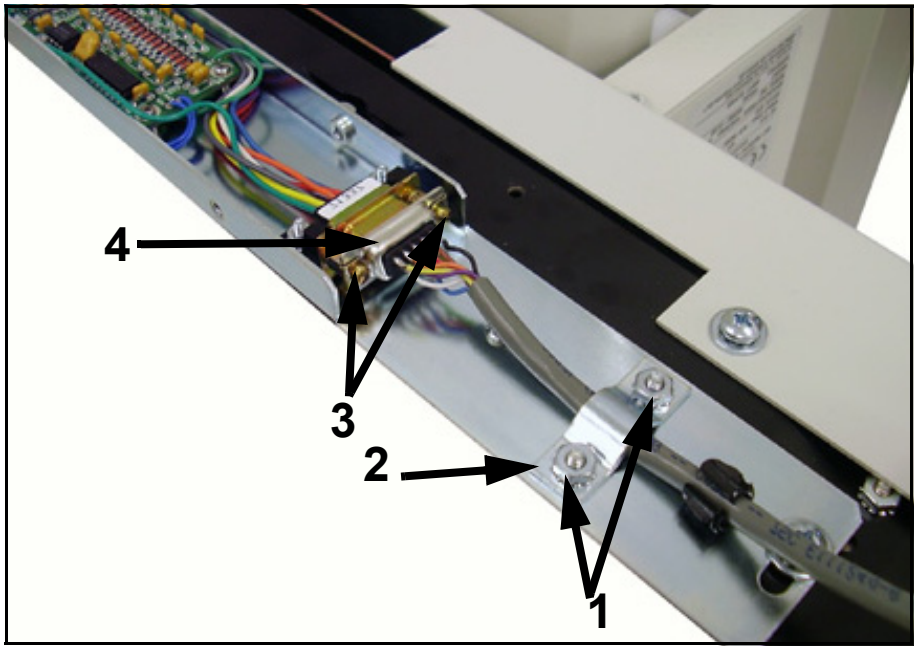

Figure 5-10. ION Chamber Screws

12 Unscrew the ion chamber mounting screws (1 in Figure 5-11).

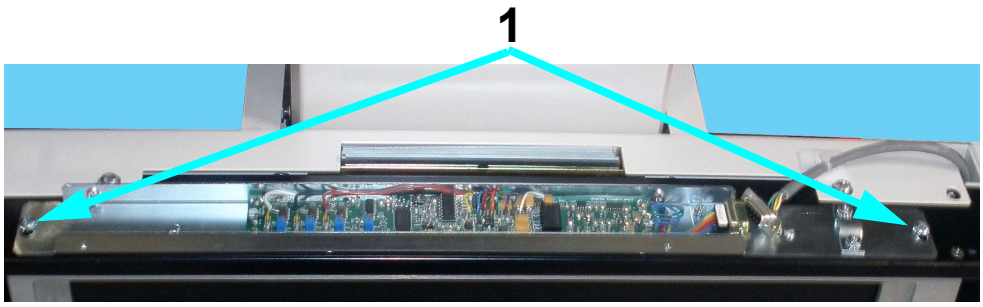

Figure 5-11. Ion Chamber Mounting Screws

13 Slide the ion chamber out as shown below (1 in Figure 5-12).

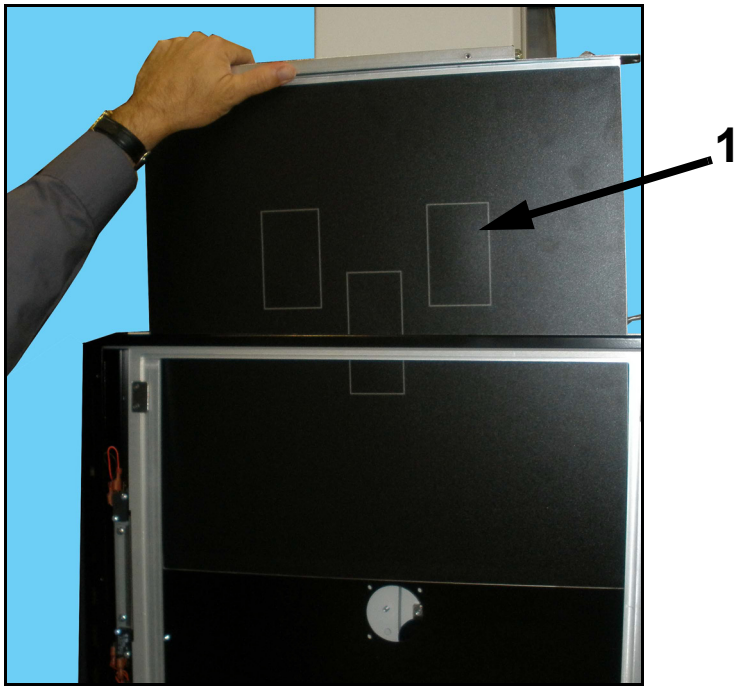

Figure 5-12. Ion Chamber Removal

Only do steps 14-18 if your wallstand has an optional bucky.

14 Cut cable ties (1 in Figure 5-13).

15 Disconnect the wires from the bucky terminal (2).

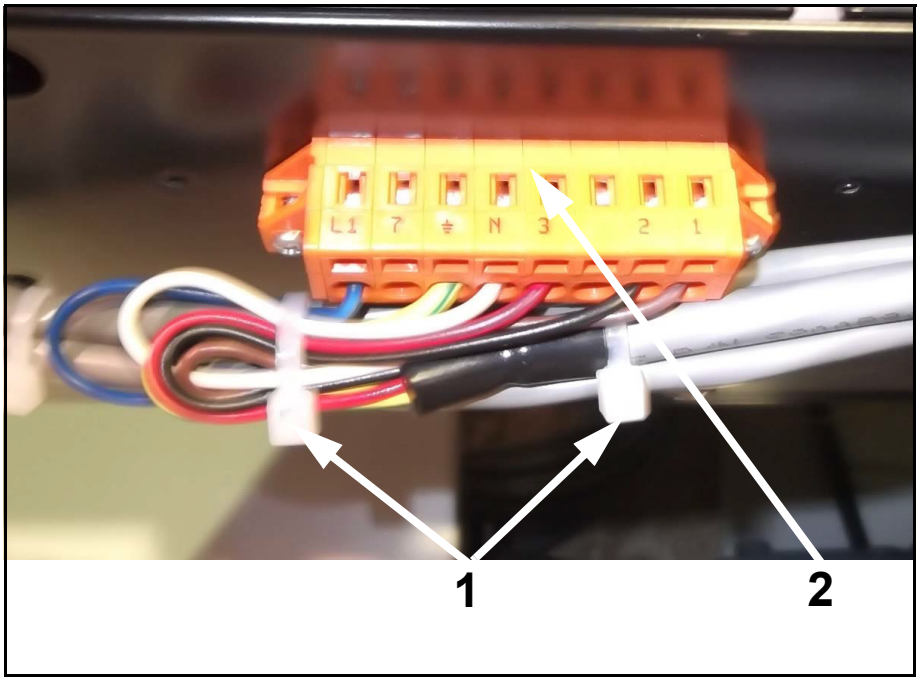

Figure 5-13. Bucky Terminal Connection

16 Unscrew the bucky bottom screws (1 in Figure 5-14).

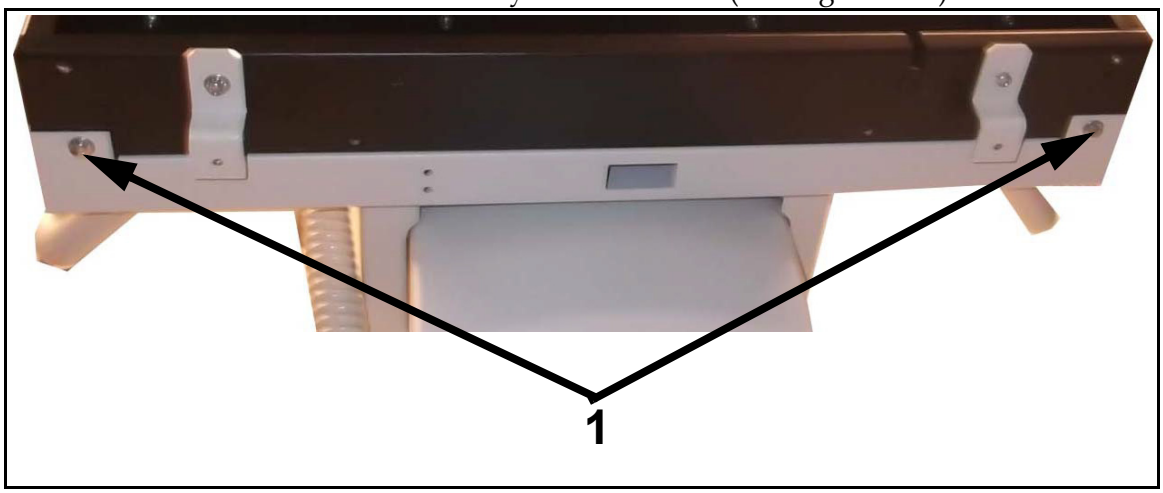

Figure 5-14. Bucky Right Side Screw

17 Unscrew the bucky top screws (1 in Figure 5-15) and remove the bucky (2).

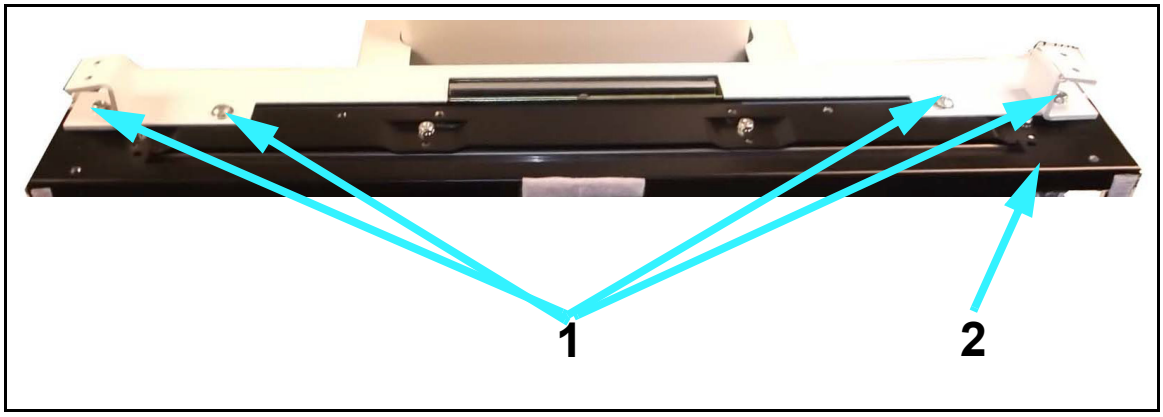

Figure 5-15. Bucky Top Screws

18 Disconnect the wires (1 in Figure 5-16) from the terminal (2).

19 Disconnect the ground wire (3).

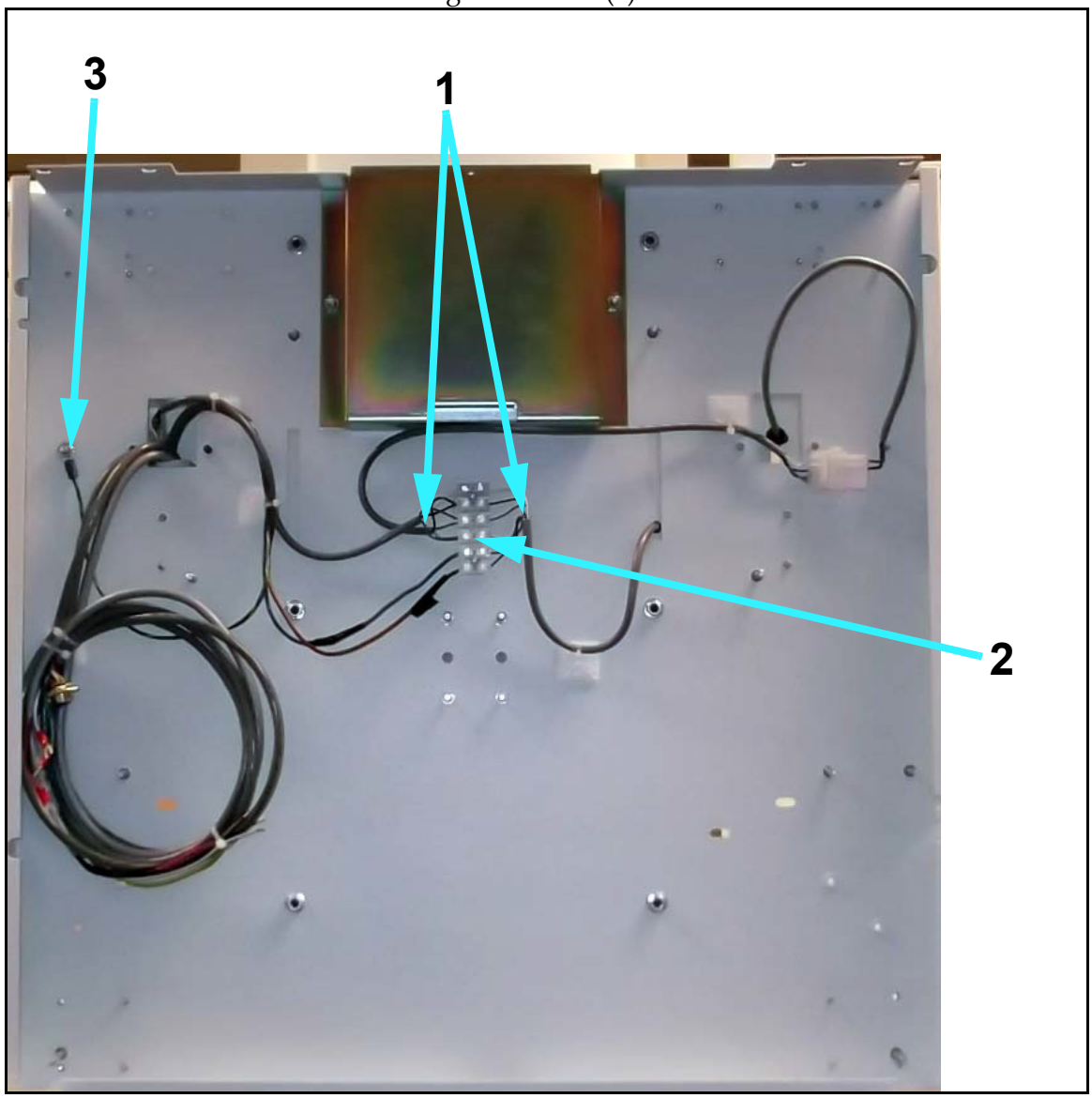

Figure 5-16. Terminal Connections

20 Unscrew the conduit box screws (1 in Figure 5-17) and remove the conduit box (2).

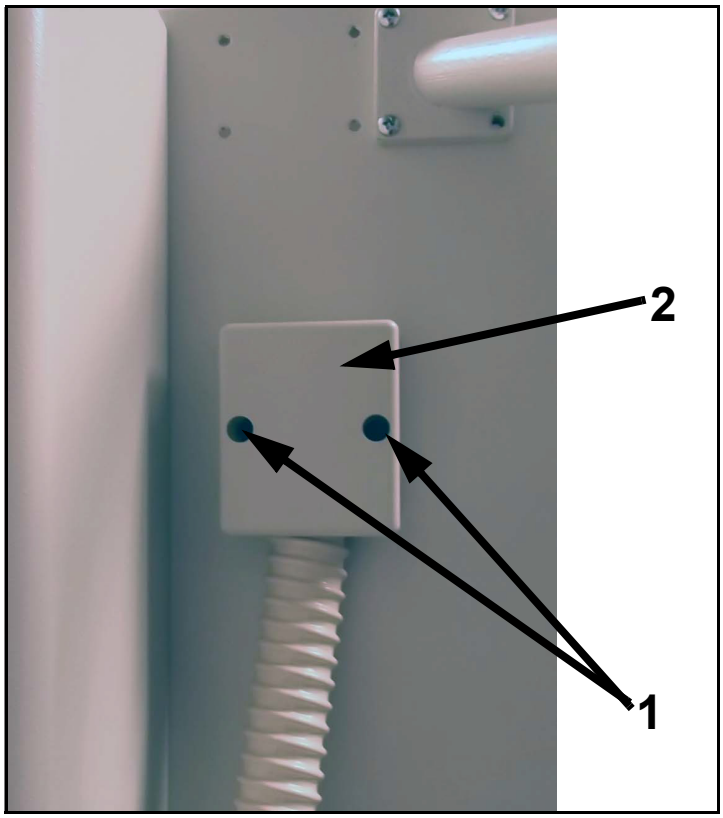

Figure 5-17. Conduit Box Removal

21 Unscrew the brake plate screw (1 in Figure 5-18) and remove the brake plate (2)

22 Unscrew the brake handle mounting screws (3) and remove the brake handle (4).

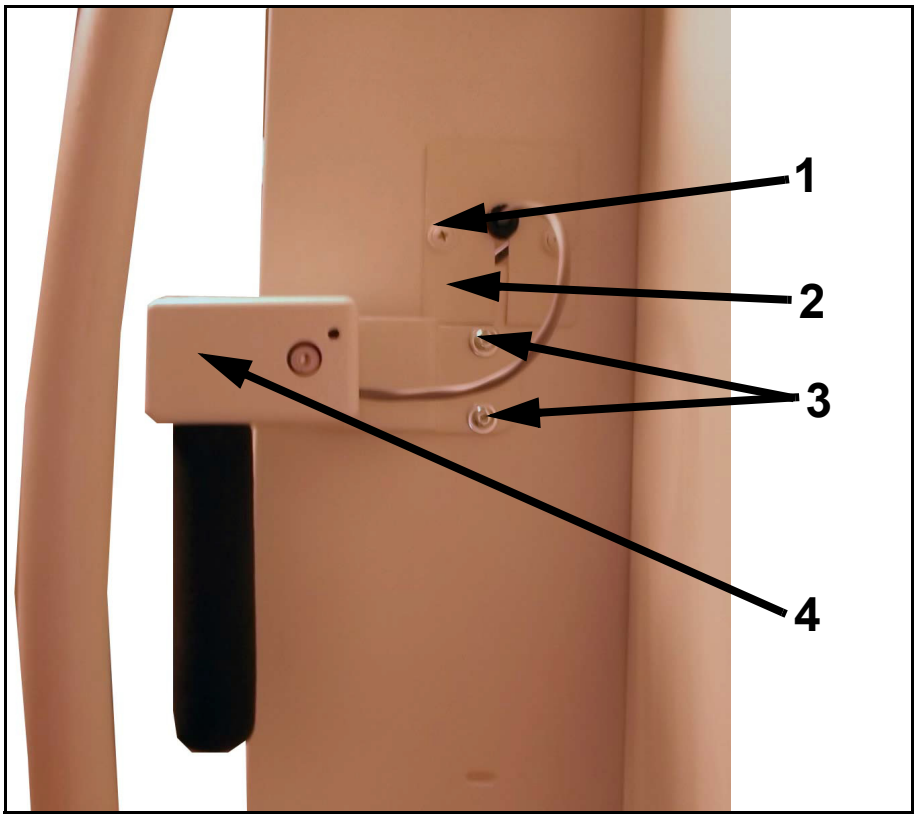

Figure 5-18. Brake Handle Removal

23 Disconnect the cable harness (1 in Figure 5-19) and remove the brake handle.

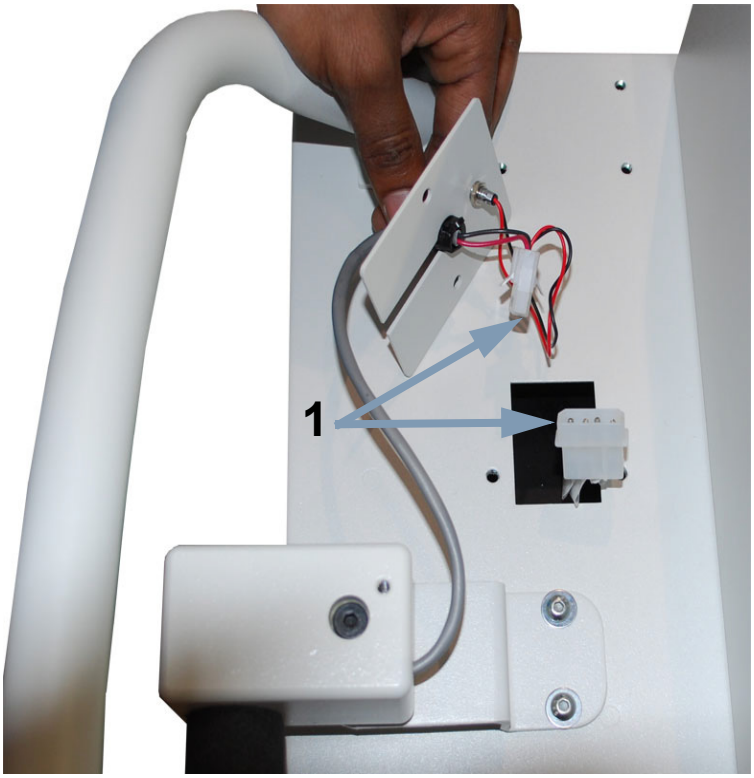

Figure 5-19. Brake Handle Connections

24 Unscrew the bucky cover screws (1 in Figure 5-20) and remove the bucky cover (2).

25 Mount the cover on opposite side of the bucky.

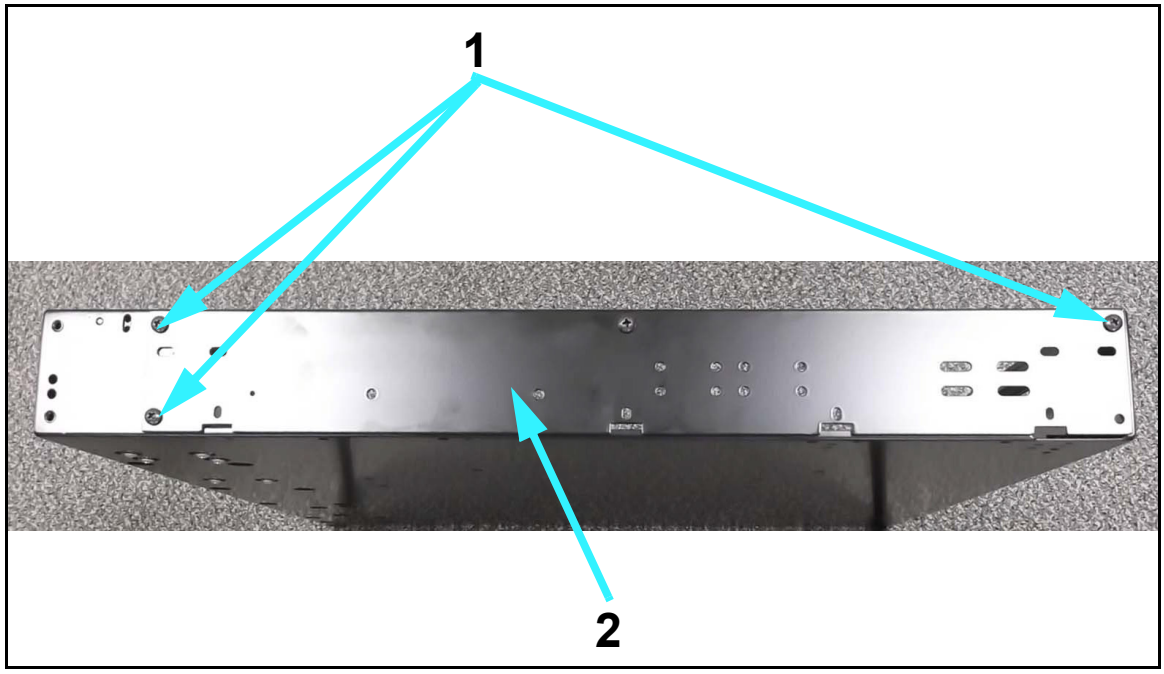

Figure 5-20. Bucky Cover Removal

26 Reconfigure the conduit and brake wiring harnesses as shown below.

Figure 5-21. Harness Configuration Left and Right Shown

27 Reverse steps to reassemble. See Figure 5-22 & Figure 5-23 for wiring information for the bucky and PBL. Be sure to recheck alignment according to Chapter 2 when setting the wallstand back up.

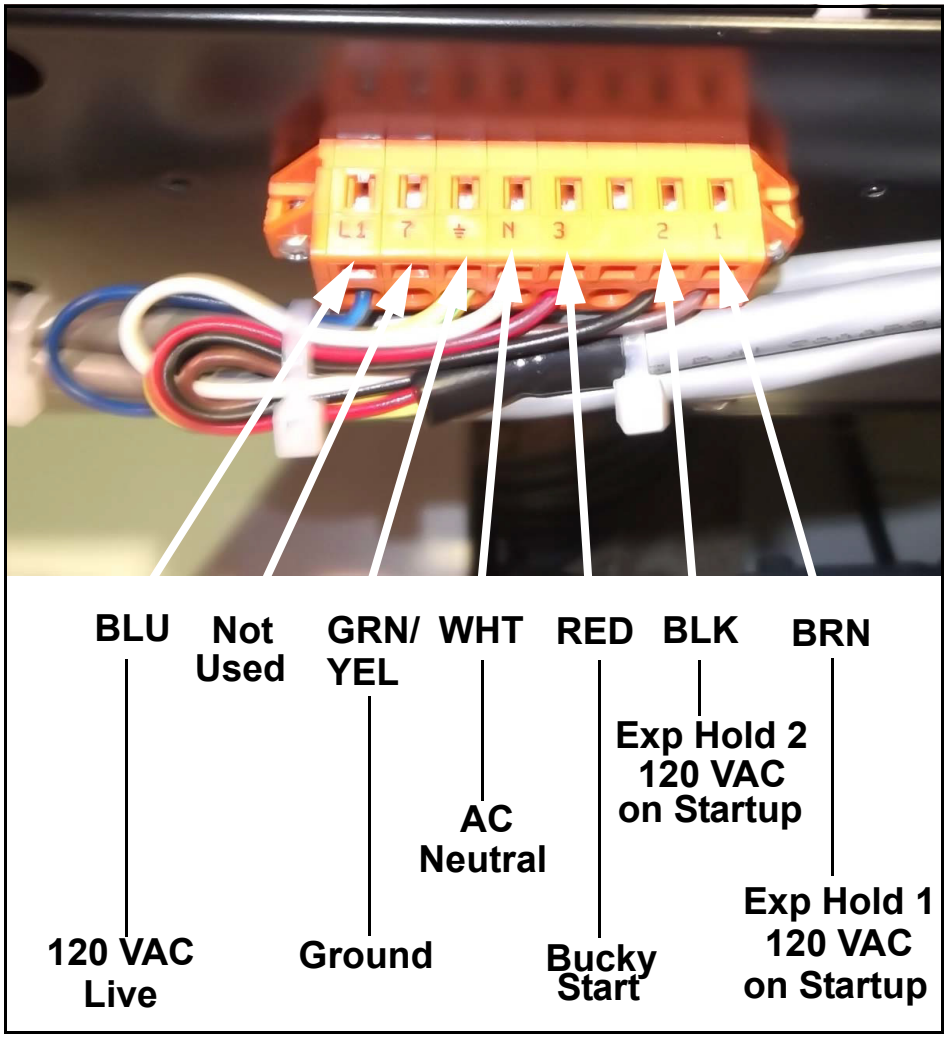

Figure 5-22. Bucky Wiring Diagram

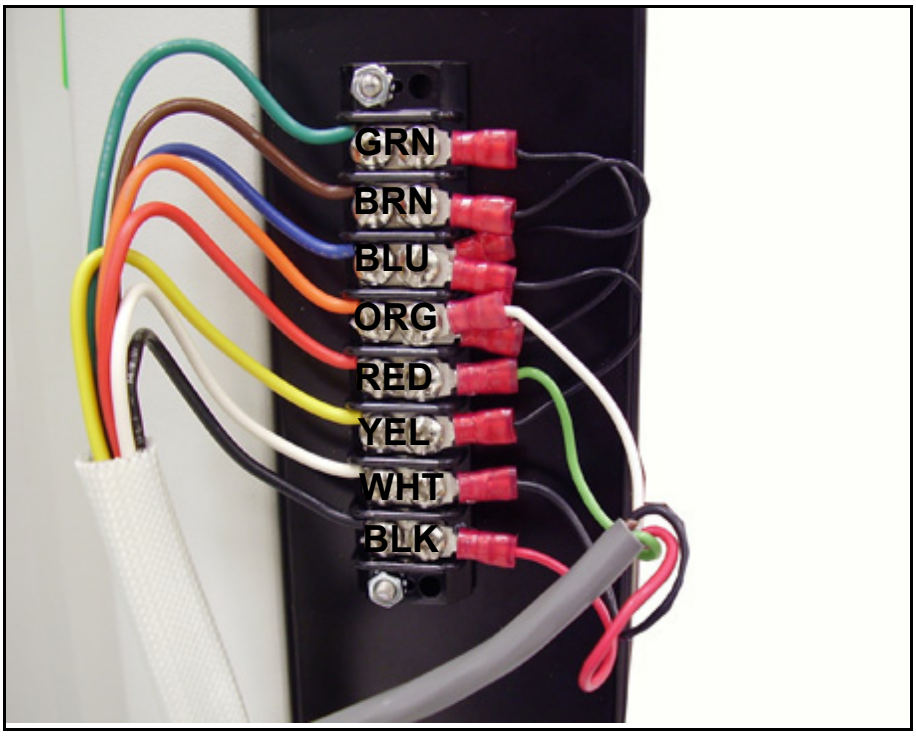

Figure 5-23. PBL Wiring Diagram

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Component Replacement

6

6.1 Introduction

This chapter provides instructions for replacing components on the wallstand.

6.2 Replacing Counterweight Cable

Tools Required

- Broom stick (min 4', [1.5 M])
- Medium phillips head screwdriver
- Retaining ring pliers
- Rug or soft surface to lay wallstand down on
- Set of nut drivers
- Set of open-end wrenches
- Work gloves

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1. Remove the wallstand's wall and floor mounting screws.
2. Carefully lay the wallstand face down on a soft rug or other soft surface.
3. Unscrew the four back cover nuts (1 in Figure 6-1) and remove the back cover (2).

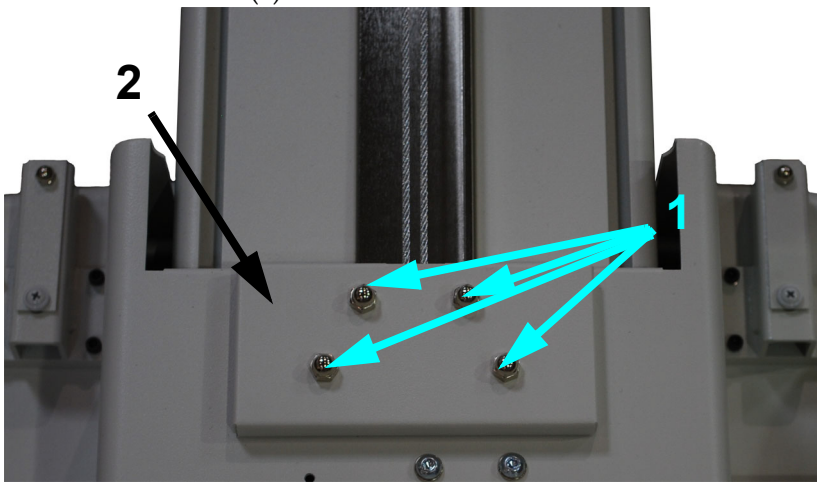

Figure 6-1. Back Cover

4 Unwrap the cable (1 in Figure 6-2) from around the disks (2).

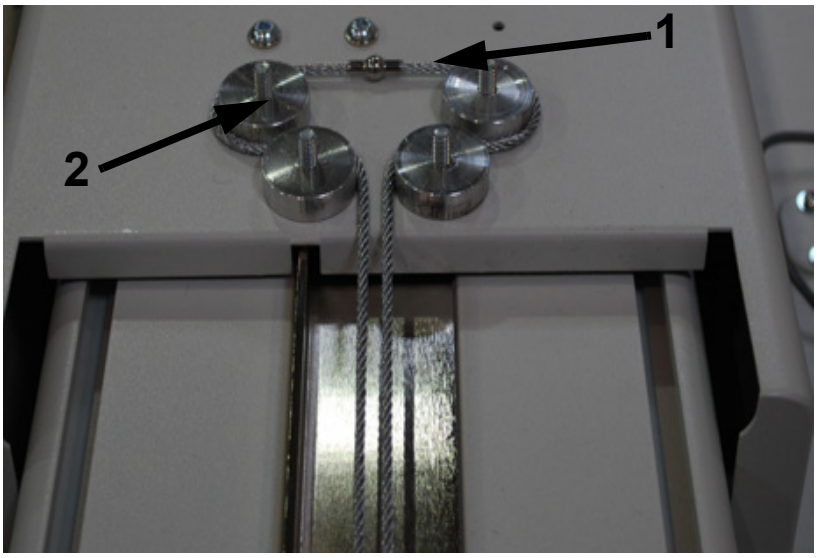

Figure 6-2. Cable End Disks

5 Unscrew the top cover screws (1 in Figure 6-3) and remove the top covers (2).

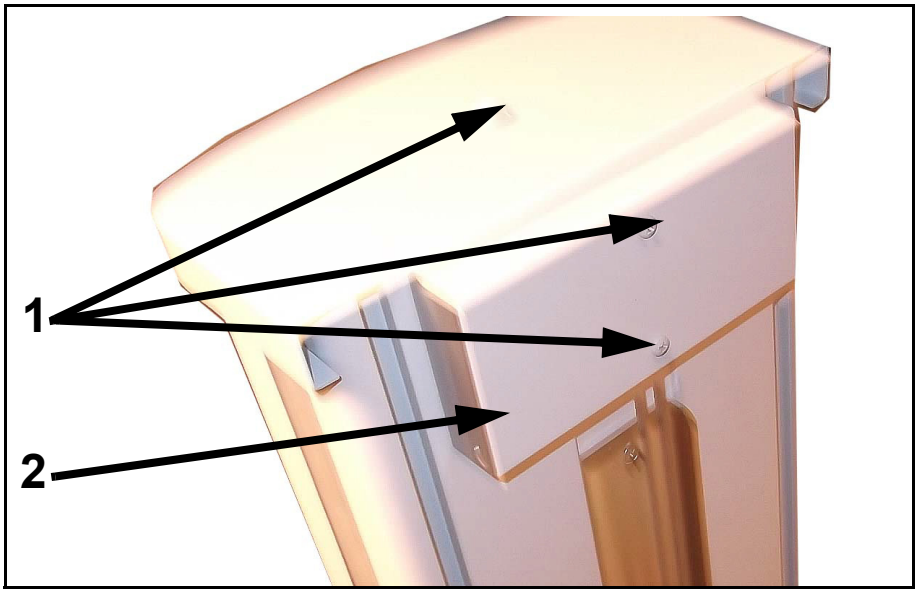

Figure 6-3. Top Cover

6 Remove the retaining ring (1 in Figure 6-4), the shaft (2), and the pulley (3).

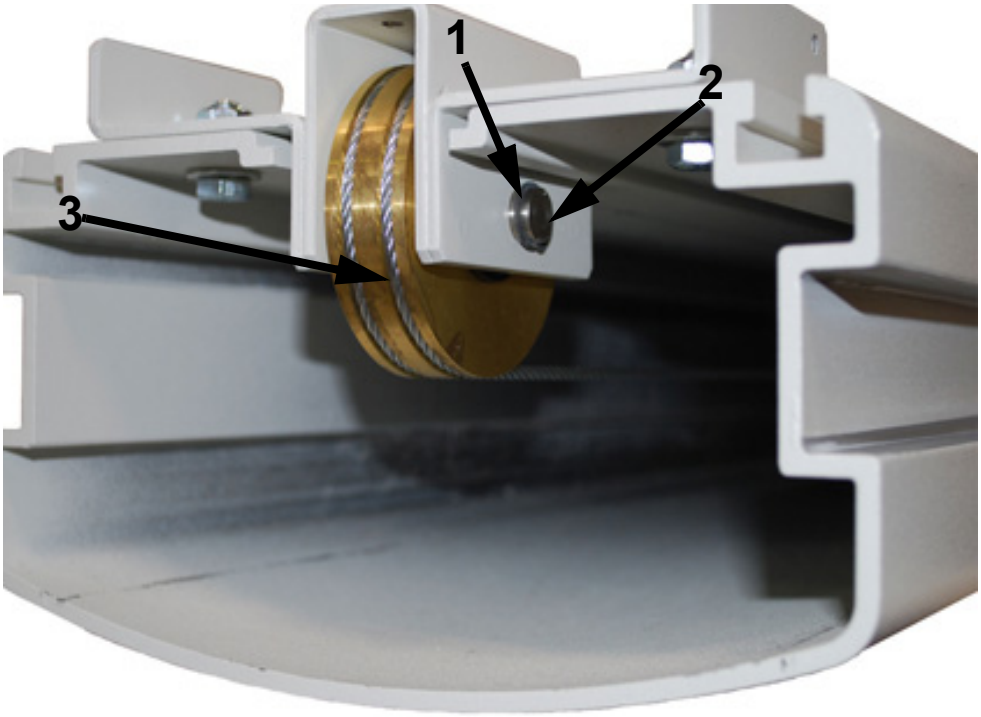

Figure 6-4. Shaft & Pulley

7 Unscrew the two nuts (1 in Figure 6-5) and remove the bracket (2).

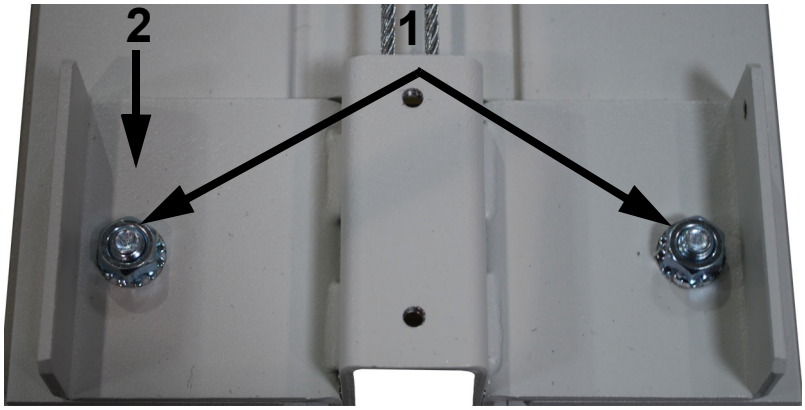

Figure 6-5. Pulley Bracket

8 Put on work gloves.

Caution

Wear work gloves when pulling cable. You may injure your hands on a frayed cable if you do not.

9 Pull on the cable (1 in Figure 6-6) to drag the counterweight (2) to the top of column as shown below.

10 Unscrew the two nuts (3) and remove screw (4).

11 Discard the old cable.

12 Connect the new cable to counterweight.

13 Push the counterweight about 3' (1000 mm) back into the column with a broom stick or similar tool.

14 Reverse steps to reassemble. Make sure that the cable stays uncrossed and aligned with the pulley. Also, make sure you insert the cable between the pulley and bracket *before* reinstalling the pulley as there is not enough clearance to insert the cable when the pulley is installed. Be sure to check alignment to X-ray source according to Chapter 2 when setting the wallstand back up.

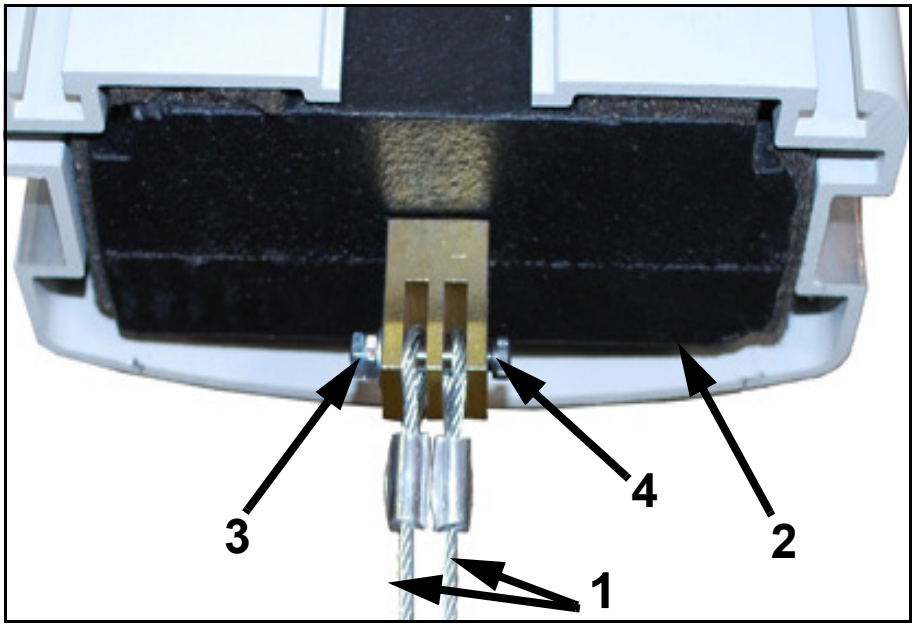

Figure 6-6. Counterweight Positioning (Typical)

6.3 Replacing Grid

Refer to the following instructions for information on how to replace the grid for the regular bucky. If the wallstand is equipped with one of the optional digital receptors with grid, refer to the corresponding documentation for instructions on how to replace the grid (if applicable).

Tools Required

- 11/32" nut driver
- Medium phillips head screwdriver

Replacing of grid for digital imaging receptors may require tools not listed here. See the digital receptor documentation for tools and materials not listed here.

Warning

Turn off all electrical power to the wallstand and all its peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 To remove the handle (1 in Figure 6-7), unscrew the handle screws (2) and lift handle.

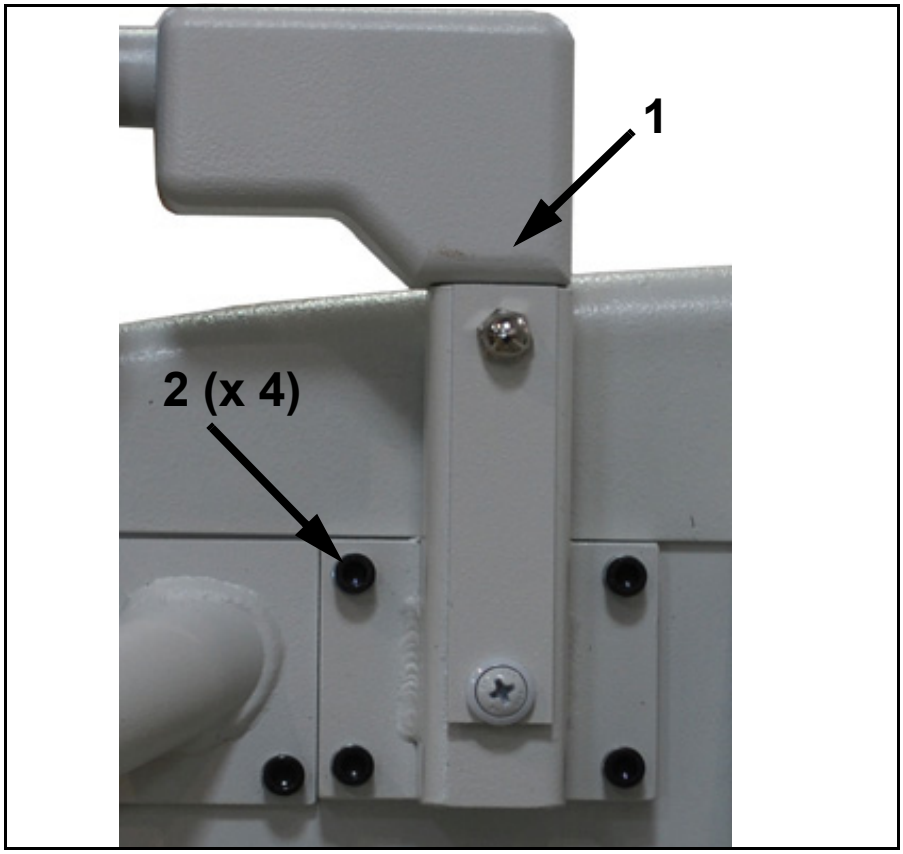

Figure 6-7. Handle Removal

2 Unscrew the two top cover screws (1 in Figure 6-8) and remove the top cover (2).

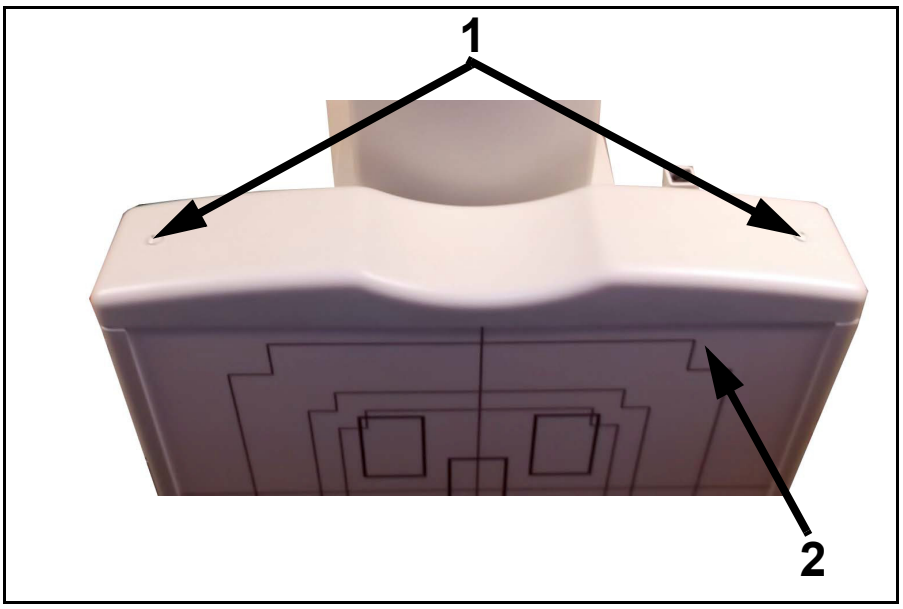

Figure 6-8. Top Cover Screws

3 Unscrew the two bottom cover screws (1 in Figure 6-9) and remove the bottom cover (2).

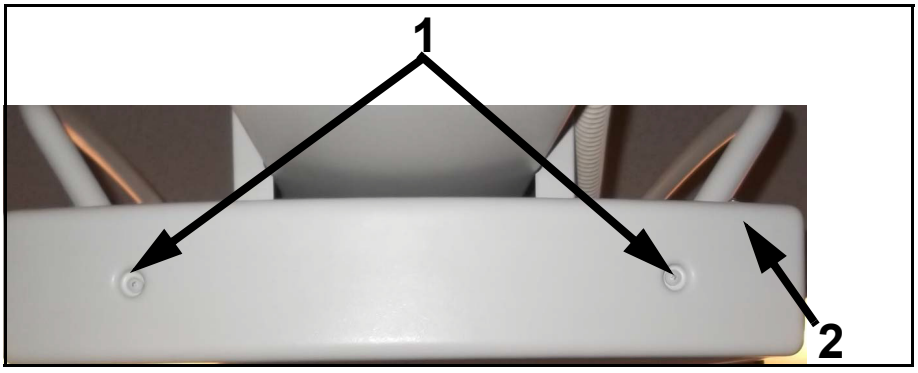

Figure 6-9. Bottom Cover Screws

4 Unscrew the two left side cover screws (1 in Figure 6-10) and remove the side cover (2).

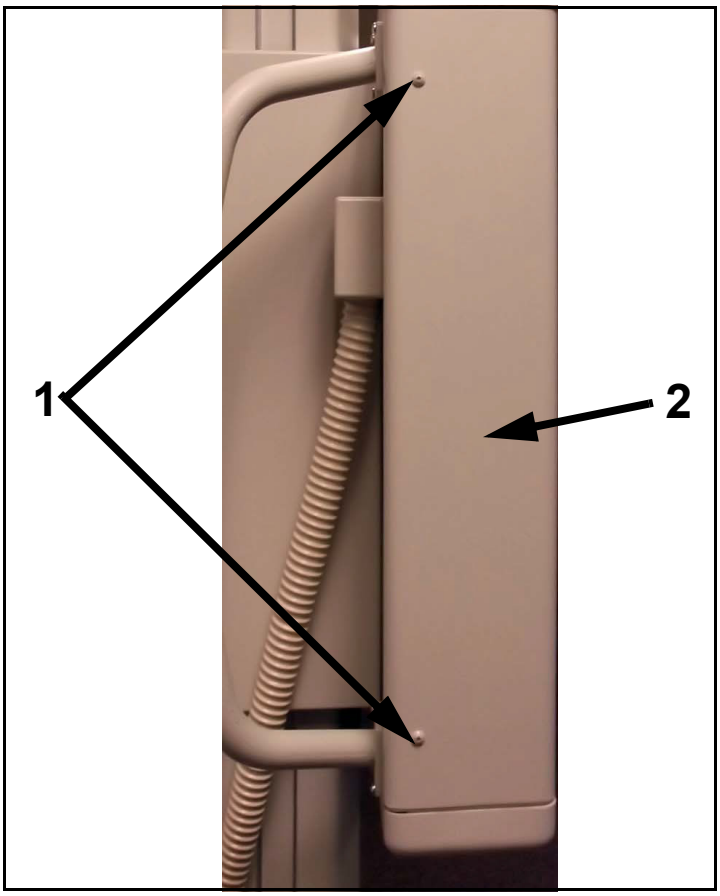

Figure 6-10. Left Side Panel & Front Panel

5 Unscrew the two right side cover screws (1 in Figure 6-11) and remove the side cover (2).

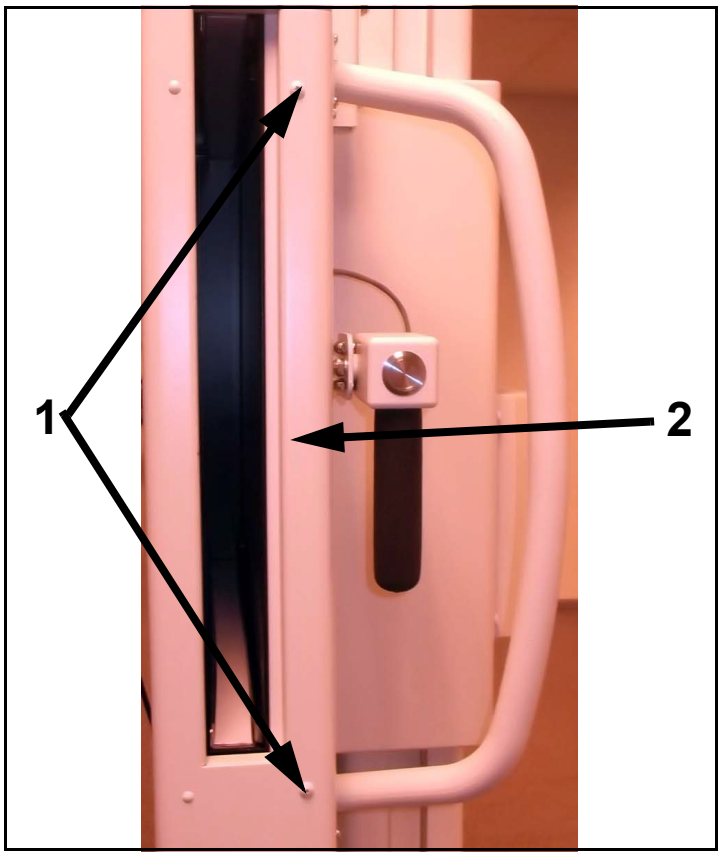

Figure 6-11. Right Side Panel & Front Panel

6 Pull the velcro-backed panel (1 in Figure 6-12) off the wallstand.

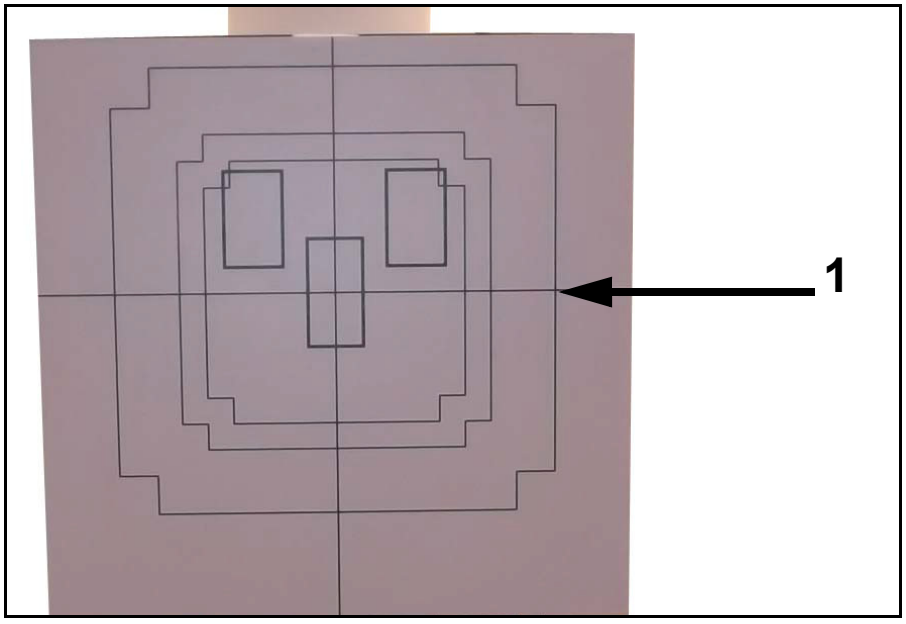

Figure 6-12. Front Panel

7 Unscrew the grid clamp screws (1 in Figure 6-13) and remove the clamps (2) and the grid (3).

8 Reverse steps to reassemble. Be sure to orient new grid so that etched center line is vertical.

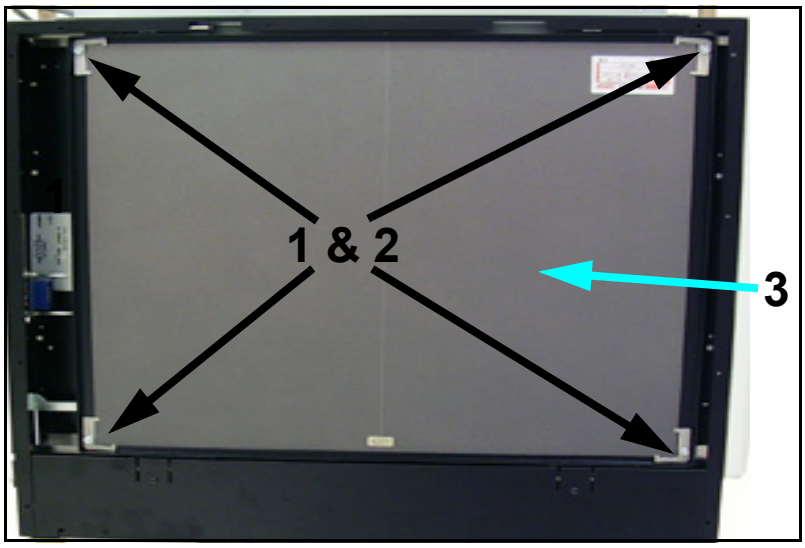

Figure 6-13. Grid

6.4 Replacing ION Chamber

For wallstands with digital receptor refer to the manufacturer's specifications and installation manuals for instructions on how to replace ION chamber (if applicable).

Tools Required

- 5/16" nut driver
- Medium phillips head screwdriver
- Small flat tip screwdriver

Warning

Turn off all electrical power to the wallstand and all it's peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside of the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 To remove the handle (1 in Figure 6-14), unscrew the handle screws (2) and lift handle.

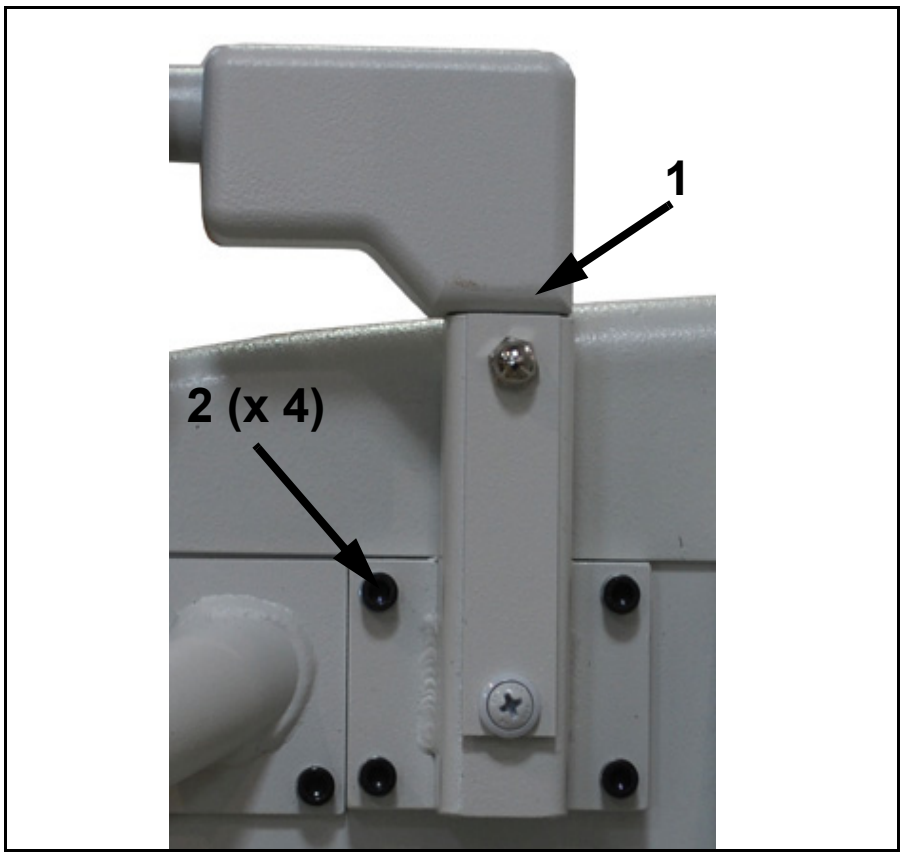

Figure 6-14. Handle Removal

2 Unscrew the two top cover screws (1 in Figure 6-15) and remove the top cover (2).

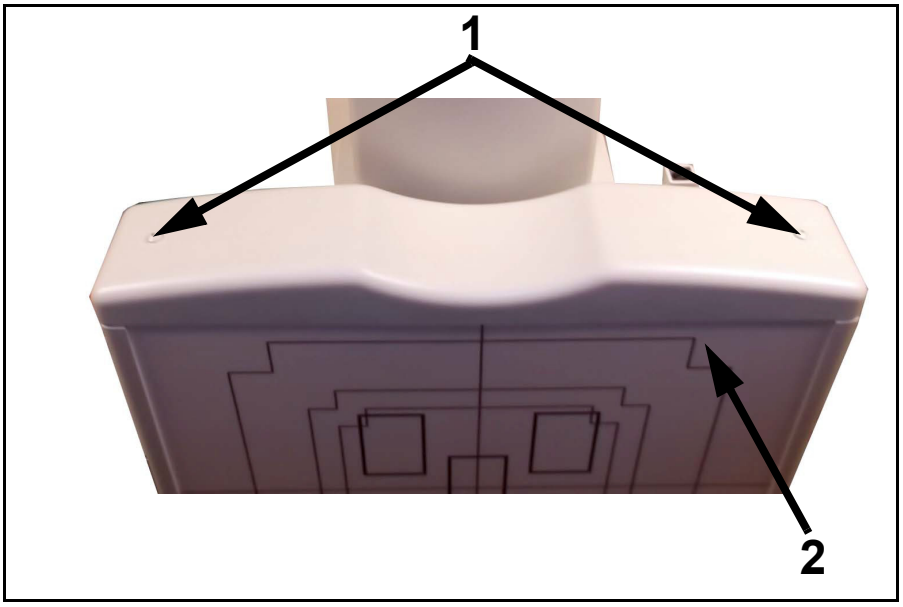

Figure 6-15. Top Cover Screws

3 Unscrew the four cover screws (1 in Figure 6-16) and remove the ION cover (2).

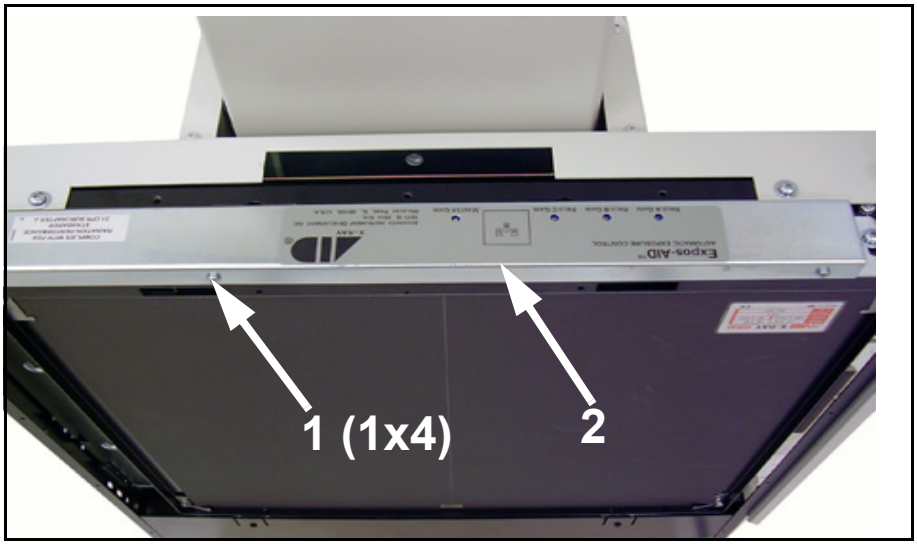

Figure 6-16. ION Chamber Cover Screws

4 Unscrew the cable clamp nuts (1 in Figure 6-17) and remove the clamp (2).

5 Unscrew the two connector screws (3) and unplug the connector (4).

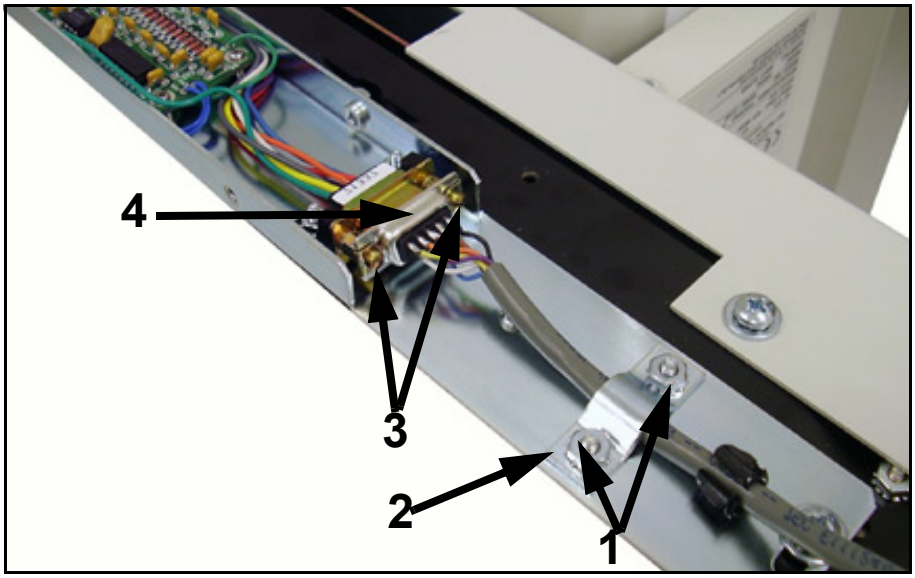

Figure 6-17. ION Chamber Screws

6 Unscrew the ION chamber mounting screws (1 in Figure 6-18) and lift the ION chamber (2) out of the cabinet.

7 Reverse steps to reassemble.

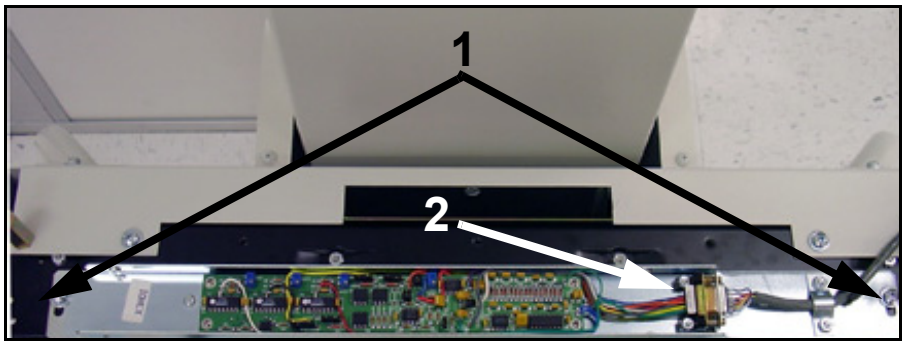

Figure 6-18. ION Chamber Mounting Screws

6.5 Replacing PBL Connector

Tools Required

- 11/32" nut driver
- Diagonal cutters
- Medium phillips head screwdriver
- Small flat-tip screwdriver

Warning

Turn off all electrical power to the wallstand and all it's peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 To remove the handle (1 in Figure 6-19), unscrew the handle screws (2) and lift handle.

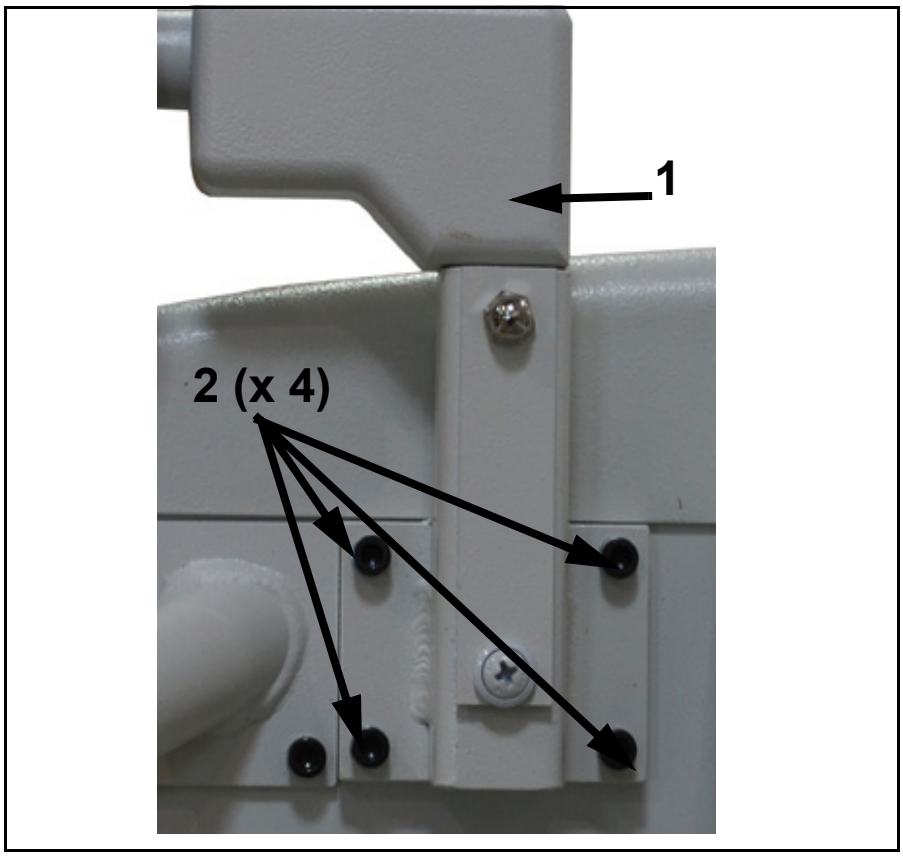

Figure 6-19. Handle Removal

2 Manually pull the cassette tray out as far as it will go.

Caution

The cassette tray is heavier than it looks (15 lbs, 7 kg). Use care when removing it.

3 While firmly pressing the cassette tray release latch (1 in Figure 6-20), pull the cassette tray completely out of the bucky.

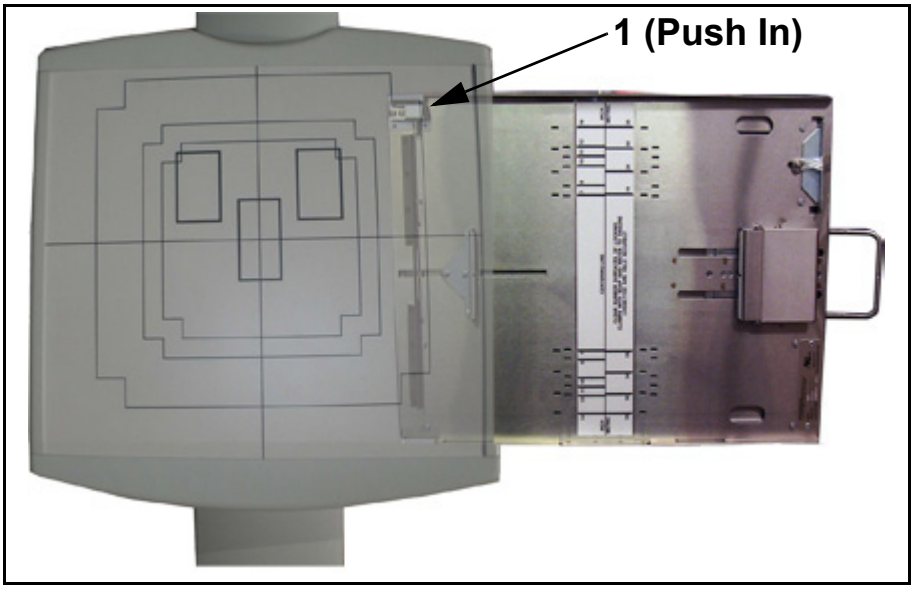

Figure 6-20. Cassette Tray Removal

4 Unscrew the two top cover screws (1 in Figure 6-21) and remove the top cover (2).

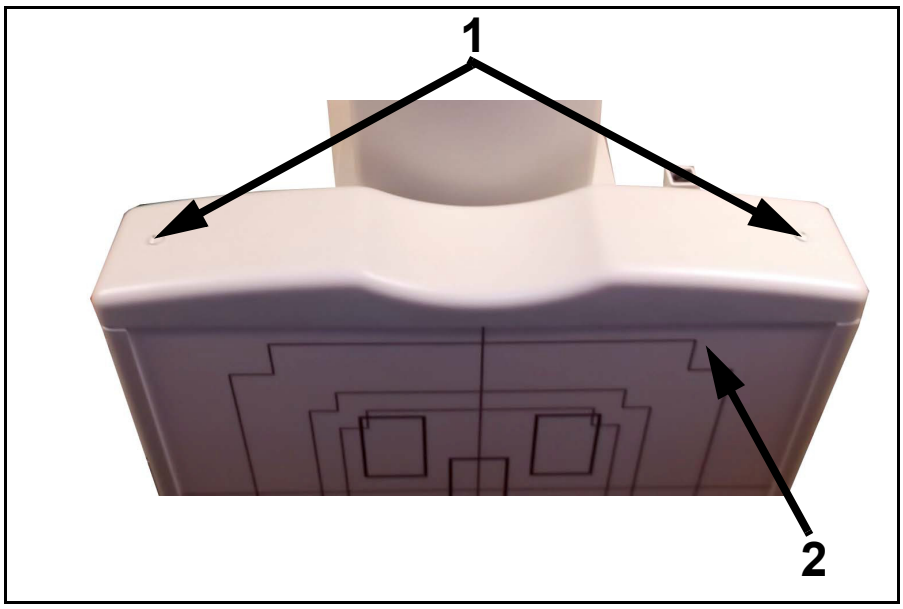

Figure 6-21. Top Cover Screws

5 Unscrew the two bottom cover screws (1 in Figure 6-22) and remove the bottom cover (2).

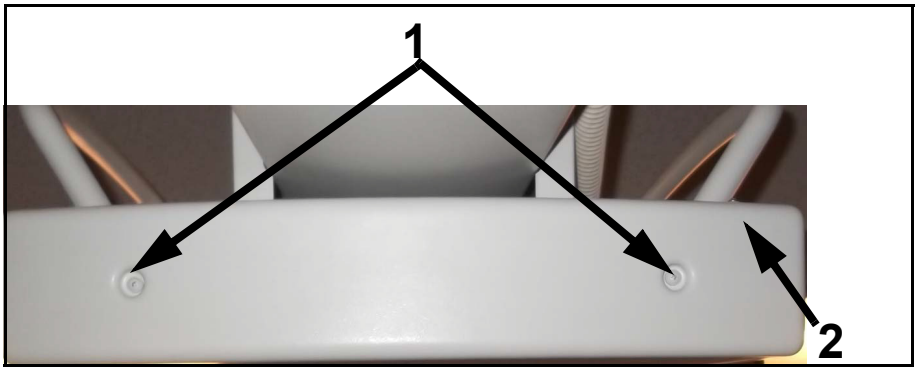

Figure 6-22. Bottom Cover Screws

6 Unscrew the two left side cover screws (1 in Figure 6-23) and remove the side cover (2).

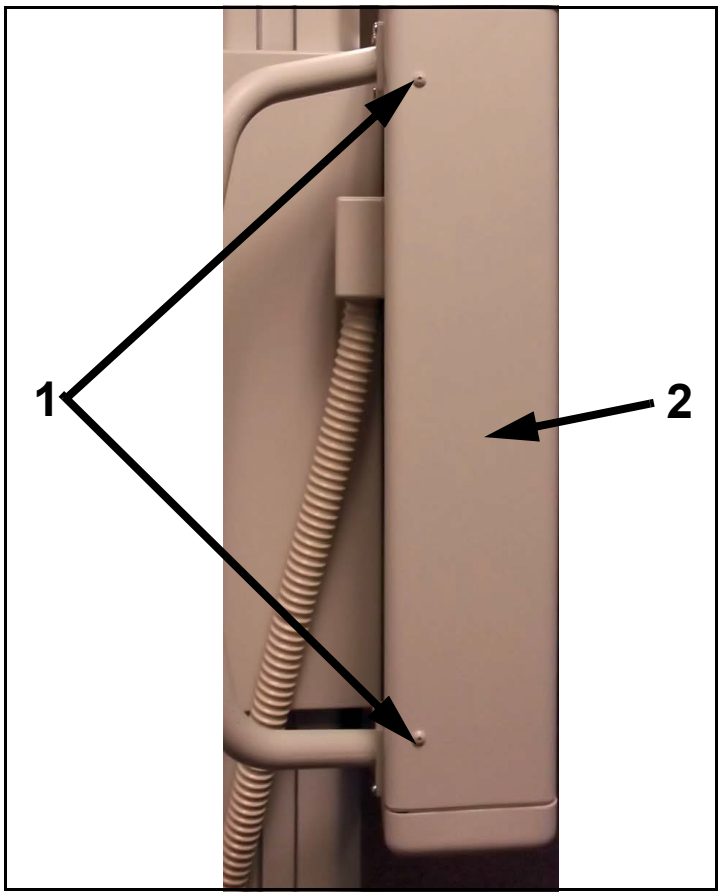

Figure 6-23. Left Side Panel & Front Panel

7 Unscrew the two right side cover screws (1 in Figure 6-24) and remove the side cover (2).

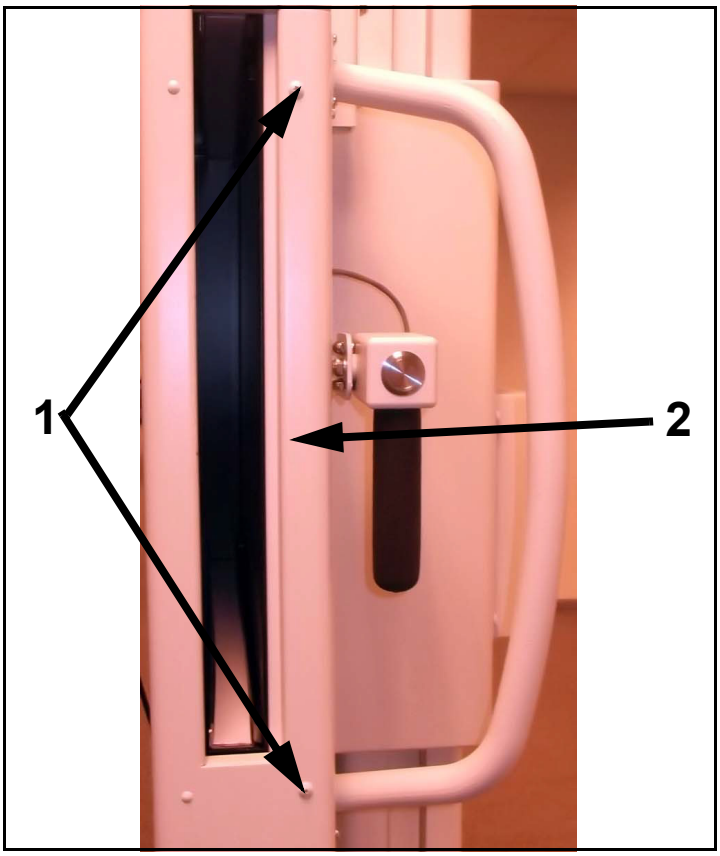

Figure 6-24. Right Side Panel & Front Panel

8 Pull the velcro-backed panel (1 in Figure 6-25) off the wallstand.

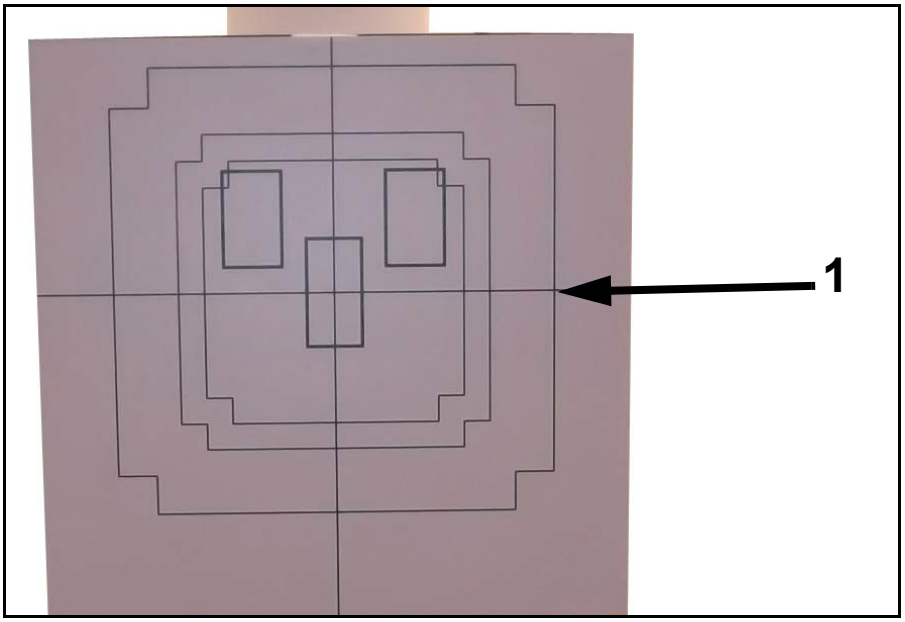

Figure 6-25. Front Panel

9 Cut cable tie (1 in Figure 6-26).

10 Disconnect wires (2) from the terminal (3).

11 Unscrew the connector screws (4).

12 Unscrew the four PBL bracket screws (5) and separate bracket (6) from the cassette holder.

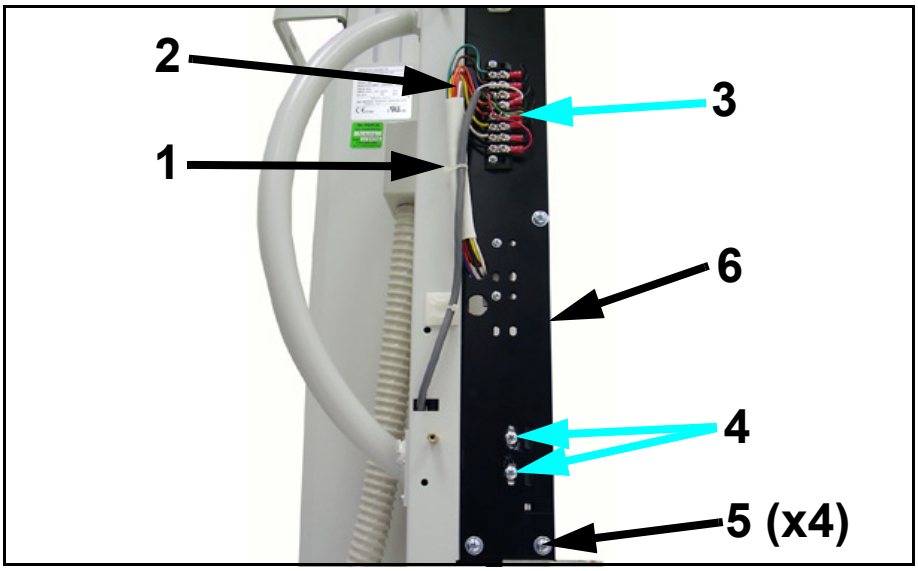

Figure 6-26. PBL Bracket Screws

13 Pull the connector and harness (1 in Figure 6-27) out of the bracket (2).

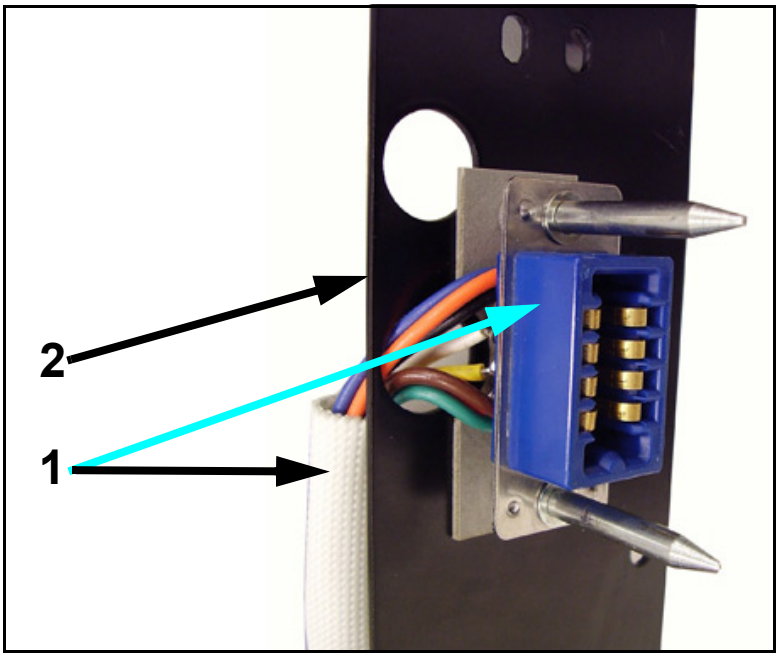

Figure 6-27. PBL Connector

14 Reverse steps to reassemble. Use Figure 6-28 as a wiring guide.

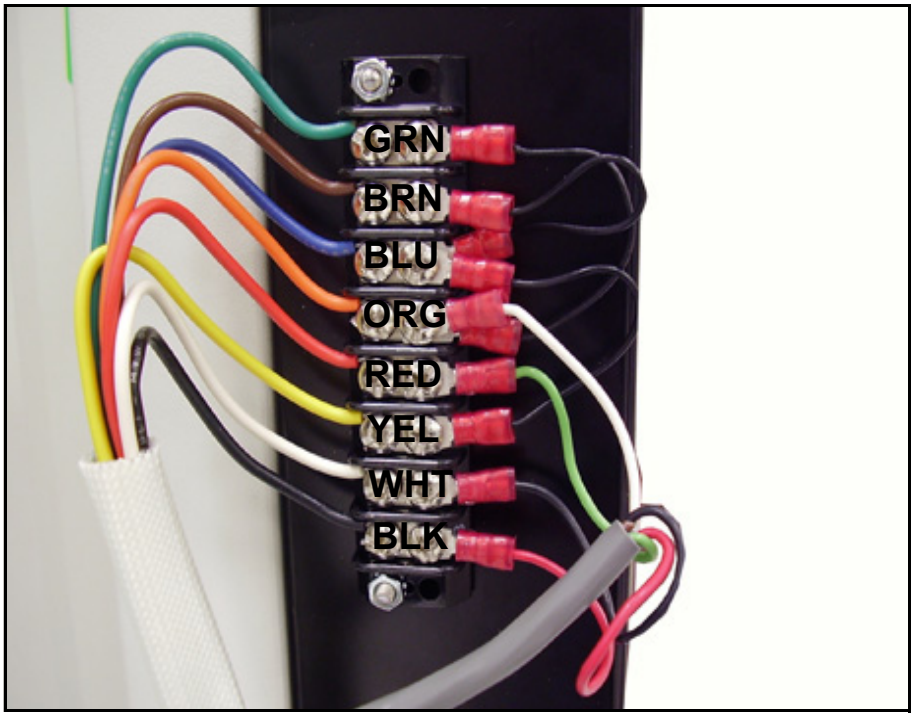

Figure 6-28. PBL Wiring Diagram

6.6 Replacing Brake PCB

Tools Required

- Set of hex wrenches
- Set of nut drivers

Warning

Turn off all electrical power to the wallstand and all it's peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Unscrew the rear cover screws (1 in Figure 6-29) and remove the cover (2).

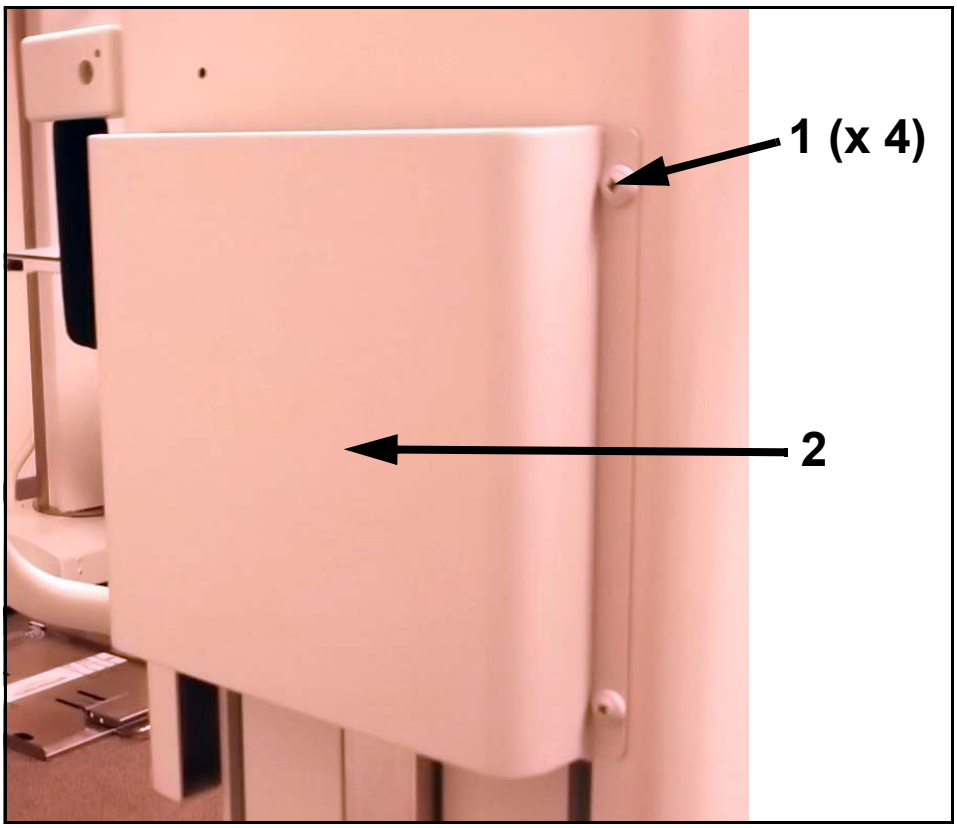

Figure 6-29. Rear Cover

2 Disconnect the electrical connector (1 in Figure 6-30).

3 Unscrew the mount screws (2) and remove the PCB (3).

4 Reverse steps to reassemble.

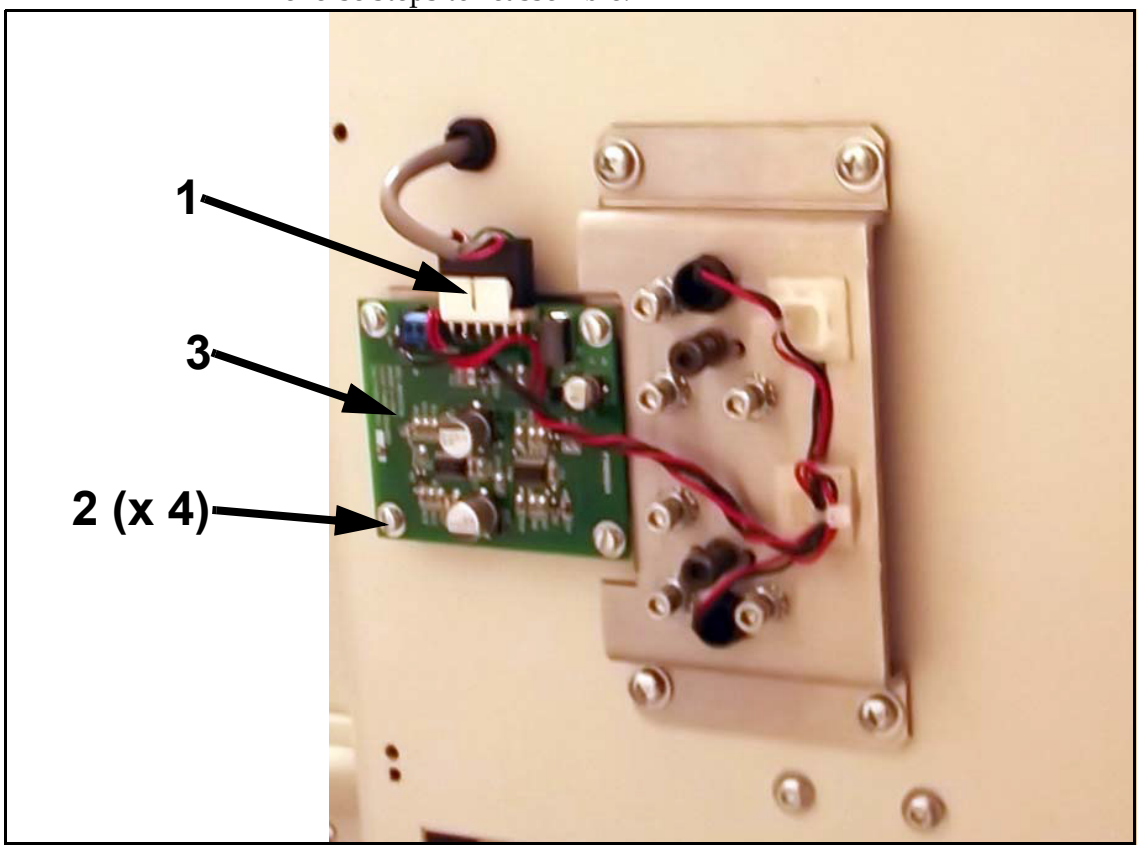

Figure 6-30. Brake PCB Removal

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6.7 Replacing Cooling Fan

Tools Required

- Medium Flat Tip Screw Driver
- Set of Nut Drivers

Warning

Turn off all electrical power to the wallstand and all it's peripheral equipment (generator, tubestand, etc.) at the power sources before servicing the wallstand. Also, make sure that the power sources are locked out and tagged "Equipment Being Serviced" before servicing the wallstand. The components inside the wallstand have power sources outside the wallstand, which is why all peripheral equipment must be turned off; you could get seriously injured if you do not.

1 Unscrew the mounting screws (1 in Figure 6-31).

2 Pull fan out of the housing.

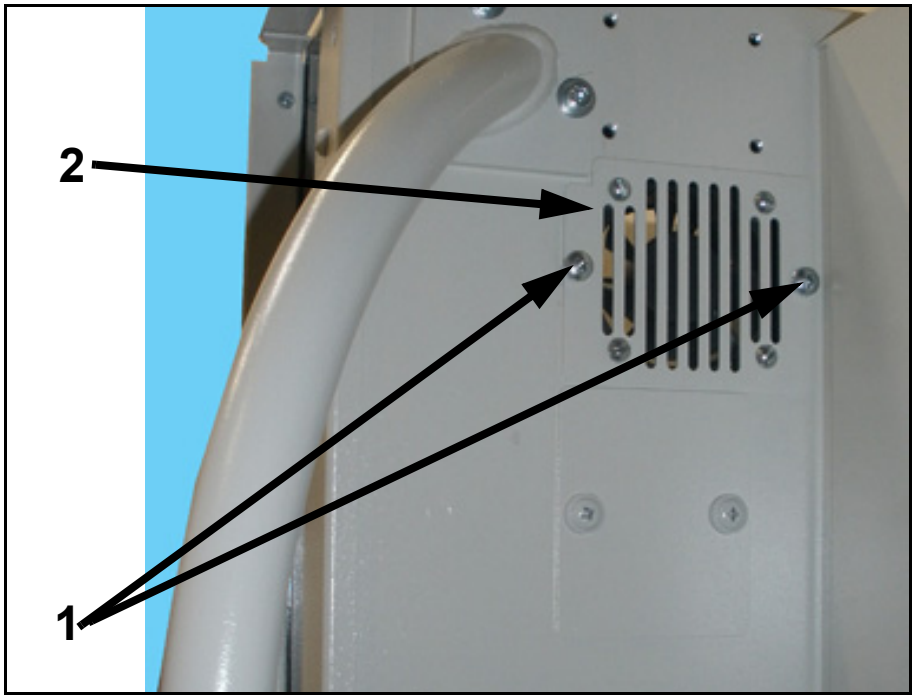


Figure 6-31. Fan Mounting Screws

3 Unscrew the mounting screws (1 in Figure 6-32).

4 Disconnect the connector (2).

5 Reverse steps to reassemble.

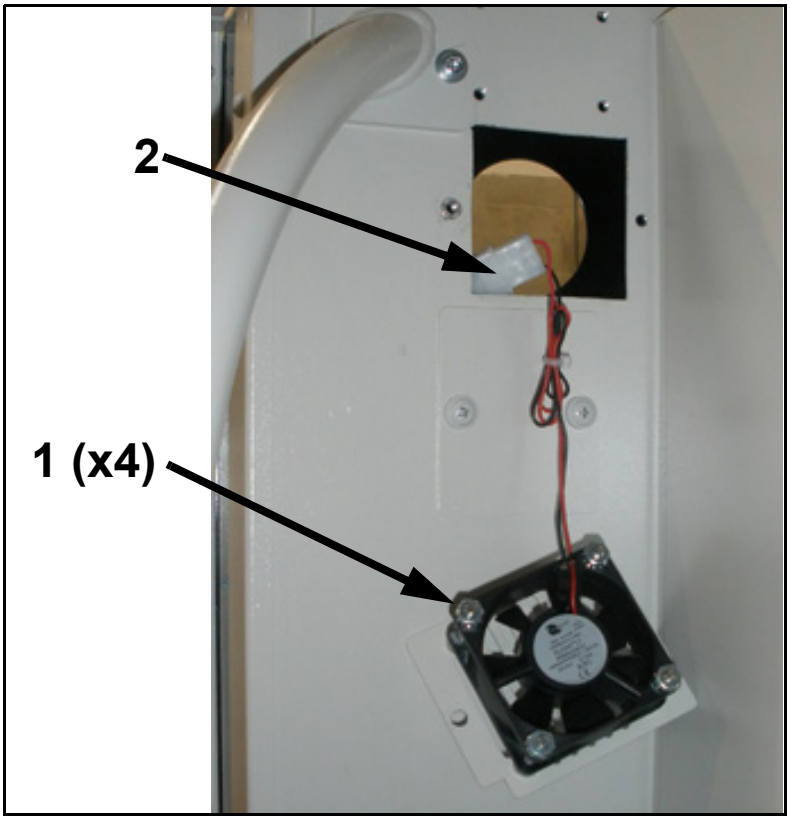


Figure 6-32. Fan Removal

Troubleshooting

7

7.1 Introduction

This chapter is divided into two sections.

The first section is a group of troubleshooting charts that will guide you through most of the problems that may occur with the wallstand.

The second section is made up of an overall schematic of the wallstand and a group of illustrations and photos that show the actual parts depicted on the schematic and their location on the wallstand.

7.2 Troubleshooting Index & Charts

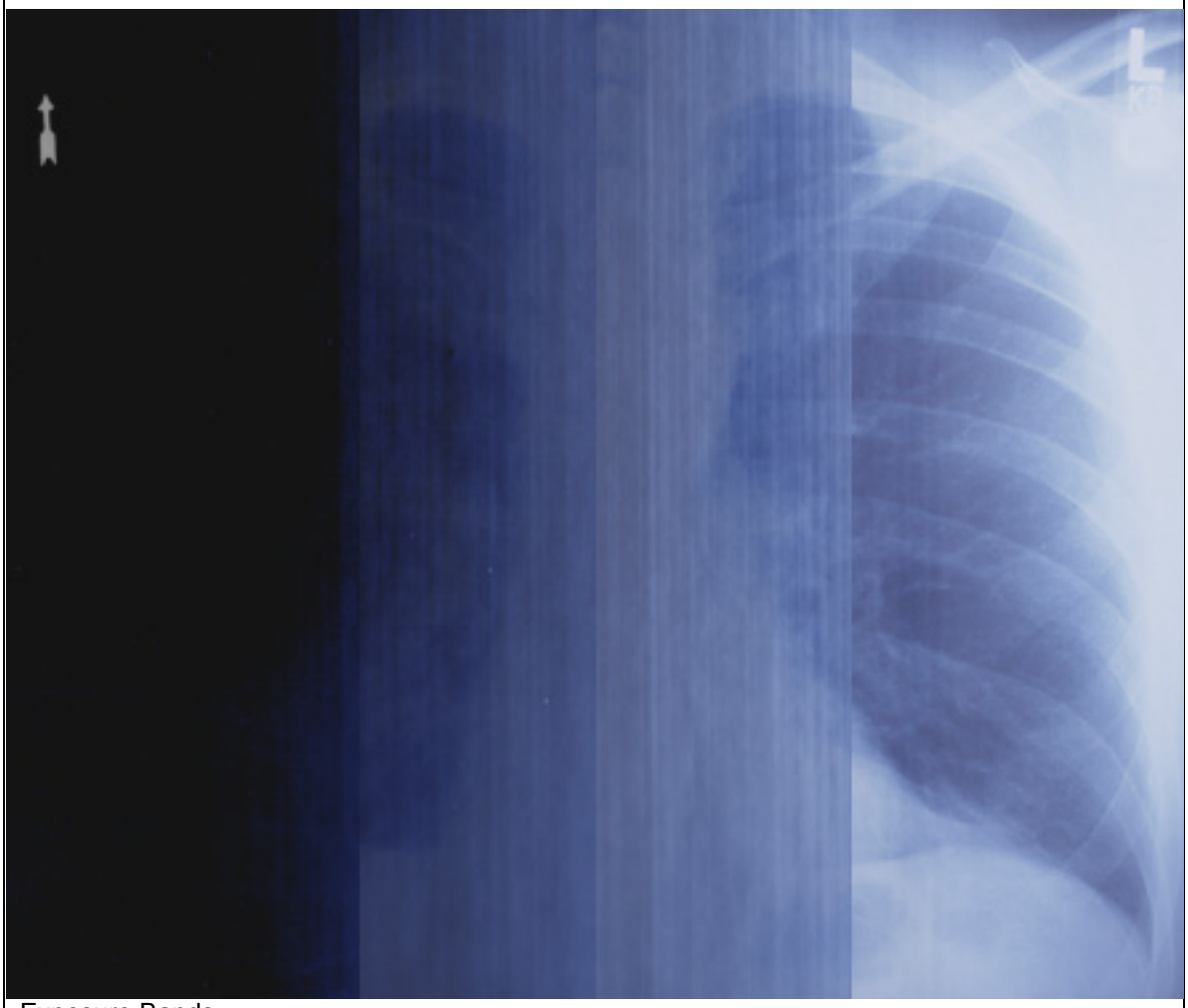
Use the following troubleshooting index and troubleshooting charts as an aid in solving your wallstand's malfunction.

For troubleshooting on optional digital receptor, refer to troubleshooting section in the digital receptor documentation.

Problem	Refer to Page:
Brake does not hold well or at all.	7-2
Up and down movement of cassette holder is difficult.	7-3
Cannot fully remove cassette tray.	7-3
Dark bands on film.	7-3
Bucky does not work.	7-4
Cassette size sensing does not work.	7-5
Exposure very light, very dark or intermittently poor.	7-6

Problem	Possible Cause	Remedy
Vertical carriage lock does not hold well or at all.	Carriage lock is worn out or broken.	Replace carriage lock
Up and down movement of cassette hold is difficult.	Bearing tracks on sides of column are dirty or blocked by obstruction.	Inspect and clean tracks.
	Counterweight cable is frayed.	Inspect cable according to Section "Checking Counterweight Cables" on page 4-3. If necessary, replace cable according to Section "Replacing Counterweight Cable" on page 6-2.
	No Power.	Make sure that switch at wall power source is turned on. Make sure that circuit breaker at wall power is turned on. Check the 24 V signal at the terminal located behind the right side cover plate of the vertical carriage.

Problem	Possible Cause	Remedy
Cannot fully remove cassette.	Cassette restricted by safety latch.	Completely remove cassette according to Section “Completely Removing the Cassette Tray” on page 3-7.
Darks bands on film after exposure.	Wallstand is not aligned perpendicularly to x-ray source. Grid is bad.	Make sure that wallstand is aligned properly according to Chapter 2 - Installation Instructions. Replace grid according to Section “Replacing Grid” on page 6-6.



Exposure Bands

Problem	Possible Cause	Remedy
Bucky does not work.	Bucky fuse is blown.	Check and, if necessary, replace fuse.
	Bucky cable is bad or not connected securely.	Make sure that bucky cable is securely connected to wallstand and generator. Check for voltage presence at bucky terminals and ground. Refer to Figure 7-3 on page 7-10. If necessary, replace cable.
	Other	Consult bucky manual for further troubleshooting instructions. The schematics for the bucky are included in Chapter 8 of **THIS** manual.
Cassette size sensing does not work.	Cassette is not fully inserted into holder.	Make sure cassette is fully inserted.
	Collimator not properly calibrated.	Make sure that collimator is calibrated according to its manual.
	PBL cable is bad or not connected securely.	Make sure that PBL cable is securely connected to wallstand and generator.
	PBL connector is bad.	Make sure that cassette is fully inserted into wallstand. Then, disconnect PBL cable from wall stand. Then on PBL cable to wallstand, test for and open circuit across the following wires: BLK - WHT RED - WHT GRN - WHT If an open circuit is found, replace connector on PBL bracket according to Section “Replacing PBL Connector” on page 6-16.
	Cassette is bad.	Replace cassette.

Problem	Possible Cause	Remedy
Exposure very light, very dark or intermittently poor.	Technique not set up correctly.	Make sure that technique is setup correctly and that proper AEC field is selected.
	ION chamber cable is not connected securely.	Make sure that Ion chamber cable is securely connected to wallstand and generator.
	Ion chamber not properly adjusted.	Check for proper voltages at the ION chamber. Refer to the Ion chamber manual. This manual is included in Chapter 8 of **this** manual. Also make sure that field selection on control panel matches field actuation on chamber. If it doesn't, reconfigure the switches on the Ion chamber board according to the Ion Chamber manual. If voltage is absent, check the cables between the generator and the ION chamber for continuity. The pin numbers on each end of each cable match. Jump two pins on the female end of each cable and test corresponding pins on the other end to check continuity.
	AEC control on generator is bad.	Troubleshoot according to generator manual. Instructions for replacing the ION chamber are in Section "Replacing ION Chamber" on page 6-12.

7.3 VS300 Electric Lock Troubleshooting

1. Measure DC voltage between J2 SOL+ and J1 pin 2 (GND); the expected voltage is 22-30 Vdc. If there is no voltage, replace the Lock Timer Board 124-5145.
2. If there is voltage on J2 SOL+, disconnect the black wires going to J2 SOL.
3. Connect a clip lead from GND (J1 pin 2) to each black wire (one at a time) and verify that the electric lock activates. When the lock is activated, it will draw about 1.2 amps and the magnetic brake will release. If the lock can be activated with the clip lead, replace the Lock Timer Board (124-5145).
4. Press the unlock button and hold it down for 60-70 seconds. The electric carriage brake will release and stay released until the overheated LED illuminates. The electric brake will then turn off and the button will not be able to unlock the carriage until the Overheat LED turns off. The LED should remain on for 60-70 seconds. If the described overheat function does not work, replace the Lock Timer Board (124-5145).

7.4 Schematic Troubleshooting

The schematic diagram below can be used to troubleshoot electrical problems with the wallstand. The schematic covers all of the electrical components in the wallstand. Figures 7-2 thru 7-4 show actual diagrams and photos of the components listed on the schematic. This allows you to identify the location of the components and translate the fault isolation logic of the schematic into actual testing of components for failure.

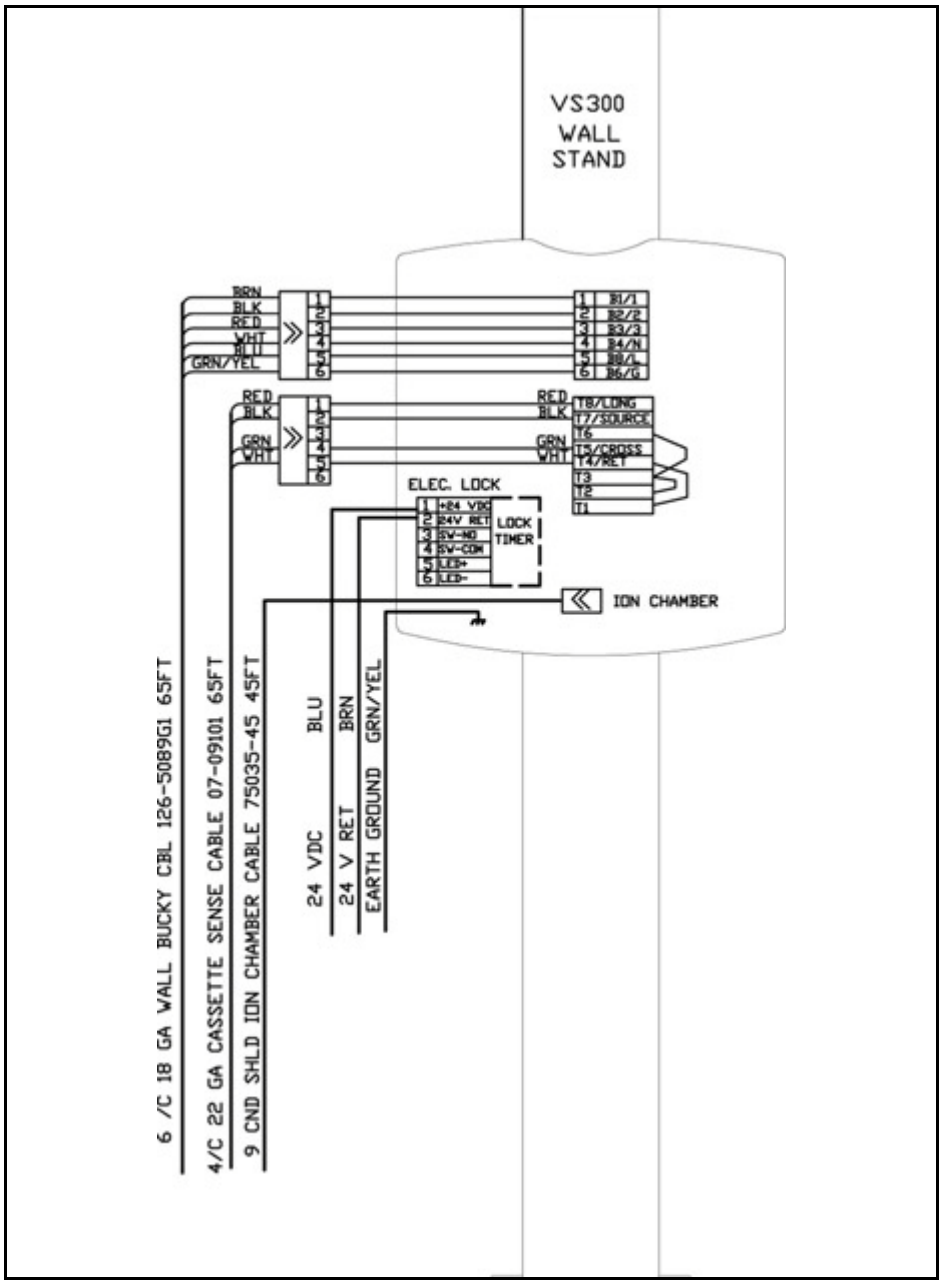
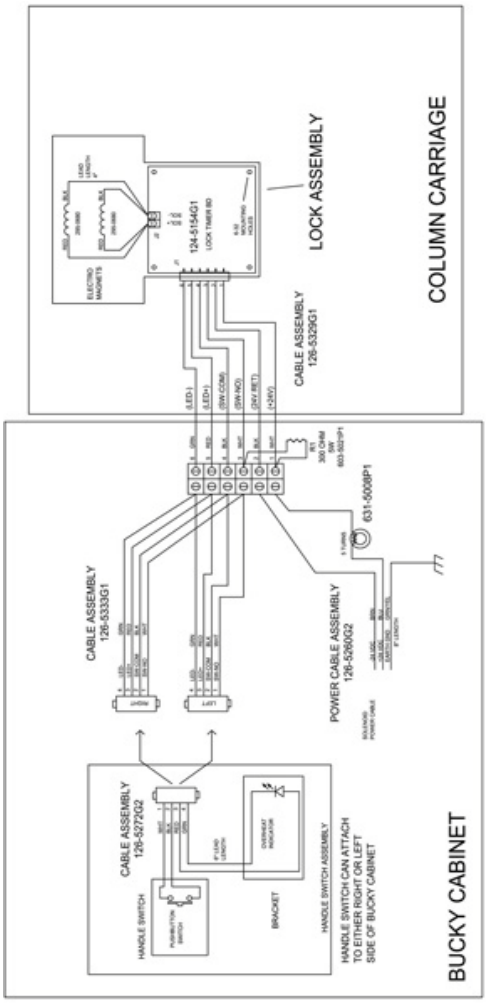


Figure 7-1. Overall Wiring Diagram


COLUMN CARRIAGE
LOCK ASSEMBLY
124-5154G1
LOCK TIMER RD
ELECTRO MAGNETS
CABLE ASSEMBLY
126-5329G1
(LED-)
(LED+)
(SW COM)
(SW NO)
(24V RET)
(+24V)
R1
300 OHM
5W
631-5008P1
CABLE ASSEMBLY
126-5333G1
POWER CABLE ASSEMBLY
126-5260G2
CABLE ASSEMBLY
126-5272G2
HANDLE SWITCH
BRACKET
HANDLE SWITCH ASSEMBLY
HANDLE SWITCH CAN ATTACH
TO EITHER RIGHT OR LEFT
SIDE OF BUCKY CABINET
BUCKY CABINET

7.4.1 Ion Chamber Connections

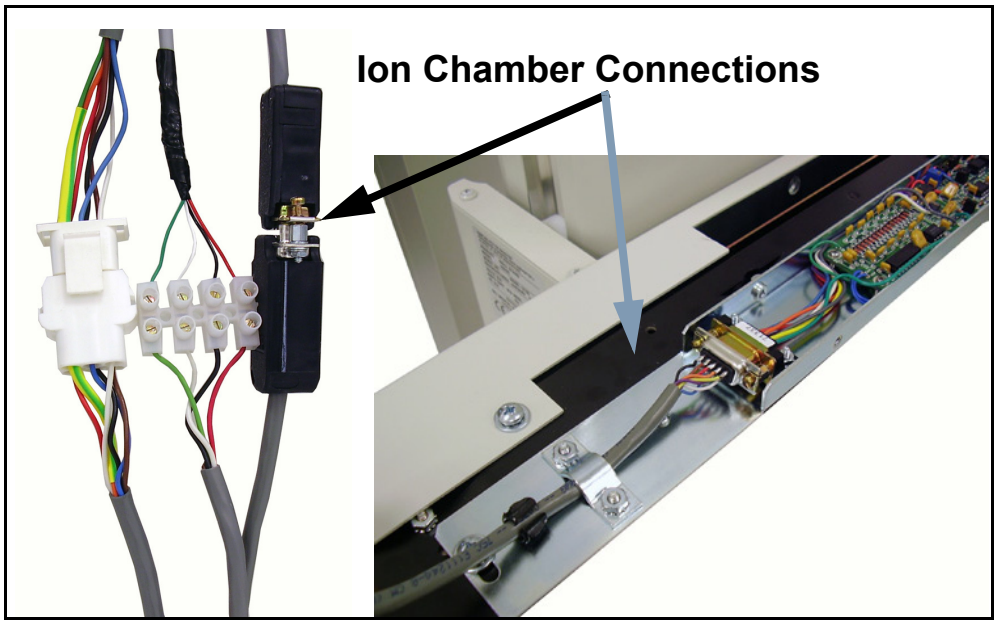


Figure 7-2. Ion Chamber Connections

Pin #	Color	Function
1	BLK	None
2	BRN	Field 2 Select
3	RED	Field 1 Select
4	ORG	Reset
5	YEL	Output
6	GRN	Field 3 Select
7	BLU	Negative Supply
8	VIO	Positive Supply
9	WHT	Ground

Table 7-1: Pin Definitions

7.4.2 Bucky Connections

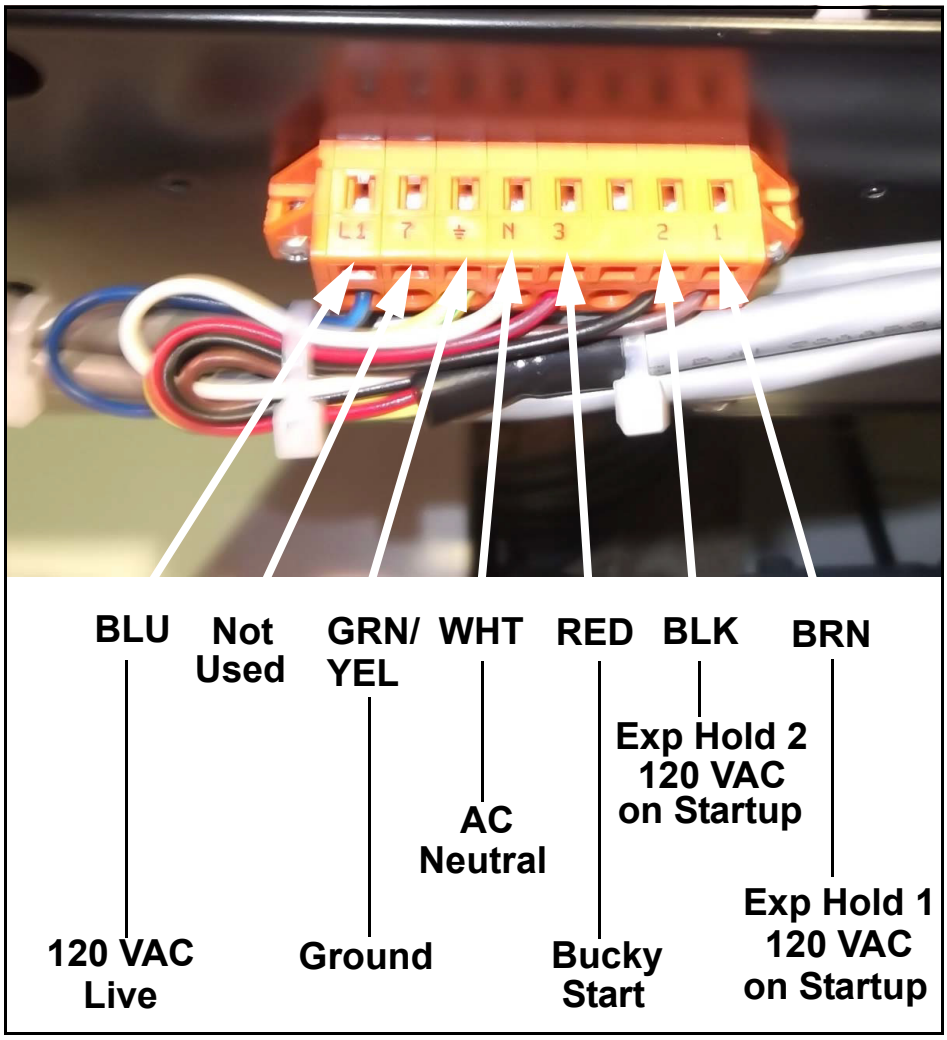


Figure 7-3. Bucky Connections

7.4.3 Cassette Size Sensing Circuit

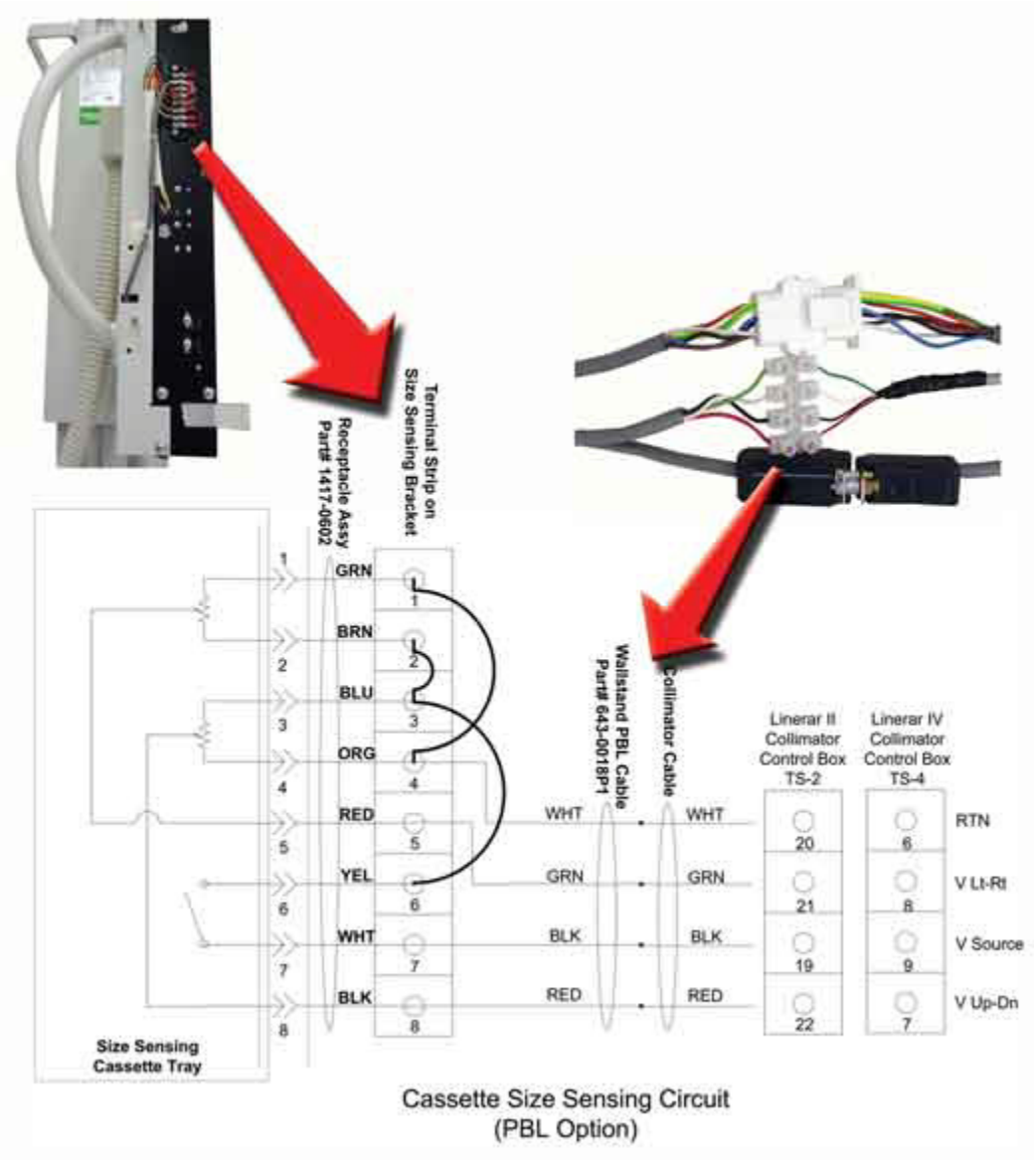


Figure 7-4. Cassette Size Sensing Circuit

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Diagrams & Electrical Schematics

8

8.1 Electrical Schematics

This chapter contains the electrical diagrams and schematics for the wallstand.

Drawing Number	Drawing Description	# Sheets	Current Rev. Level
-	VS300 Wallstand Wiring Diagram	-	See Figure 8-1 on page 8-2
-	Casette Size Sensing Circuit	-	See Figure 8-2 on page 8-3
034-5076 & 034-5077	Interconnect Diagrams for the VS300 Wallstand and various tables and tubestands.	5 & 12	See Table 8-2 on page 8-4
-	Progeny Bucky Connection Diagram 120/240 V Models	1	B
10-108000	Progeny Bucky Control Assy. Drawing	2	F
61154A	AID 3-field Isolated Pre-Amp Calculation Gain Range 1.0 to 21 Top-Turn Pots	1	02
-	AID Three-field Ionization Chamber Calibration Procedure for The 61154 Pre-Amplifier Board Assemblies (Calibration Instructions P/N 69329)	7	- -

Table 8-1: List of Diagrams and Schematics

The figure below shows the wiring diagram for a VS300 wallstand equipped with an optional bucky, ion chamber, and cassette sensing system.

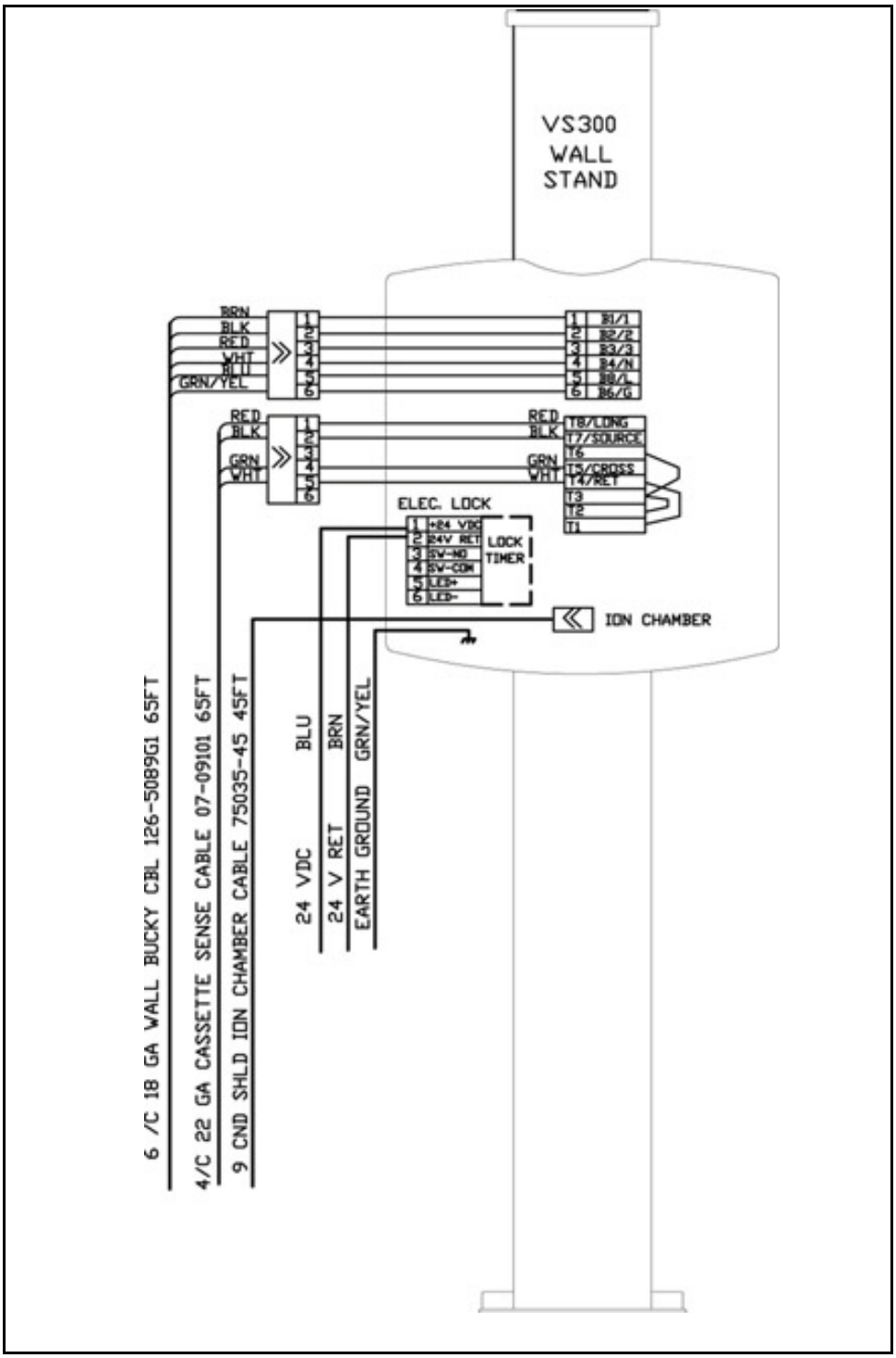


Figure 8-1. VS300 Wallstand Wiring Diagram

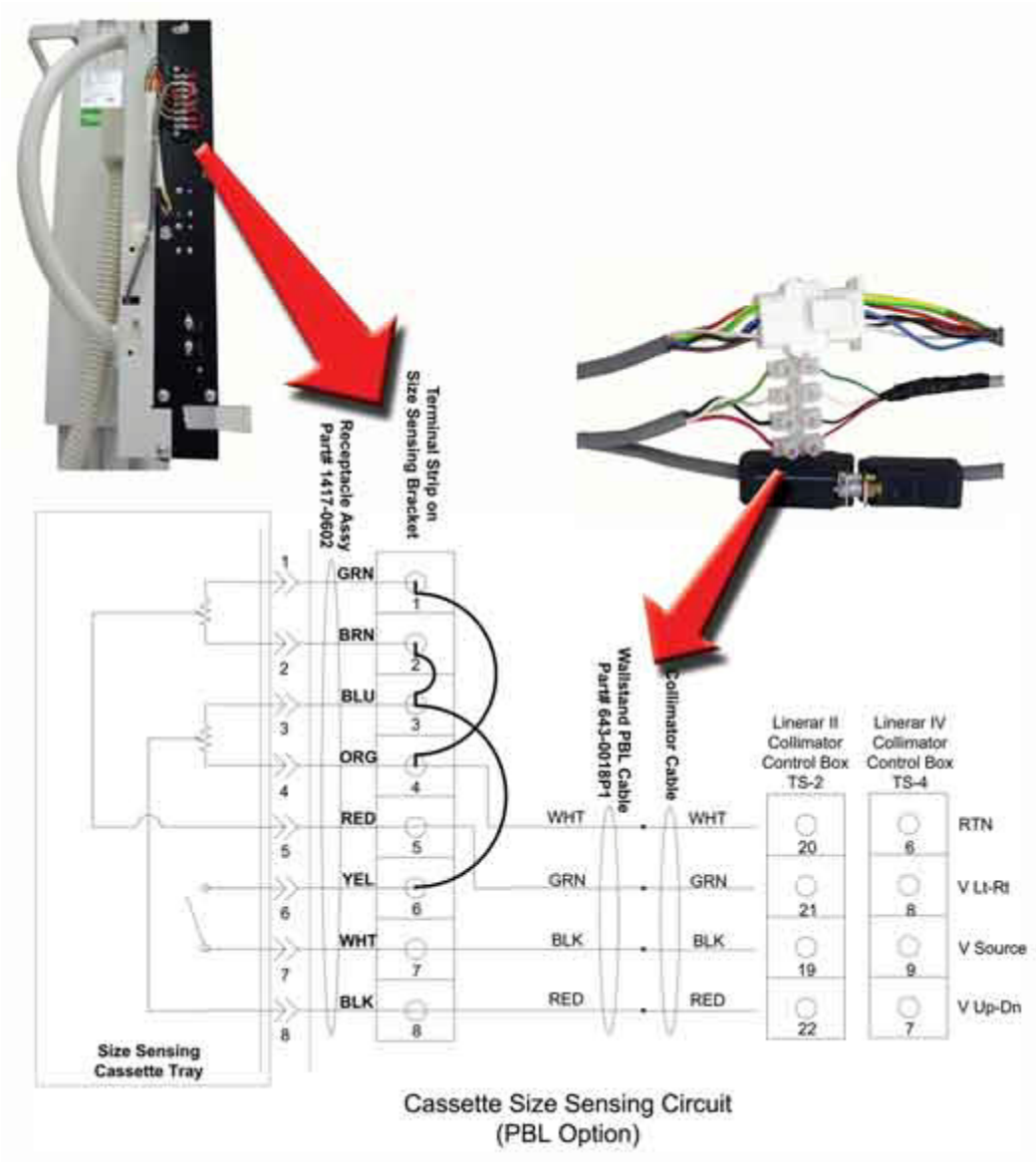


Figure 8-2. Cassette Size Sensing Circuit

8.2 Configuration - Schematic Match Table

Generator Model	Tube Stand/ Crane Model	Collimator Model	Wall Stand Model	Refer to Drawing #	Current Rev. Level
Anthem	K860 Floor-Ceiling Mounted Tubestand	Eureka Linear II	VS300		0
CM Series	DFMT Tubestand	Eureka Linear IV	VS300	034-5076S2	3
Anthem	DFTS Tubestand	Eureka MC 150	VS300		0
Sedecal	K860 Floor-Ceiling Mounted Tubestand	MC series	VS300	034-5076S8	1
CM Series	FMTS Tubestand	Eureka Linear II	VS300	034-5076S9	1
CM Series	OTC-12	Ralco M	VS300		0
CM Series	OTC-12	Ralco Auto	VS300		0
CM Series	OTC-12	Ralco Auto	VS300		0
IN Series	OTC-12	Ralco M	VS300		0
IN Series	OTC-12	Ralco Auto	VS300		0
IN Series	3D Top CTM	Siemens	VS300	034-5077S14	3
Anthem	OTC-12	Eureka MC 150	VS300		0
IN Series	OTC-12	Eureka Linear II	VS300	034-5077S17	3
CM Series	OTC-12	Ralco Auto	RT100/ VS300		0
CM Series	FMTS Tubestand	Eureka Linear IV	VS300	034-5076S19	0
IN Series	OTC-12	Ralco Auto	Apollo		0
IN Series	OTC-12	Ralco M	VS300/ Apollo		0

Table 8-2: Configuration - Schematic Match Table

CPI CMP 200 SERIES
40kW 208-230VAC 3-PH

H.V. TANK
CATHODE
ANODE

H.V. CABLE K3375-XX
H.V. CABLE K3375-XX
4 CND 16 AWG SHLD ROTOR CABLE 052206 60FT
CABLE 643-0040 60FT
40 /C 22 GA SH (FOR AUTO COLIM)

ROOM INTERFACE PCB

J7
6 SHFT — RED
5 PHASE — BLK
4 COM — WHT
3 GND — GRN
2 THERMSW — BRN/ORG
1 THERMSW — ORG/BLK

J2
10 BKY1 RET — WHT
9 BKY1 GND — BLU
8 BKY1 OUT — RED
7 BKY1 STRT — WHT
6 BKY1 RDY — RED
5 BKY1 RDY
4 INT1
3 INT1R — BLK
2 INT2 — BRN
1 INT2R

J4
10 DOOR INT
9 DOOR INT
8
7
6 BKY2 RDY — BRN
5 BKY2 RDY — BLK
4 BKY2 RET — WHT
3 BKY2 GND
2 BKY2 OUT — BLU
1 BKY2 STRT — RED

GRN/YEL
GRN/YEL
GROUND STUD

AEC PCB
737992
J1
J2

6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
6/C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
3 CND 22 AWG COLLIM EXP HOLD CABLE 45FT

CONTROL PCB
J3

INTERFACE CABLE #73780700

CONTROL CONSOLE
J8
GENERATOR INTERFACEW

TUBE CRANE DIFFER. SID CABLE 126-5161 60FT

POWER SUPPLY & INTERFACE PCB 124-5029
J5029G J5029F J5029E J5029B J5029K
CB1
BRN
BLU
5A, 240VAC
GRN/YEL
GND STUD
24VAC
24VAC RET
COLLIM CONTIN SID POT

120 VAC POWER

DCTM TUBE CRANE

COLLIMATOR HEAD

LINEAR IV COLLIMATOR LOGIC
POWER
EXPOSURE HOLD
OVER TABLE COLLIMATOR LOGIC
WALL BUCKY
TABLE BUCKY

120VAC POWER

ELEVATING TABLE EV-650
OPTIONAL
TUBECRANE DIF SID POT #122-5042G1
COLLIM DIFF SID POT #122-5076G1
PA
PBL
TB101B
TB101A
TB102
ION CHAMBER
TBLA BUCKY
PROGENY BUCKY

CABLE 126-5161 60FT
2/C 22 AWG COLLIM DIFFERENTIAL SID CABLE 126-5211 60FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
4/C 22 GA CASSETTE PRESENCE CABLE #07-09102
9 CND SHLD ION CHAMBER CABLE #75035-45 45FT
6 /C 18 GA WALL BUCKY CBL #126-5089G1 65FT
4/C 22 GA CASSETTE SENSE CABLE #07-09101 65FT
9 CND SHLD ION CHAMBER CABLE #75035-45 45FT

120 VAC POWER

WALL STAND VS-200
ION CHAMBER

6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
4/C 22 GA CASSETTE SENSE CABLE 07-09101 65FT
9 CND SHLD ION CHAMBER CABLE 75035-45 45FT

INTERCONN., EV650 CPI (CPM), DCTM, LINEAR IV - REV. 4
034-5076S - SHT. 2

DEL MEDICAL
ROSELLE, ILLINOIS

SEDECAL GENERATOR
SHF410-PSU

H.V. TANK
CATHODE
ANODE

24VAC POWER SUPPLY CABLE (SUPPLIED W/ COLLIMATOR)

MODULE-4
REFER TO INSTALLATION MANUAL MANUAL FOR CONNECTING ROTOR CABLE OF DUAL TUBE OR FLUOROSCOPY/SPOT FILM.
* TS2 CAN BE MARKED AS 4TS2, 10TS2 OR 11TS2 DEPENDING ON GENERATOR MODEL.

TS2*
1 MAIN
2 SHFTCAUX
3 COM
4 THERMSW
5 THERMSW

LOCK BOARD
TB7
3 24VAC — WHT
4 24VAC — BLK
5 24VDC — RED
6 24VDC RET — BLK
7 24VDC
8 24VDC RET — GRN

K860 FLOOR-CEILING MOUNTED TUBESTAND

40"HSID
72"HSID
40"VSID

24VDC POWER SUPPLY CABLE

SID CABLE 126-XXXXG1
(NOT USED FOR MANUAL COLLIMATOR)

COLLIMATOR HEAD

WALL STAND
VS-200

YEL
BLK
RED
WHT
GRN

B1/1
B2/2
B3/3
B4/N
B6/G
B8/L

ION CHAMBER

INTERFACE PANEL

* REFER TO I/F -001 ON THE SEDECAL MANUAL FOR CONFIGURATION JUMPERS AND ADD ON CIRCUITRIES FOR DIFFERENCE BUCKY TYPE.

TS1 OR 3TS1
1 115/220V VAC — WHT
2 *
3 0 VAC — BLU
4 BUCKY 1 DR — RED
5 BUCKY 1 MOTION — BRN
6 BUCKY 1 MOTION RTN — BLK

* REFER TO I/F -002 ON THE SEDECAL MANUAL FOR CONFIGURATION JUMPERS AND ADD ON CIRCUITRIES FOR DIFFERENCE BUCKY TYPE.

TS1 OR 3TS1
8 115/220V VAC — WHT
9 *
10 0 VAC — BLU
11 BUCKY 2 DR — RED
12 BUCKY 2 MOTION — BRN
13 BUCKY 2 MOTION RTN — BLK

GRN/YEL
GRN/YEL
GROUND STUD

AEC BOARD
A3263-03

J1
J2
J4

NOTE:
DEPENDING ON THE ION CHAMBER, MAKE JUMPER CONFIGURATION AND INTERFACE AS SPECIFIED ON SCHEMATIC IM-014, OR IM-015, OR IM-018, OR IM-019, IM-081 IN SEDECAL MANUAL.

ELEVATING TABLE
EV-650

PBL
T8 T7 T5 T4 T3 T2 T1

VILA BUCKY
B1/1 B2/2 B3/3 B4/N B6/G B8/L

PROGENY BUCKY
B1/1 B2/2 B3/3 B4/N B6/G B8/L

P106/J106
TB102
PE L2 L1
TB101B
25 40"VSID
24 40"VSIDR
TB101A
22 40"HSID
21 STDCOM
20 72"HSID
J202
BRN GRN WHT BLU
J203
+12V DC RET +5V/CRS +12V/RTN +5V/XRS +5V G
J204
BRN ORG RED WHT GRN BLU
J206
EXP RE EXP RE EXP/ER L2 L1 G
BRN BLK RED WHT WHT GRN/YEL
IDN CHAMBER

TO INCOMING POWER DISCONNECT OR SEDECAL GENERATOR.
3 CND 18 AWG POWER CABLE
GRN/YEL BLU BRN

9 CND SHLD IDN CHAMBER CABLE 75035-45
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
9 CND SHLD IDN CHAMBER CABLE 75035-45

OPTIONAL AEC CABLE (FACTORY SUPPLIED)

J5 J15
ATP BOARD
J3
J1

J3 COMMUNICATION CABLE (FACTORY SUPPLIED) J3
J2 POWER CABLE (FACTORY SUPPLIED) J1

EXPOSURE HAND SW (OPTIONAL)

SEDECAL OPERATOR CONSOLE

DEL MEDICAL
SEDECAL, EV650, K860, VS200, MC150
034-5076S, SHT. 8
REVISION 1, ECN 8003 - 10-29-07

CPI CMP 200 SERIES

H.V. TANK
ANODE
CATHODE

H.V. CABLE K 3375-60
H.V. CABLE K 3375-60
10 AWG X-RAY TUBE GROUND CABLE 126-5202G1 65FT
5 CND 16 AWG ROTOR CABLE 126-5228G1 65 FT
40 /C 22 GA SH 70-08166 65FT (FOR AUTO COLIM)

ROOM INTERFACE PCB

J7
6 SHIFT
5 MAIN
4 COM
3 GND
2 THERMSW
1 THERMSW

J2
10 BKY1 RET — WHT
9 BKY1 GND — BLU
8 BKY1 OUT — RED
7 BKY1 STRT — BRN
6 BKY1 RDY — BLK
5 BKY1 RDY
4 INT1
3 INT1R
2 INT2
1 INT2R

GRN/YEL

J4
10 DOOR INT
9 DOOR INT
8
7
6 BKY2 RDY — BRN
5 BKY2 RDY — BLK
4 BKY2 RET — WHT
3 BKY2 GND
2 BKY2 OUT — BLU
1 BKY2 STRT — RED

NOTE: PLEASE SEE PAGE 3C-5 OF CMP 200 MANUAL ABOUT BUCKY RUN ON W/O COMMAND.

GRN/YEL
GRN/YEL
GROUND STUD

AEC PCB
737992

J1
1 NC — BLK
2 FLD1 — GRN
3 FLD2 — BRN
4 +15VDC — BLU
5 FLDC — YEL
6 +15VDC — ORG
7 READY — SHLD
8 GND — WHT
9 OUTP

J2
1 NC — BLK
2 FLD1 — GRN
3 FLD2 — BRN
4 +15VDC — BLU
5 FLDC — YEL
6 +15VDC — ORG
7 READY — SHLD
8 GND — WHT
9 OUTP

6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
2 CND COLLIM EXP. HOLD CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).

JUMPER

LINEAR II COLLIMATOR

	HORIZONTAL SID	VERTICAL SID	EXPOSURE HOLD	POWER	WALL BUCKY	TABLE BUCKY
	TS1-17	TS1-9	TS2-2	120V	TS2-26	TS3-14
	TS1-13	TS1-8	TS2-1	H	TS2-20	TS3-15
	TS1-14	TS1-18		G	TS2-21	TS3-16
	TS1-18	TS1-14			TS2-22	TS3-17
	TS1-9	TS1-17				

120 VAC POWER

FMTS
TS1
COLLIMATOR HEAD

9 CND 18 AWG CABLE (SUPPLIED WITH FMTS)
3 CND 16 AWG POWER CORD (SUPPLIED WITH FMTS)

ELEVATING TABLE EV-650

PBL
VILA BUCKY
PROGENY BUCKY
J206
TB102
ION CHAMBER
TB101B
TB101A
J203
J202
J204

WALL STAND VS-200
ION CHAMBER

CONTROL PCB
J3

9 CND SHLD ION CHAMBER CABLE 75035-45
9 CND SHLD ION CHAMBER CABLE 75035-45
INTERFACE CABLE #73780700

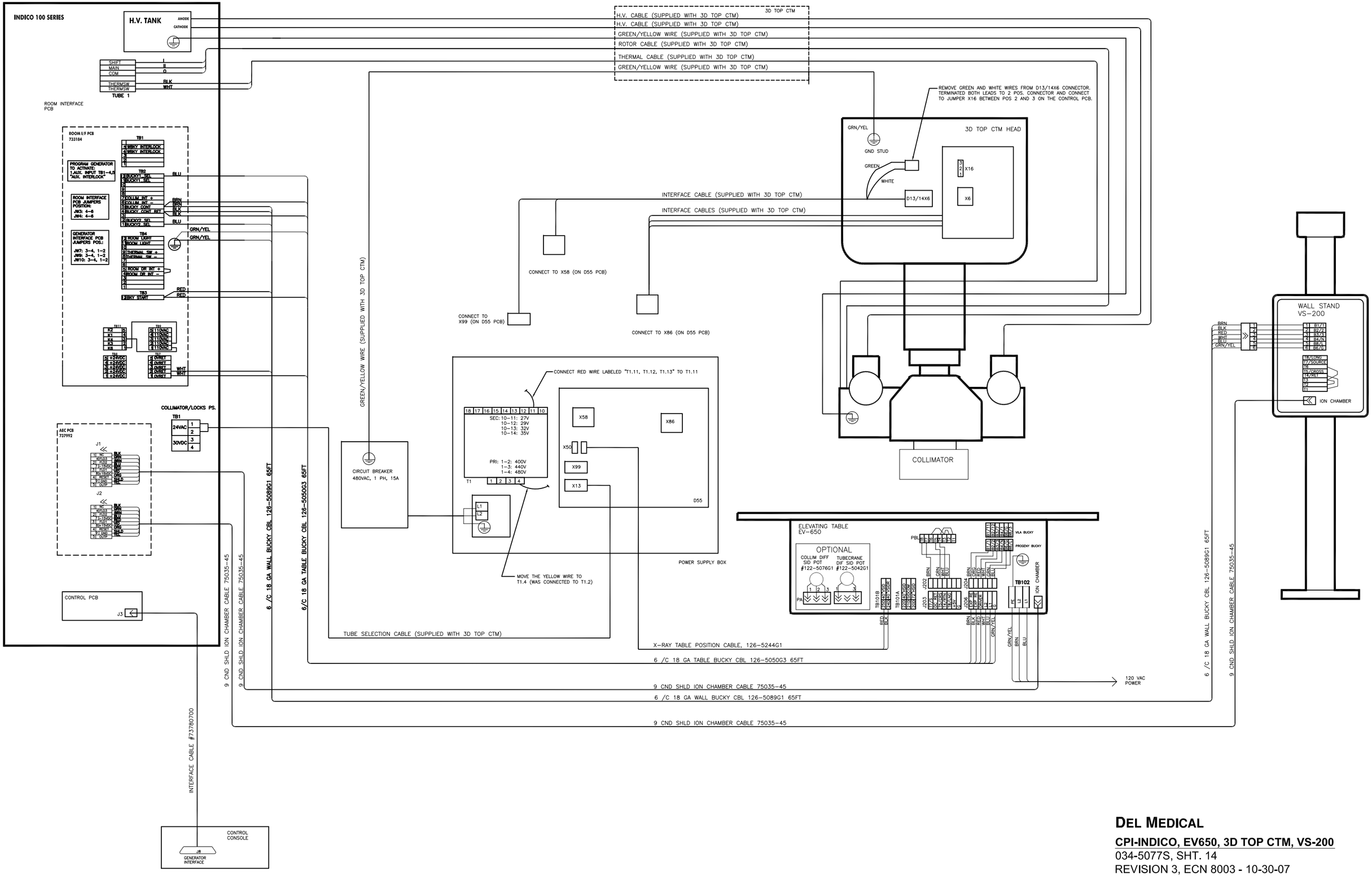
CONTROL CONSOLE
J8
GENERATOR INTERFACE

2/C 22 GA CABLE, 126-5206G1
3 ND SID CABLE, 126-5247G1, 60 FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
22 GA CASSETTE PRESENCE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
22 GA CASSETTE SENSE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45

120 VAC POWER
120/240 VAC POWER
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
4/C 22 GA CASSETTE PRESENCE CABLE 70-06525 40FT
9 CND SHLD ION CHAMBER CABLE 75035-45

INTERCONN., CPI - CMP, EV650, VS200, LIN II - REV. 2
034-5076S - SHT. 9

DEL MEDICAL
ROSELLE, ILLINOIS

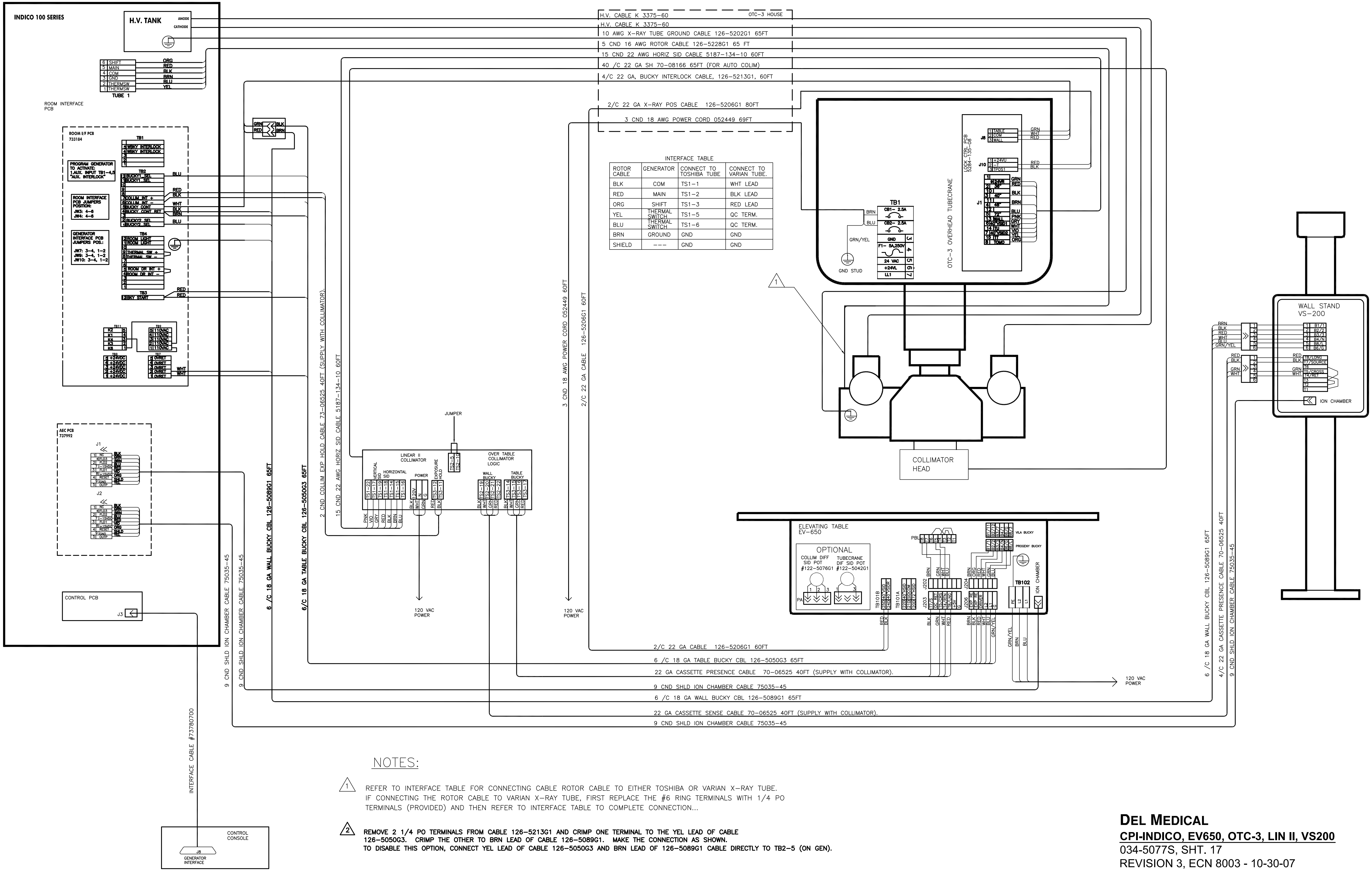


DEL MEDICAL

CPI-INDICO, EV650, 3D TOP CTM, VS-200

034-5077S, SHT. 14

REVISION 3, ECN 8003 - 10-30-07



INDICO 100 SERIES
H.V. TANK
ANODE
CATHODE
TUBE 1
ROOM INTERFACE PCB
ROOM I/F PCB 733184
PROGRAM GENERATOR TO ACTIVATE: 1.AUX. INPUT TB1-4,5 "AUX. INTERLOCK"
ROOM INTERFACE PCB JUMPERS POSITION: JW3: 4-5 JW4: 4-5
GENERATOR INTERFACE PCB JUMPERS POS.: JW7: 3-4, 1-2 JW9: 3-4, 1-2 JW10: 3-4, 1-2
AEC PCB 737992
CONTROL PCB
H.V. CABLE K 3375-60
OTC-3 HOUSE
H.V. CABLE K 3375-60
10 AWG X-RAY TUBE GROUND CABLE 126-5202G1 65FT
5 CND 16 AWG ROTOR CABLE 126-5228G1 65 FT
15 CND 22 AWG HORIZ SID CABLE 5187-134-10 60FT
40 /C 22 GA SH 70-08166 65FT (FOR AUTO COLIM)
4/C 22 GA, BUCKY INTERLOCK CABLE, 126-5213G1, 60FT
2/C 22 GA X-RAY POS CABLE 126-5206G1 80FT
3 CND 18 AWG POWER CORD 052449 69FT
OTC-3 OVERHEAD TUBECRANE
LOCK CTRL PCB 5284-135-08
TB1
GND STUD
COLLIMATOR HEAD
WALL STAND VS-200
ION CHAMBER
LINEAR II COLLIMATOR
VERTICAL SID
HORIZONTAL SID
POWER
EXPOSURE HOLD
JUMPER
OVER TABLE COLLIMATOR LOGIC
WALL BUCKY
TABLE BUCKY
120 VAC POWER
ELEVATING TABLE EV-650
OPTIONAL
COLLIM DIFF SID POT #122-5076G1
TUBECRANE DIF SID POT #122-5042G1
VILA BUCKY
PROGENY BUCKY
TB102
2 CND COLLIM EXP HOLD CABLE 73-06525 40FT (SUPPLY WITH COLLIMATOR)
15 CND 22 AWG HORIZ SID CABLE 5187-134-10 60FT
6/C 18 GA WALL BUCKY CBL 126-5089G1 65FT
6/C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
9 CND SHLD ION CHAMBER CABLE 75035-45
3 CND 18 AWG POWER CORD 052449 60FT
2/C 22 GA CABLE 126-5206G1 60FT
2/C 22 GA CABLE 126-5206G1 60FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
22 GA CASSETTE PRESENCE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
22 GA CASSETTE SENSE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45
4/C 22 GA CASSETTE PRESENCE CABLE 70-06525 40FT
INTERFACE CABLE #73780700
CONTROL CONSOLE
GENERATOR INTERFACE

INTERFACE TABLE

ROTOR CABLE	GENERATOR	CONNECT TO TOSHIBA TUBE	CONNECT TO VARIAN TUBE.
BLK	COM	TS1-1	WHT LEAD
RED	MAIN	TS1-2	BLK LEAD
ORG	SHIFT	TS1-3	RED LEAD
YEL	THERMAL SWITCH	TS1-5	QC TERM.
BLU	THERMAL SWITCH	TS1-6	QC TERM.
BRN	GROUND	GND	GND
SHIELD	---	GND	GND

NOTES:

1. REFER TO INTERFACE TABLE FOR CONNECTING CABLE ROTOR CABLE TO EITHER TOSHIBA OR VARIAN X-RAY TUBE. IF CONNECTING THE ROTOR CABLE TO VARIAN X-RAY TUBE, FIRST REPLACE THE #6 RING TERMINALS WITH 1/4 PO TERMINALS (PROVIDED) AND THEN REFER TO INTERFACE TABLE TO COMPLETE CONNECTION...

2. REMOVE 2 1/4 PO TERMINALS FROM CABLE 126-5213G1 AND CRIMP ONE TERMINAL TO THE YEL LEAD OF CABLE 126-5050G3. CRIMP THE OTHER TO BRN LEAD OF CABLE 126-5089G1. MAKE THE CONNECTION AS SHOWN. TO DISABLE THIS OPTION, CONNECT YEL LEAD OF CABLE 126-5050G3 AND BRN LEAD OF 126-5089G1 CABLE DIRECTLY TO TB2-5 (ON GEN).

DEL MEDICAL

CPI-INDICO, EV650, OTC-3, LIN II, VS200

034-5077S, SHT. 17

REVISION 3, ECN 8003 - 10-30-07

CPI CMP 200 SERIES

H.V. TANK — ANODE, CATHODE

H.V. CABLE K 3375-60
H.V. CABLE K 3375-60
10 AWG X-RAY TUBE GROUND CABLE 126-5202G1 65FT
5 CND 16 AWG ROTOR CABLE 126-5228G1 65 FT

40 /C 22 GA SH 70-08166 65FT (FOR AUTO COLIM)

2 CND, 22GA, SID MONITOR CABLE (SUPPLIED W/COL).

ROOM INTERFACE PCB

J7
6	SHIFT
5	MAIN
4	COM
3	GND
2	THERMSW
1	THERMSW

J2
10	BKY1 RET	WHT
9	BKY1 GND	BLU
8	BKY1 OUT	RED
7	BKY1 STRT	BRN
6	BKY1 RDY	BLK
5	BKY1 RDY	
4	INT1	
3	INT1R	
2	INT2	
1	INT2R	GRN/YEL
		GRN/YEL

J4
10	DOOR INT	
9	DOOR INT	
8		
7		
6	BKY2 RDY	BRN
5	BKY2 RDY	BLK
4	BKY2 RET	WHT
3	BKY2 GND	
2	BKY2 OUT	BLU
1	BKY2 STRT	RED

NOTE: PLEASE SEE PAGE 3C-5 OF CMP 200 MANUAL ABOUT BUCKY RUN ON W/O COMMAND.

AEC PCB 737992

J1
1	NC	BLK
2	4(H)03	GRN
3	4(H)02	BRN
4	4(H)01	BLU
5	4(H)00	ORG
6	4(H)GND	SHLD
7	4(H)GND	YEL
8	4(H)TP	WHT
9	4(H)GND	RED
10	4(H)OUTP	

J2
1	NC	BLK
2	4(H)03	GRN
3	4(H)02	BRN
4	4(H)01	BLU
5	4(H)00	ORG
6	4(H)GND	SHLD
7	4(H)GND	YEL
8	4(H)TP	WHT
9	4(H)GND	RED
10	4(H)OUTP	

CONTROL PCB — J3

INTERFACE CABLE #73780700

CONTROL CONSOLE — J8 GENERATOR INTERFACE

9 CND SHLD ION CHAMBER CABLE 75035-45
9 CND SHLD ION CHAMBER CABLE 75035-45
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
2 CND COLLIM EXP HOLD CABLE 73-06525 40FT (SUPPLY WITH COLLIMATOR).

JUMPER

LINEAR IV COLLIMATOR
- VERTICAL SID: TS5-18, TS5-16
- HORIZONTAL SID: TS5-17, TS5-19, TS5-20
- EXPOSURE HOLD: TS6-11, TS6-1, TS6-4
- POWER: 120V, N, G
- TS4-2, TS4-3, TS4-4, TS4-5

OVER TABLE COLLIMATOR LOGIC
- TS4-10, TS4-12

WALL BUCKY: TS4-6, TS4-7, TS4-8, TS4-9
TABLE BUCKY: TS4-12, TS4-14, TS4-15, TS4-16

120 VAC POWER

FMTS
- SID MONITOR
- TS1

COLLIMATOR HEAD

9 CND 18 AWG CABLE (SUPPLIED WITH FMTS)
3 CND 16 AWG POWER CORD (SUPPLIED WITH FMTS)

ELEVATING TABLE EV-650

OPTIONAL
- COLLIM DIFF SID POT #122-5076G1
- TUBECRANE DIF SID POT #122-5042G1

PA
TB101A
TB101B
PBK
J202
J203
J204
J205
VLA BUCKY
PROGENY BUCKY
J106
TB102
ION CHAMBER

3/C 24GA, SID CABLE, 126-5222G1, 60FT
3 ND SID CABLE, 126-5247G1, 60 FT
6 /C 18 GA TABLE BUCKY CBL 126-5050G3 65FT
22 GA CASSETTE PRESENCE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45
6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
22 GA CASSETTE SENSE CABLE 70-06525 40FT (SUPPLY WITH COLLIMATOR).
9 CND SHLD ION CHAMBER CABLE 75035-45

120 VAC POWER

120/240 VAC POWER

6 /C 18 GA WALL BUCKY CBL 126-5089G1 65FT
4/C 22 GA CASSETTE PRESENCE CABLE 70-06525 40FT
9 CND SHLD ION CHAMBER CABLE 75035-45

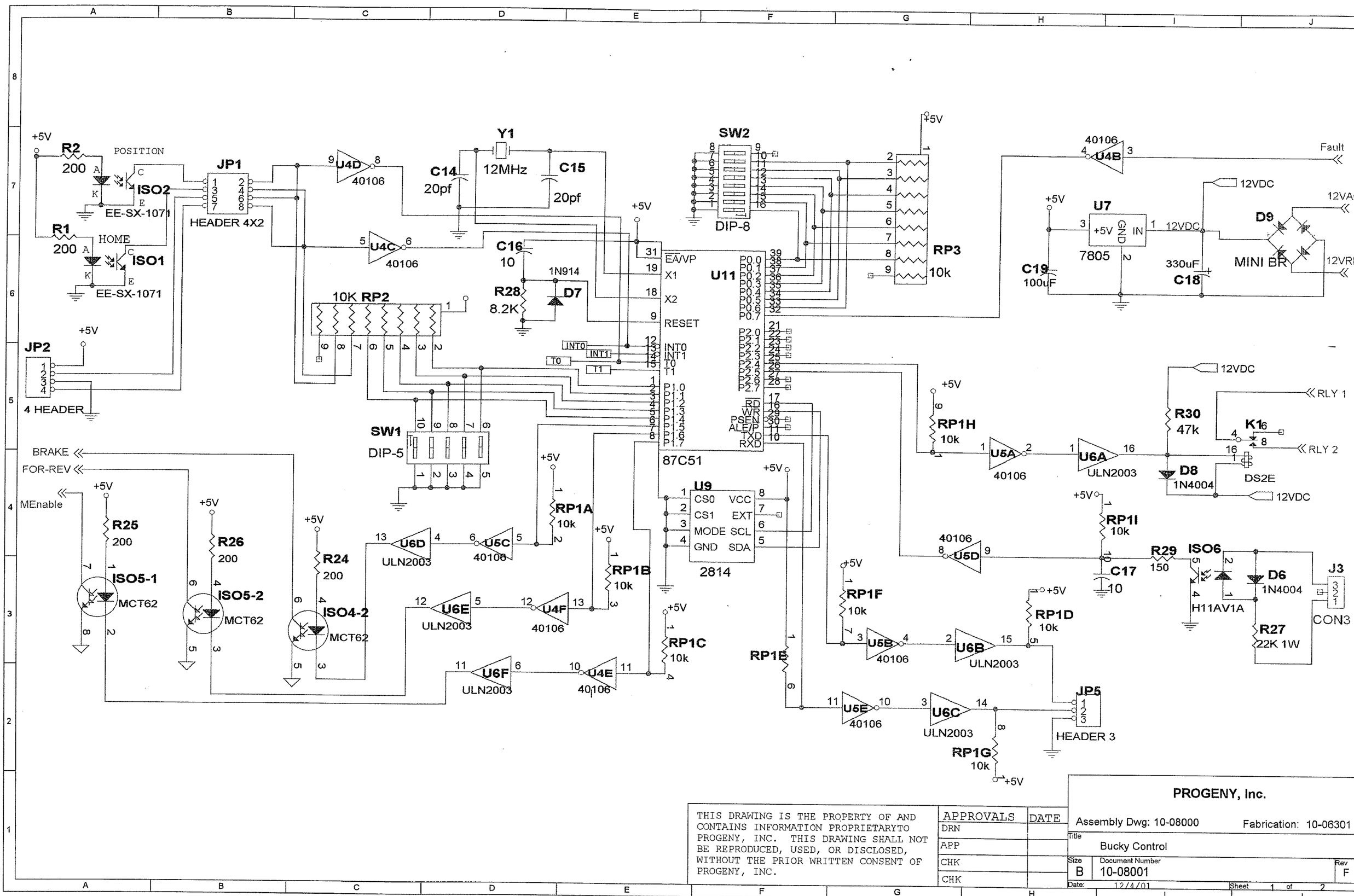
WALL STAND VS-200
- B1 T1
- B2 T2
- B3 T3
- B4 T4
- B5 T5
- B6 T6
- T8/LONG
- T7/SOURCE
- T6
- T5/CROSS
- T4/RET
- T3
- T2
- T1
- ION CHAMBER

DEL MEDICAL

CPI-CMP, EV650, FMTS, VS-200, LIN IV

034-5077S, SHT. 19

REVISION 2, ECN 8003 - 10-30-07



APPROVALS	DATE
DRN	
APP	
CHK	
CHK	

PROGENY, Inc.

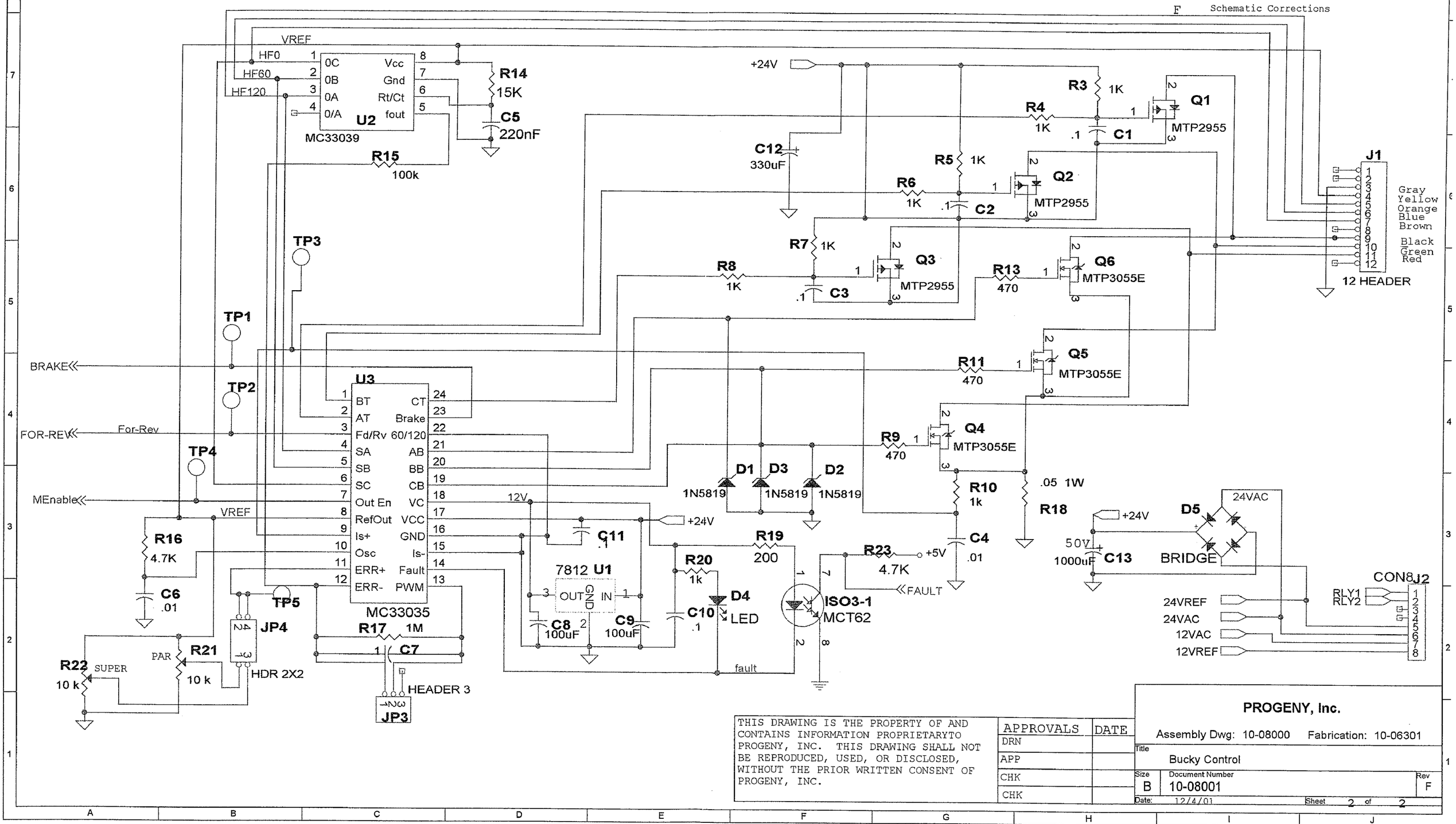
Assembly Dwg: 10-08000 Fabrication: 10-06301

Title: Bucky Control

Size: B Document Number: 10-08001 Rev: F

Date: 12/4/01 Sheet 1 of 2

REVISIONS			
REV	DESCRIPTION	DATE	APP'D
B	Production Release		
C	BOM Change		
D	BOM Change		
E	Remove R12		
F	Schematic Corrections		



APPROVALS	DATE
DRN	
APP	
CHK	
CHK	

PROGENY, Inc.

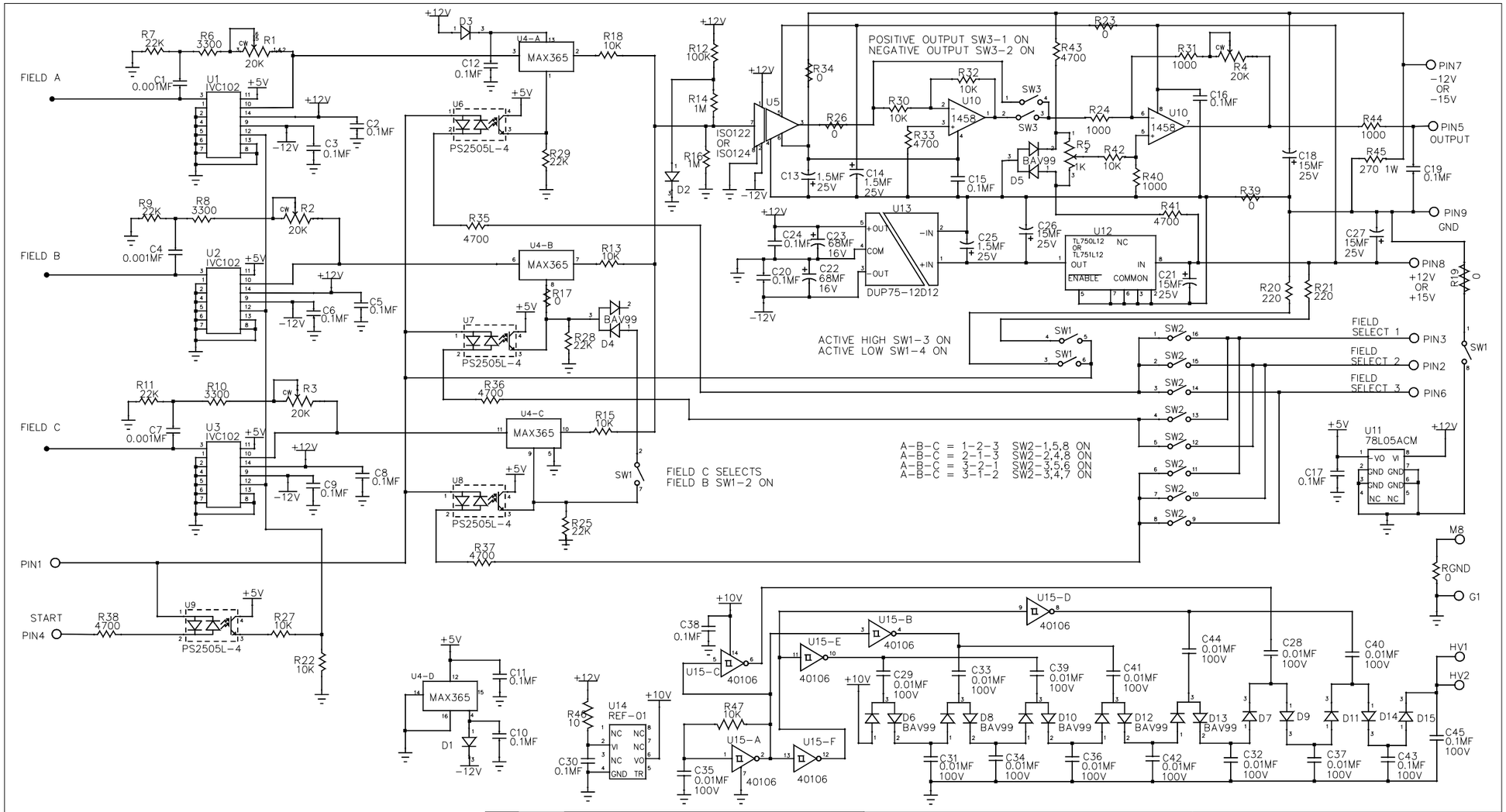
Assembly Dwg: 10-08000 Fabrication: 10-06301

Title: Bucky Control

Size: B | Document Number: 10-08001 | Rev: F

Date: 12/4/01 | Sheet 2 of 2

ORIGINAL



NOTES:
1. * MANUFACTURER MAY USE ALTERNATE COMPONENTS UNLESS NOTED OTHERWISE.
2. ALL SWITCHES OFF UNLESS OTHERWISE NOTED.
3. U6,U7,U8, AND U9 MAY BE (4) SINGLE OR (1) QUAD DEVICE.

REV.	ECN NO.	DATE	REVISIONS	BY
02	2261	10MAR05	COPPER DATE 03MAR05	BRP
			ADDED R5, R41, R42, R43 & D5	
01	2238	17DEC04	COPPER DATE 13DEC04	BRP
			ADD RGND, R37, R38, D18 & U15	
00	2045	01MAY02	SAME AS 61154A EXCEPT:	BRP
			R23=1800, R34=1500, R35=1000	

DO NOT SCALE

UNLESS SPECIFIED OTHERWISE; DIMENSIONS ARE IN INCHES.
FRACTIONS ±1/64 DECIMALS ±0.010 ANGLES ±1°

SCALE	DRAWN BY	DATE
NONE	TRW	01MAY02
MATERIAL: NONE	CHECKED BY	
FINISH: NONE	APPROVED BY	

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ADVANCED INSTRUMENT DEVELOPMENT, INC.
1011 N. 25TH AVE.
MELROSE PARK, IL. 60160
X-RAY

3-FIELD ISOLATED PRE-AMP CALCULATED GAIN RANGE 1.0 TO 21 TOP-TURN POTS

USED ON	NEXT ASSY.	DRAWING NO.	REV.
ICX SERIES		61154A	02

Illustrated Parts List

9

9.1 Ordering Parts

9.1.1 To Order

For your convenience, replacement parts and accessories can be ordered from Del Medical Inc. by home 24 hours a day. Please have the following information available to ensure quick, easy, and accurate service.

- Your name and telephone number
- Your P.O. (Purchase Order) number
- Your preferred method of delivery
- The part number and quantity of all items required
- If you need additional assistance, please call Del Medical Inc. at 1-800-800-6006 and speak to one our Customer Service Representatives. Telephone hours are 8:00 a.m. to 5:00 p.m., Monday through Friday (Central Standard or Daylight Time).

9.1.2 To Order by Fax

Fax your order to Del Medical Inc. at 1-800-288-7011. Fax orders can be sent 24 hours a day, 7 days a week.

To fax an order, the following information is needed:

- Account Number
- Billing Address
- Shipping Address
- Phone Number and Email Address
- Your preferred method of delivery
- The part number and quantity of all items required

Note: Refer to the Bucky manual for information on Bucky parts. Refer to the digital receptor documentation for information on digital receptor parts.

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9.2 How to Use This Parts List

9.2.1 General Part Numbers

This chapter contains all part numbers necessary to order wallstand replacement parts and assemblies.

This illustrated parts breakdown is presented in disassembled order. Detail parts are shown below their respective upper level assemblies whenever possible.

The parts lists follow the illustration for a particular assembly and represent components of that assembly. The number listed in the quantity column is the number of the specific part required to complete the assembly and may not reflect the quantity needed for the entire system.

The lists are divided into four columns. The item/index numbers refer to the identification number located on the drawing. The part number is the Del Medical Inc. part number, used to identify the part for ordering. The part description column lists each part name, and the quantity column lists the quantity of that part used in that particular assembly.

Illustrations are shown before the parts list for each assembly. Some assembly illustrations require more than one page.

9.3 Commonly Ordered Parts

Part Description	Part number
VS300 Wallstand Installation, Operation & Maintenance Manual	8000-VS300NM
Counterweight Cable	403-5003P1
PBL Connector Receptacle	1417-0602
Wallstand Cable Assembly (Internal)	126-5088G1
Wallstand Cable Assembly (External)	126-5089G1
Floor Mount Kit Installation Instructions	8000-VS300-FMK
Auto Tracking Kit Installation Instructions	8000-VS300-ATK
PCB Timer	650-5145P1
Lock Magnet	630-5002P1
Switch	632-5035P1
LED	623-5018P1
Front Panel	5500-0494
Del Medical Logo	408-5278P1
Cover, Floor Plate	230-5251P1/ 203-5251P2

Table 9-1: Commonly Ordered Parts

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9.4 VS-300 Wallstand Assembly (110-5124 G1, G3)

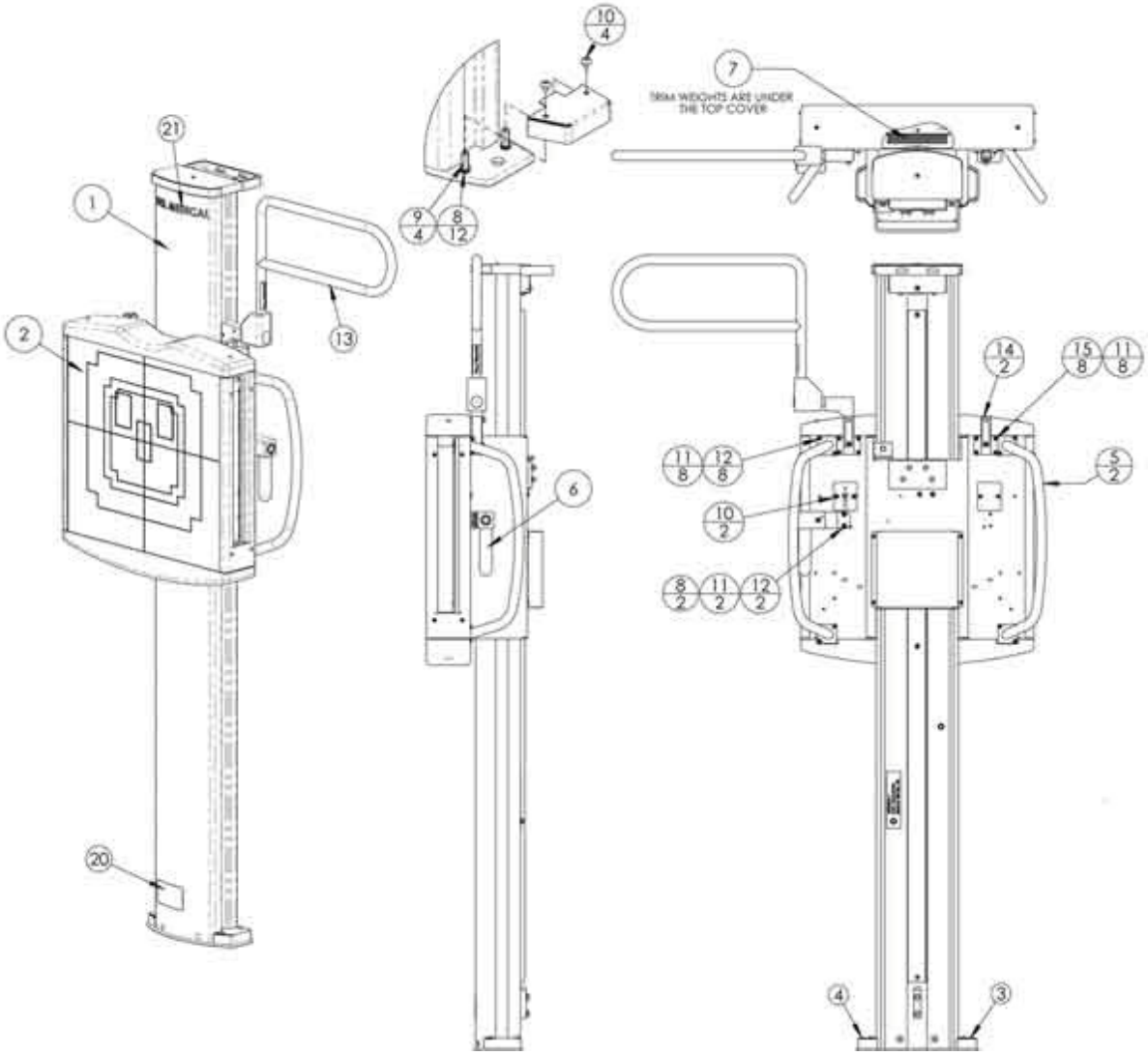

Figure 9-1. VS300 Wallstand Assembly

Fig ref.	Part number	Description	Qty
1	112-5547G1	COLUMN ASSEMBLY	1
2	112-5548G1	LOOSE PARTS KIT,DEL MED	1
3	203-5251P1	COVER, FLOOR PLATE	1
4	203-5251P2	COVER, FLOOR PLATE	1
5	114-5087G1	WELDMENT, GRIP HANDLE	2
6	112-5550G1	HANDLE, LOCK RELEASE	1
7	201-5009P1	TRIM WEIGHT	10
8	785-11-19000011	WASHER,FLAT #10 NARROW	8
9	642-0018P17	STANDOFF M-F,10-32X7/8,ZINC PLT	4
10	100012P3	SCREW,TRIM 10-32X3/8	6
11	786-50-19000011	WASHER,SPLITLK-STD #10	18
12	755-40-19105011	SCREW,SHCS 10-32 X 1/2	10
13	112-5502G1	OVERHEAD PATIENT GRIP	1
14	112-5075G1	HANDGRIP MOUNT ASM	2
15	422-0013P29	SCREW, #10-32X5/8” LG.HSBHC	8
16	427-5004P1	PALLET, SFT 2-WAY	1
17	427-5005P1	SHRINK WRAP PLASTIC FILM	1
18	427-5006P3	1/2”X12” BUBBLE WRAP	1
19	427-5001P1	CARTON, VS300 SHIPPING	1
20	408-5277P1	LABEL, SERIAL/RATING, VS300	1
21	408-5278P1	LABEL, DEL MEDICAL LOGO	1

Table 9-2: VS300 Wallstand

9.5 VS300 Wallstand Assembly (110-5124 G7, G8)

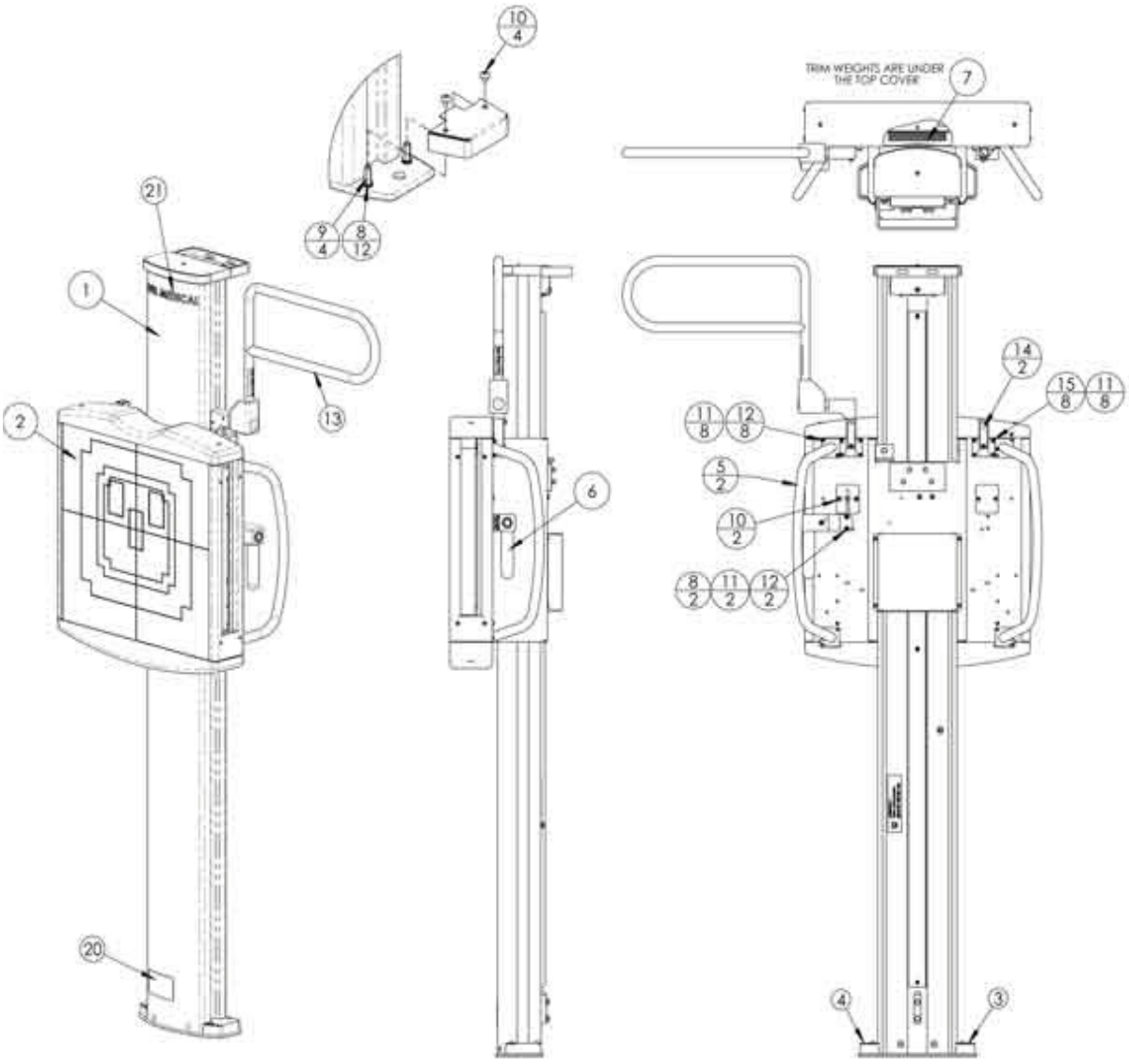

Figure 9-2. VS300 Wallstand Assembly

Fig ref.	Part number	Description	Qty
1	112-5547G1	COLUMN ASSEMBLY	1
2	112-5548G1	LOOSE PARTS KIT,DEL MED	1
3	203-5251P1	COVER, FLOOR PLATE	1
4	203-5251P2	COVER, FLOOR PLATE	1
5	114-5087G1	WELDMENT, GRIP HANDLE	2
6	112-5550G1	HANDLE, LOCK RELEASE	1
7	201-5009P1	TRIM WEIGHT	10
8	785-11-19000011	WASHER,FLAT #10 NARROW	8
9	642-0018P17	STANDOFF M-F,10-32X7/8,ZINC PLT	4
10	100012P3	SCREW,TRIM 10-32X3/8	6
11	786-50-19000011	WASHER,SPLITLK-STD #10	18
12	755-40-19105011	SCREW,SHCS 10-32 X 1/2	10
13	112-5502G1	OVERHEAD PATIENT GRIP	1
14	112-5075G1	HANDGRIP MOUNT ASM	2
15	422-0013P29	SCREW, #10-32X5/8” LG.HSBHC	8
16	427-5004P1	PALLET, SFT 2-WAY	1
17	427-5005P1	SHRINK WRAP PLASTIC FILM	1
18	427-5006P3	1/2”X12” BUBBLE WRAP	1
19	427-5001P1	CARTON, VS300 SHIPPING	1
20	408-5277P1	LABEL, SERIAL/RATING, VS300	1
21	408-5278P1	LABEL, DEL MEDICAL LOGO	1

9.6 Column Assembly (110-5547G1, G3)

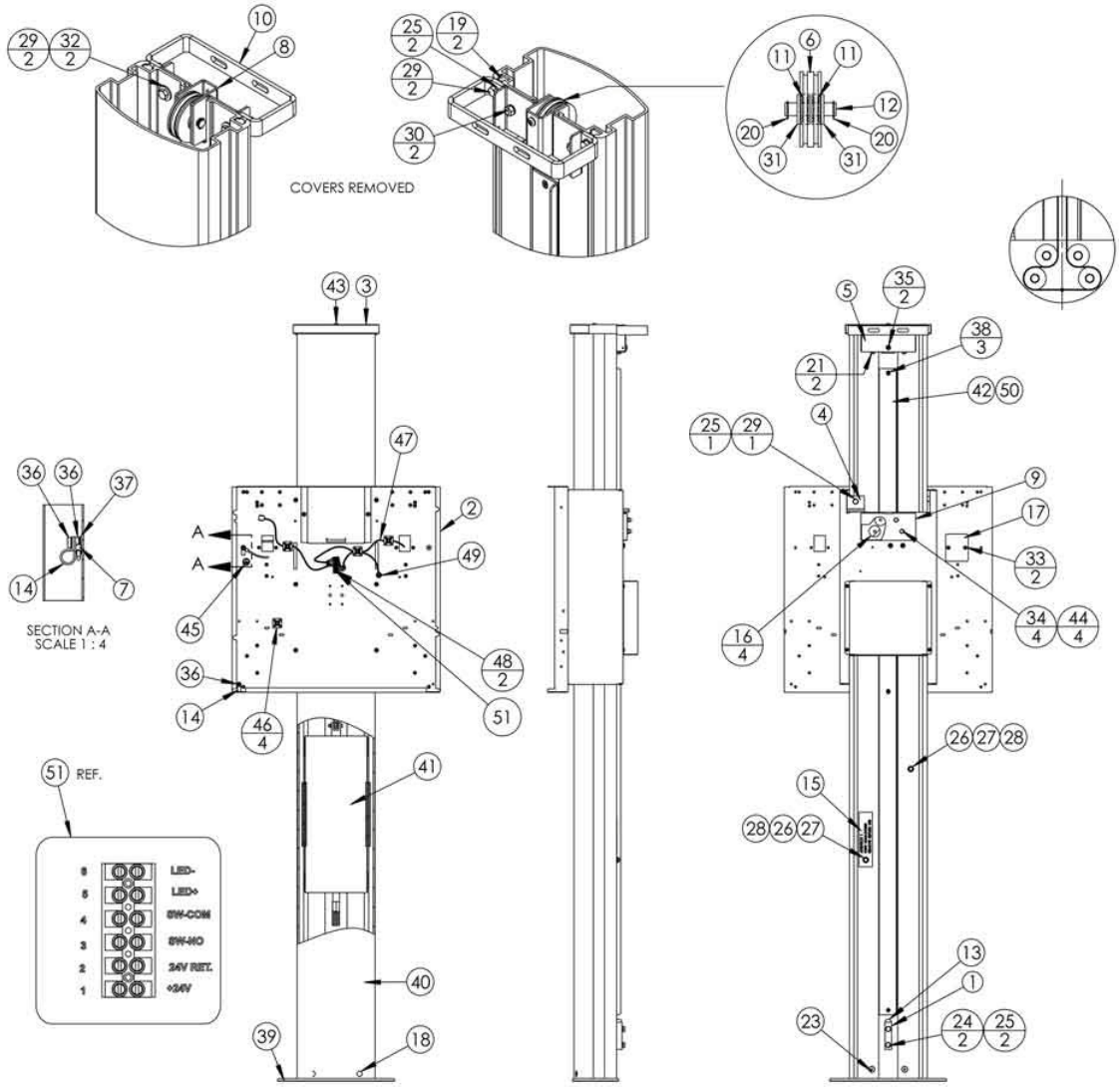

Figure 9-3. Column Assembly

Fig ref.	Part number	Description	Qty
1	234-5001P1	BAR, VERT CRG STOP	1
2	112-5544G1	ASSEMBLY, VERTICAL CAR-RIAGE	1
3	203-5253P1	COVER, COLUMN TOP	1
4	112-0756G1	COLUMN SHIP. BRKT ASM	1
5	6504310	TOP COVER (MEDICAL WHITE)	1
6	6202010	DOUBLE DIFF. WHEEL	1
7	126-5088G1	INPUT CABLE ASM	1
8	301-5005P1	SUPPORT, PULLEY MTG	1
9	203-5006P1	COVER, CABLE ANCHOR	1
10	236-5012P1	BRACKET, WALL MOUNT	1
11	400-0021P1	BALL BEARING - 12 x 28 x 8mm	2
12	6100310	AXLE, COLUMN	1
13	401-0005P1	BUMPER	1
14	46-220360P6	CABLE CLAMP,7/16 DIA	2
15	031-5001P1	SHIPPING TAG	1
16	240-5005P1	SPACER, COVER	4
17	303-0011P2	CABLE CLAMP, MED. WHT.	1
18	407-5047P2	PLUG, SNAP-IN	2
19	422-5003P1	"T" SLOT NUT, 5/16-18 THRU	3
20	731-10-01200000	RET RING,EXT 12MM DIA	2
21	46-220183P1	BUMPER, SQUARE (BLACK)	2
22	642-5020P3	CABLE TIE,14W X 5.6L,40#	1
23	756-40-31210010	SCREW,FSHMS 5/16-18 X 1	2
24	751-00-31210011	SCREW,HHMS 5/16-18 X 1"	2
25	786-50-31000011	WASHER,SPLITLK-STD 5/16	5
26	785-11-25000011	WASHER,FLAT 1/4 NARROW	2
27	786-50-25000011	WASHER,SPLITLK-STD 1/4	2
28	751-00-25207511	SCREW,HHMS 1/4-20 X 3/4	2
29	751-00-31207511	SCREW,HHMS 5/16-18 X 3/4	5

Table 9-3: Column Assembly

Fig ref.	Part number	Description	Qty
30	784-12-31200011	NUT,HEX KEPS 5/16-18	2
31	6800199	THRUST WASHER	2
32	785-13-31000011	WASHER, FLAT 5/16 WIDE	2
33	753-40-19103810	SCREW,SHCS 10-32 X 3/8	2
34	784-50-25200016	NUT,ACORN HI 1/4-20	4
35	100012P3	SCREW,TRIM 10-32X3/8	2
36	784-12-19100011	NUT,HEX KEPS 10-32	3
37	785-11-19000011	WASHER,FLAT #10 NARROW	1
38	763-20-19103111	SCREW,PFHMSUC,10-32 X 5/16	3
39	114-5201G1	COLUMN BASE (MEDICAL WHITE)	1
40	301-5014P1	COLUMN, WALLSTAND	1
41	112-5016G3	COUNTERWEIGHT ASM	1
42	201-5187P1	BRAKE STRIP, VERT. LOCK	1
43	760-20-19103811	SCREW,PPNHMS 10-32 X 3/8	1
44	786-20-25000011	WASHER, INTERNAL TOOTH, #1/4	4
45	408-5039P1	LABEL, EARTH GROUND	1
46	4455-0995	1” SQ. BASE CABLE TIE AMOUNT	4
47	126-5333G1	CABLE, BUCKY - SWITCH TERMINATION	1
48	753-40-11203811	SCREW, SCHS 4-40 X 3/8	2
49	4455-0962	SNAP BUSHING, .500	1
50	412-5014P1	TAPE, 1” VHB DOUBLE SIDED-4930	11.8 ft.
51	122-5121G1	ASSY, BUCKY TERMINATION - VS300	1

Table 9-3: Column Assembly

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9.7 Column Assembly (110-5547G4)

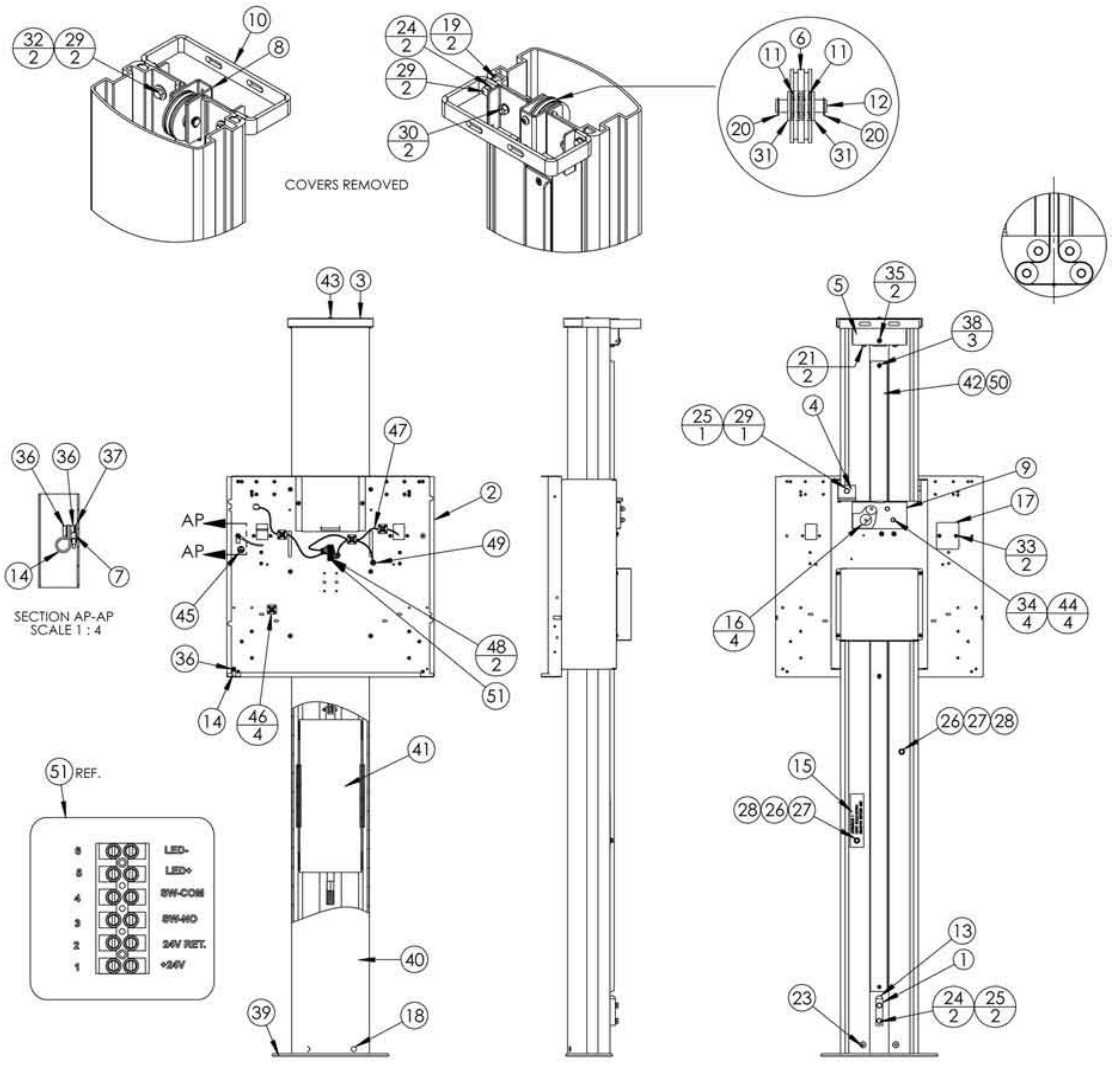

Figure 9-4. Column Assembly G4

Fig ref.	Part number	Description	Qty
1	234-5001P1	BAR, VERT CRG STOP	1
2	112-5544G1	ASSEMBLY, VERTICAL CAR-RIAGE	1
3	203-5253P1	COVER, COLUMN TOP	1
4	112-0756G1	COLUMN SHIP. BRKT ASM	1
5	6504310	TOP COVER (MEDICAL WHITE)	1
6	6202010	DOUBLE DIFF. WHEEL	1
7	126-5088G1	INPUT CABLE ASM	1
8	301-5005P1	SUPPORT, PULLEY MTG	1
9	203-5006P1	COVER, CABLE ANCHOR	1
10	236-5012P1	BRACKET, WALL MOUNT	1
11	400-0021P1	BALL BEARING - 12 x 28 x 8mm	2
12	6100310	AXLE, COLUMN	1
13	401-0005P1	BUMPER	1
14	46-220360P6	CABLE CLAMP,7/16 DIA	2
15	031-5001P1	SHIPPING TAG	1
16	240-5005P1	SPACER, COVER	4
17	303-0011P2	CABLE CLAMP, MED. WHT.	1
18	407-5047P2	PLUG, SNAP-IN	2
19	422-5003P1	"T" SLOT NUT, 5/16-18 THRU	3
20	731-10-01200000	RET RING,EXT 12MM DIA	2
21	46-220183P1	BUMPER, SQUARE (BLACK)	2
22	642-5020P3	CABLE TIE,14W X 5.6L,40#	1
23	756-40-31210010	SCREW,FSHMS 5/16-18 X 1	2
24	751-00-31210011	SCREW,HHMS 5/16-18 X 1"	2
25	786-50-31000011	WASHER,SPLITLK-STD 5/16	5
26	785-11-25000011	WASHER,FLAT 1/4 NARROW	2
27	786-50-25000011	WASHER,SPLITLK-STD 1/4	2
28	751-00-25207511	SCREW,HHMS 1/4-20 X 3/4	2

Fig ref.	Part number	Description	Qty
29	751-00-31207511	SCREW,HHMS 5/16-18 X 3/4	5
30	784-12-31200011	NUT,HEX KEPS 5/16-18	2
31	6800199	THRUST WASHER	2
32	785-13-31000011	WASHER, FLAT 5/16 WIDE	2
33	753-40-19103810	SCREW,SHCS 10-32 X 3/8	2
34	784-50-25200016	NUT,ACORN HI 1/4-20	4
35	100012P3	SCREW,TRIM 10-32X3/8	2
36	784-12-19100011	NUT,HEX KEPS 10-32	3
37	785-11-19000011	WASHER,FLAT #10 NARROW	1
38	763-20-19103111	SCREW,PFHMSUC,10-32 X 5/16	3
39	114-5201G1	COLUMN BASE (MEDICAL WHITE)	1
40	301-5014P1	COLUMN, WALLSTAND	1
41	112-5016G3	COUNTERWEIGHT ASM	1
42	201-5187P1	BRAKE STRIP, VERT. LOCK	1
43	760-20-19103811	SCREW,PPNHMS 10-32 X 3/8	1
44	786-20-25000011	WASHER, INTERNAL TOOTH, #1/4	4
45	408-5039P1	LABEL, EARTH GROUND	1
46	4455-0995	1” SQ. BASE CABLE TIE AMOUNT	4
47	126-5333G1	CABLE, BUCKY - SWITCH TERMINATION	1
48	753-40-11203811	SCREW, SCHS 4-40 X 3/8	2
49	4455-0962	SNAP BUSHING, .500	1
50	412-5014P1	TAPE, 1” VHB DOUBLE SIDED-4930	11.8 ft.
51	122-5121G1	ASSY, BUCKY TERMINATION - VS300	1

Table 9-4: Column Assembly G4

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9.8 Column Assembly (110-5547G5)

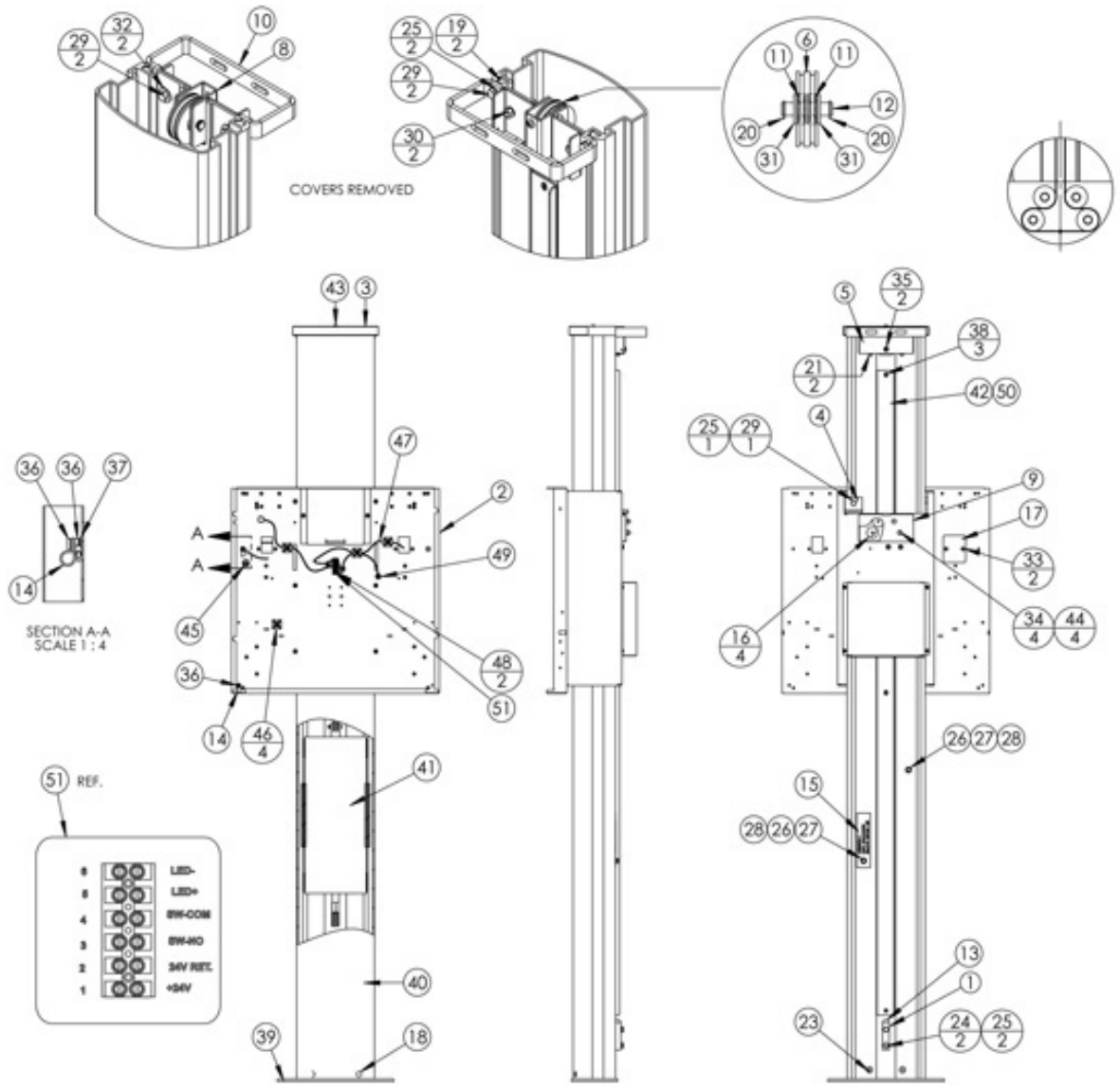

Figure 9-5. Column Assembly G5

Fig ref.	Part number	Description	Qty
1	234-5001P1	BAR, VERT CRG STOP	1
2	112-5544G1	ASSEMBLY, VERTICAL CAR-RIAGE	1
3	203-5253P1	COVER, COLUMN TOP	1
4	112-0756G1	COLUMN SHIP. BRKT ASM	1
5	6504310	TOP COVER (MEDICAL WHITE)	1
6	6202010	DOUBLE DIFF. WHEEL	1
7	126-5088G1	INPUT CABLE ASM	1
8	301-5005P1	SUPPORT, PULLEY MTG	1
9	203-5006P1	COVER, CABLE ANCHOR	1
10	236-5012P1	BRACKET, WALL MOUNT	1
11	400-0021P1	BALL BEARING - 12 x 28 x 8mm	2
12	6100310	AXLE, COLUMN	1
13	401-0005P1	BUMPER	1
14	46-220360P6	CABLE CLAMP,7/16 DIA	2
15	031-5001P1	SHIPPING TAG	1
16	240-5005P1	SPACER, COVER	4
17	303-0011P2	CABLE CLAMP	1
18	407-5047P2	PLUG, SNAP-IN	2
19	422-5003P1	"T" SLOT NUT, 5/16-18 THRU	3
20	731-10-01200000	RET RING,EXT 12MM DIA	2
21	46-220183P1	BUMPER, SQUARE (BLACK)	2
22	642-5020P3	CABLE TIE,14W X 5.6L,40#	1
23	756-40-31210010	SCREW,FSHMS 5/16-18 X 1	2
24	751-00-31210011	SCREW,HHMS 5/16-18 X 1"	2
25	786-50-31000011	WASHER,SPLITLK-STD 5/16	5
26	785-11-25000011	WASHER,FLAT 1/4 NARROW	2
27	786-50-25000011	WASHER,SPLITLK-STD 1/4	2
28	751-00-25207511	SCREW,HHMS 1/4-20 X 3/4	2
29	751-00-31207511	SCREW,HHMS 5/16-18 X 3/4	5

Fig ref.	Part number	Description	Qty
30	784-12-31200011	NUT,HEX KEPS 5/16-18	2
31	6800199	THRUST WASHER	2
32	785-13-31000011	WASHER, FLAT 5/16 WIDE	2
33	753-40-19103810	SCREW,SHCS 10-32 X 3/8	2
34	784-50-25200016	NUT,ACORN HI 1/4-20	4
35	100012P3	SCREW, TRIM 10-32X3/8	2
36	784-12-19100011	NUT,HEX KEPS 10-32	3
37	785-11-19000011	WASHER,FLAT #10 NARROW	1
38	763-20-19103111	SCREW,PFHMSUC,10-32 X 5/16	3
39	114-5201G1	COLUMN BASE (MEDICAL WHITE)	1
40	301-5014P1	COLUMN, WALLSTAND	1
41	112-5016G3	COUNTERWEIGHT ASM	1
42	201-5187P1	BRAKE STRIP, VERT. LOCK	1
43	760-20-19103811	SCREW,PPNHMS 10-32 X 3/8	1
44	786-20-25000011	WASHER, INTERNAL TOOTH, #1/4	4
45	408-5039P1	LABEL, EARTH GROUND	1
46	4455-0995	1” SQ. BASE CABLE TIE AMOUNT	4
47	126-5333G1	CABLE, BUCKY - SWITCH TERMINATION	1
48	753-40-11203811	SCREW, SCHS 4-40 X 3/8	2
49	4455-0962	SNAP BUSHING, .500	1
50	412-5014P1	TAPE, 1” VHB DOUBLE SIDED-4930	11.8 ft.
51	122-5121G1	ASSY, BUCKY TERMINATION - VS300	1

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9.9 Lock Release Handle Assembly (112-5550G1)

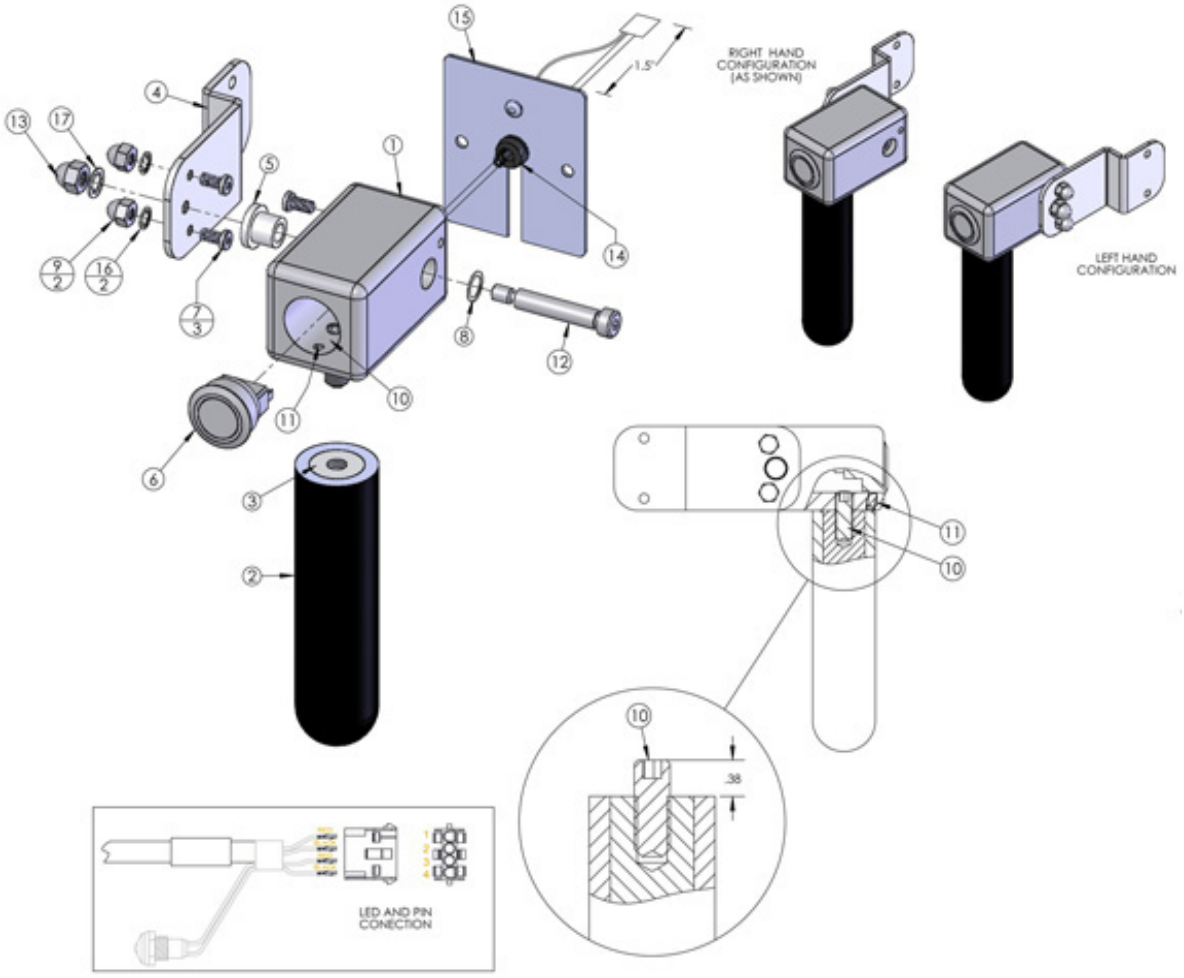

Figure 9-6. Lock Release Assembly

Fig ref.	Part number	Description	Qty
1	210-5075P1	BASE, SWITCH HANDLE	1
2	303-0006P1	HANDLE GRIP - BLACK	1
3	240-0053P1	ROD - HANDLE MTG	1
4	201-5193P1	HANDLE SUPPORT BRACKET	1
5	250-5025P1	BUSHING, PIVOT, HANDLE	1
6	126-5272G2	ASSY, CABLE, HANDLE	1
7	407-5069P1	SCREW, SHCS, #10-32 X 3/8, LOW HEAD	3
8	421-5010P1	SHIM WASHER, .352 x .491 x .016	1
9	4450-0521	NUT,ACORN HI 10-32	2
10	757-41-38210010	SCREW, SHSSCP, 3/8 - 16x1.0	1
11	757-41-19103810	SCREW,SHSSCP 10-32 X 3/8	1
12	758-40-31215010	SCREW,SHLDR,5/16 DIA, 1-1/2 LG	1
13	784-50-25200016	NUT,ACORN HI 1/4-20	1
14	46-208697P29	BUSHING, STRAIN RELIEF, HEYCO #1147	1
15	203-5254P1	PLATE, COVER	1
16	786-20-19000011	WASHER, LOCK INT #10	2
17	786-20-25000011	WASHER, INTERNAL TOOTH, #1/4	1
18	410-5005P1	THREADLOCKER, #242 BLUE	.001
19	410-5005P3	THREADLOCKER, #271 RED	.001
20	4463-0103	ADHESIVE #847 3M	.001

Table 9-5: Lock Release Assembly

9.10 Vertical Carriage Assembly (112-5544)

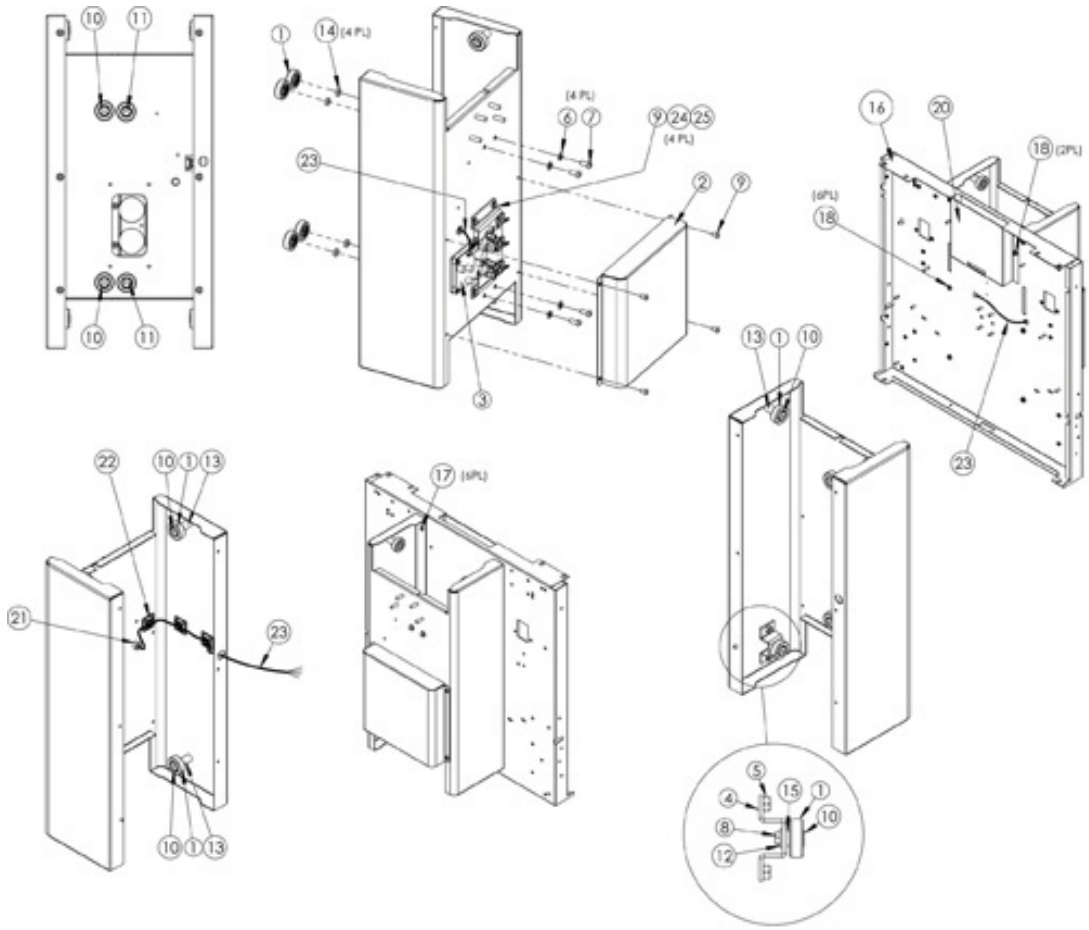

Figure 9-7. Vertical Carriage Assembly

Fig ref.	Part number	Description	G1 Qty
1	112-5545G1	ASM, BEARING AND SHOE	8
2	204-5064P1	COVER, VERTICAL LOCK	1
3	112-5546G1	ASM, VERTICAL LOCK	1
4	201-5189P1	CARRIAGE, ADJ. BEARING	1
5	784-10-25200011	NUT,HEX 1/4-20	2
6	786-50-25000011	WASHER,SPLITLK-STD 1/4	4
7	755-40-25206311	SCREW,HSBHCS 1/4-20 X 5/8	4
8	751-00-25206311	SCREW,HHMS 1/4-20 X 5/8	1
9	755-40-19103811	SCREW,HSBHCS 10-32 X 3/8	8
10	240-5059P1	BUSHING, BEARING, .375 OD	6
11	240-5059P2	BUSHING, SELF-ALIGN CON-CENTRIC	2
12	785-11-25000011	WASHER,FLAT 1/4 NARROW	1
13	421-5015P1	SPACER, .252 ID X .50 OD X 1.06 L	3
14	421-5016P1	SPACER, 0.252 ID X .50OD X 0.13 L	4
15	421-5017P1	SPACER, .252 ID X .50 OD X .19 L	1
16	203-5154P1	FRAME, BUCKY	-
17	753-40-19103811	SCREW,SHCS 10-32 X 3/8	6
18	784-12-19100011	NUT,HEX KEPS 10-32	8
19	201-5188P1	SHELL, VERT. CARRIAGE	1
20	203-5011P1	TRIM WGHT COVER (ZIC PLTD)	1
21	4455-0962	SNAP BUSHING, .500	1
22	4455-0995	1” SQ. BASE CABLE MOUNT	3
23	126-5329G1	CABLE ASM, LOCKTIMER BD	1
24	785-11-19000011	WASHER, FLAT #10 NARROW	4
25	786-20-19000011	WASHER, LOCK INT #10	4

Table 9-6: Vertical Carriage Assembly

9.11 Counterweight Assembly (112-5124G1)

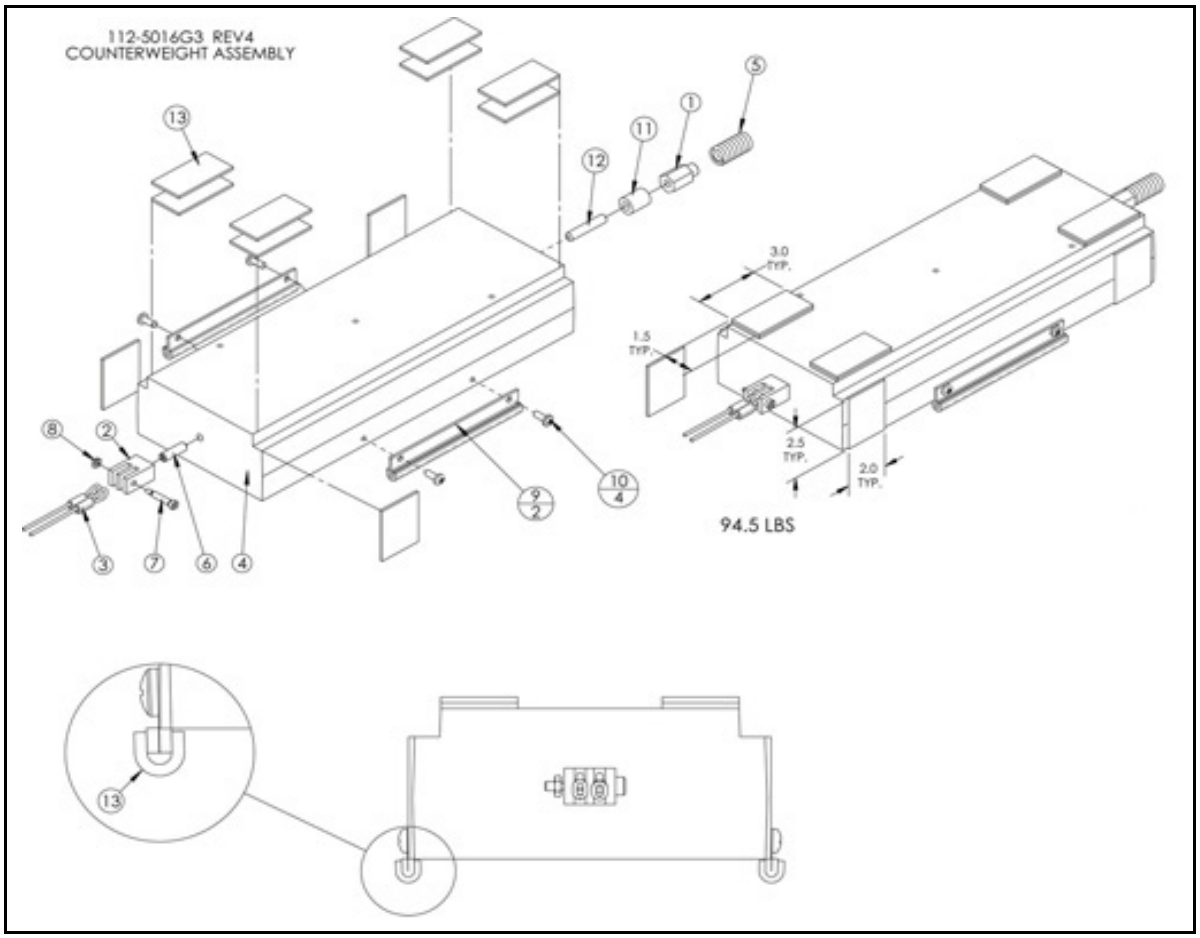

Figure 9-8. Counterweight Assembly

Fig ref.	Part number	Description	G1 Qty
1	230-5004P1	SPACER, SPRING MTG	1
2	236-5011P1	BLOCK,CTWT ANCHOR	1
3	403-5003P1	CTWT CABLE	1
4	436-5004P1	COUNTERWEIGHT, 94.5#	1
5	67-292	BUMPER SPRING	1
6	757-41-38212510	SCREW,SHSSCP 3/8-16 X 1-1/4	2
7	758-40-25210010	SCREW,SHLDR 1/4 X 1.00	1
8	784-10-19200011	NUT,HEX 10-24	1
9	201-5191P1	SPACER, CTWT	2
10	760-20-25206311	SCREW,PPNHMS 1/4-20 X 5/8	4
12	757-41-38220010	SCREW,SHSSCP 3/8-16 X 2.0	1
13	412-0007P2	FELT STRIP, .12 THICK	0.06 RL

Table 9-7: Counterweight Assembly

9.12 Vertical Lock Assembly (112-5546G1)

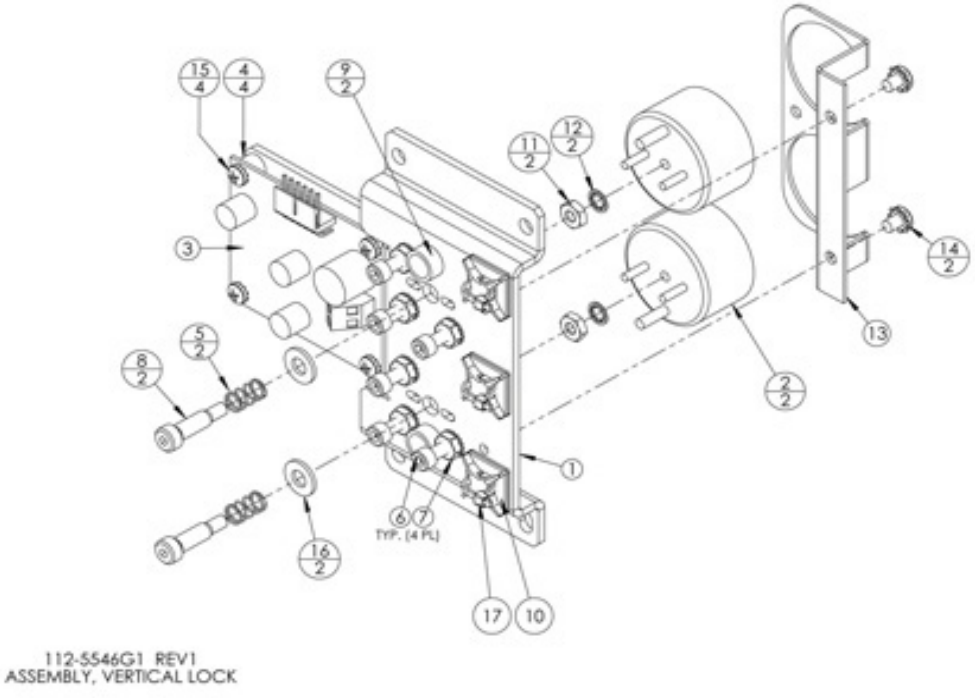

Figure 9-9. Vertical Lock Assembly

Fig ref.	Part number	Description	Qty
1	201-5190P1	MTG. PLATE, LOCK ASM	1
2	630-5002P1	MAGNET SCHULTZ L-10289	2
3	124-5145G1	TIMER PCB	1
4	273-5001P1	BUSHING, .38 OD, .194 ID, .25 Lg, NYLON	4
5	405-5013P1	SPRING, ELECTRO LOCK	2
6	753-40-19107511	SCREW, SHCS #10-32 X 3/4	6
7	784-12-19100011	NUT,HEX KEPS 10-32	6
8	758-40-02506310	SCREW, SHLDR 10-24 X 5/8	2
9	4455-0962	SNAP BUSHING, .500	2
10	163.101.93	HOLDER, TIE WRAP, 3/4" SQ	3
11	784-10-19200011	NUT, HEX 10-24	2
12	786-20-1900011	WASHER, LOCK INT #10	2
13	203-5258P1	BRACKET, MAGNET SUPPORT	1
14	760-22-19102511	SCREW, PPNHMS SEMS 10-32 X1/4	2
15	760-22-14205011	SCREW, PPNHMS SEMS 6-32 X 1/2	4
16	421-5008P1	WASHER, FLAT .250 X .562 X.065	2
17	46-208761P1	CABLE TIE, 14W X 5.6L, 40#	3
18	410-5005P1	THREADLOCKER, #242 BLUE	A/R

9.13 Bearing and Shoe Assembly (112-5545G1)

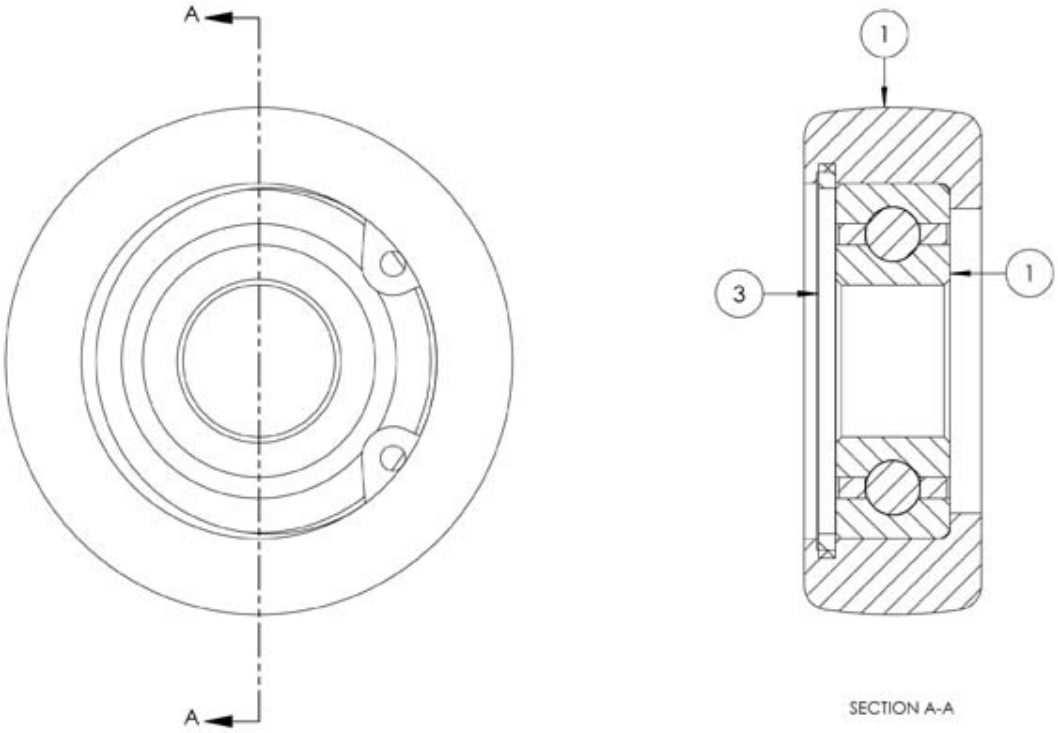

Figure 9-10. Bearing and Shoe Assembly

Fig ref.	Part number	Description	Qty
1	250-5033P1	BEARING HOUSING	1
2	400-0001P1	BALL BEARING, .875 OD	1
3	407-5060P1	RETAINING RING, INTERNAL, 7/8" BORE	1

Table 9-8: Bering and Shoe Assembly

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9.14 Floor Mount (112-5549G1)

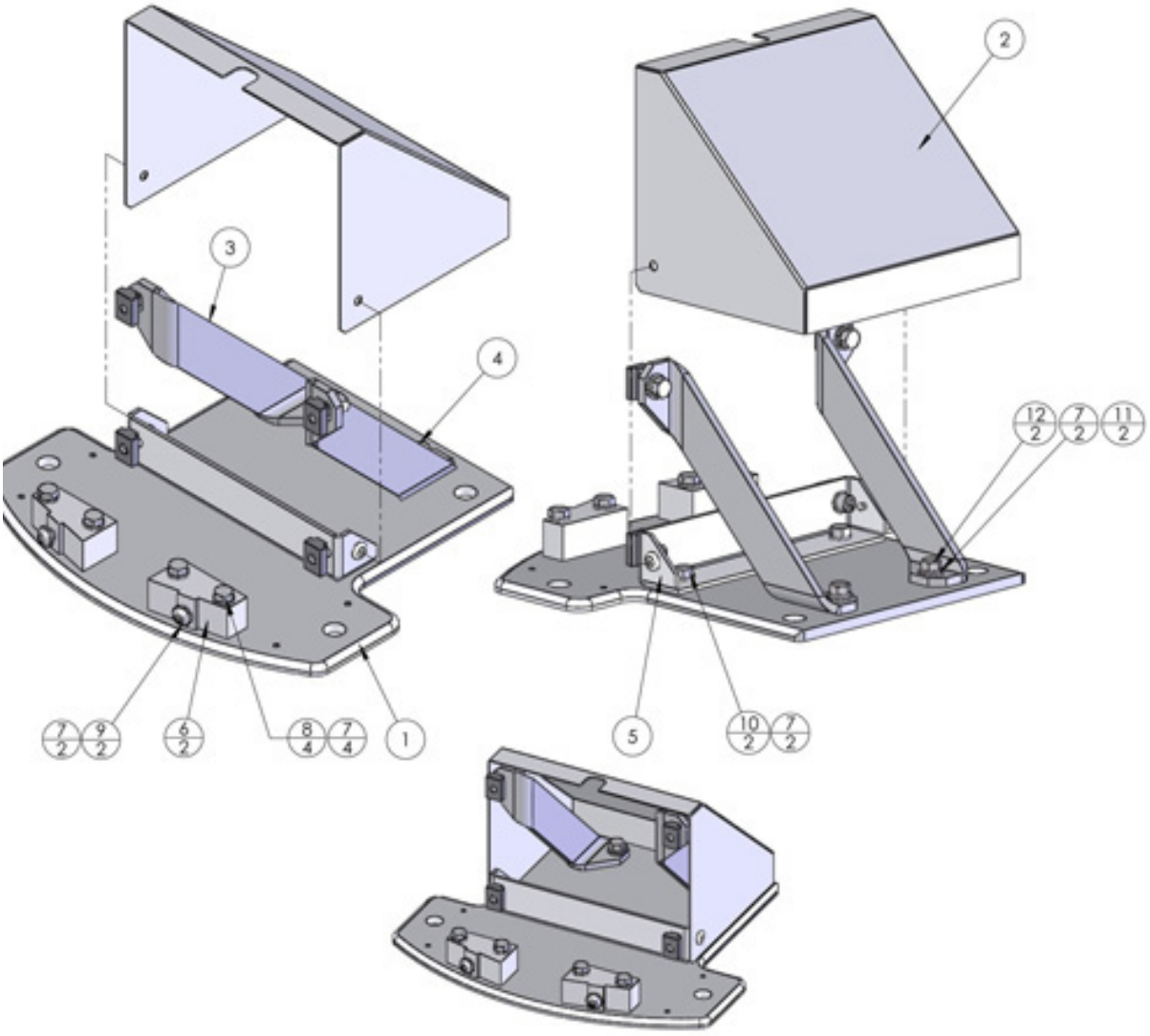


Fig ref.	Part number	Description	Qty
1	220-5017P1	FLOOR PLATE	1
2	203-5175P1	COVER, FLOOR PLATE	1
3	112-5446G2	ASM, SUPPORT, VERTICAL RIGHT	1
4	112-5446G1	ASM, SUPPORT, VERTICAL LEFT	1
5	112-5445G1	ASM, SUPPORT, REAR	1
6	234-5028P1	BAR, COLUMN SUPPORT	2
7	786-50-31000011	WASHER, SPLITLK-STD 5/16	10
8	751-00-31213811	SCREW, HHMS 5/16-18 X1-3/8	4
9	755-40-31207520	SCREW, HSBHCS, 5/16-18 X 1/2	2
10	751-00-31205011	SCREW, HHMS 5/16-18 X 1/2	2
11	785-11-31000011	WASHER, FLAT 5/16 NARROW	2
12	751-00-31206211	SCREW, HHCS 5/16 X 5/8	2
13	8000-VS300-FMK	FLOOR MOUNT KIT, VS300	1

Table 9-9: Floor Mount

9.15 Final Trim Kit (112-5188G1)

Figure 9-11. Final Trim Kit

Fig ref.	Part number	Description	Qty
4	210-5013P1	Middle Cover	1
7	210-5015P1	Bottom Cover	1
8	214-5012P1	Top Cover	1
10	210-5008P2	Trim Bar Spacer	1
12	240-5009P1	Bar Trim	1
18	5500-0494P2	Panel, Front, Bucky (Silk Screened)	1
20	202-5003P1	Bracket, Cover Mounting	4
21	232-5001P2	Spacer, Top Cover	2
22	100012P3	Screw, Trim 10-32 X 3/8”	6
23	100012P7	Screw, Trim 6-32 X 1/2”	2
24	751-02-19102511	Screw, HHMS, 10-32 X 1/4”	4
25	757-41-19103310	Screw, SHSSCP, 10-32 X 3/8”	2
26	760-22-14205011	Screw, PPNHMS SEMS 6-32 X 1/2”	2
27	760-22-19103111	Screw, PPNHMS, 10-32 X 5/16”	6
28	642-0018P10	Standoff, 6-32 X 9/16”	2
30	408-5099P2	Label, Del Med Logo	1

Table 9-10: Final Trim Kit

9.16 Loose Parts Kit (112-5548 G1)

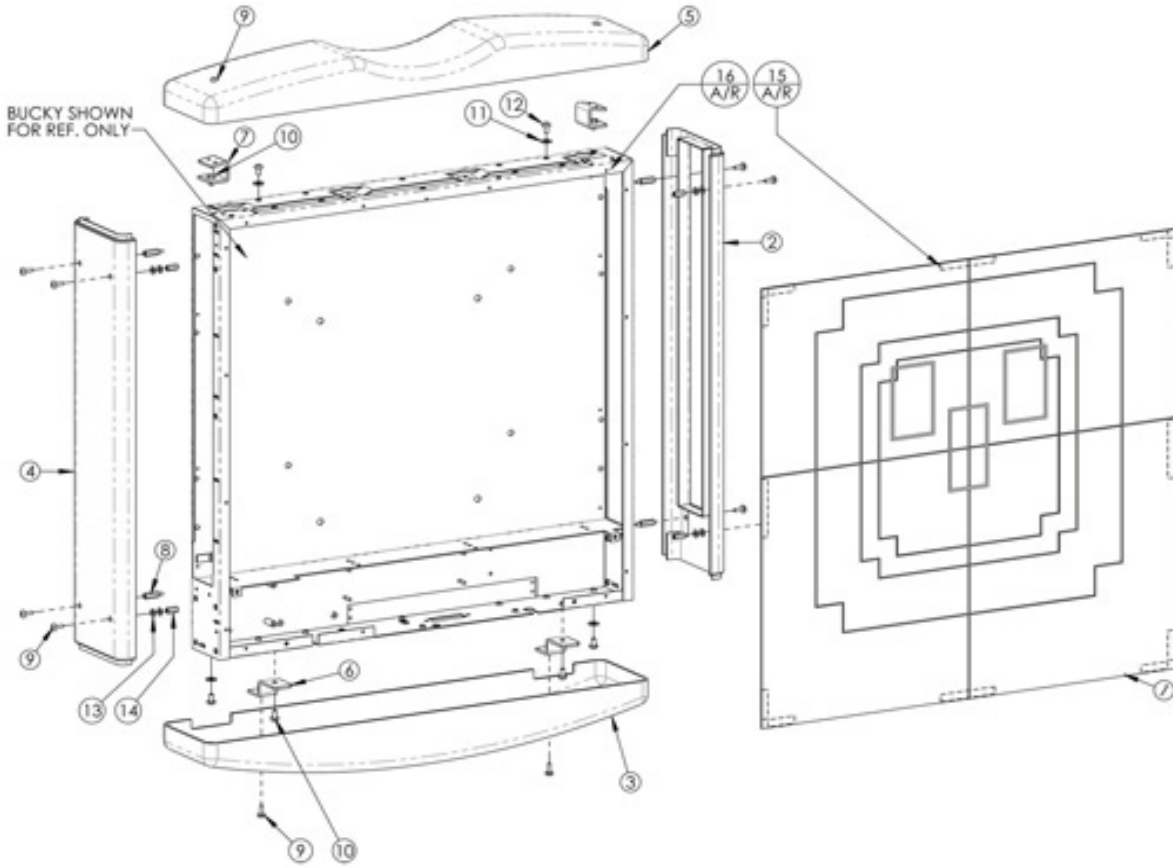


Figure 9-12. Loose Parts Kit

Fig ref.	Part number	Description	Qty
1	5500-0494P2	PANEL,FRONT (BUCKY)	1
2	210-5095P1	COVER, TRAY SIDE	1
3	214-5040P1	COVER, BOTTOM	1
4	210-5094P1	MIDDLE COVER (MEDICAL WHITE)	1
5	214-5039P1	COVER, TOP	1
6	201-5186P1	BRACKET, BOTTOM COVER	2
7	201-5185P1	BRACKET, TOP COVER	2
8	642-0018P10	STANDOFF M-F,6-32X9/16,BRASS	4
9	100012P7	SCREW,TRIM 6-32X1/2	12
10	751-02-19103811	SCREW, HHMS 10-32 x 3/8	4

Table 9-11: Loose Parts Kit

Fig ref.	Part number	Description	Qty
11	785-11-19000011	WASHER, #6 FLAT	8
12	760-22-19103811	SCREW, PPNHMS SEMS 10-32 X 3/8	4
13	421-0008P1	WASHER, #6 FLAT	8
14	46-404731P16	STANDOFF, #6-32 X .563 L	4
15	150.000.02	VELCRO, HOOK, 3/4" ADHES. WHT	A/R
16	150.000.01	VELCRO, LOOP, 3/4" ADHES. WHT	A/R
17	126-5089G1	CABLE, BUCKY	1
18	032-5038	INST, FINAL ASSEMBLY	1

Table 9-11: Loose Parts Kit

9.17 PBL Tray Bracket Assembly (5500-2855)

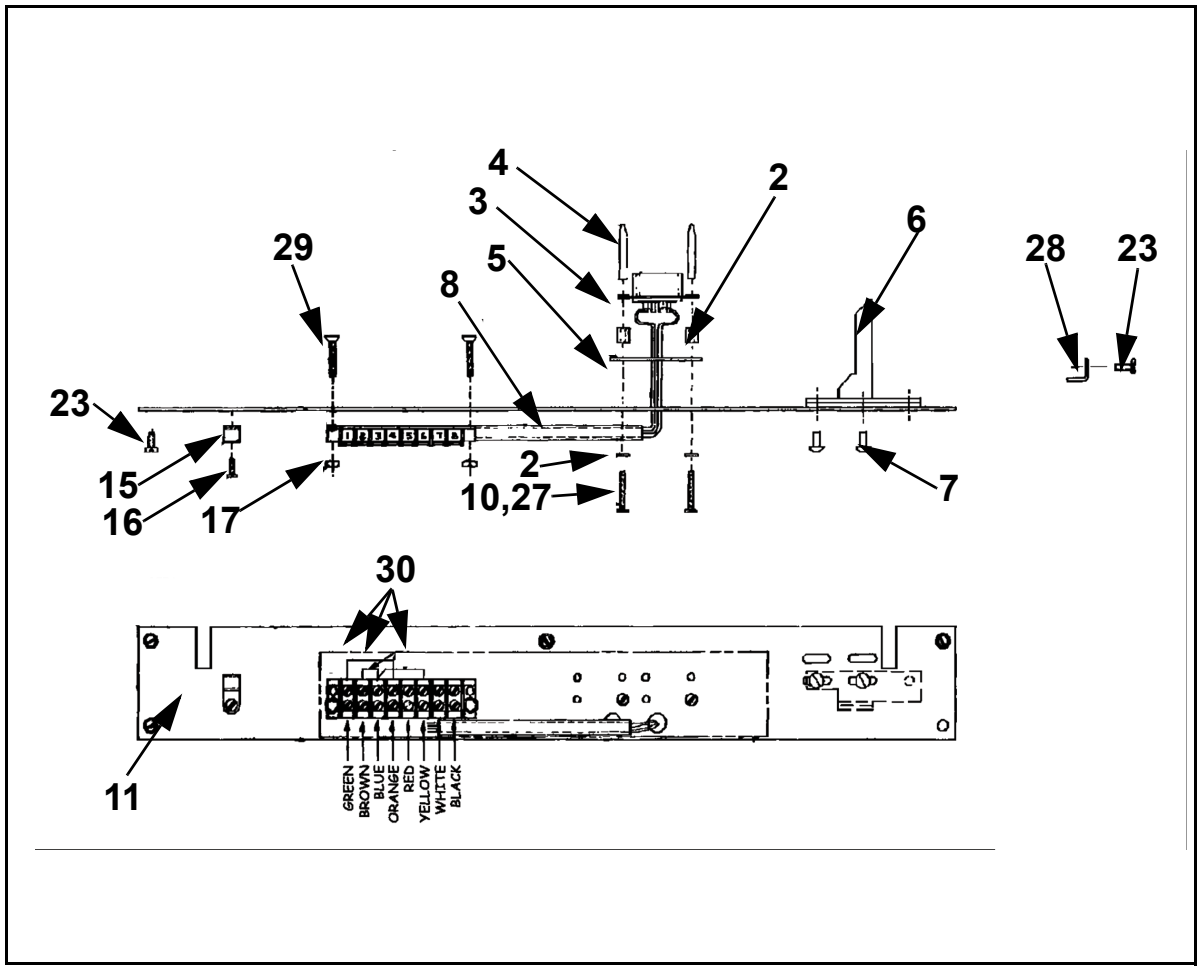


Figure 9-13. PBL Tray Bracket Assembly

Fig ref.	Part number	Description	Qty
2	1417-0604	Spacer-Receptacle	2
3	1417-0602	Amphenol Receptacle Assembly	1
4	1417-0464	Self Centering Stud	2
5	1417-0603	Insulator, Receptacle	1
6	202-5056P1	Tray Bracket	1
7	760-22-19102511	Screw, PPNHM 10-32 X 1/4	2
8	4455-0300	3/8 Sleeving	0.33
9	785-11-11000011	Washer, Flat #4 X 9/32	2
10	4450-0252	Screw, PBHMS 4-40 X 7/8	2
11	5500-2835	Plate	1
12	762-20-14208811	Screw, PFHMS 6-32 X 7/8”	2
14	1417-0468	8 Terminal Strip PBL II	1
15	46-220360P3	Cable Clamp, 1/4” Dia	1
16	4450-0154	Screw, PPHMS Type B #6 X 3/8”	1
17	46-170012P35	Nut, HEX KEPS 6-32 X 1/4”	2
23	46-170015P16	Screw, BHMS SEMS 10-32 X 3/8”	5
25	4463-0100	Lubriplate Auto-Lube	-
26	4455-0123	Terminal, AMP #52949, #6 Spade	12
27	46-170686P2	Sealant, Loctite 242	-
28	203-0305P2	Retainer	1
29	762-20-14206211	Screw, PFHMS 6-32 X 5/8	2
30	126-0005G1	Jumper	3

Table 9-12: PBL Tray Bracket Assembly

9.18 Grid Cabinet Assembly (112-0597G1)

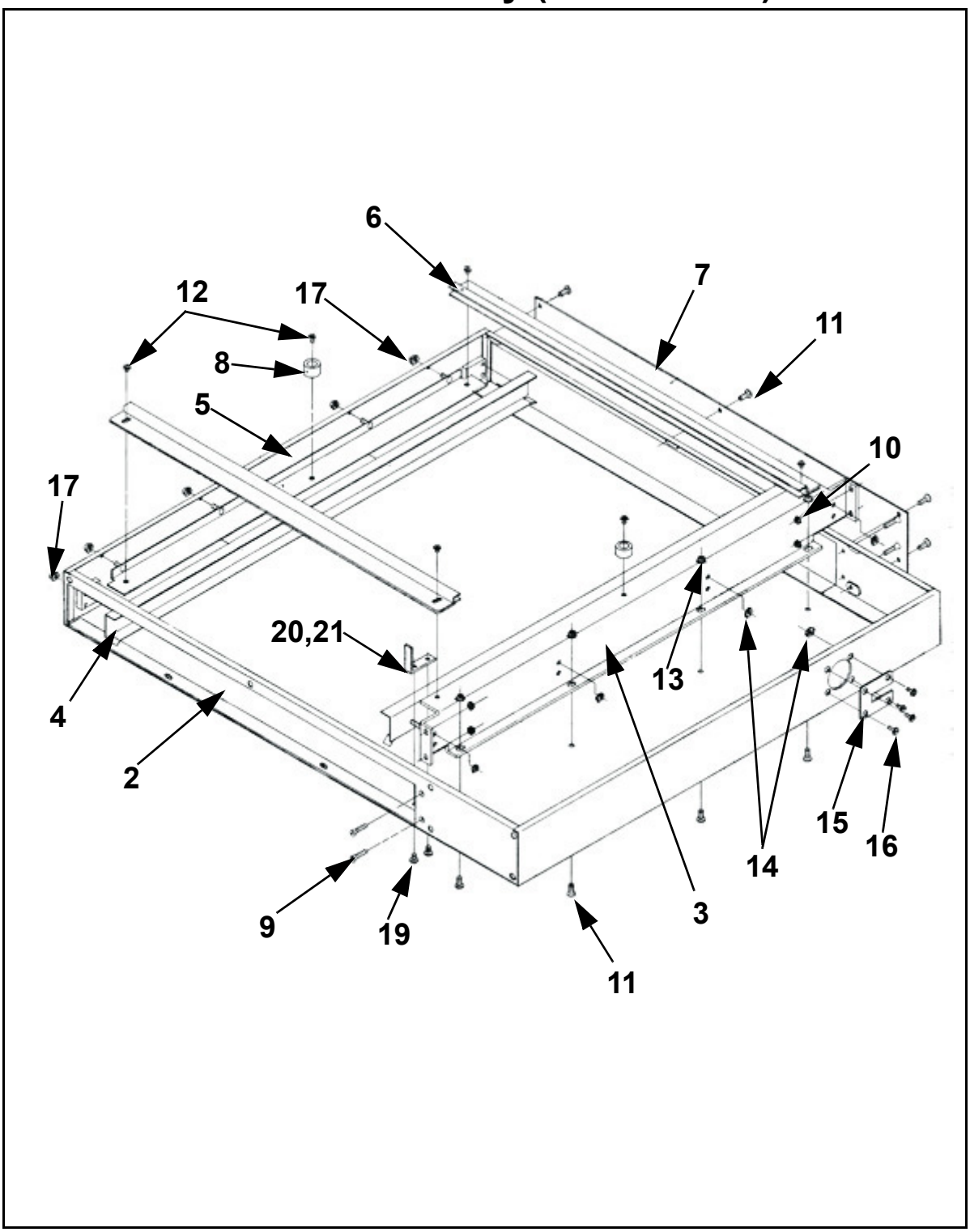


Figure 9-14. Grid Cabinet Assembly

Fig ref.	Part number	Description	Qty
2	114-0344G2	Weldment, Grid Cabinet	1
3	202-0186P2	Inside Framework	1
4	112-0594G1	Channel Assembly	2
5	112-0595G2	Mounting Bracket Assembly	1
6	1417-0117-1	Guide Assembly	2
7	203-0258P2	Rear End Cap	1
8	3920-0295	Plastic Bumper	2
9	46-208908P33	Screw, SFHMS 8-32 X 3/8”	4
10	46-170012P37	Nut, Hex KEPS 8-32 X 5/32”	6
11	46-170015P16	Screw, BHMS 10-32 X 3/8”	8
12	46-170015P8	Screw, BHMS 8-32 X 1/4”	6
13	46-170012P39	Nut, Hex KEPS 10-32 X 5/32”	4
14	46-170012P35	Nut, Hex KEPS 6-32 X 1/4	8
15	203-0263P2	Framework Plate	1
16	46-170015P19	Screw, BHMS 6-32 X 3/8”	4
17	407-0112P1	Nut, Hex Acorn 6-32	8
18	407-0184P1	Grommet	1
19	46-170015P17	Screw, BHMS SEMS 10-32 X 1/4”	2
20	5500-3554-2	Bracket, Stop	1
21	5500-3554	Bracket, Stop	1
22	46-170015P14	Screw, BHMS 8-32 X 3/8	2
23	46-220360P1	Cable Clamp CLN-1/8” Dia	2

9.19 Varian Panel Cabinet Assembly (112-5500)

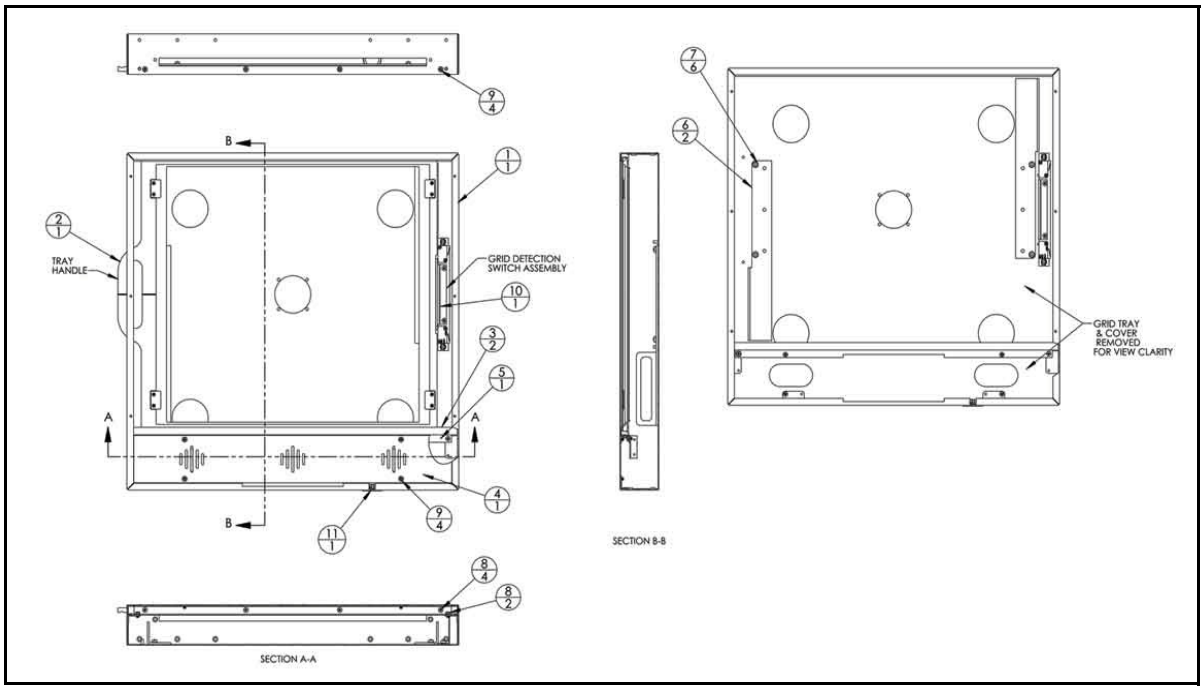


Figure 9-15. Varian Panel Cabinet Assembly (112-5500)

Fig ref.	Part number	Description	Qty
1	114-5174P1	Weldment, Cabinet, Varian	1
2	112-5501G1	Varian Cabinet Grid Tray Assembly (Refer to Section 9.16) for Break-down of Assembly)	1
3	214-5035P1	Channel, Tray	2
4	203-5218P1	Cover	1
5	203-5219P1	Bracket, Track Support	1
6	210-5089P1	Spacer, Receptor	2
7	784-12-16200011	Nut, Hex KEPS 8-32	6
8	760-22-16202511	Screw, PPNMS SEMS 8-32 X 1/4”	6
9	736-20-16202511	Screw, UPFHMS #8-32 X 1/4”	8
10	112-5503G1	Grid Detection Switch Assembly (Refer to Section 9.17) for Break-down of Assembly)	1
11	407-5003P39	Bushing, Snap	1

9.20 Varian Cabinet Grid Tray Assembly (112-5501)

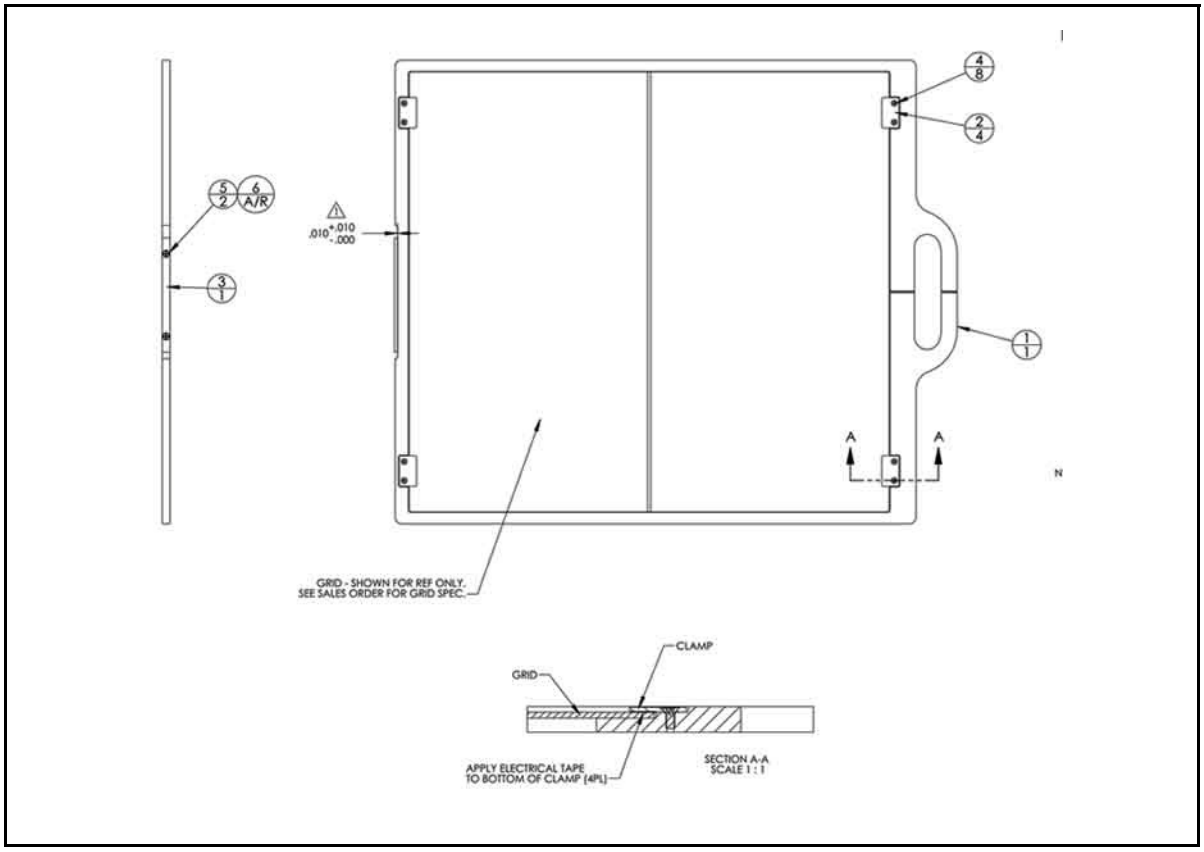


Figure 9-16. Varian Cabinet Grid Tray Assembly

Fig ref.	Part number	Description	Qty
1	210-5088P1	Tray, Grid	1
2	203-5212P1	Clamp, Grid	4
3	201-5168P1	Stop, Tray	1
4	763-20-11202511	Screw, PFHMSUC, 4-40 X 1/4”	8
5	762-20-14210011	Screw, PFHMS 6-32 X 3/8”	2
6	410-5005P1	Threadlocker, #242 Blue	1

Table 9-13: Varian Cabinet Grid Tray Assembly

9.21 Cooling Fan Assembly (112-5505)

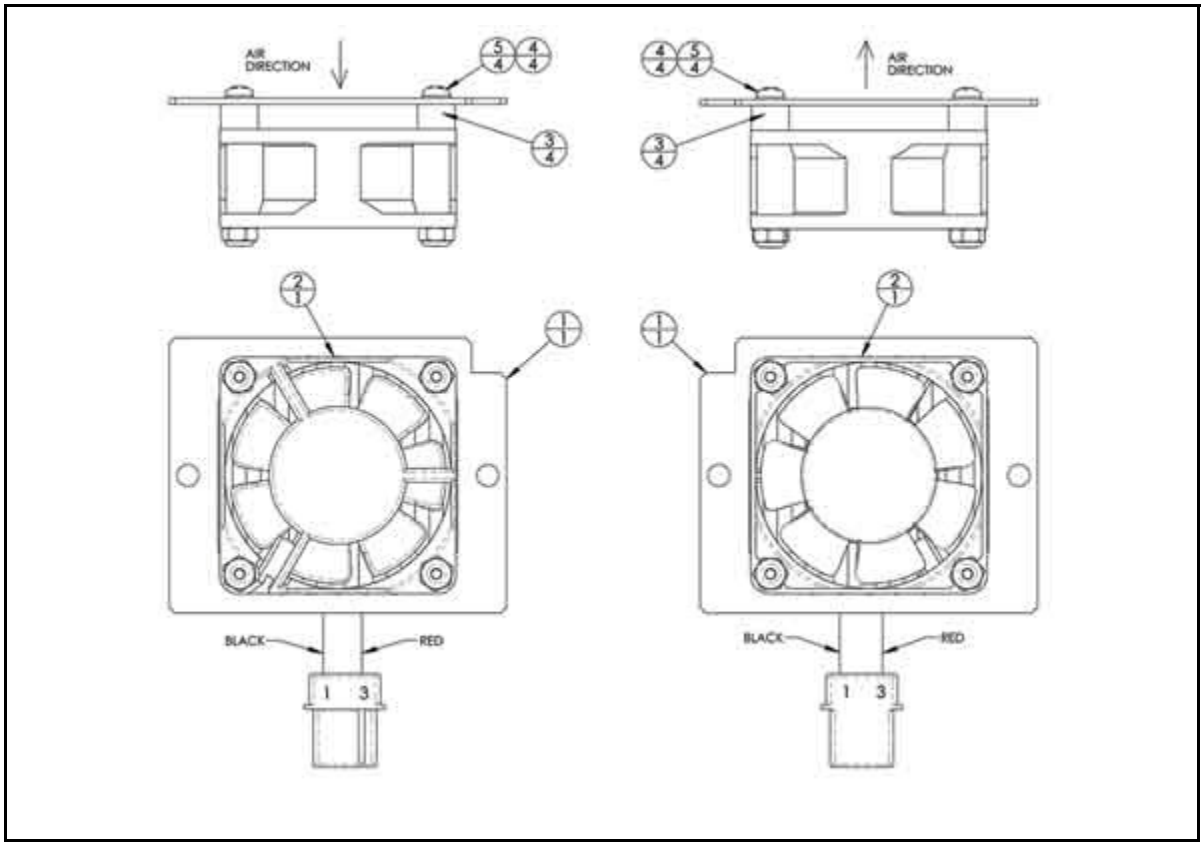
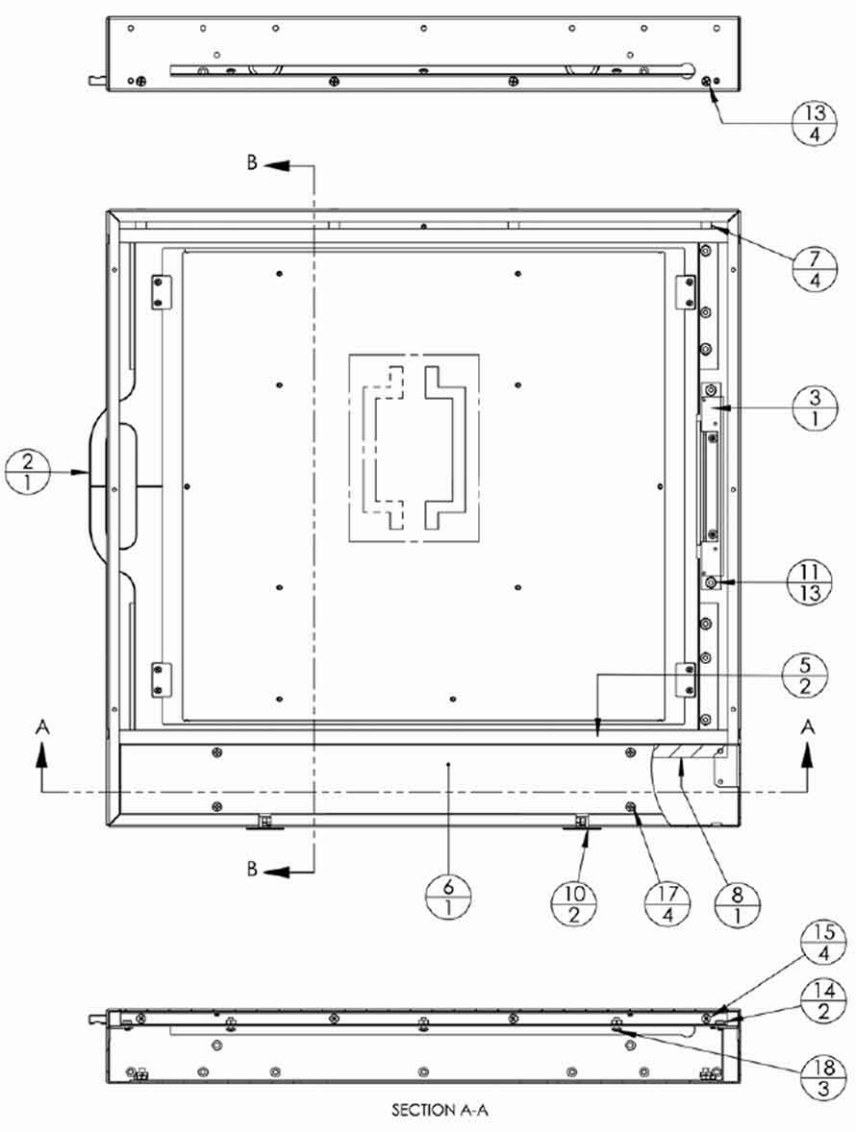


Figure 9-17. Cooling Fan Assembly

Fig ref.	Part number	Description	Qty
1	203-5223P1	Cover, Fan	1
2	652-5012	Fan, Cooling 24VDC	1
3	273-5001P1	Bushing, .38OD, .194 ID .25Lg Nylon	4
4	786-2014000011	Washer, Lock Int. #6	4
5	760-20-14215011	Screw, PPNHMS 6-32 X 1 1/2"	4
6	784-43-14200011	Nut, Hex, Nylock 6-32	4
7	46-170451P6	Connectro Amp 1-480305-0	1
8	511A590P 152	Terminal, Amp 61116-4 TIN	2

Table 9-14: Cooling Fan Assembly

9.22 Toshiba Panel Cabinet Assembly (112-5526G1)



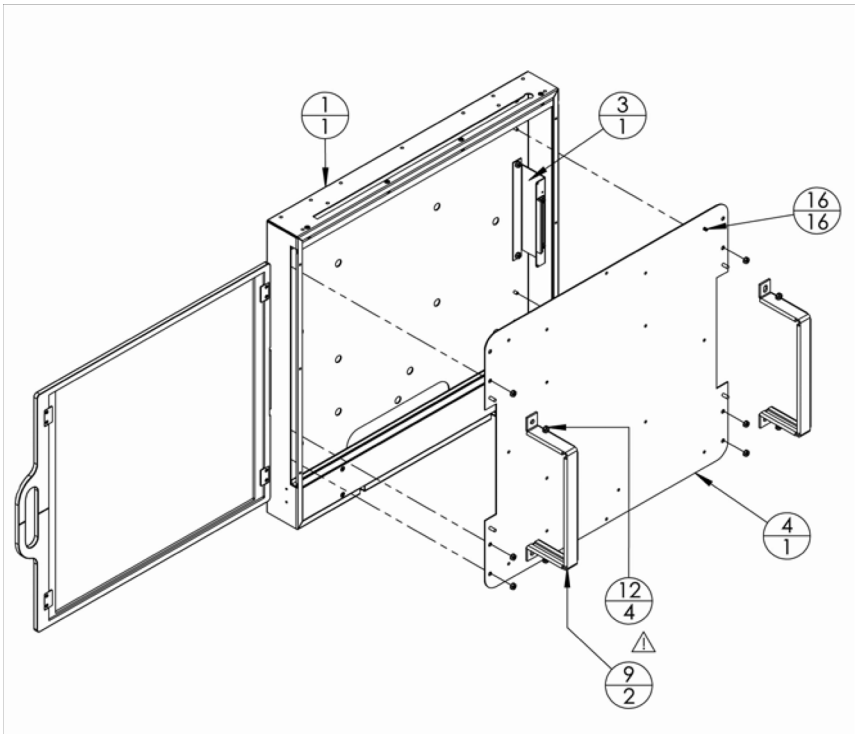


Figure 9-18. Toshiba Panel Cabinet Assembly (112-5526G1) Part B

Fig ref.	Part number	Description	Qty
1	114-5182P1	Weldment, Cabinet, Toshiba FDX4343R	1
2	112-5501G1	Assy, Grid Tray, Varian Cab.	1
3	112-5503G2	Assy, Stop, Grid Tray	1
4	203-5228P1	Adapter Plate	2
5	214-5035P1	Channel, Tray	1
6	203-5226P1	Cover	1
7	250-5030P1	Spacer	4
8	2035219P1	Brkt, Track Support	1
9	201-5177P1	Handle	2
10	407-5003P39	Bushing	2
11	784-12-16200011	Nut, Hex KEPS 8-32	13
12	784-12-19100011	Nut, Hex, KEPS 10-32	4
13	762-20-16208811	Screw, PFHMS 8-32 X 7/8”	4
14	760-22-16202511	Screw,PPNHMS SEMS 8-32 X 1/4”	2
15	760-22-16203111	Screw, PPNHMS SEMS 8-32 X .312	4
16	705-00-04000800	Screw, FSHMS M$ X 8	16
17	763-20-16202511	Screw, UPFHMS 8-32 X 1/4”	4
18	760-20-16203811	Screw, PPNHMS 8-32 X 3/8”	3

Table 9-18: Toshiba Panel Cabinet Assembly

9.23 VS-300 Wallstand Accessories

Part Number	Description	Qty
103101L18	10:1 103 Line Grid Replaces 8:1 103 Line Grid	1
103121L18	12:1 103 Line Grid Replaces 8:1 103 Line Grid	1
500-0008P2	ION Chamber ICX 159	1
B1051	Touch Up Paint -Bottle (Medical White)	1
8000-VS-300	VS-300 Wallstand Installation, Operation & Maintenance Manual	1

Table 9-15: Wallstand Accessories

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