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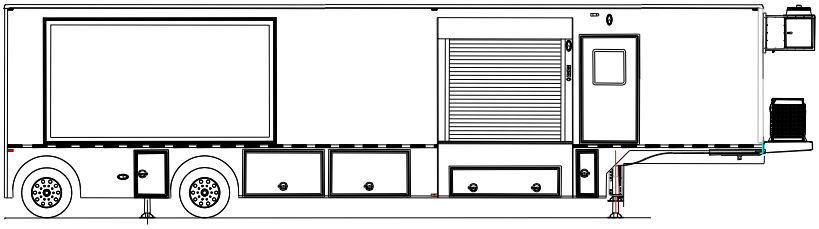
Operator and Service Manual

SIEMENS Horizon

Mobile PET/CT System

48’ L x 8’-6” W x 13’-6” H USA Unit 2018



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North America

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As part of Advanced Mobility Specialty Vehicles' on-going program to improve its product and service, Advanced Mobility Specialty Vehicles reserves the right to implement product changes and disseminate changes in design and service information without notice or recourse.

For questions regarding the Operation or Service of this unit, please call Advanced Mobility Specialty Vehicles at 1-800-839-0630

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List of Revisions & Warnings

Revisions

00	New Release	August 2014
01	Trailer Weights	July 2015
02		
03		
04		
05		

Notice

In accordance with our policy of product development, Advanced Mobility Specialty Vehicles reserves the right to make changes in the equipment, design, specifications, and materials of the product described herein. If there are any inconsistencies between this manual and the mobile unit that inhibit serviceability, please contact Advanced Mobility Specialty Vehicles for assistance.

This manual is provided in the mobile unit. The documentation package should be kept in the mobile unit at all times.

Any problems or questions related to the components or systems covered in this manual please direct to:

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Warnings & Safety Alert Conventions

The following terms define the various precautions and notices used in this manual:

NOTE: **Whenever information exists that requires additional emphasis beyond the standard textual information, the term "NOTE" is used.**

IMPORTANT — Whenever information exists that requires special attention to procedures to ensure proper operation of the equipment or to prevent its possible failure, the term "IMPORTANT" is used.

CAUTION — Whenever potential damage to equipment exists, requiring correct procedures / practices for prevention, the term "CAUTION" is used.

WARNING — Whenever potential personal injury or death situations exit, requiring correct procedures / practices for prevention, the term "WARNING" is used.

DANGER — Whenever immediate hazards exist, that could result in personal injury or death that cannot be eliminated by design safeguards, the term "DANGER" is used.

 This safety alert symbol indicates important safety messages in the manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.

WARNING — Electrical, mechanical, pneumatic, and hydraulic safety devices have been installed on this vehicle to help protect against personal injury and / or damage to equipment. Under no circumstances should any attempt be made to disconnect or in any way render any of these devices inoperative. If a malfunction of any safety device is discovered to exist, DO NOT operate the vehicle, but immediately notify appropriate maintenance personnel.

Advanced Mobility Specialty Vehicles shall have no liability with respect to:

Repairs improperly performed or replacements improperly installed (or) use of replacement parts or accessories not conforming to Advanced Mobility Specialty Vehicles' specifications, which adversely affect performance or durability (or) alterations or modifications not recommended or approved in writing by Advanced Mobility Specialty Vehicles (or) for equipment damage or personal injury or death as a result of rendering any safety device inoperable.

Certain inherent risks are associated with heavy trailers due to the nature of their use. Personnel working in the area of these trailers are subject to certain hazards that cannot be met by mechanical means but only by the exercise of intelligence, care, and common sense. It is therefore essential for the owner of this equipment to have personnel involved in the use and operation of these trailers who are competent, careful, physically and mentally qualified, and trained in the safe operation of this equipment.

If you identify a hazard not covered by this manual, please contact Advanced Mobility Specialty Vehicles right away at (001) 708-235-2800.

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Section 1: Introduction

WARNING This manual is intended to instruct and assist personnel already qualified in the proper installation of the mobile unit. This manual is not intended to enable persons unfamiliar with the mobile unit to perform the setup and transport procedures.

IMPORTANT An outside radiation physicist consultant determines the x-ray shielding based upon unit layout that is provided by Advanced Mobility Specialty Vehicles and scatter patterns provided the medical equipment manufacturer. It is the user's responsibility to ensure proper maintenance of the x-ray shielding. It is the recommendation of Advanced Mobility Specialty Vehicles that the end user has the x-ray testing completed on an annual basis to ensure that the mobile unit still meets the minimum requirements.

This manual contains the basic information needed to setup, transport, and service the mobile unit. This mobile unit was designed to operate within certain limitations and specifications. When performing the setup or transport procedures for the mobile unit, follow the proper logical steps that have been outlined in this manual. The drawings in this manual are representative of this product. In accordance with our program of continued product development, designs and specifications are subject to change without notice.

Figure 1: The Siemens Horizon PET/CT System

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Section 1.1 Support Pad Requirements

IMPORTANT If other modalities utilize the same support pad, it is recommended that non-ferrous reinforcement materials be used for pad reinforcement.

IMPORTANT Siemens must approve plans for pad construction.

The following is a list of recommendations and requirements for a concrete support pad. However, due to varying site conditions, the actual pad design should be prepared by an appropriately licensed structural or architectural engineer.

Trailer Weight

The weight of the trailer should be considered in the design of the support and service pads. The overall weight of the trailer is approximately 56,080 lbs. The weight on the rear axles is approximately 37,500 lbs. The weight on the King Pin is approximately 20,100 lbs.

Recommended Support Pad Requirements

The measurements for the recommended support pad are as follows, 10'-11" x 40'-8". The cross hatching as shown on Error! Reference source not found. and Error! Reference source not found. represents the recommended support pad.

Minimum Support Pad Requirements

The measurements for the minimum support pad are as follows, 10'-11" x 15'-2-1/2" for the rear pad and 10'-11" x 4'-6" for the front pad . The double cross hatching as shown on Error! Reference source not found. and Error! Reference source not found. represents the minimum support pad.

Support Pad Depth

Recommendations for the width and length of the pad are given above. Based upon the existing site conditions, the depth should be determined by a local contractor.

Support Pad Levelness

In order to ensure proper operation of the PET/CT system, the support pad(s) must be level and the deviation must not exceed .125" in 10'-0.

Recommended Service Pad

The measurements for the recommended service pad are as follows, 20'-6-7/8" x 54'-10". This will allow full service access to the mobile unit. The recommended service pad is shown on Error! Reference source not found.

Electro Magnetic Interference

The ambient static magnetic field within the region of the gantry should not exceed 1 Gauss (10^{-4} Tesla) peak at the detector.

Vehicle Access

A firm, level surface is required around the mobile unit in order to provide access to the site, patient access to the mobile unit, and servicing of the mobile unit.

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Recommended Attachment to the Facility

An inflatable air bag or soft seal is recommended at the point of connection from the unit to the facility. Fixed or solid connections may hinder imaging quality. Contact ADVANCED MOBILITY or the local Siemens representative prior to construction if the proposed connection varies from the recommended.

Swing Clearance Note

Please verify the actual dimensions of the rearmost projections on the cab of your tractor to the centerline of tandem suspension or centerline of the fifth wheel plate on your tractor. Refer to Error! Reference source not found. for proper tractor sizing information.

Air Conditioning Air Flow Clearance

The following clearances for acceptable air conditioning condenser air flow have been established between wall-mounted equipment and opposing units or surfaces for maximum capacity, lowest operating cost, satisfactory operation of ventilation packages, and longest service life

Unit discharging against opposing (facing) unit – 20 feet from coil grill to coil grill

Unit discharging against a wall or essential

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Section 2: Safety Guidelines

WARNING Electrical, mechanical, pneumatic, and hydraulic safety devices have been installed on this vehicle to help protect against personal injury and / or damage to equipment. Under no circumstances should any attempt be made to disconnect or in any way render any of these devices inoperative. If a malfunction of any safety device is discovered to exist, DO NOT operate the vehicle, but immediately notify appropriate maintenance personnel.

WARNING Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

WARNING It is the operator's responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.

WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.

WARNING Always make sure that eyes are protected while servicing the unit. Wear safety goggles when prying, drilling, grinding, or working with batteries. Wear safety goggles over regular prescription glasses unless the lenses are made of hardened glass and can serve as safety goggles.

WARNING Be certain to disconnect the power before working on any of the electrical systems.

IMPORTANT When servicing the unit be certain that a first aid kit and fire extinguisher are within reach at all times.

This safety section contains important information in regards to general safety guidelines that should be followed. Before attempting to service the mobile unit, read this safety section as well as all other safety sections found in applicable manufacturers' manuals in the VOL II Vendor Information binder.

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2.1 Operator's General Safety Precautions

Your safety and the safety of other persons in the area of this vehicle are the result of your correct operation of this vehicle. Know the location, positions, and functions of all the controls. Know the meaning of the various Warning, Caution, Strobe, and Annunciator lights and their associated audible warning sounds.

Read this manual completely and make sure you understand the contents. Make sure you understand, for example, the characteristics of speed, stability, brakes, and steering, etc. of this vehicle. If you have any questions, contact Advanced Mobility Specialty Vehicles, 1-708-235-2800. Always keep a copy of this manual with the vehicle.

The safety information in the manual does not replace any other rules or laws for safety that are used in your area, Know the local rules or laws for safety. Make sure that your vehicle has the correct equipment to operate according to these rules or laws.

All safety hazards that can possibly arise cannot be foreseen and noted in this manual. You must always use common sense and apply the general as well as the specific safety precautions.

Make sure the work area is well ventilated.

Disconnect the electrical power to prevent the possibility of electrical shock when servicing all electrical equipment.

Follow all manufacturers' directions and request material data sheets where applicable.

Always keep tools clean and free of grease.

Do not stand on chairs inside of the mobile unit under any circumstances.

Follow all safety precautions found in the documentation package that is included with the mobile unit.

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2.2 Electrical Safety

Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

Before connecting or disconnecting from shore power, it is imperative that the shore power connections be moved to the “OFF” position. Failure to do this can result in injury or death to the operator of the mobile unit.

It is the operator’s responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.

The Power Cable could present a trip hazard that could result in personal injury. Care should be taken to ensure that the cable is routed properly to minimize its potential as a trip hazard.

Always inspect the power cable, connectors, and fasteners prior to usage. If during inspection, it is suspected that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.

When working with the electrical system for the mobile unit. Follow the warnings and cautions listed above.

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2.3 Transportation Safety

Walk around the unit to make certain that all doors are closed and locked..

Make sure that the stabilizing stands are removed and stored in the underbody compartment.

WARNING Before moving the trailer, the driver must ensure that the rear stabilizing stands have been removed and stored in the underbody compartment. Failure to do so could result in damage to equipment, and/or severe personal injury or death.

If any of the warning lights are illuminated, do not move the mobile unit.

WARNING If the Transport Warning Light is on, the mobile unit must not be moved. If the mobile unit is moved while this light is on, irreparable damage to the mobile unit, serious injury or death can occur.

Before moving the mobile unit, verify that all marker and running lights are working properly.

Consult with the local motor vehicle authority to determine if there are any travel restrictions or routes.

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Section 3: Mobile Unit Overview

The components of the mobile unit have been divided into alphabetical order. With each component a picture and description will be found to better illustrate the components of the mobile unit. Additional components of the mobile unit can be found within the remaining chapters.

3.1 Air Suspension Controls

The Air Suspension Controls are used to select Normal Ride or Deflate the rear suspension. This control is to be used when setting up the unit for operating the PET/CT system, and for normal transport.

Figure 2: Air Suspension Controls

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3.2 Canopy (optional)

This retractable canopy is positioned above the Platform Lift to provide shelter from the elements. The handle used to deploy the unit is neatly stowed in Equipment Room during transit.

Figure 3: Canopy

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3.3 Control Room Overall

Control Room houses the system components that support the medical system. In this room, the operators console can be found, along with the privacy curtain, system controls, cabinets for storage, and all of the associated volumes of literature. Also included are various system status indicator lights to keep the Operators informed of the functional status of the Unit and the medical system.

Operator's Station

HVAC Remote Digital Displays and Controls

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Medical System Emergency Stop Button

Scan Room and Control Room Light controls, and Humidifier low water level indicator lights.

Figure 4 (Cont.): Control Room Overall

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3.4 Exterior Overall

In these photos the HVAC Units, Platform Lift, the entry door, and the generator access can be seen.

Left Side

Right Side

Figure 4: Exterior Overall (Typical)

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3.5 Fuel Compartment

The fuel compartment stores the fuel tank, fuel gauge, fuel pump, and fuel separator. The fuel tank is below the Landing Gear Hydraulic Control Panel.

Figure 5: Fuel Compartment

Fuel Gauge:	The fuel gauge is push button activated and will give an accurate reading of the available fuel supply.
Fuel Pump (not shown):	The fuel pump pumps the fuel from the fuel tank to the generator.
Fuel Separator (not shown):	The fuel separator removes debris from the fuel supply.
Fuel Tank:	The fuel tank stores and supplies fuel to the generator. The capacity of the fuel tank is 70 US gallons. Only use diesel fuel.

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3.6 Gantry Room Overall

Gantry Room is divided into two (2) sections. The first section houses the medical system and the controls for the slide-outs. The other section of the room is located behind a curtain and stores the humidifier, the electrical distribution panels and the associated support equipment for the medical system.

Figure 6: Gantry Room Overall

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3.7 Glad-hand Connections

The glad hands are the connection point between the tractor and the mobile unit. All connections must be made before moving the mobile unit. Failure to make all connections can result in damage to the mobile unit.

Figure 7: Glad Hand Connections

Emergency Airline:	Backup airline in the event that the main airline fails.
Key Lock Box:	A combination lock that holds a key to the mobile unit.
Service Airline:	The main airline for the mobile unit.
Standard Electrical Service:	The main electrical connection for the mobile unit.

3.8 Hubbell All Weather Phone Cables

Hubbell all-weather phone cables are required for use with the Hubbell all-weather telephone connections.

Figure 8: Hubbell All-Weather Phone Cables

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3.9 Levels, Digital

The digital levels allow the mobile unit to be leveled both front to back and side to side. It is imperative that the unit be leveled prior to use. Refer to

Appendix F: . This unit is equipped with an Level System which makes the leveling of the unit much easier. Instructions for operating the Level System are contained on the placard affixed to the compartment door.

Figure 9: Digital Levels

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3.10 Mobile Unit Controls

Located on the aluminum raceways inside of the mobile unit are the various controls that are used for operating such items as, the interior and exterior lights, emergency stop buttons, fire alarms, and emergency equipment.

Figure 10 Mobile Unit Controls

Control Room Dimmer and Exterior Stair Light Switches	ON / OFF light switch for Exterior lights and Dimmer Switch for Control Room.
Gantry Room Light Switches:	ON / OFF light switch for Gantry Room lights.
E Stop:	Emergency stop button for the medical system.

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3.11 Phone & Data Line Connections

The phone and data connections are located in the underbody compartments. The connections are used to connect the mobile unit to the shore facility. The telephone connections utilize a Hubbell all-weather connection, while the data lines utilize an RJ-45 connection and CAT-5E cabling.

Figure 11: Phone & Data Line Connections

Hubbell Phone Connections	The Hubbell all-weather phone connections are to be used with the provided Hubbell all-weather telephone cable.
Data Connections	The data connections that are utilized are RJ-45's. The connections utilize CAT-5E cable and can be connected directly to the facility

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3.12 Rear Stabilizing Legs

The rear stabilizing legs are located underneath the rear of the mobile unit and must be extended when the medical system is in use. These legs help to level the mobile unit and decrease vibration caused by the medical system.

Figure 12: Rear Stabilizing Legs

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3.13 Front Landing / Stabilizing Legs

The Front Landing / Stabilizing legs and auxiliary support legs can be found at front of the mobile unit. They are used in order to level the unit prior to use. Since the landing / stabilizing legs are hydraulically controlled, the manual auxiliary legs must also be used as a backup.

Figure 13: Front Stabilizing Legs and Auxiliary Support Legs

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3.14 Stair Assembly

Figure 14: Stair Assembly

CAUTION

The maximum capacity of the stairs and /or platform is 375 pounds.

Exceeding this capacity could result in damage to equipment or personal injury.

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Section 4: Safety Systems

This safety section contains important information about the safety systems that have been built into the mobile unit to protect all personnel and equipment. Before attempting to service the mobile unit, read this safety section as well as all other safety sections found in applicable manufacturers' manuals in the component literature binder.

4.1 Emergency Lighting

In the event that the main AC power fails, three dual beam emergency lights are provided in the Dispensing Lab, Control Room and Gantry Room. The light will automatically illuminate when the main AC power is lost. The emergency lighting system is wired into a 120V AC electrical system that allows the lights internal circuitry to keep its batteries at 100% charge. The emergency lights will last for approximately 90 minutes.

Figure 15: Control Room Emergency Lighting

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4.2 Fire Suppression (manual)

Only one fire extinguisher is supplied with the mobile unit. Instructions for operation are clearly printed on the canister of the fire extinguisher.

The fire extinguisher meets the following standards:

It is a class A/B/C 1211 hand held unit.

It has a charged weight of 5 lbs.

It is U.L. listed.

It meets D.O.T. requirements.

It is in accordance with N.F.P.A. Standard No. 10, “Portable Fire Extinguisher”.

Figure 16: Fire Extinguisher

4.3 Fire Detection System

A standard fire detection system is installed in the mobile unit. The fire detection system works via photoelectric smoke detectors located on the ceiling panels in each room of the mobile unit. In the event of a fire being detected, an alarm will sound.

Figure 17: Smoke Detector

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4.3.1 Pull Station

A pull station is located next to the staff door in the Control Room. When the pull station has been pulled, the fire alarm will sound and if the unit is equipped with the optional fire suppression system, the fire suppression dispersant will be discharged.

Figure 18: Fire Alarm Pull Station

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4.4 NOVEC-1230 Fire Suppression System (Optional)

An optional fire suppression system is available for the mobile unit. This fire suppression system uses a dispersant to extinguish the fire. The dispersant used is a gas that removes the oxygen from the interior of the mobile unit. Without oxygen, the fire cannot survive. This method provides the means to allow both personnel and property to escape the damage from the fire virtually unharmed. When the fire suppression system has been triggered, it will automatically shut down the medical system, and the HVAC system.

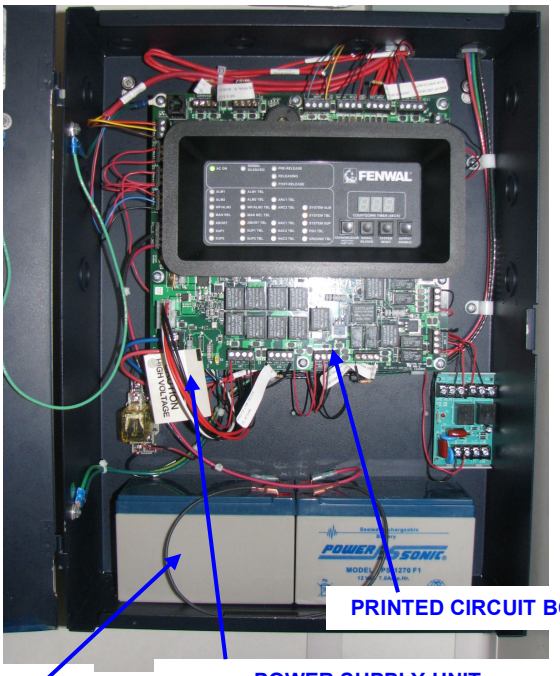
The NOVEC-1230 Fire Suppression System uses the Fenwal 732 Control Panel to monitor and operate the system. The Fenwal 732™ is a versatile, flexible, microprocessor-based conventional fire alarm/suppression control system.

AGENT STORAGE TANK

SMOKE DETECTOR

AGENT DISPERSANT NOZZLE

ENCLOSURE



PRINTED CIRCUIT BOARD

SECONDARY

STANDBY BATTERIES

POWER SUPPLY UNIT

(BEHIND PRINTED CIRCUIT BOARD)

Figure 19: Fire Suppression Components

4.4.1 Control Unit Description

The Fenwal 732 consists of the following: Enclosure with Door, Power Supply Unit, Printed Circuit Board (PCB), and Secondary Standby Batteries.

4.4.2 Enclosure with Door

The enclosure meets the requirements for NEMA Type 1 and is intended to be used indoors in a relatively dust-free environment. The enclosure has a hinged door that swings open 180° for accessibility. The enclosure can be surface or recessed mounted. A trim ring is available for recessed mounting. The enclosure is constructed of 18 gauge sheet steel. A steel door is held closed by a key lock. All operator interface switches and indicators are located behind the locked cover. The enclosure is large enough to house two 12V DC, 12 AH batteries required for standby operation.

The enclosure and door has two color options — blue for most UL/cUL applications and red for MEA/NYC applications.

4.4.3 Enclosure Door Options

The standard enclosure door allows the operator to view the operator interface display mounted on the PCB behind a Plexiglas window. The Fenwal 732 is also available with an alternate door that allows an abort and manual release switch to be mounted. The manual release switch incorporates a lift type guard and the abort switch incorporates a safety guard to prevent inadvertent activation.

4.4.4 Power Supply Unit

The power supply unit mounts behind the circuit board and operates from either 120V AC 50/60 Hz or 240V AC 50/60 Hz. It powers the system and also charges a standby battery set which provides backup in case of loss of power from the AC source.

The battery charger is capable of charging sealed lead-acid 24V DC batteries of capacity up to 68 AH. The charge voltage is 27.4V DC nominal.

The actual battery capacity used for an application is a function of the control units components, devices and configuration.

The power supply monitoring circuit provides a trouble signal if any of the following occur:

- Loss of AC input or if AC power falls below 85% of nominal. This causes an immediate changeover to battery operation and a trouble signal after 30 seconds.
- Detection of a ground fault.
- Low charging current.
- High output voltage
- The battery monitoring circuit provides a trouble signal if any of the following occur:
- The battery is installed backwards.
- The battery is disconnected.
- Battery voltage falls below 19.5 V (this condition causes the battery to disconnect and can only be cleared when primary AC main power is restored).

4.4.5 Printed Circuit Board

The printed circuit board provides an interface or terminals for the following:

- Power Supply Unit
- Battery
- Initiating Device Circuits (System Inputs)
- System Outputs
- Operator Interface
- Auxiliary Power Output

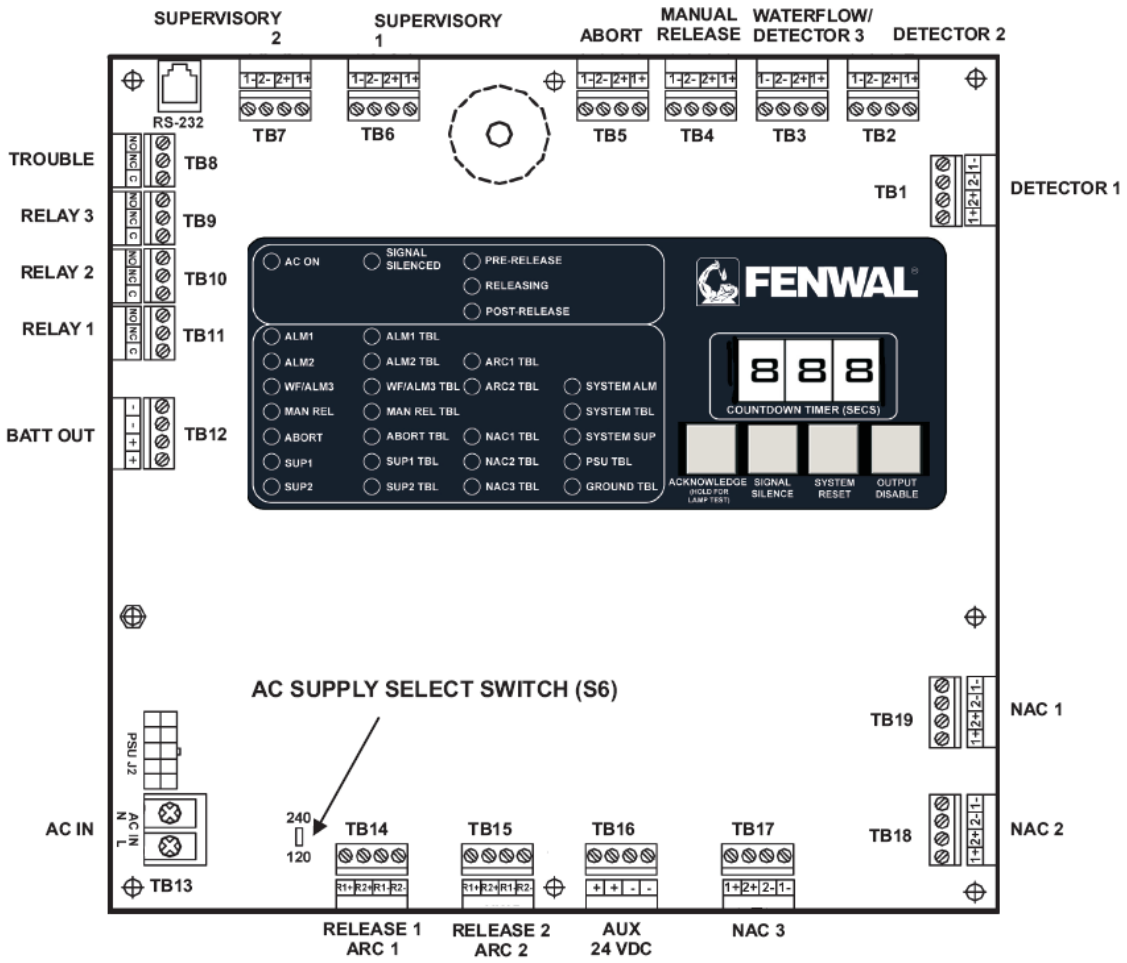


Figure 20: Printed Circuit Board (PCB)

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4.4.6 Operator Interface

All alarms, troubles and supervisory signals are received at the control unit and displayed for the operator. The Operator Interface consists of four main components and are visible and/or audible through a transparent window:

- LED Indicators
- Control Switches
- Digital Display
- Buzzer

4.4.7 LED Indicators

The following is a list of control unit indicators and their LED display color.

Table 4-1. LED Indicator and Display Color

Indicator	Display Color
AC Power On	Green
System Alarm	Red
System Supervisory	Yellow
System Trouble	Yellow
Signal Silenced	Yellow
Agent Pre-Release	Red
Agent Releasing	Red
Agent Post-Release	Red
Input Activated Alarm, Manual Release, and Abort	Red
Other	Yellow
Input Trouble	Yellow
Release Output Trouble	Yellow
NAC Output Trouble	Yellow
Ground Fault	Yellow
Power Supply Fault	Yellow

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4.4.8 Control Switches

There are four Control Switches on the Operator Interface. They are:

1. Acknowledge — Silences the buzzer which sounds when a new supervisory, alarm, or trouble is detected. Holding this control switch for five seconds activates the control unit Lamp Test. This control switch is also used in conjunction with the System Reset control switch to enter the configuration mode.

Note: Microprocessor and PCB troubles are latching and cannot be silenced or reset. Refer to Troubleshooting Section.

2. Signal Silence — Silences the NAC circuits.
3. System Reset — Disconnects power from all input and output circuits and the auxiliary output for a period of five (5) seconds. This control switch is also used in conjunction with the Acknowledge control switch to enter the configuration mode.
4. Output Disable — Disables the release of agent, and as selected in the system configuration, the activation of NAC outputs and/or Programmable Relays. This is used when performing maintenance on the system.

4.4.9 Digital Display

The three digit display is used for the following:

- View and enter field configuration settings
- Display troubleshooting/diagnostic codes
- Display battery voltage and charging current
- Count-down timer for agent release

4.4.10 Buzzer

The buzzer will sound when an alarm, trouble or supervisory condition is present.

4.4.11 Initiating Device Circuits (System Inputs)

The Fenwal 732 has the following system inputs:

- Three (3) Detection Inputs
- One (1) Manual Release
- One (1) Abort
- Two (2) Supervisory Inputs

4.4.12 Detection Inputs

The control unit provides two dedicated initiating/detector input circuits, plus a third that can be used as an independent initiating/detector input. Inputs from these circuits are latching.

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Each detector circuit is suitable for Class A or Class B wiring and is capable of operating with up to 25 smoke/electronic heat detectors and a quantity of contact-closure type devices (up to the limitation imposed by wiring resistance).

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4.4.13 Manual Release

Operation of a manual release pull station activates the NACs and initiates the release sequence. The configured time delay and agent release output is activated after the site configured time delay. Manual release overrides any other time delay. The circuit is suitable for both Class A or Class B wiring and any quantity of contact closure type manual release stations subject to the limitations imposed by the wiring resistance. The manual release will also override any activated abort switch.

4.4.14 Abort Switch

WARNING The abort switch will not stop the dispersant from discharging indefinitely. The abort switch only postpones the discharge, by resetting the 30-second counter. All personnel must be out of the unit before the dispersant is discharged.

An abort switch is located next to the staff door in the Control Room. Lift the red guard and lift and hold the switch to temporarily abort the agent discharge. When this switch has been activated, the 30-second timer will be reset.

The system will stay in the reset mode as long as the reset switch is held in position.

Once the reset switch has been released, the timer will resume the countdown starting at 30 seconds.

If for some reason the dispersant must be shortly postponed from discharging, use the abort switch.

Figure 21: Abort Switch

When the abort is activated, the timer is stopped and reset to 30 seconds. The timer will not start as long as the Abort switch is held. The timeout restarts when the Abort switch is released.

Successive Abort Switch operations, resets the timer back to a 30 second delay.

Selection of this mode does not have an over-ruling effect on any programmed manual or auto-release delays, regardless of whether an abort has actually occurred. In this mode, the auto-release delay is restricted to a maximum of 30 seconds.

4.4.15 Maintenance Switch

IMPORTANT After all service work has been completed on the mobile unit, all smoke must be cleared from the mobile unit before arming the system.

IMPORTANT If the key switch is in the active position and the red LED is illuminated, a trouble condition exists somewhere in the system. Refer to the system control panel for information.

The Maintenance Switch is mounted above the Fenwal 732 Panel in the Equipment Room.

When the maintenance switch is in the active position, the green LED will be illuminated signifying all systems are armed and functioning correctly.

When the maintenance switch is in the inactive position, the red LED will illuminate signifying that the system is unarmed. At this time, maintenance can be performed on the mobile unit as required.

Figure 22: Maintenance Switch

4.4.16 Supervisory Inputs

The Supervisory Circuits accept inputs from monitoring devices such as pressure switches on agent cylinders or sprinkler systems.

4.4.17 System Outputs

The Fenwal 732 has the following system outputs:

- Three (3) Notification Appliance Circuits (NACs)
- Two (2) Agent Release Circuits (ARC)
- Three (3) Programmable Relays
- One (1) Dedicated Trouble Relay
- One (1) Auxiliary Power Output

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4.4.18 Notification Appliance Circuits (NACs)

The Fenwal 732 has three dedicated notification appliance circuits (NAC). Any NAC can be configured in system configuration to operate on one or more of First Alarm, Pre-Release, and Releasing conditions. In the case that the control unit is being used in a non-suppression application, the three NACs may be configured to operate on Alarm from DET 1, DET 2, and DET 3. Each circuit is driven independently and is user configurable for either Class A (Style Z) or Class B (Style Y) operation with the following coded patterns:

- 60 beats per minute (BPM)
- 120 beats per minute (BPM)
- Temporal
- Continuous

The three circuits are supervised, power-limited, and are compatible with conventional UL listed, 24V DC notification appliances. They can also be used with the following synchronizable horns and strobes:

- MT series multi-tone horns and horn/strobes
- NS series horn/strobes
- NH series horns
- RSS(P) series strobes

The MT and NS series network appliances provide the option to use silenceable horns and nonsilenceable strobes on the same NAC.

Multiple NAC circuits (connected to audible devices only) programmed with the same master code pattern are synchronized, regardless of any differing starting times that preceded their concurrent operation.

The control unit is designed for user selection of an intelligent synchronization feature. This feature allows the silenceable horn to be shut off while the strobe continues to flash in synchronized fashion.

Each NAC is rated 1.5A at 24V DC and is suitable for polarized 24V DC appliances only.

4.4.19 Agent Release Circuits (ARC)

The Fenwal 732 has two (2) dedicated, independently controlled Class B ARCs compatible with devices listed.

4.4.20 Trouble Relay

The trouble relay is "normally energized" with AC Power ON and will de-energize upon receipt of a trouble condition. This change is non-latching and the relay will revert to its normal state upon removal of the trouble state.

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4.4.21 System Operation

During normal operation, the fire suppression system control panel remains in a supervisory mode. In order for the fire suppression system to discharge the dispersant, a number of events must first occur. When these events begin to occur, the fire suppression system control panel enters into what is called a “counting mode”.

If one smoke detector goes into alarm, the following steps will occur.

1. The red LED marked “ALM1” or “ALM2” located on the front cover of the fire suppression system control panel will illuminate.
2. The HVAC system will shut down.
3. The roll door will close (if applicable).
4. The “PRE-RELEASE” LED will illuminate.
5. If no other smoke detector goes into alarm, the fire system control panel will remain in alarm condition until the control panel is manually reset. To reset the control panel, open the front cover, and depress the system reset button.

If a second smoke detector goes into alarm, the following steps will occur in addition to the previously mentioned steps.

1. The horn will pulse (on-off-on-off, etc.).
2. The strobe light will begin to flash.
3. A 30 second time delay will begin.
4. After 30 seconds have passed, the dispersant will be discharged. (Total discharge time is normally less than 10 seconds.)
5. The LED marked “RELEASING” located on the front cover of the fire suppression system control panel will illuminate.
6. The horn will sound continuously indicating that the dispersant is being discharged.
7. The LED marked “POST-RELEASE” located on the front cover of the fire suppression system control panel will illuminate.
8. The medical system will shut down.
9. The fire remote contacts located in the remote box in the underbody compartment will state.

4.4.22 Pull Station

A pull station is located next to the staff door in the Control Room. When this pull station is activated, the system discharges immediately.

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4.4.23 Input / Output Matrix

The following table details the cause and effect actions that may occur during system operation. The effect actions are controlled by the Fenwal 732 Controller.

Table 4-2. Input / Output Matrix

CAUSE		Input Output Matrix	EFFECT: Suppression Control												EFFECT: Bldg.				
			Trouble	Horn/Strobe (1st Alarm)	Turn off A/C, Shut Roll Door	Horn/Strobe (2nd Alarm)	Drop Trailer Power	Input to Cross Zone	Start Timer - 30 Seconds	Inhibit Automatic Release	Discharge Agent	Discharge Strobes			Trouble	Alarm	Supervisory		
			A	B	C	D	E	F	G	H	I	J	K	L					
	1	Panel Trouble	X												X				
	2	Smoke Detector (First)		X	X											X			
	3	Smoke Detector (Second)					X	X	X										
	4	Manual Pull Station (Suppression)			X	X	X		X		X	X				X			
	5	Abort Button	X							X					X				
	6	Detection Cross Zoned				X			X										
	7	Discharge Timer Start				X													
	8	Discharge Timer Complete				X					X								
	9	Agent Release										X							

4.5 Platform Lift

There are multiple safety features for the Platform Lift. For a full list of the safety features, please refer to

Section 11: Platform Lift.

4.6 Marker Lights

Extra LED type marker and side turn signal lights are installed on the trailer body to assist the driver with maneuvering the mobile unit.

4.7 Warning Lights

Please Refer to

Section 14: Lighting System for additional information in regards to these systems.

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Section 5: Mobile Unit Setup Procedure

⚠CAUTION The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.

⚠CAUTION The stabilizing legs and rear suspension are not to be used to raise the mobile unit off the ground. The legs are meant only to level the unit and place it in a parked position. If the legs are used in an attempt to raise the mobile unit from the ground, serious damage may occur to the mobile unit.

⚠CAUTION Failure to remove the transport pins from the Platform Lift, prior to deployment, can result in structural damage to the mobile unit.

IMPORTANT A checklist can be found in Appendix A that may be used as a guideline for the following procedure.

5.1 Park the Mobile Unit

In order to join the mobile unit to the facility, place the unit on the pad per the site-planning guide. Set the trailer parking brake.

5.2 Lower the Front Stabilizing Legs

After the mobile unit has been parked on the pad per the site-planning guide, the landing legs and stabilizing legs must be lowered to stabilize the mobile unit before it can be used. Refer to **Figure 23: Landing & Stabilizing Leg Control Panel** for the following procedure.

If necessary, place aluminum ground plates from lower compartment under each leveling leg locations prior to operating leveling legs on trailer. Now move to the lower compartment where stabilizing leg control panel is located.

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Figure 23: Landing & Stabilizing Leg Control Panel

Extend front legs of trailer so tractor can be disconnect prior to leveling trailer.

Turn switch ON position as shown in **Figure 23: Landing & Stabilizing Leg Control Panel** above.

Pull the two front levers simultaneously toward you.

Extend the legs far until the front of the unit has been raised high enough to clear the fifth wheel.

5.3 Disconnect the Tractor

Once the landing legs have been lowered, the tractor can be disconnected from the mobile unit. Verify that the mobile unit has been raised high enough to clear the tractor fifth wheel, and then disconnect the tractor from the mobile unit. **Do not** disconnect the air and electrical lines.

5.4 Lower the Rear Stabilizing Legs

⚠ CAUTION The stabilizing legs and rear suspension are not to be used to raise the mobile unit off the ground. The legs are meant only to level the unit and place it in a parked position. If the legs are used in an attempt to raise the mobile unit from the ground, serious damage may occur to the mobile unit.

After the tractor has pulled from the mobile unit, the rear stabilizing legs can now be lowered into position. Refer to **Figure 23: Landing & Stabilizing Leg Control Panel** and **Figure 12: Rear Stabilizing Legs** for the following procedure.

Using the Manual Control Rocker Switch, adjust the Landing Legs to level the trailer. Refer to **Figure 9: Digital Levels** for Level Location.

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After the preceding steps have been completed, the mobile unit may no longer be level. level the unit. If necessary use the digital levels that have been provided as a reference. Refer to **Figure 9: Digital Levels**.

5.5 Disconnect the Tractor Air and Electrical Lines

⚠CAUTION Failure to completely exhaust the suspension before uncoupling the air lines may result in damage to the suspension of the mobile unit.

After the mobile unit has been re-leveled, the tractor air and electrical lines can safely be removed. Refer to **Figure 7: Glad Hand Connections**.

5.6 Lower the Auxiliary Support Legs

After the preceding steps have taken place, the auxiliary support legs can now be lowered. Refer to

Figure 37: Front Stabilizing Leg Assembly for the following procedure.

Remove the pin that is currently holding the auxiliary leg in the transport position.

Lower the auxiliary support leg to within ½" of the sand shoe and insert the pin into the highest available hole to lock the leg in position.

5.7 Connect to Shore Power

WARNING Before connecting or disconnecting from shore power, it is imperative that the shore power connections be moved to the "OFF" position. Failure to do this can result in injury or death to the operator of the mobile unit.

WARNING It is the operator's responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.

WARNING The Power Cable could present a trip hazard that could result in personal injury. Care should be taken to ensure that the cable is routed properly to minimize its potential as a trip hazard.

CAUTION Always inspect the power cable, connectors, and fasteners prior to usage. If during inspection, it is suspected that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.

Verify that the shore power disconnect is in the "OFF" position.

Open the underbody compartment door and remove the power cable from the underbody compartments of the mobile unit.

Insert the Advanced Mobility Specialty Vehicles supplied connector into the shore power receptacle and spin the lock ring clockwise to secure the connection.

Secure the connector lock ring to the shore facility.

Move the shore power disconnect to the "ON" position.

Note: The Phase Power Monitor checks the incoming shore power to ensure that it has the correct phase rotation (ABC) and that all three phases are present. If all three phases are present and in the correct rotation, the 480 VAC Light, on the monitor, will illuminate.

If any phase is not present or if the phase rotation is not correct, the 480 VAC Fault Light will illuminate, Disconnect shore power immediately and investigate to determine the cause of the fault.

Close the underbody compartment door; making sure that the access flap for the power cable has been released.

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IMPORTANT

The ATS will automatically transfer to Shore Power when connected to a viable power supply and shut down the generator unit. In the event of a Shore Power fault, the ATS will automatically start the generator unit and transfer power to the generator.

Figure 24: Automatic Transfer

Switch and Phase Power Monitor

5.8 Connect the Phone and Data Lines

The phone and data lines can be found in the underbody storage compartments. Both the phone and data lines can now be connected from the outlets located in the underbody compartments to the receptacles located at the shore site.

The phone lines make use of Hubbell all weather connections. The data lines make use of CAT-5E cable and RJ-45 connections. Refer to **Figure 11: Phone & Data Line Connections**.

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5.9 Connect the Water Hose

On the left side exterior of the mobile unit a water connection can be found. This connection is located on an underbody compartment door.

Figure 25: Humidifier Tank Fill

Remove the cap that covers the connection.

Attach the supplied water hose to this connection.

Attach the other end of the hose to facility provided faucet.

Turn on the water at the faucet.

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5.10 Install the Stair Assembly

There are two different options for the stair assembly. The first option is to attach the stairs directly to the mobile unit while the second option is to utilize the supplied platform as well. Both options can be setup easier with two people. The instructions are covered below.

5.10.1 Stair Assembly without the Platform

1. Remove the stair assembly from the underbody compartments.
2. Install the clip of the stair assembly into the channel located underneath the staff door.
3. Adjust the height of the stair legs as necessary to in order to level and secure the stairs.
4. Install the handrail into its operating position and secure in place with the hardware provided.
5. Close the door to the underbody compartment.

5.10.2 Stair Assembly with the Platform

1. Remove the stair assembly from the underbody compartments.
2. Having one person on each side of the platform, lift the platform and place the clip of the platform in the channel located beneath the staff entry door.
3. While one person holds the platform in place, the other person should insert the adjustable legs into position to support the platform.
4. Adjust the legs as necessary in order to ensure the platform is both level and secure.
5. After the platform has been supported, the slip of the stair assembly can be safely placed into the channel located on the platform.
    a. At this point, the stair assembly can either be placed parallel or perpendicular to the mobile unit. This is dependent upon the site as well as the customers' wishes.
6. Insert the adjustable legs for the stair assembly at the base of the stairs.
7. Adjust the legs as necessary in order to ensure the stair assembly is both level and secure.
8. Place the handrails in their operating positions and secure them with the hardware provided.
9. Close the door to the underbody compartment.

5.11 Platform Lift Deployment

After the stair assembly has been installed, the Platform Lift can be deployed for use. Please refer to

Section 11: Platform Lift for the following procedure.

Open the underbody compartment doors beneath the Platform Lift.

Remove the handrails and lift pendent, and place them to the side for now.

Close the underbody compartment door.

The receptacle for the remote control pendent is located next to the staff entry door. Insert the connector from the lift control pendent into the receptacle.

Remove the transport pin in order for the Platform Lift to be raised from its seated position in the cradles.

Using the remote, raise the lift high enough to clear the cradles

Carefully pull down the platform until it is parallel with the ground. A torsion bar is located within the Platform Lift hardware that will enable one person to move the lift into operating position.

Using the lift control pendent, lower the platform to the ground.

Once the platform has been lowered, install the handrails and secure them with the hardware provided.

5.12 Extend the Slide-outs

After the Platform Lift has been deployed the slide-outs for the mobile unit can now be extended.

Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-outs.

Enter the mobile unit and remove the restraining hardware that is being used to hold the slide-outs in the transport position.

⚠ WARNING

Do not release the floor latch if the slide-out is extended. The floor cylinder is pressurized when the slide-out is extended and releasing the latch could result in severe personal injury.

Before extending the slide-outs, release the hardware that is being used to hold the slide-out floors in place.

Extend the left side slide-out.

Extend the right side slide-out.

Verify that the slide-outs are in the extended position and that the floors have been completely lowered and that a seal has been made.

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5.13 Remove Restraining Hardware

There are two types of restraints that need may need to be removed prior to using the medical system. They are as follows.

The first type deals with the restraints that are used by the medical equipment manufacturer. Follow all instructions provided by the medical equipment manufacturer when adding or removing restraints from the medical equipment. These instructions can be found in the system manuals provided by the medical equipment manufacturer.

The second type deals with the restraints that are used by the mobile unit manufacturer. Various items may be secured while the unit is being transported. These items may consist of chairs, monitors, door, cabinets, cameras, and printers. Remove all restraining equipment prior to usage of the medical system.

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Section 6: Mobile Unit Transport Procedure

CAUTION If the mobile unit is moved without the rear air suspension functioning properly, irreparable damage can occur to the mobile unit.

CAUTION The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.

CAUTION The stabilizing legs and rear suspension are not to be used to raise the mobile unit off the ground. The legs are meant only to level the unit and place it in a parked position. If the legs are used in an attempt to raise the mobile unit from the ground, serious damage may occur to the mobile unit.

CAUTION Before transporting the mobile unit, check to verify all warning lights as well as all exterior marker lights are working correctly.

IMPORTANT A checklist can be found in Appendix A that may be used as a guideline for the following procedure.

6.1 Secure all Equipment

WARNING The following procedure must be accomplished prior to transporting this vehicle. If these items are not accomplished, the “Transport Warning Light”, located on the left side of the mobile unit will remain illuminated.

Two types of restraints need to be supplied before transporting the mobile unit. They are as follows:

The first type deals with the restraints that are used by the medical equipment manufacturer. Follow all instructions provided by the medical equipment manufacturer when applying restraints to the medical system. These instructions can be found in the system manuals provided by the medical equipment manufacturer.

The second type deals with the restraints that are used by the mobile unit manufacturer. Various items must be secured prior to transporting the mobile unit. Such items may consist of chairs, monitors, doors, cabinets, cameras, and printers. Use the supplied restraining hardware to secure these items before transporting the mobile unit.

Ensure that the Patient Table is in the correct position for Transport.

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6.2 Retract Slide-outs to Transport Position

After the equipment has been secured in the transport position the slide-outs can now be retracted.

Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-outs.

Verify that the slide-outs are completely extended.

Retract the right side slide-out.

Retract the left side slide-out.

Secure the slide-out floors into the transport position with the supplied hardware.

Secure the slide-outs with the ratcheting strap or over the center clamp that's provided.

6.3 Return the Platform Lift to the Transport Position

Please refer to

Section 11: Platform Lift, and follow the procedure outlined below.

Lower the Platform Lift to the ground.

Remove the restraining hardware and handrails and temporarily place them to the side.

Raise the lift to a maximum height and fold the lift upwards to a vertical position. A torsion bar is located within the Platform Lift hardware that will enable one person to move the lift into the transport position.

Lower the lift so that it rests securely in the retaining cradles. Make sure that the micro switch is actuated.

Insert the transport pin into its transport position. Make sure that the micro switch is actuated.

Remove the remote control pendent from the socket and lock the access door to the Platform Lift controls.

Open the underbody compartment door and store the remote control pendent and handrail assembly in the underbody storage compartment.

Close the underbody compartment doors.

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6.4 Remove and Store the Stair Assembly

Before removing the stair assembly, check the interior of the unit one last time to verify that all equipment is secure and ready for transport.

There are two different options for the stair assembly. The first option is to attach the stairs directly to the mobile unit while the second option is to utilize the supplied platform as well. Both options can be taken down easier with two people. The instructions are covered below.

6.4.1 Standard Stair System

1. Close and lock the staff door with the key that is provided.
2. Open the door to the underbody storage compartment.
3. Loosen the hardware holding the handrail in place. Remove the handrail from the stair assembly.
4. Lift the clip of the stair assembly up and away from the channel that is located underneath the staff door.
5. Place the stair assembly on the ground.
6. Using the sole of your shoe, step on the spring loaded release to retract the adjustable legs on each side of the stair assembly.
7. Place the stair assembly and handrail inside of the underbody storage compartment and close the compartment door.

6.4.2 Stair Assembly without the Platform

1. Open the door to the underbody compartment.
2. Release the handrails from their operating positions by loosening the hardware provided. Place the handrails to the side.
3. After the handrails have been removed, the stair assembly can be safely removed from the channel located on the platform.
4. Place the stair assembly to the side.
5. Remove the adjustable legs that were used with the stair assembly.
6. While one person holds the platform in place, another person should remove the adjustable legs that were used to support the platform. Place the adjustable legs to the side.
7. Both people should lift the clip of the platform from the channel located beneath the staff entry door.
8. Place the platform inside of the underbody compartments.
9. Place the stair assembly into the underbody compartments.
10. Place the handrails into the underbody compartments.
11. Close the underbody compartment door.

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6.5 Disconnect and Switch from Shore Power to Generator Power

Move the shore power disconnect to the “OFF” position.

Once the shore power is in the “OFF” position, unthread the lock ring binding the connection together.

Remove the power cable from the shore receptacle and store in the underbody storage compartments.

The generator will automatically start and provide power to the unit.

IMPORTANT

The ATS will automatically transfer to Shore Power when connected to a viable power supply and shut down the generator unit. In the event of a Shore Power fault, the ATS will automatically start the generator unit and transfer power to the generator.

6.6 Disconnect Phone and Data Lines

Please refer to **Figure 11: Phone & Data Line Connections**, for the following procedure.

Disconnect any phone and data lines that are currently attached to shore receptacles.

Open the compartment door and disconnect any phone and data lines that are connected in the underbody storage compartment.

Store the phone and data lines in the underbody storage compartment and close the compartment door.

6.7 Disconnect the Water Hose

On the passenger side exterior of the mobile unit a water connection can be found. This connection is located on an underbody compartment door.

Turn off the water supply at the facility provided faucet.

Disconnect the hose from the faucet.

Remove the hose from the connection on the mobile unit.

Cover the hose connection on the mobile unit with the cap provided.

Coil the hose and store in the underbody compartments.

6.8 Raise the Auxiliary Support Legs

Please refer to

Section 13: Stabilizing Legs for the following procedure.

Remove the pins holding the auxiliary support legs in the locked positions.

Lift the auxiliary support legs high enough for the pin to be inserted into the lowest available hole, thereby holding the leg as high as possible.

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Make sure this has been done for both auxiliary support legs. Failure to do this can damage the stabilizing legs when they are retracted.

6.9 Connect the Tractor Air and Electrical Lines

In order to remove the rear stabilizing stands, if applicable the air and electrical lines must first be connected from the tractor to the mobile unit. Please refer to **Figure 7: Glad Hand Connections** and follow the steps outlined below.

Back up the tractor to the mobile unit, but do not back under it at this time.

Attach the air and electrical lines from the tractor to the mobile unit.

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6.10 Raise the Rear Stabilizing Legs

Refer to **Figure 23: Landing & Stabilizing Leg Control Panel** for the following procedures.

Each stabilizing leg can be extended and retracted individually. The rear legs may be retracted together by hold rocker switch and then pushing Lever #3 and #4 at same time.

Open the underbody compartment door to gain access to the hydraulic controls.

Retract the rear stabilizing legs.

Turn the Air Suspension Control switch to “Normal Ride” to inflate the air bags.

Retract the rear stabilizing legs completely.

6.11 Connect the Tractor to the Mobile Unit

Before connecting the tractor to the mobile unit, be certain that enough clearance has been left for the fifth wheel. If the fifth wheel cannot fit underneath the mobile unit, the front end must be raised. If it is necessary to raise the front of the mobile unit to clear the fifth wheel, please follow the steps below. Each stabilizing leg is extended and retracted individually. Refer to **Figure 37: Front Stabilizing Leg Assembly** for the following procedure.

Extend both of the front stabilizing legs to their extended position.

Extend the legs far until the front of the unit has been raised high enough to clear the fifth wheel.

Check to verify that enough room has been made for fifth wheel clearance and proceed with caution to connect the tractor to the mobile unit.

Verify that the fifth wheel is locked into position.

6.12 Retract the Front Stabilizing Legs

After the tractor has successfully connected to the mobile unit, the stabilizing legs can be retracted. Each stabilizing leg is extended and retracted individually. Refer to **Figure 37: Front Stabilizing Leg Assembly** for the following procedure.

Retract the front stabilizing legs.

Close the underbody storage compartment door.

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6.13 Verify that the Mobile Unit is ready for Transport

Before the mobile unit can be transported, a final check of all components is necessary. Please refer to the following when checking the mobile unit.

Have the chairs, monitors, doors, cabinets, cameras, and printers been secured? Make sure that all of these items have been secured with the supplied hardware prior to transporting the mobile unit.

Are all exterior doors closed and locked? If not, make sure that all exterior doors are closed and locked.

Is the Platform Lift in the transport position, fully seated in its retaining cradle? If not, make sure that the Platform Lift is in the transport position, fully seated in the cradle, the transport pins are inserted, and all micro switch is actuated and the Lift Transport light will turn off.

Are all running & marker lights working correctly? If not, replace any bulb that is not working before transporting the mobile unit.

.

⚠WARNING Before moving the trailer, the driver must ensure that the rear and front landing legs are raised. Failure to do so could result in damage to equipment, and/or severe personal injury or death.

Are any warning lights illuminated? If so, check to find the cause of the warning. Do not move the mobile unit if any warning lights are illuminated. If further assistance is needed, refer to the Advanced Mobility Specialty Vehicles *General Information* binder for a list of local service representatives or call Advanced Mobility Specialty Vehicles for further assistance.

Is the fuel tank full? Check the fuel gauge, located in the underbody compartment and fill the fuel tank if necessary.

Verify that the air suspension system is fully inflated and at the proper ride height. The lowest point of the trailer sidewall should be approximately 15” above ground level.

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Section 7: Electrical System

WARNING **Electrical, mechanical, pneumatic, and hydraulic safety devices have been installed on this vehicle to help protect against personal injury and / or damage to equipment. Under no circumstances should any attempt be made to disconnect or in any way render any of these devices inoperative. If a malfunction of any safety device is discovered to exist, DO NOT operate the vehicle, but immediately notify appropriate maintenance personnel.**

WARNING Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

WARNING Before connecting or disconnecting from shore power, it is imperative that the shore power connections be moved to the "OFF" position. Failure to do this can result in injury or death to the operator of the mobile unit.

WARNING It is the operator's responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.

The entire electrical system is installed in conformance with the National Electric Code.

The system is completely installed in the factory. Service access is gained through the underbody compartments of the mobile unit with thin wall conduit and/or wire-mold sized to accept the required service entrance conductors used throughout the mobile unit.

All electrical materials, devices, appliances, fittings, and other equipment are approved and listed by Underwriters' Laboratories, Inc. (UL).

All required tags, labels and rating nameplates are permanently installed in their proper locations before the mobile unit leaves the factory.

There are several panels used in the electrical system.

The Automatic Transfer Switch is located in the underbody compartments is responsible for all incoming power. A three-pole, 40-ampere circuit breaker provides over current protection to the 30 KVA transformer also located in the underbody compartments between the ATS and the Transformer.

One 480V AC electrical distribution panel that is located in the lower compartment on the driver's side of the mobile unit. This panel is responsible for the air conditioning, humidification and heating components aboard the mobile unit.

One 120/208V AC distribution panel that is located in the Gantry Room behind the Gantry room door of the mobile unit. This panel is responsible for all other AC powered components aboard the mobile unit.

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7.1 480V AC and 120/208V AC Electrical Panels

These electrical panels supply power to the equipment aboard the mobile unit. If a problem exists with the equipment, or the power supply to them, a circuit breaker will trip in order to prevent damage. On the inside of the panel access door, a listing of all the circuit breakers can be found.

Figure 26: 480V and 120/208V AC Electrical Panels

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7.2 Automatic Transfer Switch (ATS) Panel (underbody)

WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.

IMPORTANT The ATS will automatically transfer to Shore Power when connected to a viable power supply and shut down the generator unit. In the event of a Shore Power fault, the ATS will automatically start the generator unit and transfer power to the generator.

The Automatic Transfer Switch is the 480V AC electrical panel that controls all incoming power to the mobile unit. From this location, the appropriate power supply is chosen and shore power monitored.

Figure 27: 480V AC ATS and Phase Power Monitor

WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which coulinjury or death.

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The Phase Power Monitor checks the incoming shore power to ensure that it has the correct phase rotation (ABC) and that all three phases are present. If all three phases are present and in the correct rotation, the 480 VAC Light, on the monitor, will illuminate.

If any phase is not present or if the phase rotation is not correct, the 480 VAC Fault Light will illuminate. Disconnect shore power immediately and investigate to determine the cause of the fault.

7.3 Facility Power Connection

Figure 28: Shore Power Connection

Although the shore power connection in not an actual physical feature of the mobile unit, it is an integral part of the daily operations.

Advanced Mobility Specialty Vehicles Connector:	The plug that is provided by Advanced Mobility Specialty Vehicles for connection to the shore power receptacle.
Power Cable:	The cable that runs between the shore power connections and the 480V ac electrical panel.
Shore Power Disconnect:	The shore power disconnect terminates the power to the receptacle. This must be in the “OFF” position when connecting to the receptacle.

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Shore Power Receptacle Outlet: The receptacle outlet that the shore facility has installed for use with the Advanced Mobility Specialty Vehicles connector and power cable.

Shore Power Unit:

Circuit Breaker	
Manufacturer:	Facility provided
Ampere Rating:	200 A disconnect

Receptacle	
Manufacturer:	Russellstoll
Model:	#DF 2504 FRAB0
Ampere Rating:	200 A

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7.4 Power Cable

Descriptions:	Specifications
Service Amps:	200 A
5 Wire:	3 pole plus neutral and ground
Cord:	219A, a #3/0 5 conductor type W, 600V – 2000V, 90° C, 60'-0" long
Plug Model	Russellstoll #DS2504MP000/DF2034

WARNING The Power Cable could present a trip hazard that could result in personal injury. Care should be taken to ensure that the cable is routed properly to minimize its potential as a trip hazard.

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Section 8: Generator

⚠WARNING Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

⚠WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.

⚠WARNING Always make sure that eyes are protected while servicing the unit. Wear safety goggles when prying, drilling, grinding, or working with batteries. Wear safety goggles over regular prescription glasses unless the lenses are made of hardened glass and can serve as safety goggles.

⚠WARNING Be certain to disconnect the power before working on any of the electrical systems.

⚠WARNING Before connecting or disconnecting from shore power, it is imperative that the shore power connections be moved to the “OFF” position. Failure to do this can result in injury or death to the operator of the mobile unit.

⚠WARNING It is the operator’s responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.

⚠CAUTION Always inspect the power cable, connectors, and fasteners prior to usage. If during inspection, it is suspected that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.

⚠CAUTION The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.

IMPORTANT The ATS will automatically transfer to Shore Power when connected to a viable power supply and shut down the generator unit. In the event of a Shore Power fault, the ATS will automatically start the generator unit and transfer power to the generator.

IMPORTANT When servicing the unit be certain that a first aid kit and fire extinguisher are within reach at all times.

The mobile unit is equipped with a generator that is mounted on the front of the unit in its own compartment below the air conditioning units. The generator supplies power to the unit during transport. The generator can also be able to power the medical system so the medical procedures can take place when shore power is unavailable.

The generator oil, as well as the oil filter, air filter, and fuel filter must be changed every 250 hours

or six months of service, whichever comes first. The number of hours the generator has been in operation can obtained by checking the microprocessor located on top of the staging unit in the generator compartment.

Once a year, the fuel separator should be checked for contamination and accumulation.

For additional information, refer to the Advanced Mobility Specialty Vehicles VOL II Vendor Information binder for the product manual.

Figure 29: Generator

120V AC Power Outlet:	An additional outlet has been provided for the operator of the mobile unit to be used if needed.
Air Filter:	The air filter is responsible for removing all contaminants from the generators air supply.
Battery:	The battery is used to start the generator.
Fuel Filter:	The fuel filter is responsible for removing all contaminants from the fuel supply.
Fuel Pump:	Supplies the generator with fuel from the fuel tank.
Generator Motor:	The actual motor of the generator.
Microcomputer:	The microcomputer provides the operator with information that is needed for service purposes.
Oil Filter:	The oil filter is responsible for removing all contaminants form the oil supply.

8.1 Automatic Transfer Switch (ATS)

The ATS will automatically transfer to Shore Power when connected to a viable power supply and shut down the generator unit. In the event of a Shore Power fault, the ATS will automatically start the generator unit and transfer the load to the generator. The control panel, located in the generator enclosure, is used to monitor and test the system.

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Section 9: Humidity System

⚠CAUTION All settings for the humidity system are preset at the factory. Under no circumstances should factory presets be altered.

⚠CAUTION Proper humidity levels must be maintained to protect sensitive electronic equipment.

The humidifier is responsible for maintaining the humidity levels within the mobile unit. The settings for the humidifier are set to meet the medical system manufacturers' specifications. Under no circumstances should the settings of the humidifier be altered. In order for the humidifier to function properly, the water tank level must be maintained at all times.

Exterior Connection:	The facility must provide a fresh water supply for use with the mobile unit. The incoming supply is then attached to the connection.
Humidifier:	The humidifier provides the required humidity to the mobile unit per the medical manufacturers' requirements.
Humidity Controller:	The humidistat controls the internal humidity of the mobile unit. The setting is preset at the factory to comply with the medical system manufacturers requirements.
Humidity Sensor:	Maintains an accurate reading of the humidity levels inside of the mobile unit.

9.1 System Operation

The humidifier system is capable of producing up to 6.6 pounds of steam per hour. A sensor continually monitors the interior of the mobile unit for relative humidity. This sensor is located in the HVAC return duct and is programmed to keep the relative humidity at 35%. If the humidity drops below the set point, the humidifier is signaled to emit more steam. The humidifier creates steam when electrodes in the steam cylinder of the humidifier vaporize the supplied water. The steam then travels through a hose to a distribution pipe located in the return air duct of the HVAC system. Since the steam is injected into the return duct of the HVAC system, both A/C units are supplied with humidified air for distribution throughout the interior of the mobile unit. An air pressure switch is located in the HVAC discharge duct that is interlocked to the humidifier. If for any reason the airflow is disrupted, the humidifier will shut down. When the sensor detects that relative humidity has been reached, a signal is sent to the humidifier to stop it from creating more steam.

9.2 Water Supply

Water is supplied to the humidifier by means of a facility provided water supply. Plumbing connections are as follows:

One 1" female garden hose coupling for the water supply from the exterior of the mobile unit. (incoming)

One 0.5" outer diameter copper drain line from the steam cylinder for automatic drain cycles. The drain penetrates the floor of the mobile unit in order to empty to the exterior. (drainage)

9.3 Humidity Controller

⚠CAUTION All settings for the humidity system are preset at the factory. Under no circumstances should factory presets be altered.

The humidity controller is located in Scan Room on the Partition wall next to the HVAC thermostat. The relative humidity setting for the mobile unit is 35%. The humidifier must not be altered from its factory setting.

9.4 Humidity Settings

⚠CAUTION All settings for the humidity system are preset at the factory. Under no circumstances should factory presets be altered.

The humidity low set point is 35% RH (relative humidity).

The humidity high set point is 45% RH (relative humidity).

9.5 Electrical Connections

Electrical connections at the humidifier are located on a terminal rail behind the cover of the humidifier.

The distribution panel supplies the required 480V AC power via a 15 amp, three-phase breaker.

A humidistat is connected to the humidifier via a controlling transformer cable.

9.6 Instructions

The HVAC system along with the humidifier is set to the required settings per the medical equipment manufacturers' specifications before leaving the factory. Under no circumstances should the settings be altered from their factory specifications.

Please refer to the product manual located in the literature provided by Advanced Mobility Specialty Vehicles.

Attaching the water supply lines

A water connection can be found on the right side exterior of the mobile unit. This connection is located on an underbody compartment door.

Remove the cap that covers the connection.

Attach the supplied water hose to this connection.

Attach the other end of the hose to facility provided faucet.

Turn on the water at the faucet.

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Section 10: HVAC System

⚠CAUTION

The HVAC system is critical to the operation and life of the medical system. The medical system operates within strict specifications regarding temperature and humidity. All aspects of the HVAC system such as damper settings, venting, component set points, and sensor placement are adjusted for optimum operation. Under no circumstances should these settings be altered.

⚠CAUTION

The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.

Figure 30: HVAC Unit

The air conditioning unit is used to maintain the internal environment of the mobile unit. The air conditioner comes from the factory preset to the specifications required by the medical system manufacturer. Under no circumstances should the factory presets be changed or altered from the factory setting. Irreparable damage can occur to the medical system if this is done.

The HVAC system is designed specifically to maintain only the internal environment of the mobile unit. The HVAC system is not designed to handle areas outside of the mobile unit, such as adjoining corridors or hallways. It is important to keep all exterior doors closed at all times. All interior doors, computer doors, partitions, and damper settings, must be in the intended positions before running the medical equipment. Do not attempt to store any boxes or items in the mobile unit, as this will interrupt the intended airflow requirements.

Iin order to ensure proper operation of the HVAC system at all times, refer to

Section 16: General Maintenance and

Section 17: Specific Maintenance.

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10.1 System Specifications and Descriptions

The HVAC system is completely designed and installed in full conformance with all applicable codes.

The HVAC system utilizes forced air.

The HVAC utilizes electricity as the source of power.

Heat producing appliances must be approved by Underwriters Laboratories, Inc. (U.L) and installed in accordance with the terms on their listings.

The air ducts are constructed of approved materials and installed in conformance with all applicable codes.

Air conditioning and heating registers are installed in accordance with the approved plans.

Return air is provided as required and is in full conformance with all applicable codes.

All warning and identification labels as required are installed at the factory.

All aspects of the HVAC system such as damper settings, venting, component set points, and sensor placement are adjusted for optimum operation. Under no circumstances should these settings be altered.

Two separate and individually controlled units provide air conditioning and heating for the mobile unit.

The air conditioning ductwork is lined with a sound absorbent material for reduced noise and operator and patient comfort.

10.2 Exterior HVAC Specifications

The HVAC system is designed to work within certain limitations. The ambient exterior temperatures must be within the range of -20°F to 110°F.

10.3 Interior HVAC Specifications

Each air conditioner has a cooling capacity of 60,000 BTUH. The temperature in each room is maintained at approximately 70°F with an acceptable range of 68° to 72°F. Both air conditioned and heated air is distributed through an insulated duct which starts at the discharge side of the air conditioner.

A heating controller is provided to help regulate the heat. The controller incorporates a preset sensor, which activates heat strips in the air conditioning unit. The heat will activate when the temperature drops below 68°F. When the temperature rises above this setting, the heat strips will deactivate. The controller is located in the in the return air duct vent. The controller is powered by a 12V terminal block located in the air conditioning unit, and is wired using standard 5c wire.

Air is returned to the air conditioner via ceiling vents located throughout the mobile unit. Each duct is strategically placed over the equipment for adequate ventilation. These return air ducts are located in each room and draw air from all rooms.

One 16” x 30” x 1” fiber core air filters are provided at the air return duct of each air conditioning and heating unit. This filter provides dust free air throughout the interior of the mobile unit. The air filter is accessible through an access door on the front of the plenum.

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10.4 Underbody Compartment Heater

Located in the underbody compartments are two (2) compartment heaters. These heaters provide 1.5 KW of heat each at 120V AC, single phase. The compartment heater will activate when the temperature drops below 40°F and will deactivate when the temperature rises above approximately 45°F.

All aspects of the underbody have been insulated for all weather usage.

Figure 31: Heater (Typical)

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10.5 Thermostat Temperature Setting

⚠CAUTION

The HVAC system is critical to the operation and life of the medical system. The medical system operates within strict specifications regarding temperature and humidity. All aspects of the HVAC system such as damper settings, venting, component set points, and sensor placement are adjusted for optimum operation. Under no circumstances should these settings be altered.

The temperature settings for each room are controlled by the use of Thermostat Controls. The Thermostat Control for each room must not be set outside of the parameters as defined by the medical system manufacturer. The Control Room Thermostat controls the temperature in the Control Room and the Dispensing Lab.

Remote Digital Displays for HVAC System in the Control Room to controls the Scan Room and the Control Room/Dispensing Lab

Figure 32: Temperature Controls

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Section 11: Platform Lift

The mobile unit contains a Platform Lift that is used to move personnel and equipment from the ground level to the floor level of the mobile unit. The Platform Lift has a maximum capacity of 2000 and a maximum height of 52”.

In the illustrations below, the Platform Lift can be seen in various stages.

These pictures are meant to represent the Platform Lift in different stages and not to accurately reflect the current design of the mobile unit.

Figure 33: Platform Lift Progression

In the illustrations below, the retaining cradle is shown. In the illustration, the transport pins can also be seen. The transport pins are to be used when transporting the mobile unit. The transport pins will prevent the Platform Lift from leaving the retaining cradles during transport. Failure to use the transport pins can result in damage to the mobile.

In the following illustrations, the lift pocket micro switch can also be seen. The Transport Pin micro switch cannot be seen. The micro switch is connected in series to Control Relay 1 (CR1). If CR1 is not energized the transport warning light will illuminate. These devices are used to notify the operator of the Platform Lift status during transport.

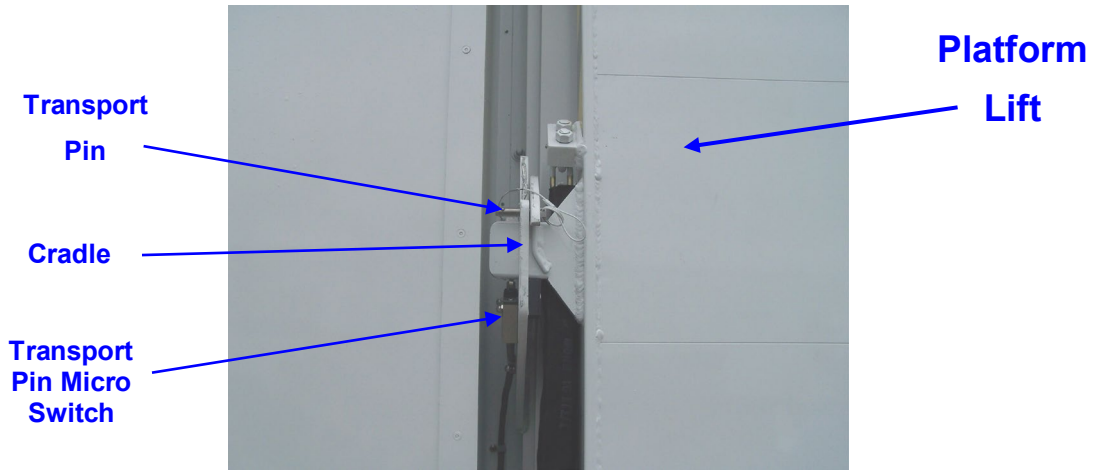

Figure 34: Platform Lift Retaining Cradles

11.1 Safety Features

The Platform Lift has several built in safety features that are designed to provide worry free operation and transportation.

11.1.1 Transport Pin

⚠CAUTION Failure to release the transport pins for the Platform Lift can result in structural damage to the mobile unit.

Transport pins have been provided for use with securing the Platform Lift. The pin must be used when the mobile unit is being transported. Failure to use the pin could result in structural damage to the mobile unit.

11.1.2 Lift Controls

The Platform Lift controls are located on the exterior of the mobile unit next to the roll door. The lift controls, including the remote control pendent, operate with open contacts. This means that in order for the Platform Lift to be moved upwards or downwards, the control must be held in the desired position.

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11.1.3 Handrails

The Platform Lift is supplied with handrails designed to provide an additional margin of safety for personnel being raised or lowered by the lift. The handrails must be installed and properly latched in place prior to raising or lowering personnel on the lift.

WARNING It is the Operator's responsibility to ensure that the handrails are properly installed and latched in place prior to raising or lowering personnel on the lift. Failure to do so could result in serious personal injury or death.

11.1.4 Lift Up Indicator Light

On the control panel located inside of the mobile unit, a separate set of controls can be found to operate the roll door. On this panel is a small green indicator light. When the lift is in the raised position the indicator light will illuminate.

WARNING It is the Operator's responsibility to ensure that the roll door is not opened unless the lift is in the raised position. Failure to do so could result in serious personal injury or death.

The roll door should not be opened unless this light is on. This light is designed to prevent the operator or other personnel from inadvertently stepping out of the roll door when the Platform Lift is not raised.

11.1.5 Remote Control Pendent

A remote control pendent is included for use with the Platform Lift. The pendent plugs into a jack located between the staff door and the Platform Lift roll door behind the lift control panel. The pendent has an expandable cord that allows the operator to be on or near the Platform Lift while it is in operation. The remote control pendent works off the 12V DC power system.

Figure 35: Remote Control Pendent

11.1.6 Transport Warning Light

WARNING If the Transport Warning Light is on, the mobile unit must not be moved. If the mobile unit is moved while this light is on, irreparable damage to the mobile unit, serious injury or death can occur.

The Transport Warning Light is located on the exterior left side of the mobile unit and will illuminate when the Platform Lift is not in the proper transport position. It is the Operator's responsibility to ensure that the Transport Warning Light is functioning properly and that the bulb element is in working order. Please refer to the Advanced Mobility Specialty Vehicles VOL II Vendor Information binder for the product manual, the Advanced Mobility Specialty Vehicles VOL I Service/Operator Manual binder for a list of local service representatives, or contact Advanced Mobility Specialty Vehicles for service.

11.2 Hydraulic System

An internal hydraulic cylinder controls the movement of the Platform Lift. The cylinder is located in the compartment below the roll door.

11.2.1 Operation

When the "UP" function has been selected for the Platform Lift, the pump is activated and fluid is moved from the reservoir through the valve block to the hydraulic cylinder. This causes the lift to move upward. When the "DOWN" function has been selected for the Platform Lift, the pump is not activated, but the fluid is moved from the hydraulic cylinder through the valve block to the reservoir. This causes the Platform Lift to descend.

11.3 Platform Lift Operation

The Platform Lift can be operated with the remote control pendent, the exterior lift controls, or the interior lift controls. The lift can be raised or lowered with these controls. In order to deploy the Platform Lift when setting up the mobile unit, or to place the Platform Lift in its storage position for transporting the mobile unit, refer to the steps outlined below. This same information can also be found under the setup and transport procedures for the mobile unit.

11.3.1 Deploying the Platform Lift for use with the Mobile Unit

⚠CAUTION Failure to remove the transport pins from the Platform Lift can result in structural damage to the mobile unit.

After the stair assembly has been installed and the slide-outs have been extended, the Platform Lift can be deployed for use.

Open the underbody compartment doors.

Remove the handrails and lift pendent, and place them to the side for now.

Close the underbody compartment door.

Insert the connector from the lift control pendent into the receptacle located next to the staff entry door.

Remove the transport pins.

Using the remote, raise the lift high enough to clear the cradles.

Carefully pull down the platform until it is parallel with the ground. A torsion bar is located within the Platform Lift hardware that will enable one person to move the lift into operating position.

Using the lift control pendent, lower the platform to the ground.

Once the platform has been lowered, install the handrails and secure them with the hardware provided.

11.3.2 Storing the Platform Lift for Transport of the Mobile Unit

After the stair assembly has been installed, the Platform Lift can be deployed for use.

Lower the Platform Lift to the ground.

Remove the restraining hardware and handrails and temporarily place them to the side.

Raise the lift to a maximum height and fold the lift upwards to a vertical position. A torsion bar is located within the Platform Lift hardware that will enable one person to move the lift into the transport position.

Lower the lift so that it rests securely in the retaining cradles. Make sure that the micro switch is actuated.

Insert the transport pins into their transport positions. . Make sure that the micro switches are actuated.

Remove the remote control pendent from the socket and lock the access door to the Platform Lift controls.

Open the underbody compartment door and store the remote control pendent and handrail assembly in the underbody storage compartment.

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Section 12: Intrusion Alarm (optional)

An optional intrusion alarm is available for the mobile unit. This alarm is designed to divert would be intruders from theft, vandalism, or unauthorized entrance of the mobile unit.

Figure 36: Intrusion Alarm Keypad

12.1 Operation

The alarm is operated via a keypad located by the staff door. When entering the mobile unit, the operator keys in a code to deactivate the alarm. When leaving the mobile unit, the operator keys in a code to activate the alarm. If either the entry door or the compartment doors are opened while the alarm is activated, a siren will sound.

For additional information, refer to the Advanced Mobility Specialty Vehicles VOL II Vendor Information binder for the product manual.

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Section 13: Stabilizing Legs

⚠CAUTION Under no circumstances should the stabilizing legs and the rear air suspension be used to lift the mobile unit from the ground. If any attempt is made to raise the unit from the ground using the only the stabilizing legs and the rear air suspension, serious damage can occur to the suspension system of the mobile unit.

Both the stabilizing legs and the auxiliary support legs can be found at the front and rear of the unit. The stabilizing legs installed on this mobile unit are only for the purpose of parking and stabilizing the mobile unit. Please refer to the product manual located in Volume II of the literature provided by Advanced Mobility Specialty Vehicles for additional information.

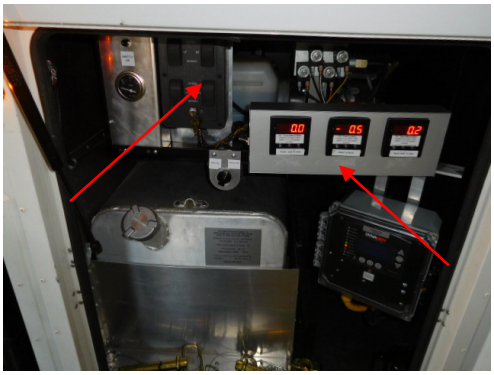

Figure 37: Front Stabilizing Leg Assembly

Stabilizing Leg Controls:	The control box houses the stabilizing leg controls.
Stabilizing Leg:	Allows the mobile unit to be parked without the tractor being attached to the unit.
Digital Levels:	Allows the mobile unit to be leveled both front to back and side to side.
Button left Leg #1	Front Left side leg.
Button right Leg:#2	Front Right side leg.
Button rear left leg #3	Rear Left side leg.
Button rear right leg #4	Rear Right side leg.
Air Suspension Control Switch	The “Deflated” position deflates the air bags. The “Normal Ride” position inflates the air bags for normal ride.
Rocker Switch	The switch must be held in the ON position when extending or retracting the legs.
Auxiliary Support Legs:	The auxiliary support legs provide a fixed leg for use as a backup in case the stabilizing legs fail.
Sand Shoe:	Helps prevent the stabilizing legs from sinking due to weight.

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13.1 Rear Stabilizing Legs

The rear stabilizing legs are extended beneath the rear of the mobile unit, and allow the mobile unit to be stabilized for all medical procedures. If shims are needed for leveling, use only the aluminum shims provided.

13.2 Rear Air Suspension System Controls

⚠CAUTION If the rear air suspension is not functioning properly the mobile unit must not be moved. If the mobile unit is moved, irreparable damage can occur to the medical system and the mobile unit itself.

The rear air suspension controls are located in the landing / stabilizing leg control box. Locate on this control panel a switch that reads Deflate /Normal Ride.

When this selector Switch is in the “Deflate” position, the mobile unit will lower. Prior to placing the selector in this position, the rear stabilizing legs must be extended.

When the selector is in the “Normal Ride” position, this will inflate the air bags and the mobile unit will automatically rise to transport height.

When Selector Switch is in the Normal Ride position this will raise the trailer

Failure to turn the selector switch to the “Normal Ride” position prior to transporting the mobile unit can cause irreparable damage to both the mobile unit and medical system.

Figure 38: Air Bag Controls

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Section 14: Lighting System

The lighting provided for the mobile unit can be divided into either interior lighting, or exterior lighting. Listed below is an explanation of the lighting system.

14.1 Emergency Lighting

In the event that the main AC power fails, two emergency lights are provided. These lights will automatically illuminate when the main AC power is lost. The lights are located in the Control Room and Gantry Room. The emergency lighting system is wired into a 120V AC electrical system that allows the lights internal circuitry to keep its batteries at 100% charge. The emergency lights will illuminate the staff door in Gantry Room and last for approximately 90 minutes.

Control Room Emergency Light

Gantry Room Emergency Light

Figure 39: Dual Beam Emergency Lighting

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14.2 Exterior Lighting

IMPORTANT All warning lights are located on the left side of the mobile unit.

The exterior lighting system can be divided as follows. For additional information of the warning lights Please refer to

Appendix B: Troubleshooting.

14.2.1 Underbody Compartment Lighting

Located inside of the underbody compartments there are wall mounted halogen lights connected to timers. The timers allow the lights to be set for up to 30 minutes before automatically turning off. There is one light provided on each side of the underbody.

Figure 40: Compartment Light

In addition, since the fuel compartment is sealed off from the others, a push button dome light has been included in this compartment.

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14.2.2 Entry Door Lighting / Exterior Service Lighting

The Entry door lighting is provided by a fixture that is located above the staff entry door.

This light is meant to illuminate the entry as well as the Platform Lift.

The switch for this light is located inside of the mobile unit on the raceway next to the entry door.

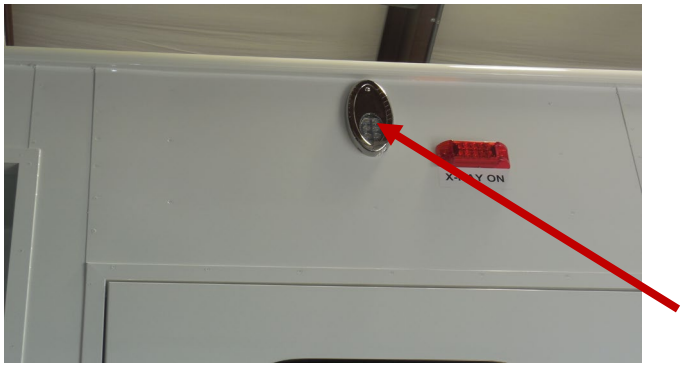

Figure 41: Entry Door Lighting

14.2.3 Marker & Running Lights

When the mobile unit is in transit, federal law requires specific illumination characteristics. The mobile unit meets and exceeds these standards as outlined in Motor Vehicle Safety Standards Guide, Federal Safety Standard No. 108-4.

All lights are 12V DC, and are powered by the tractor. All wiring is run through the underbody wire harnesses. The top marker lights are wired through a 0.5” loom pipe that is run through the sidewalls of the mobile unit. The wires terminate at the “glad-hands” which are located in the front of the mobile unit for tractor hookup. Two electrical connections are supplied on the “glad-hands”, one six terminal connection and one seven terminal connection.

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14.3 Interior Lighting

The interior lighting system can be divided as follows.

14.3.1 Control Room

The light controls for the lighting in Control Room are located just inside the access door to that leads into Control Room. Recessed light fixtures are located in the ceiling panels and have been strategically placed for effective illumination of the equipment both during operation and while being service.

Figure 42: Control Room Overall Lighting

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14.3.2 Gantry Room

The light controls for the lighting in Gantry Room are located just inside the access door to that leads into Control Room. Recessed light fixtures are located in the ceiling panels and have been strategically placed for effective illumination of the equipment both during operation and while being service.

Figure 43: Gantry Room Overall Lighting

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14.4 Warning Lights

Figure 44: Warning Lights

Warning lights have been installed on the exterior left side of the mobile unit in order to provide the operator and technician of the status of the mobile unit at all times during transit or while in the parked position. A description of each of the warning lights and their location can be found below. If any of the warning lights are illuminated, please refer to

Appendix B: Troubleshooting for additional information.

14.4.1 AC Power Indicator Light

⚠CAUTION The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.

The AC Power Indicator Light is located on the exterior left side of the mobile unit and will illuminate when the mobile unit is receiving power.

The mobile unit must have power at all times.

14.4.2 Transport Light

The Transport Light is located on the exterior left side of the mobile unit and will illuminate when the mobile unit is safe to transport.

14.4.3 Transport Warning Light

WARNING If the Transport Warning Light is on, the mobile unit must not be moved. If the mobile unit is moved while this light is on, irreparable damage to the mobile unit, serious injury or death can occur.

The Transport Warning Light is located on the exterior left side of the mobile unit and will illuminate when the Platform Lift is not in the proper transport position. It is the Operator's responsibility to ensure that the Transport Warning Light is functioning properly and that the bulb element is in working order. Please refer to the Advanced Mobility Specialty Vehicles VOL II Vendor Information binder for the product manual, the Advanced Mobility Specialty Vehicles VOL I Service/Operator Manual binder for a list of local service representatives, or contact Advanced Mobility Specialty Vehicles for service.

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Section 15: Slide-outs

This section contains important information in regards to general safety guidelines that must be followed at all times. Before servicing the mobile unit, read the section on safety and all other sections on safety found in any OEM supplied literature. The OEM supplied literature can be found in the product information binders that have been included with the mobile unit.

15.1 Slide-out Controls

The controls for the slide-outs are located in Gantry Room. One button for each slide-out controls both extend and the retract movements.

When extending or retracting the slide-outs, please follow the instructions below:

15.1.1 Expanding the Slide-outs

1. After the stair assembly has been deployed the slide-outs for the mobile unit can now be extended.
2. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-outs.
3. Enter the mobile unit and remove the restraining hardware that is being used to hold the slide-outs in the transport position.

⚠WARNING Do not release the floor latch if the slide-out is extended. The floor cylinder is pressurized when the slide-out is extended and releasing the latch could result in severe personal injury.

4. Release the hardware that is being used to hold the slide-out floors in place.
5. Extend the left side slide-out.
6. Extend the right side slide-out.
7. Verify that the slide-outs are in the extended position and that the floors have been completely lowered.

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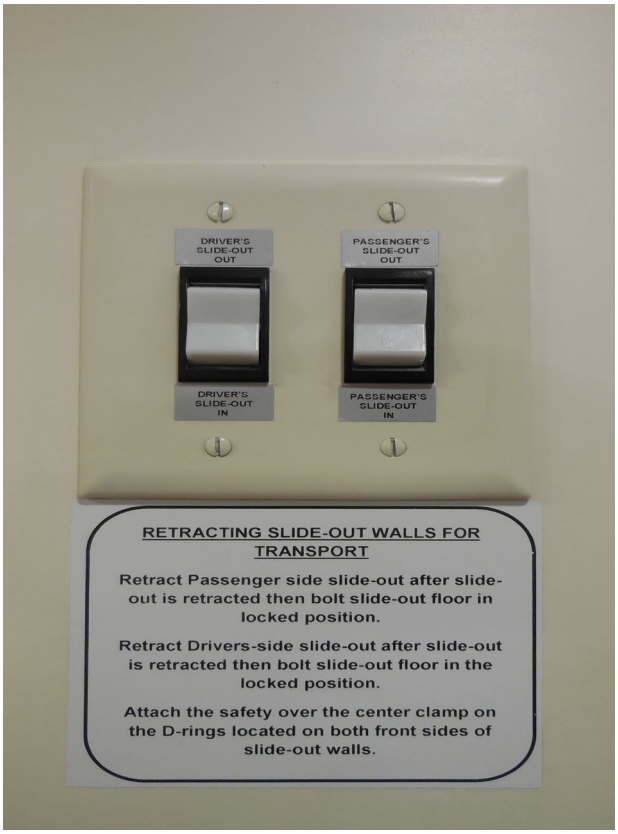
15.1.2 Retracting the Slide-outs

After the equipment has been secured in the transport position the slide-outs can now be retracted.

1. Verify that the underbody compartment doors are closed and that no obstacles are in the path of the slide-outs.
2. Verify that the slide-outs are completely extended.

IMPORTANT Before retracting the slide-outs, run the slide-outs to the fully extended position. This will ensure that the air cylinders that actuate the floor sections are pressurized and prevent binding of the floor sections.

3. Retract the right side slide-out.
4. Retract the left side slide-out.
5. Secure the slide-out floors into the transport position with the supplied hardware.
6. Secure the slide-outs with the ratcheting strap provided.



Slide-out Control Switches and Slide-out Emergency Stop Button

Figure 45: Slide-out Controls

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Section 16: General Maintenance

WARNING Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.

WARNING Always make sure that eyes are protected while servicing the unit. Wear safety goggles when prying, drilling, grinding, or working with batteries. Wear safety goggles over regular prescription glasses unless the lenses are made of hardened glass and can serve as safety goggles.

WARNING Be certain to disconnect the power before working on any of the electrical systems.

IMPORTANT When servicing the unit be certain that a first aid kit and fire extinguisher are within reach at all times.

16.1 Daily Maintenance

Fuel tank should be checked for proper fuel levels.

During cold weather, verify that all underbody heaters are operational.

Keep the air intake grills on the computer cabinets for the medical system free and clear of obstructions.

Keep the A/C grills clean and free of debris. **WARNING** Do not power wash.

Check and verify that no warning lights are illuminated.

16.2 Weekly Maintenance

Lubricate the hydraulic platform lift side rails and pivot points with an ample amount of LPS White Lithium PTFE, AMST Part Number SHS14007.

Check the A/C filters and replace if necessary.

Check the oil and water levels in the generator and refill if necessary.

Check the electrolyte levels in the DC batteries and fill if necessary using only distilled water.

Check all running lights, marker lights, brake lights, and turn signals.

A qualified technician should check tire pressure and verify that all wheels are at the correct pressure as specified by the tire manufacturer.

Check the fluid level in the hydraulic reservoir using the site glass. Add fluid if necessary. Use only AWF, all weather, fluid Automatic Transmission Fluid.

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16.3 Monthly Maintenance

Lubricate the side rails of the roll door with Mobil – Mobilith AW2 heavy-duty multipurpose industrial grease.

Lubricate all Gantry Room interlock switches.

Put a few drops of 20W oil, or similar graphite oil, on the swivel pin of all door hinges. Only use dry graphite on key openings of all door locks.

Check the operation of the smoke detectors and vacuum internally.

Check the fire extinguisher gauges for safe charges.

Inspect the power cables for any damage.

Check the cable tie downs.

Check for cut, damaged, or loose wire connections.

Check and verify that all connector bolts are tight and secure.

A qualified A/C technician must check the A/C condensers every month. Refer to the Air Conditioning Owner's Manual for more information.

Lubricate the front stabilizing legs.

Check wheel lug nuts with torque wrench and verify that all inner and outer wheels, both the front and rear, are tightened to 450-500 foot pounds. This must be done after every 500 miles of driving. In accordance with torque procedure, lugs and nuts must be installed dry. Do not use any type of lubricant.

16.4 Quarterly Maintenance

Check wheel lug nuts with torque wrench and verify that all inner and outer wheels, both the front and rear, are tightened to 450-500 foot pounds. This must be done after every 500 miles of driving. In accordance with torque procedure, lugs and nuts must be installed dry. Do not use any type of lubricant.

A copy of your vehicles completed quarterly Preventive Maintenance Checklist may be required for warranty reimbursement.

Advanced Mobility Specialty Vehicle's Service department has certified technicians, genuine parts and the information technology needed for your assistance. Please call Advanced Mobility service for your servicing needs.

Thank you for choosing Advanced Mobility Specialty Vehicles. If you have any questions call us toll free at 1-708-235-2800. We'll be happy to assist you!!

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Section 17: Specific Maintenance

WARNING Use and follow the appropriate Lockout/Tagout procedures as required by OSHA Standard 1910.147 when performing maintenance or servicing any electrical, hydraulic or pneumatic systems. See Appendix E for Lockout/Tagout procedures.

WARNING Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.

WARNING Always make sure that eyes are protected while servicing the unit. Wear safety goggles when prying, drilling, grinding, or working with batteries. Wear safety goggles over regular prescription glasses unless the lenses are made of hardened glass and can serve as safety goggles.

WARNING Be certain to disconnect the power before working on any of the electrical systems.

CAUTION The HVAC system is critical to the operation and life of the equipment. The medical equipment operates within strict limits regarding temperature and humidity. All aspects of the HVAC system such as baffling, venting, component set points, and sensor placement are adjusted for optimum operation. Under no circumstances should any aspect of the HVAC system be altered from factory specifications.

CAUTION Image quality can be impaired with improper door closer adjustment.

CAUTION A power washer should never be used to clean the A/C units. Serious damage to the A/C coils may occur.

IMPORTANT When servicing the unit be certain that a first aid kit and fire extinguisher are within reach at all times.

17.1 Door Closer Adjustments

The door closer must be adjusted so that the door does not slam shut. Refer to the door closer component sheet in the component literature manual for proper adjustment. Adjust door closer as required to insure proper non-slamming door action.

17.2 Electrical System

Inspect the power cables for any damage.

Check the cable tie downs.

Check for cut, damaged, or loose wire connections.

Check and verify that all connector bolts are tight and secure.

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17.3 Generator System

The generator oil, as well as the oil filter, air filter, and fuel filter must be changed every 250 hours or six months of service, whichever comes first. The number of hours the generator has been in operation can be obtained by checking the microcomputer controller located lower compartment unit next to the generator bay. Please refer to refer to **Figure 29: Generator** .

Once a year, check the fuel separator for contamination or debris.

17.4 Humidity System

⚠CAUTION During seasons of low humidity, the humidifier will need to be filled more often.

The fresh water tank supplies the humidifier with water. The water level must be maintained at all times.

Check the water tank to determine the water level.

Open the overflow valve.

Attach one end of a hose to the exterior water tank fill valve and the other end to the shore supply.

Turn on the water source to begin filling the tank.

After the water tank is full, turn off the water source.

Detach the hose at both ends and place in the underbody storage compartments.

Turn off the overflow control valve.

17.5 HVAC System

⚠CAUTION The HVAC system is critical to the operation and life of the equipment. The medical equipment operates within strict limits regarding temperature and humidity. All aspects of the HVAC system such as baffling, venting, component set points, and sensor placement are adjusted for optimum operation. Under no circumstances should any aspect of the HVAC system be altered from factory specifications.

The HVAC system is designed specifically to maintain only the internal environment of the mobile unit. The HVAC system is not designed to handle areas outside of the mobile unit such as adjoining corridors or hallways.

It is important to be sure that the doors, partitions, and baffling are in the intended positions before running the medical system.

Do not attempt to store boxes, or any other items near computer system air inlets or in the aisles. Such actions will disrupt the intended airflow requirements.

A qualified A/C technician must check the A/C condensers every month. Refer to the Air Conditioning Owner's Manual for more information.

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17.6 Stabilizing Legs

Once a year, perform the preventative maintenance on the stabilizing legs and the stabilizing leg controls. Refer to the accompanying manual for the stabilizing gear system.

Change the oil in the stabilizing leg control box and refill with six (6) quarts of PG-AWF or other approved fluid to port level.

Add one pint of permanent anti-freeze as necessary.

Extend the stabilizing legs and coat lightly with clean grease.

Grease the alemite fittings and check the valve on each leg. Use “NGLI” lithium grease with a grade of “00” or “0”.

Check the fittings and the hydraulic lines for leaks or worn spots. Replace all defective fittings and lines as necessary.

Check for loose bolts and nuts. Tighten as necessary.

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Appendix A: Mobile Unit Checklist

WARNING	It is the operator's responsibility to verify that the shore power receptacle is of the same type and voltage as the connection that is supplied by Advanced Mobility Specialty Vehicles. Failure to do this can result in injury or death to the operator of the mobile unit as well as irreparable damage to the mobile unit.
WARNING	Before connecting or disconnecting from shore power, it is imperative that the shore power connections be moved to the "OFF" position. Failure to do this can result in injury or death to the operator of the mobile unit.
WARNING	The Power Cable could present a trip hazard that could result in personal injury. Care should be taken to ensure that the cable is routed properly to minimize its potential as a trip hazard.
WARNING	Make sure that all electrical parts are serviced only by a certified electrician or qualified personnel. Dangerous voltages are present which could result in injury or death.
WARNING	Always make sure that eyes are protected while servicing the unit. Wear safety goggles when prying, drilling, grinding, or working with batteries. Wear safety goggles over regular prescription glasses unless the lenses are made of hardened glass and can serve as safety goggles.
WARNING	Be certain to disconnect the power before working on any of the electrical systems.
CAUTION	The Siemens medical system requires the HVAC system to be supplied power at all times. During transit of the mobile unit via the generator and when the unit is in the parked position via shore power.
CAUTION	Always inspect the power cable, connectors, and fasteners prior to usage. If during inspection, it is suspected that either internal or external damage has occurred, have a certified electrician inspect and repair the damage before using.
CAUTION	The stabilizing legs and rear suspension are not to be used to raise the mobile unit off the ground. The legs are meant only to level the unit and place it in a parked position. If the legs are used in an attempt to raise the mobile unit from the ground, serious damage may occur to the mobile unit.
CAUTION	Failure to completely exhaust the suspension before uncoupling the airlines may result in damage to the suspension of the mobile unit.
CAUTION	The air ride control valves must be in the "OFF" / normal ride position before the mobile unit can be transported. If the air ride control switch is not in the normal ride position, irreparable damage may occur to the mobile unit.
CAUTION	Before transporting the mobile unit, check to verify all warning lights as well as all exterior marker lights are working correctly.
IMPORTANT	When servicing the unit be certain that a first aid kit and fire extinguisher are within reach at all times.

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Mobile Unit Setup Checklist

Park the mobile unit on the pad per the site-planning guide. Set the trailer parking brake.

Lower the front landing legs.

Disconnect the tractor while leaving the air and electrical lines engaged.

Lower the rear stabilizing legs.

Exhaust the rear suspension.

Disconnect the tractor air and electrical lines.

Level the trailer.

Verify that the shore power disconnect is in the “OFF” position and connect to the power cable to the shore power receptacle.

Move the shore power disconnect to the “ON” position. The ATS will automatically switch from generator power to shore power.

Connect the phone and data lines.

Connect the water supply connection.

Install the stair assembly and platform, if equipped.

Remove the Lift Transport Pins.

Deploy the Platform Lift.

Remove all slide-out restraining hardware.

Expand the slide-outs.

Remove any other restraining hardware.

Check for any warning lights.

Prepare all medical equipment for use per the OEM provided instructions.

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Mobile Unit Transport Checklist

Retract the canopy, if equipped.

Secure all equipment; this includes all medical equipment per OEM requirements.

Secure all moveable objects such as chairs, monitors, doors, cabinets, cameras, and printers.

Slide the patient table towards the column until it's in the locked position.

First verify the slide-outs are fully expanded and then retract the slide-outs.

Secure the slide-outs and slide-out floors with hardware provided.

Close and lock all interior doors.

Return the Platform Lift to the transport position.

Insert the Transport Pins securely in place.

Remove and store the stair assembly.

Move the shore power disconnect to the "OFF" position and disconnect to the power cable from the shore power receptacle. The generator will automatically start and supply power to the unit.

Disconnect the phone and data lines.

Disconnect the water supply connection.

Connect the tractor air and electrical connections.

Raise the auxiliary support legs.

Retract the rear stabilizing legs.

Return the rear suspension selector switch to the "OFF" position for transport in order to inflate the rear air bags.

Connect the tractor to the mobile unit.

Raise the front landing legs.

Verify that the mobile unit is ready for transport.

Are all exterior doors closed and locked?

Is the Platform Lift in the transport position, fully seated in its retaining cradle?

Are the transport pins in place for the Platform Lift?

Are all running & marker lights working correctly?

Are any warning lights illuminated?

Is the fuel tank full?

Verify that the air suspension system is fully inflated and at the proper ride height. . The lowest point of the trailer sidewall should be approximately 15" above ground level.

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Appendix B: Troubleshooting

If any of the following troubleshooting guides do not correct the problem, or if the problem worsens, please contact Advanced Mobility Specialty Vehicles for service, or refer to the volumes of literature that shipped with the mobile unit. In these volumes you will be able to find individual product manuals, as well as a list of local service representatives.

AC Power Indicator Light is off…

If the AC Power Indicator Light is "OFF" then the mobile unit is not receiving AC power. The mobile unit must have power at all times. If the mobile unit is on site, shore power must be connected.

If the mobile unit is being transported, then the vehicle must be stopped and the following items checked. Please refer to the Advanced Mobility Specialty Vehicles VOL II Vendor Information binder for the product manual, the Advanced Mobility Specialty Vehicles VOL I Service/Operator Manual binder for a list of local service representatives, or contact Advanced Mobility Specialty Vehicles for service.

Generator power is connected when the A/C power Off strobe light illuminates:	
1.	Verify that the fuel tank has fuel.

Transport Warning Light is on…

⚠WARNING If the Transport Warning Light is on, the mobile unit must not be moved. If the mobile unit is moved while this light is on, irreparable damage to the mobile unit, serious injury or death can occur.

If the Transport Warning Light is illuminated, the mobile unit is not ready for transport. Before the mobile unit can be transported, this light must be off. Please refer to the following table:

Problem:		Solution:
The Platform Lift is not in the proper transport position.	1.	Make sure that the Platform Lift is seated in the cradles.
	2.	Make certain that the transport pins have been inserted.
	3.	If Emergency Air from the tractor is connected to the trailer Ensure that #s 1 & 2 above have been accomplished.
Dispensing Room Door is not in the proper transport position	1.	Make sure the door is closed and latched in position for transport.
Gantry Room Door is not in the proper transport position	2	Make sure the door is closed and latched in position for transport.

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Humidity is out of specifications…

The humidity settings for the mobile unit are 35% RH to 45% RH (relative humidity). If the mobile unit is experiencing humidity levels outside of this range, either too low or too high, please refer to the following table.

Problem		Check for:	Solution:
The humidity inside of the mobile unit is too high.	1.	Check for exterior doors that have been left open during humid conditions.	The HVAC system can only support the environment of the mobile unit. Unless opened for use, all exterior doors should remain closed all of the time.
	2.	Check for blocked or dirty air vents and/or air conditioner filters.	Clean the air vents and/or change the air conditioner filters. After this has been done, check for any changes to the humidity levels.
	3.	Check to see if the humidifier is constantly running.	Verify that the humidifier is set between 35% and 45% RH (relative humidity). If the humidifier is still running constantly, contact Advanced Mobility Specialty Vehicles for service.
The humidity inside of the mobile unit is too low.	1.	Check for open exterior doors left open during arid weather conditions.	The HVAC system can only support the environment of the mobile unit. Unless opened for use, all exterior doors should remain closed all of the time.
	2.	Check for blocked or dirty air vents and/or air conditioner filters.	Clean the air vents and/or change the air conditioner filters. After this has been done, check for any changes to the humidity levels.
	3.	Check to see if the A/C disconnect is in the “OFF” position.	Turn the A/C disconnect to the “ON” position.
	4.	Check to see if the humidifier disconnect is in the “ON” position.	Move the humidity disconnect to the “ON” position and verify that the humidifier is set between 35% and 45% RH (relative humidity). If the humidifier is running and the humidity level does not change, a problem exists within the humidity system.

Humidifier Empty Water Light is illuminated

If the humidifier empty water light is illuminated, the humidifier water tank is low or empty. Refill the water tank. The tank can be filled internally through the fill pipe or can be filled by connecting the water hose to the humidifier water connection on the side of the unit and to the facility.

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Temperature is out of specifications…

If the temperature is out of specifications, either too high or too low, refer to the following table.

Problem:		Check for:	Solution:
The temperature inside of the mobile unit is too warm.	1.	Check for exterior doors left open during warm weather conditions.	The HVAC system can only support the environment of the mobile unit. Unless opened for use, all exterior doors should remain closed all of the time.
	2.	Check for blocked or dirty air vents and/or air conditioner filters.	Clean the air vents and/or change the air conditioner filters. After this has been done, verify that cold air is blowing.
	3.	Check to see if the A/C disconnect is in the “OFF” position.	Turn the A/C disconnect to the “ON” position.
	4.	The Thermostat Control settings are correct.	Verify that the Thermostat Control is set at 68°F. Please contact Advanced Mobility Specialty Vehicles for further assistance.
The temperature inside of the mobile unit is too cold.	1.	Check for open exterior doors left open during cold weather conditions.	The HVAC system can only support the environment of the mobile unit. Unless opened for use, all exterior doors should remain closed all of the time.
	2.	Check for blocked or dirty air vents and/or air conditioner filters.	Clean the air vents and/or change the air conditioner filters. After this has been done, verify that warm air is blowing.
	3.	Check to see if the A/C disconnect is in the “OFF” position.	Turn the A/C disconnect to the “ON” position.
	4.	The Thermostat Control settings are correct.	Verify that the Thermostat Control is set at 72°F. Please contact Advanced Mobility Specialty Vehicles for further assistance.

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Appendix C: HVAC Set Points

⚠CAUTION The HVAC system is critical to the operation and life of the equipment. The medical equipment operates within strict limits regarding temperature and humidity. All aspects of the HVAC system such as baffling, venting, component set points, and sensor placement have been adjusted for optimum operation. Under no circumstances should any aspect of the HVAC system be altered from factory specifications.

⚠CAUTION Be certain that the HVAC system is operational at all times.

There are two set points for the HVAC system. These points are set at the factory and should not be changed under any circumstances. Altering these points can result in damage to the medical equipment.

Temperature Controller Settings

The high temperature sensor is set at 72°F. If the ambient temperature in the mobile unit reaches 72°F, the HVAC system will automatically start in order to cool the unit.

The low temperature sensor is set at 68°F. If the ambient temperature in the mobile unit reaches 68°F, the HVAC system will automatically start in order to warm the unit.

Humidity Settings

The humidistat set point is 35% relative humidity.

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Appendix D: Circuit Breaker Malfunction Checklist

Category 1

Visual Checks – Check for the most common occurrences.

Is the circuit breaker, in the 480V AC electrical panel, in the “ON” position?

Category 2

Component Checks – (some tools may be required).

Check the emergency off button in Control Room. N.O.?

Check the emergency off button in Gantry Room. N.O.?

For additional troubleshooting, please contact Advanced Mobility Specialty Vehicles for assistance.

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Appendix E: Lockout/Tagout Procedures

Specific Energy Control Procedures

Machine or Equipment for this Procedure:

Specialty Vehicle Trailer: ***Siemens mCT PET/ CT System***

Control of Hazardous Energy:

Type of Hazardous Energy		When is it Necessary to Lock Out
Electrical	480V AC	When servicing main electrical power line
Electrical	120/208V AC room circuits	When servicing or performing installation inside specific sections of the trailer
Electrical	12V DC	When servicing the following: Generator, Platform Lift, Slide-outs, Hydraulic System, Digital Levels
Electrical	12V DC From Battery	When servicing the following: Generator, Platform Lift, Slide-outs, Hydraulic System, Digital Levels

Affected Personnel to notify when the Specialty Vehicles Trailer is to be Locked Out:

Name/Department:	Location:
Production employees	In the vicinity of the trailer

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Shut down specifications for the Specialty Vehicle Trailers:

Energy Type and Rating:	Type of Energy Isolating Device:	Location of Energy Isolating Device:	Lockout Device Used:
Main power feed Electrical 480V AC	Circuit Breaker or Plug	Normally located above the Facility Power Shore	Lock and tag with or without lockout hasp
Light or outlet circuits Electrical 120/208V AC	Wall switch or circuit breaker	Distribution panel for circuit breaker, wall switch for room circuits	Lock and tag with a Universal Wall Switch Lockout, Universal Circuit Breaker Lockout
Generator Power engaged when main power is lost	Generator Breaker Switch	Inside service panels, on front of Generator control cover.	Lock and tag with a Circuit Breaker Lockout attachment device
Power to lift panels Electrical 12V DC	Breaker Switch	Inside service panels	Lock and tag with a Circuit Breaker Lockout attachment device
Electrical 12V DC From Battery	Remove Battery Cables	On battery	Lock and tag with a Plug Lockout attachment device
Medical System Siemens mCT PET /CT	150A 3 Phase Circuit Breaker	480V AC Panel in equipment area	Lock and tag with or without lockout hasp
Air Conditioning System	45A 3 Phase Circuit Breaker for each system	480V AC Panel in equipment area	Lock and tag with or without lockout hasp
Heating System	Air Conditioning Circuit Breaker	480V AC Panel in equipment area	Lock and tag with or without lockout hasp
Slide-out Heaters	20A 2 Pole Single Phase Circuit Breaker	120/208V AC Panel in equipment area	Lock and tag with or without lockout hasp

Methods to dissipate energy:

N/A

Method of Verifying the Isolation of the Machine or Equipment:

Voltmeter

Appendix F: Quarterly Maintenance Checklist

ADVANCED MOBILITY MOBILIZING YOUR MISSION

PREVENTIVE MAINTENANCE CHECKLIST

Company Performing Preventive Maintenance:

Service Technician:

Trailer ID # :	Date	Date	Date	Date	
HVAC	3M	6M	9M	12M	Comments
Inspect/change filters					
Inspect Thermostats					
Verify heat strip operation					
Inspect/clean evaporator coil					
Clean/inspect condenser coils					
Inspect electrical contactors					
Verify refrigerant pressures					
Inspect refrigeration piping abrasion					
Lubricate fan motors if applicable					
Inspect covers/fasteners					
Verify compressor amp draw					
Verify condensate pans/drains					
Verify Condenser motor operation					

Chiller	3M	6M	9M	12M	Comments
Inspect electrical contactors					
Verify refrigerant pressures					
Inspect refrigeration piping abrasion					
Inspect pump seal					
Lubricate motors					
Clean/replace aluminum filters					
Inspect covers/fasteners					
Verify operating/alarm controls					
Verify CW supply temp 45-75 F					
Inspect/replace glycol filter					
Clean/ inspect condensing coils					
Verify/adjust glycol level					
Verify Condenser motor operation					

Trailer	*3M*	*6M*	*9M*	*12M*	*Comments*
Test/inspect lift gate					
Inspect rails/ pins					
Inspect lift fittings/pivot points					
Clean / lubricate slide rails					
Verify lift switches and remote					
Load test van battery (lift)					
Verify hydraulic fluid level					
Verify van battery charger					
Verify roll door controls					
Inspect roll door mounting bolts					
Inspect roll door clutch/hardware					
Inspect roll door side track rails					
Inspect roll door key way					
Inspect awning					
Inspect bay door shocks/hardware					
Verify bay light operation					
Inspect clean and RF door gasket. Verify RF door operation					
Verify RF door lock and the handle operate correctly					
Check RF door for binding and loose hardware.					
Check door hinges/stops/latches for proper operation					
Inspect Slide outs for operation					
Inspect Slide out compressor					
Empty compressor drain and verify Y-strainer is cleaned out					
Check Fire system Last Inspection Date _____					
Inspect stair mounts					
Inspect interior flooring					
Verify bay heater operation					
Inspect cabinet latches and hinges					
Verify phone/communication lines					
Inspect landing gear					
Inspect locking pins					
Inspect air drive or air/hydraulic					
Inspect air tanks					
Verify hub fluid levels					
Inspect undercarriage/frame					
Inspect airbags/airlines/fittings					
Inspect shocks/bushings					
Inspect Tires / Rotate as needed					
Note hub meter mileage _____					

Generator	3M	6M	9M	12M	Comments
Clean fuel/water separator & replace filter					
Lamp test on control panel					
Inspect fuel lines & injectors					
Change oil/filters- 250 hrs					
Check crankcase breather					
Check hoses/belts					
Verify radiator coolant level					
Verify coolant freeze point & pH					
Verify block heater operation					
Inspect housing mounting bolts					
Inspect muffler/brackets					
Verify battery charging voltage					
Load test battery/clean terminals					
Verify voltage & hertz output					
Record hours run since last P.M. (_____) Recorded Generator Hours					

Electrical	3M	6M	9M	12M	Comments
Inspect breakers and panels					
Inspect lighting and bulbs					
Inspect power cord and plug					
Inspect 110volt outlets					

Humidifier	3M	6M	9M	12M	Comments
Inspect/replace steam tank					
Verify humid control set point					
Inspect/fill water reservoir					
Clean fill and drain valves					
Verify 12 volt pump					

Misc.	3M	6M	9M	12M	Comments
Attach and/or fill out Quarterly Service Record for all major components					

Comment :

Signature of Technician: _____ Date: _____